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Preface


This user’s guide includes the information you need to work with Oracle Projects (including Oracle Project Costing and Oracle Project Billing) effectively. It contains detailed information about the following:

- Overview and reference information
- Oracle Projects implementation suggestions
- Specific tasks you can accomplish using Oracle Projects
- How to use Oracle Projects windows
- Oracle Projects reports and processes
- Oracle Projects functions and features
- Oracle Projects system setup

This preface explains how this user’s guide is organized and introduces other sources of information that can help you.
About This User’s Guide

This guide is the primary source of information about Oracle Projects. It contains overviews as well as task and reference information. This guide includes the following chapters:

- Chapter 1 provides a brief introduction to Oracle Projects, including descriptions of Oracle Project Costing, Oracle Project Billing, and Oracle Personal Time and Expense.
- Chapter 2 describes how to create project templates and enter new projects.
- Chapter 3 explains how to budget your projects based on the desired level of detail, and how to manage the budgets you create.
- Chapter 4 contains detailed information on how to enter and manage expenditures created using Oracle Projects and Oracle Personal Time and Expense, as well as how to validate and load transactions from external cost collection systems.
- Chapter 5 tells you how to calculate, distribute, and burden project costs.
- Chapter 6 contains an overview of capital projects and explains how to create, place in service, adjust, and account for assets in Oracle Projects.
- Chapter 7 describes the steps necessary to bill a contract project, including setup, funding, revenue accrual, and invoicing.
- Chapter 8 describes the project status inquiry feature and the project summary amounts that Oracle Projects maintains for project status tracking.
- Chapter 9 describes each standard report and listing.
- Chapter 10 contains information about the processes you can submit in Oracle Projects.
- Chapter 11 provides information about accounting in Oracle Projects.
- Chapter 12 describes how to integrate Oracle Projects with other Oracle Applications.
- Chapter 13 describes how Oracle Projects integrates with non-Oracle applications using the Oracle Projects Activity Management Gateway.
• Chapter 14 gives an overview of Oracle Project Analysis Collection Pack. Oracle Project Analysis Collection Pack provides multidimensional analysis capabilities for project data.

• Chapter 15 contains information about advanced topics in Oracle Projects, including project and labor cost security, organizations, and multiple organization support.

• Chapter 16 contains detailed information about setting up and implementing Oracle Projects.

• Chapter 17 contains information about advanced implementation issues in Oracle Projects, such as tracking overtime, custom reporting, and implementing Oracle Projects for integration with other Oracle applications.

• Chapter 18 tells you how to use the Oracle Projects client extensions. The client extensions enable you to extend Oracle Projects functionality to fulfill your business needs.

• The appendices include information about menu paths, profile options, function security, descriptive flexfields, and attachments in Oracle Projects.

This user’s guide is available online

All Oracle Applications user’s guides are available online, in both HTML and Adobe Acrobat format. (Most other Oracle Applications documentation is available in Adobe Acrobat format.)

The paper and online versions of this manual have identical content; use whichever format is most convenient.

The HTML version of this book is optimized for on–screen reading, and lets you follow hypertext links for easy access to books across our entire library; you can also search for words and phrases if your national language is supported by Oracle’s Information Navigator. The HTML documentation is available from the Oracle Applications toolbar, or from a URL provided by your system administrator. Note that the HTML documentation is translated into over twenty languages.

You can order an Oracle Applications Documentation Library CD containing Adobe Acrobat versions of each manual in the Oracle Applications documentation set. Using this CD, you can search for information, read it on–screen, and print individual pages, sections, or entire books. When you print from Adobe Acrobat, the resulting printouts look just like pages from an Oracle Applications hardcopy manual.
Note: There may be additional material that was not available when this user’s guide was printed. To learn if there is a documentation update for this product, look at the main menu on this product’s HTML help.

Assumptions

This guide assumes you have a working knowledge of the principles and customary practices of your business area. It also assumes you are familiar with Oracle Projects. If you have never used Oracle Projects, we suggest you attend one or more of the Oracle Projects training classes available through Oracle Education. (See Other Information Sources for more information about Oracle Projects and Oracle training.)

This guide also assumes that you are familiar with the Oracle Applications graphical user interface. To learn more about the Oracle Applications graphical user interface, read the Oracle Applications User’s Guide.
Do Not Use Database Tools to Modify Oracle Applications Data

Oracle provides powerful tools you can use to create, store, change, retrieve and maintain information in an Oracle database. But if you use Oracle tools like SQL*Plus to modify Oracle Applications data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle Applications tables are interrelated, any change you make using an Oracle Applications form can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications forms, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle Applications.

When you use Oracle Applications forms to modify your data, Oracle Applications automatically checks that your changes are valid. Oracle Applications also keeps track of who changes information. But, if you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

Consequently, we STRONGLY RECOMMEND that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications tables, unless we tell you to do so in our manuals.

Other Information Sources

You can choose from many sources of information, including documentation, training, and support services, to increase your knowledge and understanding of Oracle Projects.

Most Oracle Applications documentation is available in Adobe Acrobat format on the Oracle Applications Documentation Library CD. We supply this CD with every software shipment.

If this manual refers you to other Oracle Applications documentation, use only the Release 11 versions of those manuals unless we specify otherwise.
Oracle Applications User’s Guide

This guide explains how to navigate, enter data, query, and run reports, and introduces other basic features of the graphical user interface (GUI) available with this release of Oracle Projects (and any other Oracle Applications product). This guide also includes information on setting user profiles, as well as running and reviewing reports and concurrent requests.

You can also access this user’s guide online by choosing “Getting Started with Oracle Applications” from any Oracle Applications help file.

Related User’s Guides

Oracle Projects shares business and setup information with other Oracle Applications products. Even if you have not installed them as separate products, your Oracle Projects application includes some forms and functionality from other Oracle Applications. Therefore, you may want to refer to other user’s guides when you set up and use Oracle Projects.

If you do not have the hardcopy versions of these manuals, you can read them by choosing Library from the Help menu, by reading from the Oracle Applications Document Library CD, or by using a web browser with a URL that your system administrator provides.

Oracle Assets User’s Guide

In Oracle Assets, you can post capital project costs to become depreciable fixed assets. Refer to this manual to learn how to use Oracle Assets to query mass additions imported from Oracle Projects and to review asset information.

Oracle General Ledger User’s Guide

Use this manual when you plan and define your chart of accounts, accounting period types and accounting calendar, functional currency, and set of books. It also describes how to define journal entry sources and categories so you can create journal entries for your general ledger. If you use multiple currencies, use this manual when you define additional rate types, and enter daily rates. This manual also includes complete information on implementing Budgetary Control.
Oracle HRMS User’s Guide

This manual explains how to define your employees, so you can give them operating unit and job assignments. It also explains how to set up an organization (operating unit). Even if you do not install Oracle HRMS, you can set up employees and organizations using Oracle HRMS windows.

Oracle Inventory User’s Guide

If you install Oracle Inventory, refer to this manual to learn how to define project–related inventory transaction types and how to enter transactions in Oracle Inventory. This manual also describes how to transfer transactions from Oracle Inventory to Oracle General Ledger.

Oracle Payables User’s Guide

Refer to this manual to learn how to use Invoice Import to create invoices in Oracle Payables from Oracle Projects expense reports data in the Oracle Payables interface tables. This manual also explains how to define suppliers, and how to specify supplier and employee numbering schemes for invoices created using Oracle Projects.

Oracle Project Manufacturing Implementation Manual

Oracle Project Manufacturing allows your company to associate manufacturing costs and inventory to a specific project and task. Use this manual as your first source of information if you are implementing Oracle Project Manufacturing.

Oracle Purchasing User’s Guide

If you install Oracle Purchasing, refer to this user’s guide to read about entering and managing the requisitions and purchase orders that relate to your projects. This manual also explains how to create purchase orders from project–related requisitions in the AutoCreate Documents window.

Oracle Receivables User’s Guide

Use this manual to learn more about Oracle Receivables invoice processing and invoice formatting, defining customers, importing transactions using AutoInvoice, and Defining Automatic Accounting in Oracle Receivables.
Oracle Applications Flexfields Guide
This manual provides flexfields planning, setup, and reference information for the Oracle Projects implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This manual also provides information on creating custom reports on flexfields data.

Oracle Workflow Guide
This manual explains how to define new workflow business processes as well as customize existing Oracle Applications–embedded workflow processes. You also use this guide to complete the setup steps necessary for any Oracle Applications product that includes workflow–enabled processes.

Oracle Alert User’s Guide
This manual explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

Oracle Applications Character Mode to GUI Menu Path Changes
This is a quick reference guide for experienced Oracle Applications end users migrating from character mode to a graphical user interface (GUI). This guide lists each character mode form and describes which GUI windows or functions replace it.

Oracle Financials Open Interfaces Guide

Multiple Reporting Currencies in Oracle Applications
If you use Multiple Reporting Currencies feature to report and maintain accounting records in more than one currency, use this manual before implementing Oracle Projects. The manual details additional steps and setup considerations for implementing Oracle Projects with this feature.
Multiple Organizations in Oracle Applications

If you use the Oracle Applications Multiple Organization Support feature to use multiple sets of books for one Oracle Projects installation, use this guide to learn about setting up and using Oracle Projects with this feature.

Oracle Applications Implementation Wizard User’s Guide

If you are implementing more than one Oracle product, you can use the Oracle Applications Implementation Wizard to coordinate your setup activities. This guide describes how to use the wizard.

Oracle Applications Developer’s Guide

This guide contains the coding standards followed by the Oracle Applications development staff. It describes the Oracle Application Object Library components needed to implement the Oracle Applications user interface described in the Oracle Applications User Interface Standards. It also provides information to help you build your custom Developer/2000 forms so that they integrate with Oracle Applications.

Oracle Applications User Interface Standards

This manual contains the user interface (UI) standards followed by the Oracle Applications development staff. It describes the UI for the Oracle Applications products and how to apply this UI to the design of an application built by using Oracle Forms 4.5.

Installation and System Administration

Oracle Applications Installation Manual

This manual and the accompanying release notes provide information you need to successfully install Oracle Financials, Oracle Public Sector Financials, Oracle Manufacturing, or Oracle Human Resources in your specific hardware and operating system software environment.

Oracle Applications Upgrade Manual

This manual explains how to prepare your Oracle Applications products for an upgrade. It also contains information on finishing the upgrade procedure for each product. Refer to this manual and the
*Oracle Applications Installation Manual* when you plan to upgrade your products.

**Oracle Applications System Administrator’s Guide**

This manual provides planning and reference information for the Oracle Applications System Administrator. It contains information on how to define security, customize menus and online help, and manage processing.

**Oracle Personal Time and Expense System Administrator’s Guide**

This manual explains how to successfully install Oracle Personal Time and Expense, a client side component of Oracle Projects. It also contains information on how you can perform a non-standard installation and implementation of Oracle Projects to tailor Oracle Personal Time and Expense to your company’s business requirements.

**Oracle Projects Technical Reference Manual**

The *Oracle Projects Technical Reference Manual* contains database diagrams and a detailed description of Oracle Projects and related applications database tables, forms, reports, and programs. This information helps you convert data from your existing applications, integrate Oracle Projects with non-Oracle applications, and write custom reports for Oracle Projects.

You can order a technical reference manual for any product you have licensed. Technical reference manuals are available in paper format only.

**Oracle Applications Product Update Notes**

This book contains a summary of each new feature we added since Release 10.7, as well as information about database changes and seed data changes that may affect your operations or any custom reports you have written. If you are upgrading from Release 10.6 or earlier, you also need to read Oracle Applications Product Update Notes Release 10.7.
Other Information

Training
Oracle Education offers a complete set of training courses to help you and your staff master Oracle Applications. We can help you develop a training plan that provides thorough training for both your project team and your end users. We will work with you to organize courses appropriate to your job or area of responsibility.

Training professionals can show you how to plan your training throughout the implementation process so that the right amount of information is delivered to key people when they need it the most. You can attend courses at any one of our many Educational Centers, or you can arrange for our trainers to teach at your facility. In addition, we can tailor standard courses or develop custom courses to meet your needs.

Support
From on–site support to central support, our team of experienced professionals provides the help and information you need to keep Oracle Projects working for you. This team includes your Technical Representative, Account Manager, and Oracle’s large staff of consultants and support specialists with expertise in your business area, managing an Oracle server, and your hardware and software environment.

About Oracle
Oracle Corporation develops and markets an integrated line of software products for database management, applications development, decision support, and office automation, as well as Oracle Applications, an integrated suite of more than 45 software modules for financial management, supply chain management, manufacturing, project systems, human resources, and sales and service management.

Oracle products are available for mainframes, minicomputers, personal computers, network computers, and personal digital assistants, allowing organizations to integrate different computers, different operating systems, different networks, and even different database management systems, into a single, unified computing and information resource.
Oracle is the world’s leading supplier of software for information management, and the world’s second largest software company. Oracle offers its database, tools, and application products, along with related consulting, education, and support services, in over 140 countries around the world.

Thank You

Thank you for using Oracle Projects and this user’s guide.

We value your comments and feedback. At the end of this manual is a Reader’s Comment Form you can use to explain what you like or dislike about Oracle Projects or this user’s guide. Mail your comments to the following address or call us directly at (650) 506–7000.

Oracle Applications Documentation Manager
Oracle Corporation
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Or, send electronic mail to appsdoc@us.oracle.com.
Overview of Oracle Projects

This chapter provides a brief overview of Oracle Projects, including descriptions of Oracle Project Costing, Oracle Project Billing, and Oracle Personal Time and Expense.
Overview of Oracle Projects

Oracle Projects is a central part of the complete software solution for project-oriented companies, providing you with a flexible approach to defining and structuring projects, tasks, and budgets by which to monitor project status.

Oracle Projects consists of three products:

- Oracle Project Costing
- Oracle Project Billing
- Oracle Personal Time and Expense

To view the Oracle Projects Flow in graphical form: see Oracle Projects Information Flow Diagrams: page 1 – 4

GUI Interface

Oracle Projects has a highly responsive, multi-window graphical user interface (GUI) with full point-and-click capability. You can use your mouse or keyboard to operate graphical controls such as pull-down menus, buttons, poplists, check boxes, or alternative regions.

You can read more about the basic characteristics of this user interface in the Oracle Applications User’s Guide.

Oracle Project Costing

Oracle Project Costing provides you with the ability to define projects, work breakdown structures, and budgets; record and report costs against projects; and integrate with other Oracle Applications, including Oracle Purchasing, Oracle Payables, Oracle General Ledger, and Oracle Assets to account for costs.

With Oracle Project Costing, you can:

- Enter projects and tasks. You can define chargeability control to limit charges to your projects and tasks
- Enter cost budgets and baseline them
- Track committed costs of requisitions, purchase orders, and supplier invoices
• Record detailed cost transactions for timecards, expense reports, asset usage, and supplier invoices. You can let your project managers and staff enter their timecards and expense reports directly for online approval using Oracle Personal Time and Expense or in pre-approved batches.

• Interface costs between other Oracle Applications while maintaining a detail audit trail.

• Collect CIP costs and interface asset costs to Oracle Assets when you are ready to place the asset in service.

• Report project status online and in reports.

Oracle Project Billing

Oracle Project Billing provides you with the ability to define revenue and invoicing rules for your projects; generate revenue; create invoices; and integrate with other Oracle Applications to process revenue and invoices. Oracle Project Billing includes all of the functionality of Oracle Project Costing and additionally integrates with Oracle Receivables.

In addition to the functionality that Oracle Project Costing provides, you can perform the following functions:

• Enter project customers and contacts with whom you have negotiated and contracted project work.

• Enter agreements (contracts) from your customers and fund projects with those agreements.

• Generate revenue using various methods including time and materials, percent complete, and cost plus.

• Create draft invoices from detail transactions and milestones for online approval by your project or accounting managers.

• Interface revenue to Oracle General Ledger and invoices to Oracle Receivables while maintaining a detail audit trail.

• Report project revenue, invoice, and receivables status online and in reports.
Oracle Personal Time and Expense

Oracle Personal Time and Expense makes it easy for your employees to record and submit their timecards and expense reports, whether they are in your office or on the road. Using the Disconnect Client technology of Oracle Power Objects, labor and expense details are collected in a Blaze database on the employee’s PC or notebook computer, and uploaded into the Oracle Projects Interface Table at the end of the time period. Oracle Personal Time and Expense is completely integrated with Oracle Project Costing and Oracle Project Billing, to provide a complete cost collection and billing solution for project-driven organizations.

See Also

Oracle Personal Time and Expense System Administrator’s Guide

Overview of Oracle Personal Time and Expense: page 4 – 50

Oracle Projects Information Flow Diagrams

The following three diagrams illustrate the Oracle Projects flow. Each successive diagram magnifies a section of the former diagram.
Oracle Projects Flow Diagram: Overview

Figure 1 – 1

* Project Management

Oracle Projects
- Projects
  - Budgets
  - Expenditures

Oracle Projects Engine

Cost Collection Systems

Human Resources

Status Reporting

Customer Invoice

Accounting Transactions

* Future Release
Inside the Oracle Projects Engine

Figure 1 – 2

Oracle Projects

Projects

Budgets

Expenditures

Oracle Projects Engine

Costing

Revenue Accrual

Capitalization

Summarization

Invoicing

Status Reporting (Actual vs. Budget)

Customer Invoice

Accounting Transactions
Oracle Projects Flow Diagram: Detail

Figure 1 – 3
See Also

System Integration: page 12 – 2
This chapter describes how to enter projects in Oracle Projects.
Overview of Projects and Tasks

A project is a primary unit of work that you can break down into one or more tasks. You charge the transactions you enter in Oracle Projects to a project and a task. When you set up a project, you must set up the work breakdown structure (WBS), and enter project and task information.

This section explains how to use Oracle Projects to organize your project setup to meet your business needs.

Setting Up a Project Work Breakdown Structure (WBS)

You organize your project work into smaller, more easily manageable units called tasks. Every project has one task by default. You can define a hierarchy of tasks called a work breakdown structure (WBS). Oracle Projects supports an unlimited work breakdown structure, in which you can define as many levels of tasks as you want. You can number and name the tasks as you wish.

Oracle Projects processes tasks based on their position in the WBS. The three distinct positions are:

- **Top Task**: A task whose parent is the project
- **Mid Task**: A task that is not a top task or a lowest task
- **Lowest Task**: A task that is at the bottom of the WBS, without any child tasks

A top task can also be considered a lowest task, if the task does not have any child tasks. For example, in Figure 2 – 1, Tasks 1 and 3 are lowest tasks as well as top tasks. Tasks 2.1 and 2.3 are lowest tasks although they are on the same level as Task 2.2, which is a mid task. A task that is the child of another task is commonly referred to as a subtask.
Oracle Projects sorts your WBS by the task number alphanumerically within a task level, so be sure that your numbering methods reflect an organized WBS. For example, if you have several subtasks for a particular top task, such as Task 3, you number the tasks as follows:

- 3 – Top Task
- 3.1 – Subtask 1 under Task 3
- 3.2 – Subtask 2 under Task 3
- 3.2.1 – Subtask 1 under Subtask 3.2
- 3.2.2 – Subtask 2 under Subtask 3.2

Or, if you have more than ten top tasks in your WBS, use the following numbering method, so Oracle Projects displays the levels in the correct numerical order:

- 01 – Task 1
- 02 – Task 2
- 03... – Task 3, Task 4, and so on
- 10 – Task 10
Attention: Plan your WBS numbering method carefully, whether it is numeric or alphanumeric. For example, if you used numbers 1 through 11 (instead of 01, 02, etc.) in the previous example, Oracle Projects would display your tasks in the following order: 1, 10, 11, 2, and so on.

In this example, note how the unplanned use of an alphanumeric numbering method yields unexpected results when the WBS is displayed online in indented format.

You define task level structure: Oracle Projects displays:

```
<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prototype</td>
<td>Build</td>
</tr>
<tr>
<td></td>
<td>Test</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

Viewing a Work Breakdown Structure (WBS)

You can view the hierarchy of tasks for a project in the Tasks, Task Budgets, and Task Status windows. A plus sign (+) indicates an expandable task. A minus sign (−) indicates a collapsible task.

To view a WBS:

1. Navigate to the Tasks, Task Budgets, or Task Status window:
   - **Tasks** window: Choose Projects from the Navigator window and find the project you want. Choose Open. From the options region of the Projects, Templates window, select Tasks and choose Detail.
   - **Task Budgets** window: Choose Budgets from the Navigator window and find the budget you want. Choose Details.
   - **Task Status** window: Choose Project Status from the Navigator window and find the project you want. Choose Task Status.

2. To expand a task so you can view its subtasks, double-click on the task number or the plus sign (+).
   - In the **Tasks** window you also can choose the double–plus sign (++) button to expand a task.
3. To collapse a task, double-click on the task number or the minus sign (−).

Control Functions by Project and Task Level

Oracle Projects supports the following functions at the project and task levels:

<table>
<thead>
<tr>
<th>Oracle Projects Functions</th>
<th>Level at which function is allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project</td>
</tr>
<tr>
<td>For All Projects</td>
<td></td>
</tr>
<tr>
<td>Budgeting</td>
<td>✓</td>
</tr>
<tr>
<td>Transaction Entry</td>
<td></td>
</tr>
<tr>
<td>Customer Entry</td>
<td>✓</td>
</tr>
<tr>
<td>For Capital Projects</td>
<td></td>
</tr>
<tr>
<td>Asset Definition</td>
<td>✓</td>
</tr>
<tr>
<td>Asset Assignments</td>
<td>✓</td>
</tr>
<tr>
<td>For Contract Projects</td>
<td></td>
</tr>
<tr>
<td>Funding from Customer Agreements</td>
<td>✓</td>
</tr>
<tr>
<td>Event Entry</td>
<td>✓</td>
</tr>
<tr>
<td>Invoice Generation</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 2 – 1 (Page 1 of 1)

See Also

Project and Task Options: page 2 – 38
Overview of Expenditures: page 4 – 2
Transaction Controls: page 4 – 57
Project-Based Security

Oracle Projects provides several layers of project security:

- **Profile Options**
  - PA: Cross-Project Responsibility  Gives a responsibility cross-project capability (users can query and update all projects). If this profile option is not set, users can query and update only those projects for which the user is assigned as a key member.
  - PA: Allow Cross-Charging in Multi-Org. Determines whether users can charge expenditure items to projects in other operating units that share the same Business Group, PA Period Type, and Set of Books as the user’s operating unit.
  
  See: Profile Options: page B - 2.


- **Project Management Controls.** Project management controls enable you to set up security controls over data imported to Oracle Projects from an external project management system. See: Project Management Controls: page 13 - 4.

Projects Window Reference

This section describes the fields you can enter when you create a new project in the Projects window. For more information about options you specify at the project level, see: Project and Task Options: page 2 - 38.
Number

Unique identification number of a project. You use this number to find and identify the project throughout Oracle Projects. You can manually enter a project number, or let the system automatically generate one for you. The project numbering method you set up in the Implementation Options form determines how to create the number.

For audit trail purposes, you cannot modify a project number after you charge expenditure items, requisitions, purchase orders, or supplier invoices to the project.

Note: Unlike projects, project templates are always numbered manually. The Project Numbering implementation option, which determines whether projects are numbered automatically or manually, does not affect numbering of project templates.

Name

A short, unique, descriptive name of a project. Use this name to find and identify a project throughout Oracle Projects.

Project Type

The project type determines how Oracle Projects processes costs (expenditure items) for a project. The type you choose provides many defaults and controls for project entry and processing. You must choose a type from one of the following project type classes:

- Use an **Indirect** project type to collect and track expenditure item costs and labor hours for overhead activities, such as administrative and overhead work, marketing, and bid & proposal preparation. You can also define indirect projects to track time off including sick leave, vacation, and holidays.

- Use a **Capital** project type to collect and track costs and labor hours for asset development activities which you plan to capitalize as one or more assets. See: About Capital Projects: page 6 – 2

- Use a **Contract** project type to collect and track costs, labor hours, revenue, and billing for services performed for and reimbursed by a client.

For audit trail purposes, you cannot change a project type after you create customer invoices for the project, or charge expenditure items, requisitions, purchase orders, or supplier invoices to the project.

**Organization**

The managing ("owning") organization of a project. Use the organization for reporting and AutoAccounting purposes. You can choose any organization that has the following characteristics:

- The organization belongs to the project/task organization hierarchy assigned to the operating unit.
- The organization has the project/task owning organization classification enabled.
- The project type class is permitted to use the organization to create projects. This permission is determined when you define the organization.
- The organization is active as of the system date.


**Changing the Owning Organization**

For audit trail purposes, there are controls over modification of the project or task owning organization.

When you attempt to change the organization on a project or task, the Verify Organization Change Extension is called to determine whether the change is allowed. The default logic in the extension does not allow the change if either of the following conditions exists:

- transactions have been charged to the project or task
- revenue has been generated for the project or task
- draft invoices have been generated for the project or task

You can override the default logic in the extension in one of the following ways:

If the change is allowed, Oracle Projects displays a dialog box when you save or exit the record. The dialog box asks if you want to recalculate the expenditure items on the project. If you check the Recalculate check box, the current date is used as the effective date of the change.

Note: If your user responsibility excludes the function Expenditure Inquiry: Adjustments: Recalculate Cost and Revenue, Oracle Projects does not display the dialog box and does not mark the items for recalculation.

Changing the Owning Organization on Multiple Projects and Tasks

If you need to change the owning organization on multiple projects and tasks, you can use the Mass Update Batches window to create a batch of projects and tasks to update. See: Mass Update Batches: page 2 – 62.

Start Date and Completion Date

The duration of a project. You cannot charge an expenditure item if the date falls outside the project dates of that project. You can leave both dates or just the end date blank; you must enter a start date if you want to enter a completion date. See: Overview of Expenditures: page 4 – 2 and Transaction Controls: page 4 – 57.

Status

Indicates the current status of a project.

Oracle Projects provides several predefined project statuses. You can define additional project statuses in the Project Statuses window. Status Controls for each project status allow you to set up permissions or restrictions on actions for each project status.

For example, you can control whether new transactions can be charged to a project with a certain project status. The same is true for revenue accrual and invoicing. See: Project Statuses: page 16 – 164. In addition, you can run costing for uncosted transactions that have already been charged to a project that now has a Closed status. See: Transaction Controls: page 4 – 57.

The Starting Status for the project’s Project Type determines the default value of this field.
Change Status

To change the status of a project, you choose Change Status. When you enter a status change for a project, Oracle Projects uses the following rules to determine if the status change is allowed:

- The project must have class codes entered for all required class categories. See: Project Classifications: page 2 – 40.
- If the project is a contract project, the project must have at least one customer, and the total billing contribution must equal 100%. See: Customers and Contacts: page 2 – 41.
- Each project customer for the project must have at least one billing contact defined. See: Customers and Contacts: page 2 – 41.
- The project must have a project manager assigned to it.

In addition to these rules, Oracle Projects provides a client extension, the Project Verification Extension, that you can use to define additional rules you want to apply for changing the project status of a project. See: Project Verification Extension: page 18 – 102.

Public Sector

Use the Public Sector check box to indicate whether a project is a private or public sector project. Use this for reporting and AutoAccounting purposes.

See Also

Project Statuses: page 16 – 164
Creating a New Project from a Project Template or Existing Project: page 2 – 31
Project Templates: page 2 – 15
This section describes the fields you can enter when you create new tasks in the Tasks window. For more information about options you specify at the task level, see: Project and Task Options: page 2 – 38.

As you create tasks, Oracle Projects defaults values from the project or the parent task to the new task. A top task accepts default values from its owning project. In addition, a new subtask accepts default values from its owning parent task.

If you modify project attributes, Oracle Projects does not change the default task information for existing tasks. In addition, if you modify task attributes, Oracle Projects does not change the default task information for lowest tasks. However, new top or lowest tasks you subsequently create inherit the new default information.

The following task details default from the project to any new top or child tasks:

- Organization
- Start date
- Completion date
- Service type
  - For top tasks, this defaults from project type
  - For sub tasks, this defaults from the parent task
- Task manager
  - No default for top tasks
• Work Site
  – For top tasks, this defaults to the customer work site if only one customer
  – For sub tasks, this defaults from the parent task
• Cost burden schedule
• Capitalizable indicator (for capital projects only)
  – For top tasks, this defaults to capitalizable
  – For sub tasks, this defaults from the parent task
• Billable indicator (for contract projects only)
  – For top tasks, this defaults to billable
  – For sub tasks, this defaults from the parent task
• Billing schedules and discounts (for contract projects only)

Task Number

Unique identification number of the task within the project. You can enter a numeric or alphanumeric value.

For audit trail purposes, you cannot modify a task number after you create customer invoices for the project, or charge expenditure items, requisitions, purchase orders, or supplier invoices to the project.

**Suggestion:** Oracle Projects sorts your WBS by the task number within a WBS level, so ensure that your numbering methods reflect an organized WBS. See: Set Up a Project Work Breakdown Structure: page 2 – 2.

Task Name

A short, descriptive name of the task. You can use the same task name many times within a project.

Start Date and Completion Date

The duration of the task. You can leave both dates or just the end date blank; you must enter a start date to enter a completion date. The task dates must be within the project dates and the dates of the parent task. You cannot charge an expenditure item whose date falls outside the task dates to that task. These dates are defaulted from the project for top tasks and the parent task for subtasks.
**Task Manager**

The employee responsible for managing this task.

**Organization**

The organization that manages the task. You can use the organization for reporting and AutoAccounting. This value is defaulted from the project organization; the task organization can be different from the project organization. You can choose any organization that is identified as a project or task owning organization based on the Project/Task Organization Type you set up in the Implementation Options form.

For audit trail purposes, there are controls over when you can change a task organization. See: Changing the Owning Organization: page 2–8.

**Service Type**

The type of work performed on this task. You use this value for reporting and AutoAccounting. This value is defaulted from the project type of the project.

**Allow Charges**

This check box controls whether to allow new expenditure items to be charged to a task. You can only enter expenditure items at the lowest task. The default is to allow charges for all new tasks. You can only allow charges for lowest tasks. Parent tasks are not chargeable. Uncheck this check box if you want to prevent new charges to this task. Oracle Projects automatically unchecks the check box for a task when you create a child task for it. See: Determining if an Item is Chargeable: page 4–61.

**Capitalizable**

This check box controls whether the expenditure items you charge to the task are eligible for capitalization. The capitalizable indicator is applicable for capital projects only. See: Specifying Capitalizability of Capital Project WBS Levels: page 6–9.
Billable

This check box controls whether the expenditure items you charge to the task are eligible for revenue accrual and billing. The billable indicator is applicable for contract projects only. See: Billing for Contract Projects: page 7 – 2 and Determining if an Item is Billable: page 4 – 63.

Location

The customer work site address where you perform a task. You can select any active, ship–to site defined for a project customer. Oracle Projects uses the work site when determining the ship–to site for taxing of project invoices on contract projects.

See Also

Entering Tasks (WBS) for a Project: page 2 – 35

Project and Task Options: page 2 – 38
Project Templates

You can easily enter a project in one simple flow by copying a project template or another project, and changing specific values using the Quick Entry feature. You can create new projects quickly and accurately by copying them from project templates that you define. Project templates predefine the most commonly used options for projects that you typically create.

You can set up any kind of project as a template, and define different combinations of default project options for each template. You can create a template for use across the company or many templates for each office in your company. You can use Quick Entry to enter key values that change for each new project. A project template includes the following elements:

- Basic project information
- Work breakdown structure (WBS)
- Agreement and funding (optional)
- Project and task options, including key members, classifications, transaction controls, and any other project and task options (optional)
- Budgets (optional)
- Quick Entry fields which specify fields to enter for the new project when creating it from a template
- Project Option controls which list the project options to display for new projects created from a template

Note: In a multi–organization environment, project templates belong to only one operating unit. Project templates can only be maintained and copied within an operating unit. However, project template numbers are unique across operating units. A project template number cannot duplicate any project or project template number within the Oracle Projects installation.

Project Template Design Considerations

Before you define project templates for your company, consider the following ideas.

- You must create at least one project template for every project type class that your company uses. All projects originate from a template. You cannot change the project type class when you copy a project from a template.
Suggestion: Oracle Projects allows you to change a project’s project type, as long as the new type belongs to the project class assigned to the project (See: Changing the Project Type of a Project: page 2–33.) However, you may find it most efficient to create a project template for each project type that your company uses, so that you can set up the appropriate parameters for each project type in each template.

- Use a numbering and/or naming convention for your templates so it is easy to identify the purpose and definition of each one.

Note: Project templates are always numbered manually. The Project Numbering implementation option, which determines whether projects are numbered automatically or manually, does not affect numbering of project templates.

- Define typical work breakdown structures and task durations for common projects. Consider the task numbering, task names, task duration, service types, and managing organizations. See: Overview of Projects and Tasks: page 2–2

- If you are going to associate the project template with an agreement template, you must enter a customer in the customer project option.

- If you do not want the task organizations to change when you copy the project template, set the project organization to an organization that is not used as a task organization. See: Project and Task Organizations: page 2–21

- Use Quick Entry fields for Key Members and Classifications when these values usually change for each new project

- If you want to maintain key members and classifications in your templates, you must define enough templates for each combination of key member and classification, and for the rest of the project template definition. Consider the amount of maintenance required for each template before you create them

- Determine the appropriate project and task options for each template to simplify project entry and maintenance

- Determine who can create templates in your company. Any active template can be used throughout the company

Suggestion: If your company does not want to use predefined templates, you can set up one template for each project type that everyone can use. You should enable all project and task options that are appropriate to the project type for this skeleton template. Do not define default values, other than the
minimum required fields. See: Specifying Project and Task Options for a Template: page 2 – 27.

See Also

Creating a Project Template: page 2 – 28
Quick Entry: page 2 – 17
Using Project Templates and Quick Entry: page 2 – 19
Specifying Project and Task Options for a Template: page 2 – 27

Quick Entry

If you create a new project by copying a template or another project, you use Quick Entry to enter project information that commonly changes between projects in a single window. When you use Quick Entry, you override the values you defined for the project template. If you copy from a project that was created from a template, Oracle Projects uses the Quick Entry fields from the source template for your new project.
You can set up the following Quick Entry fields:

- Project Number
- Project Name
- Project Start Date
- Project Completion Date
- Project Description
- Project Status
- Public Sector Indicator
- Organization
- Customer Name

**Note:** You should have a primary bill to and ship to address for a customer to use the customer in Quick Entry. If you enter the name of a customer that does not have an active primary bill–to or ship–to site, then Oracle Projects creates the project without a project customer. See: Project Customers in Project Templates: page 2–25.

- Key Members (by project role type)
- Project Classifications (by class category)
- Distribution Rule (for contract projects only)

Values you enter in Quick Entry fields override template defaults. Quick Entry fields you leave blank do not override template defaults, except for the following fields:

- Customer Name
- Key Members
- Project Classifications

Table 2–2 explains how you can use Quick Entry to enter values for specified fields that differ from the predefined template.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry Fields</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ABC</td>
<td>Name: XYZ</td>
<td>Name: XYZ</td>
</tr>
<tr>
<td>Org: Info Services</td>
<td>Org: Data Systems</td>
<td>Org: Data Systems</td>
</tr>
</tbody>
</table>

Table 2–2 (Page 1 of 2)
Using Project Templates and Quick Entry

This section describes how specific values are set for new projects and tasks based on the template definition and the values that you enter in Quick Entry. Use the template definition to define project information that does not typically change for each new project created from the template. Use Quick Entry fields to enter values that differ from the project template defaults.

Start Date and Completion Date in Project Templates

You can set up a default start and completion date for your project templates to reflect the typical duration of different kinds of projects and tasks. Use Quick Entry to enter the actual start date and completion date of the project. Oracle Projects uses the start and completion dates you enter, and the start and completion dates for the tasks in the template to determine the new task dates. In other words, Oracle
Projects uses Quick Entry start and completion dates you enter and adjusts the task dates accordingly.

For example, if you enter a project start date which is ninety days later than the template start date, Oracle Projects adjusts the new project’s task start and completion dates forward ninety days as well. If the resulting start or completion dates are later than the project completion date, Oracle Projects sets the start and/or completion date of those tasks to the project completion date. Thus, Oracle Projects ensures that the task dates remain within the new project’s effective date range.

**Suggestion:** If you use templates with durations, do not allow entry of the project completion date in Quick Entry without entry of start date.

Oracle Projects shifts the effective dates of the project level options by the number of days between the start date in the project template and the start date that you enter. It shifts the effective dates of the task level options by the number of days between the new task start date and the start date of the task in the project template.

If you do not enter start and completion dates in Quick Entry fields, Oracle Projects creates the new project and its tasks with the same dates as the project template.

**Quick Entry Date Shift Examples**

**Example 1: Same project and task duration**

In Example 1, Oracle Projects maintains the duration of the project and tasks in the template.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>MAY 01</td>
<td>Start Date JUN 01</td>
</tr>
<tr>
<td>Project Completion</td>
<td>MAY 31</td>
<td>Project Completion JUL 01</td>
</tr>
<tr>
<td>Task Start</td>
<td>MAY 02</td>
<td>Task Start JUN 02</td>
</tr>
<tr>
<td>Task Completion</td>
<td>MAY 31</td>
<td>Task Completion JUL 01</td>
</tr>
<tr>
<td>Key Member Effective</td>
<td>MAY 01</td>
<td>Key Member Effective JUN 01</td>
</tr>
</tbody>
</table>

Table 2 – 3 (Page 1 of 1) Example 1
Example 2: Shorter project duration

In Example 2, the new project duration is shorter (30 days) than the template duration (31 days). The task duration is shortened to 29 days to fall within the project dates.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>MAY 01</td>
<td>Project Start</td>
</tr>
<tr>
<td>Project Completion</td>
<td>MAY 31</td>
<td>Project Completion</td>
</tr>
<tr>
<td>Task Start</td>
<td>MAY 02</td>
<td>Task Start</td>
</tr>
<tr>
<td>Task Completion</td>
<td>MAY 31</td>
<td>Task Completion</td>
</tr>
<tr>
<td>Key Member Effective</td>
<td>MAY 01</td>
<td>Key Member Effective</td>
</tr>
</tbody>
</table>

Table 2 – 4 (Page 1 of 1) Example 2

Example 3: Shorter project and task duration

In Example 3, the new project duration (15 days) is shorter than the template duration (31 days), and the task duration (30 days) is cut short (to 14 days) to fall within the project dates.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>MAY 01</td>
<td>Project Start</td>
</tr>
<tr>
<td>Project Completion</td>
<td>MAY 31</td>
<td>Project Completion</td>
</tr>
<tr>
<td>Task Start</td>
<td>MAY 02</td>
<td>Task Start</td>
</tr>
<tr>
<td>Task Completion</td>
<td>MAY 31</td>
<td>Task Completion</td>
</tr>
</tbody>
</table>

Table 2 – 5 (Page 1 of 1) Example 3

Project and Task Organizations in Project Templates

You can create project templates to reflect the organizations that are typically responsible for the project and its different tasks.

When you specify an organization for a new project using Quick Entry, Oracle Projects assigns this new organization to any tasks originally assigned to the same organization as the project organization in the template. All tasks that are by default managed by a different
organization than the project organization in the template retain that managing organization in the new project.

In Table 2 – 6, Oracle Projects updates the task organizations in the new project, based on whether you accept the template default or enter the Quick Entry field. The organization for Task 2 changes because its managing organization is the same as the project organization in the template, and you changed the organization for the new project.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry Fields</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ABC</td>
<td>Name: XYZ</td>
<td>Name: XYZ</td>
</tr>
<tr>
<td>Org: Info Services</td>
<td>Org: Data Systems</td>
<td>Org: Data Systems</td>
</tr>
<tr>
<td>1 Risk</td>
<td>1 Risk</td>
<td></td>
</tr>
<tr>
<td>1.1 Risk</td>
<td>1.1 Risk</td>
<td></td>
</tr>
<tr>
<td>1.2 Risk</td>
<td>1.2 Risk</td>
<td></td>
</tr>
<tr>
<td>2 Info Services</td>
<td>2 Data Systems</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 – 6 (Page 1 of 1)

**Key Members in Project Templates**

The key member Quick Entry field overrides all key members defined in the template for a given project role type. If you use a project role type with a key member Quick Entry field, the key members you entered in the template for that role type are not copied to the new project.

The examples below illustrate various ways to define key members in your templates and Quick Entry fields.

**Example 1: Use template definition and Quick Entry field**

In Table 2 – 7, you define the role type of **Coordinator** in the template and **Project Manager** in the Quick Entry field.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry Fields</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ABC</td>
<td>Name: XYZ</td>
<td>Name: XYZ</td>
</tr>
<tr>
<td>Key Members:</td>
<td>Key Members:</td>
<td>Key Members:</td>
</tr>
<tr>
<td>Coordinator: Smith</td>
<td>Project Mgr: Gray</td>
<td>Project Mgr: Gray</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coordinator: Smith</td>
</tr>
</tbody>
</table>

Table 2 – 7 (Page 1 of 1)
Example 2: Override key member in template with Quick Entry field

In Table 2 – 8, you define the Coordinator role type as a key member in the template and a Quick Entry field. The key member you enter in the Quick Entry field overrides the key member you define in the template for that role type, even if you leave the Quick Entry field blank. In this case, Oracle Projects creates the new project without a Coordinator.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry Fields</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ABC</td>
<td>Name: XYZ</td>
<td>Name: XYZ</td>
</tr>
<tr>
<td>Key Members:</td>
<td>Key Members:</td>
<td>Key Members:</td>
</tr>
<tr>
<td>Coordinator:</td>
<td>Project Mgr:</td>
<td>Project Mgr:</td>
</tr>
<tr>
<td>Smith</td>
<td>Gray</td>
<td>Gray</td>
</tr>
</tbody>
</table>

Table 2 – 8 (Page 1 of 1)

Example 3: Use a role type more than once in Quick Entry

You can allow entry of more than one key member per role type in Quick Entry fields for all role types except Project Manager. You can enter only one project manager for a project.

In Table 2 – 9, you enter two key members with the same role type (Technical Lead).

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry Fields</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ABC</td>
<td>Name: XYZ</td>
<td>Name: XYZ</td>
</tr>
<tr>
<td>Key Members:</td>
<td>Key Members:</td>
<td>Key Members:</td>
</tr>
<tr>
<td>Project Mgr:</td>
<td>Project Mgr:</td>
<td>Project Mgr:</td>
</tr>
<tr>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Technical Lead:</td>
<td>Technical Lead:</td>
<td>Technical Lead:</td>
</tr>
<tr>
<td>Marlin</td>
<td>Marlin</td>
<td>Marlin</td>
</tr>
<tr>
<td>Technical Lead:</td>
<td>Technical Lead:</td>
<td>Technical Lead:</td>
</tr>
<tr>
<td>Jones</td>
<td>Jones</td>
<td>Jones</td>
</tr>
</tbody>
</table>

Table 2 – 9 (Page 1 of 1)

Project Classifications in Project Templates

The classification you enter in the Quick Entry field overrides all project classifications you define in the template for a given class category. If you use a class category with a classification Quick Entry field, the project classifications you entered in the template for that class category are not copied to the new project.

The examples below illustrate various ways to define project classifications in your templates and Quick Entry fields.
Example 1: Use template definition and Quick Entry field

In Table 2–10, you define the class category *Market Sector* in the template and *Funding Source* in Quick Entry fields.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry Fields</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ABC</td>
<td>Name: XYZ</td>
<td>Name: XYZ</td>
</tr>
<tr>
<td>Classification:</td>
<td>Classification:</td>
<td>Classification:</td>
</tr>
<tr>
<td>Market Sector:</td>
<td>Funding Source:</td>
<td>Market Sector:</td>
</tr>
<tr>
<td>Risk</td>
<td>Private</td>
<td>Risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Funding Source:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
</tr>
</tbody>
</table>

Table 2–10 (Page 1 of 1)

Example 2: Override classification in template with Quick Entry field

In Table 2–11, you define a classification for the *Market Sector* class category in the template and a Quick Entry field. The classification you enter in the Quick Entry overrides the classification you define in the template for that class category, even if you leave the Quick Entry field blank. In this case, Oracle Projects creates the new project without a *Market Sector* classification.

<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry Fields</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ABC</td>
<td>Name: XYZ</td>
<td>Name: XYZ</td>
</tr>
<tr>
<td>Classification:</td>
<td>Classification:</td>
<td>Classification:</td>
</tr>
<tr>
<td>Market Sector:</td>
<td>Funding Source:</td>
<td>Market Sector:</td>
</tr>
<tr>
<td>Risk</td>
<td>Private</td>
<td>Risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Funding Source:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
</tr>
</tbody>
</table>

Table 2–11 (Page 1 of 1)

Example 3: Use a class category more than once in Quick Entry

You can allow entry of more than one classification for a class category if you define the class category to allow more than one code per project.

In Table 2–12, you enter two classifications with the class category (*Lead Source*).
<table>
<thead>
<tr>
<th>Project Template</th>
<th>Quick Entry Fields</th>
<th>New Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ABC</td>
<td>Name: XYZ</td>
<td>Name: XYZ</td>
</tr>
<tr>
<td>Classification:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Sector:</td>
<td>Risk</td>
<td></td>
</tr>
<tr>
<td>Funding Source:</td>
<td>Private</td>
<td></td>
</tr>
<tr>
<td>Lead Source:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead Source:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding Source:</td>
<td>Private</td>
<td></td>
</tr>
<tr>
<td>Market Sector:</td>
<td>Risk</td>
<td></td>
</tr>
<tr>
<td>Lead Source:</td>
<td>Mailing</td>
<td></td>
</tr>
<tr>
<td>Lead Source:</td>
<td>Seminar</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 – 12 (Page 1 of 1)

**Project Customers in Project Templates**

If you use customer as a Quick Entry field, Oracle Projects does not copy the customers in the template to the new project. If you do not include customer as a Quick Entry field, Oracle Projects copies the customers from the source template to the new project. You can enter only one customer for a project using Quick Entry.

When you specify a value for the customer name in Quick Entry, Oracle Projects creates a project customer with a contribution of 100% and the customer relationship you specified during Quick Entry setup. For contract projects, Oracle Projects sets the bill site and work site of the project customer to the customer’s primary bill–to site and ship–to site, respectively. In addition, Oracle Projects creates a billing contact based on the contact associated with the active, primary bill–to site, and a shipping contact based on the contact associated with the active, primary ship–to site.

If the customer does not have an active, primary bill–to or ship–to site, then the customer validation will fail and you must enter another customer or leave the override customer field blank in order to create the project. If the customer does not have a primary bill–to contact, a warning message will be displayed, but the project will still be created.

You use the Setup, Customer window within Oracle Projects to define an active, primary bill–to and ship–to site, as well as a bill–to contact, for your customers. You do not have to go to customer setup in Oracle Receivables to create this data. See: Customers Oracle Receivables User’s Guide.
Defining Quick Entry Fields

As part of a project template definition setup, you can choose which Quick Entry fields you want to define. Oracle Projects prompts you to enter information in these Quick Entry fields when you create a new project from a template. Choose Quick Entry fields for project information you want to enter (instead of accepting the template default) each time you create a project. Quick Entry fields appear in the Quick Entry window. For each Quick Entry field, you can specify the following:

Order: Enter a number to indicate the sequence in which you want the Quick Entry fields to appear.

Field name: Choose the fields you want to appear in the Quick Entry window when you create a new project.

Specification: You enter a specification for the following field names:

- Key Member: Select the project role type to use when creating the key member
- Classification: Select the class category to use when creating the classification
- Customer Name: Select the customer relationship to use when creating the project customer

Prompt: You can enter a field name that is different from the predefined field name to display when you use Quick Entry.

Required: Choose whether you want to require entry for the Quick Entry field.

Oracle Projects automatically includes Project Name and Project Number as required Quick Entry fields if you use manual project numbering.

To define Quick Entry fields:

- Enter or find your template in the Projects, Templates window, and choose Setup Quick Entry. Enter or modify your Quick Entry fields.
If you modify the Quick Entry fields for an existing template, Oracle Projects uses your updated Quick Entry fields for new projects you create from the template or from projects originally created from that template.

See Also

- Project Templates: page 2 – 15
- Quick Entry: page 2 – 17
- Creating a Project Template: page 2 – 28

Specifying Project and Task Options for a Template

You can control which project and task options to display for projects based on the template you use to create the new project. You choose to hide or display options for each template during template setup. For example, if your company never uses Organization Overrides, or if you do not want employees to override options for certain projects, you can hide these options for one or more templates.

You choose which options you want to hide. When you choose to hide an option, Oracle Projects hides it at both the project and task levels (for those options available at both levels).

When you select options to display for a project template, you must ensure that the template displays any options that you want project users to view and enter. You also can enter data for a project option in a template that does not appear on the new project. In this case, you cannot view or change this information in any project created from this template, unless you query the project in the Projects, Templates Summary window (Setup, Projects, Project Templates from the navigator window).

You can change project options for a template at any time. If you modify the project options to display for a template, Oracle Projects reflects these changes when you view the options for projects created from that template. In addition, the updated template definition applies to all new projects you create from this template.
To specify project and task options for a template:

1. Enter or find your template in the Project, Templates Summary window (Setup, Projects, Project Templates from the navigator window) and choose Open.
2. In the Options region, check the Show box to display or hide the appropriate options.
   - You must hide project options that are not appropriate for the project type class. For templates using an indirect or contract project type, hide the Asset Information options. For templates using an indirect or capital project type, hide the Billing Information and Bill Rates and Overrides option.
   - Oracle Projects groups some of the options into a simple two level hierarchy. If an option has sub-options, you need to disable each options at all levels. If you hide all of the child options, you must also hide the parent option.

See Also

Creating a Project Template: page 2 – 28
Updating a Project Template: page 2 – 30

Creating a Project Template

You can create a project template using two methods:
   - You can manually enter project options for a new project template
   - You can copy a project definition from an existing project or template

Prerequisites

- Set up your Project Types. See: Project Types: page 16 – 177.


Set up your Credit Types (optional). See: Credit Types: page 16 – 142.

To create a new template:

1. Navigate to the Setup Project Templates form.
2. Choose New from the Find Projects window or from the Project, Templates Summary window.
3. Enter the basic project template information, including number, name, organization, and project type in the Projects, Templates window.
4. Set up the appropriate project options for the template by choosing which options to display or hide. See: Specifying Project and Task Options for a Template: page 2 – 27.
6. Enter or modify tasks for the template. Oracle Projects automatically creates one default task for the template. See: Entering Tasks (WBS) for a Project: page 2 – 35.
7. Enter or modify the appropriate project and task options. See: Project and Task Options: page 2 – 38.
9. Save your work.

To copy from an existing template or project:

Find the project or template you want to copy, and choose Copy. Modify the copied template definition if necessary. See: Creating a New Project from a Project Template or Existing Project: page 2 – 31.
Updating a Project Template

You can update a project template at any time. All changes to a project template affect projects that are created from the template after the changes are made. The following changes affect projects that were created from the template before the changes were made:

- **Project Option Controls**
  If you change the project option controls of a template, then the Projects, Templates window for existing projects created from the template displays the new set of options.

- **Quick Entry Fields**
  If you change quick entry fields for a template, the new set of quick entry fields are displayed when you create a new project by copying a project which was created from the template.

**To update a project template:**
- Find the project template that you want to update in the Project Templates form and choose Open. Update the project template definition as necessary.

Disabling a Project Template

You can disable a project template from future use by changing the template effective dates. You may want to disable a template if your company policies have changed and you need to create new templates to replace the existing ones.

You can reinstate a disabled project template at any time by changing the effective dates.

Any projects or templates previously created from a template that is now disabled continue to use the Quick Entry fields and project options as defined in the project template.

**To disable a project template:**
- Find the project template that you want to disable in the Project Templates form. Choose Open. Set the Template Effective Dates to the dates during which the template is no longer available for use.
Project Entry

Creating a New Project from a Project Template or Existing Project

When you create a project from a template or another project, Oracle Projects copies the project, its work breakdown structure, and all of the project and task options to the new project. It also copies the budget amounts from the source template or project to the new project’s budget.

If you copy an existing capital project, Oracle Projects copies all the asset assignments and most asset information to your new capital project. Oracle Projects does not copy the following asset information to your project: Asset Number, Asset Location, Employee Asset Assigned to, and Actual Date Placed in Service. Oracle Projects shifts the Estimated In Service Date by the number of days between the start date in the project template and the start date that you enter.

If you copy from a template with an agreement, funding, and baselined revenue and cost budget, Oracle Projects copies the agreement, funding, baselined revenue, and baselined cost budgets to the new project.
If you copy a project from an existing project that has an attachment, the attachment is copied to the new project. If you copy an existing capital project, assets associated with the existing project (and any attachments to the assets) will be copied to the new capital project. See: Attachments in Oracle Projects: page E – 2.

Oracle Projects does not copy any transactions charged to the source project to the new project; these transactions include expenditure items, requisitions, purchase orders, supplier invoices, and billing events (contract projects).

You can only copy from templates which are effective as of the current date.

**Prerequisites**

- Set up your Project Templates. See: Creating a Project Template: page 2 – 28.

**To create a new project from a template or an existing project:**

1. Navigate to the Projects window.
2. In the Find Projects window, enter your search criteria to find the template or project that you want to copy.
3. Choose the template or project that you want to copy in the Project, Templates Summary window. Choose Open if you want to review the template or project before you copy it.
4. Choose the Copy To button to copy the selected template or project definition to your new project.
5. In the Project Quick Entry window, enter values for the required fields and any appropriate optional fields.

When copying from existing projects, Oracle Projects prompts you to enter the Quick Entry fields associated with the source template of that project.

**Note:** When entering dates, such as Start Date and End Date, in the Quick Entry window, you must either use the format dd–mmm–yy or dd–mmm–yyyy, or select the date from the pull–down calendar.

6. Choose OK.
7. Modify the new project definition if necessary. See: Project and Task Options: page 2 – 38.
Project Status of a New Project

When you create a project from a template or another project, the status of the new project you create is determined as follows:

- If the status of the existing project or template is a valid starting status, then its project status is copied to the new project.
- If the status of the existing project or template is not a valid starting status, then the default starting status for the project’s project type is the starting status of the new project.


Changing the Project Type of a Project

You can change the project type of a project if the following requirements are met:

- The new project type belongs to the same project type class as the current project type.
- The project does not have any cost distribution lines.
- The project does not have any draft revenue or draft invoice items.

If the new project type’s cost burden schedule differs from that of the project type you are changing from, the following update will take place:

- If any tasks exist with a cost burden schedule matching the cost burden schedule of the project type before the change, those tasks will be updated to use the cost burden schedule of the new project type.
To change the project type:
1. Navigate to the Project, Templates window for the project.
2. Select the new project type.
3. Save the change. (If you do not save the change now, the tasks will be locked until you either save or cancel the change.)

Deleting a Project

Typically, you want to delete a project if you mistakenly create it, or use the wrong template.

You cannot delete a project if you have performed any of the following for that project:
- Charged transactions
- Baselined a budget
- Allocated funding (for contract projects)
- Created billing events (for contract projects)

If you cannot delete the project from the system due to the constraints above, you can disable the project by preventing future charges to it.

To delete a project:

- Navigate to the Projects window, find the project you want to delete, and choose Edit, Delete Row from the menu or the toolbar.

To disable a project you cannot delete:

1. Transfer all transactions to a new project. See: Transferring Expenditure Items: page 4 – 47.
2. Change the project status or the start and completion dates to prevent new charges to the project. See: Project Statuses: page 16 – 164.
3. Close the project to prevent new charges, and to prevent revenue accrual and invoicing for the project.

Attention: You must process any revenue and invoices for the project before you can close the project.
Entering Tasks (WBS) for a Project

When you create a project from a project template or an existing project, Oracle Projects copies the work breakdown structure from the source project or template. When you create a project template, Oracle Project automatically creates one default task. You may want to alter this structure by creating a new top task to begin a new branch of the work breakdown structure, or by creating additional subtasks under an existing task.

Note: Ensure that your task numbering method accurately reflects an organized WBS. See: Setting Up a Project Work Breakdown Structure (WBS): page 2 – 2.

You cannot create subtasks for a task that has any of the following:

- Transactions charged to it
- Budget amounts (and the task is not a top task)
- Transaction controls
- Burden schedule overrides
- Any billing overrides (for contract projects)
- Asset assignments (and the task is not a top task) (for capital projects)

To create a new task:

1. Navigate to the Projects window.
2. Find the project template or project for which you want to enter a task and choose Open.
3. Select the Tasks option from the Project options in the Projects, Template window.
4. If you have enabled the profile option PA_DISPLA Y_FIND_TASKS, the Tasks option will display the Find Tasks window. You can search for tasks in your project by Task Number, Task Name, Task Manager, Organization, Service Type, and WBS Level. Oracle Projects will display any task meeting the search criteria as well as all parent tasks leading back to the original top task. If you have not enabled the profile option, you can view this window by choosing the Find button or Query, Find.
5. In the Tasks window, do one of the following:
   - If you want to create a new top task, select a top task and choose Create Peer Task
• If you want to create a new child task, select the task for which you want to create a child task and choose Create Subtask

• If you want to create a peer task, select a task for which you want to create the peer task, or choose Edit, New Record from the menu to create a new record

6. Enter the basic task information, including task number, task name, and task description. Update any of the task details that default for the task if necessary. See: Tasks Window Reference: page 2 – 11.

7. Create additional top tasks or subtasks if necessary.

8. Create any task options as required for your project. See: Project and Task Options: page 2 – 38.

To review or change task details:

- In the Tasks window, choose the task you want to review or change. Choose Options to display the Task Options. Choose Task Detail in the Task Options window. Edit your task detail information.

To change the parent of a task:

- You cannot directly change the parent of a task to another task. You must create a new task under the new parent task and delete the old task under the old parent task. If you cannot delete the task, then update the task to not allow charges to prevent future charges to that task. If the old task has transactions charged to it, you may want to transfer the transactions to the new task.

See Also

Setting Up a Project Work Breakdown Structure (WBS): page 2 – 2

Control Functions by Projects and Tasks: page 2 – 5

Tasks Window Reference: page 2 – 11

Project and Task Options: page 2 – 38

Transaction Controls: page 4 – 57

Transferring Expenditure Items: page 4 – 47
Deleting a Task

You cannot delete a task if you have performed any of the following transaction on the task or any of its subtasks:

- Charged transactions
- Entered a budget amount
- Allocated funding (applies to top tasks)
- Created billing events (applies to top tasks) (for contract projects)

You cannot delete the only task on the project. Each project must have at least one task.

▶ To delete a task:

- Navigate to the Projects window, find the project whose task you want to delete. From the Tasks window, select the task you want to delete and choose Edit, Delete Row from the menu or the toolbar.
Project and Task Options

You specify project and task options to control how Oracle Projects processes your projects. The options are available at various levels of the project and work breakdown structure (WBS). Use the Projects and Tasks windows to specify project and task options.

You can control which options are available for project entry based on the project options that you define for your project templates.

Oracle Projects supports the following project and task options:

<table>
<thead>
<tr>
<th>Project/Task Options</th>
<th>Level at which entry is allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project</td>
</tr>
<tr>
<td>Classifications</td>
<td>✓</td>
</tr>
<tr>
<td>Customers and Contacts</td>
<td>✓</td>
</tr>
<tr>
<td>Key Members</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 2 – 13 (Page 1 of 2)
### Using Effective Dates to Enable or Disable Options

Oracle Projects allows you to specify when the various project options take effect using effective dates. For example, leave the Effective To field

<table>
<thead>
<tr>
<th>Project/Task Options</th>
<th>Project</th>
<th>Top Task</th>
<th>Mid Task</th>
<th>Lowest Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Overrides</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource List Assignments</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transaction Controls</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Burden Multipliers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costing Burden Schedule</td>
<td>✓ (Default)</td>
<td>✓ (Default)</td>
<td>✓ (Default)</td>
<td>✓</td>
</tr>
<tr>
<td>Burden Schedule Overrides</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Asset Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asset Information</td>
<td>(Capital Projects only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assets</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asset Assignments</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Billing Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing Information</td>
<td>(Contract Projects only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing Setup</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing Assignments</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Receivers</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bill Rates and Overrides</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Billing Schedules</td>
<td>✓ (Default)</td>
<td>✓ (Default)</td>
<td>✓ (Default)</td>
<td>✓</td>
</tr>
<tr>
<td>Employee Bill Rate Overrides</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Bill Rate Overrides</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor Multipliers</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Assignment Overrides</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Billing Title Overrides</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non–Labor Bill Rate Overrides</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 2 – 13 (Page 2 of 2)*
blank to specify that the option is effective indefinitely. Instead of deleting an option, disable it by changing the effective dates, so you can maintain the audit trail.

The default effective start date of the option is the start date of the project. If the project start date is blank, the default effective start date of the option is the system date. The same applies to task start dates and task level option effective start dates.

**Percent Completion**

Oracle Project Accounting, the predecessor product of Oracle Projects, provided in Versions 2.0, 3.0, and 3.1 the ability to enter a percent complete amount for each task as of a given date.


**See Also**

Entering Project and Task Options: page 2 – 59

Specifying Project and Task Options for a Template: page 2 – 27

**Project Classifications**

When specifying project classifications, you choose the class category for your project, then select one or more class codes for the class category. For example, you can specify a class category of Funding Source, and assign a class code of Federal to indicate project funding by a federal agency. You define class categories and codes when you set up project classifications.

You can specify classifications at the project level only.

**See Also**

Entering Project and Task Options: page 2 – 59
Customers and Contacts

You can specify the revenue and billing contribution of a paying customer for project work, define the relationship of a customer to this project, and enter other information about this project’s customer. The customer you choose must be an active customer in the Oracle Receivables database.

You must enter at least one customer on a contract project to fund the project and accrue revenue and invoice the customer. The contribution percentage must sum to 100%.

Customers and Contacts Window

You can enter the following customer information at the project level only:

**Project Customers**

**Name/Number:** You can choose any active customer in the Oracle Receivables customer database.

**Relationship:** The relationship between this customer and your project, such as Primary, or Non-Paying.

**Contribution:** The percentage of this project’s revenue and billing you expect this customer to contribute. If you enter more than one customer for this project, the total customer contributions towards revenue and billing must sum to 100% before you can accrue revenue or bill invoices against this project.

**Bill Site:** An address where you want to send this customer’s invoices. You can choose any active billing address defined for this customer in the Oracle Receivables database. You need to enter a bill site for any customer whose contribution is greater than zero percent.

**Work Site:** An address where work will be performed for this project. You can choose any active ship-to address defined for this customer in the Oracle Receivables database. You need to enter a work site for any customer having a billing contribution greater than zero percent.
Contacts

**Type:** A contact type, such as Billing or Shipping to identify a contact. You need to enter a billing contact for each paying customer on a contract project. You can enter only one billing contact for each customer associated with this project. The billing contact in Oracle Projects becomes the billing contact for contract projects’ invoices interfaced to Oracle Receivables.

**Name:** You can choose any active contact name defined for this customer in the Oracle Receivables database.

**Job Title:** The job title of the contact.

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See Also

- Entering Project and Task Options: page 2 – 59
- Project and Task Options: page 2 – 38
- Defining Project Customer Relationships: page 16 – 174
- Defining Contact Types: page 16 – 175
- Using Effective Dates to Enable and Disable Options: page 2 – 39

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Key Members

Key members are employees who are assigned a role on the project. You assign employees as key members who need access to:

- Enter or maintain project data in Oracle Projects
- View project expenditure information

Key members are a part of the project-based security in Oracle Projects; key members can view project expenditure detail transactions and update project information on any project to which they are assigned. The role that an employee is assigned also controls if they can view the labor costs on the project.

You can also enter key members for reporting purposes to easily distribute project reports to all responsible parties.
You do not need to assign each employee who is doing work on the project as a key member.

Oracle Projects requires that you enter a project manager for every project. You can only have one project manager at any given point in time; you can change the project manager over a period of time.

An employee can be assigned to more than one role on a project.

You enter key members at the project level only.

**Key Members Window**

When you choose this project option, you can enter the following key member information in the Key Member window:

- **Employee Name/Number:** The name and number of the key member.
- **Role:** The role of the key member, such as Project Manager.
- **Effective From and To Dates:** The date range this is effective. Leave the To Date blank if you want the key member to be active for this project indefinitely. To change a current key member’s role, you must enter an end date to the employee’s current role. On a new line, you can enter the employee’s new role.

**See Also**

- Entering Project and Task Options: page 2 – 59
- Project and Task Options: page 2 – 38
- Using Effective Dates to Enable and Disable Options: page 2 – 39
- Project Role Types: page 16 – 172
- Project–Based Security in Oracle Projects: page 15 – 2

**Organization Overrides**

You can reassign an employee’s, or an entire organization’s, costs and revenue to a different organization for a particular project. You can override all of the costs and revenue of an employee or organization, or
you can redirect costs and revenue to another organization only for the expenditure categories you specify.

When you enter an organization distribution override, the new organization you enter overrides the expenditure organization Oracle Projects uses in AutoAccounting and to determine the organization to use for burdening.

For AutoAccounting processing, if an organization distribution override exists, the destination organization of the override is substituted for the actual expenditure organization of affected items.

**Organization Overrides Window**

When you choose this project option, you can enter the following information in the Organization Overrides window:

- **Source Organization**: Enter the source organization whose costs and revenue you want to assign to a different organization.
- **Employee Name/Number**: Enter the name and number of the employee for this project whose costs and revenue you want to assign to a different organization.
- **Expenditure Category**: The expenditure category for the costs you want to assign to a different organization.
- **Destination Organization**: The new organization to which you want to reassign costs and revenue.

**See Also**

- Entering Project and Task Options: page 2 – 59
- Project and Task Options: page 2 – 38
- Using Effective Dates to Enable and Disable Options: page 2 – 39

**Resource List Assignments**

You assign resource lists to a project to indicate which resource lists you want to use for summarizing project actual amounts for project status tracking. When you open the Resource List Assignments window for a
project, Oracle Projects automatically displays the default resource list assignment from the project type, and you can enter additional assignments if necessary. Note that you can choose only one assignment as the drilldown default.

**Resource List Assignments Window**

When you choose this project option, you can enter the following information in the Default Resource List Assignment window:

**Resource List**: Choose the resource list you want to assign to this project. The resource list defaults from the project type.

**Use**: Indicates the purpose or use of the resource list, such as Status Reporting. Oracle Projects determines this value after you use a resource list in a budget.

**Drilldown Default**: Choose this check box if you want to automatically drilldown by resource list for project status tracking. If you enter additional assignments, only one assignment can be the drilldown default.

**See Also**

Resources and Resource Lists: page 16 – 155

Project Status Tracking: page 8 – 1

Summarizing Actuals and Commitments by Resource: page 8 – 19

Entering Project and Task Options: page 2 – 59

Project and Task Options: page 2 – 38

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**Transaction Controls**

You can use transaction controls to configure your projects and tasks to allow only charges that you expect or plan. You can also define what items are billable and non–billable on your projects.

You can configure transaction controls by the following:

- Expenditure Category
Expenditure Type
Employee
Non–Labor Resource

See Also

Transaction Controls: page 4 – 57
Entering Project and Task Options: page 2 – 59
Project and Task Options: page 2 – 38
Transaction Control Extensions: page 18 – 27

Costing Burden Schedules

You must specify a cost burden schedule if you specify that a project type is burdened. The costing burden schedule defaults from the project type.

To enter Costing Burden Schedules, you must select and expand Burden Multipliers from the list of options in the Projects, Templates window.

Cost Burden Schedules Window

When you choose this project option, you can enter the following information in the Costing Burden Schedules window:

**Burden Schedule:** Enter the burden schedule you want to use for this project or task.

**Fixed Date:** Enter a fixed date for the burden schedule if you want all expenditure items to be burdened with the multipliers in effect as of that date.

See Also

Assigning Standard Burden Schedules: page 5 – 25
Burden Schedule Overrides

You can override the standard burden schedule assigned to a task. When you enter a schedule override, you essentially create a new schedule containing revisions of negotiated multipliers for this task. Remember to compile your schedule before you use it for processing purposes.

You can override cost burden schedules only if the project type for this project allows overrides.

See Also

Override Burden Schedules: page 5 – 27
Entering Project and Task Options: page 2 – 59
Using Effective Dates to Enable and Disable Options: page 2 – 39
Project and Task Options: page 2 – 38

Assets

For a capital project, you define CIP assets that you plan to build during the course of the project work. You enter the asset information that Oracle Projects interfaces to Oracle Assets for capitalized asset lines.

When you choose this project option, you can enter asset information for the capital project in the Assets window. See: Assets Window Reference: page 6 – 12.

To enter asset information in the Assets window, you must select and expand Asset Information from the list of options in the Projects, Templates window.
Asset Assignments

For a capital project, you assign an asset to the project level or to several tasks to easily associate the CIP costs incurred on the task(s) to an asset that is being built. You can assign an asset at the project, top task, or lowest task level.

When you choose this project option, you must enter the Asset Name you want to assign to the project or task, and specify whether you want to use a Grouping Level for Specific Assets or Common Costs. See: Assigning Assets to Grouping Levels: page 6 – 19.

To enter asset assignments in the Asset Assignments window, you must select and expand Asset Information from the list of options in the Projects, Templates window.

Billing Setup

To enter billing setup information in the Billing Setup window, you must select and expand Billing Information from the list of options.
Revenue and Billing Information

When you enter revenue information for your project, you specify a revenue distribution rule for the revenue accrual method and the billing method for this project. When you enter billing information, you specify invoice formats, bill cycle days, and other invoicing information.

The project type determines which revenue distribution rule appears as the default value for this field, and which other revenue distribution rules you can choose from. Oracle Projects predefines the following revenue distribution rules:

<table>
<thead>
<tr>
<th>Revenue Distribution Rule</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost/Cost</td>
<td>Accrue revenue and bill using the ratio of actual cost to budgeted cost (percent spent).</td>
</tr>
<tr>
<td>Cost/Event</td>
<td>Accrue revenue using the ratio of actual cost to budgeted cost (percent spent), and bill based on events.</td>
</tr>
<tr>
<td>Cost/Work</td>
<td>Accrue revenue using the ratio of actual cost to budgeted cost (percent spent), and bill as work occurs.</td>
</tr>
<tr>
<td>Event/Event</td>
<td>Accrue revenue and bill based on events.</td>
</tr>
<tr>
<td>Event/Work</td>
<td>Accrue revenue based on events, and bill as work occurs.</td>
</tr>
<tr>
<td>Work/Event</td>
<td>Accrue revenue as work occurs, and bill based on events.</td>
</tr>
<tr>
<td>Work/Work</td>
<td>Accrue revenue and bill as work occurs.</td>
</tr>
</tbody>
</table>

The revenue distribution rule you enter determines how revenue is calculated and how bills are generated for this project.

**Note:** If you want to accrue revenue or generate invoices based on percent complete, you must use the Event/Event, Event/Work, or Work/Event revenue distribution rule. See: Percent Complete Revenue Accrual and Invoice Generation: page 7 – 69.
Invoice Formats

You can enter invoice formats for this project’s invoices. You should define values for these fields if you use as work occurs billing.

- You can enter a format for grouping labor items on this project’s labor invoice lines. You can accept the default format for this project type, or you can override this value and enter a preferred format.
- You can enter a format for grouping non-labor items on this project’s non-labor invoice lines. You can accept the default format for this project type, or you can override this value and enter a preferred format.

First Bill Offset Days

The number of days that elapse between the project start date and the date of the project’s first invoice. You can accept the default bill offset days, or override this value and enter a different number.

Billing Cycle

The billing cycle is the user-defined code that determines the next billing date for this project. You can accept the default cycle, or you can override this value and enter a different code. See: Billing Cycle: page 16 – 119.

Next Billing Date displays the next billing date on which the project is eligible for billing. The Next Billing Date is updated each time draft invoices for the project are released, cancelled, or deleted.

Retention

You can enter a retention invoice format and a retention percentage for this project.

Enter a format for this project’s retention invoice line description. If you do not use retention for this project, leave this field blank.

When you are ready to bill the retained amount as an event, clear this field.

Enter the percentage amount that you want to retain from invoices. If you do not use retention for this project, leave this field blank.

When you are ready to bill the retained amount as an event, clear this field.
Billing Assignments

Use the Billing Assignments option to assign billing extensions to automatically create revenue or billing events. You can assign billing extensions at the project or top task level only.

Billing Assignments Window

To enter billing assignments, you must select and expand Billing Information from the list of options in the Projects, Templates window. When you choose this option, you can enter the following information in the Billing Assignments window:

Name: Enter the name of the billing extension you want to use.
Amount: Enter the amount.
Percent: Enter the percent amount.
Active: Choose whether to enable this extension.

See Also

Entering Project and Task Options: page 2 – 59
Using Effective Dates to Enable and Disable Options: page 2 – 39
Project and Task Options: page 2 – 38
Credit Receivers

You can indicate which employees receive credit for a project. You can assign as many employees as you want to a particular credit type, as long as the total percent of credit allocated totals 100 percent. You can also assign one employee to as many types of credit as you want.

Depending on your configuration of Oracle Projects, you can either interface sales credit information to Oracle Receivables for project invoices, or use credit receivers in Oracle Projects for reporting purposes. If you want Oracle Receivables to validate salesperson and sales credit information you interface from Oracle Projects, you need to enable the Allow Sales Credits option in the Oracle Receivables Invoice Sources window for the predefined batch source of PROJECTS INVOICES. To verify that this option has been set correctly, navigate to the Oracle Projects Implementation Options window and view the options under Billing. PROJECTS INVOICES should appear in the Invoice Batch Source field.

Credit Receivers Window

To enter credit receivers, you must select and expand Billing Information from the list of options in the Projects, Templates window. When you enter credit receivers, you specify the following:

**Credit type:** Enter a credit type, such as Quota Credit. If your installation of Oracle Projects is configured to interface sales credit information to Oracle Receivables, then the credit type is validated against sales credit types in Oracle Order Entry. If Oracle Projects is not configured to interface sales credit information, this field is validated against credit types in Oracle Projects.

**Employee:** The employee you enter must be defined as a salesperson in Oracle Receivables to receive sales credit; the employee name and the salesperson name must match exactly.

**Credit %:** The amount of credit an employee receives for this credit type. The total percent amount for this credit type assigned to all employees for this project or task must equal 100 percent.

**Interface to AR:** Choose whether you want to interface the sales credit information to Oracle Receivables.

**Effective From/To:** Enter the date range the credit receiver is effective.
Standard Billing Schedules

You can enter standard burden schedules or standard bill rate schedules for a project only if the project uses burden schedule types or bill rate schedule types for labor or non–labor billing. The standard billing schedule defaults from the project type.

To enter a standard billing schedule:

1. Select and expand Bill Rates and Overrides from the list of options in the Projects, Templates window.
2. If you want to enter a Labor or Non–Labor billing schedule, you must choose whether to use a Bill Rate Schedule or a Burden Schedule.
3. If you want to enter a Bill Rate Schedule, enter the Organization, Schedule Name, Fixed Date, and Discount %.
4. If you want to use a Burden Rate Schedule, you can enter a Revenue and/or Invoice for this project. Enter the Fixed Date you want to freeze the schedule. When you enter a fixed date, Oracle Projects uses the burden multipliers effective as of the fixed date for this project. If you want to use the most current rates in the burden schedule for this project, leave this field blank. You can enter a fixed date for firm schedules only.
5. Save your work.

See Also

Bill Rate Schedules: page 16 – 125
Employee Bill Rate Overrides

You can override an employee’s standard bill rate for a project or task. When you override an employee’s standard bill rate, the new bill rate becomes the bill rate for the employee’s billing.

To enter employee bill rate overrides, you must select and expand Bill Rates and Overrides from the list of options in the Projects, Templates window.

You do not discount override bill rates, even if you specify a discount percentage.

When you override an employee’s bill rate, the new employee bill rate takes precedence over the following override you can define at the project level:

- Job bill rate override

In addition, the new employee bill rate takes precedence over the following information you can define at the task level:

- Job bill rate override
- Standard bill rate schedule
- Labor multiplier

See Also

Entering Project and Task Options: page 2 – 59
Project and Task Options: page 2 – 38
Using Effective Dates to Enable and Disable Options: page 2 – 39
Job Bill Rate Overrides

You can override a job’s standard bill rate for a project or lowest task. When you override a job’s standard bill rate, the new job bill rate becomes the job’s bill rate for this project or lowest task.

You do not discount override bill rates, even if you specify a discount percentage for this task.

When you override a job’s bill rate, the new job bill rate takes precedence over standard bill rates and labor multipliers you assign to this task. In addition the override takes precedence over any project job bill rate override.

Job Bill Rate Overrides Window

To enter job bill rate overrides, you must select and expand Bill Rates and Overrides from the list of options in the Projects, Templates window. When you enter credit receivers, you specify the following:

**Job Name:** Enter the name of the job whose bill rate you want to override.

**Rate:** Enter the new bill rate you want to use.

**Effective From/To:** Enter the date range the rate is effective.

See Also

Entering Project and Task Options: page 2 – 59

Project and Task Options: page 2 – 38

Using Effective Dates to Enable and Disable Options: page 2 – 39

Labor Multipliers

You use labor multipliers when you want to apply only one multiplier to raw labor cost for billing purposes. If you need to apply many multipliers to the raw cost for billing, use burden schedules or burden schedule overrides for revenue and invoicing to record the appropriate
multipliers. You can also use labor multipliers with standard burden schedules as explained below.

Oracle Projects calculates the revenue or bill amounts (or both) for this task’s labor items using the following formula for items based on bill rate schedules:

\[
\text{Revenue or Bill Amounts} = (\text{Labor Multiplier} \times \text{Raw Cost})
\]

Oracle Projects calculates the revenue or bill amounts (or both) for this task’s labor items using the following formula for items based on burden schedules:

\[
\text{Revenue or Bill Amounts} = \text{Burdened Amount} \times (1 + \text{Labor Multiplier})
\]

If no override revenue or invoice burden schedules exist, Oracle Projects uses the multiplier on top of the standard revenue and invoice burden schedule. Following is an example of use of the labor multiplier:

<table>
<thead>
<tr>
<th>Labor Raw Cost</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Multiplier (1.5)</td>
<td>1,500 (from standard burden schedule)</td>
</tr>
<tr>
<td>Total Burdened Labor</td>
<td>2,500</td>
</tr>
<tr>
<td>Negotiated Multiplier (1.0)</td>
<td>2,500 (from labor multiplier)</td>
</tr>
<tr>
<td>Final Burdened Labor</td>
<td>5,000</td>
</tr>
</tbody>
</table>

**Non–Labor Schedule**

You can override a non–labor standard bill rate for non–labor expenditure types and non–labor resources.

When you override a usage expenditure type, the override applies to all non–labor resources within that usage expenditure type.

When you override a non–labor resource within a usage expenditure type, the override applies to that particular non–labor resource only, and does not apply to other non–labor resources within that usage expenditure type.

Any non–labor bill rate override you enter takes precedence over non–labor bill rates or markups from your task’s standard non–labor bill rate schedules.

Any non–labor bill rate override you enter for this task takes precedence over any project non–labor bill rate override.
Labor Multipliers Window

To enter labor multipliers, you must select and expand Bill Rates and Overrides from the list of options in the Projects, Templates window. You specify the following information for this option:

**Multiplier:** Enter the labor multiplier you want to use for this project or lowest task.

**Effective From/To:** Enter the date range the labor multiplier is effective.

See Also

- Bill Rate Precedence for Non–Labor: page 7 – 31
- Entering Project and Task Options: page 2 – 59
- Project and Task Options: page 2 – 38
- Using Effective Dates to Enable and Disable Options: page 2 – 39

Job Assignment Overrides

You can override both an employee’s job assignment and an employee’s billing title for this project or lowest level task.

When you override an employee’s job assignment, the new job assignment determines bill rates for the employee’s billing on this project or lowest task (if this task uses job bill rates). You can choose any active job in the Oracle Applications database.

When you override an employee’s primary billing title, the new billing title appears on future invoices for this employee’s billing (if this project’s labor invoice format displays an employee billing title).

Any job assignment override you enter for this project or lowest task takes precedence over any project job assignment override.

Job Assignment Overrides Window

To override job assignments, you must select and expand Bill Rates and Overrides from the list of options in the Projects, Templates window. You specify the following information for this option:
Employee Name/Number: Enter the employee whose job or billing title you want to override.

Job Override: Enter the employee’s new job assignment.

Billing Title Override: Enter the employee’s new billing title.

Effective From/To: Enter the date range this override is effective.

See Also

Entering Project and Task Options: page 2 – 59
Project and Task Options: page 2 – 38
Using Effective Dates to Enable and Disable Options: page 2 – 39

Job Billing Title Overrides

You can override a job’s billing title for a project or lowest task. When you override a job’s billing title, the new job billing title appears on future invoices for this job’s billing on the project or lowest task (if this project’s labor invoice format displays a job billing title).

Job Bill Title Overrides Window

To override job billing titles, you must select and expand Bill Rates and Overrides from the list of options in the Projects, Templates window. You specify the following information for this option:

Job: Enter the job whose billing title you want to override.

Billing Title Override: Enter the job’s new billing title.

Effective From/To: Enter the date range this override is effective.

See Also

Entering Project and Task Options: page 2 – 59
Non–Labor Bill Rate Overrides

You can override a non–labor standard bill rate.

Non–Labor Bill Rate Overrides Window

To override non–labor bill rates, you must select and expand Bill Rates and Overrides from the list of options in the Projects, Templates window. You specify the following information for this option:

- **Expenditure Type:** Enter the expenditure type.
- **Non–Labor Resource:** Enter the non–labor resource whose bill rate you want to override.
- **Rate:** Enter the new non–labor bill rate.
- **Markup %:** Enter the percentage of markup for this rate.
- **Effective From/To:** Enter the date range this override is effective.

See Also

- Entering Project and Task Options: page 2 – 59
- Project and Task Options: page 2 – 38
- Using Effective Dates to Enable and Disable Options: page 2 – 39

Entering Project and Task Options

- **To enter a project or task option:**
  1. In the Projects window, find the project or task for which you want to enter one of the options and select the appropriate option.
For project level options, navigate to the Project, Template window, highlight the appropriate option, and choose Detail.

For task level options, navigate to the Tasks window, highlight the task for which you want to enter the option, and choose Options. The Task Options window appears. Select the option that you want to enter.

You can expand Burden Multipliers, Asset Information, Billing Information, and Bill Rates and Overrides from the list of options to access related options.

2. Enter the information for the option.
3. Save your work.

Available Options

You can choose from the following options:
Project Classifications: page 2 – 40
Customers and Contacts: page 2 – 41
Key Members: page 2 – 42
Organization Overrides: page 2 – 43
Resource List Assignments: page 2 – 44
Transaction Controls: page 4 – 57

Burden Multipliers:
Costing Burden Schedule: page 2 – 46
Burden Schedule Override: page 2 – 47

Asset Information:
Assets: page 2 – 47
Asset Assignments: page 2 – 48

Billing Information:
Billing Setup: page 2 – 48
Billing Assignments: page 2 – 51
Credit Receivers: page 2 – 52

Bill Rates and Overrides:
Standard Billing Schedules: page 2 – 53
Employee Bill Rate Overrides: page 2 – 54
Job Bill Rate Overrides: page 2 – 55
Labor Multipliers: page 2 – 55
Job Assignment Overrides: page 2 – 57
Job Billing Title Overrides: page 2 – 58
Non–Labor Bill Rate Overrides: page 2 – 59

See Also

Using Effective Dates to Enable and Disable Options: page 2 – 39
Mass Update Batches

Use the Mass Update Batches window to change the organization of multiple projects and tasks. The Mass Update window performs both of the following functions:

- Creates a batch for mass update of organization for projects and/or tasks.
- Initiates a process that updates the organization on all the projects and tasks specified in the batch. You can optionally mark expenditure items charged to the project or task for recalculation based on the new organization.

You can also run the update as a concurrent program by submitting a request to run the PRC: Process Mass Update Batches program.

Create Batch for Mass Update

You can use the following two methods, alone or in combination, to create a mass update batch:

- Generate lines for the batch based on selection criteria you enter.
- Enter each project and task.
To generate a mass update batch based on selection criteria:
1. Navigate to the Mass Update Batches window.
2. Enter a Batch Name, Description, and Effective Date for the batch.
3. In the Generate Detail Lines region of the window, enter the selection criteria to select the projects and tasks you want to update. See: Mass Update Batches Window Reference: page 2 – 63.
4. Choose **Generate Detail Lines** to generate the mass update batch lines.
5. If you want to review and/or revise the mass update batch, choose **Details**. See: Batch Lines Window Reference: page 2 – 65.

To generate a mass update batch by entering each project and task:
1. Navigate to the Mass Update Batches window.
2. Enter a Batch Name, Description, and Effective Date for the batch.
3. To enter batch lines in the Batch Lines window, choose **Details**.
4. For each batch line, enter a Project Name, Task Name (optional), New Value (new organization to be assigned), and Effective Date, and indicate whether the item should be marked for recalculation. See: Batch Lines Window Reference: page 2 – 65.

See Also

Organizations in Oracle Projects: page 15 – 5
Organizations Overview: page 16 – 34

Mass Update Batches Window Reference

**Batch Name.** Enter a unique name for the Mass Update Batch.

**Description.** Enter a unique, descriptive name for this batch.

**Status.** This field displays the status of the batch. It can have the following values:
- **Working.** The batch can be modified.
- **Submitted.** The batch has been submitted for update. You cannot change the batch.
• **Rejected.** The update process has rejected the batch. You can modify the batch to correct the errors, and resubmit the batch.

• **Completed.** All projects and tasks were updated successfully. You cannot modify the batch.

• **Processing.** The batch is currently being processed. You cannot modify the batch.

**Attribute.** The project and/or task attribute that you want to update. Currently, this field defaults to *Organization* and cannot be modified.

**Effective Date.** The date you enter in this field is used for two purposes:

  • The date used to select expenditure items for recalculation
  • The date when the batch will be eligible for processing

**Rejection Reason.** The reason that the batch was rejected. Following are the possible rejection reasons:

  • *At least one detail line was rejected for this batch.*
  • *Batch is not ready for processing due to the effective date.*
  • *The batch is not in Submitted status.*
  • *Internal SQL Error.*

**Processed By.** This field displays the name of the employee who last submitted the batch for update.

**Processed Date.** The date when the batch was last processed.

**Descriptive Flexfield.** Standard descriptive flexfield.

**Generate Detail Lines Region**

**From Project.** You can generate lines for a single project or a group of projects, depending on the criteria you enter:

  • **Project Name.** A single project will be selected.
  • **Managed By Organization.** All projects owned by the organization you enter will be selected.

**Task.** You can narrow the selection by entering task criteria:

  • **All.** All of the tasks for selected projects will be selected.
  • **None.** No tasks will be selected.
  • **Same Organization.** Tasks owned by the same organization entered under Managed By Organization will be selected.
**New Organization.** The new organization that will be assigned during the update process. This field is required for processing a mass update batch.

**Mark for Recalculation.** If this check box is checked, the selected transactions will be marked for recalculation.

**Buttons**

**Submit.** Changes the status of the batch from *Working* to *Submitted*. When a batch is in Submitted status, you cannot modify it. You cannot submit a batch unless it contains at least one detail line.

**Rework.** Returns a submitted batch to *Working* status.

**Update.** Runs the Batch Process for Mass Update online. This button is active only if the status of the batch is *Submitted*.

**Details.** Displays the Batch Lines window.

**Generate Detail Lines.** Generates the mass update batch detail lines based on the criteria specified in the Generate Detail Lines region.

**Batch Lines Window Reference**

The Batch Lines window displays all the detail lines for the batch. Use this window to enter new detail lines, or to modify them after you have entered them or after you have automatically generated them.

If your batch has been rejected, you can use this window to view the rejection reason for each rejected line. You can then correct the data or uncheck the Update check box.

**Project Name.** The name of the project for which you want to update the organization. Each detail line in the batch must be a unique project/task combination.

**Task Name.** The name of the task for which you want to update the organization. If you want to update the organization on the project, leave this field blank.

**Old Value.** This field displays the current organization that owns the project or task.

**New Value.** The new organization you want to assign to the project or task.

**Effective Date.** The effective date of the line. This value will default to the Effective Date you entered for the batch. You can override the default value.
**Update.** This check box indicates if a line will be processed when you run the update process for the batch. You can update this check box only if you have the security to update the specified project.

**Mark for Recalculation.** This check box indicates if the expenditure lines associated with the project or task will be marked for recalculation. You can update this check box only if you have the security to mark expenditure items for cost and revenue recalculation. See: Function Security in Oracle Projects: page C – 2.

**Rejected.** This check box is checked if the line was rejected during the latest update process.

**Rejection Reason.** For rejected lines, the reason the current line was rejected during the last update process.

---

### Processing a Mass Update Batch

You can process a mass update batch either online or as a concurrent program.

**To run the Mass Update Batch process online:**

1. Navigate to the Mass Update Batches window.
2. Choose **Update**.

**To run the Mass Update Batch process as a concurrent program:**

1. Navigate to the Submit Request window.
2. Select the **PRC: Process Mass Update Batches** process.
3. You can optionally select the batch that you wish to process. If you do not specify a batch, all eligible batches are processed.
4. Submit the process.

### Mass Update Batch Verifications

For each detail line in the batch, the Mass Update Batch process performs the several verifications before processing the line. If a detail line fails any of the verifications, the Rejected check box is checked and a Rejection Reason can be viewed for the record.

Following are the verifications that the Mass Update Batch process performs:
1. Verify that the Update check box is checked.
2. Verify that the project status is not Closed.
3. Verify that the submitter of the process has security to update the project.
4. Verify that the change specified for the line is allowed. This check includes a call to the Verify Organization Change client extension.
5. Update the organization of the project or task.
6. If the Mark for Recalculation check box is checked for the line, the process marks the related expenditure items for recalculation.

Updates

After all the batch lines have been processed, if any error has occurred during the processing, none of the updates are processed and the batch status is set to Rejected.

If no error occurs during the process, the updates are processed and the batch status is set to Completed. The Processed By, Processed Date, and Rejection Reason fields of the batch are updated.

Processing Errors

The following errors can occur during the Mass Update Batch process:

1. **The batch must have Submitted status in order to be processed.**
   
   This error can occur when the batch process is run as a concurrent program. It indicates that the status of the batch changed after the concurrent request was submitted.
   
   Solution: Reset the batch status to Submitted and submit another request to process the batch.

2. **This user is not yet registered as an employee.**
   
   The user who is running the batch process does not have an employee record. Contact your System Administrator to create an employee record for this use before continuing.

3. **You do not have permission to update this project.**
   
   You do not have permission to update the specified project on a detail line.

4. **The new organization is not allowed to create projects or tasks for the given project type class.**
The new organization is invalid for the organization change, because it is not set up to own projects with the specified project's project type class.

Solution: Enter a valid organization for the line, or uncheck the Update check box for the line.

5. **Project/Task Organization cannot be changed due to costed items/revenues/invoices.**
   
   The project/task organization of the project specified for the batch line cannot be changed because costed items, revenue, or invoices exist for the project or task.

6. **User–defined error messages.**

   You can build business rules in the Verify Organization Change Extension to determine whether the organization change is allowed, and to define error messages when the rules are violated.

**See Also**

- Verify Organization Change Extension: page 18–118
Percent Complete

Use the Percent Complete window to enter the percent complete for a project or task. Percent completion information is used for revenue accrual and billing, and for reporting purposes. Oracle Projects does not calculate project or task percent completion, but uses the percent complete amounts that you enter.

The Percent Complete window includes the following features:

- You can maintain percent complete information at all levels of the work breakdown structure (WBS), including at the project level.
- Percent complete history is maintained by the system.

In addition, as part of the project management integration, an API (application program interface) is available to maintain percent complete information. The interface is named UPDATE_PROGRESS. See: Activity Management Gateway: page 13 – 2.

Percent complete entries can be used in billing extensions. See: Designing Billing Extensions: page 18 – 66.

**To enter percent complete:**

1. Navigate to the Percent Complete window.
2. Enter the Project Number or Project Name of the project for which you want to enter percent complete information. Choose Find. The window displays the WBS for the project with the most recent percent complete entries.

3. Enter the following fields for any level of the WBS:
   - % Complete: Enter the percent complete. Your entry cannot be less than zero or larger than 100.
   - As of Date: You can enter the date directly, or select from the list of values, which is displayed in calendar format with the current date selected.
   - Comment: Optionally enter a comment for this percent complete entry.

4. Save your work.

See Also

Revenue Accrual and Invoice Generation Based on Percent Complete: page 7 – 69
This chapter describes how to manage budgets in Oracle Projects.
Overview of Project Budgets

A budget is the estimated cost or revenue for a project or task. You track project status and performance by comparing budgeted amounts to actuals using reports and Project Status Inquiry.

Project Budgeting Levels of Detail

You decide how to budget your project based on the level of detail you need to track. Each budget can have detailed or summary information in the following areas, as appropriate for each project.

- the WBS level at which you enter the budget
- whether the budget will be for the duration of the project or tasks, or time-phased by date range, GL period, PA Period
- whether you enter summary budget lines or budget lines categorized by resources
- which budget amounts you will enter for the budget. (For Cost Budgets, you can enter Quantity, Raw Cost, and Burdened Cost. For Revenue Budgets, you can enter Quantity and Revenue. Each Budget Entry Method may indicate user entry for some or all of the choices.)

The Budget Entry Method that you select when you enter a budget determines the level of detail for the budget in these four areas.

A more detailed budget allows you more detail in status tracking and exception analysis. A detailed budget requires more time and effort to plan, create, enter, and maintain the budget amounts, but can provide valuable insight into the status of your project.

Budgeting by Work Breakdown Structure

You can set up each budget for data entry at the following levels of your work breakdown structure:

- Project
- Top Task
- Lowest Task
- Top Tasks and Lowest Tasks
You can use this capability to set up different budget types at different levels of the work breakdown structure. For example, you may budget a detailed cost budget at the lowest task level, a summary cost budget at the project level, and a revenue budget at the project level.

If you select Top Tasks and Lowest Tasks, you can use a combination of top task and lowest tasks in the same budget. That is, you can set up some top tasks for budget entry at the top task level and other top tasks for budget entry at the lowest task level.

**Time–Phased Budgeting**

You can enter a budget for the duration of the project or tasks (also known as *budget at completion*), or you can enter *time–phased* budgets which contain budget amounts by time period. You can enter time–phased budgets at the project, top task, or lowest task levels by organization and then by expenditure category within that organization.

The Budget Entry Method selected for each budget determines the duration of the budget. A time–phased budget can be delineated by one of the following time periods:

- **PA Periods**: Established Oracle Projects periods
- **GL Periods**: Established Oracle General Ledger periods
- **Date Range**: User-defined date ranges with any start and end dates.

When reporting to–date amounts for project status tracking, the system automatically spreads the amounts that you entered by date range into PA periods using a straight line function based on the number of days in each PA period.

- **None (budget at completion)**

You can use different periods for different budget types. For example, you can keep a cost budget by PA Periods, a revenue budget by GL Periods, and a forecast cost budget for the duration of the project.

**Start and End Dates for Non–Time–Phased Budgets**

Before you can enter a non–time–phased budget, you must enter start and completion dates for the project and each task that will be budgeted. The start and end dates for the budget are automatically set to equal the start and completion dates of the project or task.
Summary vs. Categorized Budget Amounts

You can budget by summary amounts or by detail budget lines categorized by resource.

Uncategorized Budget Amounts (Summary Amounts)

Uncategorized budget amounts are summary amounts you enter at the work breakdown structure level for your budget.

If budgets are entered in summary amounts, one budget line is entered for the project or for each budgeted task (depending on the Budget Entry Method selected for the budget). This line may summarize a combination of labor, expenses, usages, and other costs.

Note: The figure in the Quantity column would be meaningless if it combined hours, miles, and dollars. Therefore, if budget lines are entered at the summary level, the UOM (unit of measure) displayed for the Quantity column is Hours, and you may enter the total hours, regardless of any miles or dollars that comprise the cost or revenue figures you enter. (Similarly, the summary totals in the Quantity column for budget lines entered in detail show only the total hours, and disregard quantities of miles or dollars that may comprise the total cost or revenue.)

Categorized Budget Amounts (Detail Amounts)

Categorized budgets are tracked by resource. Resources are categories of expenditures – the labor, services, equipment, and other amounts needed to track, complete, and account for project work.

You can choose to budget by different resources for different kinds of projects. For example, you can budget labor by employee for small research and development projects, and by organization for large design projects. You can also budget different budget types using different resources.

You select the resources you want to use in your project budget from the resource list you choose when you enter the draft.

See Also

Summarizing To–Date Budget Amounts: page 8 – 12
Examples of Budgets

Figure 3–1

Sample Budget: Case 1

<table>
<thead>
<tr>
<th>Category</th>
<th>Time Period 1</th>
<th>Time Period 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>$1,000</td>
<td>$1,000</td>
</tr>
<tr>
<td>Other</td>
<td>GL Period 1: $500</td>
<td>GL Period 2: $500</td>
</tr>
</tbody>
</table>

WBS Level: Lowest task
Categorized: Yes
Time–Phased: Yes (by GL Period)

Task Breakdown Structure Level

Budget Categories

Time Periods
Sample Budget: Case 2

<table>
<thead>
<tr>
<th>Work Breakdown Structure Level</th>
<th>Uncategorized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Total: $12,000</td>
<td></td>
</tr>
<tr>
<td>PA Period 1: $1,000</td>
<td></td>
</tr>
<tr>
<td>PA Period 2: $1,000</td>
<td></td>
</tr>
<tr>
<td>PA Period 3: $1,000</td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
<tr>
<td>PA Period 12: $1,000</td>
<td></td>
</tr>
</tbody>
</table>

WBS Level: Project
Categorized: No
Time-Phased: Yes (by PA Period)

Time Periods

PROJECT

TASK 1
  TASK 1.1
  TASK 1.2

TASK 2

TASK 3
Sample Budget: Case 3

- **WBS Level:** Top Task
- **Categorized:** Yes
- **Time-Phased:** No

### Budget

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Task Total:</td>
<td>$4,000</td>
</tr>
<tr>
<td>Labor</td>
<td>$2,000</td>
</tr>
<tr>
<td>Expenses</td>
<td>$1,000</td>
</tr>
<tr>
<td>Materials</td>
<td>$1,000</td>
</tr>
</tbody>
</table>

### Work Breakdown Structure Level

- **PROJECT**
  - TASK 1
    - TASK 1.1
    - TASK 1.2
  - TASK 2
  - TASK 3
See Also

Budget Entry: page 3 – 13
Define Budget Types: page 16 – 149
Budget Entry Methods: page 16 – 150
Resources and Resource Lists: page 16 – 155
Reviewing Project Status by Budget Type: page 8 – 5
Budget Security

Oracle Projects provides three levels of budget security:

- **Project Security**
  Controls which projects a user can select for budgeting and whether the user can update a budget. See Project and Labor Cost Security in Oracle Projects: page 15 – 2.

- **Function Security and Budget Line Source Security**
  - Function Security controls a user’s access to functions based on the user’s responsibility. See Function Security in Oracle Projects: page C – 2.
  - Budget Line Source Security uses function security to control whether a user can update amounts in budget lines, based on the source of the amount.
  
  The source of the amount can be an external system, a budget client extension, actual amounts (when the budget is created by copying actual amounts), or another budget version (when the budget is created by copying a budget version). See Budget Line Source Security: page 3 – 9.

- **Project Management Security**
  Controls updating of budgets created by importing from external systems. See Project Management Controls: page 13 – 4.

Budget Line Source Security

Budget line source security controls whether a user can update amounts in budget lines, based on the source of the amount. This feature is implemented using function security.

You can specify limits on updating of budget amounts that were calculated by a budget calculation extension, amounts that were copied from actuals, or amounts copied from budget versions.

The following functions are used to control budget line source security:

- **Budgets: Line Source: Burdened Cost Extn**
- **Budgets: Line Source: Copy Actual**
- **Budgets: Line Source: Copy Version**
- **Budgets: Line Source: Raw Cost Extn**
- **Budgets: Line Source: Revenue Extn**
You can also control updating of budget amounts that were imported from external systems. See: Project Management Controls: page 13 – 4

Budget Versions and Draft Budget History

A project can have more than one budget. **Budget types** distinguish the different budgets that you enter for a project. For example, one budget type may identify the approved cost budget and another type may be the forecast cost budget. You must classify every project budget you enter by a budget type.

Oracle Projects maintains detailed budget history by retaining each **budget version** for each budget type, including summary and detail information.

![Multiple Budget Versions for Each Budget Type](image)
Each budget has a **draft**, which is a working area for an in–process budget. The draft will not appear in any project status tracking inquiries or reports. (Note that *draft* is not a budget type, since any type of budget can have a draft.)

For each budget, you can create and save many budget versions. Each time you baseline a draft, you create a new version. To help identify budget versions, you can give each version a unique name and specify a change reason. You can view summary and detail information for all budget versions.

Each budget version has one of the following classifications:

- **Original Budget**: The first time you baseline a draft, the version is marked as the Original Budget.

- **Revised Original Budget**: You may need to revise your Original Budget due to budget entry errors or changes in the project scope. When you baseline a draft, you can identify the new baselined version as a Revised Original. In calculations and displays that use the Original Budget, the most recent Revised Original is used (or the Original Budget, if there is no Revised Original).

- **Current Budget**: The most recent baselined version of the budget is the Current Budget. You can have only one Current Budget for each budget type. Current Budget amounts are shown in the Project Status Inquiry window.

- **Historical Baselined Versions**: Any baselined budget that is not the Current Budget is considered an historical version of the budget.

The Current Budget and latest Original Budget figures are shown in the Project Status windows.

**See Also**

- Defining Budget Types: page 16 – 149
- Entering a Draft: page 3 – 15
- Baselining a Draft: page 3 – 35
- Revising a Baselined Budget: page 3 – 37
- Revising an Original Budget: page 3 – 38
To create or revise budgets:

1. Create the project and WBS. When you define the project’s work breakdown structure, consider how you want to track cost and revenue. See: Control Functions by Projects and Tasks: page 2–5.

   **Note:** The start and end dates for a non–time–phased budget are automatically set to equal the start and completion dates of the project or task. See: Start and End Dates for Non–Time–Phased Budgets: page 3–3

2. Enter or revise a draft budget for the project. See: Entering a Draft: page 3–15.
3. Enter budget amounts in the draft budget using any of the following methods:
   - When you first create the project you can copy the budget from the project template or project you are copying. See: Copying Budgets from a Project Template or Existing Project: page 3 – 26.
   - Enter the budget cost and/or revenue amounts directly. See: Entering Budget Lines: page 3 – 19.
   - Enter the budget quantities and allow Oracle Projects to calculate the cost and/or revenue amounts for you. See: Calculating Budget Amounts: page 3 – 25.
   - Copy the budget from an earlier version of the project’s budget (if you are revising a budget that you have previously baselined). See: Copying Budget Amounts from Earlier Budget Versions: page 3 – 28.
   - Copy the actual amounts to the budget amounts. See: Copying Actuals to Budget Amounts: page 3 – 29.

4. Submit your budget to indicate that budget entry is complete. See: Submitting a Draft: page 3 – 31.


6. Revise the current budget to reflect changes in the project or to correct data entry errors. See: Revising a Baselined Budget: page 3 – 37 and Revising an Original Budget: page 3 – 38.

See Also

Project Budgeting Detail Options: page 3 – 2
Budget History: page 3 – 10
Define Budget Types: page 16 – 149
Budget Entry Methods: page 16 – 150
Resources and Resource Lists: page 16 – 155
Entering a Budget Draft

A budget draft is a holding area for budget data that is currently in process. You enter or revise the budget amounts for a project in a draft. The status for a draft is Working.

You cannot report against a draft or use it to compare budgeted to actual amounts.

You have a draft for each budget type used on the project.

To enter or revise a budget draft:

1. **Budgets Window**

   Navigate to the Budgets window. Choose the project for which you want to enter or revise budget amounts. You must enter a valid project number before you can enter a budget type.

2. **Budget Type**

   After you have selected a valid project, the budget type field will be enabled.

   Choose the budget type. The budget type field enables you to have more than one series of budgets for a project. The budget type determines whether the budget is a revenue budget or cost budget. See: Define Budget Types: page 16 – 149.
Note: The list of values displays only active budget types. However, if a budget was created earlier for your project using a budget type that is now inactive, the inactive budget type can be entered.

3. **Find Draft**
   Choose the Find Draft button.
   
   **Note:** If you select an inactive budget type and choose Find Draft, no draft budget will be displayed.

4. **Version Name**
   Enter the version name.

5. **Budget Status**
   The budget status will be displayed, indicating where the budget is in the submission/baselining process. The budget status can have the following values:
   
   - **Working** A draft that you are entering and updating.
   - **Submitted** A draft that is submitted for baselining. If you want to change make changes in a budget that has a Submitted status, you must first select the Rework button, which returns the status to Working.
   - **Baselined** A baselined budget version. The Budget Version History window in the Budgets form displays baselined budget versions.

6. **Change Reason**
   Enter a change reason. The change reason identifies the reason for changing a budget version from a previous version. See: Defining Budget Change Reasons: page 16 – 154.

7. **Description**
   You may enter a description for the budget version.

8. **Budget Entry Method**
   You can accept or override the default **budget entry method (BEM)**, which determines the level of detail for the budget.
   
   - If you are entering the first draft for the budget type, the default BEM is determined by the project type of the project.
   
   - If a prior version of the budget type exists, the default BEM is the budget entry method of the project’s current budget for the budget type.
You can choose a categorized or uncategorized budget entry method. See: Project Budgeting Detail Options: page 3 – 2.

You can change the BEM at any time, even after you have baselined a budget version for the budget type. When you change the BEM, the system will delete the existing draft budget lines. You can then enter a new draft.

**Note:** If you select a categorized BEM for the first draft budget of any type, all subsequent draft budgets of that type (after the first draft budget has been baselined) must also use categorized BEMs. The same is true for uncategorized BEMs. The list of values of BEMs will show only valid BEMs for a budget.

See: Budget Entry Methods: page 16 – 150.

9. **Resource List**

The resource list is the set of resources that can be used as budget categories for a categorized (detail) budget. These resources will be displayed on the list of values for resource when you are entering budget lines.

If you are entering the first draft for the budget type, you may accept or override the default resource list. If you change the resource list after you have entered budget lines for the budget version, the system will delete the draft lines and you must enter a new draft.

You cannot change the resource list after you have baselined a budget version for the budget type.

10. **Original**

This field displays the version name of the current original budget for the project for the budget type. You can view the original and other historical budgets by in the Budget Version History window (choose History from the Budgets window).

11. **Was Original**

This flag indicates if the budget currently displayed was previously an original budget. Oracle Projects creates such budget versions when you revise the original budget. You can view this value in the Budget Version History window.

12. **New Original**

Use this check box if you want to indicate that this draft, when baselined, will become the revised original budget.

13. **History**
You can choose History to review the details of previous budget versions of the selected budget type. Historic budgets can be viewed for active and inactive budget types.

14. **Labor Hours, Raw Cost, Burdened Cost, Revenue**

These fields display the sum of the labor hours, raw cost, burdened cost, and/or revenue entered for the budget version.

**Project or Task Level Budget**

You can budget at the project, top task, or lowest task level.

**Note:** If you are using top task funding for your contract project, you must enter revenue budgets at the top task or the lowest task levels.

▸ **To enter a project level budget:**

1. Navigate to the Budgets form.
2. Choose a budget entry method set up with a project entry level.
3. Choose the Details button to open the Budget Lines window.
4. Enter the budget lines.
5. Save your work.

▸ **To enter a task level budget:**

1. Choose a budget Entry Method set up with the appropriate task entry level (Top Tasks, Lowest Tasks, or Top and Lowest Tasks).
2. Choose the Details button to open the Task Budgets window, which displays different levels of tasks, depending on the budget entry method you enter. Choose from the available list in the tasks list of values to view different task level combinations. See: Set Up Your Work Breakdown Structure (WBS): page 2 – 2.
3. Choose the task for which you want to budget.
4. Choose Budget Lines.
5. Enter the budget lines in the Budget Lines window.
6. Save your work.
Entering Budget Lines

A budget line contains information about how much of a resource is needed. The information in a budget line can include a unit of measure and amounts for quantity, raw cost, burdened cost, and/or revenue.

Note: If you plan to use the cost–to–cost revenue accrual or invoice generation method for your project, you must enter burdened costs in your cost budget and revenue amounts in your revenue budget. Otherwise, Oracle Projects cannot successfully generate revenue or invoices using the cost–to–cost method. For more information about these processes, see: Accruing Revenue for a Project: page 7 – 27 and Invoicing a Project: page 7 – 47.

You can enter and delete budget lines for a budget. You can delete budget lines in a draft. You cannot delete budget lines from a budget that you have baselined, or from an historical budget.

To See or Enter Detailed Budget Information

1. Navigate to the Budgets window.
2. Enter or choose the Find Draft button to find the draft for the appropriate budget type.
3. To navigate to the Budget Lines window, choose Details.
   If you are entering a project level budget, the Budget Lines window will open.
   If you are entering a task level budget, the Task Budgets window will open. Select a task, then choose Budget Lines to open the Budget Lines window.
Entering Budget Lines for Period–Phased Budgets

If you are entering a budget that is period–phased (time–phased by PA period or GL period), the **matrix entry** Budget Lines window will be displayed for budget lines entry. The matrix entry window opens automatically when you navigate to the Budget Lines window for a period–phased budget.

Using the matrix entry window, you enter budgeted amounts for an **amount type** and a period. The amount type is either quantity, raw cost, burdened cost, or revenue.

Each line in the matrix displays amounts for a resource and an amount type. You select the resource and the amount type for a given budget line. You then enter the amounts for the period range specified.

The Earliest Budget Period and Latest Budget Period fields display the earliest and latest period for which budget amounts have been entered. You control which periods to display by specifying the **First Budget Period**.

► **To enter budget lines in the matrix entry Budget Lines window:**

1. Enter the **First Budget Period** (either PA or GL period, depending on the budget entry method of the budget version). The period you select will be the earliest period, displayed in the window.
Use the left and right arrow buttons to change the periods displayed in the window. When you choose an arrow, the periods will shift forward or backward by one full screen (the number of periods displayed in the window).

2. Enter the resource you want to budget.

3. Select the amount type.

   You control the amount types that you can select by your selection in the View Lines For field in the upper region of the window. If the View Lines For is set to All, you can select any amount type allowed by the budget entry method and budget type. If View Lines For specifies an amount type, then you can only enter budget lines for the amount type specified.

   Following are the selections displayed for the View Lines for field:
   • Unit of Measure (UOM) the resource, if the resource has a UOM
   • Raw Cost (for cost budgets, if raw cost entry is allowed by the budget entry method)
   • Burdened Cost (for cost budgets, if burdened cost entry is allowed by the budget entry method)
   • Revenue (for revenue budgets, if revenue entry is allowed by the budget entry method)

4. Enter the budget amounts for the resource, amount type, and periods displayed.

   Amount Type Lines Automatically Created:

   In the matrix entry Budget Lines window, when you create a budget line for one amount type, Oracle Projects will create budget lines for other amount types. The other amount types will be the amount types that are enterable fields for the budget entry method being used. (See: Budget Entry Methods: page 16 – 150.)

   For example, if you enter an amount for Miles (amount type) for Auto Use (resource), lines will also be created for the amount types Raw Cost and Burdened Cost for the same resource, if the budget entry method in use for the budget includes raw cost and burdened cost as enterable fields.

   You can view all the lines by selecting All in the View Lines For field.

5. If you want to enter a change reason, comment, or descriptive flexfield for the resource and time period, navigate to the overflow region. You navigate to the overflow region by using the tab key or
by clicking the mouse, depending on the setting of the profile option PA: Tab to Budget Matrix Comments Fields. See: PA: Tab to Budget Matrix Comments Fields: page B – 14.

The overflow region displays the resource and period for which you are currently entering or viewing the change reason, comment, and descriptive flexfield.

The overflow region fields apply to a resource and time period, and are shared across amount types. For example, if you enter a change reason for the labor resource for raw cost for January, the same change reason applies for the labor resource for hours for January.

6. Enter more resources for the same periods or shift the periods displayed for entry by entering a new First Budget Period or by using the Period arrows.

7. Save your work.

**To view calculated budget amounts:**

If you are using budget calculation extensions to calculate raw costs, burdened costs, or revenue amounts based on the quantity or raw cost that you enter, you will be able to see the calculated amounts when you re-query the field. To re-query, click in the field whose value you want to see.

If you are calculating amounts for which you are not allowed to enter values as defined in the budget entry method, then you cannot see the budgeted amounts in the matrix entry form.

**See Also**

Budget Calculation Extensions: page 18 – 19

**To review the budget amounts:**

Use the View Lines For field to select which budget lines of a given amount type you want to review. The default selection is All. You can select from any of the following amount types that are allowed by your budget entry method and budget type class (cost or revenue).

- All
- Labor Hours (resources that are tracked as labor hours)
• Quantity (all quantities regardless of unit of measure)
• Raw Cost
• Burdened Cost
• Revenue

For example, you may want to view only budget lines for Raw Cost. If, in addition, you select Raw Cost in the View Totals For field, you can review budget amounts that comprise the displayed budget totals.

**To review the budget totals:**

Use the View Totals For field to select the amount type you want to display in the Total fields. You can select from any of the following amount types that are allowed by your budget entry method and budget type class (cost or revenue).

• Labor Hours
• Raw Cost
• Burdened Cost
• Revenue

You can review the resource totals for a range of periods by changing the Periods for Totals. These totals are displayed down the right hand side of the window under Period Totals. After you change the Periods for Totals, the totals are redisplayed when you navigate to the lines region.
Entering Budget Lines for Non–Time–Phased or Date Range Budgets

If you are entering a budget that is non–time–phased or is time–phased by date range, the row entry Budget Lines window will be displayed for budget lines entry.

The row entry Budget Lines window has columns for Resource, Period Name, UOM (Unit of Measure), Quantity, Raw Cost, Burdened Cost, and/or Revenue. Budget lines are displayed sorted by resource.

To enter budget lines in the row entry Budget Lines window:

1. Enter the resource.
2. Enter the period or dates.
   
   If the budget is non–time–phased, you do not enter dates. The dates are automatically set to equal the start and completion dates of the project or task.
3. Enter quantity and amounts for each budget line as defined in the budget entry method that you selected. You can enter a quantity only if the resource has a unit of measure specified. See: Resources and Resource Lists: page 16 – 155.
   
   If you are entering task level budgets, use the up or down arrow buttons to display the next top or lowest level task in the list.
4. Enter a budget Change Reason and Comment for each budget line.
5. Save your work.

Revising Budget Lines

- **To assign a budget line to a different resource:**
  - If you have already saved your work, you must delete and re-enter the line.

- **To delete a budget line:**
  - Choose the budget line you want to delete and choose the Delete Record button from the toolbar.
  - In the Budget Matrix Entry window, deletion of a budget line for a resource and an amount type will only delete the amounts for the periods that are currently displayed. It will not affect amounts for any other periods.
  - To fully delete a budget line for a resource, you must enter zeros for all amounts and for all periods for that resource.

Example:
A budget line exists for the Labor resource with the following amounts:
- Quantity = 10 for periods January through December
- Raw Cost = 100 for periods January through December

To fully delete the budget line (so that it is no longer displayed), you must change the amounts to zero for quantity and raw costs for periods from January through December.

Calculating Budget Amounts

You can implement Oracle Projects to calculate the raw and burdened costs and the revenue amounts for each budget line based on the quantity or raw cost that you enter, and based upon the rules that you define. You define rules using budget calculation extensions. A budget calculation extension is a client extension you write using PL/SQL.

Using the rules that you define in the budget calculation extension, the system calculates the amounts for each budget line at the following times:
• When you leave the quantity field, the raw cost and the burdened cost are calculated (for a cost budget).
• When you leave the raw cost field, the burdened cost is calculated, if the burdened cost is blank in the Budget Lines window.
• When you leave the quantity field in the Budget Lines window, the revenue amount is calculated (for a revenue budget).
• When you enter the Resource, Dates, and Quantity, or change the resource or dates for existing amounts, the system calls the extensions and recalculates any items specified for recalculation due to the changes.

Your calculation rules also specify whether a user can alter a calculated value, or must accept the calculated value.

See Also

Budget Calculation Extensions: page 18 – 19

Copying Budgets from a Project Template or Existing Project

When you copy a project template or project, the budgets from the source template or source project are automatically copied to the new project.

Oracle Projects creates a draft budget using the current budget of the source template or source project. If the source template or source project does not have a current budget, then Oracle Projects uses the draft.

The new project has a draft for each budget type entered for the source template or source project. After you copy the project, you can modify the budget amounts if necessary.

If the project template has baselined budgets, the budgets for the new project will be created as baselined. However, if the project template has a baselined revenue budget but no baselined cost budget, and the new project has a revenue distribution rule of Cost, then the revenue budget for the new project will be a draft budget, not a baselined budget.
Copying Project Actuals to the Budget of a New Project

When a new project will have a budget identical or similar to the actual amounts on an existing project, you can easily copy the actuals on the existing project to the new project budget as you create the new project.

To copy actuals to a new project budget

1. Create a special budget type for this purpose, such as prototype. See: Budget Types: page 16 – 149.

2. In the existing project, copy the project actuals to the prototype budget (or whatever you have chosen to call the special budget type). See: Copying Actuals to Budget Amounts: page 3 – 29.

3. Create the new project by copying the existing project. See: Creating a New Project from a Project Template or Existing Project: page 2 – 31.

4. In the new project, review and revise the prototype budget. When it is ready, copy it to the Approved Cost or Approved Revenue budget (whichever is appropriate). At this step, you can use the Amount Adjustment field to increase or decrease the amounts in the new budget by a percentage. See: Copying Budgets from Earlier Budget Versions: page 3 – 28.

Copying Dates or Periods for Time–Phased Budgets

When copying time–phased budgets from a project or project template, Oracle Projects adjusts the dates or periods of the budget lines based on the new dates that you specify in Project Quick Entry, according to the following rules:

Case 1: The original project or project template has no start date:

- The budget and budget periods are copied to the new project without any adjustment to the budget periods even if a start date is entered in Project Quick Entry for the new project.

Case 2: The original project or project template has a start date, but no start date was entered in Project Quick Entry:

- The budget and budget periods are copied to the new project without any adjustment to the budget periods.

Case 3: The original project or project template has a start date and a start date was entered in Project Quick Entry. Budget entry method is by GL or PA period:
• Oracle Projects calculates the number of periods between (a) the first budget period entered for the source project or project template and (b) the period that contains the project start date.

• The new budget line start period is derived by adding the number of periods to the period of the start date.

If the source template or project uses budget periods, the new project will use budget periods, also. The budget periods are based on the PA or GL period of the new project’s project and task start dates. For example:

• The source project has a start date of September 1, 1996 and budget amounts entered in P09–96, P10–96, and P12–96.

• The new project has a start date of December 15, 1996.

• Budget amounts will be created for the new project in P12–96, P01–07, and P03–97.

Note: The copy process assumes all periods are equal in length. If your periods are not uniform length, you may get unacceptable results and you will have to update the budget manually.

Copying Budgets from Earlier Budget Versions

You can create a new draft by copying any existing budget version of the same project. You can copy from one budget type to another for the same project; for example, you can copy from a cost budget type to another cost budget type. You cannot copy between cost and revenue budget types, nor can you copy budget versions between projects (except when copying the project from another project).

When you copy a prior version you can specify a growth percentage, which increases or decreases the copied budget amounts, but not the budgeted quantities, optionally rounded to the precision you choose. The new budget amounts override any data that exists in the draft.

To copy budget amounts from an earlier budget version:

1. Navigate to the Budgets form.
2. Enter the Project Number and Budget Type that you want to copy.

Note: You must enter a valid project number before you can enter a budget type.
3. Choose History.

4. In the Budget Version History window, select the budget Version that you want to copy.

5. Choose Copy To.

6. Choose the Budget Type that you want to copy to. Change the Amount Adjustment and Rounding Precision if you want to adjust the budget amounts when you copy the budget.

   **Note:** When you copy a budget, the To Draft Budget Type field defaults to the budget type you entered in Step 2. However, if the From Baselined budget type is an inactive budget type, the field defaults to blank.

7. Choose OK. Oracle Projects automatically displays the new draft in the Budgets window.

8. Revise the budget amounts as necessary.

---

**Copying Actuals to Budget Amounts**

You can build a draft for a period–based budget based upon actual past expenditures. (You cannot copy actuals for time–phased budgets that use date ranges, or for non–time–phased budgets.)

Oracle Projects uses the budget entry method and resource list that you specify for the draft when copying actual amounts to the budget amounts. If you specify a budget entry method that uses both top and lowest task budgets, the budget lines are created at the lowest task level, using the resources in the resource list to which the actuals are mapped. Oracle Projects copies the actual amounts using the lowest level in the resource list; it uses the resources in the resource list, if resources are used; otherwise, it uses the resource groups. The resources are used even if you have budgeted at the resource group level. See: Resources and Resource Lists: page 16 – 155 and Summarizing Actuals and Commitments by Resource: page 8 – 19.

The resulting new draft reflects the actuals incurred. If a resource was previously budgeted, but no actuals were incurred, this resource is not copied to the new draft budget. If an actual was incurred but was not previously budgeted, a new budget line is created in the budget to reflect the actual that was incurred.

In the following example, you enter the following actuals for that resource, and associate the following resource list with Project X.
<table>
<thead>
<tr>
<th>Period</th>
<th>Employee</th>
<th>Amt.</th>
<th>Resource</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA 1</td>
<td>Marlin</td>
<td>100</td>
<td>Professional</td>
<td>2 hrs.</td>
</tr>
<tr>
<td></td>
<td>Vincent Business Supply</td>
<td>77</td>
<td>Supplies</td>
<td></td>
</tr>
<tr>
<td>PA 2</td>
<td>Marlin</td>
<td>150</td>
<td>Professional</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Gray</td>
<td>10</td>
<td>Computer Services</td>
<td>1 hrs.</td>
</tr>
<tr>
<td></td>
<td>Robinson</td>
<td>50</td>
<td>Clerical</td>
<td>1 hrs.</td>
</tr>
</tbody>
</table>

**Resource List**
(Expenditure Type by Expenditure Category)

<table>
<thead>
<tr>
<th>Resource Group</th>
<th>Resource</th>
<th>Resource Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Professional</td>
<td>Expenditure Type</td>
</tr>
<tr>
<td></td>
<td>Clerical</td>
<td>Expenditure Type</td>
</tr>
<tr>
<td>Asset</td>
<td>Computer Services</td>
<td>Expenditure Type</td>
</tr>
</tbody>
</table>

When you copy actuals from Project X, the following resulting budget lines are created:

<table>
<thead>
<tr>
<th>Period</th>
<th>Resource Group</th>
<th>Resource</th>
<th>Qty.</th>
<th>Amt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA 1</td>
<td>Labor</td>
<td>Professional</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Uncategorized</td>
<td>Uncategorized</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>PA 2</td>
<td>Labor</td>
<td>Professional</td>
<td>3</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Labor</td>
<td>Clerical</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Asset</td>
<td>Computer Services</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

To copy actual amounts to budget amounts:

**Prerequisite**

- Run the Update Project Summary Amounts process for the project and the periods for which you want to copy actuals. Oracle Projects uses the project summary amounts when copying actuals to budget amounts. See: Updating Project Summary Amounts: page 8 – 15.
Note: Only actuals from periods whose ending dates are earlier than the current date will be copied to budget amounts.

1. Navigate to the Budgets form.
2. Choose the project and budget type into which you want to copy actuals.
3. Choose Find Draft.
4. Choose Copy Actuals.
5. Enter the period range for which you want to copy actuals. Enter GL periods if you are budgeting by GL period, or PA periods if budgeting by PA period.
   The default start period is the earliest period for which the project has summarized actuals for the resource list used on the budget. The default end period is the current reporting period.
6. Choose OK.
7. Revise the budget amounts if necessary.
8. Save your work.

Deleting a Draft

Find the draft you want to delete. Choose the Delete Record button from the toolbar, and choose OK to delete the draft. Oracle Projects deletes all budget lines associated with the budget version.

You can then create a new draft and enter any new lines by choosing Find Draft and navigating to the Budget Lines window.

Submitting a Draft

When you complete budget entry, you can submit your draft to indicate that it is ready for review and baselining.

When you submit a draft, Oracle Projects calls the budget verification extension. If the draft passes the rules in the budget verification extension, the budget status changes to Submitted. If the draft does not pass the rules in the budget verification extension, its status remains set to Working. See: Budget Verification Extension: page 18 – 109.
If the budget type of the budget uses Workflow to process budget status changes, the budget status changes to **In Progress** when a draft is submitted. After a successful submission, the budget status changes to **Baselined**. While the budget Workflow is active for a budget, no data entry is allowed for the budget and the buttons are disabled when the budget is displayed.

You can use the status information to inform individuals or groups who have different responsibilities with regard to budgets. For example, if project managers create draft budgets and the accounting department is responsible for baselining the budgets, the status informs users when a budget is ready for their use.

You can change a submitted budget back to the status **Working** if you need to make changes to the draft. For example, change the status to **Working** if you accidentally submitted the budget, or you found errors in the budget.

While the budget Workflow is active for a budget, you cannot change the status using the Budget window.

You cannot change the status to **Working** after you have baselined the budget.

If you want to make changes to the budget that is already baselined, you must create a new baselined budget. See: Revising a Baselined Budget: page 3 – 37.

**Prerequisite**


**To submit a draft:**

- Find the working draft that you want to submit in the Budgets window. Choose Submit.

**To change a submitted budget status from Submitted to Working:**

- Find the submitted draft that you want to change in the Budgets window. Choose Rework. Update the draft, as necessary and save your work.

  After you have completed the changes, you can resubmit the draft.

  **Note:** You cannot choose Rework if a workflow is active for the budget.
The Submit Draft Budget Process

When you choose Submit from the Budgets window, the following events occur:

1. Oracle Projects calls the budget verification extension. The procedure is called `pa_client_extn_budget.verify_budget_rules`.

   By default, the budget verification extension does not include any budget submission requirements. You can customize the extension to match your company’s rules for budget submission. See: Budget Verification Extension: page 18 – 109.

2. The budget verification extension has two possible outcomes:
• If the budget submission requirements are not met by the draft budget, an error message is issued and no status change is made.

• If the budget submission requirements are met by the draft budget, Oracle Projects proceeds to the next step.

3. The system must determine whether to call Workflow. The field *Use Workflow for Budget Status Change* in the Budget Type window determines whether Oracle Projects calls Workflow for the draft budget submission.

   • If Workflow is not called, Oracle Projects changes the status of the draft budget to *Submitted*.

   • If Workflow is called, Oracle Projects proceeds to the next step.

4. Oracle Projects calls the budget verification extension to determine whether the budget passes the budget baseline rules.

   By default, the budget verification extension does not include any budget baseline requirements. You can customize the extension to match your company’s rules for baselining a budget. See: Budget Verification Extension: page 18 – 109.

   • If the budget fails the budget baseline rules, an error message is issued and no status change is made.

   • If the budget passes the budget baseline rules, Oracle Projects proceeds to the next step.


   • If the draft budget fails the Workflow process, an error message is issued and no status change is made.

   • If the draft budget travels successfully through the Workflow process, Oracle Projects proceeds to the next step.

6. Oracle Projects applies the standard budget baseline requirements to the budget.

   • If the budget fails the standard budget baseline requirements, an error message is issued and no status change is made.

   • If the budget passes the standard budget baseline requirements, Oracle Projects proceeds to the next step.

7. Oracle Projects calls the budget verification extension again, to verify that the budget still passes the budget baseline rules.
• If the budget fails the budget baseline rules, an error message is issued and no status change is made.
• If the budget passes the budget baseline rules, Oracle Projects changes the budget status to Baseline.

See Also

Budget Workflow: page 12 – 91

Baselining a Draft

Baselining is the process of approving a budget for use in reporting and accounting. When the baselining function is called, the system copies the draft amounts into a new baselined budget version.

The most recent baselined version is named the Current Budget, which is used for reporting. All previously baselined budgets are historical baselined versions. The Current Budget, and all other baselined budget versions, have a status of Baseline.

For security reasons, this process is usually performed by a different project member than the person who entered and submitted the budget.

If a budget type uses Workflow for budget status changes, a draft budget is automatically baselined after it is submitted, if it passes all the Workflow approvals and other requirements. See Submitting a Draft page 3 – 31.

For contract projects in Oracle Project Billing, the baseline function verifies that the budget amounts for the budget type Approved Revenue Budget equals the total funding for the project or for the top tasks within the project, if using task level funding. If this check is successful, a new budget version is created. If the amounts are not equal, Oracle Projects displays an error and does not create a new budget version.

Prerequisites

- Enter and submit a draft. See: Entering a Draft: page 3 – 15
For contract projects in Oracle Project Billing with budgets using the budget type *Approved Revenue Budget*, enter the funding amount equal to the budget amount. If you are using top task funding, you must enter revenue budgets at the top task and/or the lowest task levels.

**To baseline a draft:**

1. Find the submitted draft that you want to baseline. Choose Baseline.
2. If the baseline function fails for the Approved Revenue Budget because the funding does not equal the revenue budget, then you must change the budget or the funding amounts before you can successfully baseline the budget.

### The Baseline Draft Budget Process

When you choose Baseline from the Budgets window, the following events occur:
1. Oracle Projects calls the Budget Verification API. This program checks for standard rules that a budget must pass before it can be baselined. For example, an approved revenue budget amount must equal the project funding.

2. Oracle Projects calls the budget verification extension. The procedure is called \texttt{pa\_client\_extn\_budget.verify\_budget\_rules}.

By default, the budget verification extension does not include any budget baseline requirements. You can customize the extension to match your company’s rules for baselining a budget. See: Budget Verification Extension: page 18 – 109.

3. The budget verification extension has two possible outcomes:
   - If the draft budget fails the baseline requirements, an error message is issued and no status change is made.
   - If the draft budget passes the baseline requirements, Oracle Projects changes the budget status to \textit{Baseline}.

**Revising a Baselined Budget**

After you baseline a budget, you can modify the following descriptive fields on a baselined version:

- Version Name
- Change Reason
- Description
- Comment

You cannot directly change the amounts or structure of a budget that has been baselined. If you need to make changes to a baselined budget, you must update the draft and baseline that version as the new Current Budget.

After you baseline a budget, the draft is the same as the last current budget version.

**See Also**

Entering a Draft: page 3 – 15
Baselining a Draft: page 3 – 35

Revising an Original Budget

The first time you baseline a budget, that budget becomes the Original Budget. The Project Status window displays information in the Original Budget and the Current Budget.

You may want to modify the Original Budget to correct data entry errors or scope changes which you want to include in the original budget amounts.

Oracle Projects uses the latest revised original budget as the Original Budget in reporting.

To revise an original budget:
1. Choose the New Original box in the Budgets window.
2. In the Budget Lines window, enter the revised budget amounts for the draft.
4. Choose Baseline. Oracle Projects creates a new version which is identified as the new Current Budget and the new Original Budget.

Reviewing a Budget

You can review current or historical budget information.

To review budget history online:
1. Navigate to the Budgets form.
2. Choose the project and budget type for which you want to review budget history.
3. Choose History.
4. Review the budget versions in the Budget Version History window.
5. Choose Details to review the details of a budget version.
You can also run reports that compare actual amounts to the current budget. See: Comparing Budget to Actual and Commitment Amounts: page 8 – 5.
This chapter describes everything you need to know about expenditures in Oracle Projects.
Overview of Expenditures

You charge expenditures to a project to record actual work performed or cost incurred, and you charge commitments to future, committed costs you expect to incur. An expenditure is a group of expenditure items, or transactions, incurred by an employee or an organization for an expenditure period.

You must charge all actual expenditure items and future commitments to a project and task. Examples of actual expenditures are timecards, expense reports, usage logs, and supplier invoices. Examples of commitments are requisitions and purchase orders.

The following are examples of expenditures and commitments:

- You have worked eight hours on Monday, June 6 for project A, task 1 doing Professional work (expenditure)
- You travelled twenty miles on Tuesday, June 7 for project X, task 1 using your own vehicle (expenditure)
- You made ten copies of a blueprint on Thursday, June 9 for project Y, task 1 using copier number 1243 (expenditure)
- You issued a purchase order for 200 pounds of cement on Friday, June 10 for project Z, task 2.3 (commitment)

You indicate how Oracle Projects processes transactions by associating each expenditure type with an expenditure type class. As you enter expenditure items, you identify the expenditure type for each transaction, such as professional labor or personal automobile use. The method Oracle Projects uses to distribute the cost depends on which of the following predefined expenditure type classes you have assigned to that expenditure type:

- Straight time
- Overtime
- Expense reports
- Usages
- Supplier invoices
- Miscellaneous transactions
- Burden transactions
- Work in process
- Inventory
Expenditure Classifications

You assign an expenditure type to each expenditure item to classify the type of cost incurred (for example, administrative or professional for labor, and air travel or lodging for expenses). Each expenditure type falls into an expenditure or revenue category. For example, airfare, meals, and hotel expenditures fall into the Travel expenditure category.

You define all expenditure types, expenditure categories, and revenue categories during implementation. You group expenditure types into expenditure categories for cost grouping, and revenue categories for revenue grouping.

Expenditure Amounts

Each expenditure item has a quantity of units and two cost amounts, raw and burden cost, when processed. The raw cost is the actual cost of the work performed; the burden cost is the indirect cost of the work performed. For example, the raw cost could be the hours multiplied by the hourly cost rate, and the burden could be the cost of the office space or benefits. The total burdened cost is the raw cost plus the burden cost.

Expenditure Item Validation

When you enter expenditure items, you charge hours, expenses, or the use of non–labor resources to a project and a task. Oracle Projects validates expenditure items against predefined criteria and any transaction controls and transaction control client extensions that you set up during the implementation of Oracle Projects.

The standard validation process performs the following checks:

- Project
  - Expenditure item falls within project dates
  - Project status allows transactions
  - Transaction controls and transaction control extensions allow charges of this type
  - Project allows cross–charges from the user’s operating unit in a multi–organization environment
• Task
  – Expenditure item falls within task dates
  – Task is a lowest task
  – Task is chargeable
  – Transaction controls and transaction control extensions allow charges of this type
• Expenditure type
  – Expenditure type is active
• Employee
  – Employee is active
• Existing expenditure item (for adjustments only)
  – Matching expenditure item exists (unless you enter an unmatched, negative transaction)

Oracle Projects may reject expenditure items for the predefined reasons listed below, whether the expenditure was created in Oracle Projects, Oracle Personal Time and Expense, other Oracle Applications, or an external cost collection system. If you receive a rejection reason not included in the list below, check with your implementation team for any rejection reasons specific to your company that were defined in transaction control extensions.

**Note:** Oracle Projects validates pre-approved expenditure batches as you enter expenditure item details. Expenditures created using Oracle Personal Time and Expense and external cost collection systems are validated during the Submit and Transaction Import processes, but before Oracle Projects creates an expenditure.

<table>
<thead>
<tr>
<th>Rejection Reason (Error Lookup Code)</th>
<th>Troubleshooting Tips</th>
<th>Expenditure (timecards, expense reports, usage logs, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burdened cost is not valid for the given system linkage (INVALID_BURDENED_AMOUNT)</td>
<td>A transaction with an expenditure type class of Burden Transactions should have a burden cost of NULL. For other expenditure type classes, if the transaction source or project does not allow burdening, then they burden cost should equal zero.</td>
<td>all</td>
</tr>
<tr>
<td>Rejection Reason (Error Lookup Code)</td>
<td>Troubleshooting Tips</td>
<td>Expenditure (timecards, expense reports, usage logs, etc.)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>----------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>CCID for credit is NULL (INVALID_CR_CCID)</td>
<td>The code combination ID for the credit account cannot be NULL for transactions that have already been accounted for in an external system.</td>
<td>GL accounted transactions</td>
</tr>
<tr>
<td>CCID for debit is NULL (INVALID_DR_CCID)</td>
<td>The code combination ID for the debit account cannot be NULL for transactions that have already been accounted for in an external system.</td>
<td>GL accounted transactions</td>
</tr>
<tr>
<td>Cannot lock original item for reversal (CANNOT_LOCK_ORIG_ITEM)</td>
<td>Another user or a process is currently accessing the original item to be adjusted. Try to revise the expenditure item later.</td>
<td>all</td>
</tr>
<tr>
<td>Cross charge validation failed (CROSS_CHARGE_PROJECT_INVALID)</td>
<td>You will get this message only if you have implemented multiple organization support and are using Transaction Import to charge expenditure items to a project owned by an operating unit that does not share your operating unit’s set of books, PA period type, and business group. Revise the expenditure item by entering a project owned by an operating unit to which you can charge.</td>
<td>all</td>
</tr>
<tr>
<td>Different system linkage (DIFF_SYS_LINKAGE)</td>
<td>During Transaction Import, Oracle Projects verifies that the expenditure type class of the transaction matches the expenditure type class of the expenditure type. You can either associate the expenditure type class with the expenditure type using the Expenditure Types window, or you can change either the expenditure type or the expenditure type class on the transaction so they form a valid combination.</td>
<td>all</td>
</tr>
<tr>
<td>Duplicate item (DUPLICATE_ITEM)</td>
<td>An expenditure item with the same transaction source and original system reference already exists. Change the transaction source or original system reference of the expenditure item to be imported.</td>
<td>all</td>
</tr>
<tr>
<td>Employee is mandatory (EMP_MAND_FOR_ER TIME)</td>
<td>Enter information into the employee number field (automatically entered in Oracle Personal Time and Expense).</td>
<td>timecards and expense reports</td>
</tr>
<tr>
<td>Employee or organization is mandatory (EMP OR ORG MAND)</td>
<td>Enter either the employee name and number or expenditure organization in the appropriate expenditure field.</td>
<td>all except for timecards and expense reports</td>
</tr>
</tbody>
</table>

Table 4-1 Expenditure item rejection reasons (Page 2 of 7)
<table>
<thead>
<tr>
<th>Rejection Reason (Error Lookup Code)</th>
<th>Troubleshooting Tips</th>
<th>Expenditure (timecards, expense reports, usage logs, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure item date is after the expenditure ending date (EI_DATE_AFTER_END_DATE)</td>
<td>The expenditure item date is after the expenditure ending date. Verify that both the expenditure item and the expenditure dates are correct and change, if necessary.</td>
<td>all</td>
</tr>
<tr>
<td>Expenditure item date is not within the expenditure week (ITEM_NOT_IN_WEEK)</td>
<td>Verify that the expenditure item date and the expenditure date are both correct and change, if necessary. You can also create a new expenditure for the expenditure item.</td>
<td>timecards</td>
</tr>
<tr>
<td>Expenditure organization is not active (PA_EXP_ORG_NOT_ACTIVE)</td>
<td>The expenditure organization is not active or is not within the current expenditure organization hierarchy.</td>
<td>all</td>
</tr>
<tr>
<td>Expenditure type/expenditure type class inactive (ETYPE_SLINK_INACTIVE)</td>
<td>The combination of the expenditure type and expenditure type class is inactive as of the expenditure item date. Refer to PA_EXPEND_TYP_SYS_LINKS for valid expenditure type/expenditure type class combinations.</td>
<td>all</td>
</tr>
<tr>
<td>Expenditure type inactive (EXP_TYPE_INACTIVE)</td>
<td>The expenditure type has been defined, but it is either not yet effective or has already expired as of the expenditure item date. Refer to the Expenditure Types window to view all valid expenditure types and their effective dates or to change the expenditure type’s effective dates.</td>
<td>all</td>
</tr>
<tr>
<td>GL date is NULL (INVALID_GL_DATE)</td>
<td>A transaction that has already been accounted for in an external system must have a GL date.</td>
<td>GL accounted transactions</td>
</tr>
<tr>
<td>Invalid burden transaction (INVALID_BURDEN_TRANS)</td>
<td>Raw cost and quantity must equal zero or NULL for burden transactions.</td>
<td>burden transactions</td>
</tr>
<tr>
<td>Invalid employee (INVALID_EMPLOYEE)</td>
<td>Oracle Projects does not recognize the employee number. Verify that you have entered the information correctly or add a new employee.</td>
<td>all</td>
</tr>
<tr>
<td>Invalid ending date (INVALID_END_DATE)</td>
<td>The expenditure ending date does not fall on the day of the week defined as your expenditure cycle end day. Refer to the Implementation Options window (Costing) for the valid expenditure cycle start day.</td>
<td>all</td>
</tr>
</tbody>
</table>

Table 4 – 1 Expenditure item rejection reasons (Page 3 of 7)
<table>
<thead>
<tr>
<th>Rejection Reason (Error Lookup Code)</th>
<th>Troubleshooting Tips</th>
<th>Expenditure (timecards, expense reports, usage logs, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invalid expenditure type (INVALID_EXP_TYPE)</td>
<td>The expenditure type does not exist. Refer to the Expenditure Types window for a list of all valid expenditure types or to create a new expenditure type.</td>
<td>all</td>
</tr>
<tr>
<td>Invalid expenditure type class (INVALID_EXP_TYPE_CLASS)</td>
<td>The expenditure type class of the transaction is invalid. Refer to PA_SYSTEM_LINKAGES for valid expenditure type classes.</td>
<td>all</td>
</tr>
<tr>
<td>Invalid expenditure type/system linkage combination (INVALID_ETYPE_SLINK)</td>
<td>The combination of the expenditure type and expenditure type class is invalid. Refer to PA_EXPEND_TYP_SYS_LINKS for valid expenditure type/expenditure type class combinations.</td>
<td>all</td>
</tr>
<tr>
<td>Invalid non–labor resource (INVALID_NL_RSRC)</td>
<td>The non–labor resource does not exist. Refer to the Non–Labor Resources window for a list of all valid non–labor resources or to create a new non–labor resource.</td>
<td>usage logs</td>
</tr>
<tr>
<td>Invalid non–labor resource organization (INVALID_NL_RSRC_ORG)</td>
<td>The non–labor resource organization does not exist. Refer to the Non–Labor Resources window for a list of all valid organizations for a particular non–labor resource or to assign a new organization to a non–labor resource.</td>
<td>usage logs</td>
</tr>
<tr>
<td>Invalid organization (INVALID_ORGANIZATION)</td>
<td>The expenditure organization does not exist. Refer to the expenditure organization hierarchy set up in Oracle Projects to determine all organizations defined as valid expenditure organizations.</td>
<td>all</td>
</tr>
<tr>
<td>Invalid project (INVALID_PROJECT)</td>
<td>The project number does not exist. Refer to the Projects Summary window for a list of all valid projects or to the Projects, Templates Summary window to create a new project by copying an existing project or template.</td>
<td>all</td>
</tr>
<tr>
<td>Invalid project type (INVALID_PROJECT_TYPE)</td>
<td>The project type for the given project is invalid.</td>
<td>all</td>
</tr>
<tr>
<td>Invalid task (INVALID_TASK)</td>
<td>The task number does not exist for the project, or the task is not a lowest task. Open your project and choose the Tasks option to view all valid tasks or to create a new lowest task.</td>
<td>all</td>
</tr>
<tr>
<td>Invalid transaction source (INVALID_TRX_SOURCE)</td>
<td>Oracle Projects does not recognize the transaction source. Refer to the Transaction Sources window for a list of valid transaction sources or to create a new transaction source.</td>
<td>all</td>
</tr>
</tbody>
</table>

Table 4 – 1 Expenditure item rejection reasons (Page 4 of 7)
<table>
<thead>
<tr>
<th>Rejection Reason (Error Lookup Code)</th>
<th>Troubleshooting Tips</th>
<th>Expenditure (timecards, expense reports, usage logs, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No open or future PA period for the expenditure item and GL dates (INVALID_PA_DATE)</td>
<td>There is no open or future PA period for the given expenditure item and GL dates.</td>
<td>GL accounted transactions</td>
</tr>
<tr>
<td>Non–labor resource expenditure type different (NL_EXP_TYPE_DIFF)</td>
<td>The non–labor resource is not associated with the expenditure type. Refer to the Non–Labor Resources window for a listing of all valid non–labor resources and their expenditure types or to create a new non–labor resource.</td>
<td>usage logs</td>
</tr>
<tr>
<td>Non–labor resource inactive (NL_RSRC_INACTIVE)</td>
<td>The non–labor resource has been defined, but it is either not yet effective or has already expired as of the expenditure item date. Refer to the Non–Labor Resources window for a list of valid non–labor resources and their effective dates or to change the effective dates.</td>
<td>usage logs</td>
</tr>
<tr>
<td>Non–labor resource mandatory for usages (NL_RSRC_MAND_FOR_USAGES)</td>
<td>A non–labor resource has not been specified. Enter the non–labor resource name for the rejected expenditure item in your usage log.</td>
<td>usage logs</td>
</tr>
<tr>
<td>Non–labor resource owning organization mandatory for usages (NL_RSRC_ORG_MAND_FOR_USAGES)</td>
<td>A non–labor resource organization has not been specified. Enter the appropriate organization name.</td>
<td>usage logs</td>
</tr>
<tr>
<td>No assignment (NO_ASSIGNMENT)</td>
<td>The employee does not have an active assignment to a specific organization and job as of the expenditure item date. Verify the expenditure item date and the employee assignment and make changes, if necessary. You can also refer to the Person Information window for the employee’s organization and job assignments and their effective dates, to change an assignment’s effective dates, or to create a new assignment.</td>
<td>all</td>
</tr>
</tbody>
</table>

Table 4 – 1 Expenditure item rejection reasons (Page 5 of 7)
<table>
<thead>
<tr>
<th>Rejection Reason (Error Lookup Code)</th>
<th>Troubleshooting Tips</th>
<th>Expenditure (timecards, expense reports, usage logs, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No matching item (NO_MATCHING_ITEM)</td>
<td>If the transaction is an adjustment with a negative quantity, and the unmatched negative flag is not set to Yes, an original, approved, unreversed expenditure item matching the transaction’s employee/organization, item date, expenditure type, project, task, reversing quantity, reversing cost (if loading costed items via Transaction Import), and non–labor resource and non–labor organization (for usages) must exist. Also, the matching expenditure item must have been originally loaded from the same transaction source. If more than one item matches the original item, Oracle Projects uses the first one that was created.</td>
<td>adjusting transactions</td>
</tr>
<tr>
<td>No raw cost (NO_RAW_COST)</td>
<td>Raw cost amount is missing. Expenditure items with a costed transaction source must include this information.</td>
<td>all</td>
</tr>
<tr>
<td>Organization does not own the non–labor resource (ORG_NOT_OWNER_OF_NL_RSRC)</td>
<td>The non–labor resource has not been assigned to the non–labor resource organization as of the expenditure item date. Refer to the Non–Labor Resources window for a list of all organizations associated with the resource or to associate a new organization with the resource.</td>
<td>usage logs</td>
</tr>
<tr>
<td>Project is not chargeable (PA_PROJECT_NOT_VALID)</td>
<td>The project is a template; has a transaction control that does not allow charges; does not share a business group, set of books, and PA period type with the user’s operating unit; or the project status does not allow new transactions.</td>
<td>all</td>
</tr>
<tr>
<td>Project does not allow burden transactions (PROJ_NOTALLOW_BURDEN)</td>
<td>Burden transactions are not allowed for this project.</td>
<td>burden transactions</td>
</tr>
<tr>
<td>Transaction source does not allow burden transactions (TRXSRC_NOTALLOW_BURDEN)</td>
<td>Burden transactions are not allowed for transactions you import from this transaction source.</td>
<td>burden transactions</td>
</tr>
<tr>
<td>Transaction source inactive (TRX_SOURCE_INACTIVE)</td>
<td>The transaction source has been defined, but either is not yet effective or has already expired as of the expenditure item date. Refer to the Transaction Sources window for a list of all valid transaction sources and their effective dates or to change the effective dates.</td>
<td>all</td>
</tr>
</tbody>
</table>

You may receive the following rejection reasons when you use Transaction Import to import an expenditure or when you enter an expenditure in Oracle Applications (pre-approved expenditures in Oracle Projects, purchase orders and requisitions in Oracle Purchasing, or supplier invoices in Oracle Payables). You may also receive additional rejection reasons if your company has implemented transaction controls.

Table 4–1 Expenditure item rejection reasons (Page 6 of 7)
Expenditure Entry Methods

You can create expenditure items in Oracle Projects to record actual work performed or costs incurred against a project in one of four ways:

### Table 4–1 Expenditure item rejection reasons (Page 7 of 7)

<table>
<thead>
<tr>
<th>Rejection Reason (Error Lookup Code)</th>
<th>Troubleshooting Tips</th>
<th>Expenditure Entry Methods (timecards, expense reports, usage logs, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project/Task validation error</td>
<td>The project or task does not exist, or the task does not belong to the project. Change the expenditure item’s project or task.</td>
<td>all</td>
</tr>
<tr>
<td>(PA_EXP_INV_PJTK)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project/Task–level expenditure</td>
<td>The transaction violates the project– or task–level transaction controls defined for the project. Refer to the Transaction Controls window (under Project Options or Tasks, Options) for a list of the transaction controls on the project or task or to change the transaction controls to allow you to charge the expenditure item. You can also charge the expenditure item to another project or task.</td>
<td>all</td>
</tr>
<tr>
<td>transaction control violated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PA_EXP_PJ/TASK_TC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The task is not chargeable</td>
<td>The task’s Allow Charges flag has not been enabled. Enable this flag from the task’s Task Details window or charge the item to another task.</td>
<td>all</td>
</tr>
<tr>
<td>(PA_EXP_TASK_STATUS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure item cannot be charged</td>
<td>Project status does not allow transactions to be charged to this project. Change the status of the project or charge the expenditure item to another project.</td>
<td>all</td>
</tr>
<tr>
<td>to a Closed project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PA_EX_PROJECT_CLOSED)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure item date is not</td>
<td>Change the expenditure item date or the task’s active dates, or charge the expenditure item to another task.</td>
<td>all</td>
</tr>
<tr>
<td>within the active dates of the task</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PA_EXP_TASK_EFF)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure item date is not within</td>
<td>Change the expenditure item date or the project’s active dates, or charge the expenditure item to another project.</td>
<td>all</td>
</tr>
<tr>
<td>the active dates of the project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PA_EX_PROJECT_DATE)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** If you cannot access any of the windows mentioned in the table above to change project or expenditure information, contact the project’s key member and request that certain information be changed.
• Enter pre-approved expenditure batches
• Import transactions from external sources
• Enter expenditures in Oracle Personal Time and Expense and submit them to Oracle Projects
• Enter expenditures in other Oracle Applications, such as Oracle Payables and Oracle Inventory, and import them into Oracle Projects

See Also

Transaction Controls: page 4 – 57
Pre–Approved Expenditures: page 4 – 12
Overview of Oracle Personal Time and Expense: page 4 – 50
Using Transaction Import: page 4 – 74
System Integration: page 12 – 2
Pre–Approved Expenditures

Pre–approved expenditures are timecards, expense reports, usage logs, miscellaneous transactions, burden transactions, inventory transactions, and work in process transactions usually completed on paper and approved by a supervisor. You enter pre–approved expenditures into Oracle Projects in batch mode, generally on a weekly basis. After you enter the batches into the system, you submit them for review and then release them for cost distribution.

**Note:** Transactions with an expenditure type class of Work in Process or Inventory are usually imported from a manufacturing system. Related burden transactions are generally generated and imported via Transaction Import.

The following diagram shows the steps involved in processing pre–approved expenditures:

![Pre–Approved Expenditure Flow Diagram](image)

**Statuses**

Pre–approved expenditure batches can have one of the following statuses:
The expenditure batch is not ready for review. You can enter timecards, expense reports, usages, miscellaneous transactions, burden transactions, inventory transactions, or work-in-process transactions and modify their expenditures and expenditure items.

The batch is awaiting review. You can still retrieve the batch if you need to make corrections.

The expenditure batch has been released for cost distribution. You can reverse incorrectly entered expenditure items within the batch. See: Correcting Expenditures and Expenditure Items: page 4 – 22.

Note: You can choose Unreleased from the Status poplist in the Find Expenditure Batches window to retrieve both Working and Submitted expenditure batches.
Entering Pre–Approved Expenditure Batches

Enter pre–approved expenditures, such as timecards, expense reports, or usage logs, in batches. If you enter expenditures in a batch, Oracle Projects processes them as a group. In addition, when you release the batch for cost distribution, Oracle Projects releases all expenditures in the batch simultaneously.

Batch entry promotes accuracy and efficiency. You can use batches to:

- Reduce data entry. You can create a new timecard batch by copying any previously created batch.
- Verify accuracy by tracking variances between actual and entered totals
- Easily locate a group of expenditures to correct, submit for review, or release for cost distribution

When you enter pre–approved expenditures, you first create a new batch, then enter the expenditures in the batch and their associated expenditure items. When you have entered all expenditures and expenditure items, you can submit the contents of the batch. Typically, your supervisor reviews your submitted batches and releases them for cost distribution.

**Note:** Your implementation team can decide to allow the same person or job responsibility to both enter, submit, and release pre–approved expenditures.
Creating a Pre–Approved Expenditure Batch

To create a new batch:

1. Sort paper expenditure reports into batches containing the same Expenditure Ending date and Expenditure Type Class (Straight Time, Overtime, Expense Reports, Usages, Supplier Invoices, Miscellaneous Transactions, or Burden Transactions).

   **Note:** If you integrate with Oracle Manufacturing or Oracle Inventory, use function security to prevent users from entering pre–approved batch items with an expenditure type class of Inventory or Work in Process.

2. Navigate to the Expenditure Batches window.

3. Enter a unique Batch name to identify this set of expenditures.

   **Suggestion:** Choose a unique, identifiable, and memorable batch name. For example, a timecard batch name might include your organization code, the letter “T” to indicate Timecards, and the week ending date.

4. Enter the expenditure Ending date for the batch. If you enter a date that is not the last day of an expenditure week, the system automatically updates the date to the next valid weekending date.

5. Choose the expenditure type class for this batch.

6. Optionally enter a Description of the batch, or leave the field blank to use the name of the expenditure Class.

7. Optionally use the fields in the Amounts region to verify actual versus entered totals:

   - To verify that the total hours, usages, expenses, or miscellaneous, burden, inventory, or work in process transaction amounts entered for this batch match the total recorded on the paper expenditure reports, calculate the total Units of Measure in the batch and enter the result as the Control Total. The total can be a mixture of different units (such as dollars and miles), although you will not typically mix different units of measure.

   - To verify that the total number of expenditures entered matches the total number of expenditures in the batch, count the paper expenditure records and enter the result as the Control Count.


8. Choose Expenditures to enter the batch. The status of a new batch is always Working.
9. Enter the expenditures and expenditure items in the batch. See: Entering an Expenditure and Expenditure Items; page 4 – 17.

10. Save your work.
Entering an Expenditure and Expenditure Items

To enter an expenditure and expenditure items:

Note: Oracle Projects validates your expenditure item information as you enter it. For a list of the validation criteria Oracle Projects uses, see: Expenditure Item Validation: page 4 – 3.

1. In the Expenditures window, enter the employee or organization who incurred the cost. For time and expense reports, enter an employee; for asset usages, invoice amounts, and miscellaneous and burden transactions, enter an employee or organization; and for all other expenditures, enter an organization.

2. Optionally enter the total units of measure recorded on the paper expenditure report in the Control Total field to verify that it matches the total Units of Measure entered for this expenditure. See: Verifying Control Totals and Control Counts: page 4 – 19.

3. In the Expenditure Items region, enter the date of the expenditure item on which the expenditure’s cost is incurred.

4. Enter the Project Number and the lowest level Task Number to which you want to charge this expenditure item.

5. Enter the Expenditure Type for this expenditure item. You can choose any expenditure type within the current expenditure class.
6. If your expenditure type is a usage, enter the non-labor asset and its owning organization for this expenditure item, so you can track asset utilization of company-owned assets.

7. Enter the Quantity of units incurred for this expenditure item (the unit of measure is determined by the expenditure type). For example, on a timecard, you enter the quantity for professional labor in hours. You can enter a mixture of units, such as dollars and miles, for an expense report.

8. Optionally enter a free text comment to the expenditure item.

9. Save your work.

10. Optionally rework the expenditure to add or revise transactions, and save your changes.

11. When you have completed the expenditure batch, submit the batch for review. See: Submitting an Expenditure Batch: page 4–20.

See Also

Submitting an Expenditure Batch: page 4–20
Overview of Expenditures: page 4–2
Correcting Expenditure Batches: page 4–22

Copying an Expenditure Batch

If you frequently enter similar groups of timecard expenditures, you can reduce manual data entry by copying data from one week to the next. The Copy function copies all expenditures and, optionally, all expenditure items from a specified source batch. Then you need to revise only the items that are different in the new batch. There are two approaches to copying expenditure data:

- Create, then copy a batch template
- Copy expenditures from any previously created timecard batch.
To create a batch template:

**Suggestion:** A timecard template is a generic batch containing the most frequently used data elements. For example, if you expect timecards from certain employees to be submitted each week, you can create a template that contains just the expenditure information. Or, if employees generally perform the same tasks for the same projects week after week, you can enter expenditure items in your template as well.

To create a batch template, follow the normal steps for creating a batch. See: Entering Pre–Approved Expenditure Batches: page 4 – 14.

**Suggestion:** Give the batch a name that will indicate it is a template. Do not submit the batch, since the batch template does not contain real expenditures and expenditure items.

To copy a batch:

1. Navigate to the Expenditure Batches window.
2. Enter the Batch name, Ending Date, Class, and Description.
3. Save your new batch.
4. Choose Copy From.
5. In the Copy From Expenditure Batch window, enter the name and description of the batch you want to copy. If you want to copy the expenditure items associated with the batch, choose Copy Expenditure Items.
6. Choose OK.
7. Revise the batch information (such as the Expenditure Ending date), make any changes to individual expenditure items, and save your work.

---

**Verifying Control Totals and Control Counts**

When you enter a Control Total or Control Count on the Expenditure Batch window, or enter a Control Total on the Expenditures window, Oracle Projects keeps track of the running total and running count of expenditures within a batch, and the running total for expenditure items...
associated with an expenditure. As you enter expenditure items, the system maintains a running total of each amount.

Oracle Projects verifies control totals and control counts when you submit a batch. If the running total or running count does not equal your control totals, the system does not let you submit the expenditure batch until your totals match. If you do not enter control totals, the system does not check that control totals match.

Submitting an Expenditure Batch

After entering a batch of expenditures and verifying data entry, you submit the batch for review. Your supervisor typically reviews the batch and either releases it for cost distribution or returns it to you to rework. When you rework a batch, the status changes from Submitted to Working.

**Note:** You can choose Unreleased from the Status poplist in the Find Expenditure Batches window to retrieve both Working and Submitted expenditure batches.

▶ **To submit a batch for review:**

1. Navigate to the Expenditure Batches window and choose the batch you want to submit.

   **Suggestion:** You can use the Find Expenditure Batches window to query a particular batch in the Expenditure Batches window.

2. Choose the Submit button. The status of the batch changes from Working to Submitted after Oracle Projects validates the control totals and counts.

See Also

Verifying Control Totals and Control Counts: page 4 – 19

Correcting Expenditure Batches: page 4 – 22
Reviewing and Releasing Expenditure Batches

Once submitted, batches of pre-approved expenditures are reviewed and released for cost distribution or returned to the user who entered the batch for reworking. You release a batch of expenditures by changing its status from Submitted to Released. Releasing a batch automatically releases all the expenditures and expenditure items in the batch.

To review an expenditure batch:

- Find the batch you want to review in the Find Expenditure Batches window. In the Expenditure Batches Summary window, choose the batch you want to review and choose Open to review information for the batch, or choose Expenditures to review expenditure and expenditure item information.

To release an expenditure batch:

- From the Expenditure Batches or the Expenditure Batches Summary windows, select the batch or batches you want to release and choose Release. See: Selecting Multiple Records Oracle Applications User’s Guide.

See Also

Correcting Expenditure Batches: page 4 – 22

Reversing an Expenditure Batch

The Reverse button is enabled only if the current batch is released. In addition, an expenditure batch can be reversed only if the transaction source of the batch allows adjustments.

When you reverse an expenditure batch, all the expenditure items are reversed except the following:

- Related items
- Expenditure items that have already been reversed
- Reversing items (net zero adjusted items)
Expenditure items that were created as a result of a transfer adjustment

To reverse an expenditure batch:
1. Navigate to the Find Expenditure Batches window.
2. Find the batch that you want to reverse.
3. In the Expenditure Batches window, choose Reverse.
4. In the Reverse an Expenditure Batch window, enter the name of the new reversing batch and choose OK.

When the reversal is complete, Oracle Projects displays the number of items that were adjusted and the number of items that were rejected.

Correcting Expenditure Batches

After you submit a batch, you can make corrections such as adding, deleting, and revising expenditures and expenditure items that you incorrectly reported or entered. You also must correct a batch if your supervisor rejects and returns a submitted batch to you.

If the batch has a status of Submitted, you locate the batch, return its status to Working, and make any changes necessary at the expenditure or expenditure item level before resubmitting the batch.

If the batch has a status of Released, you can correct individual expenditure items, but you must reverse the full amount of the original item before entering the correct information. For example, if you entered six hours on a timecard expenditure item when the correct number of hours is four, you must create a reversing item equal to a negative six hours, then add a new expenditure item of four hours. To enter the correction items, you must create a new batch, then follow the normal steps for submitting and releasing expenditures.

To rework a submitted or returned batch:
1. Navigate to the Expenditure Batches window and find the expenditure batch you want to rework.

Suggestion: You can use the Find Expenditure Batches window to query a particular batch in the Expenditure Batches window.
2. From the Expenditure Batches window, choose Rework. The status of the batch changes from Submitted to Working.

3. Choose the Expenditures button to display the expenditures in the Expenditures window, then make corrections to any expenditure or expenditure items in the batch.


► To correct a released expenditure item:

1. Create a new batch for the correction items. The Expenditure Ending date must identify the week that includes the expenditure item you are reversing. See: Entering Pre–Approved Expenditures: page 4 – 14.

   Note: Optionally check the All Negative Transactions Entered As Unmatched check box if you want to enter transactions with negative amounts and do not want Oracle Projects to search for corresponding existing transactions.

2. In the Expenditure Items window, select the Reverse Original button. In the Reverse Expenditure Items window, choose the item you want to reverse and choose the Reversal button. The system inserts a reversing (negative) expenditure item into the batch.

   Note: Instead of choosing the Reverse Original button, you can enter a negative amount in the Quantity field. Negative amounts are preceded by a minus (“–”) sign. If you have checked the All Negative Transactions Entered As Unmatched check box, Oracle Projects will not search for corresponding existing transactions. Otherwise, Oracle Projects will prompt you to confirm the creation of each negative transaction that does not have a corresponding existing transaction.

3. Finish entering the batch. Then submit the batch as usual.

   Note: Expenditure batches can contain both positive and negative transactions.

See Also

Entering Pre–Approved Expenditures: page 4 – 14

Submitting an Expenditure Batch: page 4 – 20
Expenditure Adjustments

Oracle Projects provides powerful features which allow you to adjust expenditure items on your projects, automatically process the adjustments to other Oracle Applications, and report the audit trail of these adjustments.

You can make adjustments to expenditure items after the items have been costed, revenue distributed, and invoiced. Oracle Projects automatically processes the adjusted items and interfaces the adjusting accounting transactions to other Oracle Applications.

The current project status of a project can restrict your ability to enter adjustments to project transactions. See: Project Statuses: page 16 – 164.

Audit Reporting for Expenditure Adjustments

Oracle Projects provides an audit trail of all adjustments performed on an expenditure item. The audit trail records the following information about the adjustment for an item:

- The name of the user who performed the adjustment
- The type of adjustment action performed
- The date and time that the adjustment was performed
- The window from which the adjustment action was performed

Oracle Projects also records the audit trail to the original item for transfers, splits, and corrections to approved items. With this audit trail, you can identify where an item was transferred or where an item was transferred from.

You can review the expenditure adjustment audit information for a project in the AUD:Project Expenditure Adjustment Activity report. You can review the transfer activity for a project using the MGT: Transfer Activity report.

See Also

Project Expenditure Adjustment Activity: page 9 – 25
Transfer Activity Report: page 9 – 26
Types of Expenditure Item Adjustments

Two factors control whether you can perform adjustments on expenditure items:

- Project status of the project charged
- Transaction source (if the expenditure item was imported via Transaction Import)

You can perform the following types of adjustments on expenditure items. With noted exceptions, you make the adjustments using the Expenditure Inquiry window Special menu. See: Adjusting Expenditure Items: page 4 – 45.

Except where noted, you use the same Special menu items to adjust project invoice lines. See: Adjusting Project Invoices: page 7 – 60.

See Also

Project Statuses: page 16 – 164
Transaction Sources: page 16 – 86

Correct Approved Expenditure Item

You can correct the date, expenditure type, project, task, and amount of an approved expenditure item using the Pre–Approved Expenditure Entry windows. (You cannot correct these items using the Expenditure Inquiry window.) You make the corrections by reversing the original item and then creating a new item using the correct information.

You can also change the project and task assignment of an expenditure item by using the Transfer adjustment action.

You cannot correct the amount, date, expenditure type, or supplier of supplier invoice items in Oracle Projects. You must correct these attributes of supplier invoice item in Oracle Payables.

You must correct expenditure items imported from Oracle Inventory or Oracle Manufacturing in their respective systems. You cannot reverse or correct expenditure items from these applications in Oracle Projects.

Billable to Non–Billable or Non–Billable to Billable

You can mark a billable expenditure item as non–billable, or a non–billable item as billable. A non–billable item does not accrue
revenue and is not invoiced. A billable item accrues revenue and can be invoiced.

You may want to check the setup of the billable status of your project to reduce the number of items you need to adjust for billable classification. You can define tasks as billable or non–billable; you can further specify which items are non–billable using transaction controls. See: Transaction Controls: page 4 – 57.

**Capitalizable to Non–Capitalizable or Non–Capitalizable to Capitalizable**

You can mark a capitalizable expenditure item as non–capitalizable, or vice versa. A capitalizable item can be grouped into an asset line you send to Oracle Assets. A non–capitalizable item cannot become an asset cost in Oracle Assets.

You can define tasks as capitalizable or non–capitalizable; you can further specify which items are non–capitalizable using transaction controls. See: Transaction Controls: page 4 – 57.

**Billing Hold**

You can place an expenditure item on billing hold. An item on billing hold is not included on an invoice until you release the billing hold on the item.

**One–Time Hold**

You can place an expenditure item on one–time billing hold. An item on one–time billing hold is not billed on the current invoice but is eligible for billing on the next invoice. The one–time billing hold is released when you release the current invoice.

**Release Hold**

If you have placed an expenditure item on billing hold, you use the release hold to take it off hold so the item can be billed.

**Recalculate Burden Cost**

You can recalculate burden cost of an expenditure item if you find that the burdened cost amount is incorrect. To produce correct recalculation results, you must correct the source of the problem before adjusting the items.

**Note:** You cannot recalculate burden cost of an invoice line.
Recalculate Raw Cost

You can recalculate raw cost of an expenditure item if you find that the raw cost amount is incorrect. To produce correct recalculation results, you must correct the source of the problem before adjusting the item.

You cannot recalculate raw cost on expenditure items that were imported through Transaction Import as costed items.

Note: You cannot recalculate raw cost of an invoice line.

Recalculate Revenue

You can recalculate revenue if you find that:

• Revenue or bill amount is incorrect due to incorrect bill rate or markup
• AutoAccounting is incorrect

You should correct the source of the problem before adjusting the items.

Recalculate Cost/Revenue

You can recalculate cost and revenue if you find that:

• Raw cost rate is incorrect
• Burden cost multiplier is incorrect
• AutoAccounting is incorrect

You should correct the source of the problem before adjusting the items.

If you recalculate cost, the revenue is automatically adjusted to ensure that revenue that is based on the cost (with markup or labor multipliers) is adjusted when the cost is adjusted.

Change Comment

You can edit the expenditure comment of an item. You can use this adjustment to make the expenditure comment clearer if you are including the comment on an invoice backup report.

Split

You can split an item into two items so that you can process the two resulting split items differently.

For example, you may have an item for 10 hours, of which you want 6 hours to be billable and 4 hours to be non–billable. You would split the item of 10 hours into two items of 6 hours and 4 hours, marking the 6 hours to be billable and 4 hours to be non–billable.
The resulting split items are charged to the same project and task as the original item.

**Transfer**

You can transfer an item from one project and task to another project and task, when an item is charged to the incorrect project and task.

Oracle Projects provides security as to which employees can transfer items between projects. Cross-project users can transfer to all projects. Key members can transfer to projects to which they are assigned. See: Project–Based Security in Oracle Projects: page 15 – 2.

Oracle Projects performs a standard validation on all transferred items. For a description of the standard validation process and resulting rejection reasons, see: Expenditure Item Validation: page 4 – 3. Oracle Projects also ensures that you only transfer items which pass the charge controls of the project and task to which you are transferring. If the item(s) you are transferring do not pass the new project and task’s charge controls, you cannot transfer the item(s). See: Transaction Controls: page 4 – 57.

**Restrictions for Converted Items**

You can mark expenditure items as converted when you load expenditure items in Oracle Projects during conversion by setting the CONVERTED_FLAG to Y (for Yes) in the PA_EXPENDITURE_ITEMS_ALL table.

You can perform only some adjustment actions on converted items, as listed below.

<table>
<thead>
<tr>
<th>Adjustment Action</th>
<th>Allowed for Converted Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct Approved Expenditure Item</td>
<td>✓</td>
</tr>
<tr>
<td>Allow Billing</td>
<td>✓</td>
</tr>
<tr>
<td>Billable to Non–Billable</td>
<td></td>
</tr>
<tr>
<td>Non–Billable to Billable</td>
<td></td>
</tr>
<tr>
<td>Capitalizable to Non–Capitalizable</td>
<td></td>
</tr>
<tr>
<td>Non–Capitalizable to Capitalizable</td>
<td></td>
</tr>
<tr>
<td>Billing Hold</td>
<td>✓</td>
</tr>
<tr>
<td>One–Time Hold</td>
<td>✓</td>
</tr>
<tr>
<td>Release Hold</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 4 – 2 (Page 1 of 2)
If an item is marked as converted, Oracle Projects assumes that the item does not have all the data required to support the recalculation of cost, revenue, and invoice. Therefore, you cannot perform the adjustment actions that may result in the recalculation of cost, revenue, or invoices for converted items.

**Note:** Marking items as converted has a similar effect to enabling the transaction source attribute that disallows adjustments on imported transactions originating from that source.

### Adjustments to Burden Transactions

You can perform adjustments on burden transactions that are not system-generated.

You can perform billing adjustments on burden transaction expenditure items that are created by the Create and Distribute Summarized Burden Components process. For example, the items can be placed on billing hold. To make any other type of adjustment on a system-generated burden transaction, you must adjust the source expenditure item related to these burden transactions.

You can adjust a burden transaction that is imported via Transaction Import only if ALLOW_ADJUSTMENT_FLAG is set to Y for the transaction. For the predefined transaction sources Inventory, Inventory Misc, and Work In Process, ALLOW_ADJUSTMENT_FLAG is set to N.

### Adjustments to Related Transactions

Whenever an adjustment is performed on a source transaction that requires the item to be backed out (transfer, split, manual reversal through the Pre-Approved Expenditure form), Oracle Projects creates
reversals for the related transactions of the source transaction. Oracle Projects creates related items via labor transaction extensions. See also: Labor Transaction Extensions: page 18 – 40.

You cannot independently process related transactions from the source transactions. However, there are adjustment actions for which related transactions are processed with the source transaction.

**Transfer**

You can transfer only the source transaction. When you transfer the source transaction, Oracle Projects reverses the source transaction and the related transactions, and creates only the new source transaction in the destination project. Oracle Projects does not create related transactions in the destination project because the related transactions may not be appropriate under the conditions of the project.

You can create new related transactions using the labor transaction extension when the transferred source transaction is cost–distributed.

**Split**

You can split only the source transaction. When you split the source transaction, Oracle Projects reverses the source transaction and the related transactions, and creates the two new source transactions. Oracle Projects does not create related transactions in the destination project because the related transactions may not be appropriate under the conditions of the project.

You can create new related transactions using the labor transaction extension when the new source transactions are cost–distributed.

**Recalc Cost/Revenue**

You can mark only the source transaction for cost or revenue recalculation. However, when you mark the source transaction, Oracle Projects automatically marks the related transactions of the source transaction for recalculation.

**Change Billable Status**

You can change the billable status on both the source transaction and the related transactions independently. However, a reclassification on a source transaction only will not automatically result in the reclassification of related transactions since these related transactions may have been created with a billable status independent of the source
transaction. For example, you may create the source transaction as billable and the related transaction as non-billable.

**Bill Hold/Release**

You can perform bill holds and releases on both source transactions and related transactions independently. However, an action performed on a source transaction will not automatically result in the same action on the related transactions. For example, since the transactions are treated independently, a bill hold on a source transaction will not automatically place a bill hold on any related transactions.

**Comment Change**

You can change the comment on both the source transaction and the related transactions independently.

**Manual Reversal**

You can reverse source transactions using the Expenditures form. When you reverse a source transaction, Oracle Projects automatically reverses the related transactions. If you delete the source transaction, Oracle Projects automatically deletes the related transactions.

**Reversal Using Transaction Import**

You can reverse source transactions using Transaction Import. When you reverse a source transaction, Oracle Projects automatically reverses the related transactions if the transaction being loaded is an adjustment and the unmatched negative flag is set to No.

**See Also**

- Transaction Controls: page 4 – 57
- Adjusting Expenditure Items: page 4 – 45
- Transferring Expenditure Items: page 4 – 47
- Splitting Expenditure Items: page 4 – 48
Marking Items for Adjustments

When you select most of these adjustment actions in the forms, the expenditure items are marked for adjustment processing. The effect of the adjustment action is not done online.

The table below notes how each adjustment action marks expenditure items for adjustment processing.

The first eleven adjustment actions update the expenditure item with the values as noted below for additional adjustment processing. The next adjustment action updates the comment and does not require additional adjustment processing. The last two adjustment actions create reversing and new items to be processed.

<table>
<thead>
<tr>
<th>Adjustment Action</th>
<th>Cost Distributed</th>
<th>Revenue Distributed</th>
<th>Billable / Capitalizable</th>
<th>Bill Hold</th>
<th>New Items Created</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billable to Non–Billable</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non–Billable to Billable</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capitalizable to Non–Capitalizable</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non–Capitalizable to Capitalizable</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing Hold</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>One–Time Hold</td>
<td></td>
<td></td>
<td></td>
<td>Once</td>
<td></td>
</tr>
<tr>
<td>Release Hold</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Recalculate Burden Cost</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recalculate Raw Cost</td>
<td>No</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recalculate Revenue</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recalculate Cost/Revenue</td>
<td>No</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change Comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Split</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Transfer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 4 – 3 How Adjustment Action Marks Expenditure Items for Adjustment Processing (Page 1 of 1)

A billable reclassification requires an item to be re-costed so that the billable/non–billable costs are correctly maintained in the project summarization tables. The same is true for a capitalizable reclassification.
New Expenditure Items Resulting from Transfer and Split

When you transfer or split an item, the original item is reversed and new items are created automatically by Oracle Projects. These items are similar to the items that you manually create when you correct an approved expenditure item.

The example below shows the original item (Item 1) and the new items (Item 2–3) resulting from a transfer of an item charged to project TM1 to another project and task (project SF1, task 2).

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item Reversed</th>
<th>Expenditure Item Date</th>
<th>Expenditure Type</th>
<th>Project</th>
<th>Task</th>
<th>Quantity</th>
<th>Billable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>01–JAN–96</td>
<td>Professional</td>
<td>TM1</td>
<td>1</td>
<td>10</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>01–JAN–96</td>
<td>Professional</td>
<td>TM1</td>
<td>1</td>
<td>–10</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>01–JAN–96</td>
<td>Professional</td>
<td>SF1</td>
<td>2</td>
<td>10</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 4 – 4 Items Resulting from Transfer (Page 1 of 1)

Note: The billable status of Item 3 is determined from the billable status of the project and task to which it is transferred.

The example below shows the original item (Item 1) and the new items (Items 2–4) resulting from a split of an item of 10 billable hours into 6 billable hours and 4 non–billable hours. When you split an item, you specify the billable status and bill hold status of each of the two new items.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item Reversed</th>
<th>Expenditure Item Date</th>
<th>Expenditure Type</th>
<th>Project</th>
<th>Task</th>
<th>Quantity</th>
<th>Billable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>01–JAN–96</td>
<td>Professional</td>
<td>TM1</td>
<td>1</td>
<td>10</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>01–JAN–96</td>
<td>Professional</td>
<td>TM1</td>
<td>1</td>
<td>–10</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>01–JAN–96</td>
<td>Professional</td>
<td>TM1</td>
<td>1</td>
<td>6</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>01–JAN–96</td>
<td>Professional</td>
<td>TM1</td>
<td>1</td>
<td>4</td>
<td>No</td>
</tr>
</tbody>
</table>

Table 4 – 5 Items Resulting from Split (Page 1 of 1)

Processing Adjustments

After you have performed the adjustment actions, you need to run the appropriate processes to process the adjustments.

The table below notes what processes to run to process each adjustment action.
You can use the Submit Request window to run the appropriate the processes for your project only.

You can also mark items for adjustment and allow the items to be automatically processed the next time you distribute costs, generate draft revenue and invoices by running the appropriate processes for all projects.

### See Also

Submitting Requests: page 9 – 2

### Results of Adjustment Processing

After you run the appropriate processes to recalculate the adjusted expenditure items, you can review the results of the adjustments.
Cost Adjustments

When an item marked for re-costing is processed, a cost adjustment results if one or more of the following attributes is different from the original value:

- Raw cost amount
- Burden cost amount
- Account to which the cost is charged
- Billable/Capitalizable status of the item

When the Distribute Costs program encounters an item requiring a cost adjustment, the program updates the expenditure item with the new raw and burden cost rates and amounts, and creates new cost distribution lines. The program creates a reversing and a new cost distribution line, which records the audit trail of cost adjustments.

The example below shows the cost distribution lines for an expenditure item that was re-costed due to a cost rate change a month after the original line was costed. Line 2 and 3 are new lines resulting from the cost adjustment. Line 2 reverses the same amount and account as Line 1. Line 3 uses the new cost multiplier and account based on current AutoAccounting rules.

<table>
<thead>
<tr>
<th>Line Number</th>
<th>Line Reversed</th>
<th>Amount</th>
<th>Quantity</th>
<th>Billable</th>
<th>Account</th>
<th>GL Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>100</td>
<td>10</td>
<td>Yes</td>
<td>04.401.4100</td>
<td>31–JAN–94</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>–100</td>
<td>–10</td>
<td>Yes</td>
<td>04.401.4100</td>
<td>28–FEB–94</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>200</td>
<td>10</td>
<td>Yes</td>
<td>04.401.4100</td>
<td>28–FEB–94</td>
</tr>
</tbody>
</table>

Table 4 – 7 New Cost Distribution Lines Resulting from Cost Adjustment

You can review these distribution lines in the Cost Distribution Lines window (choose Item Details > Cost Distribution Lines in the Expenditure Items window).

Corrections to Approved Items, Transfers, and Splits

When processing a reversing item which resulted from a correction of an approved expenditure item, a transfer, or a split, the Distribute Costs program uses the same cost rate used by the original item to ensure that the cost nets to zero for the original and reversing item. The reversing item is charged to an account based on the current AutoAccounting rules.

The new positive item resulting from a correction of an approved expenditure item, a transfer, or a split are processed just as a new
expenditure item is processed; no special adjustment processing is performed on these items.

**Interfacing Adjustments to Oracle General Ledger and Oracle Payables**

The Interface process will send Lines 2 and 3 in the previous table to Oracle General Ledger or Oracle Payables to reflect the cost adjustment originating in Oracle Projects.

The cost adjustment lines are posted to the earliest open or future GL period. See also: Date Processing in Oracle Projects: page 11 – 2.

*Note:* Lines 2 and 3 are posted to a new GL period of February 1994 since the original GL period of January 1994 was closed when the cost adjustment occurred.

**Revenue Adjustments**

When an item marked for recalculation of revenue is processed, revenue adjustments are created.

When the Generate Draft Revenue program encounters a item requiring a revenue adjustment, the program updates the expenditure item with the new revenue amount, and creates new revenue distribution lines. The program creates a reversing and new revenue distribution lines, which records the audit trail of revenue adjustments.

The example below shows the revenue distribution lines for an expenditure item with a revenue adjustment due to a change in a bill rate a month after the original revenue was posted. Line 2 and 3 are new lines resulting from the revenue adjustment. Line 2 reverses the same amount and account as Line 1. Line 3 has the new revenue amount based on the new bill rate/markup and the account based on current AutoAccounting rules.

<table>
<thead>
<tr>
<th>Line</th>
<th>Line Reversed</th>
<th>Amount</th>
<th>Account</th>
<th>Draft Revenue Number</th>
<th>Transfer Status</th>
<th>GL Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>100</td>
<td>04.401.3100</td>
<td>1</td>
<td>Accepted</td>
<td>31–JAN–96</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>–100</td>
<td>04.401.3100</td>
<td>2</td>
<td>Pending</td>
<td>28–FEB–96</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>200</td>
<td>04.401.3100</td>
<td>3</td>
<td>Pending</td>
<td>28–FEB–96</td>
</tr>
</tbody>
</table>

Table 4 – 8 New Revenue Distribution Lines Resulting from Revenue Adjustment (Page 1 of 1)

Each revenue distribution line is grouped into a draft revenue. A draft revenue may credit another draft revenue. Line 2 above is grouped into Draft Revenue 2, which credits Draft Revenue 1, in which Line 1 is grouped. Line 3 is included on a new draft revenue 3.
You can review these distribution lines in the Revenue Distribution Lines window in the Revenue Review window.

**Transfers, Splits, and Corrections to Approved Items**

When processing a reversing item which resulted from a correction of an approved expenditure item, a transfer, or a split, the Generate Draft Revenue program reverses the revenue of the original item to ensure that the revenue nets to zero for the original and reversing item. The reversing item is charged to a revenue account based on the original distribution line.

The new positive item resulting from a correction of an approved expenditure item, a transfer, or a split are processed just as a new expenditure item is processed; no special adjustment processing is performed on these items.

**Interfacing Adjustments to Oracle General Ledger**

The Interface Revenue to General Ledger process will send Lines 2 and 3 to Oracle General Ledger to reflect the revenue adjustment originating in Oracle Projects.

The revenue adjustment lines are posted to the earliest open or future GL period. See also: Date Processing in Oracle Projects: page 11 – 2.

*Note:* Lines 2 and 3 are posted to a new GL period of February 1994 since the original GL period of January 1994 was closed when the revenue adjustment occurred.

**Invoice Adjustments**

If an item’s bill amount changes before it has been billed on a released invoice, the item is billed with the latest bill amount. If an item’s bill amount changes after it has been invoiced, a crediting invoice and new invoice are automatically created.

The Generate Draft Invoice program compares the bill amount on the item’s revenue distribution lines to determine if the item needs to be adjusted. When program encounters a item requiring a invoice adjustment, it creates a crediting invoice and a new invoice.

The example below shows the invoices created for the same item listed above for the revenue adjustments example. Assume the project’s invoices only bill the one item and that the item was originally billed on Invoice 1 in January. Invoices 2 and 3 are new invoices resulting from the invoice adjustment.
You can review these invoices in the Invoice Summary window in the Invoice Review window.

**Transfers, Splits, and Corrections to Approved Items**

When processing a reversing item which resulted from a correction of an approved expenditure item, a transfer, or a split, the Generate Draft Invoice program credits the invoice on which the original item was billed.

The new positive item resulting from a correction of an approved expenditure item, a transfer, or a split are processed just as a new expenditure item is processed; no special adjustment processing is performed on these items.

**Interfacing Adjustments to Oracle Receivables**

The Interface Invoices to Receivables process will send Invoices 2 and 3 to Oracle Receivables.

The invoices are posted to the open or future GL period in which the invoice date falls in Oracle Receivables.

**Note**: Lines 2 and 3 are posted to a new GL period of February 1994 since the original GL period of January 1994 was closed when the invoice adjustment occurred.

Refer to the following essay regarding how a credit memo is interfaced to Oracle Receivables, if the outstanding balance is less than the credit memo amount.

**See Also**

Integrating with Oracle Receivables: page 12 – 54
Adjustments to Supplier Invoices

You can perform a number of adjustments to supplier invoices in Oracle Projects and Oracle Payables. In Oracle Projects, you can perform the following adjustments on a supplier invoice:

- Transfer and item to another project or task
- Split an item
- Reclassify an item’s billable or capitalizable status

Example

Original invoice number 123 for $100 is entered in Oracle Payables with one invoice distribution line charged to project A and interfaced to Oracle Projects. An Oracle Projects project manager transfers the item from project A to project B, resulting in a net zero different accounting transaction. The adjusting transactions result in the following transactions in Oracle Projects. In addition, the adjusting transactions, lines 2 and 3, are interfaced to Oracle Payables, and attached to the originating invoice, 123. Oracle Projects provides the amount, the accounts, and the GL date to which the transactions are to be posted.

<table>
<thead>
<tr>
<th>Item</th>
<th>Project</th>
<th>Amount</th>
<th>Account</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>100</td>
<td>01.101.5200</td>
<td>Entered in AP</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>(100)</td>
<td>01.101.5200</td>
<td>Created in PA and interfaced to AP via the transfer process</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
<td>100</td>
<td>02.201.5200</td>
<td>Adjusted in PA and interfaced to AP via the transfer process</td>
</tr>
</tbody>
</table>

In Oracle Payables, you can perform the following adjustment on a project-related supplier invoice:

- Invoice amount
- Supplier
- Expenditure type

Supplier Invoice Adjustments in Oracle Projects

To process supplier invoice adjustments from Oracle Projects to Oracle Payables:

1. Perform the adjustment in Oracle Projects.
2. Process the adjustment by running the PRC: Distribute Supplier Invoice Adjustment Costs process, or you can submit the streamline process Distribute and Interface Supplier Invoice Adjustments to Payables. If you run the streamline process, you can skip Step 3.

3. Interface the supplier invoice adjustments to Oracle Payables using the PRC: Interface Supplier Invoice Adjustment Costs to Payables process

   Note: All new invoice lines created from the adjustment are linked to the originating invoice in Oracle Payables. This allows you to reconcile all project-related supplier invoices in Oracle Payables, and accurately account for your cash books if you use Cash Basis Accounting.

4. Run AutoApproval in Oracle Payables to approve the new invoice distribution lines.

5. Post the supplier invoices from Oracle Payables to Oracle General Ledger.

Supplier Invoice Adjustments in Oracle Payables

To process supplier invoice adjustments from Oracle Payables to Oracle Projects:

1. Perform the adjustment in Oracle Payables,

2. Run AutoApproval in Oracle Payables to approve the new invoice distribution lines.

3. Post the supplier invoices from Oracle Payables to Oracle General Ledger.

4. Send the adjustment to Oracle Projects using the Oracle Projects PRC: Interface Supplier Invoices from Payables process.

   Note: Before interfacing adjustments to Oracle Projects, the process checks whether the original and adjusting invoice items net to zero. If so, then neither item is transferred to Oracle Projects.

See Also

Interface Supplier Invoices from Payables: page 10 – 50
Performing a Project Expenditure Inquiry

Use this window to review a project’s expenditure items. When you review expenditure items, you can see the amount and type of expenditure items charged to a project, the date an expenditure item occurred, how much revenue has accrued for an expenditure item, and other information about the project’s expenditure items. You can also drill down to Oracle Payables to view the Invoice Overview form.

There are two expenditure inquiry window modes available in Oracle Projects:

• **Project.** The Project mode expenditure inquiry allows you to view expenditure items for a single project only. You are required to enter a project number or name in the Find Project Expenditure Items window before you can execute the query. If project security has been implemented, you can only select projects that you are allowed to see.

• **All.** The All expenditure inquiry mode allows you to view expenditure items across projects. You are not required to enter a project number or name in the Find Expenditure Items window. You can structure your query to retrieve information across projects. No project security is enforced, as you are allowed to query expenditure items across projects.

The mode in which you access the expenditure inquiry window is determined by your user responsibility. Under the Project Billing Super User and Project Costing Super User responsibilities, which are supplied by Oracle Projects, you have access to both expenditure inquiry modes.

To perform an expenditure inquiry:

1. Navigate to the Expenditure Inquiry window (either Project or All).
2. In the Find Expenditure Items window, enter your search criteria. For example, if you want to view an expenditure item incurred by a specific employee, enter the Employee Name field. See: Expenditure Inquiry Windows Reference: page 4 – 44.
3. Choose **Find** if you want to execute the search, or choose **Mass Adjust** if you want to process mass adjustment of expenditures. See: Mass Adjustment of Expenditures: page 4 – 46.

4. From the Expenditure Items window, choose:

- **Run Request** to create Project Streamline Requests to process adjustments. You can select multiple processes to run for your project. The requests will run in the correct order. See: Adjusting Expenditure Items: page 4 – 45.

- **Totals** to view the totals for the expenditure items returned based on your search criteria.

  **Note:** This window does not display events. If your project uses event-based or cost-to-cost revenue accrual or invoice generation, use the Events window to view the total project revenue and bill amounts.

- **Item Details** to select a window for reviewing the details of this expenditure item. The Inquiry Options window will be displayed, from which you can choose one of the following options:
  
  - Choose **Cost Distribution Lines** to view individual transactions and the debit and credit GL accounts charged for raw and burdened costs for each expenditure item. You can also view other information about the cost lines, such as PA and GL period and interface status and the rejection reason if transactions could not be interfaced.

  - Choose **Revenue Distribution Lines** to view the revenue transactions generated for a specific expenditure item. The GL account credited for the revenue is displayed. You can also see the GL and PA posting period for the revenue and the interface status. The rejection reason will be displayed for any transactions that are rejected during the interface to GL.

  - Choose **AP Invoice** to drill down to the Invoice Overview form in Oracle Payables. (This option is only enabled for expenditure items whose expenditure type class is either Supplier Invoices or Expense Reports.)

  **Note:** You can also view rejection reasons for transactions rejected during the costing or revenue generation processes from the Expenditure Items window. From the Folder menu, choose Show Field and select either Cost Distr. Rejection or Revenue Distr. Rejection.
The following fields appear on the Expenditure Inquiry windows:

**Find Expenditure Items window**

Use this window to enter search criteria to narrow your search for expenditures and expenditure items.

**Item Dates:** The date of the expenditure items you want to find. You can enter a date range, or either a start or end date.

**Exp Ending Dates:** The expenditure ending dates of the items you want to find. You can enter a date range, or either a start or end date.

**Billing Status:** You can choose from the following status types:

- **Billable** Choose Yes to view only billable expenditure items.
- **Billing Hold** Choose Yes to view expenditure items that are on hold indefinitely. Choose No to view items that are not on hold. Choose Both to view items that are on
both one–time hold, and on hold indefinitely. Choose Once to view expenditure items that are on one–time hold from this project’s next invoice.

Choose Yes to view expenditure items that have ever appeared on an invoice, regardless of invoice status. When you choose this option, Oracle Projects retrieves expenditure items on a project invoices that have a status of Unapproved, Approved, Released, and Accepted.

**CIP Status:** You can choose from the following status types:

- **Capitalizable** Choose Yes to view only capitalizable expenditure items.
- **Grouped** Choose Yes to view expenditure items that have been grouped into asset lines.

**Processing Status:** You can choose from the following status types:

- **Costed** Choose Yes to view only costed expenditure items.
- **Revenue Distributed** Choose Yes to view only revenue distributed expenditure items, or choose Partial to view expenditure items that have partially distributed revenue due to a hard limit on the agreement.

**Expenditure Batch:** Choose an expenditure batch name if you want to find expenditure items grouped and entered by batch.

**Transaction Source:** The source of the imported expenditure items you want to find. Examples of transaction sources include faxed timecards and PBX. You can choose from a valid list of values.

**Exclude Net Zero Items:** Choose this check box if you want to exclude net zero expenditure items from the items you query. Net zero items consist of an original item and a reversing item for the entire amount of the original item. Together, these two items net to zero.

---

### Adjusting Expenditure Items

Use this window to adjust project expenditure items.

- **To adjust expenditure items:**
  1. Choose Expenditures, Expenditure Inquiry from the Navigator window.
2. Find the expenditure items you want to adjust.

3. In the Expenditure Items window, choose the item(s) you want to adjust. See: Selecting Multiple Records (Oracle Applications User’s Guide). You can also use the Mass Adjust feature to adjust items. See: Mass Adjustment of Expenditures: page 4 – 46.

4. Choose an option from the Special menu to specify how you want to adjust the expenditure item(s). See: Types of Expenditure Item Adjustments: page 4 – 26.

5. Choose Run Request to select the Project Streamline Request process for the adjustment. See: Processing Adjustments: page 4 – 34.

See Also

Types of Expenditure Item Adjustments: page 4 – 26
Marking Items for Adjustment: page 4 – 33
Processing Adjustments: page 4 – 34
Results of Adjustment Processing: page 4 – 35

Mass Adjustment of Expenditures

Use the Find Expenditure Items window to process mass adjustment of expenditures.

You can optionally use the multi-select functionality in the Expenditure Items window to perform adjustments on more than one expenditure. However, the mass adjustment feature provides improved performance when you adjust a large number of expenditures.

To perform mass adjustment of expenditures:

1. Navigate to the Find Expenditure Items window.

2. Enter your search criteria. For example, if you want to make an identical adjustment to all billable expenditures by a specific employee, enter the Employee Name field and select Yes for Billable under the Billing Status fields.

4. From the Mass Adjust poplist, select the adjustment you want to perform on the selected expenditures. When the adjustment process is complete, view the message indicating the results of the process.

Transferring Expenditure Items

You can transfer an expenditure item from its current project or lowest task assignment to another project or lowest task.

Run the Transfer Activity report to view the activity of expenditure items that you transfer.

To transfer expenditure items:

1. Choose Expenditures, Expenditure Inquiry from the Navigator window.
2. Find the expenditure items you want to transfer.
3. In the Expenditure Items window, choose the item(s) you want to transfer. See: Selecting Multiple Records (Oracle Applications User’s Guide). You can also use the Mass Adjust feature to adjust items. See: Mass Adjustment of Expenditures: page 4 – 46.
4. Choose Transfer from the Special menu.
5. In the Transfer Items to Project/Task window, enter the Project Number and Task Number to which you want to transfer the expenditure item(s).
6. Choose OK to mark the expenditure item(s) for transfer.
7. Enter Yes if you want to re-query your expenditure items so you can see the new expenditure items created from the transfer. Select what Search Criteria to use to re-query the records.

See Also

Marking Items for Adjustment: page 4 – 33
Processing Adjustments: page 4 – 34
Splitting Expenditure Items

You can split an expenditure item to change its billing, capitalizable, and hold status for a portion of the original item’s quantity.

When you split an expenditure item, you create a reversing entry for the original expenditure item, and create two new expenditure items for that expenditure, totalling the same quantity as the original item.

**Note:** You cannot split an original expenditure item that has already been split or transferred. You can, however, split or transfer the new expenditure items created from a split or transfer.

To split expenditure items:

1. Choose Expenditures, Expenditure Inquiry from the Navigator window.
2. Find the expenditure items you want to split.
3. In the Expenditure Items window, choose the item(s) you want to split.
4. Choose Split from the Special menu.
5. In the Split Expenditure Item window, enter the Split Quantity/Raw Cost/Burdened Cost that you want to allocate to the first item from the expenditure item you are splitting.

Oracle Projects prompts you to enter a quantity, raw cost, or burdened cost based on what amounts are assigned to the original expenditure item, as indicated in the following table.

<table>
<thead>
<tr>
<th>Quantity = 0</th>
<th>Raw Cost = 0</th>
<th>Amount Split by Oracle Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Quantity</td>
</tr>
<tr>
<td></td>
<td>✓</td>
<td>Raw cost</td>
</tr>
<tr>
<td></td>
<td>✓</td>
<td>Burdened cost</td>
</tr>
</tbody>
</table>

Table 4 – 11 How Oracle Projects determines which amount to split

Expenditure items with a zero quantity and a nonzero raw cost include costed transactions imported via Transaction Import, and expenditure items with both quantity and raw cost equal to zero include burden transactions imported via Transaction Import.
Oracle Projects calculates the difference between the quantity or cost of the original expenditure item and the quantity or cost you enter for the first item, and displays the remaining amount as the quantity or cost of the second item.

6. Choose OK to mark the expenditure item to be split.

7. Enter Yes if you want to re-query your expenditure items so you can see the new expenditure items created from the transfer. Select what Search Criteria to use to re-query the records.


See Also

Marking Items for Adjustment: page 4 – 33
Processing Adjustments: page 4 – 34
Results of Adjustment Processing: page 4 – 35
Overview of Oracle Personal Time and Expense

Note: You need to install Oracle Personal Time and Expense separately from the Oracle Projects product.

Oracle Personal Time and Expense (PTE) is a Windows-based application that lets you collect timecard and expense report information without having to connect to the Oracle Projects production database. You collect labor and expense information in a local (PC-based) database and then submit it to Oracle Projects.

PTE is designed for two kinds of users, non-networked and networked. The non-networked user works in the field and is not connected to your network and its databases. The networked user works in the office and is connected to a network, but not necessarily to the Oracle Projects production database. The location of project, task, and expenditure type values determine which type of user you are; labor and expense data are stored locally for both types of users.

Both types of users can select project, task, and expenditure type values from a lookups database, or they can enter values directly into these fields. This lookups database can reside on the PC or a network-based SQL Server. For non-networked users, the lookups database resides on a PC; for networked users, the lookups database is a SQL server somewhere on the network. The system administrator or the non-networked user keeps the lookups database current by downloading valid lookup data from the Oracle Projects production database, or some other database, such as a subset of the production database.

You submit timecards and expense reports to the Oracle Projects production database by initiating an upload session in PTE. This session interfaces with the standard Oracle Projects Transaction Import Process.

PTE creates timecard and expense report records in Transaction Import as uncosted transactions with the following transaction sources:

- PTE TIME – Timesheets
- PTE EXPENSE – Expense Reports

Oracle Projects checks your timecard and expense report data for validity (based on transaction controls in Oracle Projects and PTE extensions you have written), and notifies you of whether it is accepted or rejected. If accepted, the Transaction Import Process creates expenditure records in Oracle Projects. (These records may or may not require review and approval, depending on how you implement PTE.)
If the data is rejected, the timecard or expense report is marked in PTE as Rejected. You can modify the rejected data and resubmit it. PTE automatically initiates the upload session when the you select the Submit button, and then terminates it when the process is complete. Both Oracle Personal Time and Expense and Oracle Projects validate expenditures during the submission process. For a list of the reasons Oracle Personal Time and Expense may reject an expenditure, see: Oracle Personal Time and Expense Help. For a list of reasons Oracle Projects may reject an expenditure, see: Expenditure Item Validation: page 4 – 3.

Neither non–networked nor networked users have permanent connections to the Oracle Projects production database. Both users enter timecard and expense report information stored in a local database on the PC, and both submit this information to Oracle Projects when necessary. The non–networked user must download lookup information as necessary to their local lookups database. The networked user, however, must have their lookups database updated periodically by the system administrator.

PTE contains a report function which allows users to print copies of their timecards or expense reports. PTE users can do this in a local mode of operation without having to connect to a server. This capability is both convenient for the user and offloads report generation from the Oracle Projects production server.

### See Also

- Oracle Personal Time and Expense System Administrator’s Guide
- Implementing Oracle Personal Time and Expense for Oracle Projects Integration: page 17 – 68
- Overview of Expenditures: page 4 – 2

### Multiple Versions of Oracle Personal Time and Expense (PTE)

PTE Versions 1.5 and 2.0 are compatible with Oracle Projects. Read the following features to help you decide which version of PTE is appropriate for your company.
PTE Version 1.5 offers the following unique features:

- Supports single users only
- Compatible with Microsoft Windows 3.1
- 16-bit client application
- Local Blaze database
- Requires approximately 10 MB disk space for the PTE software and 1 MB per year of timecard data (size of local lookups database depends on your lookups strategy)

PTE Version 2.0 distinguishes from previous PTE versions:

- Supports multiple users with a single installation of PTE and Personal Oracle7
- Maintains database security (required for multiple users and optional for single users)
- Filter the download of lookups information by project, task, and expenditure type (together or individually)
- Ability to maintain lookup information (projects, tasks, and expenditure types) in your local database
- Reverse approved expenditures and individual expenditure items in approved expenditures
- Retrieve submitted or approved expenditures from the Oracle Projects production database to your local database
- Purge submitted or approved expenditures from your local database
- Additional reports
- Create customized reports
- Compatible with Microsoft Windows 95 and NT (Versions 3.51 and 4.0)
- 32-bit application
- Local Personal Oracle Lite database (Personal Oracle7 Version 7.3 or higher if you require database security)
• Requires approximately 16 MB disk space for PTE software and 5–8 MB per year of timecard data (Personal Oracle7 requires approximately 40 MB disk space)

See Also

Oracle Personal Time and Expense System Administrator’s Guide
Reviewing Online Time and Expense

You can use the Review Online Time and Expense window to review and approve timecards and expense reports online. Online timecards and expense reports are expenditures submitted from Oracle Personal Time and Expense to Oracle Projects. You can view timecards and expense reports with a status of Submitted only.

You can perform the following actions on timecards and expense reports in this window: Approve, Reject, and Forward. You can route expenditures to any other employee who is a supervisor.

The review online time and expense process is as follows:

- Employees enter timecards and expense reports in Oracle Personal Time and Expense, and submit them to Oracle Projects for approval.

- Supervisors review and approve, reject, or forward the expenditures in the Online Time and Expense window.
  - If the expenditure is approved, it is ready for cost distribution.
  - If the expenditure is forwarded, the person to whom it is forwarded can approve or reject it, or forward it to another person for approval.
  - If it is rejected, the employee must correct and resubmit the expenditure for approval.

Oracle Projects updates the expenditure status to Rejected when you reject it, or Approved, when you approve it for costing.

Prerequisites

- Submit time and expense to Oracle Projects from Oracle Personal Time and Expense for review and approval.

To review online time and expense:

1. Navigate to the Review Online Time and Expense window (Expenditures > Online Expenditure Review).
   Choose Supervisor to view only time and expense routed to you or All to view all time and expense.

2. Enter the Week Ending range of timecards and expense reports you want to review.
3. Enter the Employee who submitted the timecards and expense reports you want to review.

4. Use the View poplist to view expense reports and timecards that meet your search criteria.

5. Choose Find.

6. Choose Details to view the detail information for this timecard or expense report.

7. Choose Routing to review the routing history of this expenditure.

► To forward a timecard or expense report:

- Choose the Forward button and enter the name of the supervisor to whom you want to route this expenditure. Optionally enter a comment. Choose whether to approve this expenditure.

If you forward without approval, the expenditure status remains Submitted, and it is routed to the person you specify for review and approval.

► To reject a timecard or expense report:

- Choose the Reject button and enter a comment to indicate how you want the employee to correct it. Oracle Projects automatically routes the rejected expenditure to the employee who submitted it for approval.

In Oracle Personal Time and Expense, the employee can request the updated status for expenditures submitted to and reviewed in Oracle Projects. The employee can correct rejected expenditures and resubmit them to Oracle Projects for approval.

► To approve a timecard or expense report for costing:

- Choose the Approve button. Oracle Projects updates the status of the expenditure to Approved.

If you are using an approval extension, Oracle Projects calls the extension when you choose the Approve button to execute special checks and validations on the expenditure. See: Approval Extensions Oracle Personal Time and Expense System Administrator’s Guide.

► To print a timecard or expense report:

- Choose Print.
The resulting report is AUD: Timecard Entry for a timecard or
AUD: Expense Report Entry for an expense report.

See Also

Overview of Oracle Personal Time and Expense: page 4 – 50

*Oracle Personal Time and Expense System Administrator’s Guide*
Transaction Controls

Oracle Projects provides you with many levels of charge controls:

<table>
<thead>
<tr>
<th><strong>Project Status</strong></th>
<th>You can use the project status to indicate if any charges are allowed for the project.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task Chargeable Status</strong></td>
<td>You can specify a lowest task as chargeable or non–chargeable, to indicate if any charges are allowed for the task.</td>
</tr>
<tr>
<td><strong>Start and Completion Dates</strong></td>
<td>You can specify the start and completion dates of a lowest task, to record the date range for which charges are allowed for the task. The start and completion dates of the project also limit when transactions can be charged.</td>
</tr>
<tr>
<td><strong>Transaction Controls</strong></td>
<td>You can define transaction controls to specify the type of transactions that are chargeable or non–chargeable for the project and tasks.</td>
</tr>
</tbody>
</table>

Use transaction controls to configure your projects and tasks to allow only charges that you expect or plan. You can also define which items are billable and non–billable on your contract projects. For capital projects, you can define what items are capitalizable and non–capitalizable. This proactive means to control charges to projects enables you to better manage your projects.

You can configure transaction controls by the following:

- Expenditure Category
- Expenditure Type
- Employee
- Non–Labor Resource

You can create any combination of transaction controls that you want; for example, you can create a transaction control for an employee and a specific expenditure type, or you can create a combination for an employee, expenditure type, and non–labor resource.

You also specify the date range to which each transaction control applies.

If you do not enter transaction controls, you can charge expenditure items from any employee, expenditure category, expenditure type, and non–labor resource to all lowest tasks on the project.
Inclusive and Exclusive Transaction Controls

You specify whether the transaction controls you enter are inclusive or exclusive.

- **Inclusive** transaction controls limit charges to only the transaction controls entered; Oracle Projects then rejects any charges that are not listed as chargeable in the transaction controls.
  
  You make your transaction controls inclusive by checking the Limit to Transaction Controls box on the Transaction Controls window.

- **Exclusive** transaction controls allow all charges except those that are specified as non-chargeable in the transaction controls. Oracle Projects defaults to exclusive transaction controls.

For either method of transaction controls, you need to enter the following information:

- Expenditure category
- Expenditure type
You must specify an employee or expenditure category for each record. You can specify a non-labor resource for usage expenditure types.

**Employee controls with usage and supplier transactions**

Transaction controls that you define by employee do not apply to transactions that are not associated to an employee. This includes purchasing and supplier invoice transactions entered for a supplier not associated to an employee, and usage items incurred by an organization and not an employee.

If you define transaction controls to list employees who can charge to your project, Oracle Projects allows transactions from those employees along with any purchasing transactions, supplier invoice transactions, and usage items incurred by an organization and any other transactions that do not require an employee number.

**Employee controls with expense reports entered in Oracle Payables**

If you enter expense reports in Oracle Payables, and use suppliers associated to employees, Oracle Projects validates the transaction using the employee associated to the supplier. For example, if you specify that Donald Gray cannot charge to the project, and you enter an expense report item for the supplier GRAY, DONALD who is associated to the employee Donald Gray, Oracle Projects does not allow you to charge the item to the project, because it validates the transaction controls that you have defined.

**Allowable charges for each transaction control**

You can further control charges for each transaction control record by specifying whether to allow charges. The default value is to allow charges.

You usually select Chargeable when you are using inclusive transaction controls. For example, if you wanted to allow employees to charge only
labor to your project, you would check Limit To Transaction Controls to limit charges to only the transaction controls entered. Then you would define a transaction control with the Labor category, and allow charges to that transaction control.

You usually do not select Chargeable when you are using exclusive transaction controls because exclusive transaction controls list the exceptions to chargeable transactions.

You can also record exceptions by defining some transaction controls to allow charges and others not to allow charges. For example, say you want to define that employees can charge all labor except administrative labor. Select limit to transaction control to make the transaction control inclusive. You then enter one transaction control record with the Labor category that allows charges, and another transaction control record with the Labor category, Administrative type that does not allow charges.

### Specifying billable and capitalizable transactions

You can control what transactions for contract projects are non–billable and what transactions for capital projects are non–capitalizable when you set the **Billable/Capitalizable** field. You can choose between the options of No or Task Level. You select No if you want the charges to be non–billable or non–capitalizable; you select Task Level if you want the billable or capitalizable status to default from the task to which the item is charged.

You define the billable or capitalizable status for a task in the Task Details window. This value defaults to all expenditure items charged to the task.

#### Effective Dates

You can define transactions as chargeable for a given date range by entering an Effective From and Effective To date for each transaction control record. You must specify a start date; Oracle Projects defaults this value to the Effective From date of the project or task. The Effective To date is optional.

### See Also

Project and Task Options: page 2 – 38
Determining if an Item is Chargeable

Whenever you try to charge a transaction to a project, Oracle Projects checks all levels of chargeability control to determine if the an item can be charged to your project. This occurs when you enter an online or pre-approved expenditure item, copy a pre-approved timecard item, and transfer one or more items to a new project and/or task in Oracle Projects; when you enter a project–related requisition or purchase order distribution in Oracle Purchasing; and when you enter a project–related invoice distribution in Oracle Payables. The check is performed when you save the record.

Chargeability controls

The transaction validation checks are performed using the following tests (“chargeability controls”):

- Project status allows new transactions
- Task is chargeable
- Expenditure item date is between the start and end dates for the project and task
- Expenditure item must pass validation based on any applicable project or task transaction controls that exist

If the expenditure item passes the first three chargeability controls, then Oracle Projects checks the transaction controls.

The system first looks for an applicable task level transaction control. If it does not find applicable task level controls, it looks for project level controls. If the item matches an applicable transaction control at the task level, project level controls are not checked. The task level controls override the project level controls.

Applicable transaction controls are all of the transaction control records that apply to an expenditure item based on the employee, expenditure category, expenditure type, non-labor resource, and dates.

Oracle Projects follows the steps detailed in Figure 4 – 2 when determining the chargeable status of an expenditure item.

The flow is first followed when checking task level transaction controls and is then repeated for project level transaction controls, if needed.
Figure 4–2
Determining an expenditure item's chargeable status

Expenditure item is charged to project and task

Limit Charges to Controls Specified?  
YES  NO

Applicable Control Exist? †  
YES  NO

Transaction Control Allow Charges = Yes

YES  NO

Transaction is CHARGEABLE  Transaction is NOT CHARGEABLE

Applicable Control Exist? †  
YES  NO

Transaction Control Allow Charges = Yes

YES  NO

Transaction is NOT CHARGEABLE  Transaction is CHARGEABLE

Task level: Repeat validation for PROJECT level controls
Project level: Transaction is CHARGEABLE

† Applicable transaction controls are all transaction controls that matches the expenditure item being charged

See Also

Project and Task Options: page 2–38
Entering Project and Task Options: page 2–59
Determining if an Item is Billable/Capitalize

**Note:** You control the capitalizability of transactions for capital projects just as you control the billability of transactions for contract projects.

You specify whether an item is billable for contract projects. Oracle Projects provides you with two levels of billability control.

- **Task Billable Status**: You can specify a lowest level task as billable or non–billable. This billable status defaults to all expenditure items charged to that task.
- **Transaction Controls**: You can define transaction controls to specify what transactions are non–billable.

**Note:** You can override the billable status of an expenditure item in the Expenditure Items and Invoice Line Details window.

Billability controls

If a transaction is chargeable, Oracle Projects next determines if it is billable using the following transaction validation checks:

A transaction must meet ALL of the following criteria to be billable:

- Transaction is chargeable
- Task is billable
- Billable field must be set to Task Level in all applicable rows in Transaction Controls

You can specify what is non–billable using transaction controls.

For an item to be billable, the task must be billable. You can make an item non–billable by setting the Billable field to No for a transaction control record. You cannot mark a task as non–billable, and then mark expenditure items as billable through transaction controls.

See Also

- Project and Task Options: page 2 – 38
- Entering Project and Task Options: page 2 – 59
Examples of Using Transaction Controls

Following are some examples of what you can do with transaction controls. You can study the example configurations to help you better understand how to use transaction controls in different business scenarios. The examples show you how you can use:

- A combination of employee, expenditure category, expenditure type, and non-labor resource in your transaction controls
- A combination of project and task level transaction controls
- Transaction controls to control both billability and chargeability

Note: You control capitalizability just as you control billability.

CASE 1: Limited employees charge limited expenses

In this example, only two employees can charge a project, and they can charge only labor and expenses, not including entertainment expenses.

Scenario:
Project SF100 begins on September 1, 1995. The only people working on the project are Donald Gray and Amy Marlin; therefore, they are the only employees who can charge to the project. They can charge only labor and in-house recoverables; however, computer expenses are not allowed. All charges are billable and reimbursable by the client.

Setup:
You create Project SF100 and create all tasks as billable. You enter project level transaction controls in the options regions of the Projects, Templates window as follows:

Transaction Controls entered for: Project

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Expenditure Type</th>
<th>Non-Labor Resource</th>
<th>Employee</th>
<th>Chargeable</th>
<th>Billable</th>
<th>Effective From</th>
<th>Effective To</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marlin</td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gray</td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Labor</td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
<td></td>
</tr>
</tbody>
</table>

Table 4-12  (Page 1 of 2)
Resulting Transactions:

Amy Marlin and Donald Gray can charge only labor and in–house recoverables. All in–house recoverables except computer charges are allowed. All charges are billable as defined by the billable field.

Supplier invoices, expense report charges, and other costs are not allowed. No employees other than Marlin and Gray are allowed to charge.

In Case 2, different types of expenditures should be charged to the project at different phases in the project.

Scenario:

You have negotiated Project SF200. The project charges will include supplier invoices for material, labor, and employee travel expenses. You know that supplier invoices are charged throughout the life of the project; you know that supplier invoices will be charged before the work even begins since you have ordered materials that you must have before you can start the project work. The project work is scheduled to last two months; employees submit timecards each week, but are allowed a two week lag to submit their expense reports.

The project is scheduled to begin on September 1, 1995. The project work, which is dependent on receiving materials purchased, is scheduled for October 1 to December 31, 1995. Expense reports can be charged until January 15, 1996, two weeks after the project ends.

Setup:

You create Project SF200 with a duration from 01–SEP–95 to 15–JAN–96. You create the following transaction controls.

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Expenditure Type</th>
<th>Non–Labor Resource</th>
<th>Employee Charge–able</th>
<th>Billable</th>
<th>Effective From</th>
<th>Effective To</th>
</tr>
</thead>
<tbody>
<tr>
<td>In–House Recoverables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
</tr>
<tr>
<td>In–House Recoverables</td>
<td>Computer Services</td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
</tr>
</tbody>
</table>
Level: Project

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Expenditure Type</th>
<th>Non–Labor Resource</th>
<th>Employee</th>
<th>Chargeable</th>
<th>Billable</th>
<th>Effective From</th>
<th>Effective To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td></td>
<td></td>
<td>✓</td>
<td>Task Level</td>
<td></td>
<td>01–SEP–95</td>
<td></td>
</tr>
<tr>
<td>Labor</td>
<td></td>
<td></td>
<td>✓</td>
<td>Task Level</td>
<td></td>
<td>01–OCT–95</td>
<td>31–DEC–95</td>
</tr>
<tr>
<td>Labor</td>
<td>Administrative</td>
<td></td>
<td>✓</td>
<td>No</td>
<td></td>
<td>01–OCT–95</td>
<td>31–DEC–95</td>
</tr>
<tr>
<td>Travel</td>
<td></td>
<td></td>
<td>✓</td>
<td>Task Level</td>
<td></td>
<td>01–OCT–95</td>
<td>15–JAN–96</td>
</tr>
</tbody>
</table>

Table 4 – 13 (Page 1 of 1)

Resulting Transactions:

Supplier invoices for materials can be charged to the project from 01–SEP–95 to the end of the project.

Labor can be charged to the project from 01–OCT–95 to 31–DEC–95. Any labor charged outside those dates is not allowed. All labor, except Administrative, is billable based on the billable field; Administrative labor is non–billable based on the transaction control billable field.

Travel expenses can be charged to the project from 01–OCT–95 to 15–JAN–96. Any expenses charged outside those dates are not allowed.

CASE 3: Some tasks, but not all, are only chargeable for labor expenditures

Only labor can be charged to the project. There are exceptions to this rule for specific tasks, which are configured using task transaction controls.

Scenario:

Project SF300 has been negotiated to perform an environmental study for the proposed site of a new housing development. You organize your project so you can easily manage its status and control the charges; the project work breakdown structure is as follows. All the tasks, except task 1, are defined as billable.

Task 1          Administration
Task 2          Purchases
Task 3          Analysis
Task 3.1        Onsite Analysis
Task 3.2 In–house Analysis

Task 4 Writeup

Most of the charges on the project are labor. All labor is billable, except for Administrative labor. Some tasks involve charges other than labor.

- All administration for the project, which includes only labor and computer usage, is charged to task 1. Donald Gray, the project manager, and Sharon Jones, his assistant, are the only people handling the administration of the project.
- You know that you must make a few purchases to perform the analysis for the project; you will monitor the charges for the supplier invoices in task 2.
- You have reserved Field Equipment and a van for the onsite analysis (Task 3.1), but know that your client will not reimburse vehicle charges on this project.
- You have arranged for Susan Marshall from the East Coast office to fly in for a week to help with the in-house analysis since she has done this type of analysis before. She will charge her expenses to the same task, but your client will not be invoiced for those expenses. No other expenses are allowed on that task.

In summary, the controls you want to define for your project are as follows:

<table>
<thead>
<tr>
<th>Project/Task</th>
<th>Task Name</th>
<th>Transaction Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td></td>
<td>• only labor allowed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Administrative labor is non–billable</td>
</tr>
<tr>
<td>Task 1</td>
<td>Administration</td>
<td>• only labor and computer allowed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• only Gray and Jones can charge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• all charges non–billable</td>
</tr>
<tr>
<td>Task 2</td>
<td>Purchases</td>
<td>• only supplier invoices allowed</td>
</tr>
<tr>
<td>Task 3</td>
<td>Analysis</td>
<td></td>
</tr>
<tr>
<td>Task 3.1</td>
<td>Onsite Analysis</td>
<td>• labor, equipment, and van charges</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• allowed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• van charges are non–billable</td>
</tr>
</tbody>
</table>

Table 4 – 14 (Page 1 of 2)
**Task 3.2**  In-house Analysis
- labor allowed
- no expenses allowed, except for expenses from Susan Marshall; her expenses are non–billable

**Task 4**  Writeup
- only labor allowed
- Administrative labor is non–billable

### Setup:
You create Project SF300 with your work breakdown structure. You enter the following transaction controls.

#### Level: Project

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Expenditure Type</th>
<th>Non–Labor Resource</th>
<th>Employee</th>
<th>Chargeable</th>
<th>Billable</th>
<th>Effective From</th>
<th>Effective To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
</tr>
<tr>
<td>Labor Administrative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
<td>01–SEP–95</td>
</tr>
</tbody>
</table>

#### Level: Task 1  Administration (Task is non–billable)

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Expenditure Type</th>
<th>Non–Labor Resource</th>
<th>Employee</th>
<th>Chargeable</th>
<th>Billable</th>
<th>Effective From</th>
<th>Effective To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
</tr>
<tr>
<td>In–House Recoverables</td>
<td>Computer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
</tr>
</tbody>
</table>
You could also define the transaction controls as follows, with the same results.

**✓ Limit to Transaction Controls**

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Expenditure Type</th>
<th>Non–Labor Resource</th>
<th>Employee</th>
<th>Chargeable</th>
<th>Billable</th>
<th>Effective From</th>
<th>Effective To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td></td>
<td></td>
<td>Gray</td>
<td>✓</td>
<td>Task Level</td>
<td>01-SEP-95</td>
<td></td>
</tr>
<tr>
<td>Labor</td>
<td></td>
<td></td>
<td>Jones</td>
<td>✓</td>
<td>Task Level</td>
<td>01-SEP-95</td>
<td></td>
</tr>
<tr>
<td>In–House Recoverables</td>
<td>Computer</td>
<td></td>
<td>Gray</td>
<td>✓</td>
<td>Task Level</td>
<td>01-SEP-95</td>
<td></td>
</tr>
<tr>
<td>In–House Recoverables</td>
<td>Computer</td>
<td></td>
<td>Jones</td>
<td>✓</td>
<td>Task Level</td>
<td>01-SEP-95</td>
<td></td>
</tr>
</tbody>
</table>

**Resulting Transactions: Task 1**

Donald Gray and Sharon Jones can charge labor and computer use, both of which will be non–billable as defined by the billable field.

All other employees, other than Gray and Jones, cannot charge to the project. All other types of charges, including supplier invoices, expenses, and non–computer usages are not allowed because they are not listed in the transaction controls and the Limit to Transaction Controls is selected.

The project transaction controls are not evaluated for charges to this task, because the Limit to Transaction Controls is selected.
Level: Task 2 Purchases (Task is billable)

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Expenditure Type</th>
<th>Non-Labor Resource</th>
<th>Employee</th>
<th>Chargeable</th>
<th>Billable</th>
<th>Effective From</th>
<th>Effective To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
<td></td>
</tr>
<tr>
<td>Outside Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
<td></td>
</tr>
<tr>
<td>Other Expenses</td>
<td>Other Invoice</td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
<td></td>
</tr>
</tbody>
</table>

**Table 4 – 18 (Page 1 of 1)**

**Resulting Transactions: Task 2**

Only supplier invoice expenditures can be charged to this task. The charges are billable as defined by the billable field.

All other types of charges are not allowed. The project transaction controls are not evaluated for charges to this task, because the Limit to Transaction Controls is selected.

Level: Task 3.1 Onsite Analysis (Task is billable)

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>Expenditure Type</th>
<th>Non-Labor Resource</th>
<th>Employee</th>
<th>Chargeable</th>
<th>Billable</th>
<th>Effective From</th>
<th>Effective To</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-House Recoverables</td>
<td>Field Equipment</td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
<td></td>
</tr>
<tr>
<td>In-House Recoverables</td>
<td>Vehicle</td>
<td>Van</td>
<td></td>
<td></td>
<td>No</td>
<td>01–SEP–95</td>
<td></td>
</tr>
<tr>
<td>Labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Task Level</td>
<td>01–SEP–95</td>
<td></td>
</tr>
</tbody>
</table>

**Table 4 – 19 (Page 1 of 1)**

**Resulting Transactions: Task 3.1**

The only type of in-house recoverable expenditures allowed are Field Equipment and Vehicle. The only type of Vehicle charge allowed is the
use of a van. The Van charges are non–billable as defined by the transaction control. 

All labor can also be charged to this task. Expense report charges, supplier invoices, in–house recoverables other than Field Equipment and Vehicle usage of a Van, and other costs (such as Miscellaneous Transactions, Inventory, Work in Process, and Burden Transactions) cannot be charged to this task, as defined by the task transaction controls using Limit to Transaction Controls selected.

Level: Task 3.2 In–House Analysis (Task is billable)

<table>
<thead>
<tr>
<th>Limit to Transaction Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure Category</td>
</tr>
<tr>
<td>Travel</td>
</tr>
<tr>
<td>Travel</td>
</tr>
</tbody>
</table>

Table 4 – 20 (Page 1 of 1)

**Resulting Transactions: Task 3.2**

Susan Marshall can charge travel expenses, which are non–billable as defined by the task transaction controls. No other employee can charge travel expenses to this task.

All labor can also be charged to this task. Because this task’s Limit to Transaction Controls is set to No and no applicable transaction control was found at the task level for the following types of charges, the charges are evaluated based on the project transaction controls; these type of charges include: labor, supplier invoices, and in–house recoverables. Supplier invoices, in–house recoverables, and other costs are not allowed since they are not listed in the project level transaction controls.

Level: Task 4 (No Transaction Controls)

**Resulting Transactions: Task 4**

All labor can be charged to this task. All other charges are not allowed based on the project transaction controls.

All charges are evaluated based on the project transaction controls, because no transaction controls are entered for the task.
See Also

Project and Task Options: page 2 – 38
Entering Project and Task Options: page 2 – 59
Overview of Transaction Import

Transaction Import is an open interface that allows you to validate and load transactions from external cost collection systems into Oracle Projects. Transaction Import creates pre-approved expenditure items from transaction data entered in external cost collection systems. For example, you may wish to import transactions from the following types of systems into Oracle Projects:

- Timecard entry systems
- Expense report entry systems
- Oracle Personal Time and Expense
- Electronic data collection systems for asset usage (computer, printer, phone, etc.)
- Payroll systems that calculate complex transactions for benefits, overtime, and other labor charges
- Fixed assets systems that calculate depreciation charged to a project
- Manufacturing systems, such as Inventory and Work in Process

When loading transactions, Transaction Import creates expenditure batches, expenditures, and expenditure items. You can import costed or uncosted, accounted or unaccounted, and adjusted transactions into Oracle Projects.

This section describes how Transaction Import works. It also discusses how Transaction Import groups transactions to create expenditure batches. We also include information about the types of transactions you can load from external systems. Finally, we discuss how to view, process, and adjust the imported transactions in Oracle Projects.

See Also

Transaction Import Interface: page 4 – 88
Expenditure Item Validation: page 4 – 3
About Oracle Personal Time and Expense: page 4 – 50
Project Manufacturing: page 12 – 75
Using Transaction Import

When you import transaction information from external cost collection systems, Oracle Projects records the transaction details and the source of the imported transactions during transaction import. Transaction
Import automatically validates the transaction information, reports any exceptions, and creates transactions for all of the valid transactions. Oracle Projects does not import a transaction more than once.

**Populate the Interface Table**

Before you submit the PRC: Transaction Import process, you must populate the PA_TRANSACTIONINTERFACE_ALL table with records that you wish to import. The list of values for the transaction source parameter will display all of the transaction sources in the PA_TRANSACTION_SOURCES table. Any transaction source that has pending records in the PA_TRANSACTION_INTERFACE table will be marked with an asterisk in the list of values.

**Transaction Sources**

When you submit Transaction Import, Oracle Projects requires you to identify the source of the transactions that you want to import. The sources that you identify can be any transaction source that Oracle Projects predefines or that you define during implementation.

**Submitting Transaction Import**

Use the Submit Request window or choose Expenditures > Transaction Import > Import Transaction from the Navigator window to submit the PRC: Transaction Import process. You must specify a transaction source when you submit this process.

**Correcting and Resubmitting Transactions**

Use the Review Transactions window to review and resubmit rejected transactions or to create and submit new transactions.

**Output Reports**

Transaction Import has two output reports that allow you to review the number of successfully imported transactions as well as review transactions that were rejected by Transaction Import.

---

**See Also**

Transaction Sources: page 16 – 86

Submitting Requests: page 9 – 2

Transaction Import Interface: page 4 – 88
Types of Items that You Can Import

Using Transaction Import, you can import transactions with various expenditure types and expenditure type classes, as listed below.

- Straight Time
- Expense Reports
- Usages
- Inventory
- Work in Process
- Miscellaneous

You can import the transactions listed above from any transaction source associated with any expenditure type class.

Unmatched Negative Transactions

You can import unmatched, negative transactions. These transactions have a negative quantity and cost and do not reverse another transaction. Unmatched, negative transactions are generally used for summary-level adjustments or to correct converted transactions.

Oracle Projects does not verify that an original transaction exists for unmatched, negative transactions.

Exception

Supplier Invoices

Transaction Import does not load supplier invoices. You enter supplier invoices in Oracle Payables, and then interface the supplier invoices from Oracle Payables to Oracle Projects using the Interface Supplier Invoices from Payables process provided by Oracle Projects.

Overtime

Transaction Import does not import transactions with an expenditure type class of Overtime. However, you can load overtime from external systems by using an expenditure type class of Straight Time. Ensure
that these transactions are loaded as costed so that the cost amounts are not recalculated in Oracle Projects.

See Also

Expenditure Type Classes: page 16 – 71
Transaction Sources: page 16 – 86

Loading Items as Costed or Uncosted

You can load uncosted items and costed items. The transaction source associated with the transaction specifies whether a transaction is costed or uncosted.

<table>
<thead>
<tr>
<th>Uncosted Items</th>
<th>Items for which only the quantity is provided. Oracle Projects costs these transactions like other transactions based on the cost multiplier and quantity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costed Items</td>
<td>Items for which the quantity and raw cost is provided. Oracle Projects does not recalculate the raw cost of imported costed items.</td>
</tr>
</tbody>
</table>

With Oracle Projects, you can perform burdening and accounting on costed and uncosted items that you load via Transaction Import.

Loading Items as Accounted or Unaccounted

You can specify by transaction source whether items have already been accounted in the external system. Identifying items as accounted or unaccounted affects how Transaction Import processes the items.

<table>
<thead>
<tr>
<th>Unaccounted Items</th>
<th>Items for which the appropriate GL account has not been determined. When loading unaccounted items, the Transaction Import process calls any transaction control extensions that you have defined. Cost calculation processes (distribute raw and burden costs) determine the cost amount (for uncosted items only) and GL account to which the cost should be posted.</th>
</tr>
</thead>
</table>
Accounted Items  Items for which cost amounts and GL accounts have already been determined and posted to GL by external systems. No processes within Oracle Projects will cost these transactions or transfer them to GL. When loading accounted items, Transaction Import creates cost distribution lines with a status of Received. Transaction Import also creates expenditure items and expenditures that are identified as accounted. If you import accounted items, you must provide the debit and credit code combination ID. When loading accounted transactions, Transaction Import will not call any extensions, create related items, or allow you to import related items.

Loading Burden Transactions

You can import burden costs using the Transaction Import process. Depending on the definition of the project type of the projects that you are charging and the definition of the transaction source, you can control how burden costs are imported and accounted. You can import the burdened costs as either a value on the expenditure item or as separate burden transaction expenditure items. Alternatively, you may choose not to import burden costs and allow Oracle Projects to calculate and store the burden costs as you have defined them in Oracle Projects.

Burden transactions have raw costs and quantities of zero and only burden amounts associated with the transactions. You identify burden transactions by assigning them an expenditure type class of Burden Transaction.

There is no predefined transaction source for burden transactions. You can create a new transaction source with an expenditure type class of Burden Transaction and then use this transaction source to import burden transactions.

Loading Project Manufacturing Costs

Oracle Projects predefines the following transaction sources to enable you to import manufacturing resource costs from Oracle Manufacturing for the Project Manufacturing integration:
If you want to import manufacturing transactions from a non–Oracle manufacturing application, you must define your own transaction source.

Any transaction characterized by one of the transaction source and default expenditure type class combinations represented in the table above constitutes a manufacturing cost. However, you can use these transaction sources with other expenditure type classes. Note the following issues regarding Oracle Project Manufacturing transactions:

- Manufacturing transactions with a transaction source of Inventory or Work In Process are accounted for and interfaced to Oracle General Ledger by Oracle Manufacturing. Oracle Projects acts as the repository for these cost amounts but does not perform any accounting functions on them.

- Because they are transferred to Oracle Projects by sub–element (which maps to the expenditure type), multiple manufacturing transactions with a transaction source of either Inventory or Work In Process can use the same original system reference.

- You cannot adjust manufacturing costs in Oracle Projects, since all accounting for the costs is performed in Oracle Manufacturing. Any adjustments to these costs must originate in Oracle Manufacturing.

### Table 4 – 21 Transaction sources and their default expenditure type classes

<table>
<thead>
<tr>
<th>Transaction Source</th>
<th>Default Expenditure Type Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work in Process</td>
<td>Work in Process</td>
</tr>
<tr>
<td>Inventory</td>
<td>Inventory</td>
</tr>
<tr>
<td>Inventory Misc</td>
<td>Inventory</td>
</tr>
</tbody>
</table>

See Also

Project Manufacturing: page 12 – 75

### Options by Transaction Source

Transaction Import processes transactions based on the attributes of the source of the transaction. For example, if you want to import costed transactions (transactions with raw cost amounts), you must check the
Costed check box for the appropriate transaction source in the Transaction Sources window. Oracle Projects provides the following options for transaction sources:

- Default Expenditure Type Class
- Costed
- Cost Burdened
- GL Accounted
- Allow Duplicate References
- Modify Interface
- Allow Adjustments
- Purgeable
- MRC Amounts from External System

For a detailed description of each of these options, see: Transaction Sources: page 16 – 86.

### Grouping Transactions into Expenditure Batches

This section describes how Transaction Import groups transactions into expenditure batches and expenditures.

When you load transactions into the interface table from an external system, Oracle Projects requires that you specify the following information for each transaction:

- Transaction source
- Batch name
- Expenditure ending date
- Employee name or Organization
- Expenditure type class (if this information is not provided for the transaction, the value defaults to the expenditure type class assigned to the transaction source during implementation)

Transaction Import groups all of the transactions processed during an interface run into expenditures and expenditure batches in the following manner.

⚠️ **Attention:** For all transactions, if the employee number is specified, Transaction Import ignores any value for the
organization and derives the organization value based on the employee’s assignment.

**Straight Time and Expense Reports**

If the transaction source of the transactions being processed is defined with an expenditure type class of *Straight Time* or *Expense Reports*, the key information in the interface table used in grouping transactions into expenditures and expenditure batches is as follows:

- Transaction source
- Expenditure type class
- Batch name
- Employee number
- Expenditure ending date

Each unique batch name becomes an expenditure batch, and each unique expenditure type class, employee number, and expenditure ending date combination becomes an expenditure within the expenditure batch. The ending date of the expenditure batch is set to the maximum ending date of all the expenditures created within that batch.

An employee number is required for all transactions with an expenditure type class *Straight Time* or *Expense Reports*. Transactions with any other expenditure type classes do not require an employee number.

**All Other Expenditure Type Classes**

If the transaction source of the transactions being processed is defined with an expenditure type class of *Usages*, *Miscellaneous Transactions*, *Burden Transactions*, *Inventory*, or *Work in Process*, the key information in the interface table used in grouping transactions into expenditures and expenditure batches is as follows:

- Transaction source
- Expenditure type class
- Batch name
- Employee number (optional)
- Expenditure organization name
- Expenditure ending date
Each unique batch name becomes an expenditure batch, and each unique expenditure type class, employee number, organization, and expenditure ending date combination becomes an expenditure within the expenditure batch. The ending date of the expenditure batch is set to the maximum ending date of all the expenditures created within that batch.

Transaction Import Example: Labor and Expense by Employee Number

Example 1  You load the following transactions (expenditure items) into the interface table. The transaction source of Site1 has expenditure type classes of Straight Time and Expense Reports.

<table>
<thead>
<tr>
<th>Trx Number</th>
<th>Trx Source</th>
<th>Expenditure Type Class</th>
<th>Batch Name</th>
<th>Employee Number</th>
<th>Expenditure Ending Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Site1</td>
<td>Straight Time</td>
<td>L1</td>
<td>1000</td>
<td>02-OCT-95</td>
</tr>
<tr>
<td>2</td>
<td>Site1</td>
<td>Straight Time</td>
<td>L1</td>
<td>1000</td>
<td>25-SEP-95</td>
</tr>
<tr>
<td>3</td>
<td>Site1</td>
<td>Expense Reports</td>
<td>L1</td>
<td>1000</td>
<td>25-SEP-95</td>
</tr>
<tr>
<td>4</td>
<td>Site1</td>
<td>Expense Reports</td>
<td>L1</td>
<td>1001</td>
<td>09-OCT-95</td>
</tr>
<tr>
<td>5</td>
<td>Site1</td>
<td>Straight Time</td>
<td>L2</td>
<td>1001</td>
<td>09-OCT-95</td>
</tr>
<tr>
<td>6</td>
<td>Site1</td>
<td>Straight Time</td>
<td>L2</td>
<td>1001</td>
<td>09-OCT-95</td>
</tr>
</tbody>
</table>

If you submit Transaction Import for the transaction source of Site1 and do not specify a specific batch to process (pick all transactions with a transaction source of Site1), then Transaction Import will process all six of the above transactions.

Assuming that all of the transactions in this example are valid, then Oracle Projects creates two expenditure batches—L1 and L2:

<table>
<thead>
<tr>
<th>Batch Name</th>
<th>Transaction Number</th>
<th>Expenditure Type Class</th>
<th>Employee Number</th>
<th>Expenditure Ending Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>1</td>
<td>Straight Time</td>
<td>1000</td>
<td>02-OCT-95</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Straight Time</td>
<td>1000</td>
<td>25-SEP-95</td>
</tr>
</tbody>
</table>
Since the transaction source has expenditure type classes of Straight Time and Expense Reports, Transaction Import groups the transactions by employee, expenditure ending date, and expenditure type class when creating expenditures. Therefore, the resulting expenditures are as follows:

<table>
<thead>
<tr>
<th>Batch Name</th>
<th>Transaction Number</th>
<th>Expenditure Type Class</th>
<th>Employee Number</th>
<th>Expenditure Ending Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>Expense Reports</td>
<td>1000</td>
<td>25–SEP–95</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Expense Reports</td>
<td>1001</td>
<td>09–OCT–95</td>
</tr>
<tr>
<td>L2</td>
<td>5</td>
<td>Straight Time</td>
<td>1001</td>
<td>09–OCT–95</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Straight Time</td>
<td>1001</td>
<td>09–OCT–95</td>
</tr>
</tbody>
</table>

Table 4 – 23 (Page 2 of 2)

Notice that even though transactions 2 and 3 were for the same employee and the same ending date, Oracle Projects created two expenditures. Transactions with different expenditure type classes are imported into different expenditure batches. Different batch names will also result in the creation of different expenditure batches, even if they contain transactions for the same employee and ending date.

Since the ending date of the expenditure batch created is equal to the maximum ending date of the expenditures created within that batch, the batch ending dates for our example are as follows:

<table>
<thead>
<tr>
<th>Batch Name</th>
<th>Transaction Number</th>
<th>Expenditure Type Class</th>
<th>Employee Number</th>
<th>Expenditure Ending Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>1</td>
<td>Straight Time</td>
<td>1000</td>
<td>02–OCT–95</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Straight Time</td>
<td>1000</td>
<td>25–SEP–95</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Expense Reports</td>
<td>1000</td>
<td>25–SEP–95</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Expense Reports</td>
<td>1001</td>
<td>09–OCT–95</td>
</tr>
<tr>
<td>L2</td>
<td>5,6</td>
<td>Straight Time</td>
<td>1001</td>
<td>09–OCT–95</td>
</tr>
</tbody>
</table>

Table 4 – 24 (Page 1 of 1)
Transaction Import Example: Usage

Example 2  You load the following transactions into the interface table; the transaction source of Usage has an expenditure type class of Usages. The grouping logic is slightly different for usage items, because usage expenditures can be created for an employee or an organization.

Note: You do not need to enter an employee number for usage transactions.

<table>
<thead>
<tr>
<th>Trx Number</th>
<th>Txn Source</th>
<th>Expenditure Type Class</th>
<th>Batch Name</th>
<th>Employee Number</th>
<th>Organization</th>
<th>Expenditure Ending Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Usage</td>
<td>Usages</td>
<td>U1</td>
<td>1000</td>
<td>West</td>
<td>02-OCT-95</td>
</tr>
<tr>
<td>2</td>
<td>Usage</td>
<td>Usages</td>
<td>U1</td>
<td>1000</td>
<td>East</td>
<td>02-OCT-95</td>
</tr>
<tr>
<td>3</td>
<td>Usage</td>
<td>Usages</td>
<td>U1</td>
<td></td>
<td>West</td>
<td>02-OCT-95</td>
</tr>
<tr>
<td>4</td>
<td>Usage</td>
<td>Usages</td>
<td>U1</td>
<td></td>
<td>Midwest</td>
<td>02-OCT-95</td>
</tr>
</tbody>
</table>

Since all of these transactions have the same batch name, Oracle Projects creates only one expenditure batch. For usage items, Transaction Import groups transactions by employee, organization, and expenditure ending date when creating expenditures. Therefore, the resulting expenditures after import would be as follows:
Notice that transactions (1) and (2) appear in the same expenditure because they were for the same employee/expenditure ending date, even though the organization name specified for both is different. If a transaction specifies an employee number, Transaction Import ignores any value for Organization and derives the organization value based on the employee’s assignment.

Also note that even if employee 1000’s organization assignment were West, the resulting expenditures would still be the same. Transaction Import never groups usage transactions for an employee into the same expenditure as usage transactions for an organization.

<table>
<thead>
<tr>
<th>Batch Name</th>
<th>Trx Number</th>
<th>Expenditure Type Class</th>
<th>Employee Number</th>
<th>Organization</th>
<th>Expenditure Ending Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>U1</td>
<td>1, 2</td>
<td>Usages</td>
<td>1000</td>
<td>“Employee Org”</td>
<td>02–OCT–95</td>
</tr>
<tr>
<td>3</td>
<td>Usages</td>
<td>West</td>
<td></td>
<td></td>
<td>02–OCT–95</td>
</tr>
<tr>
<td>4</td>
<td>Usages</td>
<td>Midwest</td>
<td></td>
<td></td>
<td>02–OCT–95</td>
</tr>
</tbody>
</table>

Table 4 – 27  (Page 1 of 1)

Viewing and Processing Imported Transactions

Viewing Transactions in Oracle Projects

Transaction Import loads transactions as pre-approved expenditure items; expenditure batches are created as having a status of Released. A status of Released indicates that the expenditure batch is fully approved and ready for cost distribution.

**Note:** All transactions that have already been accounted for in external systems, including manufacturing transactions, are loaded as costed transactions. These transactions are created with cost distribution lines and a status of Received.

You can view imported expenditure batches and associated expenditures and expenditure items using the Expenditure Inquiry and Expenditure Batches windows in Oracle Projects.

**Note:** The expenditure batch name within Oracle Projects is created as a concatenation of the batch name and expenditure type class entered in the transaction interface table and the interface ID. For example, an expenditure batch name may appear as follows: B1ST101.
B1 is the batch name loaded from the external system, ST is the expenditure type class (‘ST’ for Straight Time), and 101 is the interface ID generated when you run the transaction import process.

The maximum length of the expenditure batch name is 20 characters (10 for the batch name, 3 for the expenditure type class, and 7 for the interface ID). The interface ID is an Oracle sequence that resets to 1 after 9999999. If a duplicate expenditure batch name results from resetting the interface ID to 1, change the batch name of the entire batch.

For detailed information on successfully imported expenditure items, use the following information as parameters for the AUD: Pre–Approved Expenditure Entry Audit Report. The information for these parameters is displayed in the Transaction Import output report.

- Expenditure batch
- Employee name that corresponds to the user ID of the person that submitted Transaction Import

Identifying the “Entered By” User for Reporting Purposes

For viewing imported transaction online, or for using the Entered By parameters in reports such as the Pre–Approved Expenditures Entry Audit Report, use the employee name that corresponds to the user ID of the person who submitted the process as the entered by person.

**Suggestion:** You may wish to create a new user to run Transaction Import with a unique name, such as TRX IMPORT USER, so you can easily identify and report imported transactions.

Adjusting Imported Transactions in Oracle Projects

You can adjust imported transactions in Oracle Projects, if the transaction source allows this type of change. See: Expenditure Adjustments: page 4 – 25 and Transaction Sources: page 16 – 86.

**Note:** Raw cost values for transactions that were already costed when loaded into Oracle Projects will not be changed if you mark the item for cost recalculation.

Uniquely Identifying Transactions

You can uniquely identify imported transactions by the transaction source and the original transaction reference, if you do not allow
duplicate system references for the transaction source. You can review this information in the Expenditure Items window, which you can access from the Expenditure Inquiry window.

**Processing Imported Transactions**
Oracle Projects processes imported transactions just as it processes transactions entered using the expenditure entry forms. The imported transactions that are not accounted (as specified for the transaction source) are processed in the appropriate cost distribution program. If expenditure items are billable and charged to a contract project, they are also processed during revenue and invoice generation. Accounting transactions are then interfaced to other Oracle Applications.

**Purging Imported Transactions**
You can either automatically or manually purge imported transactions from the interface table. To automatically purge imported transactions, you specify that a particular transaction source is purgeable. To manually purge imported transactions, use SQL*Plus to remove the records from the interface table.
Transaction Import Interface

This section describes how to import transactions from external cost collection systems using Transaction Import. It also describes the validation Oracle Projects performs for imported transactions, as well as how to resolve import exceptions.

See Also

Overview of Transaction Import: page 4 – 73

Transaction Import Validation

Transaction Import validates your data for compatibility with Oracle Projects by ensuring that the columns in the interface table reference the appropriate and active values and columns in Oracle Projects.

Validating Expenditure Items

Transaction Import validates all items within an expenditure before it creates an expenditure. If at least one item in an expenditure fails the validation, Oracle Projects rejects all items in the expenditure. The item that failed is marked with a rejection reason; all other items in the expenditure are marked as rejected without a reason.

Transaction Import detects only one error per transaction each time you run the import process. If a single transaction has multiple errors, you will need to run Transaction Import more than once to discover all the errors.

You can correct rejected transactions using the Review Transactions window. After you make your corrections, you can validate the revised information by resubmitting the corrected transactions from the same window. See: Resolving Import Exceptions: page 4 – 108.

If Transaction Import detects errors during the validation process, you do not need to correct all rejected items to save your transaction information. You need to correct all items, however, before you can successfully import your transactions.
Validating and Loading Transactions

Transaction Import validates the following attributes to ensure that your transactions contain the appropriate data for Oracle Projects. For a list of the validation criteria, see: Expenditure Item Validation: page 4 – 3.

Note: For detailed information on additional column validation, see: PA_TRANSACTION_INTERFACE_ALL Table Description: page 4 – 91.

Understanding the Transaction Import Interface Table

You use an import utility to load transaction information into the interface table (PA_TRANSACTION_INTERFACE_ALL) for each transaction you want to create. When you initiate importing transactions, Transaction Import validates all required transaction data in this table. After it validates the information, Transaction Import creates transactions (expenditure items) from the information in the interface table and places the transaction information in the following expenditure tables:

- PA_EXPENDITURE_GROUPS_ALL
- PA_EXPENDITURES_ALL
- PA_EXPENDITURE_ITEMS_ALL
- PA_COST_DISTRIBUTION_LINES_ALL
- PA_EXPENDITURE_COMMENTS

The interface table is organized by columns which Oracle Projects uses to categorize and store specific transaction information. For example, the column called TRANSACTION_SOURCE in PA_TRANSACTION_INTERFACE_ALL stores transaction source information.

NOT NULL Columns

You must enter values for all NOT NULL columns in the interface table to successfully create expenditures from your imported transaction data.
NULL Columns

A NULL column is a column in the interface table that does not require a value for Transaction Import to successfully create transactions from the records in the table. There are two types of NULL columns:

- Some NULL columns are NULL only because they are not required for all transactions. They are required, however, depending on the type of transaction. For example, for usage items, the NON_LABOR_RESOURCE column must be populated. We mark these columns as Conditionally Required.
- Some NULL columns should never be populated because they are used by the Transaction Import program. We list these columns in the System Assigned Columns section.

Conditionally Required Columns

Oracle Projects requires you to enter values in conditionally required columns only if you have entered a value in another column on which the columns are dependent. For example, if you are importing usage expenditure items, you must supply a value for the NON_LABOR_RESOURCE and NON_LABORRESOURCE_ORGANIZATION columns; these columns are not required for labor expenditure items. See: PA_TRANSACTION_INTERFACE_ALL Table Description: page 4 – 91.

Optional Columns

You can use some columns in the interface table to import additional information for the transactions that Transaction Import creates. Transaction Import imports the data that you load into these optional columns, provided that the information passes the validation checks that Transaction Import requires.

System Assigned Columns

Oracle Projects assigns values to the columns listed below during the import process. Your import file must leave these columns blank.

- EXPENDITURE_ID
- EXPENDITURE_ITEM_ID
- INTERFACE_ID
- TRANSACTION_REJECTION_CODE
• TXN_INTERFACE_ID
• TRANSACTION_REJECTION_REASON

Defaulted Column
If a transaction does not have an expenditure type class assigned to it, Oracle Projects uses the expenditure type class assigned to the item’s transaction source as the default value.

Additional Transaction Interface Tables
Oracle Projects uses the PA_TRANSACTION_XFACE_CTRL_ALL table to control processing of transactions by the Transaction Import program. You must not insert or update records in this table directly. This table is populated by database triggers when you load or update the PA_TRANSACTION_INTERFACE table.

PA_TRANSACTION_INTERFACE_ALL Table Description
This section describes the columns in the Transaction Import interface table and indicates the columns that require values for importing transactions into Oracle Projects. For a complete description of the Transaction Import interface table, please consult the Oracle Projects Technical Reference Manual.

Do not import your data into columns marked System Assigned in the Comments column of the following table. Columns marked OPTIONAL are for optional transaction information that you can track if you want. VARCHAR2 columns are case sensitive. You can either load the table directly from your external system, or you can fill in some values using SQL*Plus.

PA_TRANSACTION_INTERFACE_ALL
PA_TRANSACTION_INTERFACE_ALL is the table you populate to import transactions from external sources into Oracle Projects expenditure tables using the Transaction Import process.
<table>
<thead>
<tr>
<th>Column Name</th>
<th>Null</th>
<th>Type</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSACTION_SOURCE</td>
<td>NOT NULL</td>
<td>VARCHAR2(30)</td>
<td>Transaction source internal code. You can specify this value or the user transaction source value.</td>
</tr>
<tr>
<td>USER_TRANSACTION_SOURCE</td>
<td>NULL</td>
<td>VARCHAR2(80)</td>
<td>Populate this with the transaction source name. Oracle Projects will populate the transaction source code based on this value if you do not specify the transaction source code. You can specify either value.</td>
</tr>
<tr>
<td>ORIG_TRANSACTION_REFERENCE</td>
<td>NOT NULL</td>
<td>VARCHAR2(30)</td>
<td></td>
</tr>
<tr>
<td>BATCH_NAME</td>
<td>NOT NULL</td>
<td>VARCHAR2(10)</td>
<td></td>
</tr>
<tr>
<td>EXPENDITURE_ENDING_DATE</td>
<td>NOT NULL</td>
<td>DATE</td>
<td></td>
</tr>
<tr>
<td>EMPLOYEE_NUMBER</td>
<td>NULL</td>
<td>VARCHAR2(30)</td>
<td></td>
</tr>
<tr>
<td>ORGANIZATION_NAME</td>
<td>NULL</td>
<td>VARCHAR2(60)</td>
<td></td>
</tr>
<tr>
<td>EXPENDITURE_ITEM_DATE</td>
<td>NOT NULL</td>
<td>DATE</td>
<td></td>
</tr>
<tr>
<td>PROJECT_NUMBER</td>
<td>NOT NULL</td>
<td>VARCHAR2(25)</td>
<td></td>
</tr>
<tr>
<td>TASK_NUMBER</td>
<td>NOT NULL</td>
<td>VARCHAR2(25)</td>
<td></td>
</tr>
<tr>
<td>EXPENDITURE_TYPE</td>
<td>NOT NULL</td>
<td>VARCHAR2(30)</td>
<td></td>
</tr>
<tr>
<td>NON_LABOR_RESOURCE</td>
<td>NULL</td>
<td>VARCHAR2(20)</td>
<td>Required for usage items</td>
</tr>
<tr>
<td>NON_LABOR_RESOURCE_ORG_NAME</td>
<td>NULL</td>
<td>VARCHAR2(60)</td>
<td>Required for usage items</td>
</tr>
<tr>
<td>QUANTITY</td>
<td>NOT NULL</td>
<td>NUMBER(22,5)</td>
<td>Required for costed items. Otherwise Optional</td>
</tr>
<tr>
<td>RAW_COST</td>
<td>NULL</td>
<td>NUMBER(22,5)</td>
<td></td>
</tr>
<tr>
<td>RAW_COST_RATE</td>
<td>NULL</td>
<td>NUMBER(22,5)</td>
<td>Optional</td>
</tr>
</tbody>
</table>

Table 4 – 28  (Page 1 of 3) PA_TRANSACTION_INTERFACE_ALL
<table>
<thead>
<tr>
<th>Column Name</th>
<th>Null</th>
<th>Type</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BURDENED_COST</td>
<td>NULL</td>
<td>NUMBER(22,5)</td>
<td>(Conditionally required) For Burden Transactions only. Raw cost equals zero, so this column will contain only burden cost amounts.</td>
</tr>
<tr>
<td>BURDENED_COST_RATE</td>
<td>NULL</td>
<td>NUMBER(22,5)</td>
<td>(Conditionally required) External cost rate used to calculate burden cost</td>
</tr>
<tr>
<td>DR_CODE_COMBINATION_ID</td>
<td>NULL</td>
<td>NUMBER(15)</td>
<td>(Conditionally required) Debit CCID (for transactions already accounted for in GL)</td>
</tr>
<tr>
<td>CR_CODE_COMBINATION_ID</td>
<td>NULL</td>
<td>NUMBER(15)</td>
<td>(Conditionally required) Credit CCID (for transactions already accounted for in GL)</td>
</tr>
<tr>
<td>CDL_SYSTEM_REFERENCE1</td>
<td>NULL</td>
<td>VARCHAR2(30)</td>
<td>(Conditionally required) Reference 1 for cost distribution lines (for transactions already accounted for in GL)</td>
</tr>
<tr>
<td>CDL_SYSTEM_REFERENCE2</td>
<td>NULL</td>
<td>VARCHAR2(30)</td>
<td>(Conditionally required) Reference 2 for cost distribution lines (for transactions already accounted for in GL)</td>
</tr>
<tr>
<td>CDL_SYSTEM_REFERENCE3</td>
<td>NULL</td>
<td>VARCHAR2(30)</td>
<td>(Conditionally required) Reference 3 for cost distribution lines (for transactions already accounted for in GL)</td>
</tr>
<tr>
<td>GL_DATE</td>
<td>NULL</td>
<td>DATE</td>
<td>(Conditionally required) GL date for transactions already accounted for in GL</td>
</tr>
</tbody>
</table>

Table 4 – 28 (Page 2 of 3) PA_TRANSACTION_INTERFACE_ALL
<table>
<thead>
<tr>
<th>Column Name</th>
<th>Null</th>
<th>Type</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEM_LINKAGE</td>
<td>NULL</td>
<td>VARCHAR2(30)</td>
<td>(Conditionally required) Expenditure type class of the imported transaction. If no value is provided, defaults to the expenditure type class associated with the transaction source.</td>
</tr>
<tr>
<td>EXPENDITURE_COMMENT</td>
<td>NULL</td>
<td>VARCHAR2(240)</td>
<td>Optional</td>
</tr>
<tr>
<td>TRANSACTION_STATUS_CODE</td>
<td>NOT NULL</td>
<td>VARCHAR2(2)</td>
<td>Set to P for new transactions</td>
</tr>
<tr>
<td>TRANSACTION_REJECTION_CODE</td>
<td>NULL</td>
<td>VARCHAR2(30)</td>
<td>System Assigned, Foreign key: PA_LOOKUPS.</td>
</tr>
<tr>
<td>ATTRIBUTE_CATEGORY</td>
<td>NULL</td>
<td>VARCHAR2(30)</td>
<td>Optional</td>
</tr>
<tr>
<td>ATTRIBUTE [1–10]</td>
<td>NULL</td>
<td>VARCHAR2(150)</td>
<td>Optional</td>
</tr>
<tr>
<td>UNMATCHED_NEGATIVE_TXN_FLAG</td>
<td>NULL</td>
<td>VARCHAR2(1)</td>
<td>Optional. Set to Y if an unmatched, negative transaction</td>
</tr>
<tr>
<td>ORG_ID</td>
<td>NULL</td>
<td>NUMBER</td>
<td>Operating unit identifier for multi-organization installations</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>NOT NULL</td>
<td>NUMBER(15)</td>
<td>Standard Who Column</td>
</tr>
<tr>
<td>CREATION_DATE</td>
<td>NOT NULL</td>
<td>DATE</td>
<td>Standard Who Column</td>
</tr>
<tr>
<td>LAST_UPDATED_BY</td>
<td>NOT NULL</td>
<td>NUMBER(15)</td>
<td>Standard Who Column</td>
</tr>
<tr>
<td>LAST_UPDATE_DATE</td>
<td>NOT NULL</td>
<td>DATE</td>
<td>Standard Who Column</td>
</tr>
<tr>
<td>EXPENDITURE_ID</td>
<td>NULL</td>
<td>NUMBER(15)</td>
<td>System Assigned</td>
</tr>
<tr>
<td>EXPENDITURE_ITEM_ID</td>
<td>NULL</td>
<td>NUMBER(15)</td>
<td>System Assigned</td>
</tr>
<tr>
<td>INTERFACE_ID</td>
<td>NULL</td>
<td>NUMBER(15)</td>
<td>System Assigned</td>
</tr>
<tr>
<td>TXN_INTERFACE_ID</td>
<td>NULL</td>
<td>NUMBER(15)</td>
<td>Unique identifier for the transaction. System Assigned</td>
</tr>
</tbody>
</table>

Table 4–28  (Page 3 of 3)  PA_TRANSACTION_INTERFACE_ALL
TRANSACTION_SOURCE

Enter an implementation–defined transaction source code that classifies the transaction. This transaction source, along with the original transaction reference, identifies the source of transactions loaded into Oracle Projects from an external system. If a transaction source is defined as Costed, then a raw cost amount must exist for the transaction. If the transaction source is defined as Purgeable, the transaction will be purged from the table when the import process has completed. See: Transaction Sources: page 16 – 86.

Note: This column is for internal use only; you cannot view values stored in this column from any Oracle Projects windows. You must enter this internal code or a value in USER_TRANSACTION_SOURCE to specify the transaction source.

Validation: The transaction source you enter must be a valid transaction source. You can obtain a list of valid transaction sources from PA_TRANSACTION_SOURCES.TRANSACTION_SOURCE.

Destination: PA_EXPENDITURE_GROUPS_ALL.TRANSACTION_SOURCE and PA_EXPENDITURE_ITEMS.TRANSACTION_SOURCE. The transaction source information is denormalized for performance optimization.

USER_TRANSACTION_SOURCE

This column is a translatable transaction source column.

Validation: The transaction source you enter must be a valid transaction source. You can obtain a list of valid transaction sources from PA_TRANSACTION_USER.USER_TRANSACTION_SOURCE. Oracle Projects uses values from this table to derive the transaction source if you do not specify a value for the transaction source.

Destination: None

ORIG_TRANSACTION_REFERENCE

Enter a reference to the original item loaded into Oracle Projects from an external system via the Transaction Import program. Unless the transaction source allows duplicate references, this unique reference,
along with the transaction source, identifies the source of the original transaction loaded into Oracle Projects from an external system.

**Validation:** An expenditure item must not already exist with the same identifier values as the transaction if the transaction source does not allow duplicate system reference values.

**Destination:** PA_EXPENDITURE_ITEMS_ALL.ORIG_TRANSACTION_REFERENCE

### BATCH_NAME

The expenditure batch name within Oracle Projects is created as a concatenation of the batch name and expenditure type class entered in the transaction interface table and the interface ID. An expenditure batch is a group of expenditures loaded into the interface table; all transactions in this batch must have the same transaction source. The batch name is used to derive part of the expenditure batch name in Oracle Projects expenditure tables after import.

**Validation:** None

**Destination:** PA_EXPENDITURE_GROUPS_ALL.EXPENDITURE_GROUP

### EXPENDITURE_ENDING_DATE

Enter the date of the last day of the expenditure week for this transaction. All transactions in an expenditure must be on or before the expenditure ending date. In addition, all timecard items must be within the expenditure week date range. The maximum expenditure ending date of all expenditure items processed in a batch becomes the expenditure batch ending date.

**Validation:** Valid week ending date based on the expenditure cycle start day defined in Implementation Options.

**Destination:** PA_EXPENDITURES_ALL.EXPENDITURE_ENDING_DATE

### EMPLOYEE_NUMBER

Enter the number of the employee who incurred the charge for this transaction. This column must be populated for labor and expense report items, but is optional for other expenditure type classes.
Validation: Must be a valid employee number in PER_PEOPLE_F.EMPLOYEE_NUMBER

Destination: PA_EXPENDITURES_ALL.INCURRED_BY_PERSON_ID

ORGANIZATION_NAME

Enter the name of the organization that incurred the charge for this transaction. If employee number is provided, then this column can be null, in which case Transaction Import derives this value from the employee organization. If you provide both an employee and an organization, Oracle Projects uses the employee information to derive the organization. Transaction Import uses the last employee assignment in the expenditure period to derive the employee organization.

Validation: Must be a valid organization in PER_ORGANIZATION_UNITS.NAME

Destination: PA_EXPENDITURES_ALL.INCURRED_BY_ORGANIZATION_ID

EXPENDITURE_ITEM_DATE

Enter the date on which this transaction occurred.

Validation: The expenditure item date must be on or before the expenditure ending date. Also, the expenditure item date of timecard items must fall within the expenditure week as defined by the expenditure ending date.

Destination: PA_EXPENDITURE_ITEMS_ALL.EXPENDITURE_ITEM_DATE

PROJECT_NUMBER

Enter the number of the project this transaction is charged to.

Validation: Must be a valid project number in PA_PROJECTS_SEGMENT1 and PA_PROJECTS_EXPEND_V; project must have a project status that allows new transactions; project must not be a project template; and project must allow charges from your operating unit (if multiple organization support is enabled).
Destination: None

**TASK_NUMBER**
Enter the number of the task this transaction is charged to.

**Validation:** Must be a valid task number in PA_TASKS.TASK_NUMBER for the project number specified; and task must be a lowest task that allows charges.

**Destination:** PA_EXPENDITURE_ITEMS_ALL.TASK_ID

**EXPENDITURE_TYPE**
Enter the expenditure type that classifies the type of charge for this transaction.

**Validation:** This expenditure type must be a valid expenditure type in PA_EXPENDITURE_TYPES.EXPENDITURE_TYPE. The expenditure type and expenditure type class combination must exist as an active combination in the PA_EXPEND_TYP_SYS_LINKS table. You cannot import expenditure items with a expenditure type class of Supplier Invoices.

**Destination:** PA_EXPENDITURE_ITEMS_ALL.EXPENDITURE_TYPE

**NON_LABOR_RESOURCE**
Enter the non–labor resource utilized for this transaction. This column is populated only for usage items.

**Validation:** This non–labor resource must be a valid non–labor resource in PA_NON_LABOR_RESOURCES.NON_LABORRESOURCE and must be a resource classified by the specified expenditure type.

**Destination:** PA_EXPENDITURE_ITEMS_ALL.NON_LABOR_RESOURCE
## NON_LABOR_RESOURCE_ORG_NAME

Enter the name of the organization owning the non–labor resource utilized for the transaction.  This column is populated only for usage items.

**Validation:** Must be a valid non–labor resource owning organization in PA_NON_LABOR_RESOURCE_ORGS.ORGANIZATION_ID for the specified non–labor resource.

**Destination:** PA_EXPENDITURE_ITEMS_ALL.ORGANIZATION_ID

## QUANTITY

Enter the number of units for the transaction based on the unit of measure defined for the expenditure type.

**Validation:** None

**Destination:** PA_EXPENDITURE_ITEMS_ALL.QUANTITY

## RAW_COST

Enter the total raw cost of the transaction.

**Validation:** If the transaction source is defined as Costed, a raw cost amount must exist.  If transaction source is not Costed, this column value is ignored.

**Destination:** PA_EXPENDITURE_ITEMS_ALL.RAW_COST

## RAW_COST_RATE

Enter the raw cost rate for the costed transaction.  Oracle Projects uses this information for reporting purposes only.

**Validation:** None

**Destination:** PA_EXPENDITURE_ITEMS_ALL.RAW_COST_RATE

## BURDENED_COST

Enter the burdened cost for transactions that meet either of the following criteria:

- An expenditure type class of Burden Transaction
A transaction source with the Cost Burdened option enabled

Burden transactions have quantities and raw costs equal to zero.

**Validation:** None

**Destination:** PA_EXPENDITURE_ITEMS_ALL.BURDEN_COST

**BURDENED_COST_RATE**

Enter the burdened cost multiplier for the burden transaction. Oracle Projects uses this information for reporting purposes only.

**Validation:** None

**Destination:** PA_EXPENDITURE_ITEMS_ALL.BURDEN_COST_RATE

**DR_CODE_COMBINATION_ID**

If you are importing a transaction that has already been accounted for and interfaced to GL, enter the ID of the GL debit account. If you allow adjustments to these transactions, Oracle Projects uses this value to account for reversing, adjusting costs.

**Validation:** Must be a valid GL account in GL_CODE_COMBINATIONS

**Destination:** PA_COST_DISTRIBUTION_LINES_ALL.DR_CODE_COMBINATION_ID

**CR_CODE_COMBINATION_ID**

If you are importing a transaction that has already been accounted for and interfaced to GL, enter the ID of the GL credit account.

**Validation:** Must be a valid GL account in GL_CODE_COMBINATIONS

**Destination:** PA_COST_DISTRIBUTION_LINES_ALL.CR_CODE_COMBINATION_ID

**CDL_SYSTEM_REFERENCE1**

Enter the reference to the record in the external system if it has already been accounted for and interfaced to Oracle General Ledger. This information enables you to drill down to the transaction in the originating system.

**Validation:** None
Destination: PA_COST_DISTRIBUTION_LINES_ALL.SYSTEM_REFERENCE1

**CDL_SYSTEM_REFERENCE2**
Enter the reference to the record in the external system if it has already been accounted for and interfaced to Oracle General Ledger. This information enables you to drill down to the transaction in the originating system.

Validation: None
Destination: PA_COST_DISTRIBUTION_LINES_ALL.SYSTEM_REFERENCE2

**CDL_SYSTEM_REFERENCE3**
Enter the reference to the record in the external system if it has already been accounted for and interfaced to Oracle General Ledger. This information enables you to drill down to the transaction in the originating system.

Validation: None
Destination: PA_COST_DISTRIBUTION_LINES_ALL.SYSTEM_REFERENCE3

**GL_DATE**
Enter the GL date of the transaction if it has already been accounted for and interfaced to Oracle General Ledger. Oracle Projects uses this information for reporting purposes only.

Validation: If this column is null for an accounted transaction, then Transaction Import will reject the transaction.
Destination: PA_COST_DISTRIBUTION_LINES_ALL.GL_DATE

**SYSTEM_LINKAGE**
Enter the expenditure type class of the given transaction. If the transaction has no expenditure type class, the default expenditure type class defined for the transaction source will be used. Oracle Projects stores this information at the expenditure item level and uses it to determine how to process the expenditure item.
**Validation:** Must be defined for the expenditure type. If this value is NULL, then the default system linkage (or expenditure type class) defined for the transaction source is used.

**Destination:** PA_EXPENDITURE_ITEMS_ALL.SYSTEM_LINKAGE_FUNCTION

---

**EXPENDITURE_COMMENT**

Enter the description that you want to assign to the expenditure item created from this transaction.

**Validation:** None

**Destination:** PA_EXPENDITURE_COMMENTS.

---

**TRANSACTION_STATUS_CODE**

You must set this value to \textit{P} (pending) for transactions you want to import. Oracle Projects will set the value to \textit{A} (accepted) after a transaction is successfully imported, or \textit{R} (rejected) when an item is rejected during import.

If **TRANSACTION_STATUS_CODE** is set to \textit{A} after Transaction Import completes, this indicates that the **TRANSACTION_SOURCE** entered is not defined as Purgeable, and you will need to delete the item manually. See: Transaction Sources: page 16 – 86.

If an item is rejected, the rejection reason code will be generated in the **TRANSACTION_REJECTION_CODE** column.

**Validation:** Lookup codes for this column are stored in the PA_LOOKUPS table under the lookup type of TRANSACTION STATUS.

**Destination:** None

---

**TRANSACTION_REJECTION_CODE**

This column is populated by a system–defined code indicating why the transaction was rejected by the Transaction Import program. For a list of codes, see: Resolving Import Exceptions: page 4 – 108.

**Validation:** This column is system assigned. Lookup codes for this column are stored in the PA_LOOKUPS table under the lookup type of TRANSACTION REJECTION REASON.
**ATTRIBUTE_CATEGORY**

Enter the descriptive flexfield category for the descriptive flexfield information you want to import.

**Validation:** None

**Destination:** `PA_EXPENDITURE_ITEMS_ALL.ATTRIBUTE_CATEGORY`

---

**ATTRIBUTE [1–10]**

Enter the descriptive flexfield information that you want to import for a transaction (expenditure item). The structure of the information you enter in these columns (datatypes, value sets) should match the structure of the descriptive flexfield segments you have defined for your transaction or you will experience validation problems when you try to access the information in the expenditure entry forms.

**Validation:** None

**Destination:** `PA_EXPENDITURE_ITEMS_ALL.ATTRIBUTE [1–10]`

---

**UNMATCHED_NEGATIVE_TXN_FLAG**

Enter Y or N so that Transaction Import can identify summary–level adjustments (negative amounts) for which there is no single matching item to adjust. If this column is set to Y, Transaction Import will bypass the matching validation logic that is usually executed for adjustments (negative transactions). If this column is set to N, Oracle Projects finds the matching item and populates `PA_EXPENDITURE_ITEMS_ALL.ADJUSTED`.

**Validation:** None

**Destination:** `PA_EXPENDITURE_ITEMS_ALL.ADJUSTED (if column is set to N)`

---

**ORG_ID**

This column is populated by the identification code of the organization to which the user belongs. This information is used only if you have implemented multi–organization support.
Validation: Must be a valid organization ID defined in the following tables: PA_EXPENDITURE_GROUP_ALL.ORG_ID, PA_EXPENDITURES_ALL.ORG_ID, PA_EXPENDITURE_ITEMS_ALL.ORG_ID, and PA_COST_DISTRIBUTION_LINES_ALL.ORG_ID.

Destination: None

**CREATED_BY**

This column is populated by the employee number of the user who originally created the expenditure in the Review Transactions window.

Validation: None

Destination: None

**CREATION_DATE**

This column is populated by the date on which the expenditure was created in the Review Transactions window.

Validation: None

Destination: None

**LAST_UPDATED_BY**

This column is populated by the employee number of the user who last updated the expenditure in the Review Transactions window.

Validation: None

Destination: None

**LAST_UPDATE_DATE**

This column is populated by the date on which the expenditure was last updated in the Review Transactions window.

Validation: None

Destination: None

**EXPENDITURE_ID**

This column is populated by a system–defined value to identify the transactions grouped into an expenditure.
Validation: This column is system assigned.
Destination: PA_EXPENDITURES_ALL.EXPENDITURE_ID

EXPENDITURE_ITEM_ID
This column is populated by a system–defined value to identify the transactions created in Oracle Projects.
Validation: This column is system assigned.
Destination: PA_EXPENDITURES_ALL.EXPENDITURE_ITEM_ID

INTERFACE_ID
This column is populated by a system–defined value to identify transactions processed by a given concurrent request.
Validation: This column is system assigned.
Destination: None

TXN_INTERFACE_ID
The values in this column are generated by a sequence to provide a unique identifier for each transaction loaded into the interface table.
Validation: This column is system assigned.
Destination: None

Implementation Data

Define Transaction Sources
Define the source of transactions for Transaction Import in the Transaction Sources window. You can define an unlimited number of transaction sources. For each transaction source, you specify multiple options that indicate how Oracle Projects processes the transactions originating from the transaction source.

You use your import utility to enter this transaction source in the TRANSACTION_SOURCE column of the PA_TRANSACTION_INTERFACE_ALL table. You then select the name in the Submit Request window when you want to import transactions from this source.
See Also

Transaction Sources: page 16 – 86

Populating the Interface Table

Transaction Import depends on transaction data from your external system to create corresponding transactions in Oracle Projects. Before you can import transactions, you must first write a custom feeder program that interfaces transaction data from your original system into the Transaction Import interface table. Your feeder program must convert data from your original system into a standard data format that Transaction Import can read. Transaction Import can then convert your imported data into transactions in Oracle Projects.

Writing a Feeder Program

The type of environment from which you want to interface your data determines the type of feeder program you need to write. For example, you can use SQL*Loader, PL/SQL, or Pro*C to write a feeder program to interface transaction data from a non–Oracle system. Or, you can write a conversion program to interface historical data from your previous cost collection system.

Ensure that your transaction flat file has the appropriate information to populate PA_TRANSACTION_INTERFACE_ALL as indicated in the PA_TRANSACTION_INTERFACE_ALL Table Description. If a value is not required for a column, you may leave the column empty. See: PA_TRANSACTION_INTERFACE_ALL Table Description: page 4 – 91

Selecting an Import Utility

SQL*Loader is a powerful and easy–to–use tool that should be able to accommodate all of your import needs. However, depending on the complexity of your import program, you may also want to use Oracle’s Pro* language products such as Pro*C, Pro*Cobol and Pro*Fortran to write the program.

Your import utility file must populate PA_TRANSACTION_INTERFACE_ALL as indicated in the previous table description. Also, you should code your file to populate the TRANSACTION_SOURCE column in PA_TRANSACTION_INTERFACE_ALL with the
Transaction Source code exactly as you defined it in the Transaction Sources window.

You must provide any information that the interface table requires that your external system does not provide. For example, if your external timecard system does not provide expenditure types, you must create at least one expenditure type and specify it in your control file.

---

**Importing Transactions**

Complete the following steps after you populate the interface table to import external transactions into Oracle Projects:

You use the Submit Request window to run Transaction Import.

1. **To import transaction data into Oracle Projects:**

   1. In the Navigator window choose Expenditures > Transaction Import > Import Transactions. Oracle Projects opens the Submit Request window and automatically enters the PRC: Transaction Import request name for you. Alternately, you can choose Other > Requests > Run from the Navigator window and submit the PRC: Transaction Import process.

   2. Use the list of values button to choose the Transaction Source you want to process.

   3. Optionally identify a specific batch within the transaction source to process.

   4. Choose Submit.
Resolving Import Exceptions

You must correct rejected transactions before you can load them into Oracle Projects. You can correct transaction data in Oracle Projects using the Review Transactions window or in your external feeder system before you reload the data.

If you correct exceptions in your external system, you must delete the rejected rows from the interface table before reloading the corrected transactions.

This section describes how to correct rejected data, and describes reports you can use to help resolve exceptions.

Rejection Reason Codes

Transaction Import may reject importing transactions for a variety of reasons. Examples of rejection codes and their descriptions include the following:

- **DUPLICATE_ITEM** A transaction with the same transaction source and original transaction reference has already been imported into Oracle Projects.
- **INVALID_END_DATE** The value for the expenditure ending date is not a valid week ending date.
<table>
<thead>
<tr>
<th>Rejection Reason</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INVALID_PROJECT</td>
<td>No project exists with the project number specified.</td>
</tr>
<tr>
<td>ITEM_NOT_IN_WEEK</td>
<td>The expenditure item date for a timecard item does not fall within the timecard expenditure week.</td>
</tr>
<tr>
<td>PA_EXP_TASK_TC</td>
<td>The transaction violates an expenditure transaction control at the task level.</td>
</tr>
<tr>
<td>PA_EXP_TYPE_INACTIVE</td>
<td>The expenditure item date falls outside the effective dates of the expenditure type. Change the expenditure item date, expenditure type, or expenditure type dates.</td>
</tr>
</tbody>
</table>

You can get a complete listing of all the rejection reasons from the PA_LOOKUPS table under the lookup type of TRANSACTION REJECTION REASON. The codes are also listed in the Oracle Projects Technical Reference Manual.

**Viewing Rejected Transactions**

Transaction records that fail the validation process remain in the interface table.

If any one expenditure item in an expenditure fails validation, Oracle Projects rejects the entire expenditure and updates each expenditure item in the expenditure with a status of R (Rejected). However, only the expenditure item that was rejected appears on the exception report. Other expenditure items attached to the expenditure being rejected do not appear on the report. Also, the report specifies rejection reasons only for transactions with invalid data. The rest of the expenditures within the batch interface to Oracle Projects. Figure 4 – 4 demonstrates these concepts.
There are three methods you can use to view rejected transactions:

- **Use the Review Transactions window**
  
  You can use the Review Transactions window to search for rejected transactions by transaction source or batch name. See: To view rejected transactions: page 4 – 111.

- **Use SQL*Plus**
  
  You can use SQL*Plus to identify the records that have been rejected by selecting those rows with a TRANSACTION_STATUS_CODE of R and selecting the rejection reason for each rejected record from the TRANSACTION_REJECTION_CODE column.

- **Review an Oracle Projects report**
  
  The Transaction Import Exception Report shows you all of the transactions that were rejected during the Transaction Import process. For each rejected transaction, this report displays the key field values of the transaction in the interface table. It also displays the rejection reason code that identifies the cause of the transaction’s rejection. See: Transaction Import Report: page 10 – 34.
To view rejected transactions:
1. In the Navigator window, choose Expenditures > Transaction Import > Review Transactions.
2. Optionally enter the transaction source or the name of the expenditure batch containing the failed transaction(s).
   If you do not enter any search criteria, Oracle Projects will retrieve all rejected transactions, sorted by transaction source and batch name.
3. Choose Find.

Correcting Rejected Transactions within Oracle Projects
If you need to make changes to the source information because of invalid data, you need to delete the rejected rows from the interface table, correct the rejected transactions in the feeder system, and reload them from the feeder system. You can also correct the transaction in the interface table using the Review Transactions window. Oracle Projects automatically updates the status of corrected items and all other transactions in the same expenditure to P (Pending).

The original and updated values for corrected transactions are stored in the audit table PA_TXN_INTERFACE_AUDIT_ALL.

To correct and resubmit rejected transactions:
1. After you use the Review Transactions window to query your rejected transactions, make the changes indicated by the transaction rejection reasons. Oracle Projects validates each transaction and displays any errors before proceeding to the next transaction. Acknowledge each error message by choosing OK if you want to save the transaction with the errors, or choose Cancel and correct the error.
2. Save your work.
3. Choose Import to re-import all the records with a status of Pending for this transaction source and batch. Oracle Projects will validate the transactions online.

You can also use the Review Transactions window to create one or more new transactions without loading them from the feeder system. This window was designed to expedite minor additions to expenditure batches, primarily for testing purposes.
To create new transactions:

1. In the Review Transactions window, choose Edit > New Record.
2. Enter transaction details for the new transaction. You enter different types of information depending on the transaction source details, as previously discussed.
3. Save your work.
4. Choose Import to start the Transaction Import process.

Correcting Rejected Transactions Using SQL*Plus

You can alternately update the rejected transactions in the interface table using SQL*Plus. Then update the TRANSACTION_STATUS_CODE column to set the value to P so Transaction Import selects the items the next time you run it. When you resubmit updated transactions for processing, all validation is performed again.

Example of Steps You Take to Fix a Rejected Transaction

Let's walk through an example of the steps you take to correct a rejected transaction using the rejected transaction in Figure 4 – 4 as our sample data.

1. Correct the invalid data for Transaction 1.
   The validation process rejected Transaction 1 because the project you are charging is invalid. Using SQL*Plus, you update the project number of the transaction to a valid project number.

2. Run Transaction Import
   Now that you have corrected the rejected expenditure item, and the status of all expenditure items within the rejected expenditure is updated, you can run Transaction Import to successfully import the updated transactions.

Auditing Updates in the Interface Table

You can update rejected and pending transactions in the interface table using the Review Transactions window or SQL*Plus. Whenever you update a transaction, the original and revised transactions are stored in the PA_TXN_INTERFACE_AUDIT_ALL table. Each transaction is uniquely identified by:

- The combination of the transaction source and original system reference
• The transaction interface ID (if the transaction source allows duplicate system references)
This chapter describes everything you need to know about costing in Oracle Projects.
Overview of Costing

Costing is the processing of expenditures to calculate their cost to each project and determine the GL accounts to which the costs will be posted. Costing is performed for the following types of expenditures:

- Pre-approved expenditures. See: Pre-Approved Expenditures: page 4 – 12
  - Labor
  - Expense Reports
  - Usages
  - Miscellaneous Transactions
  - Burden Transactions
- Supplier Invoices from Oracle Payables. See: Integrating with Oracle Purchasing and Oracle Payables: page 12 – 35
- Expenditures submitted from Oracle Personal Time and Expense. See: Overview of Oracle Personal Time and Expense: page 4 – 50
- Imported expenditures. See: Overview of Transaction Import: page 4 – 73
- Adjusted expenditures in Oracle Projects which need re-costing. See: Expenditure Adjustments: page 4 – 25

The Costing process includes the following steps:

1. Calculate raw cost (Quantity × Rate).
2. Calculate burdened cost. See: Burdening: page 5 – 16
3. Call client extensions. See: Client Extensions: page 18 – 2
   - Overtime
   - Labor Costing
   - Create Related Items Procedure
4. Perform accounting:
   - Determine account numbers to post to in Oracle General Ledger
   - Create cost distribution lines

This chapter describes this process in detail using Labor Costing as an example of the costing process. We also describe the use of burden
schedules and overrides, and discuss the entire cost plus processing feature in Oracle Projects.

**Note:** If your transactions are not costing properly, you can view rejection reasons in the Expenditure Items window. From the Folder menu, choose the Show Field option to display all cost distribution rejections.
Cost Flow

Figure 5-1 Costing Flow

Oracle Projects

Enter and Approve Expenditures

Import Transactions

Distribute Costs

Perform Accounting

Interface Costs to Other Applications

Interface Expense Reports to Oracle Payables

Oracle Payables Interface

Invoice Import

Oracle Payables Invoices

Tieback Costs

Oracle Payables

Interface Labor, Usage, Miscellaneous Transactions, Burden Transactions, and WIP and Inventory Transactions not already costed or accounted, to Oracle General Ledger

Oracle Payables Oracle General Ledger

General Ledger Interface

Journal Import

General Ledger Journal Entries

Oracle General Ledger
Calculating Costs

This section briefly describes how Oracle Projects calculates costs for expenditures. For more detailed information about the costing process, refer to the labor costing example in this chapter. See: Distributing Labor Costs: page 5 – 8.

Each transaction has two cost amounts when processed, raw and burdened. Oracle Projects calculates these amounts for each detail transaction when you distribute costs using any of the following processes:

- Distribute Labor Costs
- Distribute Expense Report Costs
- Distribute Usage and Miscellaneous Costs
- Distribute Supplier Invoice Adjustment Costs

The raw cost is the actual cost of the work performed, and the burden cost is the indirect cost of work performed. The burden costs are created to apply overhead costs to projects to provide an accurate total cost figure. The burdened cost is the total cost of the expenditure, the sum of raw cost and burden cost. Oracle Projects calculates the burden cost using the raw cost and a burden multiplier.

Labor

Oracle Projects calculates the raw cost for labor transactions using quantity and rates as follows:

- **Raw Cost** = Hours Worked × Rate
- **Burden Cost** = Raw Cost × Multiplier
- **Burdened Cost** = Raw Cost + Burden Cost

**Note:** You can define a unique labor costing algorithm using the Labor Costing Extension. See: Labor Costing Extension: page 18 – 36.

See Also

Distributing Labor Costs: page 5 – 8
Expense Reports, Usages, and Miscellaneous Transactions

Oracle Projects calculates the cost for expense reports, usages, and miscellaneous transactions as follows:

- **Raw Cost** = Quantity (if in Currency, for example, US Dollars)
- **Raw Cost** = Quantity \( \times \) Cost Rate (if quantity is not in Currency)
  - Cost rates by expenditure type, or
  - Cost rates by non-labor resource and owning organization for usages (optional); overrides expenditure type cost rate

- **Burden Cost** = **Raw Cost** \( \times \) Multiplier
- **Burdened Cost** = **Raw Cost** + **Burden Cost**

See Also

Overview of Expenditures: page 4 – 2
Pre–Approved Expenditures: page 4 – 12
Overview of Oracle Personal Time and Expense: page 4 – 50
Expenditure Adjustments: page 4 – 25
Burdening: page 5 – 16
Overview of Transaction Import: page 4 – 73
**Burden Transactions**

Oracle Projects processes burden cost transactions, which represent only the burden or overhead cost, as follows:

- **Quantity** = 0
- **Raw Cost** = 0
- **Burden Cost** = entered burden cost amount
- **Burdened Cost** = Burden Cost

**See Also**

Burdening: page 5 – 16

---

**Supplier Invoices**

Oracle Projects calculates the raw cost for supplier invoices using the cost amount entered as the invoice amount for the invoice in Oracle Payables.

- **Raw Cost** = Supplier Invoice Amount from Oracle Payables
- **Burden Cost** = Raw Cost × Multiplier
- **Burdened Cost** = Raw Cost + Burden Cost

Oracle Projects calculates the burdened cost for supplier invoice transactions during the following processes:

- PRC: Interface Supplier Invoices from Payables
- PRC: Distribute Supplier Invoice Adjustment Costs

**See Also**

Integrating with Oracle Purchasing and Oracle Payables: page 12 – 35

Overview of Transaction Import: page 4 – 73

Burdening: page 5 – 16
Distributing Labor Costs

Oracle Projects allows you to enter detail labor transactions charged to your projects so that you can monitor labor work performed. Oracle Projects costs the items to compute the labor costs for your project, and determines the GL accounts to charge.

The PRC: Distribute Labor Costs process handles labor items in the following order:

- Selects eligible expenditure items, based on the parameters you entered for project, employee, and week ending date.
- Costs the straight time items.
- Calls the Overtime Calculation program, if it is enabled.
- Costs overtime items, including overtime items created by the Overtime Calculation program.

The diagram below shows the steps in the PRC: Distribute Labor Costs process:
Select Expenditure Items

The Distribute Labor Costs program first selects all expenditure items that are eligible for costing. To be eligible for costing, an expenditure item must meet the following criteria:

- Classified with an expenditure type having the Straight Time or Overtime expenditure type class
- Included in the specified project for straight time items (if you specify a project)
- For the specified employee (if you specify an employee)
- In a week ending on or before the end date (if you specify a week ending date)
• In a released pre-approved timecard batch or an approved PTE timecard
• Not already cost distributed (new items or items marked for adjustment)

Expenditure items selected are processed in sets according to the Expenditure Item Per Set Profile.

See Also

Profile Options in Oracle Projects: page B – 2

Process Straight Time

Distribute Labor Costs performs three steps to process straight time:
• Calculate costs
• Run AutoAccounting
• Create cost distribution lines

Calculate Straight Time Cost

Oracle Projects calculates straight time cost (raw cost) for expenditure items using the employee’s labor cost rate:

\[
\text{Straight Time Cost} = (\text{Hours Worked} \times \text{Employee's Labor Cost Rate})
\]

Distribute Labor Costs uses the labor cost rate that is in effect for an employee as of the week ending date for each selected expenditure item. This amount can be overridden by the Labor Costing Extension to handle unique labor costing rules.

If an employee’s labor cost is burdened, Oracle Projects calculates the burdened cost using the following formula:

\[
\text{Burdened Cost} = (\text{Straight Time Cost} \times (1 + \text{Burden Multiplier}))
\]

To determine if a labor cost is burdened, Oracle Projects checks the project type of the project to which an expenditure item is charged. The burden multiplier is determined from the burden schedule (or burden schedule override) assigned to the project or task. In addition, Oracle
Projects compares the expenditure item date to the effective dates of the burden schedule to determine the burden multiplier to use.

See Also

Labor Costing Extensions: page 18 – 36
Employee Cost Rates: page 16 – 95
Burdening: page 5 – 16

Run AutoAccounting

After the process calculates cost for each selected expenditure item, it runs AutoAccounting to determine account codings for each cost distribution line that it will create.

If an organization distribution override exists, the destination organization of the override supersedes the actual expenditure organization of affected items.

When you run the cost distribution programs for labor, expense reports, or usages and miscellaneous transactions, Oracle Projects redirects the Expenditure Organization to the “Override To” Organization if you have specified any of the following organization distribution overrides for the organization:

- Incurred by Employee and Expenditure Category
- Incurred by Employee
- Expenditure Organization and Expenditure Category
- Expenditure Category

If you do not specify any of these overrides, Oracle Projects uses the Incurred by Organization or the Expenditure Organization.

Create Cost Distribution Lines

After the Distribute Labor Costs process runs AutoAccounting, it creates cost distribution lines. Each item originally has one distribution line for raw cost. If an item is re–costed and the cost rate or account coding changes, Distribute Labor Costs creates a reversing cost distribution line and a new line for the updated cost or account coding.
Creating Overtime

Oracle Projects creates overtime when you enter it manually or when the Overtime Calculation program creates it automatically.

If you enter overtime manually, the Distribute Labor Costs program does not create overtime, and instead proceeds directly to calculating overtime cost. See: Tracking Overtime and Premium Labor Costs: page 17 – 2.

If you enabled the Overtime Calculation program for your company, the Distribute Labor Costs process calls the Overtime Calculation program to create overtime automatically. See: Overtime Calculation Extension: page 18 – 56.

Processing Overtime

Distribute Labor Costs performs three steps to process overtime:

• Calculate costs
• Run AutoAccounting
• Create cost distribution lines

Calculate Overtime Cost

Oracle Projects calculates premium overtime cost (raw cost) for overtime items using a labor cost rate that corresponds to the type of overtime worked:

Premium Overtime Cost =
(Hours Worked × Employee’s Cost Rate) × Labor Cost Multiplier

Overtime may or may not be burdened, depending on your burdening setup.
Run AutoAccounting

After the process calculates cost for each selected expenditure item, it runs AutoAccounting to determine account codings for each cost distribution line that the process creates.

If an organization distribution override exists, then the destination organization of the override supersedes the actual expenditure organization of affected items.

Create Cost Distribution Lines

After the process runs AutoAccounting, it creates cost distribution lines. Each item originally has one distribution line for raw cost. If an item is re-costed and the cost rate or account coding changes, Distribute Labor Cost creates a reversing cost distribution line and a new line for the updated cost or account coding.

Generating Output Reports

Output Reports

The Distribute Labor Costs process generates output reports that list detail items that were processed and exception items.

See Also

Burdening: page 5 – 16
Distribute Labor Costs Process: page 10 – 7
Labor Cost Report (Straight Time): page 10 – 7
Labor Cost Exception Report: page 10 – 7
Overtime Labor Calculations Report: page 10 – 7
Labor Cost Report (Overtime): page 10 – 7
Labor Cost Exception Report (Overtime): page 10 – 7
Distribute Labor Costs Output Reports: page 10 – 7
Precedence for Calculating Burden Cost

Figure 5–3

EXPENDITURE ITEMS with Raw Cost Amount

Is Project Type Burdened?

YES NO

Project Burden Schedule Override Exists?

YES NO

Task Burden Schedule Override Exists?

YES NO

Use Task Burden Schedule

Use Burden Multipliers from appropriate schedule revision. If a Schedule ID Override exists, use that revision.

Item is not burdened. Assume Burden Multiplier = 0

Burden Cost = Raw Cost x Burden Multiplier
Burdened Cost = Raw Cost + Burden Costs

Item is not burdened. Assume Burden Multiplier = 0
Burdening (Cost Plus Processing)

Burdening (also known as cost plus processing) is a method of calculating the burden costs by applying one or more burden cost components to the raw cost amount of each individual transaction. You can then review the raw and total burdened (raw cost + burden) cost of each transaction. Oracle Projects displays the raw cost and burdened cost in windows and reports that show the cost of each detail transaction. You can choose to account for the individual burden cost components to either track the overhead absorption or to account for the total burdened costs. You can write custom reports using standard views to report all burden cost components for each detail transaction.

Using burdening, you can perform internal costing, revenue accrual, and billing for any type of burdened costs that your company applies to raw costs. Oracle Projects calculates costs using the following formulas. (The formulas for cost also apply to revenue and billing amounts.)

**Total Burdened Cost = Raw Cost + Burden Cost**

**Burden Cost = Raw Cost × Multiplier**

You use the multiplier to derive the total amount of the burden cost. For example, you may burden the raw cost of labor using a multiplier of thirty percent to derive the fringe component, and in turn, the total burdened cost of labor is computed as follows:

\[
\begin{array}{c|c}
\text{Labor (raw cost)} & 1,000 \\
+ \text{Fringe @ 30% (burden cost)} & 300 \\
\hline
\text{Total Burdened Cost} & 1,300
\end{array}
\]

On a project for which costs are burdened, you can create some transactions that are burdened and others that are not burdened. You define which projects should be burdened by setting the Burden Cost indicator for each project type in the Project Types window. When you specify that a project type is burdened, you must then specify the burden schedule to be used. The burden schedule stores the rates and indicates which transactions are burdened, based on cost bases defined in the burden structure. You specify which expenditure types are included in each cost base.

With burdening, you can use an unlimited number of burden cost codes, easily revise burden schedules, and retroactively adjust multipliers. You can define different multipliers for costing, revenue accrual, and billing.
Building Up Costs

The objective of burdening is to provide you with a buildup of raw and burden costs, so you can accurately represent the total cost of doing business.

You can choose to calculate total burdened costs as a buildup of costs using a precedence of multipliers. Taking the raw cost, Oracle Projects performs a buildup of burden costs on top of raw costs to provide you with a true representation of costs. You provide the multiplier that is used to calculate the cost. The buildup is performed for each detailed transaction. The following example illustrates how Oracle Projects calculates total burdened cost as a buildup of raw and burden costs.

Example of Cost Buildup

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Reference</th>
<th>Cost Amount</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>(A)</td>
<td>1,000.00</td>
<td></td>
</tr>
<tr>
<td>Overhead @ 95%</td>
<td>(B)</td>
<td>950.00</td>
<td>.95 × A</td>
</tr>
<tr>
<td>Total Labor</td>
<td>(C)</td>
<td>1,950.00</td>
<td>A + B</td>
</tr>
<tr>
<td>Materials</td>
<td>(D)</td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td>Material Handling @ 15%</td>
<td>(E)</td>
<td>75.00</td>
<td>.15 × D</td>
</tr>
<tr>
<td>Total Materials</td>
<td>(F)</td>
<td>575.00</td>
<td>D + E</td>
</tr>
<tr>
<td>Total of Labor and Materials</td>
<td>(G)</td>
<td>2,525.00</td>
<td>C + F</td>
</tr>
<tr>
<td>General &amp; Administrative @ 15%</td>
<td>(H)</td>
<td>378.75</td>
<td>.15 × G</td>
</tr>
<tr>
<td>Total Burdened Cost</td>
<td>(I)</td>
<td>2,903.75</td>
<td>G + H</td>
</tr>
</tbody>
</table>

Table 5 – 1 (Page 1 of 1) Example of Cost Buildup
Example  

In the example of Cost Buildup and in Figure 5 – 4 below, raw costs are categorized by the cost bases of Labor and Materials. Each raw cost has one or more types of burden cost applied to it to derive the total burdened cost amount. The first–tier multiplier is applied to the raw costs; the second–tier multiplier is applied to the raw costs plus the previous burden cost amount, and so on. In the example above, the multiplier for G&A, which is the second–tier multiplier, is applied to the total raw and burden costs for Labor and Materials.

Examining this example in detail, the raw labor cost of $1,000 is burdened by Overhead at a multiplier of 95 percent, resulting in a burden cost of $950 and a Total Labor cost of $1,950. Next, the raw material cost of $500 is burdened by Material Handling at a multiplier of 15 percent, resulting in a burden cost of $75 and a Total Material costs of $575. Finally, G & A is applied to the total of the buildup of the total burdened costs of Labor and Materials, $2,525, resulting in a total burdened cost amount of $2,903.75, which includes raw and burden costs.

Note the flow in the figure below, which demonstrates the order in which multipliers are applied to raw cost. First Overhead is applied to Labor, then Material Handling is applied to Materials, and so on.
You define the cost buildup using a burden structure. A burden structure determines how cost bases are grouped and establishes the method of applying burden costs to raw costs. Expenditure types classify raw costs, and burden cost codes classify burden costs. The relationship between expenditure types and burden cost codes within cost bases determines what burden costs are applied to specific raw costs, and the order in which they are applied.

Note: To account for burden cost codes separately, you also define unique expenditure types to link to burden cost codes. See: Storing and Viewing Burden Costs: page 5 – 29

Your company may have several different burden structures for unique business requirements. For example, you may use a different structure for internal costing than you use for government billing.

Note: If you change your burden structure and subsequently transfer an expenditure item burdened with the old structure, then the reversed amount and the amount charged to the new task each equals the original burdened amount.

Figure 5 – 5 illustrates the components of a burden structure.

A burden cost code represents the type of burden costs you want to apply to raw costs. For each burden cost code in the burden structure, you specify what cost base it is applied to, the expenditure type or
types it is linked to, and the order in which it is applied to raw costs within the cost base.

You burden a type of cost with burden costs to obtain a more accurate representation of your company’s operating costs. For example, each hour of employee time costed directly to a project may be supported by burden costs for benefits and office space.

You specify which costs are burdened through the definition of cost bases. A cost base is a grouping of raw costs to which you apply burden costs. A cost base assignment consists of expenditure types. You specify the types of transactions that constitute the cost base when you assign expenditure types to the cost base. These expenditure types assignments represent the raw costs to which you apply the burden costs of the cost base. If you exclude an expenditure type from all cost bases in a structure, the expenditure items that use that expenditure type will not be burdened (burden cost = 0, thus burdened cost = raw cost). In Figure 5 – 5, the cost base of Labor is comprised of the following expenditure types: Professional, Clerical, and Administrative.

Cost bases also consist of burden cost codes. While the expenditure types represent the raw costs, the burden cost codes represent the burden costs that support the raw costs. Cost bases may be different within the context of different burden structures. For example, you may use a different definition of a labor cost base in a billing schedule than you would use in an internal costing schedule.

In summary, cost bases are comprised of expenditure types and burden cost codes. Expenditure types represent the raw costs, and burden cost codes represent the burden costs that support the raw costs. Cost bases may be different within the context of different burden structures. For example, you may use a different definition of a labor cost base in a billing schedule than you would use in an internal costing schedule.

An expenditure type classifies each detailed transaction according to the type of raw cost incurred.

A burden structure can be additive or precedence based. If you have multiple burden cost codes, an additive burden structure applies each burden cost code to the raw costs in the appropriate cost base. A precedence burden structure is cumulative and applies each cost code to the running total of the raw costs, burdened with all previous cost codes. The table below illustrates how different burden structures using the same cost codes result in different total burdened costs.
<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Additive</th>
<th>Precedence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost</td>
<td>Formula</td>
</tr>
<tr>
<td></td>
<td>Amount</td>
<td></td>
</tr>
<tr>
<td>Labor</td>
<td>100.00 (A)</td>
<td></td>
</tr>
<tr>
<td>Overhead @95%</td>
<td>95.00 (B)</td>
<td>.95 X A</td>
</tr>
<tr>
<td>Fringe @25%</td>
<td>25.00 (C)</td>
<td>.25 X A</td>
</tr>
<tr>
<td>G&amp;A @15%</td>
<td>15.00 (D)</td>
<td>.15 X A</td>
</tr>
<tr>
<td>Total Burdened</td>
<td>235.00</td>
<td>A + B + C + D</td>
</tr>
</tbody>
</table>

**Note:** The order of the burden cost codes has no effect on the total burdened cost with either additive or precedence burden structures.

**Using Burden Schedules for Cost Plus**

Burden schedules establish the multipliers used to calculate the burdened cost, revenue, or bill amount of each expenditure item charged to a project. You can define different burden schedules for use in internal costing, revenue accrual, and invoicing. When you define burden schedules, you specify the burden structure on which the schedule is based.

You can use both burden schedules and bill rate schedules within a project to accrue revenue and invoice. You can also use a bill rate schedule for non-labor expenditure items, and use a burden schedule for labor expenditure items.

You specify default burden schedules for each project type. You can use different schedules for different types of projects. You can override the default burden schedules for each project by using a schedule of multipliers negotiated for the project or task.

**Types of Burden Schedules**

There are two types of schedules you can use in Oracle Projects: firm and provisional.

Use **firm** schedules if you do not expect your multipliers to change. Generally, firm schedules are used for internal costing or commercial billing schedules.
Because burden multipliers may not always be known at the time that you are calculating total burdened costs, you use interim, or **provisional** multipliers. Provisional multipliers are generally estimates based on a company’s forecast budget for the year based on the previous year’s results. When you determine the **actual** multipliers that apply to costs (after the multipliers are audited), then you replace the provisional multipliers with the actual multipliers. Oracle Projects processes the adjustments from provisional to actual changes for costing, revenue, and billing.

**Schedule Versions**

You define schedule versions for a burden schedule to record the date range within which multipliers are effective. You can have an unlimited number of versions for each burden schedule, but use one active version at a given point in time. However, after you apply actuals, you can have one active provisional version and one active actual version existing at the same time within a schedule.

In addition, you may have a number of versions for each quarter of the fiscal year in which your company does business, especially for government billing projects. At the end of the year, when the government audits your burden multipliers, you create a new version that reflects the actual billing rates. Figure 5–6 illustrates the use of schedule versions.

**Figure 5–6**

In Figure 5–6, a company defines provisional burden schedules on a quarterly basis, based on a forecast of budgeted costs. Each quarter, the company creates a new version of the burden schedule to reflect updates in the budget. At the end of the fiscal year, when the company
is audited, actual multipliers are applied which reflect the true burdened cost of affected items.

See Also

Applying Actuals: page 16 – 111

Burden Multipliers

When you create burden schedules, you assign a multiplier to an organization and burden cost code. The multiplier specifies the amount by which to multiply the raw cost to obtain the burden cost amount.

Table 5 – 2 depicts the multiplier that a company uses to determine the burden cost amounts for labor during cost calculation. In earlier pages of this essay, we described the burden cost calculations for cost details, but did not include the organization in the example.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Burden Cost Code</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headquarters</td>
<td>Fringe</td>
<td>.35</td>
</tr>
<tr>
<td></td>
<td>Overhead</td>
<td>.95</td>
</tr>
<tr>
<td></td>
<td>G &amp; A</td>
<td>.15</td>
</tr>
<tr>
<td>LA</td>
<td>G &amp; A</td>
<td>.20</td>
</tr>
</tbody>
</table>

Table 5 – 2 (Page 1 of 1)

Suggestion for Organizations that Have No Burden

You may need to set up special procedures for organizations that have no burden. For example, your company may use contractors that do not have a particular type of burden cost (such as fringe) applied to their raw cost. To implement this scenario, you can first set up a new organization for contractors. Then, create a zero burden cost amount by assigning that organization to the burden schedule and using a multiplier of zero for the burden cost of Fringe. Each time that burden cost for Fringe is calculated for the contractor’s organization, Oracle Projects will multiply the contractor’s raw cost multiplier by zero, resulting in a burden cost amount of zero, which reflects the true representation of the raw cost and burden multipliers.
Assigning Multipliers to Organizations

Effective multipliers cascade down the Project Burdening Hierarchy, starting with the parent organization. If Oracle Projects finds a level in the hierarchy that does not have a multiplier defined, it uses the multipliers entered for the parent organization. Therefore, an organization multiplier schedule hierarchy is really a hierarchy of exceptions; you define only the multipliers for an organization if they override the multipliers of its parent organization.

In Figure 5–7, we depict implementation–defined multipliers in bold, and inheriting multipliers in italics. The parent organization, HQ, has two multipliers defined: Overhead at a multiplier of 2.0, and G & A at a multiplier of 3.0. When Oracle Projects processes transactions for the East organization, no multipliers are found, so the multipliers it uses are from its parent organization, HQ. However, when Oracle Projects looks for the multipliers to use for the Boston and New York organizations, the multiplier of 3.1 for G & A overrides the multiplier from East organization, so the multiplier of 3.1 is used.

Figure 5–7

**Suggestion for Burdening a Borrowed or Lent Resource**

When lending a resource to another organization for a specific project, you may want to burden the resource using the borrowing organization’s multipliers.

For example, the Los Angeles organization lends a resource to the New York City organization, and it is agreed that the borrowed resource is to be burdened using the New York City multipliers. For burdening,
Oracle Projects uses the destination organization of an organization distribution override, in place of the expenditure organization, if an organization distribution override exists. If you want the project to have the New York City burden multipliers used burdened costs of the borrowed resource from Los Angeles, then enter an organization distribution override with a source organization of Los Angeles and a destination organization of New York City.

See Also

Organization Overrides: page 2 – 43

Assigning Burden Schedules

You can assign burden schedules to project types, projects, and tasks. When you assign schedules to a project type, the schedules default to projects and tasks that use the project type. Assigning burden schedules to project types allows you to implement company policies; for example, you can implement a policy that requires all projects of a particular project type to maintain the same multipliers for internal costing purposes.

You can change the default schedule for a project or task. You can also override default schedules at the project and task level by using burden schedule overrides. Burden schedule overrides generally reflect multipliers that have been negotiated specifically for a particular project or task.

Defining Project Types

You define default standard schedules for each project type. These schedules default to each project defined with that project type. You can override the default schedules at the project and task level. See: Project Types: page 16 – 177.

Assigning Schedules at Project/Task Level

When you assign a project type to a new project, Oracle Projects automatically provides default burden schedules from the project type. These schedules are also the default schedules for each top task added.
to the project, and schedules for a top task are the default schedules for lower level tasks.

The schedules used for burdening and billing are those assigned to the lowest task.

**Note:** When you change the burden schedule assignment for a project that already has tasks set up, the schedules assigned to tasks that already exist do not automatically change. You may need to review schedules for the existing WBS to make sure they are correct.

### Scheduling Fixed Dates

You can assign schedule fixed dates for each of your burden schedules, just as you can for bill rate schedules. You can assign fixed dates only to firm schedules. You cannot use fixed dates with provisional schedules.

The fixed date specifies the date for determining the schedule revision to use in calculations, regardless of the expenditure item date.

You enter a fixed date for a cost burden schedule only if the project type definition allows you to override the cost burden schedule.

You can enter schedule fixed dates for standard burden schedules only. Schedule fixed dates are *not* used for burden schedule overrides.

### Changing Default Burden Schedules

You can change the default burden schedules for a project or task.

If you change the burden schedule for a lowest level task that has items processed, then the items are *not* automatically marked for reprocessing. Only new items charged to the task will use the new burden schedule. You can mark the items for recalculation in the Expenditure Inquiry window. This will cause the items to be reprocessed using the new burden schedule assigned to the task.

### Changing Cost Burden Schedule

You can override the cost burden schedule if the project type definition allows you to override the cost burden schedule, and the project is burdened.

### Changing Revenue or Invoice Burden Schedule

You can change the revenue or invoice burden schedule within a schedule type at any time.
Changing the Type of Revenue or Invoice Burden Schedule Used

You can change the burden schedule type of any task or project at any time. You may change a task from a burden schedule type of Bill Rate to Burden, even after you have defined bill rate overrides. These bill rate overrides will not be used in processing. You can also define burden schedule overrides and then change your task to use a bill rate schedule. The burden schedule overrides will not be used.

Overriding Burden Schedules

Defining Burden Schedule Overrides

You can define a schedule of negotiated burden multipliers for your projects and tasks which overrides the schedule that you assigned to the project and tasks. When you define burden schedule overrides, you cannot override just one multiplier for the standard schedule; you need to define an entire schedule for the project or task that overrides the standard burden schedule.

Defining burden schedule overrides is similar to defining burden schedules. You specify the revisions and the associated multipliers. The revisions are created as firm revisions. You cannot apply actuals to provisional multipliers with burden schedule overrides. You can select only burden structures that are allowed for use in burden schedule overrides.

The burden schedule overrides that you define are created as burden schedules in Oracle Projects. You must compile schedule revisions as you do with standard burden schedules.

⚠️ Attention: You do not define override multipliers by organization. The multipliers that you define are used for all items, regardless of the organization.

Assigning Burden Schedule Overrides

You can enter override burden schedules for a project or task in the Project, Templates window or the Tasks window.

The burden schedule override option is available only if the project is burdened and the project type allows override of the cost schedule. You can also choose this option if the schedule type for labor or non–labor is Burden, if you want to allow overrides of revenue and invoice schedules.

Adjusting Burden Schedule Overrides

You can correct, adjust, and create new revisions for your burden schedule override as you do for standard burden schedules.
Calculating Burden Cost

The costing and revenue programs in Oracle Projects determine the effective burden schedule to use for burden cost calculations in the following order:

- Task-level burden schedule override
- Project-level burden schedule override
- Task standard burden schedule

Oracle Projects uses the first schedule it finds to process all items charged to that task.

See Also

Precedence for Calculating Burden Cost: page 5 – 15

Distribute Costs and Interface Supplier Invoices from Payables

The Distribute Costs programs and the Interface Supplier Invoices from Payables program use the overrides and schedules to burden transactions charged to projects that are defined to be burdened for internal costing based on the project type definition. These programs calculate the burdened cost for all transactions on these projects.
Storing and Viewing Burden Costs

You can choose how you want to store and view burden costs for individual expenditure items, using either of the following methods:

- burden cost on the same expenditure item
- burden cost as separate, summarized expenditure items

You decide how to store the burden costs based on your requirements for budgeting and reporting burden costs. You specify the method for each burdened project type that you define.

To define a burdened project type, you enable the Burdened check box in the Costing Information region of the Project Types window. Oracle Projects then displays the Burden Cost Display and Accounting region, where you enter all burden cost information. See: Project Types: page 16 – 177.

See Also

Burden Costing Definitions: page 16 – 99

Burden Cost on the Same Expenditure Item

You can choose to store the total burdened cost as a value along with the raw cost on each expenditure item. The total burdened cost equals the raw cost plus the sum of the burden cost components. With this method, you can easily view the total burdened cost and the raw cost of each item. Oracle Projects displays the raw and burdened costs of the expenditure items on windows and reports.

Table 5 – 3 illustrates the total burdened cost method. The raw cost is stored on each expenditure item. The burdened cost is calculated and then also stored on each expenditure item. The burden cost shown in the table is an interim value that is not stored. In this example, Labor is burdened and Computer Rental is not.
Table 5 – 3 Burden Cost on the Same Expenditure Item

<table>
<thead>
<tr>
<th>Item #</th>
<th>Transaction</th>
<th>Raw Cost</th>
<th>Burden Cost</th>
<th>Burdened Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project A, Task 1.1, Labor, Aug 29, Amy Marlin</td>
<td>100.00</td>
<td>200.00</td>
<td>300.00</td>
</tr>
<tr>
<td>2</td>
<td>Project A, Task 1.1, Labor, Aug 29, Don Gray</td>
<td>200.00</td>
<td>400.00</td>
<td>600.00</td>
</tr>
<tr>
<td>3</td>
<td>Project A, Task 1.1, Computer Rental, Aug 29, Data Systems</td>
<td>500.00</td>
<td>0.00</td>
<td>500.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>800.00</td>
<td>600.00</td>
<td>1400.00</td>
</tr>
</tbody>
</table>

Table 5 – 4 shows the detail of the burden cost on Item #1 in Table 5 – 3.

<table>
<thead>
<tr>
<th>Burden Cost Element</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fringe</td>
<td>40.00</td>
</tr>
<tr>
<td>Overhead</td>
<td>100.00</td>
</tr>
<tr>
<td>G&amp;A</td>
<td>60.00</td>
</tr>
<tr>
<td>Total Burden Cost</td>
<td>200.00</td>
</tr>
</tbody>
</table>

Table 5 – 4 Burden Cost Detail

Oracle Projects calculates the burdened cost of each expenditure item in the Distribute Cost processes. For supplier invoices, the burdened cost of each expenditure item is calculated in the Interface Supplier Invoices from Payables process.

Note: The burden cost of each item may be comprised of a buildup of individual burden cost components, as shown in Table 5 – 4. This is not readily visible by looking at the expenditure item. However, Oracle Projects provides the ability to report this buildup of burden cost for each individual expenditure item. For more information on reporting the individual burden cost components when you use this method of storing burden amounts, see: Reporting Burden Components in Custom Reports: page 5 – 40.

Accounting for Burden Cost Components

You can choose to additionally show the burden cost on separate, summarized expenditures on a separate project. You assign this
separate **Burden Cost Project** in the Project Types window. The Burden Cost Project can be a single, indirect project that collects all burden costs or a project you define for a particular Project Type. These separate expenditures are generated in the same manner as the separate expenditures described in Burden Cost as Separate, Summarized Expenditure Items in the following section. The link to the original expenditure item is maintained but is not readily visible by looking at the summarized expenditures.

Table 5–5 illustrates accounting for summarized burden cost expenditures on a separate project.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Transaction</th>
<th>Raw Cost</th>
<th>Burden Cost</th>
<th>Burdened Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project Overhead, Task 1, Fringe, Sept 1, Consulting East</td>
<td>0.00</td>
<td>120.00</td>
<td>120.00</td>
</tr>
<tr>
<td>2</td>
<td>Project Overhead, Task 1, Overhead, Sept 1, Consulting East</td>
<td>0.00</td>
<td>300.00</td>
<td>300.00</td>
</tr>
<tr>
<td>3</td>
<td>Project Overhead, Task 1, G&amp;A, Sept 1, Consulting East</td>
<td>0.00</td>
<td>180.00</td>
<td>180.00</td>
</tr>
</tbody>
</table>

**Table 5–5  Accounting for Burden Cost Components on a Separate Project**

**Accounting for Burden Cost as Separate, Summarized Expenditure Items**

You can choose to hold the burden cost components as separate expenditure items. The expenditure items storing the burden cost components are identified with a different expenditure type that is classified by the expenditure type class **Burden Transaction**.

Table 5–6 illustrates burden cost as a separate, summarized expenditure item on the same project.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Transaction</th>
<th>Raw Cost</th>
<th>Burden Cost</th>
<th>Burdened Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project A, Task 1.1, Labor, Aug 29, Amy Marlin</td>
<td>100.00</td>
<td>0.00</td>
<td>100.00</td>
</tr>
<tr>
<td>2</td>
<td>Project A, Task 1.1, Labor, Aug 29, Don Gray</td>
<td>200.00</td>
<td>0.00</td>
<td>200.00</td>
</tr>
</tbody>
</table>

**Table 5–6  Accounting for Burden Cost Components on the Same Project**
### Table 5 – 6 Accounting for Burden Cost Components on the Same Project

<table>
<thead>
<tr>
<th>Item #</th>
<th>Transaction</th>
<th>Raw Cost</th>
<th>Burden Cost</th>
<th>Burdened Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Project A, Task 1.1, Computer Rental, Aug 29, Data Systems</td>
<td>500.00</td>
<td>0.00</td>
<td>500.00</td>
</tr>
<tr>
<td>4</td>
<td>Project A, Task 1.1, Fringe, Sept 1, Consulting East</td>
<td>0.00</td>
<td>120.00</td>
<td>120.00</td>
</tr>
<tr>
<td>5</td>
<td>Project A, Task 1.1, Overhead, Sept 1, Consulting East</td>
<td>0.00</td>
<td>300.00</td>
<td>300.00</td>
</tr>
<tr>
<td>6</td>
<td>Project A, Task 1.1, G&amp;A, Sept 1, Consulting East</td>
<td>0.00</td>
<td>180.00</td>
<td>180.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>800.00</td>
<td>600.00</td>
<td>1400.00</td>
</tr>
</tbody>
</table>

**Note:** The expenditure items that incur the raw cost have a burdened cost equal to the raw cost, because the burden cost of those transactions are included in the burden transactions. The burden transactions have a raw cost of zero and a summarized burden cost from the incurred raw costs.

Oracle Projects creates the burden transactions by summarizing the burden cost components by project, lowest task, expenditure organization, PA period, and burden cost code. If you use this method of storing burden costs, you must assign an expenditure type to each burden cost code. You may also want to define an expenditure type for each burden cost code to use for reporting and budgeting purposes. The Create and Distribute Summarized Burden Component Items process summarizes the burden costs for all costed, burdened items. If you are processing new items for a task that already has burden transactions, Oracle Projects will create new burden transactions. The existing burden transactions are not updated. Each new transaction will be assigned the system date when the process is run.

See also: Create and Distribute Summarized Burden Component Items: page 5 – 39.

### Choosing Which Method to Use

The key difference between these two methods is how you view the burden costs on your project. You view the burden costs either as another value on the same expenditure item or as another expenditure item.
The way you budget your projects may influence how you choose to store burden cost:

- If you budget burden components as separate elements in your budget, you would typically choose to view the actuals in a similar way (as a separate expenditure item).

- If you budget burdened costs as a calculation of the raw cost for a given resource, you would typically choose to view the actuals in a similar way (with the burdened costs as a value for the individual expenditure items).

  **Note:** To budget by burden cost component, you use the expenditure type assigned to the burden cost code during setup.

Regardless of which method you choose to store the burden cost, the total raw and burdened costs of the project do not change. The key difference is how you view the information. Also, these methods only apply to storing the cost amounts of the transactions. If you are using cost plus processing for revenue accrual and/or invoicing, then the revenue or invoice amounts are held as an amount along with the raw cost on the expenditure item. You cannot store the burden costs applied for revenue accrual and invoicing as separate summarized, burden transactions.

**See Also**

Overview of Project Budgets: page 3 – 2

**Setting Up The Burden Cost Storage Method**

You choose the method by which you want to store burden amounts on each burdened project type.

- If you want to store the burdened cost as an amount on the same expenditure item, you perform the following step:
  - In the Costing Information region of the Project Types window, enable the Burden Cost on Same Expenditure Item check box.
If you want to store burden amounts on each burdened expenditure item and, additionally, store the burden amounts in a separate project, you perform the following steps:

1. Define a destination project and task for generated burden transactions.
2. In the Costing Information region of the Project Types window, enable the Account for Burden Cost Components check box and add the Project and Task name.
3. In the Expenditure Types window, define an expenditure type with expenditure type class Burden Transaction.
4. In the Burden Cost Codes window, assign the appropriate burden transaction expenditure type to each burden cost code.

If you want to store the burden costs as separate, summarized transactions on the same project, you perform the following steps:

1. In the Costing Information region of the Project Types window, enable the Burden Cost as Separate Expenditure Item check box.
2. In the Expenditure Types window, define an expenditure type with expenditure type class Burden Transaction.
3. In the Burden Cost Codes window, assign the appropriate burden transaction expenditure type to each burden cost code.

See Also

Loading Burden Transactions: page 4 – 78

Accounting for Burden Costs

You determine if you want to account for the burden costs. You can choose one of the following accounting methods:

- Account for burden costs by burden cost component.
- Account for the total burdened costs.
- Perform no accounting — calculate burden costs only for use in management reporting with no accounting impact.
Oracle Projects supports all of these accounting methods for burden costs regardless of the method that you choose to store the burden costs, either as a value on the expenditure item or as separate, summarized expenditure items.

There are cases in which you may choose to use both of the methods of accounting for burdened costs, based on different objectives. The sections below explain the objectives of using each method of accounting.

See Also

Storing and Viewing Burden Costs: page 5 – 29

Example of Accounting for Total Burdened Costs

Table 5 – 7 shows an example of the accounting for the expenditure items used above in Table 5 – 3. The example includes the accounting for both raw cost and total burdened costs.

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Item #</th>
<th>Accounting Transactions</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Cost</td>
<td>1</td>
<td>Labor Expense</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payroll Clearing</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Labor Cost</td>
<td>2</td>
<td>Labor Expense</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payroll Clearing</td>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Expense</td>
<td>3</td>
<td>Computer Rental Expense</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payables Liability</td>
<td></td>
<td>500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Item #</th>
<th>Accounting Transactions</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>1</td>
<td>Project Cost Inventory</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Labor Burdened Inventory Transfer</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>Labor</td>
<td>2</td>
<td>Project Cost Inventory</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Labor Burdened Inventory Transfer</td>
<td></td>
<td>600</td>
</tr>
</tbody>
</table>
Accounting for Total Burdened Costs

<table>
<thead>
<tr>
<th>Expense</th>
<th>3</th>
<th>Project Cost Inventory</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Computer Burdened Inventory Transfer</td>
<td>500</td>
</tr>
</tbody>
</table>

Table 5 – 7  (Page 1 of 1) Accounting for Total Burden Costs

**Note:** The Computer Rental expense is included in the total burdened cost accounting, even though it is not burdened. This is done to include the total project cost in the cost WIP accounts.

Setting Up Accounting for Total Burdened Costs

To set up an Account for Total Burdened Costs configuration, you must perform the following step:

- Define AutoAccounting rules for the Total Burdened Costs Debit and Total Burdened Cost Credit AutoAccounting functions. These rules are used to determine the debit and credit GL accounts that will be charged. You must ensure that your AutoAccounting rules handle all transactions charged to burdened projects, not just those transactions that are burdened.

Creating and Interfacing the Accounting for Total Burdened Costs

To create and interface the accounting for the total burdened costs, you run the following processes:

- **PRC: Distribute Total Burdened Costs.** This process creates the total burdened cost distribution lines for all transactions charged to burdened projects, even if the transaction is not burdened, to account for the total project costs in the cost WIP account.

- **PRC: Interface Total Burdened Costs to General Ledger.** This process interfaces total burdened cost distribution lines to Oracle General Ledger.

- **PRC: Tieback Total Burdened Costs from General Ledger.** This process ties back total burdened cost distribution lines from Oracle General Ledger.

You can also use the streamline processes to create distribution lines for burdened costs.
Accounting for Burden Costs by Burden Cost Component

You can account for the individual burden cost components when you want to track the burdening in General Ledger.

Table 5–8 shows an example of the accounting for the expenditure items shown in Table 5–6. The example includes the accounting for both raw cost and burden costs by component.

### Accounting for Raw Cost

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Item #</th>
<th>Accounting Transactions</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Cost</td>
<td>1</td>
<td>Labor Expense</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payroll Clearing</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Labor Cost</td>
<td>2</td>
<td>Labor Expense</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payroll Clearing</td>
<td></td>
<td>200</td>
</tr>
<tr>
<td>Expense</td>
<td>3</td>
<td>Computer Rental Expense</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Payables Liability</td>
<td></td>
<td>500</td>
</tr>
</tbody>
</table>

### Accounting for Summarized Burden Cost Components

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Item #</th>
<th>Accounting Transactions</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fringe</td>
<td>4</td>
<td>Project Fringe Expense</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fringe Absorption/Recovery</td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>Overhead</td>
<td>5</td>
<td>Project Overhead Expense</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overhead Absorption/Recovery</td>
<td></td>
<td>300</td>
</tr>
</tbody>
</table>

Table 5–8 (Page 1 of 2) Accounting for Burden Costs by Burden Cost Component
Setting Up Accounting for Burden Costs by Burden Cost Component

To set up this configuration, you must perform the following steps:

1. Define AutoAccounting rules for the Burden Transaction Debit (Burden Cost Account) and Burden Transaction Credit (Burden Cost Clearing Account) AutoAccounting functions. These rules are used to determine the debit and credit GL accounts to be charged. You use the expenditure type parameter to distinguish between different types of burden cost components. You also have the AutoAccounting Function Burden Cost Revenue Account to account for revenue.

2. If you have chosen to store burden costs as a summarized value on a separate project and task (as defined by selecting the Burden Cost on the same expenditure item indicator on the project type), you must perform the following additional steps:
   - Define a project and appropriate tasks, which will be used as a storing bucket for summarized, burden transactions used for accounting for the individual burden costs. You typically would not do project reporting from these collection projects. However, you may choose to perform some analysis for burden absorption using these projects. After you account for the burden costs to General Ledger, you can perform additional analysis within General Ledger.
   - Specify the above project and task on the project type. This project and task are used for collecting the summarized burden transactions that are used only for the burden accounting.

**Table 5–8 (Page 2 of 2) Accounting for Burden Costs by Burden Cost Component**

<table>
<thead>
<tr>
<th>G&amp;A</th>
<th>0</th>
<th>Project G&amp;A Expense</th>
<th>180</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>G&amp;A Absorption/Recovery</td>
<td>180</td>
</tr>
</tbody>
</table>

Accounting for Summarized Burden Cost Components
Creating and Interfacing the Accounting for Burden Costs by Burden Cost Component

To create and interface the accounting for the burden transactions, you run the following processes:

- **PRC: Create and Distribute Summarized Burden Component Items.** This process summarizes the burden costs, creates the expenditure items for the burden transactions, and runs the distribution process. The burden transactions are created on different projects depending on the method you use to store burden costs. If you store burden costs as separate, summarized burden transactions, the burden transactions are created on the same project that incurred the costs. If you choose to store burden costs as a value along with raw cost on the expenditure item on the project that incurred the transactions, the burden transactions are created on the collection project and task used for collecting burden transactions intended for accounting by burden cost components only.

- **PRC: Interface Usage and Miscellaneous Costs to General Ledger.** This process interfaces the burden transactions to Oracle General Ledger. Based on the expenditure type class you enter as a process parameter, this process will interface only those transactions that match the parameter. If no parameter is entered, then this process picks up all Burden Transactions, Miscellaneous Transactions, Usage Transactions, Inventory Transactions and WIP Transactions for processing.

- **PRC: Tieback Usage and Miscellaneous Costs from General Ledger.** This process ties back all transactions processed in the PRC: Interface Usage and Miscellaneous Costs process.

You can also use the streamline processes to create distribution lines for burdened costs.

**Accounting for Total Burdened Costs**

You may choose to account for the total burdened costs of the items, without distinguishing the amounts by burden cost components. This is typically done when you track the total burdened costs in a cost asset or cost WIP (work in process) account. This method is also sometimes referred to as project inventory. You may track cost WIP when you:

- capitalize total burdened costs
• track the total burdened costs as project inventory (also known as cost WIP) on contract projects and later calculate a cost accrual when you generate the revenue.

**Note:** You must run the appropriate processes to create and interface total burdened costs distribution lines if you are capitalizing burdened costs for capital projects or are using burdened costs for the cost accrual calculation during revenue generation.

### See Also

- Capital Projects: page 6 – 2
- Revenue–Based Cost Accrual: page 7 – 73

### Storing Burden Costs with No Accounting Impact

You can choose to calculate the burden costs for project transactions for management reporting without an accounting impact.

If you store burden costs as a value on the expenditure item, you have no extra setup to perform and no accounting processes to run on the burden costs.

If you store the burden costs as separate, summarized expenditure items and perform the accounting in Oracle Projects (rather than importing the accounting), you must set up AutoAccounting for those burden transaction expenditure items to post the debit and the credit to the same GL account. Oracle Projects requires that you interface the cost distribution lines of these expenditure items to Oracle General Ledger.

### Reporting Burden Components in Custom Reports

You can report the buildup of costs for each detail transaction, by invoice, in summary for a project, by GL period, by PA period, or in any way that you want to review information. This applies only if you stored the burdened cost as a value on the expenditure item and not if you store it as a summarized burden transaction. You may want to report this information for internal reporting and for customer billing. For example, your company may need to create an invoice backup...
report that displays the raw cost as well as the related burden cost components on an invoice.

You report the individual burden cost components for costing, revenue, and invoicing using the appropriate view from the following list:

- PA_CDL_BURDEN_DETAILS_V
- PA_CDL_BURDEN_SUMMARY_V
- PA_COST_BURDEN_DETAILS_V
- PA_INV_BURDEN_DETAILS_V
- PA_REV_BURDEN_DETAILS_V

To create error reports, use the following views:

- PA_CDL_BURDEN_SUM_ERROR_V
- PA_BURDEN_EXP_ITEM_CDL_V

To create the reports for burdened commitments, use the following views:

- PA_CMT_BURDEN_DETAIL_V
- PA_CMT_BURDEN_SUMMARY_V
- PA_CMT_BURDEN_SUM_ERROR_V
- PA_CMT_BURDEN_TXN_V

See Also


Burdening: page 5 – 16

Costing Process Flow Overview

Figure 5 – 8 shows the process flow of the costing processes in Oracle Projects.

If you are not creating summarized burden transactions, you can skip that step in the process.
If you are not accounting for total burdened costs, you can skip the processes related to total burdened costs.

Figure 5 – 8

**Distribute Costs**
- calculate raw and burdened costs
- create raw cost distribution lines (determines debit account)

**Interface and Tieback Costs**
- accumulate raw and burdened costs in project accumulators
- determine credit account
- interface raw cost distribution lines to GL or AP

**Create and Distribute Summarized Burden Component Items**
- create and distribute summarized burden transactions

**Interface and Tieback Usage and Miscellaneous Costs to GL**
- interface distribution lines of summarized burden transactions to GL

**Distribute Total Burdened Costs**
- create total burdened cost distribution lines (debit and credit) for all transactions on burdened costs

**Interface and Tieback Total Burdened Costs**
- interface total burdened cost distribution lines to GL
Frequently Asked Questions

Use this section to help resolve problems and answer questions you may have concerning your burden setup and cost plus processing. For example, using this section, you can find out why Oracle Projects did not create a burdened cost distribution line for a particular expenditure item. Note that some questions may apply to Project Billing as well as Project Costing.

What characteristics should my Burden Cost Component Destination Project have?

You can set up the destination project with any project type, classifications, and other setup features. We do suggest that you make it an indirect project and use chargeability controls to prevent inadvertent charging to the project.

You can create one project for every project type that burdens costs and tracks burden costs on a separate project or, alternatively, create only one project but set up separate tasks to store costs for each project type. Either solution will work, because in each project type definition you specify a project and task as the destination for generated burden cost transactions.

Should I use unique expenditure types to map to burden cost components or should I add the expenditure type class of Burden Transaction to existing expenditures?

In the Burden Cost Codes setup window, you define each burden cost code to which you will be assigning a burden multiplier in your burden schedule. You also assign an expenditure type to each burden cost code. You may use any expenditure type that has been defined with the Burden Transaction expenditure type class or, if you want to account for the burden cost components in the GL or budget by burden cost component, you can define an expenditure type with the same name as the burden cost code. This would also enable you to view your generated burden costs by burden cost component, based on the unique expenditure type.

How can I see my generated burden cost transactions?

When you choose the option to generate separate burden cost transactions on the same project, you will have not only your original raw cost transactions on any particular task, but you will also have the new, generated burden cost transactions. When you view your project transactions in the Expenditure Inquiry window, the generated
transactions will be distinguishable from the original transactions because they will have a raw cost of zero, with the summarized burden cost balance shown as the burdened cost. The burden cost transactions will also have the following characteristics:

- The expenditure item date will be set to the date the creation process was executed.
- The expenditure type will be the unique expenditure type you assigned to the burden cost code. See: Should I use unique expenditure types?: page 5 – 43.
- The expenditure type class will be Burden Transaction.

What if I have to adjust my original expenditure after I've created these summary burden cost transactions?

While the burden cost transactions are summarized, all links to the original transactions are still maintained. Therefore, if you transfer or adjust the raw cost of the original transaction, the appropriate adjustment is also made to the summarized transactions. Remember, with the exception of billing adjustments, you cannot adjust the summarized transaction directly. See: Adjustments to Burden Transactions: page 4 – 30.

What is Burdening versus Mass Allocations?

Oracle Projects

Burden cost codes in Oracle Projects were designed for applying overhead expenses according to the burden contracting method used by government agencies in the United States. This method reflects a standard costing approach to applying overhead by defining codes and multipliers that will be applied on an ongoing basis as activity occurs. As a result, fully burdened project costs are visible on a timely basis at predictable multipliers which can be budgeted and therefore controlled. These fully burdened costs can then be posted to cost centers as a recovery against their actual costs. Variances to actuals can be monitored and burden multipliers adjusted as required. In addition, the cost center manager responsible for incurring the overhead costs can be held accountable for variances, rather than placing the responsibility on the project manager who does not control these overhead costs.
Oracle General Ledger
Oracle General Ledger Mass Allocations offers the more traditional full allocation of actual overhead expenses where no ongoing burdening method exists. These allocations are usually performed during the month–end process, resulting in a considerable delay in viewing these costs on projects. In addition, these allocations suffer from the unpredictable nature of overhead expenses which can fluctuate depending on when invoices are received. Consequently, they are very difficult to budget and control. If all of the overhead costs are always transferred to projects, then there is little incentive for the cost center manager to manage those costs.

How can I test my burden structure before processing?
You can use the View Burdened Costs window to test your burden structure before you begin processing costs.
You must have completed the cost plus implementation and assigned burden schedules to projects and tasks to use the View Burdened Costs form. See: View Burden Costs Window: page 16 – 113.

What if I do not include an expenditure type in a burden structure?
If Oracle Projects does not find an expenditure type in a cost base during burden processing, then the expenditure item is not burdened; the burdened cost is equal to the raw cost.

What if I do not include an expenditure type in the definition of my burden cost code?
Without an expenditure type, the Create and Distribute Summarized Burden Component Items process will fail, because the expenditure type is a key value in the expenditure item record.

Which burden schedule was used for my project?
Oracle Projects uses the following order of precedence when determining which schedule to use when calculating multipliers:
1. Schedule override assigned to lowest task
   If Oracle Projects finds a schedule override at the lowest task, then it uses that schedule to calculate multipliers.
2. Schedule override assigned to project
If a schedule override is not found at the lowest task, then Oracle Projects looks for a schedule override at the project level. If Oracle Projects finds a schedule override at the project level, it uses that schedule to calculate multipliers.

3. Standard schedule assigned to lowest task

If a schedule override is not found at the project level, then Oracle Projects looks for a standard schedule at the lowest task and uses that schedule to calculate multipliers.

Oracle Projects uses this precedence when looking for a burden schedule for the three uses of burden schedules: internal costing, revenue accrual, and invoicing. See: Billing: page 7 – 2

**Suggestion:** Use the View Burdened Costs window to see which schedules are used for a particular project.

**What date was used for a particular burden schedule version?**

If the schedule type is firm, Oracle Projects uses the expenditure item date to determine which burden schedule to use for burden cost calculation.

However, if you entered a schedule fixed date for a firm burden schedule, then Oracle Projects uses the schedule fixed date to determine the effective burden schedule version.

If the schedule type is provisional, then Oracle Projects uses the last date of the GL period in which the expenditure item date falls.

**What organization was used for calculating burden amounts?**

Oracle Projects uses the Expenditure Organization for calculating burden amounts, *unless* organization distribution overrides exist for the organization. If you use organization distribution overrides, then the override to organization is used in place of the expenditure organization.

**Where can I view burdened cost distribution lines?**

You can use the Expenditure Inquiry window to review burdened cost distribution lines.
Why was a particular expenditure item not burdened?

If Oracle Projects does not properly distribute cost or generate revenue for an expenditure item, you can view revenue rejection reasons from the Expenditure Items window. Use the Folder option Show Field to display either Cost Distr. Rejection or Revenue Distr. Rejection.

To be burdened, an expenditure item must meet the following conditions:

- For internal costing, the item must be charged to a project with a project type set up to burden cost
- For revenue accrual and billing, the item must be charged to a task with a labor schedule type of Burden, if the item is a labor item; or with a non-labor schedule type of Burden, if the item is a non-labor item
- Must be categorized by an expenditure type that belongs in a cost base
- Must be included in a compiled schedule
- The lowest task that the expenditure item is charged to must have an assigned compiled burden schedule for the appropriate calculation of costing, revenue, or invoicing

What do I need to do if I add a new organization?

See: If You Add a New Organization to the Project Burdening Hierarchy Version: page: 16 – 44.

What do I need to do if I add a new expenditure type?

If you want to burden transactions using a new expenditure type, you must add the expenditure type to the appropriate burden structures. You should do this before you enter transactions using this expenditure type. This will ensure that all transactions using this expenditure type are burdened. If you have charged transactions using this expenditure type before you added the expenditure type to the appropriate burden structures, you must mark these transactions to be reprocessed to burden the costs.

If you do not want to burden transactions using this expenditure type, there are no special steps that you must perform.
What happens when I compile multipliers?

When you compile a burden schedule version, Oracle Projects calculates and stores the multipliers for each organization and burden cost code in a schedule version. Additional information stored includes compiled multipliers, which allow Oracle Projects to quickly determine burden cost amounts based on the burden multipliers used for a particular organization as of a particular date.

Instead of performing a buildup of costs each time you calculate burden amounts, Oracle Projects uses the compiled multipliers to multiply the compiled multiplier by the raw cost to determine each burden cost component.

Notice in the following examples that the cost amount is the same for burden costs, regardless of the method used.

**Example of cost calculation using compiled multipliers**

<table>
<thead>
<tr>
<th>Cost Base</th>
<th>Burden Cost Code</th>
<th>Compiled Multiplier</th>
<th>Raw Cost</th>
<th>Burden Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Fringe</td>
<td>0.4</td>
<td>800</td>
<td>320.00</td>
</tr>
<tr>
<td></td>
<td>Overhead</td>
<td>1.4</td>
<td>800</td>
<td>1,120.00</td>
</tr>
<tr>
<td></td>
<td>G&amp;A</td>
<td>0.42</td>
<td>800</td>
<td>336.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>1,893.00</strong></td>
</tr>
</tbody>
</table>

**Example of cost calculation using cost buildup**

Direct Labor: \[ A = 800.00 \]
Fringe@40%: \[ B = A \times 0.40 \]
Overhead@100%: \[ C = (A + B) \times 1.0 \]
G&A@15%: \[ F = (A + B + C) \times 0.15 \]

**Total**: \[ 1,893.00 \]

What do I do if I encounter the rejection error “Cannot find compiled multiplier”?

You may find transactions with this rejection error in the output reports of the Distribute Costs programs, the Interface Supplier Invoices from Payables program, and the Generate Draft Revenue program. These programs use compiled multipliers for calculating burden costs.

Oracle Projects expects to find a compiled multiplier for every organization, expenditure type, and burden schedule version.
combination that it uses in calculating burden costs. If it cannot find a compiled multiplier, it gives this rejection reason.

You must compile the schedule version that Oracle Projects is trying to use. You can determine the appropriate schedule version that must be compiled by entering the criteria that matches the rejected transaction in the View Burdened Costs window. This window displays the burden schedule version that should be used.

You can compile a specific schedule version in the Setup Burden Schedules window for standard burden schedules or in the Burden Schedule Overrides window, which is available from either the Projects or Tasks windows for burden schedule overrides. You can also submit the PRC: Compile All Burden Schedule Revisions process to recompile all uncompiled schedule versions which are not on hold.

You may also encounter this error if you have added a new organization after setting up your cost plus setup. You must run the PRC: Add New Organization Burden Compiled Multipliers process to create compiled multipliers for the new organization.

Can I apply actual multipliers to closed projects?

Yes, you can apply actual multipliers to transactions on closed projects. However, these transactions will not be processed because Oracle Projects does not process transactions on closed projects. Burden multipliers are applied to any transaction processed in the costing, revenue accrual, and billing programs when a project is set up to burden costs, as long as the project is not closed. However, you can process transactions for a project that is inactive due to having a completion date; you just cannot charge new transactions to projects having a date after the completion date.

Can I apply a multiplier on top of my burden cost buildup?

You can apply a labor multiplier to the burdened costs on projects and tasks for billing purposes. This multiplier is applied for labor items only, and is applied on top of the standard schedule multipliers defined for revenue and invoice purposes. You use the labor multiplier when you need to account for two-tier multiplier billing. In two-tier billing, you define negotiated multipliers to apply on top of the burdened amount calculated based on standard multipliers.

See: Labor Cost Multipliers: page 16 – 96
At what level does Oracle Projects hold burden cost?

Oracle Projects calculates and maintains burdened cost amounts for every expenditure item. The audit information to display the burden cost component breakdown is also recorded at the detail level.

With this detailed information, you can report and summarize the burdened amounts in any way that you need to analyze the information.

How can I burden non–labor transactions that existed before Release 10.5?

Cost Plus Processing was enhanced in Release 10.5. Prior to Release 10.5, you could burden only labor transactions with simple burden multipliers.

You can burden non–labor transactions that existed before Release 10.5 by:

• Defining a burden structure that includes non–labor expenditure types
• Defining a burden schedule that uses a burden structure which includes non–labor expenditure types
• Assigning the burden schedule as your default costing schedule for the appropriate project types
• Assigning the burden schedule as your costing schedule for the appropriate projects and tasks
• Marking the non–labor items for cost recalculation

Use the Recalculate Burden Costs option in the Expenditure Inquiry window to recalculate burden costs.

• Running the appropriate cost distribution program

Note: If you want to recalculate cost for a large number of non–labor items, we recommend that you mark the items for re–costing and process the items in manageable volumes of data to effectively and efficiently process the data.

How can I use cost plus processing for billing projects that existed before Release 10.5?

You can use the new burden functionality for revenue accrual and billing by changing the project and task definitions to use burden schedules instead of standard bill rate schedules for revenue accrual and billing.
Any existing, already processed items will not use the new schedules. Any new transactions or transactions marked for revenue and billing adjustments will use the new schedules.
Capital Projects

This chapter describes how to create and maintain capital projects in Oracle Projects. It provides a brief overview of capital projects and explains how to create, place in service, adjust, and account for assets in Oracle Projects.
Overview of Capital Projects

You use capital projects to collect construction–in–process (CIP) and expensed costs for assets you are building. When you are ready to place the asset in service, you generate asset lines from the CIP costs in Oracle Projects. You can send these lines to Oracle Assets to become depreciable, fixed assets.

About Capital Projects

You define and build capital assets in Oracle Projects using information specified in the project work breakdown structure (WBS). You define and assign the grouping method and levels for CIP costs to summarize them for capitalization. You can review and adjust the summarized CIP costs if necessary.

You can adjust capital project costs before and after capitalization. For example, you may want to split the costs collected under common tasks into multiple CIP assets before you place them in service. Or, you may need to account for additional costs incurred after capitalization, since Oracle Projects allows you to place assets in service before completion of a project. You can also reverse capitalize an asset, if necessary.

When your CIP asset is built and ready to be placed in service, you can send the associated capitalized costs as asset lines to Oracle Assets. Oracle Assets places these imported mass addition lines in a holding area, where your fixed assets department can post the capitalized costs.
to become assets. Now you can begin using and depreciating your assets. You can review detail project transactions associated with the asset lines in Oracle Projects and Oracle Assets if necessary.

See Also

Capital Projects Process (Integration With Oracle Products): page 6 – 3
Creating a Capital Asset in Oracle Projects: page 6 – 8
Defining Assets: page 6 – 11
Use Grouping Levels to Summarize Asset Costs: page 6 – 16
Placing an Asset in Service: page 6 – 23
Creating and Preparing Asset Lines for Oracle Assets: page 6 – 25
Sending Asset Lines to Oracle Assets: page 6 – 32
Adjusting Assets After Interface: page 6 – 34
Accounting for CIP and Asset Costs in Oracle Projects: page 6 – 40

Capital Projects Process

You can enter expenditure items associated with building capital assets in Oracle Projects. You also can collect supplier invoice costs for your capital projects from Oracle Purchasing and Oracle Payables into Oracle Projects. When you are ready to place the CIP asset in service, you can send the associated capitalized asset lines from Oracle Projects to Oracle Assets to become fixed assets. You use AutoAccounting in Oracle Projects to post to the appropriate CIP and expense accounts in Oracle General Ledger.
Create Purchase Orders for Capital Projects

When you create a purchase order for a capital project in Oracle Purchasing, you can enter a project, task number, and expenditure type for each project–related distribution line. You match this purchase order to an invoice in Oracle Payables, and then send the appropriate lines to Oracle Projects.

You can use the asset category to assign an inventory item’s cost on a purchase order to an asset on a capital project in Oracle Projects. You define default asset categories for inventory items in Oracle Purchasing. After you match the purchase order to an invoice, and interface the invoice from Oracle Payables, Oracle Projects assigns the inventory item’s cost to an asset on the project that has the same asset category as the inventory item.

If you assign purchase order distribution lines to asset clearing accounts instead of projects, Oracle Payables matches the purchase order to an invoice and sends the lines to Oracle Assets using the Mass Additions interface.
If both a project and an asset clearing account are used in the distribution line, the following occurs:

- If the project is a capital project:
  
  Oracle Payables posts the costs to the asset clearing account and the costs remain there until you place the asset in service in Oracle Projects.

  You can send the costs to Oracle Projects after you post the invoice to Oracle General Ledger.

  You cannot send costs to Oracle Assets from Oracle Payables when you run Mass Additions.

- If the project is a contract or indirect project:

  Oracle Payables posts the costs to the asset clearing account and, if you have sent the costs to Oracle Projects, Oracle Assets interfaces the costs to an asset cost account when you post the transaction from Oracle Assets to Oracle General Ledger.

  You can send the costs to Oracle Projects after you post the invoice to Oracle General Ledger.

  You **can** send costs to Oracle Assets from Oracle Payables when you run Mass Additions.

The only way a distribution line can have both a project and an asset clearing account is if the Account Generator process is set up to create the asset clearing account as the account segment, or if you enter it manually.

**Charge Supplier Invoice Distribution Lines to Projects**

You can charge project–related supplier invoice distribution lines to capital projects in Oracle Payables, and interface the invoice distribution lines to Oracle Projects. You cannot send capital project–related distribution lines to Oracle Assets directly from Oracle Payables. You must collect capital project–related costs in Oracle Projects and send them to Oracle Assets when you want to place the asset in service.

To send non–CIP distribution lines directly to Oracle Assets, use the Mass Additions process. See: [Create Mass Additions from Invoice Line Distributions in Oracle Payables](#)

You must post all project–related supplier distribution lines to Oracle General Ledger before you can interface them from Oracle Payables to Oracle Projects. Non–CIP project–related invoices must also be sent to
Oracle Projects before you can send them to Oracle Assets. Invoices charged to capital projects are posted to CIP accounts in Oracle General Ledger. Invoices charged to contract and indirect projects are usually charged to expense accounts. Your Account Generator setup determines these accounts.

**Charge Labor, Expense Reports, Usages, and Miscellaneous Transactions**

You enter labor, expense reports, asset usage, and miscellaneous transactions for your capital project in Oracle Projects. The Distribute Labor, Expense Report, and Usage and Miscellaneous Costs processes charge the capital project costs to a CIP account in Oracle General Ledger. Your AutoAccounting setup determines these accounts. Oracle Projects is the subsidiary ledger for your CIP accounts in General Ledger. You can review the details for your CIP accounts by querying your capital projects in Oracle Projects.

**Place CIP Assets in Service**

You enter a date placed in service for the CIP assets that are completed for a capital project. Then, you can run the Generate Asset Lines process, which uses the grouping method and levels you define to summarize all costs (supplier invoice, labor, expense reports, usages, and miscellaneous transactions) into asset lines. You associate these asset lines with one or more assets and send the lines to Oracle Assets to become fixed assets.

**Create Fixed Assets from Capital Projects**

You run the Interface Assets process to send asset lines from Oracle Projects to Oracle Assets. This process merges the asset lines into one mass addition line for each asset. The mass addition line appears in the Prepare Mass Additions Summary window in Oracle Assets as a merged parent with a description identical to the one you entered in Oracle Projects and a cost amount of zero. The lines have a status of MERGED.

For example, you would see the following lines in Oracle Assets for an asset interfaced from Oracle Projects. When you run the Post Mass Additions process, Oracle Assets assigns the same asset number to these lines.
Oracle Assets places the mass addition in the POST queue if you completely defined the asset in Oracle Projects, and it is ready for posting. Oracle Assets places the mass addition in the NEW queue if the asset definition is not complete; you must enter additional information for the mass addition in the Prepare Mass Additions window, and then update the queue status to POST. You do not need to change the queue status for lines with a status of MERGED.

Use the Post Mass Additions process to create fixed assets from your mass addition lines. When you run the Create Journal Entries program, Oracle Assets creates journal entries to the appropriate CIP and asset cost accounts in Oracle General Ledger. For CIP assets, the CIP account comes from the asset lines generated in Oracle Projects and the asset account comes from the asset category associated with the asset.

### See Also

Integrating with Oracle General Ledger: page 12 – 9

Integrating with Oracle Purchasing and Oracle Payables: page 12 – 35
Creating a Capital Asset in Oracle Projects

Create a capital project to collect construction–in–process (CIP) costs you want to place in service and send to Oracle Assets to become fixed assets.

You create an asset in Oracle Projects for each CIP asset you want to place in service. You generate summarized asset lines for each asset, which you can interface to Oracle Assets when the asset is ready to be placed in service.

You can copy a capital project and its assets to create a new project. Figure 6 – 2 illustrates the capital projects flow in Oracle Projects before you send capitalized asset lines to Oracle Assets.

Figure 6 – 2 Capital Project Flow
Create a Capital Asset

To create a capital asset in Oracle Projects:

1. Create a new capital project and WBS using a project template whose project type is set up for a capital project. Update project and task details if necessary. See: Creating a New Template: page 2 – 28.

You can also copy an existing capital project. If you copy an existing capital project, assets associated with the existing project (and any attachments to the assets) will be copied to the new capital project. See: Creating a New Project from a Project Template or Existing Project: page 2 – 31.

2. Update the Transaction Controls, as appropriate, including capitalizability by employee, expenditure category, expenditure type, or non–labor resource. See: Specifying Capitalizability of Capital Project WBS Levels: page 6 – 9.

3. Collect CIP and expensed costs for your capital project. Make adjustments if necessary.


5. Specify grouping levels and grouping level types within the WBS. You can then associate assets with the various grouping levels. See: Assigning Assets to Grouping Levels: page 6 – 19.

6. Specify the date in service for completed assets in your capital project. See: Placing an Asset in Service: page 6 – 23.


Specifying Capitalizability of Capital Project WBS Levels

You must specify whether to capitalize or expense each transaction charged to a capital project. The capitalizable classification is similar to the billable classification for transactions charged to a contract project; the task and transaction controls you define determine the default value for this classification.
To specify capitalizability for a capital project WBS level:

1. Decide at which level you want to specify capitalizability and navigate to the appropriate window (See Table 6–2 below):

<table>
<thead>
<tr>
<th>Control Levels</th>
<th>Control Windows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire Task</td>
<td>Task Details window</td>
</tr>
<tr>
<td>Specific Employee</td>
<td>Transaction Controls window</td>
</tr>
<tr>
<td>Specific Expenditure Category</td>
<td></td>
</tr>
<tr>
<td>Specific Expenditure Type</td>
<td></td>
</tr>
<tr>
<td>Specific Non-Labor Resource</td>
<td></td>
</tr>
<tr>
<td>Specific Expenditure Item</td>
<td>Expenditure Inquiry window</td>
</tr>
</tbody>
</table>

2. Check or uncheck the Capitalizability check box for the task control level you want.

3. Save your work.
Defining Assets

In Oracle Projects, you can define assets you plan to build during the project. To define a CIP asset for a capital project, enter asset information, such as the date placed in service, asset location, employee assignment, and corporate asset book.

During project type setup, you specify whether the asset definitions must be complete in Oracle Projects before you can place the asset in service. See: Project Types: page 16 – 177. If your project type requires the asset definition to be complete before you can send the asset to Oracle Assets, you must enter the following fields:

- Asset Name
- Description
- Book (unless you only have one Oracle Assets corporate book for the Oracle Projects set of books)
- Asset Category
- Location
- Depreciation Expense Account
- Units (default is one)
- Depreciate (default is yes)
- Amortize Adjustments (default is no)

To define assets in the Capital Projects window:

1. Navigate to the Capital Projects window.
2. Find the capital project for which you want to define assets in the Find Capital Projects window.
3. Choose the Assets button in the Capital Projects window.
4. Use the poplist in the Assets window to enter asset information in each alternative region.
   
   **Note:** You must at least enter the Asset Name and Description to create a CIP asset.
5. Save your work.

To define assets in the Projects window:

1. Navigate to the Projects window.
2. Find the capital project for which you want to define assets in the Find Projects window.

3. Choose the Open button in the Projects, Templates Summary window.

4. Choose Asset Information, Assets from the Options list in the Project, Templates window.

5. Enter information for an asset. You can use the down arrow key or Edit, New Record from the menu if you want to enter more than one asset for this capital project.

   **Note:** You must at least enter the Asset Name and Description to create a CIP asset.

6. Save your work.

**See Also**

- Creating a Capital Asset in Oracle Projects: page 6 – 8
- Use Grouping Levels to Summarize Asset Costs: page 6 – 16
- Assigning Assets to Grouping Levels: page 6 – 19
- Placing an Asset in Service: page 6 – 23

**Assets Window Reference**

You must enter asset information when you define an asset in Oracle Projects. The Interface Assets process sends all asset information to Oracle Assets, except the following:

- Asset Name
- Estimated Date In Service

**Asset Name**

The asset name must be unique within the project. You cannot change the asset name after you place the asset in service in Oracle Projects.
Asset Number

An asset number uniquely identifies each asset. You can enter a unique asset number, or use automatic asset numbering in Oracle Assets during the Mass Additions process. You cannot update this field after you send the asset to Oracle Assets.

If you enter an asset number, it must be unique and not in the range of numbers reserved for automatic asset numbering in Oracle Assets. You can enter any unique number that is less than the number in the Starting Asset Number field in the System Controls form, or you can enter any non-numeric value.

Estimated In Service Date

The date you estimate placing the asset in service. Use the Estimated Date In Service to query and review assets you expect to be in service.

Actual Date In Service

The actual date you place the asset in service and begin using it. The date can be in the current or a prior accounting period. You cannot change this date after you place the asset in service in Oracle Projects.

You may want to begin creating and reviewing asset lines prior to the period you intend to place the asset in service. You can enter a date in a future accounting period.

⚠️ Warning: The Interface Assets process automatically rejects an asset with a future date in service.

Description

The description of the asset you are building. You cannot update this field after you send the asset to Oracle Assets.

Asset Category

The asset category determines the default asset cost account and depreciation rules for the asset after you send the asset to Oracle Assets. You cannot update this field after you send the asset to Oracle Assets.

Oracle Projects provides you with a list of asset category values defined in Oracle Assets and associated with the corporate book of the CIP asset.
Book

The corporate depreciation book of the asset. Oracle Assets defaults financial information from the asset category, book, and date placed in service for your asset after you send it to Oracle Assets.

Oracle Projects provides you with a list of corporate book values defined in Oracle Assets which match the Oracle Projects set of books. You can have multiple corporate books associated with one set of books in Oracle Assets.

Location

Expected physical location of the asset after it is placed in service. Oracle Projects provides you with a list of valid locations defined in Oracle Assets.

Units

The number of units of the asset. You cannot update this field after you send the asset to Oracle Assets. For example, if you are building two assembly machines, enter 2 units for the asset.

Employee Name and Number (Optional)

The employee (not the project owner) responsible for the asset when it is placed in service.

Depreciate

Check the Depreciate check box if you want to depreciate the asset in Oracle Assets.

Depreciation Expense Account

The expense account to which you want to charge the asset’s depreciation. You cannot update this field after you send the asset to Oracle Assets. You must specify a Book before you can enter a depreciation expense account.
Amortize Adjustments

Check the Amortize Adjustments check box if you want to amortize the catchup depreciation on a cost adjustment over the remaining life of the asset. If you do not check Amortize Adjustments, Oracle Assets expenses the catchup depreciation expense for the adjustment in one period.

If you check this check box, you cannot uncheck it once the asset has been interfaced to Oracle Assets.

Attention: If you check this check box and reverse capitalize the asset, Oracle Assets will amortize the catch up depreciation on the negative cost adjustment over the remaining life of the asset. Therefore, the depreciation expense per period on the original asset cost will not match the backout depreciation expense per period to account for the asset cost reversal in Oracle Assets.

See Also

Asset Setup Information Oracle Assets User’s Guide
Use Grouping Levels to Summarize Asset Costs

Use grouping levels to control how Oracle Projects summarizes expenditure items into CIP asset lines. You can group by project, top task, or lowest level task. For example, if you group at the project level, Oracle Projects summarizes all capitalizable costs at all task levels into asset lines at the project level. If you group at a top task level, Oracle Projects summarizes all tasks below that top task into asset lines for that top task. The grouping level type you choose determines whether you can associate assets with the grouping level. See: Grouping Level Types: page 6 – 18.

You cannot summarize at the lowest level in a particular WBS branch if you have already summarized the top task above that lowest level. For example, if Top Task 1 is a grouping level, you cannot also group at the lowest level task, Task 1.1.1. If you group at lowest level task 2.1.1, you cannot group at Top Task 2. If you group at the project level, you cannot group at any top or lowest level task.

**Note:** You also use the grouping method assigned to your project type to summarize expenditure items.

Examples of Grouping Levels

Figure 6 – 3 to Figure 6 – 6 illustrate four possible variations of grouping levels for a single capital project:

---

**Figure 6 – 3 Group at Project level**

- **Project**
  - **Top Task 1**
    - Task 1.1
    - Task 1.2
  - **Top Task 2**
    - Task 2.1
    - Task 2.2
    - Task 2.2.1
    - Task 2.2.2

---
Grouping Level Types

You can choose between two types of grouping levels: Specific Assets and Common Costs.

You can associate assets only with grouping levels with the type of Specific Assets. You can associate one or more assets with this type of grouping level. The Generate Asset Lines process generates asset lines from the specific assets and costs you associate with this grouping level.

You cannot associate assets with grouping levels with the type of Common Costs. Use the common task grouping level to group together common tasks that capture costs you want to allocate to multiple assets. The Generate Asset Lines process creates unassigned asset lines for your common cost grouping levels, and then you can allocate these common costs across assets.

For example, you set up a construction management or an administrative task to capture project management activities. These costs do not apply to any specific asset. When the project is complete, you spread these costs over all the assets you built by using a standard procedure to split the costs over the assets. You associate these tasks with a grouping level so you can create asset lines from them, but you use a Grouping Level Type of Common Costs so you can manually assign the costs to various assets using the Split Asset Lines window.
You can change the grouping level type at any time. If you want to change a grouping level's type from Specific Assets to Common Costs, Oracle Projects deletes any existing asset assignments from the grouping level. If you have already interfaced assets, and you change the grouping level, it does not affect the asset lines you sent to Oracle Assets.

To specify grouping level type in the WBS:

1. Navigate to the Projects window, find your capital project, and open the Projects, Templates window.
2. If the grouping level is project, choose the Asset Assignments option from the Options region.
3. If the grouping level is task, choose the Task option from the Options region. Choose the Options button from the Tasks window. Then, for each task you want to be a grouping level, choose the Asset Assignments button.

   **Note:** You can associate assets only with grouping levels with a type of Specific Assets.

4. For the project or each task, choose Specific Assets or Common Costs as the grouping level type.
5. Save your work.

See Also

Creating a Capital Asset in Oracle Projects: page 6 – 8

Assigning Assets to Grouping Levels

You assign an asset to a grouping level to associate the asset with the CIP costs incurred to build it.

Oracle Projects associates all the asset lines created from capitalizable expenditure items within the grouping level with the asset you indicate. If you associate more than one asset with the same grouping level, you must manually assign or allocate the asset lines to the various assets.
Example

Figure 6–7 illustrates an example of a capital project. All transactions on all tasks, except for Task 2.3, are capitalizable, and the following applies:

Grouping levels:

• You create asset lines for Task 1.1, Task 1.2, Top Task 2, and Top Task 3 grouping levels
• You charge expenditure items to Tasks 2.1 and 2.2, and they are grouped together into asset lines for Top Task 2
• You can charge expensed transactions only to Task 2.3, because it is not capitalizable

Grouping level types:

• Task 1.1, Task 1.2, and Top Task 2 grouping levels have a type of Specific Assets
• Top Task 3 has a Common Costs grouping level. Asset lines are created, but specific assets cannot be assigned to this grouping level
• You have to manually assign assets to the asset lines created for Top Task 3

Asset assignments:

• You associate Asset 1 with Task 1.1 and Task 1.2 (Single Asset associated with multiple grouping levels)
• You associate Asset 1 and Asset 2 with Task 1.2, and Asset 3 and Asset 4 are to Top Task 2 (Multiple assets associated with a single grouping level)
To assign assets to grouping levels:

1. Navigate to the Project window, find your capital project, and open the Projects, Templates window.

2. If the grouping level is project, choose the Asset Assignments option from the Options region.

3. If the grouping level is task, choose the Task option from the Options region. Choose the Options button from the Tasks window, and then the Asset Assignment button from the Task Options window for each task that is in a Specific Asset grouping level.

   **Note:** You can assign assets only to grouping levels with a type of Specific Assets.

4. Choose the assets you want to assign to the grouping level.

5. Save your work.
See Also

Use Grouping Levels to Summarize Asset Costs: page 6 – 16
Placing an Asset in Service

When the CIP asset is complete, you place it in service. If your project has more than one CIP asset, you can place each asset in service as it is completed; you do not have to complete the entire project to place an asset in service. You place an asset in service by entering the Actual Date In Service for the asset. Although you can collect expensed costs for a capital project, you cannot capitalize these costs.

The Actual Date In Service can be a past, current, or future date. After you enter the date, generate and interface the asset lines. Oracle Assets will calculate and record how much depreciation should have been taken for the asset.

To capitalize CIP asset costs (place an asset in service):

1. Navigate to the Capital Projects window.
2. Find the capital project whose assets you want to place in service by entering search criteria, such as estimated in service date, project name or number, project type, organization, key member, or class code, in the Find Capital Projects window.

   In the Capital Projects window, Oracle Projects displays the summarized expensed, CIP, and capitalized project costs for each project. The Update Project Summary Amounts process updates expensed and CIP amounts; the Interface Assets process updates the capitalized amount.

3. Choose the capital project you want and choose the Assets button.
4. In the Assets window, enter the Actual Date In Service.

   Compare the Estimated Date In Service to the Actual Date Placed in Service. If unreasonable discrepancies exist, verify that the Date Placed in Service for the asset is correct.

   Attention: You cannot send assets to Oracle Assets whose Actual date placed in service is later than the current Oracle Assets period date.

5. Enter a complete asset definition for the asset if you have set up Oracle Projects to only allow complete definitions to be sent to Oracle Assets. (Oracle Projects prompts you to enter missing required fields when you attempt to save your work.)

   For a list of the fields required for a complete asset definition, see: Defining Assets: page 6 – 11.

6. Save your work.
See Also

Defining Assets: page 6 – 11
Reversing Capitalization of an Asset in Oracle Projects: page 6 – 35
Creating and Preparing Asset Lines for Oracle Assets

After you place your assets in service, you can create, prepare, and send asset lines to Oracle Assets to become fixed assets. First, you must run the Generate Asset Lines process to create summary asset lines from capitalizable expenditure items and cost adjustments. Before you run the Interface Assets process, review and adjust your asset lines if necessary. You can perform the following adjustments on your asset lines:

- Associate assets with unassigned asset lines
- Change which asset is associated with a line
- Split an asset line into multiple asset lines and associate the new lines with different assets
- Change the line description

Generating Summary Asset Lines

The Generate Asset Lines Process creates summarized asset lines from those capitalizable expenditure items on tasks assigned to an asset with an actual date placed in service. Oracle Projects summarizes the lines based on the grouping level and the grouping method you choose for the project.

In addition, you use the Grouping Level to determine at what WBS level you summarize the costs. For example, you can summarize asset costs at the project, top task, or lower task levels. See: Using Grouping Levels to Summarize Asset Costs: page 6 – 16.

The AutoAccounting rules you define for CIP costs also influences the amount of summarization. Oracle Projects creates asset lines by summarizing by grouping level, grouping method, and CIP account.
## Mapping Costs to Assets

<table>
<thead>
<tr>
<th>Number of assets assigned to a grouping level</th>
<th>Expected Results after Running Generate Asset Lines Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>One asset assigned to a grouping level</td>
<td>All detail costs charged to that level are automatically mapped to that asset.</td>
</tr>
<tr>
<td>More than one asset assigned to a grouping level, only one asset is placed in service</td>
<td>Asset lines created for all capitalizable costs, but no assets will be assigned to the lines</td>
</tr>
<tr>
<td>The cost distribution is for purchased goods from a purchase order which has an inventory item with a default asset category</td>
<td>Detail will be mapped to the single asset that matches the default asset category for that grouping level.</td>
</tr>
<tr>
<td>More than one asset has the same asset category as the default asset category for a purchased item</td>
<td>Asset line created and asset category assigned, but the asset line will not be assigned to an asset automatically</td>
</tr>
</tbody>
</table>

Table 6 – 3  (Page 1 of 1)

### Example

For example, assume you assign one asset to Capital Project Y at the project level. You charge the following expenditure items to the project, all of which are capitalizable and charged to the same CIP account:

<table>
<thead>
<tr>
<th>Expenditure Type</th>
<th>Expenditure Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplies</td>
<td>Operating</td>
<td>5,000.00</td>
</tr>
<tr>
<td>Supplies</td>
<td>Operating</td>
<td>20,000.00</td>
</tr>
<tr>
<td>Professional</td>
<td>Labor</td>
<td>5,800.00</td>
</tr>
<tr>
<td>Clerical</td>
<td>Labor</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Computer</td>
<td>Service Center</td>
<td>14,000.00</td>
</tr>
<tr>
<td>Meals</td>
<td>Travel</td>
<td>300.00</td>
</tr>
<tr>
<td>Lodging</td>
<td>Travel</td>
<td>500.00</td>
</tr>
<tr>
<td>Air Travel</td>
<td>Travel</td>
<td>900.00</td>
</tr>
</tbody>
</table>

Table 6 – 4  (Page 1 of 2)
If you group by Expenditure Category, Oracle Projects creates the following asset lines:

- Labor 7,300.00
- Operating 30,000.00
- Service Center 14,000.00
- Travel 1,700.00

If you group by Expenditure Type, Oracle Projects creates the following asset lines:

- Air Travel 900.00
- Clerical 1,500.00
- Computer 14,000.00
- Lodging 500.00
- Meals 300.00
- Miscellaneous 5,000.00
- Professional 5,800.00
- Supplies 25,000.00

If you group All, Oracle Projects creates the following asset line:

- All 53,000.00

**Prerequisites**

- Before you run the Generate Asset Lines process, you must cost the transactions by running the processes listed below. You do not need to interface these costs to Oracle General Ledger before you create asset lines.
  - Distribute Labor Costs
  - Distribute Expense Report Costs
  - Distribute Usage Costs
• Distribute Supplier Invoice Adjustments
• Interface Supplier Invoices to Oracle Projects
• Distribute Total Burdened Costs (if you are capitalizing burdened CIP costs)

Before you run the Generate Asset Lines process, you must also run the Update Project Summary Amounts process. If you fail to run Update Project Summary Amounts, you will not see the total expensed and CIP amounts in the Capital Projects Summary window.

To generate summary asset lines for a single project:
1. Navigate to the Capital Projects window.
2. Find the capital project for which you want to generate asset lines.
3. Choose the Generate button.
4. Enter the In Service Date Through. Oracle Projects creates asset lines from assets with an actual date placed in service before and including this date only.
5. If you choose to Include Common Costs, Oracle Projects creates asset lines from costs not assigned to specific assets.
6. Choose OK to submit the Generate Asset Lines process. Oracle Projects creates asset lines for your project and runs the Generate Asset Lines Report.

To generate summary asset lines for a range of projects:
- Choose PRC: Generate Asset Lines process in the Submit Request window and enter the project or range of projects, and the in service date through you want to process. Choose Submit to generate asset lines and run the Generate Asset Lines Report. Review the report to verify the creation of asset lines.

See Also

Use Grouping Levels to Summarize Asset Costs: page 6 – 16
Adjusting Assets After Interface: page 6 – 34
Reviewing and Adjusting Asset Lines

You can review and adjust the asset lines created by the Generate Asset Lines process online.

Assigning an Asset to Unassigned Asset Lines

When the Generate Asset Lines process creates asset lines without an asset assignment, you need to manually assign an asset to the line before you can send it to Oracle Assets.

If you choose the Include Common Tasks check box when you generate asset lines, Oracle Projects creates asset lines from common task grouping levels (to which you cannot assign assets) as well as from specific assets grouping levels. Use the common task grouping level to group together tasks that capture costs you want to allocate to multiple assets. Refer to Table 6 – 3 in the preceding section for examples of how Oracle Projects maps costs to assets: Generating Summary Asset Lines: page 6 – 25.

- **To assign an asset to unassigned lines:**

1. Navigate to the Capital Projects window, choose the project you want, and choose the Lines button.

2. Choose the Find button from the toolbar to open the Find Asset Lines window.

3. Select No from the Assigned poplist within the Line region, and choose the Find button to find all unassigned asset lines for the project.

4. Optionally choose the Details button to view detail information for an asset line to help you identify which asset you want to assign.

5. Assign an asset to the lines by entering the asset Name.

6. Save your work.
Changing the Asset Assigned to an Asset Line

To change the asset assigned to an asset line:

- Change the asset or description for an asset line in the Asset Lines window.

  Note: You cannot make changes to asset lines you have already sent to Oracle Assets.

Splitting an Asset Line into Multiple Asset Lines

You can split an asset line and assign the split costs to multiple assets by using percentages or amounts. You can split lines with and without asset assignments.

1. Navigate to the Capital Projects window, choose the project you want, and choose the Lines button.
2. Choose the asset line you want to split.
3. Choose the Split Line button to open the Split Asset Line window.
4. Enter the Asset Name and the Amount or Percentage you want to split. The Unassigned fields indicate the amount and percent of the asset line's cost you have not yet assigned to an asset.
5. Choose OK when you finish splitting the line.
6. Save your work.
Sending Asset Lines to Oracle Assets

Run the Interface Assets process to send valid asset lines to Oracle Assets to become fixed assets. Then, in Oracle Assets, you review the mass addition lines created from the project asset lines in the Prepare Mass Additions window. For Oracle Projects to send asset lines to Oracle Assets, the asset line must meet these specific conditions:

- The actual date in service must fall in the current or a prior Oracle Assets accounting period
- The CIP costs for summarized asset lines must be interfaced to Oracle General Ledger
- The CIP costs for supplier invoice adjustments must be interfaced to Oracle Payables
- A CIP asset must be associated with the asset line

The process creates one mass addition line in Oracle Assets for each asset line in Oracle Projects, assigning the asset information you entered for the CIP asset in Oracle Projects to the mass addition line in Oracle Assets. You use the Mass Additions process in Oracle Assets to prepare and post these mass additions to become assets. If you did not enter all required asset information in Oracle Projects, you must enter it for the line in the Prepare Mass Additions window before you can post it.

In Oracle Assets you can query and review assets posted to Oracle Assets by project number and task number in the Financial Inquiry window.

**Prerequisite**

- Interface your capital project CIP costs from Oracle Projects to Oracle General Ledger.
- Interface CIP costs for your supplier invoice adjustments to Oracle Payables
- If you are sending cost adjustments for an asset from Oracle Projects to Oracle Assets, ensure that the original mass addition was posted to Oracle Assets. If the mass addition has not become an asset, the Interface process will reject the adjustment line.

**To send asset lines for a range of projects:**

- Choose PRC: Interface Assets process in the Submit Request window and enter the project or range of projects, and the In
Service Date up to which you want to process capitalized costs. Choose Submit to start the process and run the Interface Assets Report.

See Also

Creating Mass Additions for Oracle Assets Oracle Assets User’s Guide
About the Mass Additions Open Interface Oracle Assets User’s Guide
Reviewing Mass Addition Lines Oracle Assets User’s Guide
Viewing Assets Oracle Assets User’s Guide
Adjusting Assets After Interface

You can adjust assets after they have been interfaced to Oracle Assets.

See Also

Adjusting Capital Project Costs: page 6 – 35
Reversing Capitalization of an Asset in Oracle Projects: page 6 – 35
Abandoning an Asset in Oracle Projects: page 6 – 38

Cost Adjustments

You can adjust expenditure items whose costs are sent to Oracle Assets, and collect new expenditure items for an asset in Oracle Projects after you capitalize and send the summarized asset lines to Oracle Assets. You process these cost adjustments in Oracle Projects and send them to Oracle Assets as adjusting asset lines.

Your cost adjustments can be either positive or negative. For example, you receive a credit memo from a supplier for a capitalized asset you sent and posted to Oracle Assets. When you send this credit memo to Oracle Projects, you create new negative asset lines, which you can send to Oracle Assets as a negative cost adjustment to the original asset.

Oracle Projects includes the information you enter for the asset on the adjusting asset line you send to Oracle Assets. Thus, if you specify to Amortize Adjustments to the asset in Oracle Projects, Oracle Assets amortizes any catchup depreciation amount for the adjustment over the remaining life of the asset. Otherwise, it expenses the catchup depreciation for the adjustment in the current period.

Note: You cannot send cost adjustments to Oracle Assets until you have posted the original mass addition line (imported CIP asset line) to Oracle Assets using the Post Mass Additions process.
Adjusting Capital Project Costs

You can adjust capital project expenditure items associated with an asset you placed in service or sent to Oracle Assets. You can generate new asset lines for these adjusted expenditure items and interface them to Oracle Assets to adjust the original asset cost.

To adjust capital project costs:

1. Navigate to the Expenditure Items window.
2. In the Find Expenditure Items window, enter your search criteria. To query by capitalizability or grouping level for your capital project, choose Yes in the Capitalizable poplist in the CIP status alternative region.
3. Choose the expenditure item you want to adjust.
4. Use the Special menu to choose the type of adjustment you want to make. You can choose from the following options:
   - **Capitalizable** or **Non–Capitalizable** to change the capitalizability for an expenditure item.
   - **Split** to split the cost of the expenditure item. You must specify how you want to split the item in the Split Expenditure Item window.
   - **Transfer** to transfer the expenditure item to another project or task. You must specify the destination project or task for this transfer in the Transfer Expenditure Item window.
5. Save your work.

Reversing Capitalization of an Asset in Oracle Projects

If you placed an asset in service in error or sent inappropriate asset costs to Oracle Assets, you can reverse capitalization of the asset in Oracle Projects, and send the reversing line to Oracle Assets as an adjustment.

When you reverse a capitalized asset in Oracle Projects, Oracle Projects creates reversing (negative) asset lines to offset the asset lines previously interfaced to Oracle Assets. The asset remains in Oracle Assets with a value of zero. Oracle Projects does not delete or dispose
of the asset in Oracle Assets. You can use functionality within Oracle Assets to retire the asset if you do not ever plan to re–capitalize the reversed asset.

See Also

Retiring an Asset Oracle Assets User’s Guide

**Note:** If you reverse capitalize an asset in Oracle Assets that was created from Oracle Projects, this transaction is recorded in Oracle Assets only, and not in Oracle Projects. If this happens, you cannot manually update the corresponding asset in Oracle Projects.

**Note:** You cannot send a reversing line to Oracle Assets until you have posted the original asset using the Post Mass Additions process. You cannot make a negative cost adjustment (reversal) to a mass addition not yet posted to Oracle Assets.

Reverse Capitalize an Asset after Depreciation

Oracle Assets processes reversal transactions from Oracle Projects as negative cost adjustments to the original asset. If you have begun depreciating this asset, Oracle Assets must reverse the depreciation expense in the period you reverse capitalize the asset.

**Attention:** Before you reverse an asset, ensure that the Amortize Adjustment check box is unchecked for the asset. If you reverse capitalize an asset for which you specify to amortize adjustments, the monthly depreciation on the original cost will not equal the monthly backout depreciation generated to account for the asset cost reversal in Oracle Assets. Oracle Assets will amortize the catch up depreciation on the negative cost adjustment over the remaining life of the asset.

Recapitalize Reverse Capitalized Assets

If you need to recapitalize the asset, put the new Date Placed in Service in the Assets form in Oracle Projects so new asset lines will be created.

**Attention:** You must also manually change the Date Placed in Service for the asset in the Asset Workbench in Oracle Assets,
To reverse capitalization of an asset:

1. Navigate to the Capital Projects window.
2. Find the project you want and choose Assets to open the Assets window.
3. Choose the asset you want to reverse capitalize.
4. Ensure that you do not amortize adjustments for the asset you want to reverse capitalize or recapitalize. You can specify whether to amortize adjustments in the asset definition. See: Defining Assets: page 6 – 11.
5. Choose the Reverse button.
6. Save your work.
7. Run the Generate Asset Lines process to remove the Actual Date In Service from the asset and create reversing entries you can send to Oracle Assets. See: Generating Summary Asset Lines: page 6 – 25.

To recapitalize a reverse capitalized asset:

1. Navigate to the Capital Projects window.
2. Find the project you want and choose Assets to open the Assets window.
3. Enter the Actual Date In Service for the reverse capitalized asset.
4. Save your work.
5. In Oracle Assets, change the date placed in service to match the Actual Date In Service you just entered. See: Changing Asset Details Oracle Assets User’s Guide.
Abandoning an Asset in Oracle Projects

You can abandon an asset at any time.

Before Interfacing to Oracle Assets

You can abandon a capital project prior to interfacing to Oracle Assets by changing all transactions from capitalizable to non-capitalizable.

1. Navigate to the Expenditure Inquiry window.
2. Select all expenditures for the project where the Capitalizable column is checked.
3. From the Special menu, choose Non-Capitalizable. If cost distribution has been run on the expenditures, the Cost Distributed column checkbox will change to unchecked.
4. Run the distribute labor, expense, and usage costs processes and the PRC: Distribute Supplier Invoice Adjustment Costs process. If you are using burdening, run the PRC: Distribute Total Burdened Costs process.
5. Interface the costs to GL and AP. When you post the costs to Oracle General Ledger, the system will create entries that transfer these costs from the CIP account to the Expense account. The AutoAccounting rules you set up determine these accounts.

After Interfacing to Oracle Assets

If you have already interfaced the asset you want to abandon, you must reverse capitalize the asset in the Assets window in Oracle Projects. You also need to send the reversing lines to Oracle Assets to account for the abandoned CIP asset.

See Also

Generate Asset Lines Process: page 10 – 17
Depreciation Calculation Oracle Assets User’s Guide
The Generate process creates reversal lines and interfaces them to Oracle Assets.

**See Also**

Specifying Capitalizability of Capital Project WBS Levels: page 6 – 9
Reversing Capitalization of an Asset in Oracle Projects: page 6 – 35
Accounting for CIP and Asset Costs in Oracle Projects and Oracle Assets

You use AutoAccounting to determine how to account for all your project costs in Oracle Projects. For capital projects, you must define AutoAccounting to account for CIP and expensed costs.

When you use Oracle Projects to track your CIP projects, Oracle Projects acts as a subsidiary ledger for CIP assets, and Oracle Assets acts as a subsidiary ledger for capitalized (depreciable) assets only.

Accounting for Capital Project Costs

As you charge costs to the capital project, you post them to Oracle General Ledger.

Example

Charge transactions to a capital project

In the following example, Project X is a capital project set up to collect costs to build a new clean room. You charge the following supplier invoice and expenditure items to the project:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier Invoice for architectural drawings</td>
<td>2,000.00</td>
</tr>
<tr>
<td>Supplier Invoice for building contractor</td>
<td>5,500.00</td>
</tr>
<tr>
<td>Supplier Invoice for building permit penalty</td>
<td>200.00</td>
</tr>
<tr>
<td></td>
<td>7,700.00</td>
</tr>
<tr>
<td>Employee Labor for project management</td>
<td>1,400.00</td>
</tr>
<tr>
<td>Employee Expense Report for miscellaneous costs</td>
<td>250.00</td>
</tr>
<tr>
<td>Usage for use of company car</td>
<td>55.00</td>
</tr>
<tr>
<td><strong>TOTAL COSTS</strong></td>
<td><strong>9,405.00</strong></td>
</tr>
</tbody>
</table>

Account for supplier invoice transactions

You post the supplier invoice transactions from Oracle Payables to Oracle General Ledger before sending them to Oracle Projects. Workflow determines the accounts for the following journal entry for Oracle Payables:
Account for expenditure items entered in Oracle Projects

You also post the following employee labor, employee expense report, and usage transactions for your capital project to Oracle General Ledger from Oracle Projects:

<table>
<thead>
<tr>
<th>Dr.</th>
<th>CIP – Clean Room</th>
<th>7,700.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Accounts Payable Trade</td>
<td>7,700.00</td>
</tr>
</tbody>
</table>

Account for a capitalizable adjustment

After reviewing the costs, you determine that you cannot capitalize the building permit penalty. You change the transaction from capitalizable to non-capitalizable. Oracle Projects interfaces the supplier invoice adjustments to Oracle Payables when you run the Distribute Supplier Invoice Adjustment process. Oracle Payables posts the reversing entry for the adjustment to Oracle General Ledger. (You originally posted the invoice to Oracle General Ledger as part of the 7,700 supplier invoice transactions.)

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Building Permit Penalty Expense</th>
<th>200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>CIP – Clean Room</td>
<td>200.00</td>
</tr>
<tr>
<td>Cr.</td>
<td>Payroll Liability</td>
<td>1,400.00</td>
</tr>
<tr>
<td>Cr.</td>
<td>Expense Report Liability</td>
<td>250.00</td>
</tr>
<tr>
<td>Cr.</td>
<td>Usage Clearing</td>
<td>55.00</td>
</tr>
</tbody>
</table>

In this example, after you post these transactions, the total amount in Oracle General Ledger for the CIP–Clean Room account is 9,205.00.

Accounting for Asset Costs

Each asset line created by the Generate Asset Lines process has an associated general ledger account. After you capitalize (place in service), send, and post the asset line to Oracle Assets, you can run the Create Journal Entries process in Oracle Assets to create a journal entry to transfer the costs from the CIP account (associated with the asset lines) to the asset cost account (determined by the asset category assigned to the asset).
In the example of Project X, assume the clean room is complete and ready to be placed in service. You capitalize and send the CIP costs for Project X to Oracle Assets. Oracle Assets creates the following journal entry after you post the asset:

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Clean Room – Asset Cost</th>
<th>9,205.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>CIP – Clean Room</td>
<td>9,205.00</td>
</tr>
</tbody>
</table>

See Also

Overview of AutoAccounting: page 16 – 217

Asset Accounting *Oracle Assets User’s Guide*
This chapter describes everything you need to know about billing for contract projects in Oracle Projects.
Billing Data Flow for Contract Projects

Figure 7 – 1 illustrates the billing flow for contract projects.

Figure 7 – 1 Billing Flow

[Diagram of billing flow for contract projects]
Overview of Contract Projects

You use contract projects to track activities, cost, revenue, and billing for services performed for and reimbursed by a customer. Types of contract projects include:

- Time and Materials
- Fixed Price
- Cost Plus

Setting Up a Contract Project

A contract project is the primary billing unit at which you specify the following information:

- Revenue accrual method
- Billing method
- Billing cycle
- Other billing information

For contract projects, you define additional information for revenue accrual and billing based on requirements of your project, your company, and your customer. For example, you can enter billing terms, bill rates and billing titles, status, and credit receivers for contract projects only.

Attention: If you enter funding for a project at the top task level, you must define the invoice formats (for labor, non–labor, and retention) for the project at the top task level or below. You define your invoice formats in the Revenue and Billing Information window. If you do not define invoice formats at the proper level, an invoice will not be generated for your project. If you enter funding for a project at the project level, you can define invoice formats at any level.

Figure 7 – 2 illustrates the flow for entering a contract project.

To enter a contract project:

3. Fund the contract project. See: Funding a Project: page 7 – 12.


Funding a Contract Project

You must fund your project before your project can actually accrue revenue and be billed. Funding is the step that relates the dollars associated with a customer agreement to a specific project. The amount of project funding must equal the current approved project budgeted revenue amount to successfully baseline your budget.

Oracle Projects allows you to define agreements, projects, and tasks to organize your project work. Figure 7–3 represents an example of how you can use an agreement to fund projects and tasks. In the pages that follow, we discuss using agreements to fund projects and tasks in more detail.

Figure 7–3

Using Agreements, Projects, and Tasks
Agreements

In Oracle Projects, an agreement represents any form of contract, written or verbal, between you and one of your customers. For example, an agreement may correspond to a purchase order, a continuing service agreement, or a verbal authorization.

Enter an agreement

An agreement provides the funding for projects and tasks. Each agreement you define includes the following items:

- A customer
- A hard or soft revenue limit
- A dollar amount

If you specify a hard revenue limit on an agreement, Oracle Projects prevents revenue accrual or billing activity beyond the amount you funded to a particular project or task.

If you specify a soft revenue limit, Oracle Projects provides a warning telling you when revenue for the project exceeds the amount you funded.

No project or task can accrue revenue without an agreement to fund its revenue budget.
Fund multiple projects with one agreement

You can allocate funds from one agreement to any number of projects or top level tasks.

If your business deals with very large contracts, and divides the work into separate projects, you can use one agreement to fund each project. You may assign some of the work to a time and materials project; other work to a fixed price project; and other related bid and proposal work to an indirect project. The agreement represents the total value of the contract; you can generate separate invoices for each contract project.

An agreement may also represent a contract to do an unspecified amount of work over a period of time. You can create a project as various pieces of work are defined. Each of these projects is funded by the master agreement.

Revenue and invoices

All revenue and invoices in Oracle Projects are recorded against an agreement, and all items that accrue revenue against an agreement subsequently bill against the same agreement.

See Also

Entering Agreements: page 7 – 10
Funding a Project: page 7 – 12
Project Funding Inquiry Window Reference: page 7 – 13

Fund at the Project Level

There are many different ways to link agreements, projects and tasks. You should learn the benefits and consequences of each method to create clear policies.

One Customer, One Agreement

Use one agreement when you have one customer and one contract.
This should be your most frequent case. All revenue is accrued and all invoices billed against the same agreement. The same agreement may fund other projects without changing the operation of the system.

**Multiple Customers, One Agreement Per Customer**

Use one agreement per customer when you have multiple paying customers, no additional contracts with any of the customers, and a requirement to invoice by contract.

All revenue and invoice amounts are divided between each customer according to the percentage splits defined for the project in the Customers and Contract Project options. Each run of generate revenue creates one draft revenue per customer, and each run of generate invoice creates one draft invoice per customer. The draft revenue and invoices for all customers contain the same items, but with prorated amounts.

Oracle Projects supports only one percentage split between customers over the life of a project. If you want to change an existing percentage split, you must cancel all invoices and recalculate all revenue.

**One Customer, Multiple Agreements**

Use multiple agreements when you have one customer, but several contracts, and a requirement to invoice by contract.

For example, a project that was originally funded by one purchase order is subsequently funded by another purchase order. The customer has requested that each invoice reference a specific purchase order. In this case, you would fund the project from two agreements, one for each purchase order. The PRC: Generate Draft Invoice process produces two invoices — one against each purchase order agreement from which funding is used.

When revenue is generated, hard limit agreements are used first in order of expiration date, followed by soft limit agreements in order of expiration date. When revenue fills one agreement and starts on the next, all of the items in the current revenue run are prorated between the two agreements. This proration follows through on the invoices.

**Multiple Customers, Multiple Agreements Per Customer**

Use multiple agreements per customer when you have multiple paying customers, multiple contracts with one or more of the customers, and a requirement to invoice by contract.
This method is a combination of the two above. Revenue is prorated between the customers according to their percentage split. For each customer, revenue is placed on agreements by the same rules as for multiple agreements and a single customer.

**Fund at the Task Level**

**One Customer, One Agreement**

Use one agreement when you have one customer and one contract.

Use this method only if you want to accrue revenue cost-to-cost at the task level or impose hard or soft revenue limits at the task level.

Task level funding with one agreement does NOT create separate task invoices. However, you can define an invoice format to group expenditure items by task.

**Case Study: Funding for Hard Limits at the Task Level**

Fremont Corporation has a contract with XYZ Company for $100,000. There are three phases to the project, each with a separate hard limit. Each phase is set up as a top task, and funded with a hard revenue limit:

- Task 1: Design ($20,000)
- Task 2: Programming Services ($60,000)
- Task 3: QA/Testing ($20,000)

**One Customer, Multiple Agreements**

Use multiple agreements when you have one customer, but a requirement to create a separate invoice for each top task.

You can use this method to accrue revenue cost-to-cost or impose hard or soft revenue limits by task, as well as automatically create separate invoices by task.

To create separate invoices by task, you must use a different agreement to fund each task. If you use more than one agreement for a single task, the agreements are used according to the precedence described earlier for projects.
Entering Agreements

You can enter an agreement representing a purchase order, retainer letter, or any other funding agreement you make with a customer. When you record an agreement, you can specify payment terms for invoices against the agreement, and whether there are limits to the amount of revenue you can accrue and bill against the agreement.

From the Agreements window, you can open the Funding window to allocate funds to one or more projects (or to top tasks within a project), and to see how much unused funding remains for an agreement.

For any agreement, you can review the revenue and billing activity associated with the agreement, such as the amount of revenue accrued, the amount invoiced, and the amount of funding that is allocated and baselined.

To enter an agreement:

1. Navigate to the Agreement window.
2. Enter the Customer who is providing the agreement funding.
3. Enter a Number to identify this agreement, such as the customer’s purchase order number.
   The agreement number must be unique for this customer and agreement type, although two customers can each have an agreement with an identical agreement number.

   **Attention:** You cannot change this number once you create an invoice against this agreement and interface the invoice to Oracle Receivables.
4. Enter an agreement Type.
5. Enter the Amount of this agreement.
6. Enter the accounts receivable Terms (defined in Oracle Receivables) for any invoices funded by this agreement.
7. Choose the Hard Limit check box to impose a hard limit on revenue accrual and invoice generation for projects funded by this agreement. Otherwise, Oracle Projects imposes a soft limit.

   A **hard limit** prevents revenue accrual and invoice generation beyond the amount allocated to a project or task by this agreement. A **soft limit** issues a warning when revenue accrual and invoice generation exceed the amount allocated to a project or task.
8. Enter the date this agreement expires. If you do not want to enforce an expiration date, leave this field blank.

If you generate draft revenue or an invoice for projects funded by this agreement after the agreement expiration date, Oracle Projects creates distribution warnings for revenue and invoices.

9. Optionally enter a Description of this agreement.

10. Enter the administrator of this agreement.

11. Enter a Creation Date.

12. Save your work.

Viewing Agreement Summary Amounts

To view agreement summary amounts:

- Query the agreement you want to review in the Agreement window. The Summary Amounts region displays the overall agreement amounts for the following:
  - Amount of the Agreement
  - Allocated, Not Baselined
  - Allocated, Baselined
  - Not Allocated
  - Net Revenue
  - Revenue Write–off
  - Invoiced Amount

- Choose the Summary button to view the funding and billing amounts for the agreement in more detail in the Summary Project Funding window.

- Choose Funding History in the Funding Summary window to view the allocation history for this agreement.

See Also

Agreements: page 7 – 6
Funding a Project

You can allocate an agreement’s funds to a project or top-level task. You can divide these funds among several projects or tasks. In addition to allocating funds, you can reverse agreement funding from a project or task, up to the amount accrued or invoiced.

Note: You cannot fund at the task-level for multiple-customer projects.

You can also view the funding line’s baseline status for this project or task.

Note: Only baselined funding is used for revenue or invoice generation.

To fund a project:

1. Navigate to the Agreement form and query the agreement you want.
2. Choose the Funding button.
3. In the Fund Projects window, enter the number of the project you want to fund with this agreement. You can choose any active project that has been entered for this agreement’s customer.
4. Enter the number of the top-level task you want to fund with this agreement. If you do not want to restrict funding for a particular task, leave this field blank.
5. Enter the Amount you want to allocate to this project or task.
6. Enter a Date to record when you allocated agreement funds to this project or task.
7. Save your work.

To review project funding information:

- Query the project or agreement in the Project Funding Inquiry form. See: Project Funding Inquiry Window Reference: page 7–13.

To reverse funds from a project:

- Enter a negative amount if you want to reverse funds from a project or task and allocate the funds elsewhere, or to leave the funds available for future funding. You can decrease the funding amount up to the amount already accrued or invoiced for the project or task.
See Also

Fund at the Project Level: page 7 – 7
Fund at the Task Level: page 7 – 9

Project Funding Inquiry Window Reference

Use this window to view information about project funding. For a given project, you can view the amount invoiced, the amount of net revenue accrued, the revenue write–off balances, as well as other funding information.

You can view summary amounts for funding allocated to a particular project by agreement and top level task, such as baselined amounts, the amount of revenue accrued and invoiced, as well as the customer providing agreement funding.

You can also use this window to view a history of project funding allocation, such as the incremental allocation amounts, and the allocation date.
Funding

**Funding, Not Baselined:** The total funding amount that is not baselined for this project or task.

**Funding, Baselined:** The total funding amount that is baselined for this project or task.

**Total Funding:** The total funding allocated to this project or task.

Billing

**Net Revenue:** The net amount of revenue accrued for this project or task, regardless of revenue transfer status.

**Revenue Write–Off:** The total amount of revenue write–off events.

**Invoiced Amount:** The total amount invoiced for this project, regardless of invoice transfer status.

Funding Summary by Agreement

**Agreement Number:** The agreement number from which funds are allocated.

**Top Task Number:** The task number to which funds are allocated, if you have funded your project at the top level task level.

Funding History Window

**Date:** The date this funding line was allocated.

**By:** The person responsible for allocating this funding line.

**Amount:** The incremental amount of agreement funding allocated by this detail funding line.

**Baselined:** This check box indicates whether the funding line is baselined.
Controlling Billing by Top Task

You can control revenue accrual and invoices by the top task of a project.

To control billing by top task:

1. Navigate to the Control Billing by Top Task window.
2. Find the project you want.
3. Indicate whether you want to hold, accrue, or bill:
   - **Hold Accrual** Choose this button to hold revenue accrual for this project at this top task.
   - **Hold Billing** Choose this button to hold billing for this project at this top task.
   - **Ready to Accrue** Choose this button if you are ready to accrue for this project at this top task.
   - **Ready to Bill** Choose this button if you are ready to bill for this project at this top task.
4. Save your work.
See Also

Accruing Revenue for a Project: page 7 – 27
Invoicing a Project: page 7 – 47
Quick Agreement / Funding Projects

Many companies have short-term projects, lasting one to ten days, which they want to bill. Oracle Projects provides an easy way to set up these short-term contract projects. You can create a project template that is associated with an agreement, funding, and baselined budgets. When you create a new project by copying the template, the agreement funding, and baselined budgets will also be copied to the new project.

The project template is funded with an agreement template; the revenue budget and funding may be baselined. When you copy a new project from the project template, you specify the customer in the Quick Entry options, and Oracle Projects copies the agreement, funding, and baselined budgets from the template to the project. You do not specify the amount of the budget in Quick Entry. Rather, you set up the project template with the appropriate revenue budget and funding amount. Thus, you may need to set up as many templates with appropriate funding amounts as needed for your projects. If the project is of short duration, you may elect to have a nominal agreement amount (such as $1.00) with a soft limit.

To create a quick agreement project:

1. Set up a Project Template with a Customer Quick Entry field and a customer defined in the project option.
2. Set up an Agreement Template with the same customer entered in the Customer option in the Project Template.
3. Within the Agreement Template, fund the Project Template at either the project or task level.
4. Create a revenue and/or cost budget for the Project Template. Baseline the budgets.
5. Copy the Project Template to a new project. The new project will be ready to bill as soon as it is created.

Project Templates for Quick Agreement

Project Options

When you are creating a project template that will be used to create a quick agreement, you must enter a customer in the Customer option of the project. You will use this customer in the Agreement Template that
creates the agreement/funding for the quick agreement project. You can only have one customer in a template that will be used to create Quick Agreement projects. The customer billing contribution must equal 100%. If you have more than one customer in the project template, you will not be able to associate the project template with an agreement template.

Define any other project and task options that are appropriate for the project. A Quick Agreement template has no special restrictions or requirements other than those noted in the above paragraph.

**Quick Entry Setup**

When creating a project template for quick agreement projects, you must enable the Customer field in the Quick Entry setup. You then select the customer relationship to use when creating the project customer (*primary*, for example). When you create a project by copying the template, you enter the appropriate customer in Quick Entry. The customer in the agreement template will be replaced by the customer you enter in Quick Entry.

Enable any other Quick Entry fields that are appropriate for the project. A Quick Agreement template has no special restrictions or requirements other than those noted in the above paragraph.

**See Also**

- Project Template Design Considerations: page 2 – 15
- Defining Quick Entry Fields: page 2 – 26

**Agreement Template**

To create a Quick Agreement, you set up an agreement template that will be associated with a project template.

A project created from the project template associated with the agreement template will have an agreement created for it with the values entered in the agreement template. The only exceptions are the Agreement Number and Expiration Date. The Agreement Number will be the same as the Project Number you enter in Quick Entry. The
Expiration Date will be based on the relationship between the project start date and the agreement template Expiration Date.

For example, if the project start date of the project template is January 1, 1996, the agreement template funding date is January 10, 1996, and the new project’s start date is July 15, 1996, then the agreement for the new project will be created with an expiration date of July 25, 1996.

You create an agreement template the same way you create any other agreement.

Agreement templates can only be viewed in the Agreement Template Entry window. You cannot view agreement templates in the Agreement Entry window.

See Also

Entering Agreements: page 7 – 10

Funding a Project Template

Each agreement template that funds a project template can fund only one project template. Conversely, each project template can only be funded by one agreement template.

When you fund an agreement template, only project templates (not projects) will be listed in the Project List of Values.

When you create a new project from the project template associated with the agreement template, you enter a starting date for the project. The funding date for the new project will be based on the funding date you entered in the agreement template, adjusted by the difference between the project template start date and the project start date.

For example, if the funding date in the agreement template is January 1, 1996 and the project template has a start date of June 1, 1997, when you create a new project whose start date is July 15, 1996, the funding for the new project will have an allocation date of July 15, 1997.

You can fund agreement templates at either the project or task level.
Budgeting for Project Templates

Enter budgets for the project template you will use to create Quick Agreements. After the budgets are created, baseline the budgets. New projects created from the template will have baselined budgets equal to the amounts entered in the budgets for the project template.

See Also

Budget Entry: page 3 – 13

Copying a Template to Create a Quick Agreement Project

To create a Quick Agreement Project, you select a template to copy. Oracle Projects copies the template to the new project, along with the agreement, funding, and baselined budgets based on the following rules:

- If an agreement template is associated with the project template, the agreement and funding are copied. If a customer is specified in Quick Entry, the template customer is replaced with the specified customer. The agreement number is replaced with the project number. If a project start date is entered in Quick Entry, the agreement expiration date and funding allocated date are shifted accordingly.

- The funding, cost budget, and revenue budget are copied to the project. If these budgets are baselined, they are copied as baselined.

- If the project template has a baselined revenue budget and the new project has no project customer for a contract project, no agreement, funding, or baselined revenue budget will be copied. However, if there is a baselined cost budget, it will be copied as baselined and the baselined revenue budget will be copied as a draft revenue budget to the new project.

- If the template project has a baselined revenue budget but not baselined cost budget and the new project has a COST/COST, COST/EVENT, or COST/WORK distribution rule, the draft cost budget, if any exists, will be copied, along with the draft revenue budget, as well as agreement and funding, but with no baseline.
• If the Customer field in Quick Entry is null, the new project will have no customer, agreement, or funding. Any budgets will be copied as draft budgets.

• If Customer is not a Quick Entry field, the new project will have the same customer as the template and will also have an agreement, funding, and baselined budgets.

• If the customer entered in Quick Entry does not have a primary bill–to and ship–to site, you will receive an error message and will not be able to create the new project with that customer.

• If the customer entered in Quick Entry does not have a primary bill–to contact, you will receive a warning message but will still be able to create the new project with that customer.
Use the Event windows to enter and review events for a project or top task. Examples of events include an invoice reduction, a performance bonus, or a revenue write-off. You can also change the bill hold status of an event using these windows.

There are two Event Window modes:

- **Project.** The Project mode Event Windows allow you to enter and view events for a single project only. You must enter a project number or name in the Find Project Events window before you can execute the query. If project security has been implemented, you can only select projects that you are allowed to see.

- **All.** The All mode Event Windows allow you to enter and view events across projects. You are not required to enter a project number or name in the Find Events window. You can structure your query to retrieve information across projects.

The mode in which you access the Event Window is determined by your user responsibility, as set up by your System Administrator. Under the Project Billing Super User and Project Costing Super User responsibilities, which are supplied by Oracle Projects, you have access to both modes.

**To Review or Enter Events:**

1. Navigate to the Find Events window (Billing > Events).
   - To view or enter events in summary format, enter your search criteria and choose Find. See Event Summary Window Reference: page 7 – 23.
To enter a new event in the Event Details window, choose New. See Event Details Window: page 7 – 25.

2. From the Event Summary window, choose:
   - Revenue to view event revenue distribution lines information.
   - Totals to view the total bill amount and total revenue amount for the events displayed based on your search criteria.
   - Open to view all of the event information for a single event in one window. See: Event Details Window: page 7 – 25.

See Also

- Event Types: page 16 – 143.
- Event Summary Window Reference: page 7 – 23.
- Event Details Window: page 7 – 25.

Event Summary Window Reference

Use this window to view information about the events that meet your search criteria, or to enter new events. The Event Summary window uses folder technology, allowing you to customize the window to display the fields you want to view. The following information is available for display in this window:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Number</td>
<td>The number of the project for the event.</td>
</tr>
<tr>
<td>Project Name</td>
<td>The name of the project.</td>
</tr>
<tr>
<td>Task Number</td>
<td>The number of the top task for the event.</td>
</tr>
</tbody>
</table>

Table 7 – 1 (Page 1 of 2)
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Name</td>
<td>The name of the top task.</td>
</tr>
<tr>
<td>Event Number</td>
<td>The number of the event.</td>
</tr>
<tr>
<td>Event Type</td>
<td>The event type.</td>
</tr>
<tr>
<td>Event Classification</td>
<td>The event classification of the event type.</td>
</tr>
<tr>
<td>Date</td>
<td>The date the event is eligible for processing.</td>
</tr>
<tr>
<td>Bill Amt</td>
<td>The bill amount if the event affects billing for this project/task.</td>
</tr>
<tr>
<td>Revenue Amt</td>
<td>The revenue amount if this event affects revenue accrual. The amount for write-off revenue may not exceed this project’s unbilled receivables amount.</td>
</tr>
<tr>
<td>Description</td>
<td>The event description. Except for events having a classification of Write-Off, this description appears on the invoice line billing this event.</td>
</tr>
<tr>
<td>Organization</td>
<td>The organization name for the event. You assign organizations to events to credit project revenue to different organizations. You can also use events in AutoAccounting to account for revenue at the expenditure organization level.</td>
</tr>
<tr>
<td>Bill Hold Flag</td>
<td>The bill hold flag for this event. The options are: No – Do not hold from billing, Once – Hold from the next billing only, Yes – Hold from future billing indefinitely. Holding an event applies only to events that are billed, which does not include write-offs. You can update this flag from the Event Summary Window.</td>
</tr>
<tr>
<td>Billed</td>
<td>Indicates whether this event has been billed.</td>
</tr>
<tr>
<td>Revenue Distributed</td>
<td>Indicates whether this event’s revenue has been distributed.</td>
</tr>
</tbody>
</table>
Event Details Window

Use the Event Details window to enter, modify, or review all of the information for a single event on one screen.

For field descriptions in the Event Details window, see Event Summary Window Reference: page 7 – 23.

Event Revenue Distribution Lines Window

The Event Revenue Distribution Lines window displays information about the revenue distribution lines for an event.

The following information is displayed for the selected event:

• Amount
• GL Account
• GL Account Description
• Draft Revenue Number and Line
• PA Date and Period
• GL Date and Period

Function Security for Event Windows

Use function security to control user access to the Event windows. Your system administrator customizes each responsibility at your site by including or excluding registered functions and menus of functions for a responsibility in the Responsibilities window. For more information about function security in Oracle Projects, see Function Security in Oracle Projects: page C – 2.

The following user function names control the Event windows functions:
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice Events Maintenance</td>
<td>Enter and update invoice events</td>
</tr>
<tr>
<td>Revenue Events Maintenance</td>
<td>Enter and update revenue events</td>
</tr>
</tbody>
</table>

Table 7-2  (Page 1 of 1)
Accrue Revenue for a Project

Oracle Projects generates revenue based on the transactions that you charge to your projects. You configure your projects to accrue revenue based on your company policies. You can review revenue amounts online, and can also adjust transactions; these transactions are then processed by Oracle Projects to adjust the revenue amounts for your project. Oracle Projects interfaces the revenue amounts to Oracle General Ledger.

When you generate revenue, Oracle Projects calculates revenue, creates event and expenditure item revenue, determines GL account codings, and maintains funding balances. You can generate revenue for a range of projects or for a single project.

Revenue Flow

The Oracle Projects revenue flow follows the steps detailed in Figure 7 – 4. In the pages that follow, we discuss each of these steps. After we tell you how to generate, review, and release revenue, we discuss advanced topics such as adjusting revenue, creating revenue events, hard limits, and other information to help you to understand how Oracle Projects processes revenue.

Steps Before Generating Revenue

Oracle Projects provides control as to which projects are ready for revenue generation; it processes only funded, fully defined projects.
You must complete the following steps before generating revenue for a contract project in Oracle Projects:

1. Baseline the project budget
   
   **Note:** You must enter and submit an approved revenue budget and allocate funds to the project or task before you can baseline it.

2. Distribute costs for billable expenditures charged to your project
   
   **Note:** If you do not want to accrue revenue for a specific top task, uncheck the Ready to Accrue check box in the Control Billing by Top Task window. Oracle Projects assumes you want to generate revenue and invoices for all billable top tasks on contract projects.

**See Also**

Revenue Accrual and Invoice Generation Based on Percent Complete: page 7 – 69

Baselining a Draft: page 3 – 35

Entering a Draft: page 3 – 15

Entering Agreements: page 7 – 10

Funding a Project: page 7 – 12

Submitting Requests: page 9 – 2

Generating Revenue: page 7 – 35

**Revenue Generation Process**

When you generate revenue, Oracle Projects first selects projects, tasks, and their associated events and expenditure items that are eligible for revenue generation. Oracle Projects next calculates the potential revenue and then creates revenue events and expenditure items.
Selection Criteria

Projects: Oracle Projects first determines if a project is eligible for revenue accrual. To accrue revenue, a project must meet the following criteria:

- Must have a status that allows revenue generation (for more information, see: Project Statuses: page 16 – 164)
- Must be a contract project
- Must have a baselined revenue budget
- Within the specified range (if you specify a start and end project number, for mass generation only)
- Must have expenditure items or events that are eligible for revenue accrual or transaction independent billing extensions that are assigned at the project type, project, or top task level

Expenditure Items: For each project selected, Oracle Projects then selects expenditure items that are eligible for revenue accrual based on the following criteria for items:

- Approved
- On a ready–to–accrue task
- Billable and cost distributed
- Not revenue distributed, partially distributed, or marked for revenue recalculation
- Occurred on or before the accrue through date

If the project uses cost–to–cost revenue accrual, items must also:

- Have project or task cost budgets that include burdened costs and revenue budgets that include revenue amounts
  
      Note: Without these amounts, Oracle Projects cannot successfully generate revenue for your project.

- Have a summarized cost distribution line which must be in a PA Period that ends on or before the accrue through date

- If the revenue accrual is based on percent complete, you must have entered percent complete at the funding level.

Events: For each project selected, Oracle Projects then selects events that are eligible for revenue accrual based on the following criteria for events:

- On a ready–to–accrue task
• Are not revenue distributed
• Have a completion date on or before the accrue through date
• Revenue amount not equal to zero
• Have an event type classification of Write–On, Write–Off, Manual, or Automatic

If the project uses cost–to–cost revenue accrual, events must also:
• Have the event type matching the event type that you specified for the cost–to–cost billing extension.

**Billing Extensions:** For each project selected, Oracle Projects then selects expenditure items and events that are eligible for revenue accrual based on the criteria that you define in your billing extensions. If you define transaction independent billing extensions, Oracle Projects executes these extensions for each project with an active billing assignment, even if there are no transactions to process. See also: Billing Extensions: page 18 – 62.

### Calculate Potential Revenue

Oracle Projects next calculates the total potential revenue that can be accrued for each project. Potential revenue is the full revenue amount that could be accrued if enough funding is available. Projects that use task level funding calculate the potential revenue for each task, while projects that are funded at the project level have a single potential revenue amount for the project.

Oracle Projects calculates the bill amounts for all expenditure items when calculating revenue, except for cost and event billing projects, which do not bill expenditure items.

**As–Work–Occurs (Time and Materials)**

For projects that use as–work–occurs (or time and materials) revenue accrual, the total potential revenue is simply the sum of the revenue of all expenditure items plus events.

For these projects, the revenue for each expenditure item is calculated by applying a bill rate or markup. The bill rate or markup for each item is determined by using a precedence of rates, as follows:

**Bill Rate Precedence for Labor:** If any of the following labor billing terms exist, Oracle Projects uses the bill rate override or markup:
• Task or Project Employee Bill Rate Override
• Task or Project Job Bill Rate Override
  The job is determined in the following order:
  – Task Job Assignment Override
  – Project Job Assignment Override
  – Employee’s Primary Job Assignment

• Task or Project Labor Multiplier

  **Note**: If both a task and project value exist, the task value takes precedence over the project value.

If none of the preceding billing terms exists, the Task Labor Schedule determines if the labor revenue is calculated with a Bill Rate or Burden Schedule.

When you create the Billing Schedules during setup, you specify if the schedule is based on employee or job criteria. Oracle Projects uses the bill rate or markup if the task labor bill rate schedule type is Employee, and uses the bill rate markup if the type is Job.

Oracle Projects determines the effective job for labor items from the task assignment override, then the project assignment override, and finally the primary job assignment. It then uses the job that was just determined along with the task job title override, project job title override, and primary job title, to determine the correct job billing title for each labor item.

Oracle Projects determines the employee billing title for labor items from the task employee billing title override, the project employee billing title, and the primary employee billing title.

**Bill Rate Precedence for Non–Labor**: If any of the following non–labor billing terms exist, Oracle Projects uses the bill rate override or markup:

• Task or Project Non–Labor Resource Bill Rate Override
• Task Non–Labor Bill Rate Override
• Task or Project Expenditure Type Bill Rate Schedule for Non–Labor Resource Override
• Task Non–Labor Bill Rate Schedule for Expenditure Type

If none of the preceding billing terms exist, you will receive a generation error.

Items that have partially accrued revenue due to having previously reached a hard limit do not have their revenue and bill rates recalculated.
After all of the bill rates are assigned, Oracle Projects rejects those items for which no bill rate or markup is found, and creates distribution warnings.

Oracle Projects also calculates the bill amounts for each item for projects which accrue cost–to–cost revenue based on percent complete but bill on a time and material basis.

**Cost–to–Cost (Percent Spent)**

For projects using cost–to–cost revenue accrual method, Oracle Projects uses the following formula to calculate revenue to accrue for the revenue generation run:

\[
{\text{CCR}}_{\text{RUN}} = \text{Lesser of} \left( \frac{AC}{BC} (BR - ER) - AR \right) \quad \text{and} \quad \text{Remaining Funding Available if using hard limit}
\]

Where, for a project or task:

- \( {\text{CCR}}_{\text{RUN}} \) = Cost to cost Revenue for current run
- \( AC \) = Actual total burdened cost through the PA Period on or before the accrue through date
- \( BC \) = Budgeted baselined burdened cost
- \( BR \) = Budgeted baselined revenue
- \( ER \) = Entered event revenue
- \( AR \) = Revenue previously accrued in PA Period on or before accrue through date

*Oracle Projects uses the cost and revenue budget types that you specify on the Cost–to–Cost billing extension.


**See Also**

Revenue Accrual and Invoice Generation Based on Percent Complete: page 7 – 69
Creating Event and Expenditure Item Draft Revenue

After Oracle Projects calculates potential revenue for expenditure items, it searches for agreements against which to accrue draft revenue, based on the project customer billing contributions and the amount of funding available. Oracle Projects first creates draft revenue for events, then for expenditure items.

See Also

Accounting Transactions for Revenue: page 11 – 13
Revenue Flow Detail Report: page 9 – 40
Potential Revenue Summary Report: page 9 – 38

Other Revenue Issues

Funding and Multiple Customers or Multiple Agreements

When you generate revenue, Oracle Projects determines which agreement an event or revenue item is accrued and billed against. Each time Oracle Projects finds available funding for an expenditure item or an event, it creates a revenue item and updates the funding amount billed on that agreement.

Expenditure Items and Events

Oracle Projects creates revenue by searching for agreements that fund the project against which to accrue potential revenue. When Oracle Projects finds an agreement with against which to accrue revenue, it updates the amount accrued on the appropriate funding record.

Whenever an agreement with acceptable funding is found, Oracle Projects creates a draft revenue against that agreement. The event revenue is split among the customers on the project according to their bill split percentage.

If Oracle Projects cannot find enough funding for the full potential revenue amount, it creates partial revenue for the expenditure items.
If multiple agreements fund the revenue generated for an expenditure item or event, Oracle Projects creates a revenue distribution line for each project (or task) and agreement funding the revenue. Therefore, a single expenditure item or event may have more than one revenue distribution line, which are billed on separate invoices.

**Note:** Projects that use cost-to-cost revenue accrual can only be funded by one agreement.

## Hard Limits and Partial Accrual

### Hard Limits

You specify a hard limit for an agreement to limit revenue accrual and billing of a project funded by that agreement to the amount funded. You specify whether to use hard limits in the Agreement window. See: Entering Agreements: page 7 – 10.

### Events

Oracle Projects accrues revenue for an event only if enough funding is available to accrue the full event amount.

### Expenditure Items and Partial Accruals

Unlike events, for which revenue can be accrued only if funding exists for the full amount of the event, you can partially accrue expenditure items against agreements with hard limit funding. You can accrue expenditure item revenue up to hard revenue limits by partially accruing the potential revenue.

If Oracle Projects encounters expenditure items funded by an agreement with a hard revenue limit, and all of the potential revenue cannot be accrued on the agreement, the expenditure items for the current revenue generation run of the project are marked as partially accrued. These partially accrued items can be fully accrued by adding more funding before the next time you generate revenue.

Oracle Projects calculates the proration for partial accruals based on the following formula:

\[
AR_{ITEM} = \frac{PR_{ITEM}}{PR_{RUN}} \times \left( AR_{RUN} \right)
\]
Where, for an item:

- \( AR_{ITEM} \) = Partial accrued revenue for an item
- \( PR_{ITEM} \) = Potential revenue for an item
- \( PR_{RUN} \) = Total potential revenue of all items processed in the current run
- \( AR_{RUN} \) = Total accrued revenue on the project or task for the current run based on available funding

For example, say Task 3.0 is funded with $1,000 from an agreement with a hard limit, and expenditures charged to the task create potential revenue of $6940, which is in excess of $1,000. When revenue is generated for task 3.0, Oracle Projects reaches the revenue limit at $1,000. Oracle Projects creates partially distributed revenue for the task and accrues a portion of each expenditure item’s potential revenue as we show below:

### Task 3.0: Partial Revenue Accrual

<table>
<thead>
<tr>
<th>Employee Name</th>
<th>Labor Hours</th>
<th>Bill Rate</th>
<th>Potential Revenue *</th>
<th>Partially Distributed Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheng</td>
<td>6 hours</td>
<td>180.00</td>
<td>1,080.00</td>
<td>155.62</td>
</tr>
<tr>
<td>Cheng</td>
<td>6 hours</td>
<td>180.00</td>
<td>1,080.00</td>
<td>155.62</td>
</tr>
<tr>
<td>Gray</td>
<td>6 hours</td>
<td>100.00</td>
<td>600.00</td>
<td>86.46</td>
</tr>
<tr>
<td>Gray</td>
<td>6 hours</td>
<td>100.00</td>
<td>600.00</td>
<td>86.46</td>
</tr>
<tr>
<td>Marlin</td>
<td>2 hours</td>
<td>145.00</td>
<td>290.00</td>
<td>41.79</td>
</tr>
<tr>
<td>Marlin</td>
<td>2 hours</td>
<td>145.00</td>
<td>290.00</td>
<td>41.79</td>
</tr>
<tr>
<td>Robinson</td>
<td>6 hours</td>
<td>250.00</td>
<td>1,500.00</td>
<td>216.13</td>
</tr>
<tr>
<td>Robinson</td>
<td>6 hours</td>
<td>250.00</td>
<td>1,500.00</td>
<td>216.13</td>
</tr>
</tbody>
</table>

| Total Revenue | 6,940.00 | 1,000.00 |

* The amount of revenue that would have been generated with sufficient funding or no hard limit.

Table 7 – 3 Partial Revenue Accrual  (Page 1 of 1)

### Generating Revenue

You can generate revenue for a single project, or for a range of projects using the PRC: Generate Draft Revenue process.

When you generate revenue, Oracle Projects first selects projects, tasks, and their associated events and expenditure items that are eligible for revenue generation. Oracle Projects next calculates the potential revenue and then creates revenue events and expenditure items. See: Revenue Generation Process: page 7 – 28.

Oracle Projects also calculates the bill amounts of each expenditure item, based on the revenue distribution rule associated with a particular project.

When Oracle Projects creates revenue, it also searches for available funding for each revenue item. We discuss each of these topics in detail below after we tell you how to generate revenue.

► To generate revenue across a range of projects:

    Suggestion: You should run Generate Draft Revenue on a specified processing cycle (for example, weekly) to calculate revenue for projects across the company. You can also run the process on demand by project to process adjustments.

Use the rescheduling parameters to configure the Generate Draft Revenue process to run automatically, according to a defined schedule.

► To generate revenue for a single project:
  - Submit the PRC: Generate Draft Revenue for a Single Project process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Revenue Accrual and Invoicing

Generate Draft Revenue uses the overrides and schedules to process projects using As Work Occurs revenue accrual and/or invoicing. These projects are assigned one of the following distribution rules: WORK/WORK, WORK/EVENT, EVENT/WORK.
Burden Schedules
Generate Draft Revenue follows the burden schedule precedence for items charged to tasks that use a burden schedule; it does not use bill rate overrides for these items.

Burden Schedules and Labor Multipliers
You may decide to use labor multipliers instead of a labor burden schedule if you are using a one tier multiplier for labor items. With a one tier labor multiplier, the use of labor multipliers and burden schedule overrides for labor will result in same bill amounts but the method of processing will be different.

You can also use labor multipliers with a standard burden schedule for multiplier–tier revenue accrual and billing. This allows you to define one negotiated labor multiplier on top of the standard cost buildup provided by the standard burden schedule. The labor multiplier is treated as another burden multiplier. The calculation is:

\[ \text{Bill Amount} = \text{Burdened Amount} \times (1 + \text{Labor Multiplier}) \]

You can also report this labor multiplier as another burden cost component in the PA_INV_BURDENDETAILS_LM_V view. The labor multiplier component is not displayed in the PA_INV_BURDENDETAILS_V view. See: Oracle Projects Technical Reference Manual.

Bill Rate Schedules
Generate Draft Revenue follows the standard bill rate precedence for items charged to tasks that use a bill rate schedule. This precedence includes employee bill rate overrides, job bill rate overrides, non–labor bill rate overrides, job assignment overrides, and task schedules.

See Also

Billing: page 7 – 2
Revenue Flow Detail Report: page 9 – 40
Potential Revenue Summary Report: page 9 – 38
Release and Interface Revenue

Oracle Projects releases revenue to make it eligible for interface to Oracle General Ledger. You cannot update or delete released revenue; Oracle Projects processes adjustments to released revenue by creating crediting revenue transactions.

When you generate revenue for a range of projects, it has a status of Released. Released revenue can interface to Oracle General Ledger when you run the Interface revenue process. When you generate revenue for a single project, it has a status Pending.

Releasing Revenue

Oracle Projects automatically releases revenue when you interface revenue to Oracle General Ledger in the Submit Request window. You can also release revenue manually using the Revenue Review window.

If you regenerate draft revenue for a single project, the process deletes any Pending draft revenue and replaces it with the new amount.

When you release an invoice which is based on revenue details (such as a T & M invoice), Oracle Projects automatically releases the associated revenue. You use the Invoice Summary window to release an invoice.

Interfacing Revenue

Oracle Projects fully integrates with Oracle General Ledger to update your general ledger accounts with your revenue transactions. You need to interface revenue with Oracle General Ledger using Oracle Projects processes. These processes interface and tieback revenue and maintain accounting balances.

See Also

Releasing Invoices: page 7 – 58
Submitting Requests: page 9 – 2
Integrating with Oracle General Ledger: page 12 – 9
Adjusting Revenue

Revenue is automatically adjusted when you adjust an invoice that bills the associated revenue. You can adjust draft revenue and draft invoices by adjusting expenditure items using the Expenditure Items window. For example, you can change the status of an expenditure item from billable to non-billable, or transfer an expenditure item to a different project from the one it is charged to.

⚠️ **Warning:** You should make all revenue adjustments in Oracle Projects. You should not adjust project revenue in Oracle General Ledger, because the revenue amounts will not reconcile to the amounts in Oracle Projects.

You also can create revenue events to adjust the revenue amount associated with a project, independent of the expenditure items charged to the project. Revenue events have a classification of Write-On, Write-Off, Manual, or Automatic. You use the Events window to enter revenue events for projects or top tasks. The Events window is accessible from the Billing Information option.

See Also

- Adjustments to Supplier Invoices: page 4 – 40
- Adjusting Expenditure Items: page 4 – 45
- Events: page 7 – 22
- Entering Project and Task Options: page 2 – 59
- Entering Tasks (WBS) for a Project: page 2 – 35
Reviewing Revenue

Use the Revenue Review windows to review detailed information about project revenue.

The information you can view in these windows includes:

- Amount
- Revenue category
- Event description
- Information about a revenue item’s distribution lines
- Agreement providing the revenue funding
- Date the revenue was interfaced to Oracle General Ledger
- Distribution warnings encountered while generating draft revenue

You can use Revenue Review to delete or regenerate a project’s unreleased revenue or to release and unrelease revenue. See: Revenue Flow p–revflow.

Access to Revenue Review can be controlled by function security and project security. Function security can be used to control the release, unrelease, and run functions in Revenue Review. For more information, see: Function Security in Oracle Projects n–security.
To review project revenue:

1. Navigate to the Find Revenue window.

2. Enter your search criteria. For example, if you want to view draft revenue earned for a specific customer, enter the Customer Name or Customer Number. Choose Find to execute the search and display the Revenue Summary window.

For a description of the fields displayed in the Revenue Summary window, see Revenue Summary Window Reference: page 7 – 42.

To select more than one line in the Revenue Summary window to release or unrelease, hold down the Ctrl key (add line) or Shift key (include range of lines) to select multiple lines. The Release and Unrelease buttons will display the number of items you selected (for example, Release 1, Release 2, etc.). See: Selecting Multiple Records, Oracle Applications System Administrator’s Guide.

3. From the Revenue Summary window, choose:

   - **Run Request** to regenerate revenue or delete revenue for a project. When you delete or regenerate draft revenue using this window, you submit the PRC: Generate Draft Revenue process or the PRC: Delete Draft Revenue of a Single Project process.

You can delete draft revenue or regenerate draft revenue only for revenue having a status of Unreleased or Generation Error.

If you regenerate draft revenue for a project that has unreleased draft revenue, Oracle Projects deletes the project’s unreleased draft revenue before it creates new draft revenue.

See: Generate Draft Revenue: page 10 – 23.

   - **Unrelease** to change revenue status from Released to Unreleased.

   **Note:** You can unrelease revenue only if you have not performed any of the following actions: released draft invoices for this draft revenue, subsequently generated draft revenue, and summarized draft revenue for the project.

   - **Release** to release unreleased revenue.

   **Note:** You cannot release revenue if you encountered any errors while generating the draft revenue.

   - **Totals** to view the total revenue amount for the draft revenue displayed based on your search criteria.
• **Lines** to view the revenue lines. See: Revenue Lines Window: page 7 – 44.

• **Open** to view all of the revenue information for a single draft revenue on one screen. See: Revenue Window: page 7 – 43.

**Revenue Summary Window Reference**

Use this window to view information about the revenue that meets your search criteria. The Revenue Summary window uses folder technology, allowing you to customize the window to display the fields you want to view. The following information is available for display in this window:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrue Through</td>
<td>The accrue through date used to calculate the draft revenue</td>
</tr>
<tr>
<td>Agreement</td>
<td>The number of the agreement providing the revenue funding</td>
</tr>
<tr>
<td>Credited Number</td>
<td>The number of the draft revenue that was credited by this revenue (if this revenue credits another revenue number)</td>
</tr>
<tr>
<td>Customer Bill Split</td>
<td>The percentage of billing to the customer</td>
</tr>
<tr>
<td>Customer</td>
<td>Customer name</td>
</tr>
<tr>
<td>Customer Number</td>
<td>Customer number</td>
</tr>
<tr>
<td>Draft Revenue</td>
<td>The draft revenue number</td>
</tr>
<tr>
<td>Exception Reason</td>
<td>Revenue exception reason</td>
</tr>
<tr>
<td>Generation Error</td>
<td>Check box indicating if there was a revenue generation error</td>
</tr>
<tr>
<td>GL Date</td>
<td>The end date of the GL posting period</td>
</tr>
<tr>
<td>Interface Date</td>
<td>Date revenue was interfaced to GL</td>
</tr>
<tr>
<td>PA Date</td>
<td>End date of the PA period in which the revenue was generated</td>
</tr>
<tr>
<td>Project Name</td>
<td>The name of the project on which the revenue was earned</td>
</tr>
<tr>
<td>Project Number</td>
<td>The number of the project on which the revenue was earned</td>
</tr>
<tr>
<td>Released Date</td>
<td>Date released</td>
</tr>
<tr>
<td>Resource Accumulated</td>
<td>Check box indicating if accumulated to a resource</td>
</tr>
</tbody>
</table>

Table 7 – 4   (Page 1 of 2)
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue Amount</td>
<td>The revenue amount</td>
</tr>
<tr>
<td>Revenue Status</td>
<td>Revenue status</td>
</tr>
<tr>
<td>Unbilled Receivable DR</td>
<td>Amount of unbilled receivable for the revenue. The Revenue window also displays the corresponding account number.</td>
</tr>
<tr>
<td>Unearned Revenue CR</td>
<td>Amount of unearned revenue included in the revenue amount. The Revenue window also displays the corresponding account number.</td>
</tr>
</tbody>
</table>

Table 7 – 4  (Page 2 of 2)

Revenue Window

Use the Revenue window to view all of the revenue information for a single draft revenue in one window. In addition to the information in the Revenue Summary window, the Revenue window displays the following information:

- **Released Date.** If the draft revenue is released to interface to Oracle GL, the released date.
- **Warning.** Check box indicating if revenue generation encountered warnings. You can view warnings by selecting Revenue Exceptions in the Revenue window.

Revenue Window Selections

From the Revenue window, you can choose Run Request, Unrelease, or Release. These buttons are described under Revenue Summary Window Reference: page 7 – 42.

Select Lines to display the lines that comprise the selected revenue. See: Revenue Lines Window: page 7 – 44.

Revenue Processing Information

The Review window contains revenue processing information displayed in two alternative regions. You can display the region you want by selecting from the poplist:
• Choose **Interface** to review the status of revenue after a successful interface to Oracle General Ledger.
  
  - **GL Date**
  
  - **Unbilled Receivable amount.** Oracle Projects also displays the Unbilled Revenue account number to which the project’s unbilled revenue is posted.
  
  - **Unearned Revenue amount.** Oracle Projects also displays the Unearned Revenue account number to which the project’s unearned revenue is posted.

• Choose **Revenue Exceptions** to view exception reasons and warnings encountered while generating draft revenue.

  Following are some examples of exception reasons:
  
  - Revenue was rejected in transfer to Oracle General Ledger
  
  - Revenue was rejected by Journal Import
  
  - A generation error was encountered during revenue generation

  Some examples of warnings include:
  
  - Revenue has reached the hard limit
  
  - Revenue has reached or has accrued beyond the soft limit
  
  - Items with missing labor (or non–labor) bill rates or markups were encountered
  
  - Agreement has expired

---

**Revenue Lines Window**

The Revenue Lines window displays the task, revenue source, revenue category, and amount for the revenue lines that comprise a draft revenue item.

The Revenue Lines window displays the following information for each selected revenue line:

- Line Number
- Task Number
- Task Name
- Revenue Source
Choose Details to view details of the selected revenue line in the Revenue Line Details window.

Revenue Line Details Window

Use the Revenue Line Details window to view revenue line details for a selected revenue line. The Revenue Line Details window uses folder technology, allowing you to customize the window to display the fields you want to view. The following information is available for display in this window:

• Account Description
• Accrual Rate
• Accrued Revenue
• Borrowed/Lent
• Employee Billing Title
• Employee Name and Number
• Employee/Supplier Name and Number
• Expenditure Batch, Comment, Organization, and Type
• Function Transaction
• GL Account
• Item Date
• Job Billing Title and Job Name
• Non-Labor Resource and Non-Labor Resource Organization
• Original Transaction Reference
• Quantity
• Raw Cost
• Revenue Amount
• Supplier Name
• Task Number and Name
• Transaction Source
• Unit
Invoicing a Project

Oracle Projects provides you with rich functionality to help you meet your invoice processing needs. Using Oracle Projects features, you can manage and control your invoices, review and adjust them online, and review the detailed information that backs up your invoice amounts.

When you generate invoices, Oracle Projects calculates bill amounts, creates formatted invoices for printing and posting, and maintains funding balances.

Invoice Flow

The Oracle Projects invoice flow follows the steps detailed in Figure 7 – 5. In the pages that follow, we discuss each of these steps. We also tell you how to view invoices in Oracle Receivables, create invoice adjustments, and address other topics that help you to simplify your invoicing needs.
Steps To Take Before Generating Invoices

Oracle Projects provides controls as to which projects are ready for invoice generation.

You must complete the following steps before generating invoices for a direct project in Oracle Projects:

1. Enter an agreement and fund the project, using the Enter Agreements window.
2. Enter budgets.

   **Note:** If your project uses the cost-to-cost invoice generation method, you must include burdened costs in your cost budget and revenue amounts in your revenue budget. Without these amounts, Oracle Projects cannot successfully generate invoices for your project.

3. Baseline the project budget.

   **Note:** You must fund the budget before you can baseline it.

4. For projects using as-work-occurs billing, generate revenue for expenditure items using the Generate Draft Revenue process.

5. For projects using event billing, enter billing events using the Event option in the Project or Task window.

   **Note:** If you do not want to generate an invoice for a specific top task on your project, uncheck the Ready to Bill check box in the Control Billing by Top Task window. Oracle Projects assumes you want to invoice all billable top tasks on contract projects.

See Also

Revenue Accrual and Invoice Generation Based on Percent Complete: page 7 – 69

Baselining a Draft: page 3 – 35

Billing Cycle: page 2 – 50

Entering a Draft: page 3 – 15

Events: page 7 – 22
Generating Invoices

You can generate an invoice for a single project, or for all projects having potential invoices by running the PRC: Generate Draft Invoice process. When you generate an invoice, Oracle Projects first select projects, tasks, and their associated events and expenditure items that are eligible for billing.

Oracle Projects next creates invoice items for billing events, revenue events, and for expenditure items. When Oracle Projects creates invoice items, it also searches for available funding for each invoice item.

Oracle Projects also calculates the bill amounts of each expenditure item, based on the revenue distribution rule associated with a particular project. See: Accruing Revenue for a Project: page 7 – 27.

When you generate invoices, you can specify a Bill Through Date, which is the date through which you want Oracle Projects to process all eligible expenditure items and events. Oracle Projects creates an invoice using expenditure items and events dated on or before the bill through date you specify.

To generate invoices across a range of projects:

- Submit the PRC: Generate Draft Invoices for a Range of Projects in the Submit Request window to run multiple invoice generation processes in parallel. See: Submitting Requests: page 9 – 2.

  Suggestion: You should run Generate Draft Invoice on a specified processing cycle (for example, weekly) to generate invoices for projects whose billing cycles are due across the entire company. You can also run the process on demand to process off schedule invoices.

  Use the rescheduling parameters to configure the Generate Draft Invoice process to run automatically, according to a defined schedule.

To generate invoices for a single project:

- Submit the PRC: Generate Draft Invoices for a Single Project process from the Submit Request window or choose Run Request
from the Invoice Summary window or Invoice window. See: Submitting Requests: page 9 – 2.

See Also

Invoice Review Report: page 9 – 32

Invoice Flow Detail and Summary Reports: page 9 – 36

Selection Criteria

Projects: Oracle Projects first determines if a project is eligible for invoice generation using the following criteria:

• Must have a status that allows invoice generation (for more information, see: Project Statuses: page 16 – 164)
• Must be a direct project
• Must have a baselined budget
• Must have expenditure items or events that are eligible for invoice generation or transaction-independent billing extensions that are assigned at the project type, project, or top task level

If you submit the process for all projects, it checks the eligibility of each project to bill according to its billing cycle. A project must meet the following billing cycle criteria before it can generate an invoice:

• Must not have any pending invoices (Unreleased)
• At least one bill cycle past the bill through date (or creation date if no bill through date exists) of the last non-crediting invoice
• At least first bill offset days past the project start date (or project creation date if no start date exists) if you have not yet invoiced a particular project
• If the billing date is calculated by a client extension, and the client extension returns a null value for the billing date, then the process will not pick up the project.

When submitted for a single project, the Generate Draft Invoices process ignores billing cycle. Also, if you have any unreleased draft invoices, they are deleted and a new draft invoice is created.
Attention: For projects that use work billing on their revenue distribution rule (such as T & M), you must generate draft revenue before you can generate an invoice.

Tasks: To be billed on an invoice, a project’s top tasks must have a ready to bill status. This is done automatically when you create a project, but you may choose to change the top task bill status to Not Ready to Bill in the Control Billing by Top Task window. A project’s lowest tasks must be billable. You specify billability in the Task Details window.

Expenditure Items: To be included on an invoice, an expenditure item must meet the following criteria:

- Must be cost distributed
- Must have a billable status
- Must be partially or fully revenue distributed
- Must not be on billing hold
- Must not be already invoiced
- Project billing distribution rule must be T & M and not Event
- Expenditure item date is on or before the bill through date

Events: To be included on an invoice, an event must meet the following criteria:

- Must not be already invoiced
- Event completion date is on or before the bill through date
- Must be revenue distributed (for write–on revenue events only)

OR

- Event Type Classification is: Scheduled Payment, Deferred Revenue, Invoice Reduction, Manual, or Automatic (for billing events only)

Note: An automatic event created by billing extensions after an adjustment must include the number of the original event. Without this information, Oracle Receivables cannot autoinvoice the automatic event. If Oracle Projects does not find this value during the invoice generation process, it will display the following message to the log file: "Cannot find a proper inv line credited for this adjusted event." See: Inserting Events: page 18 – 82.

Billing Extensions: For each project selected, Oracle Projects then selects expenditure items and events that are eligible for invoice
generation based on the criteria that you define in your billing extensions. If you define transaction independent billing extensions, Oracle Projects executes these extensions for each project with an active billing assignment, even if there are no transactions to process. See also: Billing Extensions: page 18 – 62.

Agreements and Creating Invoices

Oracle Projects bills each customer based on their billing contribution and the available funding from the customer agreement. If a customer is on credit hold in Oracle Receivables, Oracle Projects creates an invoice with a generation error for that customer.

When you generate an invoice, Oracle Projects determines which customer agreement an event or invoice item should be billed against. Each time Oracle Projects finds available funding for an expenditure item or an event, it creates an invoice item and updates the funding amount billed on that agreement.

Billing Events: Billing events are events for which there is no associated revenue. Because billing events have not accrued revenue against an agreement, they can be billed against any agreement having sufficient funding to cover the entire amount of the event.

When processing a Scheduled Payment event, Oracle Projects marks expenditure items as billed using the first-in, first-out (FIFO) method based on the expenditure item date. The FIFO marked items of an event may not total to the exact amount of the event; the total item amount is an estimation of the total work performed which backups the scheduled payment amount for internal reporting.

Write–On Events: Write–on events are events that have accrued revenue against an agreement, or have been previously billed and cancelled against an agreement. They must be billed to that same agreement. Revenue events typically have an event classification of Write–On.

Expenditure Items: Since expenditure items have already accrued revenue against an agreement, they must bill against that same agreement. Oracle Projects selects all of the eligible items, groups and summarizes them according to their project’s invoice format, and bills them up to the limit of the available funding.

Invoice Set: For each given run of invoice generation for a project, if multiple customer agreements exist, Oracle Projects creates multiple invoices within a unique invoice set. You must approve, release, and
cancel all invoices within an invoice set together by performing an action on a single invoice within the invoice set.

Components of an Invoice

Certain components of an invoice are determined when you generate a draft invoice. We discuss some of these components below. For more information concerning how project information affects invoices, and information about the components of a released invoice in Oracle Receivables, refer to the sections below.

<table>
<thead>
<tr>
<th>Components of a Draft Invoice in Oracle Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill through date</td>
</tr>
<tr>
<td>Invoice Comment</td>
</tr>
<tr>
<td>Invoice Lines</td>
</tr>
<tr>
<td>Draft Invoice Number</td>
</tr>
</tbody>
</table>

In addition, there are 'behind-the-scenes' factors that impact invoice generation; you specify these factors when you enter a project. They provide default values or rules when you generate an invoice. The terms in the table below help you to understand how information is derived from your project setup to create an invoice.
Project Information That Affects Your Invoices

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Billing Cycle Code</strong></td>
<td>The code that indicates when to generate invoices automatically a project; determined from the project. The bill cycle code is used only during mass invoice generation. See: Billing Cycles: page 16 – 119.</td>
</tr>
<tr>
<td><strong>First Bill Offset Days</strong></td>
<td>The number of days that elapse between the project start date and the date of the project’s first invoice; determined from the project. Bill offset days are used only during mass invoice generation.</td>
</tr>
<tr>
<td><strong>Invoice Formats</strong></td>
<td>Uses the invoice formats defined for a project (T &amp; M only). See Determining Your Invoice Printing Method: page 16 – 134</td>
</tr>
<tr>
<td><strong>Distribution Rule</strong></td>
<td>Determines how bills are generated for a project; determined from the project. (T &amp; M and Events)</td>
</tr>
<tr>
<td><strong>Billing Titles</strong></td>
<td>The job and employee billing titles printed on an invoice using the effective billing titles.</td>
</tr>
</tbody>
</table>

Table 7 – 6   (Page 1 of 1)

Certain components of an invoice are determined when you release a draft invoice, interface it to Oracle Receivables, and create an invoice from it in Oracle Receivables. We discuss some of these components below.

Components of a Released Invoice in Oracle Receivables

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bill to address</strong></td>
<td>The bill to address specified for this customer on this project.</td>
</tr>
<tr>
<td><strong>GL Date</strong></td>
<td>The GL Date is determined from the open or future period in which the invoice date falls, based on the period status in Oracle Receivables.</td>
</tr>
<tr>
<td><strong>Invoice Date</strong></td>
<td>The date that is printed on the invoice and the date on which an invoice receivable’s aging begins. You specify the invoice date when you release the invoice.</td>
</tr>
</tbody>
</table>

Table 7 – 7   (Page 1 of 2)
### Components of a Released Invoice in Oracle Receivables

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice Number (AR)</td>
<td>The number of an invoice that is printed on an invoice, and the number that can be tracked in Oracle Receivables. This number can be system generated, or a number that you enter which uniquely identifies the invoice in Oracle Receivables, depending on how you implemented your invoice numbering system in Oracle Projects. The invoice number is determined when you release an invoice.</td>
</tr>
<tr>
<td>Invoice Transaction Type</td>
<td>If you set up invoice processing types during implementation, this is the name of the organization that is the invoice processing organization for the project owning organization. Otherwise, this is the default transaction type of Projects Invoice or Projects Credit Memo based on the PROJECTS INVOICES batch source. You can override the transaction type of an invoice using the transaction type billing extension. You can also use the AR transaction type extension to determine the AR transaction type when you interface invoices to Oracle Receivables. An invoice transaction type determines if it is an invoice or a credit memo.</td>
</tr>
<tr>
<td>Notes</td>
<td>The invoice comment determined from the project comment. You can override this default for each invoice before you interface the invoice to Oracle Receivables.</td>
</tr>
<tr>
<td>Payment Terms</td>
<td>The payment terms in Oracle Receivable are determined from the agreement that is used to fund an invoice.</td>
</tr>
<tr>
<td>Salesperson</td>
<td>If you define project managers as salespeople, then this is the project manager of the invoice's project. If you do not define project managers as salespeople, this value is blank. See: Defining Salespersons and Credit Types: page 17 – 59.</td>
</tr>
<tr>
<td>Ship to address</td>
<td>The ship to address specified for this customer on this project.</td>
</tr>
</tbody>
</table>

Table 7 – 7 (Page 2 of 2)
Other Invoicing Issues

Retention

You use invoice retention to reduce a project invoice by a percentage amount that you specify for a particular project. Invoice retention applies to both expenditure item invoices and event billings. Oracle Projects does not do any special accounting for invoice retention.

To bill an invoice retention amount, you first clear the Retention Invoice Format field in the Revenue and Billing Information window. Then you create a manual invoice event equal to the retained invoice amount, and then generate an invoice.

Hard Limits

You specify a hard limit for an agreement to limit revenue accrual and billing of a project funded by that agreement to the amount funded. You specify whether to use a hard limit for an agreement in the Agreements form. See: Entering Agreements: page 7 – 10.

When Oracle Projects encounters a hard limit when generating an invoice, it selects expenditure items until the hard limit is met, or until all additional items would cause the hard limit to be exceeded. However, the amount that Oracle Projects bills is the full bill amount for each expenditure item, not the partially accrued (partially distributed) revenue amount.

For example, say Task 3.0 is funded with $1,000 from an agreement with a hard limit, and expenditures charged to the task create potential billable items in excess of $1,000. When an invoice is generated for task 3.0, Oracle Projects reaches the hard limit at $1,000. Oracle Projects bills as many expenditure items as it can up to the limit of $1,000. Oracle Projects looks at the earliest expenditure items billed against Task 3.0 as its criteria of which items to select to bill first under the $1,000 limit. According to this example, Oracle Projects bills $940; additional eligible items exist, none with an amount of $60 or less.

<table>
<thead>
<tr>
<th>Employee Name</th>
<th>Quantity Billed</th>
<th>Bill Rate per Unit</th>
<th>Bill Amount</th>
<th>Amount Invoiced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marlin</td>
<td>6 hours</td>
<td>60.00</td>
<td>360.00</td>
<td>360.00</td>
</tr>
<tr>
<td>Gray</td>
<td>1 hour</td>
<td>40.00</td>
<td>40.00</td>
<td>40.00</td>
</tr>
</tbody>
</table>

Table 7 – 8 Invoicing Hard Limits (Page 1 of 2)
Task 3.0: Hard Limits for Invoicing

<table>
<thead>
<tr>
<th>Task 3.0: Hard Limits for Invoicing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marlin</td>
</tr>
</tbody>
</table>

*Table 7 – 8 Invoicing Hard Limits (Page 2 of 2)*

### Reviewing Invoices

You should review each invoice before you approve and release it for billing. You can review invoice information such as invoice amount, invoice lines, expenditure items that back up invoice items, and the invoice customer.

In addition to reviewing invoice information, you should also review an invoice to ensure that it did not encounter any generation errors or distribution warnings during generation and to monitor the status of your invoices. If you encounter a draft invoice with a generation error, you should correct the error and regenerate the invoice.

You can use the Invoice Review report to review the draft invoices associated with a particular project. You can use this report to verify your draft invoices before approving and releasing them for interface to Oracle Receivables. You can also use this report to review detail items billed on an invoice.

#### To review an invoice:

2. Find the invoice you want to review in the Find Invoices window.
3. Choose the Open button to review invoices. You can review the Address, Agreement, Comment, Approval, Interface status, Receivables amounts, and any invoice warnings or exceptions.
4. Choose the Lines button to review the invoice lines created for your invoice.
5. From the Invoice Lines window, choose the Details button to review expenditure items which support the invoice line.
6. Choose either the Print button in the Invoice Summary window, or the Print Draft button in the Invoice window to print a hard copy of the draft revenue.
Approving Invoices

After you review invoices and make any necessary adjustments, you need to approve them before you can release them for interfacing to Oracle Receivables. There are two ways to approve invoices:

1. **Manual invoice approval**
   Usually your project administrator or project manager approves invoices. Oracle Projects records the invoice approval information of the person who approved the invoice and the date it was approved.

2. **Automatic invoice approval**

   To approve an invoice manually:
   1. Navigate to the Find Invoices window.
   2. Find the invoice or invoices you want to approve.
   3. In the Invoice window or Invoice Summary window, choose the Approve button.
      
      **Note:** In the Invoice Summary window you can approve multiple invoices at once. Highlight multiple invoices and then choose the Approve button. See: Selecting Multiple Records Oracle Applications User’s Guide.
   4. Save your work.

Releasing Invoices

After you approve invoices, you need to release them for interface to Oracle Receivables.
There are two ways to release invoices:

1. **Manual invoice release**
   
   Usually your accounting department releases invoices. Oracle Projects records the invoice release information of the person who released the invoice and the date it was released.
   
   Before you release an invoice, you determine if the invoice is taxable or not. See: Applying Tax to Project Invoices: page 17 – 64.

2. **Automatic invoice release**
   

   **Attention:** Once you release an invoice in Oracle Projects, you cannot change or delete it. You can adjust a released invoice; Oracle Projects processes adjustments to released invoices by creating crediting invoice transactions.

   After you release an invoice, you need to interface the invoice with Oracle Receivables using Oracle Projects processes. These processes interface draft invoices, create invoices, and tie back invoices. See: Integrating with Oracle Receivables: page 12 – 54.

   ▶ **To release an invoice manually:**

   1. Navigate to the Find Invoices window.
   2. Find the invoice you want to release.
   3. In the Invoice window or Invoice Summary window, choose the Release button.

      **Note:** You cannot release multiple invoices at one time. They must be released individually, because you must provide the invoice date and invoice number. (If you have elected to use automatic invoice numbering, you only need to enter the invoice date.)

   4. Save your work.
Printing Invoices

You can print invoices either from Oracle Projects, or from Oracle Receivables, depending on how your company implements your invoice printing method.

**Attention:** If you print your invoices from Oracle Projects, you do not need to interface invoices before printing them.

To print an invoice from Oracle Projects:

- Find the invoice you want to print in the Invoice Summary window and choose Print.
- You can also print from the Invoice window by selecting Print Draft.


See Also

Determining Your Invoice Printing Method: page 16 – 134

Adjusting Project Invoices

You can adjust anything on draft invoices before you approve, release, and interface them to Oracle Receivables. You can perform many of the same actions on an invoice that you can on project expenditures. See: Expenditure Adjustments: page 4 – 25.

**Note:** If you perform an adjustment on an invoice’s expenditure items and events, you need to submit the appropriate process to reflect those adjustments. For example, if you change an expenditure item’s status from billable to non-billable, you need to submit the appropriate processes to recalculate cost, regenerate revenue, and regenerate the invoice.

When you regenerate a project’s unreleased draft revenue and unreleased draft invoices, Oracle Projects deletes the project’s unreleased draft revenue and invoices and creates new draft revenue and invoices.

**Cancel a released invoice**
Cancelling an invoice causes the creation of a credit memo for the entire amount of the cancelled invoice. All items on the cancelled invoice are eligible for rebilling. In addition, Oracle Projects updates the funding balance on the agreement that funded the original invoice.

You cannot cancel an invoice if payments have been applied against it in Oracle Receivables or if an invoice has credit memos applied against it. You can cancel an invoice only if it is released and has no payments, adjustments, or crediting invoices applied against it. Once the cancellation is completed, you cannot delete the credit memo created by the cancellation action. That is, you cannot reverse an invoice cancellation.

**Write off an invoice**

Writing off an invoice creates a crediting invoice against the original invoice for the write–off amount you request. When you write off an invoice, Oracle Projects reverses the invoice amount from the unbilled receivables account and places it into a write off expense account when you interface the write off to Oracle Receivables.

The write off creates a negative invoice in Oracle Projects that is attached to the original invoice. Oracle Projects records the appropriate write–off accounting transaction in Oracle Receivables when you interface the invoices to Oracle Receivables.

You can only write off an invoice whose status is Accepted. The write–off amount you enter can be any amount up to the outstanding receivable balance on the invoice.

**Create credit memos**

Oracle Projects automatically creates a credit memo each time you adjust detail expenditure items billed on a released invoice. The credit memo reverses the amount on the invoice by the amount of the adjusting item.

To create a crediting invoice for a project that is not associated with a particular invoice, you should create an invoice reduction event for that project. When you generate the next invoice, Oracle Projects creates a negative invoice that is not attached to the original invoice. After you interface the negative invoice to Oracle Receivables, you can manually apply the negative invoice to any receipt from that customer in Oracle Receivables.

**Attention:** Do not create credit memos in Oracle Receivables for Oracle Projects invoices. Adjustments made in Oracle Receivables will not be reflected in Oracle Projects, and will cause your amounts to be out of balance with Oracle Projects.
Overapplied Credits: When Oracle Projects sends a credit memo that is greater than the original invoice amount outstanding in Oracle Receivables, Oracle Receivables overapplies the remaining credit memo balance to the original invoice, creating a negative outstanding amount on the invoice.

Delete an invoice

You may determine it is not appropriate to create an invoice for the customer at this time. You can delete unreleased draft invoices.

► To adjust an invoice:

2. Find the invoice you want to adjust.
3. Choose the Invoice, Invoice Lines, and Details buttons to open the Invoice Line Details window.
4. Choose an option from the Special menu to specify how you want to adjust the invoice line details.
5. Choose Run Request from the Invoice window to process the adjustment. See: Processing Adjustments: page 4 – 34.

► To cancel a released invoice:

Attention: You cannot delete a cancellation (credit memo) once Oracle Projects performs the cancellation.

1. Choose the Credit button in either the Invoice Summary or Invoice window.
2. Choose Cancel Invoices.
3. When you choose OK, Oracle Projects submits a process to create a credit invoice.

► To write off an invoice:

Attention: You can write off an invoice only if it has a status of Accepted.

1. Choose the Credit button from either the Invoice Summary or Invoice window.
2. Enter the write off amount for the invoice.
3. Choose OK. Oracle Projects submits a process to write off the invoice.
To create an independent crediting invoice:
1. Find the project for which you want to create the credit invoice in the Projects, Templates Summary window.
2. Open the project and select the Events option under Billing Information.
3. Enter an Invoice Reduction type event for the project or top task, as appropriate based on your invoice format.
4. Save. When the Generate Draft Invoices process is run for your project, a credit invoice will be created.

To delete an unreleased draft invoice:
1. Find the invoice you want in the Invoice Summary window.
2. Choose Run Request.
3. Click on the Delete Invoices option button.
4. Choose OK.

Types of Invoice Adjustments

You can adjust invoices at the invoice line detail level in the Invoice Line Details window. You can perform most of the same types of adjustments on invoices as you can perform on expenditure items. See: Expenditure Adjustments: page 4 – 25.

<table>
<thead>
<tr>
<th>Level</th>
<th>Adjustment Type</th>
<th>Steps to complete adjustment</th>
</tr>
</thead>
</table>
| Invoice | Change Billing Address | 1. Add new address in Oracle Receivables  
2. Change address in Oracle Projects by choosing the Customers and Contacts project option.  
3. Regenerate invoice |
|       | Change Billing Contact | 1. Add new contact in Oracle Receivables  
2. Change contact in Oracle Projects by choosing the Customers and Contacts project option.  
3. Regenerate invoice |

Table 7 – 9  (Page 1 of 2)
<table>
<thead>
<tr>
<th>Level</th>
<th>Adjustment Type</th>
<th>Steps to complete adjustment</th>
</tr>
</thead>
</table>
|                       | Change Agreement Type or Terms        | 1. Change information in Agreements window  
2. Regenerate invoice                                      |
|                       | Change Comment                       | 1. Correct comments in Invoice window  
2. Save                                                                 |
|                       | Bill Through Date incorrect          | Regenerate invoice (and revenue if necessary) with correct Through Date |
|                       | Invoice Amount Incorrect             | 1. Analyze how revenue was created  
2. Make changes as appropriate  
3. Regenerate revenue and invoice |
|                       | Invoice Lines                        |                                                                                                   |
|                       | Wrong invoice line format            | 1. Change invoice lines format in Billing Information window, Project options  
2. Regenerate invoice                                      |
|                       | Wrong amount on invoice line         | 1. Analyze how amount was created  
2. Make changes as appropriate  
3. Regenerate revenue and invoice |
|                       | Retention amount incorrect           | 1. Change Retention Percentage in Billing Information window, Project options  
2. Regenerate invoice |
|                       | Invoice Lines Details                |                                                                                                   |
|                       | Item should not be billed            | 1. Select Special Menu  
2. Choose Non–Billable option  
3. In the Invoices window choose Run Request, Regenerate Revenue and Invoices |
|                       | Item should not be billed at this time| 1. Select Special Menu  
2. Choose Billing Hold or One–Time Hold option  
3. In the Invoices window choose Run Request, Regenerate Invoices |
|                       | Bill Amount is incorrect             | 1. Analyze how amount was created  
2. Make changes as appropriate  
3. From Special Menu choose appropriate Recalc actions  
4. Regenerate revenue and invoice |
|                       | Only part of the expenditure item can be invoiced | 1. From the Special Menu choose Split  
2. After splitting the item, select Non–Billable for the part that cannot be invoiced  
3. Recalc cost, revenue, and invoice |
|                       | Item does not belong on this project or task | 1. From the Special Menu, choose Transfer  
2. After transferring the item, Recalc cost, revenue, and invoice |

Table 7 – 9 (Page 2 of 2)
Viewing Invoices

You can view invoices in Oracle Projects or in Oracle Receivables. You can also drill down from the Invoice Summary window or the Invoice window in Oracle Projects to the AR Transaction Overview form in Oracle Receivables.

Viewing Invoices in Oracle Projects

You can view invoice information by project, or for an individual invoice. When you view invoice information for a project, you can view information such as the amount invoiced, the amount of unbilled receivables, and the amount of unearned revenue. You use the Funding Inquiry form to view project funding information.

In addition, you can view invoice information and outstanding receivables balances for each invoice for a project using the Project Status Inquiry and Funding Inquiry forms.

Reporting

You can use the Unbilled Receivables Aging report to review a project’s unbilled receivables which includes eligible revenue items that have not yet been invoiced, or those items included in draft invoices that are not yet released. This report ages the unbilled receivables in four buckets, and you specify in the report parameters the number of days that you want in each bucket.

You can use the Receivables Aging by Project/Customer report to review information about your accounts receivable by project and customer. This report lists the total Oracle Receivables invoice amount that has not yet been paid, and then it divides that amount into aging buckets that you specify in the report parameters.

To view invoices in Oracle Projects:

2. Find the invoice(s) you want to review by entering search criteria in the Find Invoices window. Choose Find.
3. View summary invoice information in the Invoice Summary window.
   - To drill down to the Oracle Receivables Transaction Overview form, select the invoice you want to review, and choose AR Invoice. (The AR Invoice button is only enabled if function security is implemented in such a way that the user is able to see
From the Transaction Overview form in Oracle Receivables, you can access the following forms using the Special menu:

- Calls
- Account Details
- Activities

To view detail invoice information, select the invoice you want to review, and choose Open to open the Invoice window.

- To view invoice lines for an invoice, choose Invoice Lines to open the Invoice Lines window. Choose Detail to view invoice line details.
- To drill down to the Oracle Receivables Transaction Overview form from the Invoice window, choose AR Invoice. (The AR Invoice button is only enabled if function security is implemented in such a way that the user is able to see the button.)

See Also

Function Security: page C – 2

Viewing Invoices in Oracle Receivables

Each invoice and invoice line in Oracle Projects is translated into an invoice and invoice line in Oracle Receivables when you successfully interface and create an invoice in Oracle Receivables. You can view any invoice in Oracle Receivables that originates in Oracle Projects either from an Oracle Projects invoice inquiry window, or by using Oracle Receivables.

Oracle Projects does not interface invoice line detail (such as expenditure item details or event details) to Oracle Receivables. The following information appears for each line:

- UOM = Each
- Quantity = 1
- Unit Price = amount of invoice line
- Item = (Oracle Projects leaves this field blank)
Use the Invoice Number, Invoice Date, and/or Total Invoice Amount to query Oracle Projects invoice information in Oracle Receivables.

In addition, for any invoice, you can query on the following project information in the Invoice Transaction Flexfield that Oracle Projects passes to Oracle Receivables. You query this information by specifying values in the PROJECTS INVOICES context value descriptive flexfield for the Invoice Transaction Flexfield.

- Project Number
- Draft Invoice Number
- Agreement Number
- Project Organization
- Project Manager

When you process invoices in Oracle Receivables, you can also identify invoices in Oracle Receivables based on project information, using the value that you specify for the AR: Transaction Flexfield Quickpick Attribute profile value. You can set this profile to display any project information that Oracle Projects passes to Oracle Receivables in the Transaction Flexfield. The value you specify is displayed under the 'Reference' column in Lists of Values in the following Oracle Receivables forms:

- QuickCash
- Reapply Receipts
- Record A Call
- View Call History
- Reapply Credits
- Enter Receipts

See Also

*Oracle Receivables User’s Guide*
Conditions That Allow Specific Invoice Actions

In the Invoice Summary Window, the buttons and Special Menu items that perform actions on an invoice are enabled or disabled, depending on the characteristics of the invoice that is selected. These characteristics are listed in the following table. This table clarifies when you can perform each action on an invoice.

<table>
<thead>
<tr>
<th>Conditions Required for Invoice Actions To Take Place</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approve Invoice</strong></td>
</tr>
<tr>
<td>Invoice has no generation errors.</td>
</tr>
<tr>
<td>Invoice has not been approved or released.</td>
</tr>
<tr>
<td><strong>Adjust Invoice</strong></td>
</tr>
<tr>
<td>Invoice has no generation errors.</td>
</tr>
<tr>
<td>Invoice has not been released.</td>
</tr>
<tr>
<td><strong>Release Invoice</strong></td>
</tr>
<tr>
<td>Invoice has no generation errors.</td>
</tr>
<tr>
<td>Invoice has been approved.</td>
</tr>
<tr>
<td>Invoice has not been released.</td>
</tr>
<tr>
<td><strong>Cancel an Invoice</strong></td>
</tr>
<tr>
<td>Invoice has no generation errors.</td>
</tr>
<tr>
<td>Invoice has been approved.</td>
</tr>
<tr>
<td>Invoice has been released.</td>
</tr>
<tr>
<td>Invoice has not been canceled.</td>
</tr>
<tr>
<td>Invoice is not a credit memo.</td>
</tr>
<tr>
<td>Invoice has not been written off.</td>
</tr>
<tr>
<td>Invoice does not have a credit memo applied against it.</td>
</tr>
<tr>
<td><strong>Write Off an Invoice</strong></td>
</tr>
<tr>
<td>Invoice has no generation errors.</td>
</tr>
<tr>
<td>Invoice has been approved.</td>
</tr>
<tr>
<td>Invoice has been released.</td>
</tr>
<tr>
<td>Invoice has not been canceled.</td>
</tr>
<tr>
<td>Invoice is not a credit memo.</td>
</tr>
<tr>
<td>Invoice status is Accepted.</td>
</tr>
<tr>
<td><strong>Print Invoice Review Report</strong></td>
</tr>
<tr>
<td>No conditions apply. All selected draft invoices will be printed in the Invoice Review Report.</td>
</tr>
</tbody>
</table>

Table 7 – 10  (Page 1 of 1)
Revenue Accrual and Invoice Generation Based on Percent Complete

Oracle Projects can generate revenue and invoices based on the percent complete that you enter for a project. You can enter the percent complete for all the levels in the work breakdown structure (WBS). However, to generate revenue or invoices based on percent complete, you must enter percent complete at the funding level (project or top task).

Each percent complete entry you make has an As Of Date, so that Oracle Projects can maintain percent complete history. When you use percent complete as the basis for revenue accrual or generation of draft invoices, Oracle Projects uses the As Of Date to determine the current percent complete.

Revenue accrual based on physical percent complete is different from percent complete based on our budget (Actual Cost / Budgeted Cost). The method based on budgets, is also sometimes referred to as Percent Spent or Cost–to–Cost Revenue Accrual. See: Cost–to–Cost (Percent Spent): page 7 – 32.

Revenue accrual based on physical percent complete is also different from revenue accrual on an as–work–occurs (or time and materials) basis, where the total potential revenue is the sum of the revenue of all expenditure items plus events. See: As Work Occurs (Time and Materials): page 7 – 30.

Oracle Projects performs the physical percent complete revenue calculation using the following predefined billing extensions:

- Percent Complete Revenue
- Percent Complete Invoicing

The revenue and invoice processes call the appropriate billing extension to calculate the revenue or invoice amount and to create an event.

See Also

Setup Requirements for Percent Complete Revenue and Invoicing: page 16 – 148
Processing Percent Complete Revenue and Invoicing

To accrue revenue or generate draft invoices based on percent complete, you submit the PRC: Generate Draft Revenue or PRC: Generate Draft Invoices process. To submit the process for one project, submit PRC: Generate Draft Revenue for a Single Project or PRC: Generate Draft Invoice for a Single Project. You can also submit a project streamline request.

The revenue or invoice process performs the following steps:

1. The process calls the billing extension for each project or top task (depending on whether the project is funded at the project or top task level). The calling procedure specifies whether it is a revenue or invoice calling process and whether the call is made at the project or task level.

2. The billing extension determines the budget amounts, event amount, existing revenue amounts, funding balance, and percent complete.

3. If the percent complete cannot be determined, then the percent complete used by the process is zero, the revenue or draft invoice amount is zero, and no event is created.

4. The process calculates the accrued revenue or draft invoice amount, using the formulas shown in Figure 7 – 6 and Figure 7 – 7.

5. The billing extension creates an event. The description of the event includes the event type and the formula that was used to calculate the revenue or draft invoice amount.
Accrued Revenue = the Lesser of A or B:

A = Remaining Funding Balance
   if Agreement has a Hard Limit

B = ((Budgeted Revenue – Event Revenue) * Percent Complete at Funding Level/100) – Existing Revenue

Existing Revenue = Total Revenue Accrued Previously by Percent Complete Events

Event Revenue = Total Event Revenue Accrued Other Than Revenue Amount Accrued by Percent Complete Events

Draft Invoice = the Lesser of A or B:

A = Remaining Funding Balance
   if Agreement has a Hard Limit

B = ((Budgeted Revenue – Event Invoice) * Percent Complete at Funding Level/100) – Existing Invoice

Existing Invoice = Total Invoice Accrued Previously by Percent Complete Events

Event Invoice = Total Event Invoice Accrued Other than Invoice Amount Accrued by Percent Complete Events
The event revenue or invoice is subtracted from budgeted revenue to obtain the net available budgeted revenue or invoice amounts. The process then effectively apportions the event revenue or invoice for the duration of the project.

**Agreements with Hard Limits**

If the agreement funding the project has a hard limit, the Remaining Funding Balance is the amount of funding left. This portion of the formula (part A) is required because revenue for an event cannot be partially accrued. If the amount calculated in part B of the formula is greater than the amount of funding, then the Remaining Funding Balance is taken as the accrued revenue or draft invoice. An event is still created in this case.

If the agreement has no hard limit, only part B of the formula is used.

**See Also**

Percent Complete: page 8 – 23

Events: page 7 – 22

Event Types: page 16 – 143

Billing Extensions: page 18 – 62

Automatic Events: page 18 – 64

Assigning Event Types: page 16 – 146

Entering Agreements: page 7 – 10

Generate Draft Invoices: page 10 – 20

Generate Draft Revenue: page 10 – 23
Revenue-Based Cost Accrual

Cost accruals are the accounting transactions to account for expenses in the same accounting period in which revenue is generated. Cost accruals are also referred to as Cost of Goods Sold or Cost of Sales.

According to the matching principle required by Generally Accepted Accounting Principles (GAAP), expenses (cost) incurred in earning revenue must be accrued in the same accounting period as the revenue. If you do not follow this matching principle, the financial statement and the reported profitability of the company are affected. If the current period expenses are accrued immediately, but related revenues are accrued in a future period, then the profitability of the company is reduced for the current period. To conform to the matching principle, you must defer expenses until revenue is accrued.

In Oracle Projects, cost distribution and revenue generation are two separate processes. Consequently, it is possible to account for expenses (costs) and revenue in different accounting periods. You must determine your accounting procedures and setup to ensure that you match expenses to revenue.

You must determine if your company uses cost accruals during revenue generation. The answer depends on the revenue accrual methods that your company uses. Some companies recognize revenue in the same period as costs. This type of accounting is typically done with work based or time and materials revenue accrual. For such companies, cost accruals are not needed. Other companies use a method that recognizes revenue in future periods after cost is accrued. For these companies, cost accruals are required.

With cost accruals, you initially account for the costs incurred as an asset in a cost work in process (WIP) account. You determine whether you account raw or burdened cost as the cost WIP. When you accrue revenue, the costs are recognized as expense by using cost accruals.

Cost Accrual Implementation Example

Oracle Projects provides an example implementation of cost accruals. The example includes billing extensions that create events to produce the appropriate accounting.

You can use the example with the provided extensions without modification. Your business requirements for cost accruals may be different from the requirements on which the example is based. If this is the case, you must implement your own cost accrual process and logic,
using the example provided by Oracle Projects as a model. See: Implementing Your Own Cost Accrual Procedures and Extensions: page 7 – 85.

The implementation example illustrates how to perform the following activities required for cost accrual:

- Calculate cost accrual amounts based on the accrued revenue amounts and budgeted cost and revenue amounts. The example uses a billing extension to create events that produce the appropriate accounting.
- Define the appropriate setup data to support cost accrual calculation and the corresponding accounting entries.
- Initiate project closing accounting entries using a project status with a system status of Pending Close.
- Implement rules to ensure that all accounting entries are complete before a project status can be changed from one with a system status of Pending Close to one with a system status of Closed.
- Create columns in the Project Status Inquiry window to view the cost WIP and cost accrual amounts.

Cost Accrual Accounting Entries

The implementation examples for cost accruals provided by Oracle Projects generates the following accounting entries for cost accruals:

**Distribute costs (may be raw or burdened costs)**

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Cost WIP Account (Asset)</th>
<th>&lt;Cost Amount&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Expense Clearing Account (Liability)</td>
<td>&lt;Cost Amount&gt;</td>
</tr>
</tbody>
</table>

**Generate Revenue**

<table>
<thead>
<tr>
<th>Dr.</th>
<th>UBR/UER Account (Asset/Liability)</th>
<th>&lt;Revenue Amount&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Revenue Account (Revenue)</td>
<td>&lt;Revenue Amount&gt;</td>
</tr>
</tbody>
</table>
Cost Accrual Accounting

In cost accrual accounting, costs are accounted for in a cost WIP account as they are incurred and distributed during the life of the project. You determine if you account for cost WIP with the raw or burdened costs. Based on this decision, you define your AutoAccounting rules for the raw cost or burdened cost accounting.

As revenue is accrued, the cost accrual amount is calculated and the expense account is debited via a Cost Accrual entry. A Cost Accrual Contra account is credited. A Cost Accrual Contra account is used instead of a Cost WIP account to allow you to easily view and reconcile the Cost WIP and Cost Accrual Contra accounts during the life of the project.

When the project is pending close, you must perform appropriate project closing entries. At this time you must ensure that the Cost Accrual (expense) amount equals the Cost WIP amount. You must fully credit the Cost WIP account and debit the Cost Accrual Contra account. When this is done, you have moved all cost WIP amounts to the Cost Accrual (expense) account. The balancing entry that accounts for the difference of the cost accrual amount and the cost amount is an entry to the Cost Accrual account.
If the project status is changed from a closed status to an active status after closing entries, the closing entries are automatically reversed the next time the Generate Draft Revenue process is run for the project. See: Close the Project: page 7 – 85.

Cost Accrual Calculation using Billing Extensions

Oracle Projects provides an example billing extension in which the cost accrual amounts are calculated. This example is called the Cost Accrual Billing Extension.

Figure 7 – 8 shows the calculation used in the example billing extension.

![Revenue-Based Cost Accrual](image)

Cost Accrual Amount = \((AR/BR * BC) – CS\)

WHERE:
- AR = Accrued Revenue To Date
- BR = Budgeted Revenue
- BC = Budgeted Costs
- CS = Accrued Costs To Date

You must decide some of the inputs to this extension:

- **Budget Amounts.** You specify which cost and revenue budget types to use in the calculation on the billing extension definition. If you do not specify values, the budget types Approved Cost Budget and Approved Revenue Budget are used. The last baselined budget version of the specified budget types are used. See: Billing Extensions: page 18 – 62.

- **Cost Amounts for WIP.** You determine whether to base your cost accrual on the budgeted raw cost or the budgeted burdened costs. You specify this on the definition of the billing extension. This also defines what cost amounts are accounted for as cost WIP. You must setup your AutoAcccounting rules to account for the appropriate cost amounts as cost WIP.
• **Event Types to use for Events.** You specify which event types to use when creating the events which result in the Cost Accrual, Cost Accrual Contra, and reversing Cost WIP entries.

**Designing a Cost Accrual Billing Extension**

Following are some facts to consider when you are using the example cost accrual billing extension.

• In the calculation in Figure 7 – 8, there is no relationship between the costs entered in the system and the cost accrual amounts generated by the Cost Accrual Billing Extension during the life of the project. The cost accrual amounts are calculated based on the actual accrued revenue, the budgeted cost amounts, and the budgeted revenue amounts.

• If the result of the formula in Figure 7 – 8 is zero or less than zero, no event is created. Cost accruals cannot be negative.

• If the budgeted costs are greater than the budgeted revenue amounts (the project is incurring a loss), then the accumulated cost accrual will be greater than the accumulated accrued revenue.

• Events are created at the funding level (project or top task).

• The billing extension example creates events that use only one account for each of the corresponding buckets: Cost Accrual, Cost Accrual Contra, and Cost WIP (for the reversing entries at project closing).

**Implementing the Cost Accrual Example**

In this section, we describe the setup steps required to support the Cost Accrual Billing Extension example. We also show some examples of a cost accrual setup.

1. **Define Event Types**

Define event types with the classification *Automatic*. You need an event type for events that will account for each of the following accounts:

• Cost Accrual
• Cost Accrual Contra
• Cost WIP (for reversing entries during project closing)
You will drive AutoAccounting rules based on these event types.

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Description</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Accrual</td>
<td>Cost Accrual Account</td>
<td>Automatic</td>
</tr>
<tr>
<td>Cost Accrual Contra</td>
<td>Cost Accrual Contra Account</td>
<td>Automatic</td>
</tr>
<tr>
<td>Cost WIP</td>
<td>Cost WIP Account (for reversing entries)</td>
<td>Automatic</td>
</tr>
</tbody>
</table>

Table 7–11 Example Cost Accrual Event Types (Page 1 of 1)

2. Define the cost accrual billing extension.

To define the cost accrual billing extension:

a) Value Sets and Descriptive Flexfields for Billing Extension

Set up the value sets and descriptive flexfield used in the billing extension definition. The Cost Accrual Billing Extension example requires following five descriptive flexfield segments to be set up on the Billing Extension:

- Cost Accrual Identifier. This value is used by the project verification rules and project status columns extensions to identify events created from the cost accrual billing extension. You must define the cost accrual identifier with a value of COST-ACCRUAL in the ATTRIBUTE11 column. You can define a value set with just one value that is uppercase. The minimum and maximum value is COST-ACCRUAL, with a maximum size of 12.

- Cost Accrual Event Type in the ATTRIBUTE12 column.

- Cost Accrual Contra Event Type in the ATTRIBUTE13 column.

- Cost WIP Event Type in the ATTRIBUTE14 column.

- Cost Basis in the ATTRIBUTE15 column. The cost basis specifies whether to use raw or burdened costs as the Cost WIP and raw or burdened budgeted costs in the cost accrual calculation. The two possible values are R and B. You can define a value set with just two values that are uppercase. The minimum value is B and the maximum value is R. The maximum size is 1.

The three segments that hold event types should use a table-validated value set with a length of 30 characters which displays all automatic event types using the following SQL:
select event_type
from pa_event_types
where event_type_classification = 'AUTOMATIC'

**Note:** After you have defined and used the billing extension, you must not change the values of the descriptive flexfield.

b) Define the Billing Extension

You define the billing extension with the following key attributes:

- Procedure: `pa_rev_ca.calc_ca_amt`. This is the example procedure provided by Oracle Projects. Use your own procedure name, as appropriate.
- Calling Place: Post Regular Processing
- Calling Process: Revenue
- Transaction Independent: Yes

<table>
<thead>
<tr>
<th>Cost Accrual Billing Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Procedure</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Order</strong></td>
</tr>
<tr>
<td><strong>Calling Process</strong></td>
</tr>
<tr>
<td><strong>Default Event Type</strong></td>
</tr>
<tr>
<td><strong>Event Description</strong></td>
</tr>
<tr>
<td><strong>Default Cost Budget</strong></td>
</tr>
<tr>
<td><strong>Default Revenue Budget</strong></td>
</tr>
<tr>
<td><strong>Calling Place</strong></td>
</tr>
<tr>
<td><strong>Required Inputs</strong></td>
</tr>
<tr>
<td><strong>Other Parameters</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Descriptive Flexfield:</strong></td>
</tr>
<tr>
<td><strong>Cost Accrual Identifier</strong></td>
</tr>
<tr>
<td><strong>Cost Basis</strong></td>
</tr>
<tr>
<td><strong>Cost Accrual Event Type</strong></td>
</tr>
</tbody>
</table>
c) Install the Billing Extension Package

You must install the billing extension PL/SQL package. The package that Oracle Projects provides is in the Oracle Projects admin/sql directory. The file names are PAXICOS.pls and PAXICOSB.pls.


3. Assign Billing Extension to Project Types

Assign the billing extension to the appropriate project types.

You can also choose to implement a billing extension that you assign to specific projects. To do this, you enable the Project Specific check box in the Billing Extension window. However, for the cost accrual example, you are expected to assign the billing extension at the project type level.


4. Define AutoAccounting

Define AutoAccounting setup for cost WIP and cost accruals. Typically, you define GL accounts for each of the different buckets, as shown in the example below:

<table>
<thead>
<tr>
<th>Cost WIP</th>
<th>1280</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Accrual</td>
<td>1285</td>
</tr>
<tr>
<td>Cost Accrual Contra</td>
<td>1286</td>
</tr>
</tbody>
</table>

To define AutoAccounting for Cost WIP and Cost Accruals:

a) Cost WIP account for incurring costs (via expenditure items)

To account for actual raw costs in cost WIP, you must perform the following steps:

- Define an AutoAccounting rule for Cost WIP.
Assign the Cost WIP rule and other appropriate rules to the Function Transaction of Contract for the following AutoAccounting functions:

- Labor Cost Account
- Expense Report Cost Account
- Usage Cost Account
- Burden Cost Account
- Inventory Cost Account
- Miscellaneous Cost Account
- WIP Cost Account (work in process from Manufacturing)
- Supplier Invoice Cost Account

If you use burdened cost as cost WIP, then you must define the AutoAcccounting rules for the Total Burdened Cost Debit and Credit functions and run the Distribute and Interface Total Burdened Cost processes before you generate revenue.

For more information about burdened costs, see: Burdening (Cost Plus Processing): page 5 – 16 and Accounting for Total Burdened Costs: page 5 – 39.

b) Cost Accrual accounts for events resulting from the billing extension

Assign the AutoAccounting rules to the Event Revenue function under the Write–On function transaction (under which Automatic events are accounted). To account for different event types under one function transaction, you must define a rule based on the event types. The rule may be a parameter–based rule that uses a lookup set, or it can be a SQL statement AutoAccounting rule that uses the SQL statement to map the event type to the account value.

**Note:** The AutoAccounting rules for the Cost WIP reversing entries created via an event should result in the same accounts as the AutoAccounting rules used to derive the Cost WIP account for costs incurred via expenditure items.

5. Implement Project Verification Rules

Implement project verification rules to ensure that project closing entries are made before the project status is changed to *Closed*. The rules should ensure that the closing entries are made when the project has a project status with a system status of *Pending Close*. 
Oracle Projects provides an example of how to enforce this requirement in the project verification extension. To implement the requirement, you remove the comments around the section for cost accruals in the project verification extension.


6. Implement Cost Accrual Columns in Project Status Inquiry

Implement columns to view Cost WIP and Cost Accrual amounts in the Project Status Inquiry window.

The PSI client extension includes an example of how to implement the following columns in columns 28 through 33 in the Project Status Inquiry window:

- ITD – Cost WIP
- PTD – Cost WIP
- ITD – Cost Accrual
- PTD – Cost Accrual
- ITD – Margin
- PTD – Margin

To implement these columns, you perform the following steps:

1. Remove the comments around the section for cost accruals in the project status inquiry column extensions. See: PSI Extension: page 16 – 203.


When a project is closed, these columns are updated. At that point, the amounts for the PTD (period to date) columns are a combination of PTD activity and closing activities.

---

**Case Study: Using Cost Accrual for a Project**

A Project is created with the following values:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>CA–Project01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name</td>
<td>CA–Project for Documentation</td>
</tr>
</tbody>
</table>
Billing

Distribution Rule

<table>
<thead>
<tr>
<th>Employee Bill Rate Override</th>
<th>WORK/WORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amy Marlin</td>
<td>1,000 hourly</td>
</tr>
</tbody>
</table>

One additional task, Task 2, is added.

Budget and Fund the Project

The following uncategorized, non–time–phased budgets are created:

Cost Budget:

<table>
<thead>
<tr>
<th>Budget Type</th>
<th>Approved Cost Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>1000</td>
</tr>
<tr>
<td>Raw Cost</td>
<td>250,000</td>
</tr>
</tbody>
</table>

Revenue Budget:

<table>
<thead>
<tr>
<th>Budget Type</th>
<th>Approved Revenue Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1,000,000</td>
</tr>
</tbody>
</table>

Project CA–Project01 is funded in agreement CA–01 with a soft limit purchase order from the customer for $1,000,000 US. The budget and funding are baselined.

Enter Timecard

The following pre–approved timecard batch is entered, submitted, and released:

Batch: CA–01–tc
Ending Date: 13–APR–1997
Employee: Marlin, Amy
### Table 7 – 12

<table>
<thead>
<tr>
<th>Item Date</th>
<th>Project Number</th>
<th>Task Number</th>
<th>Expenditure Type</th>
<th>Quantity</th>
<th>Raw Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>12–APR–1977 CA–Project01 1</td>
<td>Professional</td>
<td>50</td>
<td>3000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13–APR–1997 CA–Project01 2</td>
<td>Professional</td>
<td>50</td>
<td>3000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
<td>6000</td>
</tr>
</tbody>
</table>

The PRC: Distribute Labor Costs process is run. The cost rate for Amy Marlin is $60.00 per hour.

The following accounting entries are created for these costs:

| Dr. | Cost WIP | 6,000.00 |
| Cr. | Payroll Clearing | 6,000.00 |

#### Generate Revenue and Cost Accrual

Because this project uses the WORK/WORK revenue distribution rule, the draft revenue is calculated as follows:

\[(100 \text{ hours} \times $1,000 \text{ per hour}) - 0 = $100,000\]

The cost accrual is calculated as follows (using the algorithm in Figure 7 – 8):

\[(100,000 / 1,000,000 \times 250,000) -0 = 25,000\]

The cost accrual events are created and accounted as follows:

| Dr. | Cost Accrual | 25,000.00 |
| Cr. | Cost Accrual Contra | 25,000.00 |

Revenue accounting entries are created as follows:

| Dr. | Unbilled Revenue | 100,000.00 |
| Cr. | Revenue | 100,000.00 |

The draft revenue is released and interfaced to GL.
Close the Project

Using the Project Closing procedure, the project status is set to *Pending Close*. This status change initiates the closing cost accrual entries. The Generate Draft Revenue process is run and three events are automatically created and accounted for as follows:

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Cost Accrual Contra</th>
<th>25,000.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Cost WIP</td>
<td>6,000.00</td>
</tr>
<tr>
<td>Cr.</td>
<td>Cost Accrual (Balance so that Cost Accrual = Cost WIP at end of project)</td>
<td>19,000.00</td>
</tr>
</tbody>
</table>

The draft revenue is released and interfaced to GL.

The project status can now be changed to *Closed*. If the project is reopened (if its status is changed to an active status with a system status other than *Pending Close* or *Closed*), these three events are reversed the next time the Generate Draft Revenue process is run for the project.

Implementing Your Own Cost Accrual Procedures and Extensions

Your business requirements for cost accruals may be different from those addressed in the cost accrual example that Oracle Projects provides. If this is the case, you must design and create your own billing extension and appropriate setup data to match your requirements.

Listed below are some of the business requirements for cost accruals that may vary in your company from the cost accrual example provided by Oracle Projects:

- **The cost accrual calculation.** For example, you may calculate cost accruals to be equal the cost WIP, instead of calculating cost accruals based on the budgets as in the cost accrual example.

- **The number of accounts to which you charge cost WIP or cost accruals.** The cost accrual example uses one account for each bucket: Cost Accrual, Cost Accrual Contra, and Cost WIP. If you charge your cost WIP to many accounts, you will need to create your own cost accrual billing extension to account for the many cost WIP accounts that you use.
• **What is considered cost WIP.** The cost accrual example includes all costs in cost WIP. If you need to exclude certain costs from the cost WIP calculation, you need to change your cost accrual implementation.

Oracle Projects provides a template package and procedure that you use as the basis of your cost accrual extension procedures. The name of the package is **pa_rev_ca**.

Print out and review the following files before you begin writing cost accrual billing extensions. The files are located in the Oracle Projects admin/sql directory.

**PAXICOSB.pls.** Package Body Template. This file contains the procedure that you modify to implement cost accrual billing extensions. You can define as many procedures as you like within this package or within the predefined procedure.

**PAXICOSS.pls** Package Specification Template. If you create procedures within the package outside the predefined procedure, you must also modify this file.

**Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.

You can base your cost accrual billing extension on the one provided by Oracle Projects. You must not change the example billing extension definition or the logic. You can copy the definition and the PL/SQL package to use as a starting point for your own billing extension. You are responsible for the support and upgrade of your cost accrual implementation, including the billing extension procedure and logic.

**See Also**

*PL/SQL User’s Guide and Reference Manual*

*Oracle Projects Technical Reference Manual*

Designing Client Extensions: page 18 – 9
This chapter describes the project summary amounts that Oracle Projects maintains for project status tracking. In addition, it describes how you can use Project Status Inquiry (PSI) to review summary amounts and calculations by project, task, and resource. For example, you can review project summary amounts, or budget amounts by budget type. You can also drill down to commitments, actuals, and events detail for tasks and resources.
With Project Status Inquiry (PSI), you can review the current status of your projects and then drill down for more detailed review of a project and its tasks. Oracle Projects provides you with several features that allow you to control your search for project status information. For example, you can do the following:

- Limit your search for projects by entering search criteria
- Control the type of information that Oracle Projects displays by using custom folder definitions
- View summary information by project, task, and resource
- Drill down from lowest tasks and resources to commitments and expenditure item details
- Drill down from projects, top tasks and lowest resources to events for contract projects

See Also

Project Status Inquiry Setup: page 16 – 194
Project Summary Amounts: page 8 – 10
Reviewing Project, Task, and Resource Summary Amounts

You can review project summary amounts to quickly determine the status of your projects. After you review project summary amounts, you can drill down to see the summary amounts for the tasks of a project.

You also can drill down to see the summary amounts for the resources of the project or the selected task. You select the resource list by which you want to view actuals and budgets. By default, you drill down using the drilldown default resource list defined for the project. You can choose to drilldown by other resource lists assigned to the project.

In addition, you can export PSI data into a spreadsheet for further analysis. Choose Action, Export from any of the Project Status windows (Project, Task, or Resource) to export the data into a spreadsheet file. See: Export Oracle Applications User’s Guide.

Note: You can customize this folder form to show the Project Status information that you need. See: Customizing the Presentation of Data in a Folder Oracle Applications User’s Guide.

Prerequisite

- Run the Update Project Summary Amounts process for your projects. The Project Status window uses the data that is summarized by this process. If you do not run this process, you will not be able to see any numbers in the Project Status window. See: Updating Project Summary Amounts: page 8 – 15.

To review project summary amounts:

1. Navigate to the Project Status window.
2. Enter the search criteria to find the project(s) you want to review.
3. Choose the Find button.

You can review summary amounts for the projects that match your criteria in the Project Status window. You can also review summary status information by task or resource.

Oracle Projects displays only the projects with a current budget that is summarized or with summarized actuals and commitments.

This window displays the Current Period as the current reporting period by which Oracle Projects calculates the period-to-date values for projects. See: Maintaining To-Date Amounts: page 8 – 14.
To review task summary amounts:

- From the Project Status window, select the project you want and then choose the Task Status button to review top tasks and their summarized amounts. Choose the Task button to review details for a selected task.

  To drill down to review subtasks, select a top task, and then double-click on the selected task number to review the subtasks that are one level below the top task. Continue this for subsequent task levels.

To review resource summary amounts:

- To review project resources, select a project in the Project Status window and choose the Resource Status button.

  To review task resources, select a task in the Task Status window, and then choose either the drilldown indicator or the Resource Status button.

  Oracle Projects displays the resource groups and resources in the resource list that are budgeted or have summarized actuals or commitments.

  To review resources below a resource group, select a resource group, and then double-click on the resource name.

To view actuals and commitments using a different resource list:

- Choose a different resource list that is assigned to the project from the Resource Drilldown List menu item on the Special Menu.

See Also

- Project Summary Amounts: page 8 – 10
- Resources and Resource Lists: page 16 – 155
- Resource List Assignments: page 2 – 44
- Summarizing Actuals and Commitments by Resource: page 8 – 19
Using Factoring to Control Currency Display

You can use the factoring feature in PSI to make very large currency amounts easier to read. Factoring enables you to control the multiples factor used to display the amounts. Factoring can be used for all PSI columns identified as currency amounts in the Project Status Column Setup window.

To change the factor in a PSI window:

1. Navigate to the PSI Project, Task, or Resources window.
2. From the Special menu, choose Factor By.
3. From the Factor By list of values, select a factor. For example:
   - **Units.** Displays amounts as calculated.
   - **Tens.** Displays amounts as multiples of ten (10 = 1.00).
   - **Ten Thousands.** Displays amounts as multiples of ten thousand (10,000 = 1.00).
   - **Millions.** Displays amounts as multiples of one million (1,000,000 = 1.00).

This factor applies to all status folders during your current session, and is active until you exit Project Status Inquiry. The factor is not saved in the PSI folders.

To change the factor of a PSI column defined by the PSI client extension:

- A function named PA_STATUS.Get_Factor can be called by the PSI client extension to enable factoring for amounts calculated by the PSI client extension. See: PSI Extension: page 16 – 203.

Comparing Budget to Actual and Commitment Amounts

You can review current and original budgeted amounts and compare them to actuals and commitment amounts.

You review the budgeted amounts for one cost budget type and one revenue budget type at a time.

The default cost budget type is the predefined Approved Cost Budget. The default revenue budget type is the predefined Approved Revenue Budget.
Prerequisite

- Enter and baseline a budget for the project. See: Entering a Draft: page 3 – 15 and Baseline a Draft: page 3 – 35.

To review a different cost or revenue budget type:

- Choose Revenue Budget Type from the Special Menu.

You can choose a different cost or revenue budget type from all budget types from the Project Status window. If you choose a budget type from the Task Status window, you can only select from the budget types assigned to the project.

See Also

Overview of Project Budgets: page 3 – 2
Define Budget Types: page 16 – 149

Drilling Down to Actuals, Commitments, and Events Detail

The following drilldown options are available for actuals, commitments, and events detail in the Task and Resource Status windows:

- You can drill down to see supporting actuals details for the project summary amounts as of the project’s last reporting period.
- You can drill down to see supporting commitment details for the commitment summary amounts.
- You can drill down to see supporting revenue details, including expenditure items and events, for the project revenue summary amounts irrespective of time period.
- You can drill down from the Task Status window to the Oracle Payables Invoice Overview form.

Table 8 – 1 illustrates from which status windows you can drill down to actuals, commitments, and events detail, and any drilldown restrictions...
imposed by each window. The drilldown to events is only available for contract projects with Oracle Project Billing.

<table>
<thead>
<tr>
<th>Window Name</th>
<th>Commitments</th>
<th>Actuals</th>
<th>Events</th>
<th>Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Status</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Task Status</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>You must select a lowest task before choosing the Commitments or Actuals button, or a top task before choosing the Events button.</td>
</tr>
<tr>
<td>Resource Status</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>You must select a lowest task before choosing the Commitments or Actuals button or a top task before choosing the Events button.</td>
</tr>
</tbody>
</table>

Table 8 – 1 (Page 1 of 1)

**Prerequisite**

- Enter and baseline a budget for the project. See: Entering a Draft: page 3 – 15 and Baseline a Draft: page 3 – 35.

**To review actuals details for a task or resource:**

1. Navigate to the Project Status window.
2. Find the project(s) you want in the Find Project Status window.
3. Choose the **Actuals** button from either the Task Status or Resource Status window.

   Use the Find Expenditure Items window to reduce the number of expenditure items that appear in the Expenditure Item Details window.

   Oracle Projects displays expenditure items incurred in the last period that the summary amounts were updated for the project. To view expenditure items from prior periods in the Expenditure Items window, change the default date range using the Find Expenditure Items window.
To drill down to the Oracle Payables Invoice Overview form:

1. Navigate to the Project Status window.
2. Find the project(s) you want in the Find Project Status window.
3. Choose the **Actuals** button from the Task Status window.
   
   Use the Find Expenditure Items window to reduce the number of expenditure items that appear in the Expenditure Item Details window.
4. Choose the **AP Invoice** button to view the related invoice in the Oracle Payables Invoice Overview form.

   **Note:** The AP Invoice button is only enabled (1) for expenditure items whose expenditure type class is either Supplier Invoices or Expense Reports, and (2) if function security is implemented in such a way that the user is able to see the button.

To review commitment details for a task or resource:

1. Navigate to the Project Status window.
2. Find the project(s) you want in the Find Project Status window.
3. Choose the **Commitments** button from either the Task Status or Resource Status window.

   Use the Find Commitments window to reduce the number of commitments that appear in the Commitment Details window.

To review event revenue details for a project, task, or resource:

- Choose the **Events** button from the Project Status, Task Status, or Resource Status window.

See Also

- Expenditure Type Classes: page 16 – 71
- Function Security: page C – 2
Reviewing Customer Invoices for a Contract Project

In the Project Status window, you can drill down to view either summary or detail information about customer invoices for contract projects.

► To review customer invoices for a contract project:
   1. Navigate to the Project Status window.
   2. Find the contract project(s) you want in the Find Project Status window.
   3. Choose a contract project in the Project Status window.
   4. Choose the Invoices button.

See Also

Invoicing a Project: page 7 – 47
Project Summary Amounts

To facilitate fast and easy status reporting and inquiries, Oracle Projects maintains various levels of project summary amounts for cost, commitment, revenue, and budget amounts by project, task, and resource.

Oracle Projects maintains to-date amounts as follows:

- Period-to-Date Amounts (PTD)
- Prior Period Amounts (PP)
- Year-to-Date Amounts (YTD)
- Project or Inception-to-Date Amounts (ITD)

You can update project summary amounts anytime after you distribute costs, independent of when you interface costs and revenue to Oracle General Ledger. This allows you to have up-to-date information for project status reporting, independent of the accounting flow.

See Also

Maintaining To-Date Amounts: page 8 – 14
Resources and Resource Lists: page 16 – 155

Maintaining Summary Amounts

Oracle Projects maintains amounts for each of the to-date values of Period-to-Date (PTD), Prior Period (PP), Year-to-Date (YTD), and Inception-to-Date (ITD), in addition to total (at project completion) budget amounts.

All amounts are held at the project, task, and resource levels except for non-labor quantities. Labor hours are summarized to the project and task levels based on the labor resource amounts. All other quantities that are not labor hours are summarized only to the resource level.

Actual Cost Amounts

Oracle Projects summarizes the following cost amounts for expenditure items after the items are costed:
• Raw Cost
• Billable Raw Cost (for contract projects only)
• Capitalizable Raw Cost (for capital projects only)
• Burdened Cost
• Billable Burdened Cost (for contract projects only)
• Capitalizable Burdened Cost (for capital projects only)
• Actuals Labor Hours
• Billable Labor Hours (for contract projects only)
• Actuals Quantity (for resources only)
• Billable Quantity (for resources only; for contract projects only)

Actual Revenue Amounts
Oracle Projects summarizes the following revenue amounts for billable expenditure items and events on contract projects after the revenue is released:
• Revenue

Budget Amounts
Oracle Projects summarizes budget amounts for the to-date values, in addition to total (at project completion) budget amounts, using the current and original budget versions of each budget type. When you run the Update Project Summary Amounts process, Oracle Projects deletes all previously summarized cost and revenue budget amounts and recreates the new budget to-date and total amounts.

Cost Budget Amounts
• Current Budget Raw Cost
• Original Budget Raw Cost
• Current Budget Burdened Cost
• Original Budget Burdened Cost
• Current Budget Cost Labor Hours
• Original Budget Cost Labor Hours
• Current Budget Cost Quantity (for resources only)
• Original Budget Cost Quantity (for resources only)
Revenue Budget Amounts

- Current Budget Revenue
- Original Budget Revenue
- Current Budget Revenue Labor Hours
- Original Budget Revenue Labor Hours
- Current Budget Revenue Quantity (for resources only)
- Original Budget Revenue Quantity (for resources only)

Reconciling Budget Periods to Summarization Periods

If a budget period does not match the summarization period or the budget is not time-phased, the summarization process must apportion the budget amounts into the summarization periods.

If a budget is not time-phased, Oracle Projects determines the budget start and end dates based on the project or task start and end dates, as illustrated in the following table:

<table>
<thead>
<tr>
<th>Budget Entry Level</th>
<th>How the Budget Period is Determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>Project Start and End Dates</td>
</tr>
<tr>
<td>Task (where start and end dates have been entered for the task)</td>
<td>Task Start and End Dates</td>
</tr>
<tr>
<td>Task (where start and end dates have not been entered for the task)</td>
<td>Project Start and End Dates</td>
</tr>
</tbody>
</table>

Table 8 – 2 (Page 1 of 1)

Reconciling Summarization by PA Period

If summarization is by PA period, the summarization process divides the amounts into PA periods. If a budget period spans PA periods, the process prorates the amounts by day.

Reconciling Summarization by GL Period

If summarization is by GL period, the summarization process uses the following logic:

1. Divide the amounts into PA periods, prorating the amounts by day if a budget period spans PA periods.
2. Summarize the amounts in the GL period that includes the ending date of the PA period determined in step 1. This process is illustrated in the following diagram:

Figure 8–1
Summarization by GL Periods

See Also

Implementation Options: Summarization Period Type: page 16–57

Commitment Amounts

Oracle Projects maintains the summary commitment amounts, by taking a snapshot of the commitments when the summarization is done; the commitment summary amounts are deleted and recreated.

- Commitment Raw Cost
- Commitment Burdened Cost

See Also

Define Budget Types: page 16–149

Drilling Down to Commitment Details: page 8–6
Maintaining To–Date Amounts

Oracle Projects maintains to–date summary amounts as follows:

• Period–to–Date Amounts (PTD)
• Prior Period Amounts (PP)
• Year–to–Date Amounts (YTD)
• Project or Inception–to–Date Amounts (ITD)

You also specify the current reporting period through which the to–date values are maintained.

The prior–period summary amounts are the period–to–date summary amounts for the previous reporting period. The period–to–date, year–to–date, and inception–to–date amounts are summarized in relation to the current reporting period.

Oracle Projects derives the year–to–date values using the accounting year of the GL period associated to the current reporting period.

Summarization Period Type

During implementation, you define whether to maintain these to–date amounts by PA period or GL period. You specify this in the Implementation Options window. See Implementation Options: Summarization Period Type: page 16 – 57

Current Reporting Period

The current reporting period defines the period through which the amounts are summarized for all projects in your system. A common reporting period facilitates cross–project reporting.

Setting the Current Reporting Period

You set the current reporting period used in maintaining project summary amounts in the PA Periods window. You can select any PA period that is later than the current reporting period.

Typically, you set the current reporting period in one of two ways:

• Use the closed PA period before the current open period for new transactions. This method provides a static view of the project
summary amounts and gives a historical view through the last period.

- Use the current PA Period open for transactions. This provides a dynamic view of the project summary amounts, because you can update the values for all new transactions entered each day.

Prerequisite

- Define PA Periods.

To query the current reporting period:

- Navigate to the PA Periods window. Query the PA Period with the Reporting Period box checked. This is the current reporting period.

To change the current reporting period:

1. Navigate to the PA Periods window.
2. Choose the Set Reporting Period button.
3. Accept the default or change the Next Reporting period to another future period.
4. Choose OK. Oracle Projects uses the New Reporting Period you specify for subsequent project summary amount processing and reporting.

Optionally submit the Update Project Summary Amounts process for all projects in your system to update the project summary amounts using the new current reporting period. See: Updating Project Summary Amounts: page 8 – 15.

See Also

Setting the PA Reporting Period: page 16 – 69

Updating Project Summary Amounts

You run the Update Project Summary Amounts process to update the project summary amounts with new cost, commitment, and revenue
transactions and any new baselined budget versions. You can run this process as many times as you want.

If you maintain to–date amounts by GL period, select the PA period in the PA Periods window that is the first PA period of the GL period that you are selecting as the current reporting period.

You run the Update Project Summary Amounts After a Resource List Change process when you have changed the resource list and want to map historical transactions to resources using the new resource list.

**Prerequisites**

- Enter expenditure items and distribute costs (optional).
- Accrue and release revenue (optional).
- Create new commitments (optional).
- Create a new current budget (optional).
- Set the current reporting period.

**To update project summary amounts:**

1. Navigate to the Submit Request window.
2. Choose the PRC: Update Project Summary Amounts process or the PRC: Update Project Summary Amounts After a Resource Change process.
3. Enter the project range or project number for which you want to update summary amounts. You may choose to submit this process many times for different project ranges.
4. Optionally, enter other options to control what Oracle Projects updates.
5. Choose Submit.

**To update project summary amounts after changing a resource list:**

2. Enter the From/To Project Number and Resource List Name. You may choose to submit this process many times for different project ranges.
3. Choose Submit.
Creating Project Summary Amounts After Conversion

After you have converted detail transactions from your legacy system to Oracle Projects, you can create project summary amounts using these processes:

- Refresh Project Summary Amounts
  Use this process to create the project summary amounts from the detail transactions that you have converted.

- Refresh Transaction Summary Amounts
  Use this process if you are converting large numbers of detail transactions for projects and want to build the summary amounts in smaller processing units. You first run the Refresh Transaction Summary Amounts process to create transaction summary amounts upon which project summary amounts are created. You then run the Update Project Summary Amounts process to create the project summary amounts.

To create project summary amounts after conversion:

1. Navigate to the Submit Request window and choose PRC: Refresh Project Summary Amounts.
2. Enter the project range parameter. You may submit many requests for different project ranges.
3. Choose Submit.

To create project summary amounts after conversion by first creating transaction summary amounts from a project’s detail transactions:

1. Navigate to the Submit Request window and choose PRC: Refresh Transaction Summary Amounts.
2. Enter the project range, period range, and expenditure type class parameters. You may submit many requests for different project ranges, period ranges, or expenditure type classes.

3. Choose Submit.

4. After you have built all the transaction summary amounts, run the PRC: Update Project Summary Amounts process to create the project summary amounts. See: Updating Project Summary Amounts: page 8 – 15.

Troubleshooting Project Summary Amounts

Summarization Log

If you suspect that the project summary amounts do not properly reflect the source detail, a good way for you to start troubleshooting is to examine the log file produced by the Update Project Summary Amounts process. The summarization log shows the following information related to a project-level summarization:

- The submission parameters for the process
- Before and after numbers for actuals
- Before and after numbers for each budget type

Careful examination of the summarization log can provide evidence as to whether the problem originated in the summarization process or some other aspect of the Oracle Projects application.

Update Project Summary Amounts Report

The Update Project Summary Amounts Report, which is produced by the Update Project Summary Amounts process, lists all costs, revenue, budget amounts, and commitments that were summarized during the process.

This report also lists future period transactions. Future period transactions are transactions whose PA Period is later than the current PA reporting period. Any transactions appearing in this section have not been summarized by the Update Project Summary Amounts process, and will not be reflected in the Project Summary window. To summarize these transactions, you must set the current reporting period to a PA Period equal to or later than the PA Period of these transactions. See: Setting the PA Reporting Period: page 16 – 69.
Summarizing Actuals and Commitments by Resource

Oracle Projects summarizes actuals and commitments by resource when you update project summary amounts.

Oracle Projects automatically maps each transaction to one resource in each resource list assigned to the project to which the transaction is charged. This mapping is based on the following: employee or supplier, expenditure organization, and expenditure type of the transaction; you do not have to specify the resource when you enter the transaction.

Oracle Projects maps each transaction to a resource based on the combination of the resource and its resource group. For example, you can enter an organization resource of Risk Analysis under both the resource groups of Labor and Other Expenses in one resource list. Timecards for the Risk Analysis organization map to the resource of Risk Analysis under the Labor resource group, and expense reports for the Risk Analysis organization map to the Risk Analysis resource under the Other Expenses resource group.

Precedence-Based Mapping of Transactions to Resources

There are cases in which one transaction could map to more than one resource in a resource list. For example, you may have entered both an employee resource for Marlin and a job resource of Senior Consultant under the Resource Group of labor. Amy Marlin, a senior consultant, charges labor to the project using this resource list. Marlin’s labor transaction can be mapped to both resources. However, Oracle Projects ensures that each transaction maps to only one resource in a resource list by utilizing a precedence-based mapping to determine which resource in the resource list is mapped to each transaction. Oracle Projects predefines the precedence of each resource type for each expenditure type class. The resource types that are more specific are ranked higher and thus are used to summarize the transaction amounts.

The precedence by resource type is as follows:

1. Employee and Supplier
2. Job
3. Organization
4. Expenditure Type and Event Type
5. Expenditure Category and Revenue Category

For example, an employee resource is used before a job resource is used.
When a Transaction Does Not Map to a Resource

It is possible that a transaction cannot be mapped to any resource defined in the resource list. Oracle Projects maps such transactions to an *Unclassified* resource.

If you discover that transactions are mapped to an Unclassified resource, and you subsequently want to change the resource list to ensure that all transactions are mapped to a resource, you can add the appropriate resource to the resource list and then update the project summary amounts after a resource list change.

Changing the Resource List After the Resource List is Used in Summarization

You may need to change your resource list after you have used it for summarization for status reporting. Some reasons for this may be due to new employees or organizations defined for your company, if you use employees and organizations as resources, or because your company has decided to classify expenses in a different way, thus disabling use of an expenditure type.

When you change a resource list, the new resource may change the way a transaction is mapped to a resource. In such a case, you need to decide how to handle the transactions that have already been summarized using the resource list precedence that existed before you made the change. You may choose to leave the historical transactions summarized as they are and have new transactions summarized using the new precedence. For more consistency in the summarization, you can summarize all historical transactions mapped to resources in that resource list again so that they use the new resource precedence by running the PRC: Update Project Summary Amounts after a Resource List Change process.

See Also

- Updating Project Summary Amounts: page 8 – 15
- Resources and Resource Lists: page 16 – 155
- Resource List Assignments: page 2 – 44
- Project Summary Amounts: page 8 – 10
- Case Study: Summary Amounts for Reporting: page 18 – 141
Project Status Inquiry: page 8 – 2

Reviewing Resource Summary Amounts: page 8 – 3
This chapter describes each standard report and listing in Oracle Projects.
Submitting Requests

Use Oracle Projects standard reports and listings to keep track of your assets, and to reconcile Oracle Projects to your general ledger.

You can run a single request, or submit a streamline request to submit several reports as a group.

Submitting Requests

To submit a standard request from the Submit Request window:

1. Navigate to the Submit Request window.
2. Enter Request in the Type field.
3. Enter the name of the request that you want to submit.
4. If the request or request set has parameters, enter the parameters in the Parameters window. Choose OK to save the parameters.
5. Choose Submit to submit your request. You can review the status of your request in the Concurrent Requests Summary or in the Requests window.

No List of Values for Project Number Range Parameter

When a report or process has Starting Project Number and Ending Project Number as parameters, no list of values is displayed when you enter these fields, and the project numbers you enter are not validated by the system.

This allows you to enter a range of project numbers that will accommodate the needs of the report or process. For example, you can submit a process that will include project 000000 through project 999999, whether or not projects currently exist that have those project numbers. If the process is resubmitted automatically, it will include the full range of projects without the need to manually change the project number range.

Submitting a Streamline Request

The Submit Streamline Processes process submits and monitors a series of other processes that must be run sequentially to complete a function. For example, in order to interface labor costs between Oracle Projects and Oracle General Ledger, a user must submit three separate
processes: Interface Labor Costs to General Ledger, Oracle General Ledger’s Journal Import, and Tieback Labor Costs from General Ledger. By using the PRC: Submit Streamline Processes process, a user avoids having to run and track the status of these processes individually. Instead, the user submits one Streamline process for the option ‘Interface Labor Costs to GL’; this process then submits and monitors the progress of each separate process in sequence. When all processes required to complete a function are finished, the Submit Streamline Processes process itself finishes.

Oracle Projects provides two types of streamline processes:

- Interface Streamline Processes which combine distribute, interface, and tieback cost, invoice or revenue processes between Oracle Projects and other Oracle applications.
- Project Streamline Processes which combine distribute processes for labor, usage, and supplier invoice adjustments, generate revenue, and generate invoice processes for a single project. Generally, you submit a project streamline request after you make expenditure or invoice adjustments.

To submit a streamline request:

1. Navigate to the Submit Request window.
2. Choose either PRC: Submit Interface Streamline Processes or PRC: Submit Project Streamline Processes from the request Name list of values.
3. Choose the Streamline Option(s) you want to submit.

Attention: You must use the same report mode, either summarized or detailed, to interface expense report costs to Oracle Payables and to tieback the same expense reports. See: Interface Expense Reports to Oracle Payables: page 12 – 24.
4. Enter the Reschedule Interval, Reschedule Time of Day, and Stop Rescheduling Date.
5. Choose whether you want to Adjust Dates.

Report Output

There is one output report that shows you the results of the Submit Streamline Processes process:
• **The Streamline Processing Report.** Lists the name, the concurrent request ID, and the completion status of each child process monitored by the Submit Streamline Processes process.

**Cancelling Requests**

► **To cancel a concurrent request:**

- In the Concurrent Requests Summary, query the concurrent request number for your request. Select your request. Choose Cancel Request. See also: Cancelling Requests, *Oracle Applications User’s Guide*.

**Monitoring Requests**

► **To monitor status of a concurrent request:**

- You can view the status of your request in the Requests window by choosing View My Requests from the Help Menu. See Also: Monitoring Requests, *Oracle Applications User’s Guide*.

**Debug Mode**

You can run Oracle Projects processes and some reports in debug mode. Debug mode provides more details in the log file for debugging purposes, and creates a trace file for performance analysis.

► **To run a process or report in debug mode:**

Set the profile option **PA: Debug Mode** to *yes*, and submit the process or report.

**See Also**

- Defining Request Sets *Oracle Applications User’s Guide*
- Submitting a Request *Oracle Applications User’s Guide*
- Submitting a Request Set *Oracle Applications User’s Guide*
Implementation Listings

These implementation listings help you audit your implementation of Oracle Projects, so you can verify your entry of implementation data and document your implementation decisions.

Report Submission

You submit each of the implementation listings from the Submit Request window. Include the prefix “IMP:” when you enter the report name. See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Agreement Types Listing

Use the IMP: Agreement Types Listing to review all agreement types and their associated terms and revenue limit defaults. See also: Agreement Types: page 16 – 123.

AutoAccounting Functions Listing

Use the IMP: AutoAccounting Functions Listing to review a complete list of the parameters and transactions associated with a particular AutoAccounting function.

For each function, this report displays all of the possible parameters that AutoAccounting rules use to derive key flexfield segment values. The report also shows you all of the transactions related to the AutoAccounting function and whether each transaction is enabled or disabled.

Parameters

Function Name. to limit the output of this report to only one function, enter the function. Otherwise, leave this field blank.
AutoAccounting Lookup Sets Listing

Use the IMP: AutoAccounting Lookup Sets Listing to obtain a list of all the AutoAccounting lookup sets.

For each AutoAccounting lookup set selected, this report prints each possible intermediate value and its corresponding segment value.

Parameters

Lookup Set. To limit the output of this report to only one lookup set, enter the lookup set. Otherwise, leave this field blank.

AutoAccounting Rule Definitions Listing

Use the IMP: AutoAccounting Rule Definitions Listing to review the definition of a particular AutoAccounting rule. See: Define Rules: page 16 – 220.

For each AutoAccounting rule selected, this report displays the type of its intermediate source (either a Constant, Parameter, or SQL Statement) and the corresponding value for that source. If the intermediate value source is a SQL statement, this report displays the text of that statement.

This listing also includes the segment value source (either the Intermediate Value or a Segment Value Lookup Set) that maps an intermediate value to the final segment value. If the segment value source is a lookup set, this report displays the name of that lookup set.

Parameters

Rule Name. To limit the output of this report to only one rule name, enter the rule name. Otherwise, leave this field blank.

AutoAccounting Segment Rule Pairings Listing

Use the IMP: AutoAccounting Segment Rule Pairings Listing to review all pairings of AutoAccounting rules with key flexfield segments.

For each function selected, this report displays each of the function’s transactions. It also lists the AutoAccounting rule and key flexfield

This report also displays the function's transactions without paired segments and rules.

**Parameters**

**Function Name.** To limit the report to only one function, enter the function. Otherwise, leave this field blank.

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**Class Categories and Codes Listing**

The IMP: Class Categories and Codes Listing lists class categories and their associated class codes. See: Defining Project Classifications: page 16 – 167.

For each class category selected, this report indicates whether a class category is a mandatory part of project setup, whether AutoAccounting uses the class category, and whether the “pick one code only” restriction is assigned to a class category.

**Parameters**

**Class Category.** To limit the report to one class category, enter the category. Otherwise, leave this field blank.

---

**Compensation Rules Listing**


**Parameters**

**Compensation Rule.** To limit the report to only one compensation rule, enter the compensation rule. Otherwise, leave this field blank.
Credit Types Listing

Use the IMP: Credit Types Listing to obtain a list of all credit types. See: Credit Types: page 16 – 142

Employee Assignments Listing and Employee Assignments by Organization Listing

Use the employee assignments reports to review all employees including their associated organization and job assignments. See: Employees: page 16 – 50.

**IMP:Employee Assignments Listing.** If you want a listing for a particular organization, use this report and specify that organization in the report parameters. Leave organization parameters blank to see all employees.

**IMP:Employee Assignments by Organization Listing.** This report starts with a particular organization and reports down the organization hierarchy listing employees and their jobs. You cannot print a listing for a single organization using this report unless the organization is on the lowest level of the hierarchy.

**Parameters**

Enter values for organization, job, job level, and/or job discipline, to limit the output of this listing to include only the specific employees you want to review.

**Effective Date.** Date Oracle Projects uses to identify active employee assignments. The report lists only active employees.

**Start Organization.** (Employee Assignments by Organization Listing only). Organization from which you want the report to start down the organization hierarchy listing employee assignments.

Event Types Listing

Use the IMP: Event Types Listing to obtain a list of all the event types and their classifications. See: Event Types: page 16 – 143.
Expenditure Cost Rates Listing

Use the IMP: Expenditure Cost Rates Listing to review the non-labor expenditure cost rates. You can print a listing for one or all expenditure categories, one or all expenditure types, and/or for a specified effective date. If an effective date is specified for the report, the report will list only expenditure cost rates that are active as of the date you enter.

See: Defining cost rates for expenditure types: page 16 – 90.

Expenditure Types Definition Listing

Use IMP: Expenditure Types Definition Listing to review expenditure types. You can print a listing for one or all expenditure categories and/or for a specified effective date. If an effective date is specified for the report, the report will list only expenditure types that are active as of the date you enter.

See: Expenditure Types: page 16 – 78

Implementation Options Listing

Use the IMP: Implementation Options Listing to review all values you entered in the Define Implementation Options window. See: Implementation Options: page 16 – 56.

Invoice Formats Listing

Use the IMP: Invoice Formats Listing to review invoice formats. See: Invoice Formats: page 16 – 129.

For each invoice format listed, this report displays the grouping, the invoice format type, and the fields and text objects that comprise each invoice format line.

Parameters

Format Name. To limit the report to one format name, enter the format name. Otherwise, leave this field blank.
Grouping Name. To submit the report for only one grouping name, enter the grouping name. Otherwise, leave this field blank.

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Job Listing

Use the IMP: Job Listing to review jobs. See: Jobs: page 16 – 46.

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Labor Cost Multipliers Listing


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Labor Cost Rates Listing and
Labor Cost Rates By Organization

Use the Labor Cost Rates Listings to review all employees and their cost rates, job level, job discipline, or compensation rule. See: Employee Cost Rates: page 16 – 95, and Employees: page 16 – 50.

**IMP: Labor Costs Rates Listing.** For each employee listed, this report displays the employee’s active organization and job assignments, the assigned compensation rule, and the hourly cost rate.

**IMP: Labor Cost Rates Listing By Organization.** This report starts at a specified organization and reports down the organization hierarchy listing employees and their labor cost rates. You cannot print a listing for a single organization using this report unless the organization is on the lowest level of the hierarchy.

---

Selected Parameters

**Top Organization.** (Cost Rates Listing By Organization only) The organization from which you want the Labor report to start down the organization hierarchy.

**Effective Date.** This listing includes all labor cost rates that are effective as of the date you enter here. Leave blank to include all labor cost rates.

This listing also includes all employee organization and job assignments that are active as of the date you enter here.
Job Level. To submit the report for employees at only one job level, enter the job level. Otherwise leave this field blank.

Job Discipline. To submit the report for only on job discipline, enter the job discipline. Otherwise, leave this field blank.

Compensation Rule. To submit the report for only one compensation rule, enter the compensation rule set.

Non–Labor Resources by Organization Listing

Use the IMP: Non–Labor Resources by Organization Listing to review all non–labor resources associated with a particular organization, expenditure category, or expenditure type. See: Employee Cost Rates: page 16 – 95, and Employees: page 16 – 50.

For each organization listed, this report displays the organization’s non–labor resources and their corresponding expenditure types and expenditure categories.

Parameters

You are not required to enter any parameters. To narrow your listing you can enter one or more parameters.

Organization Hierarchy Listing


This report displays each organization in the hierarchy and its corresponding organization type. By using an indented–outline format, this report depicts the hierarchical relationships between the listed organizations.

Parameters:

Top Organization. The organization from which you want this report to start down the organization hierarchy.
Organizations are work units that Oracle Projects uses for employee assignments, project and task ownership, and cost and revenue allocation.

This report displays each defined organization, its organization type, whether it is Internal or External, and its location. See: Organizations: page 16 – 34

Parameters:

**Organization Type.** to limit the output of this report to one organization type, enter the organization type. Otherwise leave this field blank.

See Also

Organization Hierarchy Listing: page 9 – 11

**Project Accounting Lookups Listing**

Use the IMP: Project Accounting Lookups listing to review all lookup codes, meanings, and descriptions associated with a particular lookup type.

For each lookup type listed, this report displays whether the lookup type and its codes are system–defined or user–definable. It then lists all the lookup codes for a lookup type and their corresponding meanings and active dates.
Parameters

**Lookup Type.** To limit the output of this report to only one lookup type, enter the lookup type. Otherwise, leave this field blank.

---

**Project Accounting Periods Listing**

Use the IMP: Project Accounting Periods Listing to review all project accounting periods. See: Project Accounting Periods: page 16 – 65.

For each project accounting period, this report displays its start and end dates, and its closing status.

**Parameters**

**Closing Status.** To limit the report to periods with one closing status, enter the closing status (Closed, Future, Never Opened, or Open). Otherwise, leave this field blank.

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**Project Contact Types Listing**

Use the IMP: Project Contact Types Listing to review all project contact types. See: Defining Contact Types: page 16 – 175.

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**Project Customer Relationships Listing**


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**Project Role Types Listing**

Use the IMP: Project Role Types Listing to review all of project role types. See: Project Role Types: page 16 – 172.

For each project role type listed, this report indicates whether individuals with that project role type are permitted to query labor costs.
Project Statuses Listing

Use IMP: Project Statuses Listing to review the list of all project statuses. See: Project Statuses: page 16 – 164.

Project Types Listing

Use IMP: Project Types Listing to review all project types. See: Project Types: page 16 – 177.

For each project type listed, this report displays whether the project type is direct or indirect, and whether costs are burdened. It also displays the default service type, default labor and non–labor bill rate schedules, default invoice formats, and the distribution rules assigned to the project.

Parameters:

Project Type. To limit the report to only one project type, enter the project type. Otherwise, leave this field blank.

Revenue Categories Listing

Use the IMP: Revenue Categories Listing to review revenue categories. See: Revenue Categories: page 16 – 76.

For each revenue category listed, this report prints all the associated expenditure types and their corresponding expenditure categories.

Parameters:

Revenue Category. To limit the report to only one revenue category, enter the revenue category. Otherwise, leave this field blank.

Service Types Listing

Use the IMP: Service Types Listing to review all the service types. See: Service Types: page 16 – 170.
Standard Bill Rate Schedules Listing

Use the IMP: Standard Bill Rate Schedules Listing to review the rates or markup percentages for an organization’s standard bill rate schedule or for all standard bill rate schedules. See: Bill Rate Schedules: page 16 – 125.

Parameters:

Organization. To limit the report to one organization, enter the organization. Otherwise, leave this field blank.

Standard Bill Rate Schedule. To limit the report to one standard bill rate schedule, enter it. If you specify an Organization, the standard bill rate you enter must belong to that organization. Leave blank to submit the report for all standard bill rate schedules.

Effective Date. This report includes all standard bill rates that are active as of the date you enter here. Leave blank to submit the report for all standard bill rates.

Transaction Sources Listing

Use the IMP: Transaction Sources Listing to review the transaction sources you defined to identify data imported into Oracle Projects using Transaction Import. See: Transaction Import: page 10 – 34.

Units Definition Listing

Use the IMP: Units Definition Listing to review all units of measure. See: Units: page 16 – 77.
Project Entry Reports

Use the project entry reports to verify that you have set up your projects correctly.

Report Submission

You submit each of these reports from the Submit Request window. Include the prefix "AUD:" when you enter the report name. See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Project Configuration

Use the AUD: Project Configuration report to review the configuration details of a particular project and verify that you have entered the data correctly.

This report lists details for the following: revenue and billing information, project customers, customer contacts, project members, class categories, employee bill rates overrides, and non-labor bill rate overrides.

Parameters

Project Number. Enter the number of the project for which you want to review setup details.

Task Details

Use the AUD: Task Detail report to review task details for a specific task, or for all tasks of a project. Like the Project Configuration report, this report provides a comprehensive view of how you have defined your tasks.
**Parameters**

**Project Number.** Enter the number of the project for which you want to review task details.

**Task Number.** If you want to submit the report for a particular task number, enter it. Leave blank to submit the report for all task numbers.

**Explode Subtasks.**

- **Yes.** Display information about each subtask of the specified task.
- **No.** Display information for only top-level tasks of the project you specify in the Project Number option.

**Display Task Details.** Enter Yes if you want this report to display for each lowest-level task selected, the task organization, customer, and service type details. Enter No to exclude task details.

---

**Work Breakdown Structure**

Use the AUD: Work Breakdown report to review the complete task structure of a particular project. This report lists all tasks and subtasks in hierarchical format with their respective start and completion dates. This report lists all tasks in an indented outline format so that you can easily identify the hierarchical relationship between tasks.

**Parameters**

**Project Number.** Enter the number of the project for which you want to review that work breakdown structure.

**Task Number.** To submit the report only for a task and its subtasks, enter the task number. Otherwise, leave this field blank.
Transaction Entry Reports

Use the transaction entry reports to verify that you have set up your projects correctly. You can use these reports to audit data entry of both online and preapproved expenditures.

Report Submission

You submit each of these reports from the Submit Request window. Include the prefix "AUD:" when you enter the report name. See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Expenditure Batch Status

Use the AUD: Expenditure Batch Status report to view the status of expenditure batches. With this report you can identify expenditure batches that are ready to be released. You can also ensure that none of your expenditure batches go unprocessed by retaining a status of Working or Submitted.

This report groups expenditure batches first by status, then by expenditure type class. It lists the name of the person who entered the expenditure batch, and it prints the Control and Running totals for the batch. This report also provides summaries for each expenditure batch, for each organization, and for the entire report.

Selected Parameters

The Organization Name parameter is required. You can enter any other parameters to limit the report.

Organization Name. The organization for which you are submitting the report.

Expenditure Ending Date. To submit this report only for expenditure batches with a particular expenditure ending date, enter the date. Leave blank to submit the report for all expenditure batches.
Display Released Batch? Enter No or leave this field blank if you do not want this report to include expenditure batches with a status of Released. Enter Yes if you want this report to include expenditure batches of any status.

Expense Report Entry

Use the AUD:Expense Report Entry report to review all online expense reports within a specified date range for either a particular employee, all employees within an organization, or all employees within all organizations. An employee may run this report after submitting an online expense report to use as a hard copy record of submission. Or, the controller of an organization may want to audit all the expense reports submitted by the employees in a particular organization.

In addition to the Submit Request window, you can submit this report from the Enter Expense Reports window.

Parameters

Week Ending Date From/To. Enter the range of week ending dates you want included in the report. The report includes only those expense reports with week ending dates on and between the dates you enter.

Employee Name. If you want to submit the report for only one employee’s online expense reports, enter the employee’s name. Otherwise, leave this field blank.

Incurred By Organization. If you want to submit the report only for employees in a particular organization, enter the organization. Otherwise, leave this field blank.

Include Routing History.

- Yes. Report routing history of the expense reports.
- No. Do not include routing history of the expense reports.

Missing Timecards

The AUD: Missing Timecards report includes employees that:

- have not entered a timecard in the expenditure week
• have entered a timecard, but have not submitted it (timecard has a status of Working)
• have a rejected timecard, but have not corrected it and resubmitted it (timecard has status of Rejected)

Selected Parameters
The expenditure date range is required. To limit the report, you can enter any other parameters.

From/To Expenditure Ending Date. This report includes only those timecards with expenditure dates on or between the expenditure dates you specify.

Pre–Approved Expenditures Entry Audit
Use the AUD: Pre–Approved Expenditures Entry Audit report to review preapproved expenditures. After you have entered all the expenditures for an expenditure batch, submit this report and use it to verify that all of the data you have entered is correct before you submit your expenditure batch. This report provides a summary for each expenditure batch that displays the total amounts for each expenditure type in the expenditure batch.

Parameters
The following parameters are required: Entered By, Expenditure Ending Date, and Sort Expenditures By. You can enter any other parameters to limit the report.

Entered By. The report includes only those expenditure batches entered by the person you specify.

Expenditure Ending Date. The report selects only expenditure batches with the expenditure date you specify.

Sort Expenditures By: Choose the criteria by which to order the report output: alphabetically by Employee Name or Organization, or numerically by Employee Number.

Expenditure Batch. To review expenditures for only one expenditure batch, enter an expenditure batch. Otherwise leave this field blank.

Date Entered. To include expenditures entered on one particular date, enter it. Otherwise leave this field blank.
**Expenditure Type Class.** To limit the output of this report to expenditure batches having a particular expenditure type class, enter an expenditure type class. Otherwise, leave this field blank.

**Expenditure Batch Status.** To limit the output of this report to expenditure batches having a particular status, enter the expenditure batch status. Otherwise, leave this field blank.

**Expenditure Batch Sort By.** Choose the criterion by which the report sorts expenditure batches.

---

**Timecard Entry**

Use the AUD:Timecard Entry report to review all online timecards within a specified date range for either a particular employee, all employees within an organization, or all employees within all organizations. For example, an employee may run this report after submitting an online timecard to use as a hard copy record of submission. Or, the controller of an organization may want to audit all the timecards submitted by the employees of a particular organization.

For each timecard selected, the report displays the total time worked by an employee and the total billable time reported in the timecard as a percentage of the total time.

This report also displays the timecard routing history, if you enter yes for the Include Routing parameter.

You can submit this request from the Submit Request window or from the Timecards window.

**Parameters**

- **Week Ending Date From/To.** Enter the range of week ending dates you want included in the report. The report includes only those timecards with week ending dates on and between the dates you enter.

- **Employee Name.** If you want to submit the report for only one employee’s online timecards, enter the employee’s name. Otherwise, leave this field blank.

- **Incurred By Organization.** If you want to submit the report only for employees in a particular organization, enter the organization. Otherwise, leave this field blank.

- **Include Routing History.**
  - **Yes.** Report routing history of the timecards.
• No. Do not include routing history of the timecards.
Project Expenditures Reports

These reports provide a detailed view of the cost, revenue, and invoice activities of your projects. Use them to review your project expenditures, revenues, invoices, and expenditure item adjustments.

You can also use these reports to compare a project’s performance against performance data for other projects within the same organization or across organizations. By submitting and analyzing the reports in this section regularly, you can monitor the performance of your projects.

The reports in this section describe how well your projects perform in terms of their budgets versus actual cost and revenue amounts.

These reports provide you with many different views of actual and budgeted project costs and revenues. For example, Oracle Projects reports revenue, cost, and budget summaries at the project level, the task level, the Work Breakdown Structure, the project level by category, and the task level by category. In addition, these reports display budgeted and actual costs and revenues for a specified PA Period, a PA Period range, or as project-to-date amounts.

The reports in this section also provide you with information about the status of your agreements and employee activity by organization.

Report Submission

You submit each of these reports from the Submit Request window. The report names include a prefix of either "MGT:" or "AUD:". See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Expenditures Detail and Summary Reports

Use the expenditure reports to review project expenditures. Use the detail report to report on details for one project. Use the summary report to get an overview of expenditures for one project or many projects belonging to a specified organization or project manager.
You specify a Sort By parameter to order the report. For each of these sort by options, this report also separates expenditure items into the categories of labor and non–labor. Because labor costs may be sensitive information, these reports display labor costs only if the employee submitting the report is a Cross–Project user or a project member having a project role type that allows access to view labor costs. If the employee submitting the report does not have access to view labor costs, the report does not display labor costs.

**MGT: Expenditures Detail.** This report includes for one project, details on expenditure item’s revenue amount, burden cost amount, and billing status.

This report provides summaries for labor items, for non–labor items, and for the entire project.

**MGT: Expenditures Summary.** For each project listed, this report selects the total labor hours reported, the total billable hours as a portion of the total hours, the total burdened costs, and the total revenue of the project.

You can submit this report for a particular period of time by specifying the start and end dates of the desired date range in the report parameters. If you do not specify a date range, this report displays project–to–date expenditure totals.

**Parameters.**

The Sort Expenditures By parameter is required both reports. If you submit the detail report, you must also enter a project number. You can enter any other parameters to limit the report.

**Project Number.** Enter the number of the project for which you want to review expenditure details.

**Sort Expenditure Items By.** Choose the order in which you want to view the report:

- **Employee.** Alphabetically by the employee who submitted the expenditures.
- **Expenditure Item Date.** Ascending date order by the date on which the expenditure item was incurred.
- **Expenditure Type.** Alphabetically by expenditure type.
- **Task.** In alphanumeric order by task number.
- **Vendor.** Alphabetically by supplier.
Expenditure Type Class. To limit the report to expenditures with one expenditure type class, enter the expenditure type class. Otherwise, leave this field blank.

Suppress Labor Costs? To exclude labor costs from the report, enter Yes. Enter No to include labor costs and revenue.

From/To Expenditure Item Date. The report lists expenditure items dated on or after the From Expenditure Date, and on or before the To Expenditure Date. Both parameters are optional.

Display Comments. To display any comments the expenditure items may have, enter Yes. Enter No to omit comments.

Task Number. Enter the task number of the particular task for which you want to review expenditure details. The task you enter here must be a lowest-level task of the project you specified in the Project Number option. Leave this option blank to include expenditure details for all tasks.

Employee Name. To report on only one employee, enter the employee name. Otherwise leave this option blank.

Project Organization. To report on only one organization, enter the organization. Otherwise leave this option blank.

Project Manager. To report on only one manager, enter the organization. Otherwise leave this option blank.

Expenditure Category. To report on only one expenditure category, enter the category. Otherwise leave blank.

---

Project Expenditure Adjustment Activity

Use the AUD: Project Expenditure Adjustment Activity report to review all the adjustments made to expenditure items of a particular project. You can make adjustments to expenditure items. See: Expenditure Adjustments: page 4 – 25 and Adjustments to Supplier Invoices: page 4 – 40.

Your accounting department can submit this report regularly to audit the kinds of expenditure adjustments being made for a project. For example, they can use this report to identify any expenditure adjustments that are unauthorized or against company policy.
Parameters

The Project Number parameter is required. You can enter other parameters to limit the report.

**Project Number.** Enter the number of the project for which you want to review expenditure adjustment activities.

**Task Number.** Enter the number of the lowest level task whose expenditures want to review. Leave this field blank to review expenditure adjustment activities for all tasks.

**Employee Name.** To limit report output to only one employee’s adjustment activity, enter the employee name. Otherwise, leave this field blank.

**From/To Adjustment Date.** The report includes expenditure adjustments made on and after the From Adjustment Date, and on and before the To Adjustment Date. Both fields are optional.

Transfer Activity Report

Use the MGT: Transfer Activity report to review the expenditure item transfers into and out of a particular project. You can use this report as an audit tool to control project costs by identifying incorrect or unauthorized transfers for a project. You can also use this report to verify any expenditure item transfers that you perform.

For each specified project, this report shows you the expenditure items transferring into or out of the project and the transfer history of each of these expenditure items. For each expenditure item listed, this report displays the item’s cost amount, its quantity, and either the destination project and task numbers or the originating project and task numbers, depending on the expenditure item’s transfer direction.

Selected Parameters

You must enter a Project Number. You can enter other parameters to limit the report.

**Project Number.** Enter the number of the project for which you want to run the report.
Project Status Reports

Use the Project Status Reports to review revenue and costs for your projects.

Report Submission

You submit each of these reports from the Submit Request window. Include the prefix "MGT:" when you enter the report name. See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Revenue, Cost, Budgets by Resources (Project Level)

Use the MGT: Revenue, Cost, Budgets by Resources (Project Level) report to review project revenue and costs broken down by resources for a particular PA Period and for the project–to–date. This report also displays budgeted revenue and cost amounts broken down into the same resources, but only under the project–to–date column since budgets are independent of PA Periods.

This report always lists revenue amounts by revenue budget type, but the categorization of costs depends on how a project is budgeted. If the project is budgeted by budget item at the project level, then this report lists costs by the cost breakdown code specified in the project–level budget. For the cost breakdown level of Organization and Organization/Expenditure Category and Job, this report lists costs by expenditure category.

If budget amounts are not entered at the budget–item level, then this report cannot determine the revenue or expenditure categories in which the amounts belong. For these cases, it displays the budget amounts under the revenue or expenditure category titled Uncategorized.

For each project selected, this report displays the project’s total unbilled receivables amount and its total unearned revenue amount.
If a budget is categorized at the task level, this report shows only summarized information for categorized costs for the whole project across all tasks.

**Parameters**

Although the report parameters are each optional, you must enter a value for at least one of the following: Project Organization, Project Manager, or Project Number. Enter any additional parameters to limit the report. If you do not enter a Period Name, the report uses the current PA period.

---

**Task – Revenue, Cost, Budgets by Resources**

Use the MGT: Task–Revenue, Cost, Budgets by Resources report to review a task’s revenue and costs broken down by resources for a particular PA Period and for the project–to–date.

This report is the task–level counterpart to the Revenue, Cost, Budgets by Resources (Project Level) report. Like the Project Level report, this report lists revenue by revenue budget type and costs by the cost breakdown code specified for the budget items budget. The only difference in this case is that the budget items budget must exist at the task level instead of the project level.

If a task has direct budgeted amounts, but it does not have budgeting by budget item, then this report cannot determine the revenue or expenditure categories in which the budget amounts belong. For these tasks, it displays the budget amounts under the revenue or expenditure categories entitled Uncategorized.

Although you can submit this report to run for all tasks belonging to a specified organization or task manager, it provides summaries only by task.

**Parameters**

Although the report parameters are all individually optional, you must enter a value for at least one of the following: Task Organization, Task Manager, or Project Number. Enter any additional parameters to limit the report.
Revenue, Cost, Budgets by Work Breakdown Structure

Use the MGT: Revenue, Cost, Budgets by Work Breakdown Structure report to review the tasks in a project’s work breakdown structure and their budgeted and actual revenue, burdened costs, and labor hours. This report displays information for projects that have baselined budgets only. This report always displays project-to-date totals.

By default, this report displays all of a project’s top-level tasks and their subtasks in an indented outline format that depicts the task hierarchy of the project’s work breakdown structure. However, you can enter values for the report parameters that limit the output to top-level tasks only, to a specific top-level task only, or to one top-level task and all of its subtasks.

For each task selected, this report displays the task’s actual and budgeted amounts side by side for easy comparison. It also lists the task’s completion date, if one exists.

The top-level tasks have corresponding actual costs shown even though Oracle Projects only allows expenditure charges to a lowest-level task. These figures are a sum of the task’s subtask amounts. This report rolls-up the amounts of the lowest-level tasks to each level in the project’s work breakdown structure, all the way up to the project level itself. The project-level aggregates display on the last line of the report.

The budget amounts also roll-up. However, budget definition is not restricted to one level in Oracle Projects. The budget amounts in this report, therefore, might not originate from the lowest-level tasks. For example, a report can show budget amounts for the top-level task 1.0, but not for 1.0’s subtasks. These figures, then, are not rolled-up amounts of the lowest-level tasks.

For each project listed, this report shows the total amount invoiced, the project’s accounts receivable, its unbilled receivables, and its unearned revenue.

Parameters

Although the report parameters are each optional, you must enter a value for at least one of the following in order for this report to return output: Project Organization, Project Manager, or Project Number. Enter any additional parameters to limit the report.

Top Task. Enter the number of the project task from which you want this report to start down the work breakdown structure.
Explode Subtasks.

- **Yes.** Display all subtasks under each top level task.
- **No.** Display only top level tasks with amounts that are rolled up from the subtasks.
Employee Activity Report

Report Submission

You submit the MGT: Employee Activity report from the Submit Request window. See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Employee Activity by Organization

Use this report to review a summary of an employee’s billable and non–billable hours. This report uses the total number of hours and the total number of billable hours to determine an employee’s utilization percentage for the specified date range.

This report also summarizes the employee hours by project and expenditure type, giving you several views of the same data. You can use the Display Details parameter to review details of an employee’s reported hours by the date on which they were reported.

Selected Parameters

The Start Organization and the date range parameters are required. You can enter any other parameters to limit the report.

Start Organization. Enter the name of the organization from which you want this report to start down the organization hierarchy.

From/To Date. Enter the date range for which you want to submit the report.

Display Details

- Yes. Display an employee’s hours on each date of the specified range.
- No. Do not include any employee hours details.
Billing Review Reports

Use the billing review reports to review invoice information and agreements with your customers.

Report Submission

You can submit each of these reports from the Submit Request window. Include the prefix “MGT:” when you enter the report name. See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Invoice Review

Use the MGT: Invoice Review report to review the draft invoices of a particular project. You can use this report to verify your draft invoices before approving and releasing them for interface to Oracle Receivables for final customer invoice generation.

This report begins by listing header information regarding the project. It also displays project totals, including the unbilled receivables amount to date, the dollar amount of expenditure items on hold, and the budgeted revenue.

For each draft invoice selected, this report displays invoice header information including the customer name, the percentage of the total invoice amount for which the customer is responsible, and the invoice status. It also displays the AR Invoice Number that is created when you interface your draft invoice to Oracle Receivables.

If you regenerate a draft invoice to credit a previously released invoice and create a customer credit memo, this report displays the number of the original approved invoice in the Credit of Number field.

Below the invoice header information, this report displays all the invoice line items of the draft invoice. The invoice line descriptions appear on the final customer invoice when it is generated in Oracle Receivables. You can change the look and content of your invoice line
descriptions by regenerating the draft invoice after first selecting new labor or non–labor invoice formats for your project.

This report finishes by listing a summary of the revenue–distributed expenditure items and billing events that have not yet been billed for this project.

**Report Submission**

In addition to submitting the MGR: Invoice Review report from the Submit Reports window, you can also submit this report from the Review Invoices, Adjust Invoices, and Release Invoices windows by selecting Print Invoice Review.

**Selected Parameters**

The following parameters are required: Project Role Type, Invoice Status, Display Details and Display Unbilled Items. You can enter any other parameters to limit the report.

**Start Organization.** Enter the organization from which you want this report to start down the organization hierarchy. If you leave this option blank, Oracle Projects uses the Start Organization you defined in the Define Implementation Options window.

**Invoice Status.** To limit the report to a particular invoice status, enter the invoice status:

- **All Invoices.** Invoices of any status.
- **Released Invoices Only.** Draft invoices that have already been released.
- **Unreleased Invoices Only.** Draft invoices that are not yet released.

**Display Details.** If you enter Yes, the report includes an invoice line details section that displays all of the expenditure items that Oracle Projects selected to produce the invoice lines. Enter No to include invoice lines only.

**Display Unbilled Items.** Enter Yes to include any unbilled items or items on hold at the end of the output. Otherwise enter No.
Unbilled Receivables Aging

Use the MGT: Unbilled Receivables Aging report to review, by project, eligible revenue items that have not yet been invoiced, or those items not included on a released draft invoice. This report lists the receivables in four buckets. You can specify the number of days you want in each bucket when you submit the report.

You can submit this report for an organization, in which case it groups all projects owned by the organization by their project managers. The report then displays summaries for each project manager.

If you specify a project manager in the report parameters and do not specify an organization, the report groups all projects by project manager regardless of the project-owning organization. This format provides you with the real total of unbilled receivables for a particular project manager.

Events relieve the oldest unbilled receivable as the invoices in which the events are billed are released. Revenue events age from their Completion Date if you choose Expenditure Item Date as your preference in the Age Receivables From report parameter.

Selected Parameters

The Age Receivables From and the Number of days in Bucket parameters are required. You can enter any of the other parameters to limit the report.

Effective Date. The report ages unbilled receivables backwards starting from the date you enter here until it reaches the start date, which is determined by the value you enter for the Age Unbilled Receivables From parameter.

Age Receivables From. Enter the date you want Oracle Projects to use when aging unbilled receivables.

Number of days in Bucket 1/2/3. Enter the number of days that you want in each bucket.

Agreement Status by Customer

Use the MGT: Agreement Status by Customer report to review the status of your customer agreements. The report includes an agreement’s revenue limit, expiration date, and the amounts allocated, accrued, and invoiced against it.
This report groups all the agreements by customer, then orders them by the value that you enter in the Sort By report parameter. It also includes summaries for each customer and for the entire report.

Selected Parameters

The Sort By parameter is required. You can enter any other parameters to limit the report.

Sort By. Choose the order within each customer in which you want to review the report:

- Agreement Number. Ascending alphanumeric order by the agreement number.
- Amount Not Allocated. Ascending numeric order, by the funding not allocated.
- Expiration Date. Ascending date order by the expiration date of each agreement.
- Revenue Backlog. Ascending numeric order by the revenue backlog (amount allocated minus the amount accrued) of each agreement.
- Revenue Limit. Ascending numeric order by the revenue limit of each agreement.
Billing Process Flow Reports

These reports show how effectively your organization turns earned revenue into cash. These reports help you identify any bottlenecks in your revenue and invoice processing flow, and they alert you to problems your organization may have in collecting on invoices.

Report Submission

You submit each of these reports from the Submit Request window. The report names include a prefix, either “FLW:” or “MGT:” See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Invoice Flow Detail and Invoice Flow Summary

Use the invoice flow reports to review flow information about project invoices through Oracle Projects.

FLW: Invoice Flow Detail. This report groups invoices by invoice status, allowing you to quickly identify where your draft invoices currently are in the invoice processing flow. You can specify a transfer status or a dollar amount to report on a subset of invoices.

FLW: Invoice Flow Summary. You can use this report to identify by dollar range how many invoices are in each stage of the invoice processing flow. After reviewing this report, if you want to see the specific draft invoices that comprise the invoice summaries, submit the Invoice Flow Detail report and specify the same date range.

Parameters

You must specify a Start Organization or Project Member when you submit these reports. Enter any other parameters to limit the report.

Start Organization. Top organization in the organization hierarchy from which you will report data. If you leave this option blank, the
The report uses the Start Organization defined in the Define Implementation Options window.

**Project Member.** To submit the report for only one project member’s draft invoices, enter the project member’s name. Otherwise, leave this field blank.

**Project Role Type.** The report includes only draft invoices of projects where the person specified in the Project Member report parameter is defined with this project role type. If you did not enter a value for the Project Member report parameter, this option has no effect.

**Creation Date To/From.** The report includes draft invoices created on or after the Creation Date From report parameter, and draft invoices created on or after the Creation Date To report parameter. Both fields are optional. Leave both blank to submit the report for draft invoices regardless of their creation dates.

**Additional Parameters for Invoice Flow Detail Report**

**Include Released Invoices.** Enter Yes if you want the report to include draft invoices with a status of Released. Enter No to exclude released invoices from the report.

**Include Amount Ranges.** Only invoices with amounts in the amount range you specify will be reported. Select All to include draft invoices regardless of invoice amount.

**Invoice Status.** The report includes only invoices with the status you select.

- **Accepted.** Invoices that have been interfaced to and tied back from Oracle Receivables.
- **All.** All invoices regardless of invoice status.
- **Approved.** Invoices that have been approved.
- **Rejected.** Invoices that have been rejected by Oracle Receivables.
- **Rejected in Transfer.** Invoices that have been rejected during the interface to Oracle Receivables.
- **Transferred.** Invoices that have been successfully interfaced to, but not yet accepted by, Oracle Receivables.
- **Unapproved.** Invoices that have not yet been approved.
Potential Revenue Summary

Use the MGT: Potential Revenue Summary report to identify projects that cannot fully accrue revenue due to a hard funding limit encountered. This report shows you the total potential revenue, the total amount accrued, and the difference between these two values for a project's expenditure items incurred through the date you specify in the report parameters.

When the total available amount of an agreement’s funding is insufficient to accrue revenue on all of a project’s expenditure items, Oracle Projects accrues as much as possible against the potential revenue. This report alerts you to the amount of additional revenue you could accrue with more funding.

Parameters

You must provide a value for at least one of the following parameters: Project Organization, Project Manager, or Project Number. Enter any other parameters to limit the report.

Accrue Thru Date. The report includes only expenditure items dated on or before the Accrue Thru Date you enter.

Project Organization. To report on expenditure items for only one project organization, enter a project organization. Otherwise leave this field blank.

Project Manager. To report on only one project manager’s potential revenue, enter the project manager’s name. Otherwise leave this option blank.

Project Number. To report on the potential revenue for only one project, enter the project number. Otherwise, leave this option blank.

Include Closed Projects? Enter Yes if you want the report to include the potential revenue of all projects regardless of project status. Enter No if you want to report to exclude the potential revenue for expenditure items of projects with a Closed status.

Project Billing Status

Use the MGT: Project Billing Status report to review the billing status of your projects, and identify projects that have not yet been billed.
For each project listed, this report displays the days since the last billing date, the date of the last billing, the next scheduled billing date, the amount of any pending invoices, and the amount of unbilled receivables. The last page of the report defines the columns in this report.

**Parameters**

You must specify a Start Organization or a Project Member when you submit this report. You can enter any other parameters to limit the report.

**Start Organization.** Top organization in the organization hierarchy from which you will report invoices associated with projects with a project organization. If you leave this option blank, the report uses the Start Organization defined in the Define Implementation Options window.

**Project Member.** To submit the report for only one project member’s projects, enter the project member’s name. Otherwise, leave this field blank.

**Project Role Type.** The report includes only projects where the person specified in the Project Member report parameter is defined with this project role type. If you did not enter a value for the Project Member report parameter, this option has no effect.

**Project Number.** To report on the potential revenue for only one project, enter the project number. Otherwise, leave this option blank.

**Days Since Last Billing.** The report includes projects only when the number of elapsed days since the latest invoicing for the project is greater than or equal to the number you enter here. Leave this option blank to include all projects regardless of the last invoice date.

**Only Report Never Billed.** Enter Yes to include only projects that have never been invoiced. Enter No to include projects regardless of invoicing status.

**Billing Method.** To report on projects with one particular billing method, enter the billing method. Leave this option blank to include projects regardless of billing method.

**Thru Next Bill Date.** The report includes projects with next billing dates that are on or after the date you enter here. Leave this option blank to include projects regardless of their next billing dates.
Revenue Flow Detail

Use the FLW: Revenue Flow Detail report to review the flow of draft revenue through Oracle Projects. This report shows all draft revenues generated within a specified PA Period Date range. The draft revenues are sorted by their transfer statuses, thereby allowing you to quickly identify where revenue currently is in the revenue processing flow. If a draft revenue is rejected by the revenue transfer or tieback process, this report displays the reason for the rejection. It also provides action hints to help you resolve any problems and continue the flow of revenue through the system.

Parameters

The From PA Date parameter and the To PA Date parameter are required. You can enter any other parameters to limit the report.

**From/To PA Date.** Enter the PA Period date range for which you want to submit the report.

**Revenue Transfer Status.** To limit the report to one particular transfer status, enter the status. Otherwise, leave this field blank.

- **Accepted.** Transferred to Oracle General Ledger.
- **Pending.** Pending Interface to Oracle General Ledger.
- **Rejected.** Rejected by or rejected in interface to Oracle General Ledger.

**Include Accepted Revenue.** To include in the report revenues with a transfer status of Accepted, enter Yes. Enter No to exclude Accepted revenues.
Interface Audit Reports

Use these reports to verify that your interface of information to another Oracle product was complete and accurate.

Report Submission

You submit each of these reports from the Submit Request window. Include the prefix "AUD:" when you enter the report name. See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

GL Cost Interface Audit

Use the AUD: GL Cost Interface Audit report to review labor and usage cost distribution lines interfaced from Oracle Projects to Oracle General Ledger. This report displays items by the expense account number. Information about the item and the liability account are also displayed.

Parameters

All parameters for this report are optional. However, entering no parameters or specifying only the interface date range can result in poor performance. Specifying the GL account range, the GL period name range, or the journal entry batch name (or any combination of these parameters) will significantly improve the performance of this report.

FROM/TO ACCOUNT. Enter the range of GL account numbers to which you interfaced the cost distribution lines of timecards and usage logs that you want to appear in the report.

FROM/TO PERIOD. Enter the names of the starting and ending GL periods within which you want the report to select cost distribution lines of timecards and usage logs.
**From/To Interface Date.** Enter the date range within which the timecard and usage log cost distribution lines you want to include in the report were interfaced to Oracle General Ledger.

**Journal Entry Batch Name.** Enter the name of the journal batch that you created in Oracle General Ledger for which you want the report to select cost distribution lines of timecards and usage logs.

---

**GL Revenue Interface Audit**

Use the AUD: GL Revenue Interface Audit report to review a listing of the revenue distribution lines interfaced from Oracle Projects to Oracle General Ledger. The revenue distribution lines are reported by revenue account and by project. The project revenue unbilled receivable and unearned revenue amounts and accounts are also displayed.

**Parameters**

All parameters for this report are optional. However, entering no parameters or specifying only the interface date range can result in poor performance. Specifying the GL account range, the GL period name range, or the journal entry batch name (or any combination of these parameters) will significantly improve the performance of this report.

**From/To Account.** Enter the range of GL account numbers to which you interfaced the revenue distribution lines that you want to appear in the report.

**From/To Period.** Enter the names of the starting and ending GL periods within which you want the report to select revenue distribution lines.

**From/To Interface Date.** Enter the date range within which the revenue distribution lines you want to include in the report were interfaced to Oracle General Ledger.

**Journal Entry Batch Name.** Enter the name of the journal batch that you created in Oracle General Ledger for which you want the report to select revenue distribution lines.
Project Subledger Audit Reports

The Project Subledger Audit Reports print cost distribution lines related to projects. The reports enable you to drill down from a GL account balance in the trial balance to the individual project-related transactions.

Report Submission

You submit each of these reports from the Submit Request window. Include the prefix “AUD:” when you enter the report name. See: Submitting Requests: page 9 – 2.

See Also

Oracle Projects Reports and Listings: page 9 – 1

Project Subledger Summary

Because the number of transactions that comprise a GL account balance is usually very large, it is preferable to print a summary report of the transactions and then print a detailed report to narrow down the range of transactions that need to be examined. The Project Subledger Summary report prints a summary of cost distribution lines by project.

The transaction sources are classified broadly as Manufacturing and Non-manufacturing. This is done to enable the user to see manufacturing costs separate from non-manufacturing costs. Manufacturing transactions include imported items using the following transaction sources:

- Inventory
- Inventory Misc.
- Work in Process

The report prints subtotals for GL Account, Project Number, Manufacturing-Related, and Expenditure Type Class.
Parameters

**From/To GL Account.** Select a GL account or a range of accounts.

**From/To Project.** Select a project or range of projects.

**From/To GL Date.** Enter the date range within which you want the report to select cost distribution lines of expense reports.

---

**Project Subledger Detail by Project**

This report shows cost distribution lines for a single project by task.

Parameters

**From/To GL Account.** Select a GL account or a range of accounts.

**From/To GL Date.** Enter the date range within which you want the report to select cost distribution lines of expense reports.

**Project Number.** Select a project.

**From/To Task Number.** Select a task or range of tasks.

---

**Project Subledger Detail by Expenditure Type**

This report shows project subledger detail across projects for one expenditure type.

Parameters

**From/To GL Account.** Select a GL account or a range of accounts.

**From/To GL Date.** Enter the date range within which you want the report to select cost distribution lines of expense reports.

**Expenditure Type.** Select an expenditure type.

**From/To Project.** Select a project or range of projects.
Period Close Exception Reports

Use the period close exception reports to identify transactions that have not been fully processed, and that would prevent you from closing the PA period. These reports are commonly used when you are preparing to close a PA period. When the exceptions are corrected, the PA period can be closed.

Report Submission

You can submit each of these reports from the Submit Request window. Include the prefix "EXC:" when you enter the report name. See: Submitting Requests: page 9 – 2.

See Also

PA Periods: page 16 – 65
Oracle Projects Reports: page 9 – 1

Transaction Exception Details

The EXC: Transaction Exception Details report lists all transactions that have not been fully processed. You can use this report to identify corrections that you need to make before attempting to close a PA period.

The report is sorted by PA period. Within each PA period, the report is sorted by exception category (see the list of report parameters below), and then by exception reason. For each group of transactions under an exception reason, the report lists the total amount and total number of items.

The table below shows the information that is listed for transactions in each exception category:
### Exception Category

<table>
<thead>
<tr>
<th>Exception Category</th>
<th>Information Listed for Each Transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Invoice Exceptions</td>
<td>invoice number, invoice date, supplier number, supplier, line number, posted (yes or no), project, task, expenditure type, and amount</td>
</tr>
<tr>
<td>Costing Exceptions</td>
<td>vendor or employee, project, task, expenditure type, expenditure item date, expenditure item ending date, expenditure group name, and amount</td>
</tr>
<tr>
<td>Revenue Exceptions</td>
<td>project, draft revenue number, and amount</td>
</tr>
</tbody>
</table>

#### Parameters

**From PA Period...To PA Period.** Enter a range of PA periods for which you want the report to print exceptions. These parameters are required, and your entries must be valid PA periods.

**Exception Category.** If you want the report to print just one category of exceptions, you can select an exception category. If you leave this parameter blank, the report includes all categories. The categories are:

- **Accounts Payable Invoice Exceptions.** Includes supplier invoices that have not been interfaced from Oracle Payables to Oracle Projects.
- **Costing Exceptions.** Includes cost distribution lines that have not been interfaced to Oracle General Ledger.
- **Revenue Exceptions.** Includes revenue distribution lines that have not been interfaced to Oracle General Ledger.

**Exception Reason.** If you selected an exception category, you can also select an exception reason. The list of values displays exception reasons that are valid for the category you chose. If you leave this parameter blank, the report includes all exception reasons.

#### Transaction Exception Summary

The EXC: Transaction Exception Summary report lists a summary of transactions that have not been fully processed. This report also lists the action required to correct the exceptions.
The report is sorted by PA period. Within each PA period, the report is sorted by exception category, and then by exception reason. For each exception reason, the report lists the total amount, the total number of items, and a description of the corrective action required to process the transactions.

Parameters

From PA Period...To PA Period. Enter a range of PA periods for which you want the report to print exceptions. These parameters are required, and your entries must be valid PA periods.
Summarization Period Exceptions

When you change the PA Reporting Period, Oracle Projects displays a warning message if the change would affect the summary amounts reported on any projects. This report lists projects that will be affected by changing the reporting period.

This report lists projects that will be affected by a change in the reporting period. The report lists projects by the following categories:

- Projects that have been summarized beyond the reporting period parameter.
- Projects that have not been summarized up to the reporting period parameter.
- Projects that have never been summarized.

For example, suppose the PA Reporting Period is week 3–JUL–98, and you want to change the PA Reporting Period to week 2–JUL–98. When you make the change, the PA Periods window displays a warning message indicating that some projects would be affected by the change. This report enables you to see which projects would be affected.

The summarization period exception report is based on the view PA_ACCUM_PERIOD_EXCEPTIONS_V.

Report Submission

You can submit this report from the Submit Request window. Include the prefix “EXC:” when you enter the report name. See: Submitting Requests: page 9 – 2.

Parameters

Reporting PA Period. Enter the PA Period you want to set as the new current reporting period.

See Also

Setting the PA Reporting Period: page 16 – 69
This chapter describes the processes you can submit in Oracle Projects.
Create Invoice Organization Transaction Types

If you use decentralized invoicing, you need to run this program after you specify an invoice processing organization level. This program copies the predefined transaction types to generate unique transaction types for each organization at the invoice processing organization level.

Process Submission

You submit the IMP: Create Invoice Organization Transaction Types process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Fremont uses decentralized invoice collection processing.

Fremont runs this program from the Submit Request window. The program creates transaction types for the four organizations classified with an organization type of Division.
Add New Organization Compiled Burden Multipliers

This process adds burden multipliers to burden schedules for an organization when you add a new organization to your organization hierarchy. If you do not add the organization to a specific schedule revision, this process compiles rates for the organization in all burden schedule revisions using the rates of the parent organization as defined in the organization hierarchy. A burden schedule revision must already be successfully compiled for the organization rate to be added.

You must run this process after you create the organization and before you charge transactions using this organization as the expenditure organization.

Process Submission


Output Reports

This process does not have any output reports. However, the concurrent request status window provides information about the results of the process.
Compile All Burden Schedule Revisions

This process compiles all burden schedule revisions that are not compiled and are not on hold. We recommend that you run this process overnight, as you may have many uncompiled schedule revisions that need to be processed.

Process Submission

You submit the PRC: Compile All Burden Schedule Revisions process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Output Reports

Two output reports show you the results of this process:

- **Burden Schedule Mass Compilation Report.** Lists all burden schedule revisions that were successfully compiled during the process.

- **Burden Schedule Mass Compilation Exception Report.** Lists any burden schedule revisions that failed the compilation process.
Distribute Expense Report Costs

This process computes the costs of expense report expenditure items, including adjustments, and determines the account to which to post the cost. It groups expenditure items into batches of expense reports so that they can be interfaced to Oracle Payables. This process is a prerequisite for the generation of revenue and invoices for expense report expenditure items.

Process Submission

From the Submit Request window, you can submit the PRC: Distribute Expense Report Costs process either by itself, or as part of the ‘Distribute and Interface Expense Reports Costs to AP’ streamline option of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

Process Parameters

To limit the process to certain expense reports, specify any of the following parameters: Expenditure Batch, Employee Name, Through Week Ending Date.

Output Reports

Two output reports show you the results of this process:

- **Batch Expense Reports Report.** Lists the results of the Distribute Expense Report Costs process. This report prints all of the expense reports that were successfully cost distributed by the process. It displays the total number of expense reports processed in the batch, the employees who incurred the expenses, and the total dollar amount of the expense report costs.

- **Batch Expense Reports Exception Report.** Lists all expense reports that the process could not process. If one expenditure item of an expense report cannot be processed, all expenditure items for that expense report are not processed. This report lists the rejection reason for each of the expense report items that fails cost distribution. Examples of these failure or rejection reasons include incomplete AutoAccounting rules, missing cost rates, or invalid GL account.

  **Note:** You can also review rejection reasons from the Expenditure Items window by using the Show Field option in
the Folder menu to display Cost Distr. Rejection. See: Performing a Project Expenditure Inquiry: page 4 – 42.
Distribute Labor Costs

This process computes the labor costs for timecard hours and determines the GL account to which to post the cost. The Distribute Labor Costs process is a required prerequisite for the generation of revenue and invoices for timecard items. For more information about this process, see: Distributing Labor Costs: page 5 – 8.

Process Submission

You submit the PRC: Distribute Labor Costs process from the Submit Request window either by itself, or as part of the ‘Distribute and Interface Labor Costs to GL’ streamline option of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

Process Parameters

To limit the process to a particular project number, employee, or week ending date, enter one or more parameters.

Rescheduling Parameters

Rescheduling parameters allows you to configure the Distribute Labor Cost process to run automatically, according to a defined schedule. You can specify rescheduling parameters when you submit the Distribute Labor Costs process from the Submit Request form.

Output Reports

Five output reports show you the results of this process:

- **The Labor Cost Exception Report (Straight-time).** Lists all straight–time labor expenditure items that could not be processed by the Distribute Labor Costs process. This report lists the rejection reason for each of the expenditure items that failed cost distribution.

- **The Labor Cost Report (Straight–time).** Lists the costs for all of the straight time labor hours successfully processed by the Distribute Labor Costs process. For each labor item, this report lists the employee who reported the labor hours, the expenditure and expenditure item dates, the project and task to which these hours were charged, and the number of hours charged.

- **The Overtime Labor Calculations Report.** Lists all the employees for which the Overtime Calculation extension calculated new
overtime items. This report is displayed only if you use the Overtime Calculation extension to automatically calculate overtime. If you use manual overtime entry, this report is not printed.

This report displays each employee for which new overtime items were created, the week in which the overtime was created, the employee’s compensation rule used to calculate overtime for the employee, and the number of overtime hours for the different types of overtime. See: Overtime Calculation Extension: page 17 – 24.

- **The Labor Cost Exception Report (Overtime).** Lists the same information as the Labor Cost Exception Report (Straight–time). The difference is that this report only shows overtime expenditure items that could not be processed normally by the Distribute Labor Costs process. This report lists the rejection reason for each of the expenditure items that fails cost distribution.

- **The Labor Cost Report (Overtime).** Lists the same information as the Labor Cost Report (Straight–time). The difference is that this report displays only overtime items.

  **Note:** You can also review rejection reasons for straight–time and overtime items from the Expenditure Items window by using the Show Field option in the Folder menu to display Cost Distr. Rejection. See: Performing a Project Expenditure Inquiry: page 4 – 42.
Distribute Total Burdened Cost

This process creates total burdened cost distribution lines for all transactions on a burdened project. The process creates credit and debit distribution lines for burdened costs, assuming that you have implemented the AutoAccounting functions to create burdened cost distribution lines. After you run this process, run the PRC: Interface Total Burdened Costs to General Ledger process to post the costs to Oracle General Ledger.

Process Submission

You submit the PRC: Distribute Total Burdened Cost process from the Submit Request window either by itself, or as part of the “Distribute and Interface Total Burdened Costs to GL” streamline option of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

Process Parameters

To limit the report to one expenditure batch, project, or expenditure ending date, enter one or more parameters.

Output Reports

Two output reports show you the results of this process:

- **Burdened Cost Report.** Lists all of the expenditure items successfully distributed by this process. For each item, this report displays the expenditure type class, expenditure type, project and task, as well as other useful information.

- **Burdened Cost Exception Report.** Lists all expenditure items that could not be processed by the process. This report lists the rejection reason for each of the expenditure items that fails burdened cost distribution.

  **Note:** You can also review rejection reasons from the Expenditure Items window by using the Show Field option in the Folder menu to display Cost Distr. Rejection. See: Performing a Project Expenditure Inquiry: page 4 – 42.
Distribute Usage and Miscellaneous Costs

This process computes the costs and determines the GL account to which to post the cost for expenditure items with the following expenditure type classes:

- Usages
- Burden Transactions
- Miscellaneous Transactions
- Inventory and WIP transactions not already costed or accounted

The Distribute Usage and Miscellaneous Costs process is a prerequisite for the generation of revenue and invoices for assets usage expenditure items and miscellaneous transactions.

Process Submission

You submit the PRC:Distribute Usage and Miscellaneous Costs process from the Submit Request window either by itself, or as part of the "Distribute and Interface Usages to GL" streamline option of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

Process Parameters

To limit the report to one expenditure batch, project, or expenditure ending date, enter one or more parameters.

Output Reports

Two output reports show you the results of this process:

- **The Usage and Miscellaneous Cost Report.** Lists all expenditure items that were successfully cost distributed. For each item, this report displays the resource and expenditure type that was used, the date on which the resource was used, the project and task to which the item is charged, the quantity of the usage utilized (measured by the units of the expenditure type), the cost rate of the resource, and total cost.

- **The Usage and Miscellaneous Cost Exception Report.** Lists all usage, burden transaction, and miscellaneous transaction expenditure items that could not be processed by the Distribute Usage and Miscellaneous Costs process. Also lists Inventory and WIP transactions not already costed or accounted that could not be
processed by the Distribute Usage and Miscellaneous Costs process. This report lists the rejection reason for each of the expenditure items that fails cost distribution.

**Note:** You can also review rejection reasons from the Expenditure Items window by using the Show Field option in the Folder menu to display Cost Distr. Rejection. See: Performing a Project Expenditure Inquiry: page 4 – 42.
Create and Distribute Summarized Burden Component Items

This process summarizes the burden costs and creates the expenditure items for the burden transactions. The burden transactions are created on different projects depending on the method you use to store burden costs.

If you store burden costs as separate, summarized burden transactions, the burden transactions are created on the same project that incurred the costs. If you choose to store burden costs as a value along with raw cost on the expenditure item on the project that incurred the transactions, the burden transactions are created on the collection project and task used for collecting burden transactions intended for accounting by burden cost components only.

The burden transactions created by this process can be billable or non-billable, depending on the Transaction Control logic you have entered. See: Transaction Controls: page 4 – 57.

The process also computes the costs and determines the GL account to which to post the cost for the burden transactions that it creates.

Process Submission

You submit the PRC: Create and Distribute Summarized Burden Component Items process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Output Reports

Two output reports show you the results of this process:

- **The Usage and Miscellaneous Cost Report.** Lists all items that were successfully cost distributed. For each item, this report displays the resource and expenditure type that was used, the date on which the resource was used, the project and task to which the item is charged, the quantity of the usage utilized (measured by the units of the expenditure type), the cost rate of the resource, and total cost.

- **The Usage and Miscellaneous Cost Exception Report.** Lists all items that could not be processed by the Create and Distribute Summarized Burden Component Items process. This report lists the rejection reason for each of the items that fails cost distribution.

  **Note:** You can also review rejection reasons from the Expenditure Items window by using the Show Field option in
the Folder menu to display Cost Distr. Rejection. See: Performing a Project Expenditure Inquiry: page 4 – 42.
**Distribute Supplier Invoice Adjustment Costs**

This process determines the GL account in which to post supplier invoice adjustment costs. Supplier invoice adjustments are supplier invoice items that were originally interfaced from Oracle Payables into Oracle Projects and have been transferred to another project and/or task in Oracle Projects. The transfers may result in posting costs to different GL accounts. The cost amount does not change for these items in Oracle Projects; any cost changes must be done in Oracle Payables. The Distribute Supplier Invoice Adjustment Costs process is a required prerequisite for the generation of revenue and invoices for adjusted supplier invoice expenditure items.

**Process Submission**

You submit the PRC: Distribute Supplier Invoice Adjustment Costs process from the Submit Request window either by itself, or as part of the ‘Distribute and Interface Supplier Invoice Adjustments to GL’ streamline option of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

**Process Parameters**

To limit the report to one project, and/or expenditure ending date, enter one or both parameters. If you leave the Through Date parameter blank, the process selects all eligible adjusted supplier invoice items for cost distribution.

**Output Reports**

Two output reports show you the results of this process:

- **The Supplier Invoice Adjustment Cost Report.** Lists all adjusted supplier invoice expenditure items successfully cost distributed.

- **The Supplier Invoice Adjustment Cost Exception Report.** Lists any adjusted supplier invoice expenditure items that could not be processed by this process and lists the rejection reason for each item.

  **Note:** You can also review rejection reasons from the Expenditure Items window by using the Show Field option in the Folder menu to display Cost Distr. Rejection. See: Performing a Project Expenditure Inquiry: page 4 – 42.
See Also

Overtime Calculation Extension: page 18 – 56

Structure of the Overtime Calculation Report: page 18 – 59
Compute Forecast Labor Revenue

This process calculates the potential revenue of labor expenditure items based on established bill rates and markups. The expenditure items that the process selects are billable labor expenditure items charged to contract projects that have not yet been processed by the Generate Draft Revenue process. The items do not have to be approved to be processed for forecast revenue.

Process Submission

You submit the PRC: Compute Forecast Labor Revenue process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Process Parameters

Project Number. To limit the process to one project, enter the project. Otherwise, leave this field blank.

Forecast Through Date. To limit the process to expenditure items dated on or before a certain date, enter the date. Otherwise, leave this field blank.

Output Reports

Two output reports show you the results of this process:

- The Forecast Revenue Computation Report. Lists the results of the Compute Forecast Revenue process. In this report, you see the projects selected for forecast revenue calculation, the total forecast revenue amount, and the expenditure item dates through which forecast revenue was calculated for each project.

- The Forecast Labor Revenue Computation Exception Report. Lists the expenditure items for which the Compute Forecast Revenue process could not forecast revenue because a bill rate or markup could not be found for the items.
Generate Asset Lines

This process generates summary asset lines for a single project or for a range of projects.

**Prerequisites**

- Before you run the Generate Asset Lines process, you must cost the transactions by running the processes listed below. You do not need to interface these costs to Oracle General Ledger before you create asset lines.
  - Distribute Labor Costs
  - Distribute Expense Report Costs
  - Distribute Usage Costs
  - Distribute Supplier Invoice Adjustments
  - Interface Supplier Invoices from Payables
  - Distribute Total Burdened Costs (if you are capitalizing burdened CIP costs)

- Before you run the Generate Asset Lines process, you must also run the Update Project Summary Amounts process. If you fail to run Update Project Summary Amounts, you will not see the total expensed and CIP amounts in the Capital Projects Summary window.

**Process Submission**

To submit the process for all projects, submit the PRC: Generate Asset Lines for a Range of Projects process from the Submit Request window.

To submit the process for one project, submit the PRC: Generate Asset Lines for a Single Project process from the Submit Request window.


**Process Parameters**

**From Project Number.** Enter the number of the project that you want the Generate Asset Lines process to use as the low end of the project number range within which it selects projects to process. If you leave this parameter blank, the Generate Asset Lines process generates asset lines for all eligible projects whose project numbers come before the project number entered in the End Project Number process parameter.

See: No List of Values for Project Number Range Parameter: page 9 – 2.
To Project Number. Enter the number of the project that you want the Generate Asset Lines process to use as the high end of the project number range within which it selects projects to process. If you leave this parameter blank, the Generate Asset Lines process generates asset lines for all eligible projects whose project numbers come after the project number entered in the Start Project Number process parameter.

Project Number. Enter the number of the project for which you want to submit the Generate Draft Invoices for a Single Project process.

PA Through Date. Enter the ending date of the PA period through which you want the costs to be considered for capitalization. If the date you enter does not match a PA period ending date, but falls within a PA period, then the ending date of the preceding PA period will be used.

Date Placed in Service Through. Enter the In Service Through date. Asset lines will be created from assets with an actual Date Placed in Service before and including this date only.

Include Common Tasks? If you choose to include common costs, Oracle Projects will create asset lines from costs not assigned to specific assets.

Output Reports

The Generate Asset Lines process automatically runs the Generate Asset Lines Report, which includes three sections: Generate Asset Lines Exceptions, Reverse and Interface Exceptions, and Generate Asset Lines.

- **The Generate Asset Lines Exception Report.** The Generate Asset Lines Exceptions section only prints if you run the Generate Asset Lines for a single project. This section shows asset lines that were not created for a project, and the reason each one was rejected. Rejection reasons include the following:
  - The project has no asset assignments
  - The project has no assets with valid in service dates
  - The project has no eligible capitalizable costs to process

  **Note:** If you are interfacing burden costs, then you must run the Distribute Burden Costs process before asset lines can be created.

- **Reverse and Interface Exceptions.** The Reverse and Interface Exceptions Report shows reversing lines that were rejected during the Assets Interface process.
Generate Asset Lines. This section displays the following:

- The sum and count of reversed lines
- The sum and count of generated lines
- A subtotal for each project
- The overall total for the generation run

If the process creates an asset line, but is unable to assign an asset to it, Oracle Projects displays an asterisk (*) for the line and marks it as UNASSIGNED in the Asset Name column of the report.

See Also

Placing an Asset in Service: page 6 – 23
Generate Draft Invoices

This process creates invoices from expenditure items and events. In addition to regular invoice generation, this process deletes unreleased draft invoices, and creates invoice write-offs, credit memos, and invoice cancellations.

**Note:** An automatic event created by billing extensions after an adjustment must include the number of the original event. Without this information, Oracle Receivables cannot autoinvoice the automatic event. If Oracle Projects does not find this value during the invoice generation process, it will display the following message in the log file: "Cannot find a proper inv line credited for this adjusted event." See: Inserting Events: page 18 – 82.

**Note:** If your project uses the cost–to–cost invoice generation method, you must include burdened costs in your cost budget and revenue amounts in your revenue budget. Without these amounts, Oracle Projects cannot successfully generate invoices for your project.

Process Submission

To submit the process for all projects, submit the PRC: Generate Draft Invoices for a Range of Projects process from the Submit Request window.

To submit the process for one project, submit the PRC: Generate Draft Invoices for a Single Project process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Process Parameters

**Bill Through Date.** The Generate Draft Invoices process creates invoices using expenditure items and events dated on or before the date you enter here. If you leave this parameter blank, the process uses the current date as the bill through date.

**From Project Number.** Enter the number of the project that you want the Generate Draft Revenue process to use as the low end of the project number range within which it selects projects to process. If you leave this parameter blank, the Generate Draft Revenue process generates revenue for all eligible projects whose project numbers come before the project number entered in the End Project Number process parameter. See: No List of Values for Project Number Range Parameter: page 9 – 2.
**To Project Number.** Enter the number of the project that you want the Generate Draft Invoices process to use as the high end of the project number range within which it selects projects to process. If you leave this parameter blank, the Generate Draft Invoices process generates invoices for all eligible projects whose project numbers come after the project number entered in the Start Project Number process parameter.

**Project Number.** Enter the name of the project for which you want to submit the The Generate Draft Invoices for a Single Project process.

**Output Reports**

Five output reports show you the results of the Generate Draft Invoices process: The last three reports print only when you submit the process for a single project.

- **The Draft Invoice Generation Report.** Prints each draft invoice that is successfully created by the process. For each draft invoice, this report displays the project for which the invoice was created, its draft invoice number, the number of the draft invoice, if any, that it credits, the customer number, name, and agreement that funds it, the bill through date through used to create the invoice, and the total amount of the invoice. This report also tells you the next action to take in the invoicing flow process for each draft invoice.

- **The Draft Invoice Generation Exception Report.** Lists any of the project draft invoices that the process was unable to successfully create during its processing. For each rejected draft invoice, the Draft Invoice Generation Exception Report displays the rejection reason.

- **The Draft Invoice Generation Eligibility Report.** This report displays information about the project for which the process was submitted. This information includes the project’s revenue accrual and billing method, the project start date, and the date of its last invoice generation. If the Generate Draft Invoices process cannot create a new draft invoice, the reason for the generation failure appears under the Rejection Reason column heading.

- **The Draft Invoice Generation Eligibility Report (Unprocessed Expenditure Items Detail).** This report displays all expenditure items that the process could not invoice for the specified project and also shows information for each expenditure item to help you identify why the expenditure item was not invoiced. Use this information to check if the expenditure item date is on or before the bill through date, if the item is revenue distributed, if the item is on
billing hold, or if the item is included on a draft revenue that has a generation error.

- **The Draft Invoice Generation Eligibility (Unprocessed Events Detail) report.** This report displays any of the billing events that the process could not invoice for the specified project and shows information for each event to help identify why the event was not invoiced. Use this information to check if the completion date is on or before the bill through date, if the event is on billing hold, or if the write on event is revenue distributed.
Generate Draft Revenue

This process calculates revenue for contract projects. This process has several modes: generate, regenerate, and delete. You can run this process in different modes as described below under the Process Submission section.

Note: If your project uses cost-to-cost revenue accrual, you must include burdened costs in your cost budget and revenue amounts in your revenue budget. Without these amounts, Oracle Projects cannot successfully generate revenue for your project.

Process Submission

You submit the PRC: Generate Draft Revenue process from the Submit Request window. To submit the process for one project, submit the PRC: Generate Draft Revenue for a Single Project process. See: Submitting Requests: page 9 – 2.

Process Parameters

Accrue Through Date. The process only selects those expenditure items and events dated on or before the date that you enter here. If you leave this parameter blank, the Generate Draft Revenue process uses the current date as the accrue through date.

Note: When you process revenue for projects using cost-to-cost revenue accrual, the accrue through date used is the PA Date instead of the expenditure item date.

Start Project Number. Enter the number of the project that you want the Generate Draft Revenue process to use as the low end of the project number range within which it selects projects to process. If you leave this parameter blank, the Generate Draft Revenue process generates revenue for all eligible projects whose project numbers come before the project number entered in the End Project Number process parameter. See: No List of Values for Project Number Range Parameter: page 9 – 2.

End Project Number. Enter the number of the project that you want the Generate Draft Revenue process to use as the high end of the project number range within which it selects projects to process. If you leave this parameter blank, the Generate Draft Revenue process generates revenue for all eligible projects whose project numbers come after the project number entered in the Start Project Number process parameter.
Project Number. (For PRC: Generate Draft Revenue for a Single Project only). Number of the project for which you want to run the process.

Output Reports

Seven output reports show you the results of the Generate Draft Revenue process:

- **The Draft Revenue Generation Exception Report.** Lists all of the project draft revenues that the process was unable to successfully create during its processing. For each rejected draft revenue, the Draft Revenue Generation Exception Report displays the rejection reason.

- **The Draft Revenue Generation Exception (Rejected Expenditure Items Detail) Report.** Created only when the process is run for all eligible projects or a group of projects. This report shows you all expenditure items that the Generate Draft Revenue process rejected during its processing. For each rejected expenditure item, the report displays the rejection reason.

  **Note:** You can also view the results of the process in the following ways:

  - You can review rejection reasons from the Expenditure Items window by using the Show Field option in the Folder menu to display Revenue Distr. Rejection. See: Performing a Project Expenditure Inquiry: page 4 – 42.

  - You can review the log file generated by the Generate Draft Revenue process to view exceptions. The log file is generated for both the Single Project and multiple project Generate Revenue processes.

- **The Draft Revenue Generation Exception Report (Rejected Event Detail).** Created only when the process is run for all eligible projects or a group of projects. This report shows you all revenue events that the Generate Draft Revenue process rejected during its processing. For each rejected revenue event, this report displays the rejection reason.

- **The Draft Revenue Generation Report.** Lists each draft revenue that was successfully created by the process. For each draft revenue, this report displays the project for which it was created, its draft revenue number, the number of the draft revenue, if any, that it credits, the customer number, name, and agreement providing the funding, the accrue through date used to generate...
the revenue, and the total dollar amount of the draft revenue. This report also displays any generation warnings below each draft revenue.

- **The Draft Revenue Generation Eligibility Report.** Created only when the process is run for one project. This report displays the project for which the Generate Draft Revenue process was submitted. If the process cannot create a new draft revenue for the project, the reason for the generation failure appears under the Rejection Reason column heading.

- **The Draft Revenue Generation Eligibility Report (Unprocessed Expenditure Items Detail).** Created only when the process is run for one project. This report displays all of the specified project’s expenditure items for which the process could not accrue revenue and shows information to help identify why the item did not accrue revenue. Use this information to check if the expenditure item date is on or before the accrue through date, if the item is costed, if the item is summarized (for cost revenue accrual projects), if the item is billable, and if a rejection reason like ‘No labor bill rate’ was encountered.

- **The Draft Revenue Generation Eligibility Report (Unprocessed Events Detail).** Created only when the process is run for one project. This report displays all of the specified project’s revenue events for which the process could not accrue revenue and shows information to help you identify why the event did not accrue revenue. Use this information to check if the event completion date is on or before the accrue through date.
Delete Draft Revenue of a Single Project

This process deletes draft revenue for a single contract project. When you delete draft revenue for a project that uses cost-to-cost revenue accrual or invoice generation, the corresponding invoices will also be deleted.

Process Submission


Process Parameter

Project Number. Number of the project for which you want to run the process.

Output Reports

There are no reports for the Delete Draft Revenue of a Single Project process.
Tieback Expense Reports from Payables

This process determines the status of expense reports that were previously interfaced to Oracle Payables. If the expense reports were processed by Oracle Payables’ Invoice Import process successfully, then this process updates the expense reports as Accepted by Oracle Payables. If the expense reports were rejected by Oracle Payables’ Invoice Import process, this tieback process deletes all rejected rows from the interface tables and updates all expense reports as Rejected in Oracle Projects. Rejected expense reports are corrected and retransferred.

Attention: You must use the same report mode, either summarized or detailed, to interface expense report costs to Oracle Payables and to tieback the same expense reports. See: Interface Expense Reports to Oracle Payables: page 12 – 24 and PA: Summarize Expense Report Lines: page B – 13.

Process Submission

From the Submit Request window, you can submit the PRC: Tieback Expense Reports from Payables process either by itself, or as part of the Interface Expense Reports Costs to AP streamline option of the PRC: Submit Interface Streamline Processes process. See: Submitting Requests: page 9 – 2.

Output Reports

Two output reports show you the results of this process:

- The Tieback Expense Report Costs Report. Lists the total number of expense reports successfully processed by Invoice Import since the last time the Tieback Expense Reports from Payables process ran.

- The Tieback Expense Report Costs Exception Report. Lists any expense reports that were rejected by Oracle Payables’ Invoice Import process since the last time the Tieback Expense Reports from Payables process ran. For each rejected expense report, this exception report displays the rejection reason given by Invoice Import.
See Also

Payables Invoice Import  *Oracle Payables User’s Guide*
Tieback Invoices from Receivables

This process determines the status of draft invoices interfaced to Oracle Receivables. If invoices are successfully processed through Oracle Receivables AutoInvoice process, this tieback process updates the invoice interface status to *Accepted*. If Oracle Receivables AutoInvoice process rejects draft invoices, the tieback process deletes all rejected rows from the interface tables and updates the invoice status to *Rejected*. Rejected invoices are corrected and retransferred.

**Process Submission**

From the Submit Request window, you can submit the PRC: Tieback Invoices from Account Receivables process either by itself, or as part of one of the Interface to AR Streamline options of the PRC: Submit Interface Streamline Processes process. See: Submitting Requests: page 9 – 2.

**Output Reports**

Two output reports show you the results of this process:

- **The Accounts Receivable Tieback Report (Successful Invoice Transfers).** Lists each draft invoice that was successfully processed by the AutoInvoice process. For each draft invoice, the report displays the project number and the draft invoice number, the customer number, name, and agreement funding the invoice, the date that the draft invoice was interfaced to Oracle Receivables, and the AR invoice number of the invoice.

- **The Accounts Receivable Tieback Report (Rejected Invoice Transfers).** Lists any draft invoices that were rejected by Oracle Receivables’ AutoInvoice process. For each rejected draft invoice, this report lists the rejection reason given by AutoInvoice.
Tieback Labor Costs from General Ledger

This process determines if labor costs previously interfaced to Oracle General Ledger have been rejected by Oracle General Ledger’s Journal Import process. If Journal Import rejected the labor costs, this tieback process deletes all rejected rows from the interface tables and updates the cost distribution lines’ interface status to *Rejected*. After the reason the costs were rejected is resolved, these costs can then be retransferred to General Ledger. You can determine the rejection reason from the Journal Import report.

**Process Submission**

From the Submit Request window, you can submit the PRC: Tieback Labor Costs from General Ledger process either by itself, or as part of one of the ‘Interface Labor Costs to GL’ parameters of the PRC: Submit Interface Streamline Processes process. See: Submitting Requests: page 9 – 2.

**Output Reports**

One output report shows you the results of this process:

- **The Tieback Labor Costs Report.** Lists the total number of labor cost items rejected by the Journal Import process since the last time the Tieback Labor Costs from General Ledger process ran.
Tieback Revenue from General Ledger

This process determines if revenue previously interfaced to Oracle General Ledger have been rejected by Oracle General Ledger’s Journal Import process. If Journal Import rejected the revenue, this tieback process deletes all rejected rows from the interface tables and updates the draft revenues’ interface status to Rejected. After the reason the revenue was rejected is resolved, these revenues can then be retransferred to General Ledger. You can determine the rejection reason from the Journal Import report.

Process Submission

From the Submit Request window, you can submit the PRC: Tieback Revenue from General Ledger process either by itself, or as part of one of the ‘Interface Revenue to GL’ parameters of the PRC: Submit Interface Streamline Processes process. See: Submitting Requests: page 9 – 2.

Output Reports

One output report shows you the results of this process:

- The Tieback Revenue Report. Lists the total number of draft revenues rejected by the Journal Import process since the last time the Tieback Revenue from General Ledger process ran.
Tieback Total Burdened Cost from General Ledger

This process determines if total burdened costs previously interfaced to Oracle General Ledger have been rejected by Oracle General Ledger’s Journal Import process. If Journal Import rejected the total burdened costs, this tieback process deletes all rejected rows from the interface tables and updates the cost distribution lines’ interface status to Rejected. After the reason the total burdened costs were rejected is resolved, these costs can then be retransferred to General Ledger. You can determine the rejection reason from the Journal Import report.

Process Submission

From the Submit Request window, you can submit the PRC: Tieback Total Burdened Cost from GL process either by itself, or as part of one of the ‘Distribute and Interface Total Burdened Cost to General Ledger’ or ‘Interface Total Burdened Cost to General Ledger’ parameters of the PRC: Submit Interface Streamline Processes process. See: Submitting Requests: page 9 – 2.

Output Reports

One output report shows you the results of this process:

- **Tieback Total Burdened Costs Report.** Lists the total number of burdened cost distribution lines rejected by the Journal Import process since the last time the Tieback Total Burdened Costs from General Ledger process ran.
Tieback Usage and Miscellaneous Costs from General Ledger

The Tieback Usage and Miscellaneous Costs from General Ledger process determines if usage or miscellaneous costs previously interfaced to Oracle General Ledger have been rejected by Oracle General Ledger’s Journal Import process. If Journal Import rejected the costs, this tieback process deletes all rejected rows from the interface tables and updates the cost distribution lines’ interface status to Rejected. After the reason the costs were rejected is resolved, these costs can then be retransferred to General Ledger. You can determine the rejection reason from the Journal Import report.

Process Submission

From the Submit Request window, you can submit the PRC: Tieback Usage and Miscellaneous Costs from General Ledger process either by itself, or as part of one of the 'Interface Usage Costs to GL' parameters of the PRC: Submit Interface Streamline Processes process. See: Submitting Requests: page 9 – 2.

Output Reports

One output report shows you the results of this process:

- The Tieback Usage and Miscellaneous Costs Report. Lists the total number of cost distribution lines rejected by the Journal Import process since the last time the Tieback Usage and Miscellaneous Costs from General Ledger process ran.
Transaction Import

The Transaction Import process selects all eligible pending transactions in the PA_TRANSACTION_INTERFACE_ALL table that satisfy the selection criteria of the process request and determines the validity of each transaction.

For each valid transaction, Transaction Import imports the transactions and creates corresponding expenditure records in the Oracle Projects expenditure tables; expenditure records include expenditure batches, expenditures, and expenditure items. For each invalid transaction, Transaction Import rejects the transaction and updates the transaction in the interface table with a status of Rejected and the rejection reason. You should update rejected items in the interface tables or your external system and import the transactions again.

If the transaction source for the Transaction Import is purgeable, Transaction Import deletes the corresponding transactions from the interface table. If the transaction source is not purgeable, Transaction Import updates the status of the corresponding transaction in the interface table with a status of Accepted.

For detailed information on importing data into Oracle Projects using Transaction Import, including interface table descriptions, refer to the following essay: Overview of Transaction Import: page 4 – 73.

Process Submission

You submit the PRC: Transaction Import process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Process Parameters

Transaction Source. Enter the transaction source for the transactions that you want to import into Oracle Projects.

Batch Name. Enter the name of a specific batch of transaction that you want to import into Oracle Projects. You can choose only batches having the transaction source specified for the Transaction Source parameter.

Suggestion: For increased performance, submit several concurrent Transaction Import requests specifying different batch names rather than submitting one request for a particular transaction source.
Output Reports

Two output reports show you the results of this process:

- **The Transaction Import Exception Report.** Lists all transactions that were rejected during the Transaction Import process. For each rejected transaction, this report displays the key field values of the transaction in the interface table. It also displays the rejection reason code that identifies the cause of the transaction’s rejection. For reference, the last page of this report prints a key of rejection reason codes and their meanings.

  **Attention:** If any one expenditure item in an expenditure fails validation, Oracle Projects rejects the entire expenditure and updates each expenditure item in the expenditure with a status of R (Rejected). You can locate all of the related rejected transactions within an expenditure batch by using a SQL*Plus select statement on the EXPENDITURE_ID column using the expenditure id of the rejected item; then update the TRANSACTION_STATUS_CODE column to remove the R status. Or you can re-import the corrected items, Oracle Projects creates a new record for the expenditure items instead of updating the existing records that were rejected.

- **The Transaction Import Report.** Displays a summary of the expenditure successfully imported into Oracle Projects by the Transaction Import process. This report lists the name of each expenditure batch created during the import process, the expenditure batch ending date, and the total number of expenditures created in the expenditure batch. This report also includes a total count of the expenditure batches created during the import process.

  **Suggestion:** If you want to view more detailed information about the expenditures created in Oracle Projects, submit the AUD: Pre–Approved Expenditures Entry Audit report.
Interface Assets

The Interface Assets process sends valid asset lines to Oracle Assets to become fixed assets. The process creates one mass addition line in Oracle Assets for each asset line in Oracle Projects, assigning the asset information you entered for the CIP asset to the mass addition line in Oracle Assets.

Process Submission

You use the Submit Request window to submit the PRC: Interface Assets process. See: Submitting Requests: page 9 – 2.

Process Parameters

From Project Number. Enter the number of the project that you want the Interface Assets process to use as the low end of the project number range within which it selects projects to process. If you leave this parameter blank, the process sends valid asset lines for all eligible projects whose project numbers come before the project number entered in the End Project Number process parameter. See: No List of Values for Project Number Range Parameter: page 9 – 2.

To Project Number. Enter the number of the project that you want the Interface Assets process to use as the high end of the project number range within which it selects projects to process. If you leave this parameter blank, the process sends valid asset lines for all eligible projects whose project numbers come after the project number entered in the Start Project Number process parameter.

Date Placed in Service Through. Enter the In Service Through date up to which you want to process capitalized costs.

Output Reports

Two output reports show you the results of this process:

- **Interface Assets Exceptions.** The Interface Assets Exceptions Report indicates which asset lines were not sent to Oracle Assets for the selected projects, and why each one was rejected. Rejection reasons include:
  - Date placed in service belongs to a future Oracle Assets period
  - Asset not created in Oracle Assets (You have not yet posted the mass addition asset line from Oracle Projects) to Oracle Assets
• CIP costs for supplier invoice adjustments have not been interfaced to Oracle Payables
• CIP Costs for the summarized asset lines have not been interfaced to Oracle General Ledger

- **Interfaced Assets.** The Interfaced Assets Report displays the following:
  • The count of asset lines, and the sum of the interfaced assets, for each project and successfully interfaced asset
  • The subtotal for each project
  • The overall total

**See Also**

Sending Asset Lines to Oracle Assets: page 6 – 32
Interface Expense Reports to Payables

The Interface Expense Reports to Payables process collects all eligible expense reports, including adjustments, in Oracle Projects and interfaces them to the Oracle Payables interface tables. The Interface process also determines the liability account for the expense report costs.

After they are interfaced to these interface tables, the expense reports await further processing by Oracle Payables’ Invoice Import process. If any of the expense reports are rejected during the interface to Oracle Payables, then the transfer status for these expense reports is set to Rejected in the interface. Those expense report costs that are successfully interfaced have a transfer status of Interfaced.

Any adjustments processed for existing transactions are attached to the original expense reports in Oracle Payables for Cash Basis Accounting purposes.

Process Submission

From the Submit Request window, you can submit the PRC: Interface Expense Reports to Payables process either by itself, or as part of one of ‘Interface Expense Report Costs to AP’ parameters of PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

Output Reports

Two output reports show you the results of this process:

- **The Interface Expense Reports Report (Interface to Payables).** Lists all interfaced expense reports, along with the total count and the total cost of the expense reports. For each expense report, this report displays the name of the employee who submitted the expense report, the period ending date of the expense report, the total cost of the expenditure items included in the expense report, and the name of the expense reports batch in which the expense report was grouped.

- **The Interface Expense Reports Exception Report (Interface to Payables).** Lists any expense reports that were rejected during interface to Oracle Payables. For each expense report that fails to interface to Oracle Payables, this report lists the rejection reason.
See Also

Payables Invoice Import  Oracle Payables User’s Guide
Interface Invoices to Receivables

This process collects all eligible draft invoices in Oracle Projects and interfaces them to the Oracle Receivables interface tables. The process also maintains the project balances of unbilled receivable and unearned revenue and creates accounting transactions for these amounts.

Once interfaced to these interface tables, the draft invoices await further processing by Oracle Receivables’s AutoInvoice process. If any of the draft invoices are rejected during the interface to Oracle Receivables, then the interface status for these invoices is set to Rejected in Interface. Those draft invoices that successfully interface have the transfer status Interfaced.

You can run this process either before or after you run PRC: Interface Revenue to General Ledger (neither process is a prerequisite for the other).

Note: If you implement Multiple Reporting Currencies in Oracle Projects, you can run this process only in your primary currency. See also: Multiple Reporting Currencies in Oracle Applications.

Process Submission

From the Submit Request window, you can submit the PRC: Interface Invoices to Receivables process either by itself, or as part of one of the ‘Interface Draft Invoice to AR’ parameters of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

Process Parameters

Project Number. Enter the number of the project whose invoices you want to interface to Oracle Receivables. If you leave this parameter blank, the process selects all eligible draft invoices for all projects.

Output Reports

Two output reports show you the results of this process:

- The Accounts Receivable Interface Report (Invoice Transactions) prints each draft invoice that successfully interfaced to Oracle Receivables. For each draft invoice, this report displays the draft invoice’s project number and draft invoice number, the customer name and customer agreement funding the invoice, the PA and GL accounting dates in which the draft invoice posts, the number of
the draft invoice, if any, that this one credits, and the total bill amount of the draft invoice.

- **The Accounts Receivable Interface Exception Report (Invoice Transactions)**. Lists any draft invoices that were rejected during the process. For each draft invoice that fails to interface to Oracle Receivables, this report lists the rejection reason.
Interface Labor Costs to General Ledger

This process collects all eligible labor costs in Oracle Projects and interfaces them to the Oracle General Ledger interface tables. The interface process also determines the liability account for the labor costs. Once interfaced, these labor costs await further processing by Oracle General Ledgers Journal Import process.

The labor costs that successfully interface are updated with the interface status of Accepted. If any of the labor costs are rejected during interface to Oracle General Ledger, then the interface status for these labor items is set to Rejected.

**Note:** If you implement Multiple Reporting Currencies in Oracle Projects, you must run this process in your primary currency before you can run the same process in your reporting currencies. See also: *Multiple Reporting Currencies in Oracle Applications.*

**Process Submission**

From the Submit Request window, you can submit the PRC: Interface Labor Costs to General Ledger process either by itself, or as part of one of the ‘Interface Labor Costs to GL’ parameters of the PRC: Submit Streamline Processes process.

**Process Parameters**

**End PA Date.** The process interfaces all cost distribution lines with a PA date on or before the date that you enter here. If you leave this parameter blank, the process selects all eligible labor expenditure items for interface.

**Output Reports**

Two output reports show you the results of this process:

**The Interface Labor Costs to General Ledger Report.** Lists all timecards, along with the total timecard count and the total labor cost successfully interfaced to Oracle General Ledger. For each expenditure, this report displays the name of the employee who reported the timecard, the timecard week ending date, and the total labor cost.

**The Interface Labor Costs to General Ledger Exception Report.** Lists any expenditures that were rejected during the process. For each
expenditure that fails to interface to Oracle General Ledger, this report lists the rejection reason.
Interface Revenue to General Ledger

This process collects all eligible revenue in Oracle Projects and interfaces them to the Oracle General Ledger interface tables. The interface process also maintains project balances for unbilled receivable and unearned revenue and creates accounting transactions for these amounts. Once interfaced, these revenue await further processing by Oracle General Ledger’s Journal Import process.

The revenues that successfully interface are updated with the interface status of Accepted. If any of the revenues are rejected during interface to Oracle General Ledger, then the interface status for these revenues is set to Rejected.

You can run this process either before or after you run PRC: Interface Invoices to Receivables (neither process is a prerequisite for the other).

**Note:** If you implement Multiple Reporting Currencies in Oracle Projects, you must run this process in your primary currency before you can run the same process in your reporting currencies. See also: *Multiple Reporting Currencies in Oracle Applications.*

**Process Submission**

From the Submit Request window you can submit the PRC: Interface Revenue to General Ledger process either by itself, or as part of one of the Interface Draft Revenue to GL parameters of the PRC: Submit Streamline Processes process.

**Process Parameters**

**Start PA Date.** Enter the date for the low end of the PA Date range within which you want the process to select eligible draft revenues. If you leave this parameter blank, the process selects all eligible draft revenues having PA Dates before the date you enter in the End PA Date process parameter.

**End PA Date.** Enter the date for the high end of the PA Date range within which you want the process to select eligible draft revenues. If you leave this parameter blank, the process selects all eligible draft revenues having PA Dates after the date you enter in the Start PA Date process parameter.

**Project Number.** Enter the number of the project whose draft revenues you want to interface to Oracle General Ledger. If you leave this
parameter blank, the process selects all eligible draft revenues across all projects.

Output Reports
Two output reports show you the results of this process:

The Interface Revenues to General Ledger Report (Revenue Transactions). Lists each draft revenue that successfully interfaced to Oracle General Ledger. For each draft revenue, this report displays the draft revenue’s project number and draft revenue number, the customer name and customer agreement funding the revenue, the PA and GL accounting dates in which the draft revenue posts, the number of the draft revenue, if any, that this one credits, and the total revenue amount of the draft revenue.

The Interface Revenues to General Ledger Exception Report (Revenue Transactions). Lists any draft revenues that were rejected during the process. For each draft revenue that fails to interface to Oracle General Ledger, this report lists the rejection reason.
Interface Total Burdened Cost to General Ledger

This process collects all eligible total burdened distribution lines in Oracle Projects and interfaces them to Oracle General Ledger.

**Note:** If you implement Multiple Reporting Currencies in Oracle Projects, you must run this process in your primary currency before you can run the same process in your reporting currencies. See also: *Multiple Reporting Currencies in Oracle Applications.*

**Process Submission**

From the Submit Request window, you can submit the PRC:Interface Total Burdened Cost to GL process either by itself, or as part of one of the ‘Distribute and Interface Total Burdened Cost to General Ledger’ or ‘Interface Total Burdened Cost to General Ledger’ parameters of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

**Process Parameters**

**End PA Date.** This process interfaces all total burdened cost distribution lines with a PA date on or before the date that you enter here. If you leave this parameter blank, the process selects all eligible total burdened cost distribution lines for interface regardless of the PA date.

**Output Reports**

Two output reports show you the results of this process:

- **Interface Total Burdened Cost to General Ledger Report.** Lists interfaced burdened items by expenditure type class, along with the total amount successfully interfaced to Oracle General Ledger. This report also displays the employee, expenditure ending date, and the batch name of the interfaced amounts.

- **The Interface Total Burdened Cost to General Ledger Exception Report.** Lists any expenditure items that were rejected during the process and lists the rejection reason for each item.
Interface Usage and Miscellaneous Costs to General Ledger

This process collects all eligible cost distribution lines of the following transactions in Oracle Projects and interfaces them to the Oracle General Ledger interface tables: usage costs, miscellaneous transaction costs, burden transaction costs, and Inventory and WIP transactions not already costed or accounted. The interface process also determines the liability account for these costs. After they are interfaced, these costs await further processing by Oracle General Ledger’s Journal Import process.

The costs that are successfully interfaced are updated with the interface status of Accepted. If any of the costs are rejected during interface to Oracle General Ledger, then the interface status for these items is set to Rejected.

Note: If you implement Multiple Reporting Currencies in Oracle Projects, you must run this process in your primary currency before you can run the same process in your reporting currencies. See also: Multiple Reporting Currencies in Oracle Applications.

Process Submission

From the Submit Request window you can submit the PRC:Interface Usage and Miscellaneous Costs to General Ledger process either by itself, or as part of one of the Interface Usage and Miscellaneous Costs to GL parameters of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

Process Parameters

Through PA Date. This process interfaces eligible cost distribution lines with a PA date on or before the date that you enter here. If you leave this parameter blank, the process selects all eligible distribution lines for interface regardless of the PA date.

Output Reports

Two output reports show you the results of this process:

The Interface Usage and Miscellaneous Costs to General Ledger Report. Lists resources by expenditure week, along with the total count and cost successfully interfaced to Oracle General Ledger. This report displays the non–labor resource, the expenditure week ending date, and the total cost.
The Interface Usage and Miscellaneous Costs to General Ledger Exception Report. Lists any expenditure items that were rejected during the process and the rejection reason for each item.
Interface Supplier Invoice Adjustment Costs to Payables

This process collects all eligible supplier invoice adjustment costs in Oracle Projects and interfaces them to Oracle Payables. The process determines the liability account for the supplier invoice costs. Once interfaced, these costs await further processing by Oracle Payables before you can post the adjustments to Oracle General Ledger.

The costs that successfully interface are updated with the interface status of Accepted. If any of the costs are rejected during interface to Oracle Payables, then the interface status for these items is set to Rejected.

Process Submission

From the Submit Request window you can submit the PRC:Interface Supplier Invoice Adjustment Costs to Payables process either by itself, or as the ‘Distribute and Interface Supplier Invoice Adjustments to AP’ option of the PRC: Submit Streamline Processes process. See: Submitting Requests: page 9 – 2.

Process Parameters

End PA Date. The process interfaces all supplier invoice cost distribution lines with PA dates on or before the date that you enter here. If you leave this parameter blank, the process selects all eligible usage cost distribution lines for interface regardless of the PA date.

Output Reports

Two output reports show you the results of this process:

- **The Interface Supplier Invoice Adjustment Report.** Lists supplier invoice adjustment items successfully interfaced to Oracle Payables. This report displays the expenditure items that were interfaced to Oracle Payables.

- **The Interface Supplier Invoice Adjustments Exception Report.** Lists any expenditure items that were rejected during the process. For each supplier invoice item that fails to interface to Oracle Payables, this report lists the rejection reason.
Interface Supplier Invoices from Payables

This process retrieves all eligible posted, project-related supplier invoices from Oracle Payables and interfaces them to Oracle Projects. This process creates a cost distributed expenditure item and cost distribution line for each invoice distribution line and an expenditure for each invoice.

This process also checks for original items being adjusted when processing adjusting items from Oracle Payables, to ensure that every negative expenditure item adjusts a valid original expenditure item. If an original matching item is found, the process next checks to ensure that the original item is not already adjusted to have a net zero amount.

This process validates and rejects or interfaces the supplier invoice adjustments being interfaced. If the process finds a valid original expenditure item for the adjusting item, it interfaces the adjusting item to Oracle Projects. If the process cannot find a valid original item that matches the adjusting item, it rejects the adjusting item with a reason of No matching item for adjustment. If the process finds a matching item that is already reversed, it rejects the adjusting item with a reason of Item already reversed.

Process Submission

You use the Submit Request window to submit the PRC:Interface Supplier Invoices from Payables process. See: Submitting Requests: page 9 – 2.

Process Parameters

Project Number. Enter the number of the project whose supplier invoice distribution lines you want to transfer. If you leave this parameter blank, the process selects all eligible supplier invoice distribution lines for all projects.

End GL Date. Enter the GL Date through which you want this process to select supplier invoice distribution lines. If you leave this parameter blank, the process selects all eligible supplier invoice distribution lines regardless of their GL Dates.

End Expenditure Item Date. Enter the expenditure item date through which you want this process to select supplier invoice distribution lines. If you leave this parameter blank, the process selects all eligible supplier invoice distribution lines regardless of their expenditure item dates.
Output Reports

Two output reports show you the results of this process:

- **The Interface Supplier Invoices Report.** Lists supplier invoice distribution lines that were successfully interfaced to Oracle Projects, as well as a summary of the total number and cost of distribution lines.

- **The Interface Supplier Invoices Exception Report.** Lists any supplier invoice distribution lines that failed to interface to Oracle Projects during the process. For each supplier invoice distribution line that fails to transfer, output reports lists the rejection reason.
Update Project Summary Amounts

This process updates the project summary amounts with new cost, commitment, and revenue transactions and any new baselined budget versions.

You can run this process as many times as you want.

Process Submission

From the Submit Request window, submit one of the PRC: Update Project Summary Amounts processes:

- To submit the process for one project, submit the PRC: Update Project Summary Amounts for a Single Project process.
- To submit the process for a range of projects, submit the PRC: Update Project Summary Amounts process.
- To submit the process after making changes in a resource list, submit the PRC: Update Project Summary Amounts After a Resource List Change process.

See: Submitting Requests: page 9 – 2

Process Parameters

Accumulate Cost. Enter Y if you want the Update Project Summary Amounts process to summarize cost amounts.

Accumulate Revenue. Enter Y if you want the Update Project Summary Amounts process to summarize revenue amounts.

Accumulate Budgets. Enter Y if you want the Update Project Summary Amounts process to summarize budget amounts.

Accumulate Commitments. Enter Y if you want the Update Project Summary Amounts process to summarize commitment amounts.

From Project Number. Enter the number of the project that you want the Update Project Summary Amounts process to use as the low end of the project number range within which it selects projects to process. If you leave this parameter blank, the process selects all eligible projects whose project numbers come before the project number entered in the End Project Number process parameter.

Note: You do not need to enter a valid project number in the From/To Project Number fields. This allows you to enter a range that will limit the process to the projects you want to summarize without knowing the actual lowest and highest
To Project Number. Enter the number of the project that you want the Update Project Summary Amounts process to use as the high end of the project number range within which it selects projects to process. If you leave this parameter blank, the process selects all eligible projects whose project numbers come after the project number entered in the Start Project Number process parameter.

Project Number. Enter the name of the project for which you want to submit the Update Project Summary Amounts for a Single Project process.

Budget Type. Select the budget type that you want the Update Project Summary Amounts process to use.

Expenditure Type Class. If you are running the Update Project Summary Amounts process for one project, you can optionally select one expenditure type class that the Update Project Summary Amounts process will use.

Resource List Name. If you are running the Update Project Summary Amounts After a Resource List Change process, you can optionally select one resource list that the Update Project Summary Amounts process will use.

Output Reports

Two output reports show you the results of this process:

- **Update Project Summary Amounts Report.** Lists all costs, revenue, budget amounts, and commitments that were summarized during the process.

  This report also lists *future period transactions*. Future period transactions are transactions whose PA Period is later than the current PA reporting period. Any transactions appearing in this section have not been summarized by the Update Project Summary Amounts process, and will not be reflected in the Project Status Inquiry window. To summarize these transactions, you must set the current reporting period to a PA Period equal to or later than the PA Period of these transactions. See: Setting the PA Reporting Period: page 16 – 69.

- **Update Project Summary Amounts Log.** The Update Project Summary Amounts log can be viewed by choosing Request Log from the Completed Requests window. The log displays amounts
before and after the Update Project Summary Amounts process was run.
Process Mass Update Batches

This process updates the organization on all the projects and tasks specified in a mass update batch.

You can also run Mass Update Batches as an online program, using the Mass Update Batches window. See: Mass Update Batches: page 2 – 62

Process Submission

From the Submit Request window, submit the PRC: Process Mass Update Batches process. See: Submitting Requests: page 9 – 2

Process Parameters

Batch. Select the batch that you wish to process. If you leave this field blank, all mass update batches with the status Submitted and with effective dates on or earlier than the current system date will be processed.

Output Reports

An output report shows you the results of this process.

See Also

Processing a Mass Update Batch: page 2 – 66
Refresh Project Summary Amounts

After you have interfaced detail transactions from your legacy system to Oracle Projects, you use the Refresh Project Summary Amounts and Refresh Transaction Summary Amounts processes to create project summary amounts from transactions that you have interfaced.

You can use this process alone, or run this process after you have run Refresh Transaction Summary Amounts to build the summary amounts from large numbers of detail transactions. See: Refresh Transaction Summary Amounts: page 10 – 58

You must also run this process after you set the current PA Reporting Period to an earlier period than the previous PA Reporting Period, if the system has alerted you that projects have been summarized with dates later than the new reporting period. See: Setting the PA Reporting Period: page 16 – 69.

Process Submission

From the Submit Request window, submit the PRC: Refresh Project Summary Amounts process. See: Submitting Requests: page 9 – 2

Process Parameters

From Project Number. Enter the number of the project that you want the Refresh Project Summary Amounts process to use as the low end of the project number range within which it selects projects to process. If you leave this parameter blank, the process selects all eligible projects whose project numbers come before the project number entered in the End Project Number process parameter.

Note: You do not need to enter a valid project number in the From/To Project Number fields. This allows you to enter a range that will limit the process to the projects you want to summarize without knowing the actual lowest and highest project numbers that will be selected. See: No List of Values for Project Number Range Parameter: page 9 – 2.

To Project Number. Enter the number of the project that you want the Refresh Project Summary Amounts process to use as the high end of the project number range within which it selects projects to process. If you leave this parameter blank, the process selects all eligible projects whose project numbers come after the project number entered in the Start Project Number process parameter.
See Also

Setting the PA Reporting Period: page 16 – 69
Creating Project Summary Amounts After Conversion: page 8 – 17
Refresh Transaction Summary Amounts

After you have interfaced detail transactions from your legacy system to Oracle Projects, you use the Refresh Project Summary Amounts and Refresh Transaction Summary Amounts processes to create project summary amounts.

Use this process if you are interfacing large numbers of detail transactions. This process enables you to build the summary amounts in smaller runs based on the process parameters you enter. This process creates transaction totals for the specified range of PA periods, but does not produce the project summary numbers used by the Project Status Inquiry window.

After you run this process, you then run the Update Project Summary Amounts process to create the project summary amounts used by the Project Status Inquiry window.

Process Submission

From the Submit Request window, submit the PRC: Refresh Transaction Summary Amounts process. See: Submitting Requests: page 9 – 2

Process Parameters

From Project Number. Enter the number of the project that you want the process to use as the low end of the project number range within which it selects projects to process. If you leave this parameter blank, the process selects all eligible projects whose project numbers come before the project number entered in the End Project Number process parameter.

Note: You do not need to enter a valid project number in the From/To Project Number fields. This allows you to enter a range that will limit the process to the projects you want to summarize without knowing the actual lowest and highest project numbers that will be selected. See: No List of Values for Project Number Range Parameter: page 9 – 2.

To Project Number. Enter the number of the project that you want the process to use as the high end of the project number range within which it selects projects to process. If you leave this parameter blank, the process selects all eligible projects whose project numbers come after the project number entered in the Start Project Number process parameter.

From PA Period...To PA Period. Enter a range of PA periods for which you want the process to run.
**Expenditure Type Class.** You can optionally select an expenditure type class that the process will use.

**See Also**

- Creating Project Summary Amounts After Conversion: page 8 – 17
- Project Status Inquiry: page 8 – 2
Collect Dimension and Fact Tables

Attention: Oracle Project Analysis Collection Pack is not included in, but is additional to, the Oracle Projects product. You do not have access to this process unless you have purchased and are a licensed user of Oracle Project Analysis Collection Pack.

This process collects information from the Oracle Projects production summarization tables and loads it into dimension and fact interface tables. The process selects data based on the dimensions and measures you define when integrating Oracle Projects with Oracle Project Analysis Collection Pack. This collection process is incremental, which means it loads only information that changed since the last collection process was run.

By default, this process collects dimension and fact table information from the operating unit of the employee submitting the process.

Prerequisite

Before you run the Collect Dimension and Fact Tables process, you must run the Update Project Summary Amounts process. If you fail to run Update Project Summary Amounts, this collection process will find no data to load into the interface tables.

Process Submission

You submit the PRC: Collect Dimension and Fact Tables process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Process Parameters

Collect Dimension Tables. Enter Yes if you want the Collect Dimension and Fact Tables process to collect information for the dimension interface table you select.

Dimension Table. If you enter Yes for the Collect Dimension Tables parameter, enter the name of the predefined or custom dimension table you want to populate or update. If you do not want to collect any dimension information, leave this field blank.

Collect Fact Tables. Enter Yes if you want the Collect Dimension and Fact Tables process to collect information for the fact interface table you select.
Fact Table. If you enter Yes for the Collect Fact Tables parameter, enter the name of the predefined or custom dimension table you want to populate or update.

From Project Number. If you enter Yes for the Collect Fact Tables parameter, enter the number of the project that you want the Collect Dimension and Fact Tables process to use as the low end of the project number range within which it selects projects to process. If you leave this parameter blank, the process selects all eligible projects whose project numbers come before the project number entered in the End Project Number process parameter. You can enter wildcards for this parameter.

Note: You do not need to enter a valid project number in the From/To Project Number fields. This allows you to enter a range that will limit the process to the projects whose information you want to load into interface tables without knowing the actual lowest and highest project numbers that will be selected. See: No List of Values for Project Number Range Parameter: page 9 – 2.

To Project Number. If you enter a value in the From Project Number field, enter the number of the project that you want the Collect Dimension and Fact Tables process to use as the high end of the project number range within which it selects projects to process. If you leave this parameter blank, the process selects all eligible projects whose project numbers come after the project number entered in the Start Project Number process parameter.
Refresh Dimension and Fact Tables

**Attention:** Oracle Project Analysis Collection Pack is not included in, but is additional to, the Oracle Projects product. You do not have access to this process unless you have purchased and are a licensed user of Oracle Project Analysis Collection Pack.

This process deletes all the records from the Oracle Project Analysis Collection Pack interface tables and then repopulates the interface tables based on your current set of dimensions and measures. You must run this process if you have enabled or disabled standard dimensions since you last ran the collection process. If you are integrating with Oracle Applications Data Warehouse, then you must refresh your warehouse as well.

**Process Submission**

You submit the PRC: Collect Dimension and Fact Tables process from the Submit Request window. See: Submitting Requests: page 9 – 2.

**Process Parameters**

This process does not have any parameters.
Generate Collection Views

Attention: Oracle Project Analysis Collection Pack is not included in, but is additional to, the Oracle Projects product. You do not have access to this process unless you have purchased and are a licensed user of Oracle Project Analysis Collection Pack.

This process generates the collection views based on your current set of dimensions. You can submit this process from the Enable/Disable Dimensions window. This process creates a copy of the new collection views in the concurrent manager log file. After you enable or disable any standard dimensions, you must regenerate the collection views and submit the PRC: Refresh Dimension and Fact Tables process.

Attention: If you customize the collection views, you must apply your changes to the database after you generate the collection views.

Process Submission

You submit the PRC: Collect Dimension and Fact Tables process from the Submit Request window. See: Submitting Requests: page 9 – 2.

Process Parameters

This process does not have any parameters.
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This chapter describes everything you need to know about accounting in Oracle Projects.
Date Processing in Oracle Projects

Oracle Projects tracks detail transactions for project management and for financial accounting. Each transaction has many dates associated with it to handle the different types of processing and reporting required for these two purposes.

You can report transactions based on:

• when the work was incurred
• when the work was accounted for

The date the work was incurred is used for project and resource management control. The date the work was accounted for is for financial accounting control.

Oracle Projects also tracks dates when transactions were processed in the system for process flow audit.

Dates for Project and Resource Management

For project and resource management control, Oracle Projects maintains the date the transaction was incurred and the expenditure period in which the transaction date falls.

These dates are defined as follows:

Expenditure Item Date

The expenditure item date is the date upon which work was incurred. This date falls between the start date and end date of an expenditure period. For example, if you submit an expense report that includes an expenditure item for air travel incurred on 15–MAR–96, the expenditure item date is 15–MAR–96.

Expenditure Ending Date

The expenditure ending date is the end date of a weekly expenditure period. For example, if you submit a timecard for labor hours worked during the week of 20–MAR–96, the expenditure ending date is 20–MAR–96.

Note: The expenditure periods usually correspond to the expenditure entry cycle of timecard and expense report entry.

Oracle Projects supports weekly expenditure periods. You specify the day of the week for the Expenditure Cycle Start Day in the Implementation Options window.
See Also

Expenditure Cycle Start Day: page 16 – 60

**Dates for Financial Accounting**

For financial accounting control, you report on general ledger periods (also referred to as GL periods).

You can also report by project accounting periods (also referred to as PA periods) to track project accounting data on a periodic basis, which may be more frequent than your general ledger accounting periods. Your project managers can review timely information by project accounting period; this information reconciles to your financial reporting by general ledger accounting periods.

Oracle Projects maintains the date a transaction was accounted for based on your general ledger periods and your project accounting periods.

These dates are defined as follows:

**PA Date**

The PA Date is the end date of the project accounting period in which costs, revenue, and invoices are accounted for.

When you initially set up PA periods, it is recommended that PA periods not overlap GL periods. This is explained in detail in Defining PA Periods: page 16 – 68.

**GL Date**

The GL Date is the end date of the GL Period in which costs, revenue, and invoices are accounted for.

**Invoice Date**

The invoice date applies only to customer invoices, and is the date which appears on the customer invoice. This date is used to calculate the invoice due date according to the customer payment terms.
See Also

Defining PA Periods: page 16 – 68

Dates for Process Flow Audit

Oracle Projects maintains the following dates to track process flow through the system.

**Approved Date**
The approved date applies only to customer invoices, and is the date on which the invoice was approved.
Oracle Projects sets this date when you approve an invoice in the Invoice Summary or Invoice windows.

**Released Date**
The released date applies only to revenue and customer invoices, and is the date on which the transaction was approved.
Oracle Projects sets this date when you release an invoice in the Invoice Summary or Invoice windows.

**Interface Date**
The interface date is the date on which you send cost, revenue, and invoices to other Oracle Applications. Oracle Projects sets this date on the date the interface process runs. The interface date is maintained for each cost distribution line, revenue distribution line, and invoice.

Determining Dates

Oracle Projects determines the various dates during the processing of each transaction.

Expenditure Item Date

**Timecards, Expense Reports, Usages, and Miscellaneous Transactions**
You enter the expenditure item date when you enter labor, usage, expense report, and miscellaneous transaction expenditure items in Oracle Projects. Each expenditure item has an expenditure item date.
Supplier Invoice Items
You enter the expenditure item date for supplier invoices when you enter the project information for the invoice distribution line in Oracle Payables. If you match the invoice to a purchase order, Oracle Payables copies the expenditure item date from the purchase order distribution line. If you use distribution sets to create invoices in Oracle Payables, the expenditure item date is set to the invoice date.

See Also
Integrating with Oracle Purchasing and Oracle Payables: page 12 – 35

Expenditure Ending Date
Timecards, Usages, Expense Reports, and Miscellaneous Transactions
You enter the expenditure ending date when you enter timecards, usage logs, expense reports, and miscellaneous transactions in Oracle Projects. The expenditure item dates for a labor expenditure must fall between the start and end dates of the expenditure period. The expenditure item date for expense reports, usages, and miscellaneous transactions must fall before or on the expenditure ending date. Each expenditure item is associated with an expenditure which has an expenditure ending date.

See Also
Overview of Expenditures: page 4 – 2

Supplier Invoice Items
Oracle Projects derives the expenditure ending date for supplier invoice items when you interface supplier invoices from Oracle Payables. The expenditure ending date is the ending date of the week the supplier invoice items are interfaced to Oracle Projects.
PA Date

Oracle Projects determines the PA Date when you distribute costs, interface supplier invoices from Oracle Payables, generate revenue, and generate invoices. The PA date is determined for each cost distribution line, each draft revenue, and each draft invoice.

PA Dates are determined according to the following criteria:

**Timecards, Usages, Expense Reports, and Miscellaneous Transactions**

Oracle Projects derives the PA date when you distribute costs. A PA date is determined for each cost distribution line created for an expenditure item.

The PA Date is set to the end date of the earliest PA period that is on or after the expenditure item date and has a status of Open or Future.

**Supplier Invoice Items**

Oracle Projects derives the PA date for each supplier invoice cost distribution line when you interface the supplier invoice from Oracle Payables. Each project related invoice distribution line in Oracle Payables becomes a cost distribution line associated with an expenditure item in Oracle Projects.

The PA Date is set to the end date of the earliest PA period that is on or after the expenditure item date and has a status of Open or Future.

You enter the expenditure item date and the GL date when you enter a supplier invoice in Oracle Payables. The PA date is derived during interface to Oracle Projects. In most cases, the PA date is earlier than the GL date. However, for supplier invoices, there are cases where the PA date may be later than the GL date. The conditions under which the PA date may be later than the GL date on a supplier invoice item are as follows:

- You enter an expenditure item date that is later than the GL date of an invoice.
- You close the PA period in which the expenditure item date falls before an item is interfaced to Oracle Projects.

**Revenue and Invoices**

When generating draft revenue or draft invoices, Oracle Projects derives the PA date for each revenue and invoice. All items associated with the draft revenue and the draft invoice use the PA date of the revenue or invoice.
Oracle Projects determines the PA date for draft revenue and invoices as follows:

1. Looks for the last expenditure item or event completion date on or before the invoice/revenue generation accrue through date.
   
   **Note:** If your project uses cost-to-cost revenue accrual, the completion date for all events is the revenue generation accrue through date.

2. Determines which PA Period includes the last expenditure item or event completion date.

3. If that PA Period has a status of Open or Future, the PA date is set to the end of that PA Period. Otherwise, Oracle Projects sets the PA date to the end of the next Open or Future PA Period.

**GL Date**

Oracle Projects determines the GL Date when you interface costs, revenue, and invoices to other Oracle Application products. The GL date is determined for each cost distribution line, each draft revenue, and each draft invoice.

GL Dates are determined according to the following criteria:

**Timecard, Usage, and Miscellaneous Transaction Costs**

Oracle Projects derives the GL date when you interface costs to Oracle General Ledger. A GL date is determined for each cost distribution line of an expenditure item.

The GL Date is set to the end date of the earliest GL period that is on or after the PA date of the cost distribution line and has a status of Open or Future according to the period status in Oracle General Ledger.

**Expense Report Costs**

Oracle Projects derives the GL date when you interface expense report costs to Oracle Payables. A GL date is determined for each cost distribution line of an expenditure item.

The GL Date is set to the end date of the earliest GL period that is on or after the latest PA date of the cost distribution lines included on the expense report and has a status of Open or Future according to the period status in Oracle Payables. The Oracle Payables Invoice Import program uses one GL date for each expense report loaded into Oracle Payables. Because of this, all cost distribution lines for an expense report must use the same GL date.
Supplier Invoice Costs
Oracle Projects copies the GL date for each supplier invoice cost distribution line from the GL date that you entered for the invoice distribution line in Oracle Payables, when you interface supplier invoices from Oracle Payables. This date may not be the end date of a GL period.

Supplier Invoice Adjustment Costs
Oracle Projects derives the GL date for supplier invoice adjustment distribution lines as it does for timecard, usage, and miscellaneous transaction items, which is explained above.

Revenue
Oracle Projects derives the GL date when you interface revenue to Oracle General Ledger. A GL date is determined for each draft revenue. All items associated with the draft revenue use the GL date of the draft revenue.

The GL Date is set to the end date of the earliest GL period that is on or after the PA date of the draft revenue and has a status of Open or Future according to the period status in Oracle General Ledger.

Invoice
Oracle Projects derives the GL date when you interface invoices to Oracle Receivables. A GL date is determined for each draft invoice.

The GL Date is set to the end date of the GL period that the invoice date of the draft invoice falls within and has a status of Open or Future according to the period status in Oracle Receivables.

Invoice Date
You specify the invoice date of the customer invoice when you release the invoice in the Summary Invoices or Invoices windows. Oracle Projects passes this date to Oracle Receivables when you interface invoices to Oracle Receivables.

Financial Accounting Date Processing Exceptions
Oracle Projects follows the steps below to determine the appropriate PA and GL dates. These steps describe the process of determining the PA date for cost distribution lines. The same process determines the PA date for revenue and invoices, and the GL date for all transactions.
1. If the PA period in which the expenditure item date falls is *Open* or *Future*, Oracle Projects sets the PA Date to the last day of the PA period of the expenditure item date.

2. If the PA period of the expenditure item date is closed, Oracle Projects sets the PA Date to the last date of the next earliest open PA period. (This is particularly applicable to adjustments which are processed after you close the PA period in which the expenditure item date falls.)

3. If the PA period of the expenditure item date is closed and no future periods are open, Oracle Projects will give you an error and the item will not be cost distributed.

### Example of Date Processing

You can study the examples below to understand how dates are processed in Oracle Projects.

In the examples that follow, we used weekly PA periods and GL periods based on 5–4–4 calendar periods. The PA Periods correspond to expenditure periods, which are weekly and end on a Sunday.

A labor expenditure for $100 dated Monday, February 14, 1997 is charged to the third PA Period in February and is processed the same week. That same item is posted in the February GL Period.

Later, that same expenditure item is re-costed the first week of March due to a retroactive cost rate change. The cost change results in a reversal of the $100 cost distribution line and the creation of a $200 cost distribution line. These adjusting distribution lines are accounted for in March periods.

In the examples below, we show you the detailed effect of the initial expenditure item processing on dates, and of the adjustment processing on dates.

### Initial Processing of Expenditure Item

The following figure depicts the initial processing of the $100 expenditure item.
Oracle Projects creates the following cost distribution line.

<table>
<thead>
<tr>
<th>Line #</th>
<th>Line # Reversed</th>
<th>Amount</th>
<th>Account</th>
<th>PA Date</th>
<th>GL Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>100</td>
<td>04.401.5100</td>
<td>20–FEB–97</td>
<td>27–FEB–97</td>
</tr>
</tbody>
</table>

Table 11 – 1 Cost distribution line after initial processing

**Adjustment Processing of Expenditure Item**

The following figure depicts the adjustment processing of the $100 expenditure item, resulting in the creation of an adjusting item for $200 and a reversing item for −$100, which are accounted for in the same periods.
Oracle Projects creates two adjusting cost distribution lines (lines #2 and #3) as shown below.

<table>
<thead>
<tr>
<th>Line #</th>
<th>Line # Reversed</th>
<th>Amount</th>
<th>Account</th>
<th>PA Date</th>
<th>GL Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>100</td>
<td>04.401.5100</td>
<td>20–FEB–96</td>
<td>27–FEB–96</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>–100</td>
<td>04.401.5100</td>
<td>06–MAR–96</td>
<td>27–MAR–96</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>200</td>
<td>04.401.5100</td>
<td>06–MAR–96</td>
<td>27–MAR–96</td>
</tr>
</tbody>
</table>

Table 11 – 2 Cost distribution lines after adjustment processing
Accounting Transactions

Each expenditure item’s accounting transactions are held as cost distribution lines. Cost distribution lines are debit amounts. Oracle Projects creates lines for raw costs and total burdened costs (if burdened). AutoAccounting determines the General Ledger accounts to which Oracle Projects charges transactions.

Oracle Projects allows you to generate draft invoices and draft revenue using separate processes, which you can run at different times. To allow for different billing cycles and revenue accrual, the distribution lines for General Ledger are created during invoice and revenue generation.

During the Generate Draft Invoices process, the account that is credited with the invoice amount is either the unbilled receivables (UBR) account or the unearned revenue (UER) account, depending on whether you accrue revenue before or after you generate invoices.

Accounting Transactions for Cost

The following examples illustrate how Oracle Projects accounts for cost transactions.

Expenditure Type: Labor

Post labor costs:
Oracle Projects creates these transactions when labor is distributed.

<table>
<thead>
<tr>
<th>Dr. Raw Labor Costs</th>
<th>100.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Payroll Clearing</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dr. Total Debit (Project Inventory)</th>
<th>200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Total Credit (Transfer Out)</td>
<td>200.00</td>
</tr>
</tbody>
</table>

Pay timecard
These entries are created by your payroll system.

<table>
<thead>
<tr>
<th>Dr. Payroll Clearing</th>
<th>100.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Cash</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Expenditure Type: Expense

Post expense costs
Oracle Projects creates these transactions and sends them to Oracle Payables. Oracle Payables sends them to Oracle General Ledger.

<table>
<thead>
<tr>
<th>Dr. Expense</th>
<th>100.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. AP Liability</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Pay expense report
Oracle Payables creates this entry when you reimburse employees for their expenses,

<table>
<thead>
<tr>
<th>Dr. AP Liability</th>
<th>100.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Cash</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Expenditure Type: Usage

Post usage costs
Oracle Projects creates this entry when usage distribution is processed.

<table>
<thead>
<tr>
<th>Dr. Usage Costs</th>
<th>100.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Usage Clearing (Transfer Out)</td>
<td>9,205.00</td>
</tr>
</tbody>
</table>

See Also

Accounting for Burden Costs: page 5 – 34

Accounting Transactions for Revenue

The following examples illustrate how Oracle Projects accounts for revenue transactions.

Revenue

Once revenue is created, Oracle Projects runs AutoAccounting to determine the appropriate general ledger accounts. AutoAccounting selects all of the AutoAccounting parameters for each item or event,
determines the account coding, validates the account coding against the general ledger, and updates each revenue distribution line with the appropriate account.

Any items or events that fail in AutoAccounting are marked accordingly, and the associated draft revenue is marked with a generation error. See: Overview of AutoAccounting: page 16 – 217.

**Borrowed and Lent Revenue**

Oracle Projects creates borrowed and lent revenue distribution lines for projects that use a distribution rule of WORK and has borrowed and lent AutoAccounting rules enabled.

If borrowed and lent is enabled for labor, Oracle Projects creates borrowed and lent revenue distribution lines for each labor expenditure item for which the employee organization is different from the project organization.

If borrowed and lent is enabled for usage, Oracle Projects creates borrowed and lent revenue distribution lines for each usage expenditure item for which the non–labor resource organization is different from the project organization.

You can specify the percent to use for borrowed and lent revenue by setting the PA: Borrowed Lent Percentage Amount profile option. For example, you company may have a policy that a borrowing organization receives 20% credit for revenue, while the receiving organization gets 80% of the revenue. Assuming your AutoAccounting setup credits the revenue to the lending organizations, your borrowed and lent percentage is 20%.

**Revenue**

Oracle Projects creates these transactions during the revenue generation process.

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Unbilled Receivables and/or Unearned Revenue</th>
<th>200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Revenue</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Labor Revenue Lent</th>
<th>100.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Labor Revenue Borrowed</td>
<td>100.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Usage Revenue Lent</th>
<th>100.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Usage Revenue Borrowed</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Invoice

When invoices are interfaced to Oracle Receivables, Oracle Projects runs AutoAccounting to determine the appropriate general ledger accounts.

Invoice

Oracle Projects creates this entry when the Interface Invoices to Oracle Receivables process is run.

![Table 1]

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Receivables 200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Unbilled Receivables and/or Unearned Revenue 200.00</td>
</tr>
</tbody>
</table>

Collections

Oracle Receivables creates this entry.

![Table 2]

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Cash 200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Receivables 200.00</td>
</tr>
</tbody>
</table>

Examples of Revenue and Invoice Accounting Transactions

Example 1: Accrue prior to billing

![Table 3]

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Unbilled Receivables 200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Revenue 200.00</td>
</tr>
</tbody>
</table>

Invoice

![Table 4]

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Receivables 200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Unbilled Receivables 200.00</td>
</tr>
</tbody>
</table>

Example 2: Invoice prior to accrual

![Table 5]

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Receivables 200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Unearned Revenue 200.00</td>
</tr>
</tbody>
</table>

Invoice

![Table 6]

<table>
<thead>
<tr>
<th>Dr.</th>
<th>Unearned Revenue 200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr.</td>
<td>Revenue 200.00</td>
</tr>
</tbody>
</table>
Example 3: Accrue prior to invoicing and invoice partial amount of work

<table>
<thead>
<tr>
<th>Dr. Unbilled Receivables</th>
<th>200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Revenue</td>
<td>200.00</td>
</tr>
</tbody>
</table>

Invoice

<table>
<thead>
<tr>
<th>Dr. Receivables</th>
<th>100.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Unbilled Receivables</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Example 4: Pre–bill and accrue more than pre–bill

<table>
<thead>
<tr>
<th>Dr. Receivables</th>
<th>200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cr. Unearned Revenue</td>
<td>200.00</td>
</tr>
</tbody>
</table>

Invoice

<table>
<thead>
<tr>
<th>Dr. Unearned Revenue</th>
<th>200.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Unbilled Receivables</td>
<td>100.00</td>
</tr>
<tr>
<td>Cr. Revenue</td>
<td>300.00</td>
</tr>
</tbody>
</table>

Invoice

Accounting Transactions for Cost Accrual

With revenue–based cost accrual, you initially account for the raw or burdened costs incurred as an asset in a cost work in process (WIP) account. When you accrue revenue, the costs are recognized as expense via cost accruals.

For detailed examples of cost accrual transactions, see: Cost Accrual Accounting Entries: page 7 – 74.
This chapter describes everything you need to know about integrating Oracle Projects with other Oracle Applications. It includes information about integration with the following Oracle Applications: Oracle General Ledger, Oracle Payables, Oracle Purchasing, Oracle Receivables, Oracle Assets, and Oracle Human Resources.
System Integration

Oracle Projects integrates with other Oracle Applications, such as Oracle Purchasing, Oracle Payables, Oracle Receivables, Oracle Assets, and Oracle Manufacturing. The following diagram illustrates the integration flow between these systems.

**LEGEND**

- **Solid line** Data interfaced between applications as part of PA
- **Dashed line** Data referenced/reported between applications as part of PA
- **Custom interface; not part of PA**
- **Dotted line** Data interfaced between applications using Activity Management Gateway (AMG)
Oracle General Ledger Integration

Oracle Projects fully integrates with Oracle General Ledger and allows you to easily update your general ledger with Oracle Projects activity. Oracle Projects lets you validate your expense, liability, revenue, and other accounts determined by your accounting rules against your chart of accounts.

When you transfer cost and revenue information to Oracle General Ledger, you use Oracle Projects to collect all project cost and revenue detail transactions, summarize them, and transfer them to Oracle General Ledger.

Oracle General Ledger integration includes:

- inquiry of journal entries imported from Oracle Projects via GL Journal Import and using the predefined journal entry sources and categories

Oracle Purchasing and Oracle Payables Integration—Requisitions, Purchase Orders, and Vendor Invoices

Oracle Projects fully integrates with Oracle Purchasing and Oracle Payables, and allows you to enter project-related requisitions, purchase orders, and vendor invoices using those products.

When you enter information in Oracle Purchasing and Oracle Payables that affects Oracle Projects, you enter project information on your source document. Oracle Purchasing, Oracle Payables, and Oracle Projects carry the project information through the document flow, from the requisition to the purchase order in Oracle Purchasing, to the vendor invoice in Oracle Payables, and to the project expenditure in Oracle Projects. You can report committed costs of requisitions and purchase orders that are outstanding against your projects in Oracle Projects.

Oracle Purchasing integration includes:

- entry of project information on requisition distribution lines
- entry of project information on PO distribution lines
- entry of project information on PO release distribution lines
- entry of project information on preferences
- copy project information from requisition to PO in AutoCreate
Oracle Payables integration includes:

- entry and inquiry of project information on invoice distributions
- entry and inquiry of project information on invoice header (for default entry)
- entry and inquiry of project information on distribution set lines
- copy project information from PO to invoice when they match
- support building of GL account with Workflow based on project information
- support load of project information in Invoice Import from project expense reports

Oracle Receivables integration includes:

- loading of project invoices via AutoInvoice and using the transaction flexfield for project information to be stored on the invoices in AR
- inquiry of invoices by project information using the transaction FlexField in AR forms
- inquiry of invoices by a key reference
  - User able to specify one segment of the transaction FlexField as the reference (for example, key identifier for PA, project number, for OE, or order number) via the profile code PA_AR_CODE.
  - Include the reference for invoice (e.g. project number, order number) in appropriate position for highly used field for display and inquiry on all AR transaction forms and quickpicks. Users will look at invoices by one or a combination of these values: reference, invoice number, and customer.
  - Display source of invoice, so that a user dealing with invoices from more than one source knows what the source of the invoice is
  - Distinguish Transaction Flex character field from standard descriptive Flex with 4 char field
- selection of invoices for cash application by displaying reference in the invoice List of Values in cash application forms
- inquiry of invoices by primary salesperson (project manager, if project manager is set up as salesperson in Oracle Receivables)
- entry and use of customers

**Oracle Assets Integration**

Oracle Projects allows you to manage capital projects. In a capital project, you can collect construction–in–process (CIP) and expensed costs for each asset you are building. You use Oracle Projects to collect all asset cost detail transactions, summarize them, and transfer them to Oracle Assets to become depreciable fixed assets. Oracle Assets will create and transfer journal entries to Oracle General Ledger to relieve the CIP account and record the asset cost.

Oracle Assets integration includes:
- inquiry of project information on mass addition lines
- drilldown to project asset line details in Oracle Projects from project–related mass addition lines in Oracle Assets
- copying of project information from mass addition lines to asset source lines during Mass Additions Posting process
- inquiry of project information on asset source lines
drilldown to project asset line details from project–related asset source lines

Coordination with Oracle Payables so supplier invoices lines are not interfaced to Oracle Assets by both Oracle Payables and Oracle Projects when the invoice line is associated with a capital project.

**Oracle Human Resources Integration**

Oracle Projects shares organization, job, and employee information with Oracle Human Resources. If your business does not use Oracle Human Resources, you can easily enter this data in Oracle Projects.

Oracle Human Resources integration includes:

- business group definition, including the specification of the Project Burdening Hierarchy
- job definitions
- organizations and organization hierarchies and organization types definitions
- entry and inquiry of employees and employee assignments, including date–effective assignments over time and specification of supervisors and billing titles (used in Oracle Projects) on the employee assignments

**External Transaction Collection Systems Integration**

You can load transactions from external cost collection systems into Oracle Projects using the Transaction Import function. You can load quantities or quantities and raw costs for the transactions. Oracle Projects calculates burdened cost, revenue, and invoice amounts, and performs all accounting functions for these imported transactions.

**Summary of Project–Related Windows in Other Oracle Applications**

The following table lists the windows in other Oracle Applications that include specific logic for project transactions.
<table>
<thead>
<tr>
<th>Product</th>
<th>Form</th>
<th>Form Name</th>
<th>Window(s) with Oracle Projects Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>PO Workbench</td>
<td>POXPOEPO</td>
<td>PO Distributions – Projects alternative region</td>
</tr>
<tr>
<td>PO</td>
<td>View POs</td>
<td>POXPOVPO</td>
<td>PO Distributions folder includes project fields</td>
</tr>
<tr>
<td>PO</td>
<td>Requisitions Workbench</td>
<td>POXRQERQ</td>
<td>Requisition Distributions – Projects alternative region</td>
</tr>
<tr>
<td>PO</td>
<td>View Requisitions</td>
<td>POXRQVRQ</td>
<td>Requisition Distributions folder includes project fields</td>
</tr>
<tr>
<td>PO</td>
<td>Enter PO/Requisition Preferences</td>
<td>POXDOPRE</td>
<td>Project alternative region</td>
</tr>
<tr>
<td>PO</td>
<td>Enter Releases</td>
<td>POXPOERL</td>
<td>Release Distributions – Projects alternative region</td>
</tr>
</tbody>
</table>
| AP      | Invoices Workbench | APXINWKB | 1) Find (with dynamic field prompts) to search based on default project info at header level (not distributions)  
2) Invoices Summary folder includes projects fields  
3) Invoice Distributions folder includes projects fields |
| AP      | Distribution Sets | APXSUMDS | Distribution Lines |
| AP      | Invoice Distribution Inquiry | APXGLINQ | 1) Find – Projects alternative region  
2) Invoice Distributions folder includes projects fields |
| AR      | Transactions | Displays Transaction Flexfield and Reference field:  
1) Find  
2) Transaction Summary  
3) Transaction-Main  
4) Transaction Credit  
5) Copy Transactions  
6) Lines – More  
7) Credit Memo |
| AR      | Transaction Overview | Displays Transaction Flexfield and Reference field:  
1) Find  
2) Transaction |
<p>| AR      | QuickCash | Display project number in Transaction LOV |
| AR      | Cash Application | Display Reference in Transaction LOV |</p>
<table>
<thead>
<tr>
<th>Product</th>
<th>Form</th>
<th>Form Name</th>
<th>Window(s) with Oracle Projects Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>Employees</td>
<td></td>
<td>Employee Assignments (multi–row)</td>
</tr>
</tbody>
</table>
| FA      | Mass Additions | FAXMADDS | 1) Find Mass Additions window includes Project/Task fields  
2) Mass Additions folder includes project fields  
3) Mass Additions single row displays project fields  
4) Mass Additions single row window includes Project Details button to drill down to Oracle Projects |
| FA      | Assets Workbench | FAXASSET | 1) Find – Find by Source Line alternative region  
2) Source Lines window displays project fields at bottom of page  
3) Source Lines window has Project Details button to drill down to Oracle Projects |
| FA      | Financial Inquiry | FAXOLFIN | 1) Find – Find by Source Line alternative region  
2) Source Lines folder includes project fields  
3) Source Lines window has Project Details button to drill down to Oracle Projects |

**See Also**

About Capital Projects: page 6 – 2
Integrating with Oracle General Ledger

Oracle Projects fully integrates with Oracle General Ledger and allows you to easily update your general ledger with project accounting activity. Oracle Projects lets you validate your expense, liability, revenue, and other accounts determined by AutoAccounting against your chart of accounts.

When you interface cost and revenue information to Oracle General Ledger, you use Oracle Projects processes which collect all eligible cost and revenue distribution lines, summarize them, and interface them to an Oracle General Ledger interface table.

After you interface cost and revenue information to the Oracle General Ledger interface table, you run the Journal Import program. This program creates journal entries for your cost and revenue transactions, which you can post to Oracle General Ledger at any time.

After you run the Journal Import program to create journal entries, you tieback cost and revenue items to Oracle Projects to ensure that all items are successfully loaded into Oracle General Ledger. If any items are rejected, you correct them and interface them again to Oracle General Ledger.

You can use standard Oracle Projects reports to reconcile your summary cost and revenue journal entries to your project accounting detail transactions. You can also use standard reports to track your expenditure items in Oracle Projects and your journal entries in Oracle General Ledger as you interface data between products.

See Also

Importing Journals Oracle General Ledger User’s Guide

Overview of AutoAccounting; page 16 – 217

Accounting Transactions: page 11 – 12

Implementing Oracle General Ledger

You need to implement the following information in Oracle General Ledger before you can use Oracle General Ledger with Oracle Projects:
Also during the implementation process, you need to specify if you want to interface costs and revenue transactions to Oracle General Ledger. You do this using the Implementation Options window in Oracle Projects.

Loading Legacy Data

You may elect to load legacy transactions to Oracle Projects using the Transaction Import process. The General Ledger balances for these transactions may be loaded directly to Oracle General Ledger, so you would not want to transfer the accounting entries for the legacy transactions from Oracle Projects to Oracle General Ledger.

**To Load Legacy Data:**

In the Implementation Options, set options that control whether you want to interface the costs and revenue to GL as follows:

<table>
<thead>
<tr>
<th>Interface Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface Labor Costs to GL</td>
<td>N</td>
</tr>
<tr>
<td>Interface Usage Costs to GL</td>
<td>N</td>
</tr>
<tr>
<td>Interface Revenue to GL</td>
<td>N</td>
</tr>
</tbody>
</table>

When these options are set to No, the Interface to GL programs will mark the rows as Accepted, but will not create rows in the GL interface table.

**Note:** You should run the Interface to GL programs, even when these options are set to No, so that the above actions will occur.

After all the legacy transactions have been loaded, set the control options to Y before you process any new transactions.

See Also

Setting Up Oracle Applications Set of Books: page 16 – 26

Implementation Options: page 16 – 56
Data that Oracle Projects Predefines

Oracle General Ledger uses journal entry sources and journal entry categories to differentiate the various cost and revenue journal entry transactions you load into Oracle General Ledger.

Journal entry sources
A journal entry source identifies the origin of a journal entry. Each journal entry in the general ledger is associated with a journal entry source. For example, when you import a journal entry to Oracle General Ledger from Oracle Projects, Projects is that journal entry’s source.

Oracle Projects predefines one journal entry source named Projects for the source of project accounting journal entries for cost and revenue transactions.

Journal entry categories
Journal entry categories categorize the types of transactions you can enter in your general ledger.

Oracle Projects predefines four journal entry categories for the journal entries you import to Oracle General Ledger. Three categories are for cost transactions, and the other is for revenue transactions.

- Labor Cost
- Usage Cost
- Total Burdened Cost
- Revenue
You can interface records for your revenue and cost transactions to Oracle General Ledger whenever you are ready and as many times during an accounting period as you wish. You can then use Oracle General Ledger to create journal entries for your transactions and post these journal entries, according to your accounting practices.

**Note:** If you implement Multiple Reporting Currencies in Oracle Projects, you must interface costs and revenue to Oracle General Ledger in your primary currency before you can interface costs and revenue in your reporting currencies. See also: *Multiple Reporting Currencies in Oracle Applications.*

**Submitting Processes**

You can interface costs and revenue to Oracle General Ledger using Oracle Projects streamline processes. When you use a streamline
process, you submit one request that interfaces costs and revenue to Oracle General Ledger, runs Journal Import, and ties back costs and revenue to Oracle Projects. The streamline process submits each process sequentially. We discuss each of these processes in the pages that follow.

You use the following streamline options to interface costs and revenue with Oracle General Ledger:

- DXB: Distribute and Interface Total Burdened Costs to GL
- DXL: Distribute and Interface Labor Costs To GL
- DXU: Distribute and Interface Usage Costs To GL
- XR: Interface Draft Revenue to GL
- XRXI: Interface Draft Revenue to GL and Invoice to AR
- XB: Interface Total Burdened Costs to GL
- XL: Interface Labor Costs To GL
- XU: Interface Usage Costs To GL

You submit a streamline process by requesting the PRC: Submit Interface Streamline Process using the Submit Request form.

If you need to perform an individual function (such as interfacing labor costs), you can use an individual process.

The streamline processes which include distribution processes (DXL and DXU) should not be run during critical processing times. You should run individual distribute processes, and then run the interface and tieback streamline processes later. This will speed up the cycle of getting project information to project managers.

See Also

Submitting Requests: page 9 – 2
Processes: page 10 – 1
Interfacing Costs and Revenue to Oracle General Ledger

You use processes to collect all eligible costs and revenue in Oracle Projects and interface them to Oracle General Ledger. When you interface costs and revenue to Oracle General Ledger, Oracle Projects collects all eligible distribution lines, and if enabled, the employee summarization tables, with the cost and revenue amounts.

Oracle Projects summarizes detail lines into summary interface lines and places the summarized information into an Oracle General Ledger interface table. Oracle Projects summarizes detail lines by Code Combination ID (CCID), GL Period, and Journal Entry Source.

**Note:** Items must be costed and revenue distributed before you can interface them to Oracle General Ledger.

GL Date

The GL Date of the cost or revenue determines the accounting period in which a transaction is posted to a general ledger account. In Oracle Projects, for cost and revenue, the GL Date is the end date of the earliest open or future GL Period on or after the PA Date of a cost distribution line or a draft revenue.

Oracle Projects determines the accounting period by comparing the PA Date to the ranges of dates you have defined for your accounting periods in Oracle General Ledger.

See: Date Processing in Oracle Projects: page 11 – 2

Accounting Transactions

When you interface revenue to Oracle General Ledger, Oracle Projects uses AutoAccounting to determine the accounts for unbilled receivables and unearned revenue. Oracle Projects also uses AutoAccounting to determine the liability account for each type of cost you interface (such as labor or usage). The accounting transactions that the process creates are interfaced to Oracle General Ledger interface tables.

See: Accounting Transactions: page 11 – 12

Output Reports

Each time you interface costs and revenue to Oracle General Ledger, Oracle Projects prints output reports which allow you to track your
successfully interfaced costs and revenue, as well as those distribution lines which fail to interface. You should correct any exceptions and resubmit the process to successfully import rejected items.

Processes: page 10 – 1

**Journal Import**

The Oracle General Ledger Journal Import program takes the summary interface information stored in the Oracle General Ledger interface table and automatically creates cost and revenue journal entries for posting in Oracle General Ledger.

Journal Import creates a journal entry batch for each set of books and accounting period of your revenue and cost journal entry records. For each journal entry category in a batch, Journal Import creates a journal entry header. For each header in a journal entry batch, Journal Import creates one or more journal entry lines that correspond to the journal entry records you interfaced from Oracle Projects to Oracle General Ledger.

If you run Journal Import from Oracle General Ledger instead of using one of the Oracle Projects streamline options, you should choose not to summarize costs, since Oracle Projects summarizes your project accounting data when you interface costs and revenue to Oracle General Ledger.

⚠️ **Warning:** If you run Journal Import from Oracle General Ledger, you should not post errors to suspense. If you do post errors to suspense, your project accounting details will not reconcile with your general ledger summary amounts.

Once Journal Import validates your import data, it sends the data from the interface table to Oracle General Ledger journal entry tables.

You should not correct Journal Import data from Oracle Projects in Oracle General Ledger; if you do, Oracle Projects may not reconcile with Oracle General Ledger.

**Journal Import Execution Report**

Each time you run Journal Import, Oracle General Ledger prints the Journal Import Execution Report which allows you to review the status of your import journal entries. You should correct any exceptions and resubmit Journal Import to successfully import rejected journal entries.
See Also

Importing Journals  *Oracle General Ledger User’s Guide*

Journal Import Execution Reports  *Oracle General Ledger User’s Guide*

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**Tieback Costs and Revenue from Oracle General Ledger**

After you run Journal Import, you run the Tieback Costs and Revenue process to verify your project accounting data loaded successfully into Oracle General Ledger.

**Output Reports**

Each time you tieback costs and revenue from Oracle General Ledger, Oracle Projects prints output reports which allow you to track your successfully interfaced costs and revenue, as well as those distribution lines which fail to interface. You should correct any exceptions and interface them again to Oracle General Ledger.

See Also

Processes: page 10 – 1

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**Posting in Oracle General Ledger**

When Journal Import runs, it does not automatically post and update your account balances in Oracle General Ledger with these journal entries. You can post these journal entries in Oracle General Ledger at any time to update your account balances.

See Also

Posting Journal Batches  *Oracle General Ledger User’s Guide*
Intercompany Accounting

Journal Import automatically creates intercompany accounting transactions based on the intercompany accounts you define in Oracle General Ledger. You can specify the intercompany balancing account you want Oracle General Ledger to use. You can also define intercompany accounts for Oracle General Ledger to use for balancing different types of journal entries.

When you load a journal entry that requires intercompany balancing, Journal Import looks first for an intercompany account for the same source and category as the journal entry. If there is none, Oracle General Ledger balances your journal entry to the standard intercompany account you defined for your set of books.

See Also

Defining Intercompany Accounts Oracle General Ledger User’s Guide

Opening and Closing Periods

You can open and close accounting periods (PA Periods) in Oracle Projects independently of Oracle General Ledger.

The period statuses available in Oracle Projects are Open, Closed, Future, Pending Close, Permanently Closed, and Never Opened.

The period statuses available in Oracle General Ledger are Open, Closed, Permanently Closed, Never Opened, and Future Entry.

See Also

PA Periods: page 16 – 65

Opening and Closing Accounting Periods Oracle General Ledger User’s Guide
Reporting

Oracle Projects automatically maintains audit information so you can reconcile your summary journal entries to your detail project accounting transactions. Oracle Projects provides two reports to help you with your reconciliations:

**GL Cost Interface Audit Report**

You can use the GL Cost Interface Audit report to review and reconcile labor and usage cost distribution lines interfaced from Oracle Projects to Oracle General Ledger. This report displays items by the expense Account and displays information about each expenditure item and the associated liability Account.

**GL Revenue Interface Audit Report**

You can use the GL Revenue Interface Audit report to review and reconcile a listing of the revenue distribution lines interfaced from Oracle Projects to Oracle General Ledger. The revenue distribution lines are reported by revenue Accounting and by project. This report also displays project unbilled receivable and unearned revenue amounts and Accounts.

See Also

GL Cost Interface Audit : page 9 – 41

GL Revenue Interface Audit: page 9 – 42

Other Journal Entry Issues

**Creating Cost and Revenue Adjustments**

We recommend that you create adjustments for cost and revenue distribution lines in Oracle Projects. If you adjust costs and revenue in Oracle General Ledger, those adjustments are not recorded in Oracle Projects, and will not reconcile with Oracle Projects details.

**Drilldown from Oracle General Ledger to Oracle Projects**

Currently there is no automatic drilldown from journal lines in Oracle General Ledger to expenditure items in Oracle Projects.
When cost distribution lines are summarized and successfully interfaced to Oracle Ledger, the batch_name field in the PA_COST_DISTRIBUTION_LINES table is populated. This value is a concatenation of liability CCID (code combination ID), GL date, and transfer request ID, separated by hyphens. This same value is used to populate the reference_1 field in the GL_JE_LINES table.
Integrating Expense Reports with Oracle Payables

Oracle Projects integrates with Oracle Payables so that you can easily create and pay invoices for your project accounting expense reports in Oracle Payables. You enter expense reports in Oracle Projects and use Oracle Payables features to create invoices from the expense reports, maintain and track payment of them, and interface the accounting transactions to Oracle General Ledger.

When you send expense reports to Oracle Payables, you use an Oracle Projects process which collects all eligible costed expense reports in Oracle Projects and interfaces them to the Oracle Payables interface tables. This process also creates accounting transactions for the expense report liability amounts.

Once moved to these interface tables, the expense reports await further processing by the Oracle Payables Invoice Import program. This program automatically creates invoices and invoice distribution lines from the expense report information you load into the interface tables.

After you run Invoice Import to create invoices in Oracle Payables, you tie back successfully interfaced expense reports as well as rejected expense reports using another Oracle Projects process. Rejected expense reports are corrected, and interfaced again to Oracle Payables.

You can use standard reports to track your expense reports as you interface data between applications. You can also use Invoice Import output reports to review imported transaction data and transaction data that fails when you run Invoice Import.

You can also use Oracle Payables features to create prepayments or advances, and apply them against Oracle Projects expense reports and invoices in Oracle Payables. These features are described in the pages that follow.

See Also

Payables Invoice Import Oracle Payables User’s Guide

Implementing Oracle Payables

Employees must be defined as suppliers in Oracle Payables in order to interface Oracle Projects expense reports to Oracle Payables.
You can enable an Oracle Payables system option to create employees as suppliers. If this system option is enabled, then when Oracle Payables does not have a supplier record for an employee which Oracle Projects specifies, the Oracle Payables Invoice Import program automatically creates a supplier for the employee. If you do not enable the Payables option to automatically create suppliers from employees, and the employee is not a supplier, Oracle Payables does not create an invoice for that expense report and lists the expense report as an exception. You create employees as suppliers in Oracle Payables.

You must specify an expense address flag (Home or Office) for each employee so Oracle Payables knows whether to mail an employee’s expense report reimbursement to their home address (in the employee record) or their office address (in the HR location record).

The Expense Address flag also determines which address is used if Oracle Payables creates a supplier record.

Oracle Projects determines the employee expense account using AutoAccounting. Oracle Projects does not use the default account number defined in the employee assignment.

You need to update the PA:Summarize Expense Report Lines profile option in the Systems Profile Values window in System Administration. This profile option determines whether expense report lines in an expense report are summarized by code combination ID when you interface expense reports to Oracle Payables.

See Also

Implementing Oracle Payables for Projects Integration: page 17 – 48

Updating Profile Options for Integration with Other Products: page 17 – 44

Setting Up Employees and Organizations: page 16 – 50
You can interface costed expense reports to Oracle Payables whenever you are ready and as many times during an accounting period as you want.

### Submitting Processes

You can interface expense reports to Oracle Payables using Oracle Projects streamline processes. When you use a streamline process, you submit one request that interfaces expense reports to Oracle Payables, runs Invoice Import, and ties back invoices to Oracle Projects. The streamline process submits each process sequentially. We discuss each of these processes in the pages that follow.

**Attention:** You must run the Distribute Expense Report Costs process before you interface expense reports with Oracle Payables. This process groups expenditure items into batches of expense reports and determines the expense account held in the cost distribution line.

You use the following streamline options to interface expense reports with Oracle Payables:
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DXES</td>
<td>Distribute and Interface Expense Report Costs to AP</td>
<td>(Summarized report)</td>
</tr>
<tr>
<td>DXEU</td>
<td>Distribute and Interface Expense Report Costs to AP</td>
<td>(Detailed report)</td>
</tr>
<tr>
<td>XES</td>
<td>Interface Expense Report Costs to AP</td>
<td>(Summarized report)</td>
</tr>
<tr>
<td>XEU</td>
<td>Interface Expense Report Costs to AP</td>
<td>(Detailed report)</td>
</tr>
<tr>
<td>DTE</td>
<td>Distribute and Interface Expense Report Costs to AP</td>
<td></td>
</tr>
<tr>
<td>ITES</td>
<td>AP Invoice Import (Summarized report) and Tieback</td>
<td>Expense Reports</td>
</tr>
<tr>
<td>ITEU</td>
<td>AP Invoice Import (Detailed report) and Tieback</td>
<td>Expense Reports</td>
</tr>
</tbody>
</table>


You submit a streamline process using the PRC: Submit Interface Streamline Process option of the Submit Request form.

If you need to perform an individual function (such as interfacing expense reports), you can use an individual process.

**Attention:** You must use the same report mode, either summarized or detailed, to interface expense report costs to Oracle Payables and to tieback the same expense reports, regardless of whether you submit a streamline process or an individual process.

The streamline processes which include distribution processes (DXES, DXEU and DTE) should not be run during critical processing times. You should run the individual distribute processes, and then run the interface and tieback streamline processes later. This will speed up the cycle of getting project information to project managers.

**See Also**

Submitting Requests: page 9 – 2
Interface Expense Reports to Oracle Payables

You use the Interface Expense Reports to Payables process to collect all eligible costed expense reports in Oracle Projects and send them to Oracle Payables interface tables.

Once loaded onto these interface tables, the expense reports await further processing by Oracle Payables Invoice Import process.

**Attention:** If any expense reports fail to interface to Oracle Payables, you may need to redistribute costs before you can attempt to interface the expense reports again. Use the PRC: Distribute Expense Reports process to distribute expense reports.

When you interface invoices, Oracle Projects sets the purgeable flag for each expense report in Oracle Payables to No.

GL Date

The GL Date of the expense report cost determines the accounting period in which a transaction is posted to a general ledger account. In Oracle Projects, the GL Date for costs is the end date of the earliest open or future GL Period on or after the latest PA Date of the cost distribution lines included in an expense report. All cost distribution lines for an expense report are interfaced together to Oracle Payables and use the same GL date; this GL date becomes the GL date of the invoice in Oracle Payables.

Accounting Transactions

The Interface Expense Reports to Payables process uses AutoAccounting to determine the liability account for expense report costs. Oracle Projects derived the expense accounts using AutoAccounting when the expense reports costs were distributed; Oracle Projects does not use the Default Expense Account that you can define for the employee. The process interfaces the accounting transactions for expense reports to Oracle Payables interface tables.

Output Reports

Each time you run Interface Expense Reports to Payables, Oracle Projects prints output reports which allow you to track your successfully interfaced expense reports, as well as those expense reports which fail to interface. You should correct any exceptions and resubmit the process to successfully import rejected expense reports.
Invoice Import

You use the Oracle Payables Invoice Import program to automatically create invoices and invoice distribution lines from Oracle Projects expense report information that you load into Oracle Payables interface tables. Oracle Payables imports expense report interface data into Oracle Payables invoice tables.

**Note:** AP Invoice Import does not call Workflow. If you manually populate the invoice import tables, you need to supply the accounting flexfield information.

You can submit the Payables Invoice Import program from Oracle Payables, or by using one of the Oracle Projects streamline options. If you submit Invoice Import from Oracle Payables, you must specify a source of **Oracle Projects**. Leave the batch name and GL date blank.

Oracle Payables identifies invoices you create from Oracle Projects expense reports with a source of **Oracle Projects** so that you can easily determine the source of your project invoices.

**Prerequisites:**

- Enter expense reports in Oracle Projects.
- Run Oracle Projects PRC: Distribute Expense Report Costs process to calculate the amount and generate accounts.
- Submit Oracle Projects PRC: Interface Expense Reports to Payables process to transfer expense reports to the Payables Invoice Interface Tables.
- If the Oracle Payables Create Employee As Supplier option is not enabled, manually enter the employee as a supplier in the Supplier window.
To Submit Invoice Import for Expense Reports Entered in Oracle Projects:

1. In the Submit Request window, choose the Request Type, and select Payables Invoice Import.

2. Enter the report parameters. Do not enter a batch name. Select Oracle Projects for the source. Leave the GL date field empty.
   If you want to purge expense reports from the Invoice Import Interface Tables, enter the date criteria you want Payables to use. Payables will delete all Oracle Projects expense reports that were entered before this date and have already been imported and tied back to the original expense report in Oracle Projects.

3. Choose OK to submit Invoice Import for all Oracle Projects expense reports in the system that have not yet been imported. Payables creates invoices with the following attributes:
   • Type: Expense Report.
   • Supplier name is Employee Name.
   • Invoice date is Week Ending Date.
   • Invoice number is the expenditure batch name from Oracle Projects appended to a unique identifier for the expense report.
   • Invoice distributions based on cost distribution of expense report items. Also, each invoice distribution in Oracle Payables includes expenditure item information, such as project information, amount, and account coding.
   • Invoice liability account based on AutoAccounting rules in Oracle Projects.
   • Scheduled payments based on payment terms defined in the Payables Options window.
   • Payment method from the Financials Options window.
   • If the supplier is a U.S. federally reportable 1099 supplier, Oracle Payables enters the income tax type for each invoice distribution.
   • When the program is complete, you can query the new invoices in the Invoice Workbench. The new invoices are ready for approval and payment.

4. In Oracle Projects, be sure to run the PRC: Tieback Expense Reports from Payables process.
Output Reports

Each time you run Invoice Import, Oracle Payables prints output reports which allow you to track each expense report created by Invoice Import, as well as exceptions that Invoice Import encounters during the import process.

For detailed information concerning the exceptions that Invoice Import may encounter for Oracle Projects expense reports, please refer to the Oracle Payables User’s Guide.

See Also

Submit Invoice Import  Oracle Payables User’s Guide
Invoice Import  Oracle Payables User’s Guide

Tieback Invoices from Oracle Payables

You use the Tieback Expense Reports from Payables process to tieback expense report costs to ensure that your project accounting data loaded successfully into Oracle Payables.

For all expense reports successfully processed by Invoice Import, the tieback process verifies the interface process was successful. If any expense reports are rejected by Invoice Import, the tieback process updates all expense reports as rejected in Oracle Projects. You should correct rejected expense reports and interface them again to Oracle Payables.

When you tieback invoices created from expense reports, Oracle Projects updates the purgeable flag for each expense report in Oracle Payables interface tables from No to Yes.

Output Reports

Each time you run Tieback Expense Reports to Payables, Oracle Projects prints output reports which allow you to track your successfully interfaced expense reports, as well as those expense reports which fail to interface. You should correct any rejected expense reports and interface them again to Oracle Payables.
Interfacing Invoices to Oracle General Ledger

Once you create expense reports in Oracle Payables, you can pay the expense reports and load your invoice and payment accounting information to create journal entries in Oracle General Ledger.

After Invoice Import creates invoices, and you approve them in Oracle Payables, you send your invoice information to Oracle General Ledger interface tables. You use the Payables Transfer to General Ledger program in Oracle Payables to interface invoices to Oracle General Ledger.

In Oracle General Ledger, you post the invoice interface data to update your account balances. For detailed information about posting your journals, refer to the Oracle General Ledger User’s Guide.

Expense Report Purge

You can purge imported Oracle Projects expense reports from the Oracle Payables interface tables to create more space in your database after you create and tie back invoices from Oracle Payables. You identify the date through which you want to purge expense reports when you submit Payables Invoice Import; Oracle Payables purges the expense reports during the import process.

You can also have Payables Invoice Import automatically purge imported information once it successfully creates invoices from expense report information and the tieback process is complete.

Suggestion: You should purge expense reports periodically to create additional space in your database.
Viewing Expense Reports in Oracle Payables

Each expense report in Oracle Projects is converted to an invoice in Oracle Payables after you successfully interface the expense report and it is imported into Oracle Payables. You can view these expense reports either from an Oracle Projects window, or by using Oracle Payables.

You can use the Oracle Payables Expense Report window to view expense reports in Oracle Projects. After you submit the Payables Invoice Import process and successfully create a Payables invoice, you can view the invoice as you would any other invoice in Oracle Payables.

• **Expense Reports Window** – Use this window to view expense reports interfaced from Oracle Projects to Oracle Payables interface tables, which Payables Invoice Import has not yet loaded into Oracle Payables.

You use many windows in Oracle Payables to view different types of invoice information. Following are some examples of invoice information you can view:

• **Invoices Window or Invoice Distributions Window** – Use these windows to view invoices that have been successfully created from Oracle Projects expense reports.

You can query Oracle Payables invoices using the following information that Oracle Projects passes to Oracle Payables:

• **Employee Name** – The employee name becomes the supplier name, and appears in uppercase when it is system–generated in Oracle Payables.

• **Week Ending Date** – The week ending date, or expenditure ending date, becomes the invoice date in Oracle Payables.

• **Total Invoice Amount** – The total expense report cost becomes the total invoice amount in Oracle Payables.

• **Project/Task/Expenditure** – This data is available in the Invoices Window and the Invoice Distributions Windows.
In addition, for each invoice distribution in Oracle Payables, you can view information for each expenditure item, such as the project information, the amount, and the account coding.

**Suggestion:** To query the payment status of an employee’s expense report, query by supplier name and invoice date using the Find Invoices window.

### Invoice Number in Oracle Payables

The invoice number for the expense reports in Oracle Payables is the expenditure batch name from Oracle Projects concatenated to a unique identifier of the expense report. For example, the invoice number ‘EX–DEN–125 R11–DEC–95 12:00:00–1000’ is an invoice that was processed in the expenditure batch of ‘EX–DEN–125 R11–DEC–95 12:00:00’ which is uniquely identified by the number 1000.

### Expense Report Batch Name

The expenditure batch name in Oracle Projects is a concatenation of the expenditure batch processed, the type of batch, and the date and time the batch was created. If an expenditure batch is not specified as a parameter when you submit the Distribute Expense Reports process, the term `ALL` is used. For example, the batch name ‘ALL R11–DEC–96 12:00:00’ is the name of an expenditure batch that processed all eligible expense reports in a regular batch on December 11, 1995 at 12pm.

If all expense reports in Oracle Projects were costed, the batch name prefix is `ALL`. If a specific expenditure batch was costed, the batch name prefix is the batch name. The letter R stands for a regular expense report batch, the letter A stands for an adjusted expense report batch. Some examples are below:

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All</strong></td>
<td>ALL R16–DEC–95 14:46:05</td>
</tr>
<tr>
<td><strong>Specific Batch</strong></td>
<td>EX–HQ–D523 A16–DEC–95 12:00:05</td>
</tr>
</tbody>
</table>

### Example

Your employee, Amy Marlin, wants to know the status of her expense report which she submitted on October 1, 1996. The expenditure ending date of her expense report was 15–SEP–1996. Expense reports are submitted to the local accounting staff for entry into Oracle Projects. You don’t know when the expense report was entered in Oracle Projects or interfaced to Oracle Payables.
In Oracle Payables, navigate to the Find Invoices window by selecting the following menu items: Invoices, Inquiry, Invoices. In the Find Invoices window, enter “%Marlin%” in the supplier name field. Enter invoice dates beginning September 1, 1996. Choose the Find button.

The Invoices window will display all of Amy Marlin’s expense reports with expenditure ending dates after August 31, 1996 that have been interfaced to Oracle Payables. You will be able to see if the expense report is in Oracle Payables, if it has been posted to Oracle General Ledger, if it has been approved, and if it has been paid. From this window you can also drill down to the individual distribution line items and see project information.

If the Invoice window does not display the expense report Amy submitted on October 1, go to the Expense Report window to see if the expense report has been interfaced but not yet imported. You navigate to the Expense Report window by selecting the following menu items: Invoices, Entry, Expense Reports. You can query by Employee Name or Number to locate any expense reports for Amy that are interfaced but not yet imported.

See Also

Reviewing Invoices  Oracle Payables User’s Guide
Managing Expense Reports  Oracle Payables User’s Guide

Advances and Prepayments

You can create prepayments and apply them against Oracle Projects expense reports using Oracle Payables after an expense report is loaded into Oracle Payables. An advance, or prepayment, refers to funds advanced to an employee for travel or other expenses. When an employee incurs an expense and submits an expense report, you reduce the amount of the reimbursement by applying outstanding prepayments to it.

You can apply prepayments to an expense report when the expense report is in the Oracle Payables interface tables or when the expense report is loaded in Oracle Payables as an invoice.
To Apply Prepayments to Expense Reports before they are loaded in Oracle Payables as an invoice:

1. Use Oracle Payables to enter a prepayment, approve it, and pay it (see below).
2. Enter and approve the expense report in Oracle Projects; release the expense report batch.
3. Distribute expense reports and interface them to Oracle Payables using Oracle Projects processes. You can use the **DTE Distribute and Interface Expense Report Costs to AP** interface streamline option.
4. Apply the prepayment to an expense report using the Oracle Payables Expense Report window (see below).
5. Run the Oracle Payables Invoice Import program and tie back invoices from Oracle Payables to Oracle Projects. You can use either of the following Oracle Projects interface streamline options:
   - ITES: AP Invoice Import and Tieback Expense Reports
   - ITEU: AP Invoice Import (Unsummarized Report) and Tieback Expense Reports.
6. Review invoices and payments in Oracle Payables.

When you enter a prepayment, Oracle Payables automatically creates invoice distributions and a scheduled payment. After you pay a prepayment, you can apply the paid amount to an expense report or invoice to reduce the amount you owe. Oracle Payables automatically creates reversing distribution and payment schedule lines and updates the remaining amount of the prepayment.

You use the Invoices window in Oracle Payables to create and approve prepayments. You must approve and pay a prepayment before you can apply it to an invoice. You can use the Payments window in Oracle Payables to pay a prepayment.

You can use the Expense Report window in Oracle Payables to apply a prepayment or enter a hold against an expense report. You can apply prepayments and holds to expense reports after you interface expense reports into Oracle Payables, but before you run Payables Invoice Import and create invoices from the expense reports. You cannot change any information for an Oracle Projects expense report in the Expense Reports window; you can only apply prepayments or holds.
You can also apply prepayments and holds to expense reports after you run Payables Invoice Import when the expense reports are invoices in Oracle Payables.

See Also

Prepayments  Oracle Payables User’s Guide

Other Expense Report Issues

Entering Expense Reports in Oracle Payables

You can enter expense reports in Oracle Payables using the Invoices Summary window instead of entering them in Oracle Projects. Using this form, you can enter project information for your expense report invoices similar to your supplier invoices. The expense reports you enter in Oracle Payables are interfaced to Oracle Projects as supplier invoices.

Attention:  You must define appropriate expenditure types with an expenditure type class of Supplier Invoices in order to enter expense reports using the Oracle Payables Invoices Summary window. You define expenditure types in Oracle Projects in the Expenditure Types window. See:  Expenditure Types: page 16 – 78.

You cannot enter project–related expense reports in the Oracle Payables Expense Reports window because currently there is no method of recording project information for the expense report lines.

Creating Expense Report Adjustments

We recommend that you create expense report adjustments in Oracle Projects. If you adjust an expense report in Oracle Payables before an invoice is created, those adjustments are not recorded in Oracle Projects, and will cause your accounts to be out of balance with Oracle Projects transactions.

All adjusting transactions from Oracle Projects are linked to the originating invoice in Oracle Payables when you interface expense reports. This allows you to reconcile all project–related expense reports
in Oracle Payables, and accurately account for your cash books if you use Cash Basis Accounting.

See Also

Entering Invoices  *Oracle Payables User’s Guide*
Integrating with Oracle Purchasing and Oracle Payables
(Requisitions, Purchase Orders, and Supplier Invoices)

Oracle Projects fully integrates with Oracle Purchasing and Oracle Payables and allows you to enter project–related requisitions, purchase orders, and supplier invoices using those products.

When you enter project–related transactions in Oracle Purchasing and Oracle Payables, you enter project information on your source document. Oracle Purchasing, Oracle Payables, and Oracle Projects carry the project information through the document flow: from the requisition to the purchase order in Oracle Purchasing, to the supplier invoice in Oracle Payables, and to the project expenditure in Oracle Projects.

Oracle Purchasing and Oracle Payables use the Account Generator to determine the account number for each project–related distribution line based on the project information that you enter.

Using Oracle Projects views, you can report committed costs of requisitions and purchase orders that are outstanding against your projects in Oracle Projects.

Project–Related Document Flow

The following figure displays the flow of project–related information through Oracle Purchasing, Oracle Payables, and Oracle Projects. Each of these steps is described in the sections below.

When you enter project–related documents, you specify project information in addition to the information you normally specify for a document. You can use all the standard features of Oracle Purchasing and Oracle Payables, including encumbrance accounting and funds checking, when you enter project–related documents.
Oracle Purchasing

When you enter project–related transactions in Oracle Purchasing, you only need to enter project information on the source document — either the requisition or the purchase order. When you automatically create purchase orders from requisitions using Oracle Purchasing AutoCreate feature, the project information from the requisition is copied to the purchase order.

Entering Requisitions

You enter project–related purchase requisitions using the Requisitions window in Oracle Purchasing. You can enter default project
information in the Requisitions Preferences window in the Project Information alternate region. This default information will be used to populate requisition distribution lines you create during your current session. The requisitions distribution line has a Project alternate region for you to enter project–related information. A requisition can have a combination of project–related and non–project–related distribution lines.

**AutoCreate**

When you automatically create purchase orders from project–related requisitions in the AutoCreate Documents window, Oracle Purchasing copies the project information and the accounting information from the requisition to the purchase order. You do not need to enter any additional project–related information on your purchase order when you use this feature. See: AutoCreate Documents Overview Oracle Purchasing User’s Guide.

You can change the project information on the purchase order that was copied from the requisition; the project information on the requisition is not updated.

**Entering Purchase Orders**

If your company does not use online requisitions or the AutoCreate feature, you can enter project–related information directly on your standard purchase orders using the Purchase Orders window in Oracle Purchasing. When you use this window, you specify project–related information in the Project alternate region of the distribution line. The account information will automatically be created by the Account Generator, based on the project–related information you enter. See: Overview of Purchase Orders Oracle Purchasing User’s Guide.

**Entering Releases**

You enter project–related releases against blanket purchase agreements and planned purchase orders using the Enter Releases window in Oracle Purchasing. When you use this window, you specify if the release distribution line is project–related. If it is project–related, you continue to enter project information for the line. See: Entering Release Headers Oracle Purchasing User’s Guide.
Recording Receipts and Delivery

You can track receipt and delivery of goods for project–related purchase orders using the Receipts window in Oracle Purchasing. You can report the delivery of purchased goods in your commitment reporting.

Purchased goods must be both received and delivered to be reported against your project as delivered. Oracle Purchasing does not record the received goods as delivered for your project until the goods are delivered and assigned to a purchase order distribution line. See: Overview Receipts Oracle Purchasing User’s Guide.

Entering Default Project–Related Information

You can enter default project–related information for requisitions and purchase orders.

To enter default project information for requisitions and purchase orders:

1. In Oracle Purchasing, open either the Requisitions or Purchase Orders window.
2. Select the Special menu option at the top of the window and choose Preferences.
3. Open the Project Information alternate region and enter default project information to be used to create requisition and purchase order distribution lines during the current session.
4. Save.

Oracle Payables

When you match an invoice to a purchase order in Oracle Payables, the project information from the purchase order is copied to the invoice. When you enter new project–related invoices in Oracle Payables, you only need to enter project information on the source document, the invoice. If you use distribution sets with project information, Oracle Payables automatically supplies project information for your supplier invoice distribution lines.
Matching Invoices

If you use Oracle Purchasing and have already associated project–related information to a purchase order, and you are matching an invoice to a purchase order using the Invoices windows instead of manually creating invoice distribution lines, Oracle Payables automatically copies the project information from the purchase order to the invoice.

You cannot change the project information that is copied from the purchase order to the invoice.

Entering Invoices

You can enter project–related invoices directly in the Invoices windows in Oracle Payables. You can enter project–related information in the Invoice Summary folder which will default to all distributions you enter for the invoice. These values can be overridden. You also enter project–related information in the Distribution Summary window. You can create a folder with project–related fields to be used for entering information. An invoice can have both project–related and non–project–related distribution lines. See: Entering Standard Invoices Oracle Payables User’s Guide.

Using Distribution Sets

You can define project–related distribution sets using the Distribution Sets window by specifying project information for the distribution set lines. You can use project–related distribution sets for any project class (contract, indirect, and capital) costs which recur over time. See: Distribution Sets Oracle Payables User’s Guide.

When you enter invoices, you can enter a distribution set to facilitate invoice entry by reducing or eliminating entry of invoice distributions. You can use distribution sets to create project–related invoices in the following Oracle Payables forms:

- Invoices Summary
- Recurring Invoices

Posting Invoices

After you process invoices according to your business policies, you approve them in Oracle Payables, and interface the invoice information to Oracle General Ledger interface tables. You use the Payables
Transfer to General Ledger process in the Submit Request window in Oracle Payables to interface invoices to Oracle General Ledger.

In Oracle General Ledger, you post the invoice interfaced data to update your account balances. See: Posting Journal Batches Oracle General Ledger User’s Guide.

Entering Default Project–Related Information

You can enter default project–related information for Oracle Payables.

► To enter default project information for a single supplier invoices:

1. In Oracle Payables, open the Invoices window located under Invoices, Entry.

2. Enter default project information to be used to create the distribution lines for the invoice.

3. Save and continue entering the invoice information.

   **Suggestion:** Create project–oriented folders at the invoice and invoice distribution line level to make it easier and faster to enter project related information for your invoices.

► To enter default project information in supplier invoice distribution sets:

1. In Oracle Payables, open the Distribution Sets window located under Setup, Invoice.

2. For project–related distribution lines, check the Project Related box. This will open the Project Information window.

3. Enter default project information to be used to create the distribution line, then select OK to close the window.

4. Save.

You can review and change project information in the distribution set by selecting the Project Information button at the bottom of the window.
Oracle Projects

Interfacing Supplier Invoices from Payables

You load invoices from Oracle Payables to Oracle Projects using the PRC: Interface Supplier Invoices from Payables process in Oracle Projects.

This process retrieves all eligible posted, project–related supplier invoices from Oracle Payables and interfaces them to Oracle Projects. This process creates an expenditure for each invoice, and a cost distributed expenditure item and a cost distribution line for each invoice distribution line.

The Interface Supplier Invoices from Payables process uses the project and task information to determine if the items are billable/capitalizable. You can accrue revenue and invoice billable items in Oracle Projects.

Each time you run Interface Supplier Invoices from Payables, Oracle Projects prints output reports which allow you to track your successfully interfaced supplier invoices distribution lines, as well as those invoice lines which are rejected during interface from Oracle Payables.

See Also

Interface Supplier Invoices from Payables: page 10 – 50

Entry of Project–Related Information

You enter project information at the distribution line level for project–related requisitions and purchase orders in Oracle Purchasing, and for project–related supplier invoices in Oracle Payables.
Default Project Information

You can specify default project information at the header level for requisitions, purchase orders, and supplier invoices; this information defaults to the document’s distribution lines. For purchase orders, you can also specify default project information at the purchase order line and purchase order shipment levels.

The default project information for requisitions and purchase orders are session defaults which are lost when you exit the entry forms. The default project information for invoices is stored with the invoice and is retained when you requery the invoice.

Project–Related Information
When you enter requisitions, purchase orders, and supplier invoices in Oracle Purchasing or Oracle Payables, and have Oracle Projects installed, you specify the following project–related information:

The **Project Number** segment is the project number incurring the charge from the requisition, purchase order, or invoice.

The **Task Number** is the lowest level task incurring the charge from the requisition, purchase order, or invoice.

The **Expenditure Type** is an expenditure type classified with an expenditure type class of Supplier Invoices.

The **Expenditure Organization** is the organization that is ordering or has ordered the goods or services, which may be different from the project owning organization.

This organization defaults to the organization you specify in the profile option PA: Default Expenditure Organization in AP/PO. This profile option provides a default value for the expenditure organization segment each time you create project information in Oracle Payables or Oracle Purchasing. You can choose from any expenditure organization that has an HR Classification as your default value. Your system administrator can configure this default profile at the site, application, responsibility, and user levels; each user can also specify their own personal value for this profile.

The **Expenditure Item Date** is the date that you expect to incur the expense for the goods or services that you are requesting for a requisition or purchase order, or the date that you incur the charge for an invoice. This date is used during online validation against project transaction controls, and becomes the expenditure item date on the expenditure item in Oracle Projects. This date defaults to the current date each time you create a new Accounting Flexfield combination.

The **Quantity** is the quantity of goods or services that you are charged for. You can only enter data in this field in Oracle Payables, as this field is applicable for invoice distributions only.

This value is required if you have defined the expenditure type with Cost Rate Required set to Yes. For expenditure types that require a cost rate, the quantity on the invoice distribution becomes the quantity in the expenditure item and a cost rate is calculated as the amount divided by the quantity when Oracle Projects interfaces the invoice distribution and creates an expenditure item in Oracle Projects.

For other expenditure types that do not require a cost rate, the quantity in the invoice distribution is not copied to the expenditure item; instead
the amount of the line is copied as the quantity and the amount on the expenditure item.

**Entry of Project–Related Fields by Document**

You do not need to enter information for each project field for all documents in Oracle Purchasing and Oracle Payables. For example, you do not need to enter information for expenditure item date and quantity if you are entering invoice distribution sets.

The following table specifies the project information that you enter for each document in Oracle Purchasing and Oracle Payables.

<table>
<thead>
<tr>
<th>Document</th>
<th>Location</th>
<th>Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oracle Purchasing</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Requisition       | • Requisition Level (default only)  
                     • Requisition Distribution Line Level |
|                    |                                 | • Project                                   |
|                    |                                 | • Expenditure Type                          |
|                    |                                 | • Task                                      |
|                    |                                 | • Expenditure Organization                  |
|                    |                                 | • Expenditure Item Date                     |
| Purchase Order     | • Purchase Order Level (default only)  
                     • Purchase Order Line Level (default only)  
                     • Purchase Order Shipment Level (default only)  
                     • Purchase Order Distribution Line level |
|                    |                                 | • Project                                   |
|                    |                                 | • Expenditure Type                          |
|                    |                                 | • Expenditure Organization                  |
|                    |                                 | • Expenditure Item Date                     |
| Release            | • Release Distribution Line Level |                                             |
| **Oracle Payables** |                                 |                                             |
| Invoice            | • Invoice Level (default only)  
                     • Invoice Distribution Line Level |
|                    |                                 | • Project                                   |
|                    |                                 | • Task                                      |
|                    |                                 | • Expenditure Type                          |
|                    |                                 | • Expenditure Organization                  |
|                    |                                 | • Expenditure Item Date                     |
|                    |                                 | • Quantity (not at invoice level)           |
| Distribution Set   | • Distribution Set Line Level   |                                             |
|                    |                                 | • Project                                   |
|                    |                                 | • Task                                      |
|                    |                                 | • Expenditure Type                          |
|                    |                                 | • Expenditure Organization                  |

**Requisition, Purchase Order, and Release**

You do not enter the quantity for documents in Oracle Purchasing because you do not know the quantity for which you will be invoiced.

Oracle Payables automatically sets the quantity field to the quantity invoiced of the invoice distribution line when you match an invoice to a purchase order.

**Invoice**
You can enter all of the project fields for an invoice line. The quantity field is optional if the expenditure type does not require a quantity.

**Distribution Set**

You do not enter the Expenditure Item Date in the distribution set lines you create in Oracle Payables because you use the distribution sets for an indefinite period of time. When you use the distribution set to create an invoice, Oracle Payables sets the expenditure item date of the invoice distributions to the invoice date of the invoice.

**Online Validation Against Project Transaction Controls**

When you enter project information and either leave or save the record, the information is validated against the project transaction control information in Oracle Projects. This validation ensures that you can charge the type of expenditure to the project and task on the expenditure item date that you specified. If the information that you entered does not pass the project transaction control validation, you will see an error message displayed on the bottom line of the screen. You must enter valid chargeable project information based on the transaction controls in Oracle Projects before you can continue.

If you cannot determine valid project information that is chargeable, you can delete the project–related fields and close the window. You should then determine valid project information and return to the document to enter the project information.

**Validation of Distribution Set Project Information**

When you create a distribution set in Oracle Payables, the project information for a distribution set line is not validated against the project transaction controls information in Oracle Projects, because you do not enter an expenditure item date which is required for transaction control validation.

Usually, distribution sets are used on recurring transactions, and the associated project does not have transaction controls. The only validation Oracle Projects performs on a distribution set is at the time you create the distribution set lines. Oracle Projects validate the project and task number.
Accounting Transactions Created by the Account Generator

Oracle Purchasing and Oracle Payables use the Account Generator to determine the GL account number for each project-related distribution line based on the project information that you enter.

Oracle Purchasing builds the account number for the charge, accrual, and variance distribution accounts based on the Account Generator assignments that you define during implementation. You can define your Account Generator processes so that project-related requisitions and purchase orders use project-related information in the Account Generator assignments and non-project-related documents use the Account Generator assignments predefined by Oracle Purchasing.

If you are using Encumbrance Accounting, you can also define assignments for the budget account based on project information.

Oracle Payables builds the expense account number for project-related invoices using assignments that you define during implementation. You must enter the account number for non-project-related invoices. Oracle Payables determines the liability account for all invoices based on the liability account defaults provided by Oracle Payables.

You can control whether users can override the account number determined by the Account Generator for project-related distributions using the profile option PA: Allow Override of PA Distributions in AP/PO.

For example, you may want only the Purchasing Manager and Payables Manager to have the ability to override the project-related distributions. In this example, you set the profile to No at the Site level and to Yes for the Payables Manager and Purchasing Manager responsibilities.

See Also

The Account Generator in Oracle Projects: page 16 – 286
Commitment Reporting

You can report the total costs of a project by reporting the committed costs along with the actual costs. Committed costs are the outstanding requisitions and purchase orders charged to a project, which are not yet invoiced.

Total Project Costs = (Committed Costs + Actual Costs)

You can report the flow of committed costs through Oracle Purchasing and Oracle Payables, which can include the following buckets of committed costs:

- Open Requisitions (approved, unpurchased requisitions)
- Open Purchase Orders (approved, uninvoiced purchase orders)
- Pending Invoices (supplier invoices not yet interfaced to Oracle Projects to be included in project costs)

You can report summary committed cost amounts for your projects and tasks, and can also review detail requisitions and purchase orders that backup the summary amounts.

See Also

Project Summary Amounts: page 8 – 10
Implementing Commitments from External Systems: page 17 – 29

Example of Commitment Reporting

Study the following example to understand the flow of committed costs through Oracle Purchasing, Oracle Payables, and Oracle Projects.

Assume that you define committed costs as the total of these three buckets:

Committed Costs = (Open Requisitions + Open Purchase Orders + Pending Invoices)

You use requisitions, purchase orders, and receipt and delivery in Oracle Purchasing. You track the delivery of purchase orders to better manage your project progress and schedule.
The following table depicts the charges that are incurred as you record transactions. The table includes a detailed analysis of the impact of various actions, such as receiving an invoice for purchased goods, on committed costs and the total costs charged to a project. We describe each of the actions in the pages that follow.

### Example of Commitment Reporting

<table>
<thead>
<tr>
<th>Action</th>
<th>Open Req</th>
<th>Ordered POs</th>
<th>Delivered POs</th>
<th>Open POs</th>
<th>Pending Invoices</th>
<th>Total Committed Costs ‡</th>
<th>Actual Costs</th>
<th>Total Project Costs §</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter Requisition</td>
<td>1000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Create PO from Req</td>
<td>200</td>
<td>800</td>
<td></td>
<td>800</td>
<td></td>
<td>1000</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Receive Goods</td>
<td>200</td>
<td>800</td>
<td>500</td>
<td>800</td>
<td></td>
<td>1000</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Receive Invoice</td>
<td>200</td>
<td>800</td>
<td>500</td>
<td>300</td>
<td>500</td>
<td>1000</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Enter non-PO Invoice</td>
<td>200</td>
<td>800</td>
<td>500</td>
<td>300</td>
<td>600</td>
<td>1100</td>
<td>1100</td>
<td></td>
</tr>
<tr>
<td>Interface Invoices</td>
<td>200</td>
<td>800</td>
<td>500</td>
<td>300</td>
<td>0</td>
<td>600</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>Close PO</td>
<td>200</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>200</td>
<td>600</td>
<td>800</td>
</tr>
<tr>
<td>Close Requisition</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>600</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Charge labor to Project</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5600</td>
</tr>
<tr>
<td>Charge Blanket PO</td>
<td>0</td>
<td>400</td>
<td>0</td>
<td>400</td>
<td>0</td>
<td>600</td>
<td>5600</td>
<td>6000</td>
</tr>
</tbody>
</table>

† Total Committed Costs = Open Requisitions + Open Purchase Orders + Pending Invoices
§ Total Project Costs = Total Committed Costs + Actual Costs

---

**Enter requisition**

You enter and approve a requisition totalling $1000, with two lines of $800 and $200.

The requisition amount is included in the Open Requisitions and the Total Committed Costs amounts.

**Create purchase order from requisition**

You create a purchase order for the first line of the requisition, totalling $800. You approve the purchase order.
The Open Requisition amount decreases by $800 and the Ordered Purchase Order and Open Purchase Order amounts increase by $800. The total committed costs remain the same.

**Receive delivery of purchased goods**

The supplier delivers $500 of the $800 of goods that you ordered.

The Delivered Purchase Order amount increases by $500. The Open Requisition, Ordered Purchase Order, Open Purchase Order, and Total Committed Costs amounts do not change.

**Receive invoice for delivered goods**

You are invoiced for the $500 of goods that you received. The Payables department matches the invoice to the purchase order.

The Open Purchase Order amount decreases by $500, and the Pending Invoice amount increases by $500. The Total Committed Costs amount does not change. The Ordered Purchase Order amount does not change.

**Enter supplier invoice not associated to purchase order**

You receive another invoice for $100 that is not associated to a purchase order. The Payables department enters the invoice.

Both the Pending Invoice amount and the Total Committed Cost amounts increase by $100. The Total Project Cost also increases because the Total Committed Costs amount increases.

**Interface invoices to Oracle Projects**

The Payables department approves and posts all invoices to Oracle General Ledger, and then interfaces the supplier invoices to Oracle Projects. The invoice costs totalling $600 are now recorded against your project in Oracle Projects.

The Pending Invoice amount, along with the Total Committed Costs amount decreases by $600. The Actual Costs amount increases by $600. The Total Project Costs amount does not change.

**Close purchase order**

You close the purchase order that has $300 remaining, because you do not expect any more activity against that purchase order. The purchase order is no longer reported in your committed costs.

Closed purchased orders are not reported in the commitment reporting, so all of the Purchase Order amounts are reduced for the purchase order closed. The Total Committed Costs amount, and in
turn, the Total Project Cost amount, decreases by $300, which was the Open Purchase Order amount for the purchase order closed.

Close requisition
You close the requisition for $200 because you no longer need the goods requested. The requisition is no longer reported in your committed costs.

Closed requisitions are not reported in the commitment reporting, so Open Requisition amount decreases by $200 for the requisition that you close. The Total Committed Costs amount, along with the Total Project Costs, also decreases by $200.

Charge labor costs to project
Employees working on your project record time to your project, which totals $5000.

The Actual Costs amount increases by $5000. The Total Project Costs amount also increases.

Enter release against blanket purchase agreement
You need to order supplies for your project. You create a $400 release against a blanket purchase agreement that your company has negotiated with a supplier.

The Ordered Purchase Order and Open Purchase Order amounts increase by $400. In turn, the Total Committed Costs and Total Project Costs also increase.

Adjustments
You can adjust project–related documents in Oracle Purchasing, Oracle Payables, and Oracle Projects. You can perform an adjustment under specific conditions; your adjustments have different effects depending on the process flow.

Requisition Adjustments
You can update project information on a requisition. If the requisition is included on a purchase order before you update the project information, the purchase order is not updated with the new project information. If the requisition line is included on a new purchase order after you change the project information, Oracle Purchasing copies the new project information to the new purchase order.
The Account Generator builds a new account number value when you change the project information. The new project information is used in commitment reporting.

**Purchase Order Adjustments**

You can update project information on a purchase order, even after it is approved and invoiced. If the purchase order is invoiced before you update the project information, the invoice is not updated with the new project information. If the purchase order line is invoiced on a new invoice after you change the project information, Oracle Payables copies the new project information to the new invoice.

The Account Generator builds a new account number when you change the project information. The new project information is used in commitment reporting.

**Supplier Invoice Adjustments in Payables**

You can perform supplier invoice adjustments in Oracle Payables at any stage in the process flow.

**Adjustments to project information of matched invoice**

If you have matched an invoice to a purchase order, you cannot directly change any of the project information copied from the purchase order. You may encounter cases in which you want to change the project information; in particular, you may want to change the expenditure item date that was copied from the purchase order, because the expenditure item date on the purchase order was not maintained.

If you want to change the project information in this case, there are two ways of making the change.

You can reverse the matching distribution line from the purchase order in the Distributions Summary window in Oracle Payables, change the purchase order project information in Oracle Purchasing, and match the invoice to the purchase order again. See: Adjusting Invoice Distributions Oracle Payables User's Guide.

You can also create two adjusting invoice distributions on the original invoice which net to zero, but have different project information. This is a generally a simpler way to correct the project information. Using either the Invoices Summary or Distribution Summary windows in Oracle Payables, you first enter a negative distribution line with the same project information as on the incorrect invoice distribution line. You then enter a positive distribution line with the correct project
information. The two lines that you entered net to zero, but record the correction to the project information, without having to match to the purchase order again.

Adjustments to manually entered, unposted invoices
You can directly change any or all of the project information before an invoice is posted. The Account Generator derives a new account number based on the new project information that you enter.

Adjustments to manually entered, posted invoices
You cannot directly change any project information on a posted invoice. You must reverse the distribution line and create a new distribution line with the new project information using the Distributions Summary window in Oracle Payables. See: Adjusting Invoice Distributions

Interfacing adjusting lines to Oracle Projects
If the original invoice distribution line that was reversed was not yet interfaced to Oracle Projects, the Interface Supplier Invoices from Payables process does not interface the original or reversing items, that are included on the same invoice, to Oracle Projects. These items are marked as net zero adjustment lines that are not to be interfaced to Oracle Projects. The new line with the correct project information is interfaced to Oracle Projects.

If the original invoice distribution line that was reversed was interfaced to Oracle Projects before the adjustment, the Interface Supplier Invoices from Payables process interfaces the reversing and new invoice adjustment lines that you created to correctly maintain project costs in Oracle Projects.

Supplier Invoice Adjustments in Oracle Projects
You perform the following adjustments for supplier invoices in Oracle Projects:

• Transfer between projects/tasks
• Split expenditure item
• Reclassify item as billable or non–billable
• Reclassify item as capitalizable or non–capitalizable
• Edit comment
• Hold or release from billing
Project users can perform these adjustments in Oracle Projects because the actions do not change the amount of the invoice which is processed in Oracle Payables. These adjustment actions change the project information of the supplier invoice item, which is used in Oracle Projects processing.

After you have made adjustments to supplier invoice items, you must send the adjustment information back to Oracle Payables so the payables distribution lines match what is recorded in Oracle Projects. Oracle Payables will interface adjustments that affect the GL account number to Oracle General Ledger. You run the following processes in Oracle Projects for supplier invoice adjustments:

- PRC: Distribute Supplier Invoice Adjustment Costs
- PRC: Interface Supplier Invoice Adjustment Costs to Payables

If you need to change any of the following information for a supplier invoice line, you must perform the adjustment in Oracle Payables, by reversing the line and creating a new line as we discussed in an earlier section.

- Invoice Amount
- Supplier
- Expenditure Type
- Expenditure Organization
- Expenditure Item Date

See Also

Adjustments to Supplier Invoices: page 4 – 40
Integrating with Oracle Receivables

Oracle Projects fully integrates with Oracle Receivables to process your invoices and track customer payments. Oracle Projects generates draft invoices and uses Oracle Receivables features to create invoices and interface the accounting transactions to Oracle General Ledger.

When you interface invoices to Oracle Receivables, you use an Oracle Projects process which collects all eligible released draft invoices in Oracle Projects and interfaces them to Oracle Receivables interface tables. This process also maintains project balances of unbilled receivables and unearned revenue and creates accounting transactions for these amounts.

Once interfaced to these interface tables, the draft invoices await further processing by Oracle Receivables AutoInvoice process. After you run the AutoInvoice program to create invoices in Oracle Receivables, you tieback successfully interfaced invoices as well as rejected invoices using another Oracle Projects process. Rejected invoices are corrected, and interfaced again to Oracle Receivables.

You can use standard Oracle Projects reports to track your invoices as you interface data between Oracle Projects and Oracle Receivables. You can also use AutoInvoice output reports to review imported transaction data and transaction data that fails when you run AutoInvoice.

For information pertaining to performing an action on a project invoice, such as generating, cancelling, crediting, or writing off an invoice; and tracking customer payments on an invoice, see: Invoicing a Project: page 7 – 47.

See Also

Determining Your Invoice Printing Method: page 16 – 134
Implementing Oracle Receivables for Oracle Projects Integration: page 17 – 53
Importing Invoice Information into Oracle Receivables Applications Using AutoInvoice Oracle Financials and Oracle Public Sector Financials Implementation Manual
Data that Oracle Projects Predefines

Oracle Projects predefines most of the information that AutoInvoice needs to create your customer invoices in Oracle Receivables, such as an invoice batch source, transaction types for your invoices and credit memos, as well as other information.

Invoice Batch Source

An invoice batch source indicates the source of an invoice that you interface to Oracle Receivables. An invoice batch source also determines how AutoInvoice processes an invoice.

The batch source controls your invoice batch numbering sequence, supplies transactions with a default transaction type and grouping rule, and indicates which calculation and validation options you want AutoInvoice to use. All Oracle Projects transactions use the same Oracle Receivables batch source. Oracle Projects predefines a batch source of PROJECTS INVOICES.

⚠️ Warning: Do not modify the invoice batch source that is predefined and used by Oracle Projects.

Invoice Transaction Types

An invoice transaction type tells AutoInvoice how to process an invoice transaction. A transaction type determines whether a transaction:

- Generates an open receivables balance
- Posts to your general ledger
- Is printed

Oracle Projects creates standard invoices with an invoice transaction type. An invoice credit memo transaction type reduces the amount outstanding on the original invoice by the amount of the credit and reverses the appropriate general ledger transactions.

Oracle Projects predefines two invoice transaction types for the processing of invoices:

- Projects Invoice – creates an open receivable, posts to the general ledger, and is printed
- Projects Credit Memo – corresponds to the invoice transaction type for processing credit memos and writeoffs; creates an open receivable, posts to the general ledger, and is not printed by default.
You use the Oracle Receivables Transaction Types form to define additional transaction types. See: Define Transaction Types for Invoice Processing: page 17 – 55.

⚠️ Warning: Do not modify transaction types that are predefined and used by Oracle Projects.

**Line Ordering Rules**

Line ordering rules tell AutoInvoice how to order Oracle Projects invoice lines on an invoice. Oracle Projects predefines an invoice line ordering rule named `Projects Line Order` that uses the following attributes:

- Project Manager
- Line Number
- Line Type (Standard or Tax)

⚠️ Warning: Do not modify the line ordering rule that is predefined and used by Oracle Projects.

**Line Grouping Rules**

Line grouping rules tell AutoInvoice how to group Oracle Projects invoice lines into an invoice. Each grouping rule is associated to the batch source that you use for your invoicing.

Oracle Projects predefines a grouping rule named `Projects Grouping Rule` that uses the following attributes:

- Project Number
- Draft Invoice Number
- Agreement Number
- Project Organization

⚠️ Warning: Do not modify the line grouping rule that is predefined and used by Oracle Projects.

**Credit Memo Reason QuickCodes**

Oracle Projects predefines two QuickCodes to process credit memos and writeoffs. Oracle Receivables predefines the Credit Memo Reason QuickCode Type under which Oracle Projects predefines two credit memo reason QuickCodes:

- Projects Write Off
• Projects Credit Memo

INTERFACING INVOICES WITH ORACLE RECEIVABLES

You can interface released invoices and invoice lines from Oracle Projects to Oracle Receivables whenever you are ready and as many times during an accounting period as you wish.

Submitting Processes

We recommend that you interface invoices to Oracle Receivables using Oracle Projects streamline processes. When you use a streamline process, you submit one request that interfaces invoices to Oracle Receivables, runs AutoInvoice, and ties back invoices to Oracle Projects. The streamline process submits each process sequentially. We discuss each of these processes in the pages that follow.

You use the following streamline options to interface invoices with Oracle Receivables:
• XI: Interface Draft Invoice to AR
• XRXI: Interface Draft Revenue to GL and Draft Invoice to AR

You submit a streamline process by requesting the PRC: Submit Interface Streamline Process in the Submit Request window.

If you need to perform an individual function (such as interfacing invoices), you can use an individual process.

See Also

Submitting Requests: page 9 – 2
Processes: page 10 – 1

Interface Invoices to Oracle Receivables

When you interface invoices and invoice lines to Oracle Receivables, Oracle Projects places invoice information into Oracle Receivables interface tables.

GL Date

The GL Date of the invoice determines the accounting period in which it affects your general ledger account. Oracle Projects determines the GL Date as the end date of the open or future GL period in which the invoice date falls as defined in Oracle Receivables, when you interface an invoice.

See: Date Processing in Oracle Projects: page 11 – 2

Accounting Transactions

When you interface invoices to Oracle Receivables, Oracle Projects uses AutoAccounting to determine the accounts for receivables, unbilled receivables, unearned revenue, and write off account for each invoice. The accounting transactions that the process creates are interfaced to Oracle Receivables interface tables. Oracle Projects does not use Oracle Receivables AutoAccounting to determine account codings except for tax transactions for taxable invoice lines. If an invoice line is taxable,
Oracle Receivables AutoAccounting determines the tax account coding. See: Accounting Transactions: page 11 – 12

Output Reports

Each time you interface invoices to Oracle Receivables, Oracle Projects prints output reports (Account Receivables Interface Report and Account Receivables Interface Exception Report) which allow you to track your successfully interfaced invoices, as well as those invoices which fail to interface. You should correct any exceptions in Oracle Projects and resubmit the process to successfully import rejected invoices. See: Interface Invoices to Receivables: page 10 – 40

AutoInvoice

Oracle Receivables AutoInvoice feature takes the interface invoice line information stored in Oracle Receivables interface tables, validates it, and converts the interface data into invoices and credit memos and writeoffs in Oracle Receivables.

AutoInvoice creates an invoice batch for each group of invoice records. For each invoice in a batch, AutoInvoice creates an invoice header. For each header in a invoice batch, AutoInvoice creates an invoice line and distribution line that corresponds to the invoice line records you interfaced from Oracle Projects to Oracle Receivables.

You can run AutoInvoice from Oracle Receivables or from one of the Oracle Projects streamline options. If you run AutoInvoice from Oracle Receivables, you can specify a value of PROJECTS INVOICES for the invoice source to process.

Each time you run AutoInvoice, Oracle Receivables prints output reports which allow you to track each invoice created by AutoInvoice, as well as exceptions that AutoInvoice encounters during the import process.

See Also

Run AutoInvoice Oracle Receivables Reference Manual


Tieback Invoices from Oracle Receivables

You run the Tieback process to ensure that your project accounting invoice data loaded successfully into Oracle Receivables. For successfully interfaced invoices loaded into Oracle Receivables, the tieback process updates your project accounting data to reconcile invoices in Oracle Projects to Oracle Receivables. Rejected invoices are purged from the Oracle Receivable interface tables. The Invoice Status in Oracle Projects is updated so you can correct them and interface them again to Oracle Receivables.

Each time you tieback invoices from Oracle Receivables, Oracle Projects prints output reports which allow you to track your successfully interfaced invoices, as well as those invoices which fail to interface. You should correct any rejected invoices in Oracle Projects and interface them again to Oracle Receivables.

See Also

Tieback Invoices from Receivables: page 10 – 29

Interfacing Invoices to Oracle General Ledger

After AutoInvoice creates invoices, you interface your invoice accounting information to Oracle General Ledger interface tables. You use the Run General Ledger interface process in Oracle Receivables to send invoice transactions to Oracle General Ledger.

In Oracle General Ledger, you post the invoice interface data to update your account balances.

See Also

Run General Ledger Interface  Oracle Receivables Reference Manual
Automatic Tax Calculation

AutoInvoice automatically calculates sales tax for taxable invoice lines as invoices from Oracle Projects are processed. (Oracle Projects uses Oracle Receivables AutoAccounting for tax accounting only; Oracle Projects uses its own AutoAccounting for all other accounting transactions.)

See Also

Applying Tax to Project Invoices: page 17 – 64

Reporting

Oracle Projects provides you with reports that display information that help you to track your invoices as you interface data between Oracle Projects and Oracle Receivables.

Invoice Flow Detail

You can use the Invoice Flow Detail report to review the flow of project invoices through Oracle Projects. This report groups invoices by invoice status, which allows you to quickly identify where your draft invoices currently are in the invoice processing flow.

Invoice Flow Summary

You can use the Invoice Flow Summary report to review summary flow information about project invoices by project organization and project member. You can use this report to quickly identify how many invoices are in each stage of the invoice processing flow and the invoice amounts involved.

See Also

Invoice Flow Detail and Invoice Flow Summary: page 9 – 36
### Viewing Invoices in Oracle Receivables

Once invoices have been interfaced from Oracle Projects to Oracle Receivables, you can query receivables information by project-related query data. Project information in Oracle Receivables is located in the Transaction Flexfield and Reference field. The following fields in Oracle Receivables hold project-related data:

<table>
<thead>
<tr>
<th>Oracle Receivables Field Name</th>
<th>Oracle Projects Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Number</td>
<td>Invoice Number</td>
</tr>
<tr>
<td>Source</td>
<td>Either the predefined Projects Invoices source, or sources you have defined</td>
</tr>
<tr>
<td>Batch</td>
<td>Concatenation of source and processing request ID; for example, Projects Invoices_1614</td>
</tr>
<tr>
<td>Transaction Type</td>
<td>Either the predefined Projects Invoices and Projects Credit Memo or the transaction types you have defined</td>
</tr>
<tr>
<td>Transaction Flexfield Value 1/Reference Number</td>
<td>Project Number</td>
</tr>
<tr>
<td>Transaction Flexfield Value 2</td>
<td>Draft Invoice number from Oracle Projects</td>
</tr>
<tr>
<td>Transaction Flexfield Value 3/PO Number</td>
<td>Agreement Number</td>
</tr>
<tr>
<td>Transaction Flexfield Value 4</td>
<td>Project Organization</td>
</tr>
<tr>
<td>Transaction Flexfield Value 5/Salesperson</td>
<td>Project Manager</td>
</tr>
</tbody>
</table>

**Table 12 – 3** (Page 1 of 1)

The following table lists where project-related information is located in Oracle Receivables.

<table>
<thead>
<tr>
<th>Oracle Receivables Window Name</th>
<th>Project–Related Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batches Summary</td>
<td>Folder includes Source, which can be queried for project batches by entering, for example, PROJECTS INVOICES</td>
</tr>
<tr>
<td>Find Batches</td>
<td>Find by Source</td>
</tr>
</tbody>
</table>

**Table 12 – 4** (Page 1 of 2)
<table>
<thead>
<tr>
<th>Oracle Receivables Window Name</th>
<th>Project–Related Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transaction</strong></td>
<td>Number Reference Source</td>
</tr>
<tr>
<td></td>
<td>Salesperson (Main alternate region) PO Number (More alternate region)</td>
</tr>
<tr>
<td><strong>Lines</strong></td>
<td>Lines displayed under Main alternate region match Invoice Lines in Oracle Projects Invoice Review. Reference field under More alternate region corresponds to Project Number.</td>
</tr>
<tr>
<td><strong>Line Transaction Flexfield</strong></td>
<td>Data displayed includes: Project Number Draft Invoice Number Agreement Number Project Organization Project Manager Line Number</td>
</tr>
<tr>
<td><strong>Transaction Summary</strong></td>
<td>Folder includes: Transaction Flexfields 1–5 Transaction Number Source Batch Transaction Type</td>
</tr>
<tr>
<td><strong>Find Transactions</strong></td>
<td>Main alternate window includes: Transaction Numbers = Invoice Numbers Reference Numbers = Project Numbers PO Numbers = Agreement Numbers Sources = PROJECTS INVOICES Batches = PROJECTS INVOICES</td>
</tr>
<tr>
<td><strong>Credit Memo</strong></td>
<td>Source Reference Transaction Flexfield</td>
</tr>
<tr>
<td><strong>Copy Transactions</strong></td>
<td>Source Transaction Number Reference Number Type</td>
</tr>
<tr>
<td><strong>Transaction Overview</strong></td>
<td>Find and Transaction Overview includes: Source PO Number Type Reference Salesperson</td>
</tr>
</tbody>
</table>

Table 12 – 4 (Page 2 of 2)
AR Merge

If you are merging customers in Oracle Receivables, the customer reference on agreements and project customers are merged in Oracle Projects. Similarly, if you merge customer addresses in Oracle Receivables, the address references on project customers and tasks in Oracle Projects are updated.

If after you have merged customers in Oracle Receivables, you reprint an invoice generated by Oracle Projects, that is, the original invoice was billed before the merge, the new customer information will print on the reprinted invoice.

After you merge the customers, when you query invoice information in Oracle Projects for the remaining customer after the merge you will see all invoices for the merged customer. For example, the customer for Project A is XYZ Corp and the customer for Project B is XYZ Corporation. Project A has invoices totaling $3,500 and Project B has invoices totaling $10,100. In Oracle Receivables, you merge the two customers into one customer: XYZ Corporation. The customer associated with the agreement for Project A and the customer on Project A are automatically updated to XYZ Corporation. When you query in Oracle Projects Invoice Review for all invoices for XYZ Corporation, all invoices for both Project A and Project B will be displayed for a total of $13,600.

See Also

Merge Customers Oracle Receivables User’s Guide
Integrating with Oracle Assets

Oracle Projects integrates with Oracle Assets, allowing you to manage capital projects in Oracle Projects and update your fixed assets records when assets are ready to be placed in service. In a capital project, you can collect construction-in-process (CIP) and expensed costs for each asset you are building. Oracle Projects collects labor, expenses, usages, miscellaneous transactions, and supplier invoice costs, and using a combination of AutoAccounting and Workflow, assigns the costs either to a CIP or an expense account.

When you are ready to place the asset in service, you use Oracle Projects processes to collect all eligible CIP cost distribution lines, summarize them, and create asset lines. You can review and make changes to the asset lines before interfacing them to Oracle Assets. When you are satisfied that the asset lines are correct, you use Oracle Projects processes to interface the costs for the completed asset to the Oracle Assets Mass Additions table.

After you interface the costs to the Oracle Assets Mass Additions table, you can make changes to the asset definition, if necessary, and then run the Post Mass Additions process. This program creates the asset records in Oracle Assets. When you run the Create Journal Entries process in Oracle Assets, journal entries will be created and sent to Oracle General Ledger to relieve the CIP account and transfer the amount to the appropriate asset cost account.

There is currently no interface between Oracle Assets and Oracle Projects which allows you to post depreciation expenses directly to projects.

Implementing Oracle Assets

You need to implement Oracle Assets before you can create asset lines for your CIP projects if you plan to interface assets to Oracle Assets. The following information is used by Oracle Projects to validate your asset definition:

- Corporate Book
- Category FlexField
- Location FlexField
- Automatic Asset Numbering
- Accounting FlexField
You may elect to interface asset costs without the category, location, depreciation expense account or asset number defined. You will then be required to add this information after the asset is posted to the mass additions table in Oracle Assets. However, you cannot create asset lines for an asset until it has a corporate book assigned to it. Whether a complete asset definition is required before interfacing the asset to Oracle Assets is determined by the Project Type setup in Oracle Projects.

There are no additional implementation requirements in either Oracle Assets or Oracle Projects to interface asset costs from Oracle Projects to Oracle Assets.

**When Oracle Assets is not installed**

When Oracle Assets is not installed, the capital projects forms disables the following fields:

- Location
- Category
- Book
- Depreciation Expense Account
Interfacing Assets to Oracle Assets

You can interface asset costs from Oracle Projects to Oracle Assets whenever you are ready and as many times during an accounting period as you wish.

Submitting Processes

When you are ready to place your CIP assets in service, you can interface the asset costs to Oracle Assets. You interface asset cost lines by running the Oracle Projects process PRC: Interface Assets. You can run this process whenever you are ready and as many times during an accounting period as you want. You can run the process for a single project or for a range of projects. You can choose to interface costs for assets that are placed in service as of a date you specify in the processing parameters.

Prerequisites

- Interface and tie back labor, usage, and miscellaneous transaction costs to Oracle General Ledger by running the appropriate streamline process in Oracle Projects.
• Interface expense report and supplier invoice costs to Oracle General Ledger by running the Payables Transfer to General Ledger process in Oracle Payables.

• If you are interfacing burdened asset costs to Oracle Assets, Interface Burden Costs to Oracle General Ledger ) by running the appropriate streamline process in Oracle Projects.

• Post all asset costs previously interfaced to the FA Mass Additions table by running the Post Mass Additions process in Oracle Assets.

• Assign the asset an appropriate in service date in the Capital Projects Workbench.

• Run the Generate Asset Lines process in Oracle Projects to create asset cost lines.

**Accounting Transactions**

Each asset cost line sent to Oracle Assets from Oracle Projects includes the CCID (code combination ID) for the account number charged for the CIP costs.

Fremont Corporation charges $100 of supplies to a capital project to build a new research lab in Sacramento.

- The supplies are costed to account 01.100.1531.
- When the asset is placed in service and interfaced to Oracle Assets, account 01.100.1531 is relieved of $100 in costs.
- The $100 is charged to the appropriate asset cost account based on the asset category of the new asset.

**Output Reports**

Each time you run the Interface Assets process, Oracle Projects prints output reports which allow you to track you successfully interfaced assets, as well as those assets which failed to interface.

**See Also**

Sending Asset Lines to Oracle Assets: page 6 – 32
Mass Additions

Successfully interfaced asset cost lines from Oracle Projects are written to the Mass Additions table. These source system for all these costs is Oracle Projects. You can use the Prepare Mass Additions window to review the interfaced assets. You can use all the normal functionality of Oracle Assets for assets that originate in Oracle Projects. You can perform the following operations on assets within Mass Additions:

- Split assets with more than 1 units into multiple assets.
- Add the new asset to an existing asset in Oracle Assets.
- Merge 2 or more new asset records into a single asset.
- Change the asset information defined in Oracle Projects; for example, asset category, asset key, or asset location.

Asset records created by Oracle Projects will have one of the following queue statuses:

- POST – A new asset from Oracle Projects with all required fields populated. The records for this asset can be posted to the FA tables.
- NEW – A new asset from Oracle Projects which needs to have required fields manually populated before it can be posted to the FA tables.
- MERGED – The individual summarized cost lines created in Oracle Projects. These records are merged into a single asset record in Oracle Assets. You do not make changes to the merged records.
- COST ADJUSTMENT – New costs for a previously interfaced asset. These costs can be either positive or negative. You can make changes to certain fields on cost adjustments, as allowed by Oracle Assets.

When you have completed making changes to the asset records in Mass Additions, run the Post Mass Additions process in Oracle Assets. Records that have been successfully posted to FA tables will have a queue status of *posted*.

See Also

Sending Asset Lines to Oracle Assets: page 6 – 32
## Viewing Capital Project Assets in Oracle Assets

Once capitalized assets have been interfaced from Oracle Projects to Oracle Assets, you can locate the assets by project and task. You can also drill down to the underlying expenditure items that support the asset costs from within Oracle Assets.

The following table lists where project-related information is located in Oracle Assets.

<table>
<thead>
<tr>
<th>Menu Item</th>
<th>Window Name</th>
<th>Project-Related Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare Mass Additions</td>
<td>Find Mass Additions</td>
<td>Find criteria include Project/Task fields</td>
</tr>
<tr>
<td></td>
<td>Mass Additions Summary</td>
<td>Folder includes Project/Task fields</td>
</tr>
</tbody>
</table>
|                                   | Mass Additions (select Open from Mass Additions Summary window) | • Source alternate region includes Project/Task fields  
• Window includes Project Details button to drill down to Lines Details folder in Oracle Projects |
|                                   | Find Assets (select Add to Asset from Mass Additions Summary window) | Find by Source Line alternate region includes Project/Task fields                             |
|                                   | Merge Mass Additions (select Merge from Mass Additions Summary window) | Lines folder includes Project/Task fields                                                    |
| Asset Workbench                   | Find Assets                           | Find by Source Line alternate region includes Project/Task fields                             |
|                                   | View Source Lines (select Source Lines from Assets window) | • Cost alternate region includes Project/Task fields  
• Window includes Project Details button to drill down to Lines Details folder in Oracle Projects |
| Financial Information Inquiry     | Find Assets                           | Find by Source Line alternate region includes Project/Task fields                             |
|                                   | View Source Lines (select Source Lines from Assets window) | • Folder includes Project/Task fields  
• Window includes Project Details button to drill down to Lines Details folder in Oracle Projects |
Adjustments

You can make changes in Oracle Assets to the asset information and cost amounts for assets interfaced from Oracle Projects. However, any changes made in Oracle Assets will not be reflected in Oracle Projects.

You cannot change the Project or Task information associated with assets interfaced from Oracle Projects.

Cost Adjustments

You can adjust an asset’s cost after you have interfaced the asset to Oracle Assets. For example, expense reports or supplier invoices may be processed after you have placed the asset in service which are part of the asset’s costs. You process these costs the same as you normally do. Generate new asset lines for the costs by running the Generate Asset Lines process in Oracle Projects. These new asset lines will be interfaced to Oracle Assets as cost adjustments.

See Also

Adjusting Assets After Interface: page 6 – 34
Integrating with Oracle Human Resources

Oracle Projects fully integrates with Oracle Human Resources to keep track of employees and information relevant to them, such as bill rates and mailing address. If you have installed Oracle Human Resources, you must use an Oracle Human Resources responsibility to define employees. Otherwise, you enter this information directly into Oracle Projects and other Oracle Applications that integrate with it (Oracle Payables, Oracle Receivables, and Oracle Purchasing).

This section provides a list of steps you need to perform when adding an employee, changing an employee’s name, and deleting an employee using Oracle Projects. Unless otherwise noted, you perform each step within Oracle Projects from the GUI form indicated in parentheses. For navigator paths for each of these forms, see: Navigator Paths in Oracle Projects: page A–2.

**Note:** The steps below provide full navigator paths for GUI forms you access using other Oracle Applications.

Adding an Employee

**To Add an Employee:**

1. Define the employee and enter the employee organization and job assignment (Enter Person). See: Employees and Employee Assignments: page 16–50. Optionally give the employee assignments for:
   - supervisor, if necessary to approve Oracle Personal Time and Expense expenditures
   - billing title, if using billing titles in invoice formats
   - location, if using with Oracle Payables or Oracle Purchasing

2. You can enter either the employee’s home or work address (Enter Person). Oracle Projects reads this value when interfacing expense reports to Oracle Payables. If you enter a home address, you must define the employee’s primary home address.

3. Enter the employee’s cost rate (Employee Cost Rates).

4. Add the employee’s bill rate to any employee–based bill rate schedules (Bill Rate Schedules).

5. Add the employee to any resource lists that use employees (Resource Lists).
6. Using the System Administrator responsibility, define the employee’s Applications Object Library (AOL) username. Assign the appropriate responsibilities to the employee (System Administrator: Navigate Security User Define).

7. In Oracle Purchasing, optionally define the employee as a buyer for use with Oracle Purchasing (Oracle Purchasing: Setup Personnel Buyers).

8. In Oracle Receivables, optionally define the employee as a salesperson, if the employee is a project manager or you want to transfer credit receivers from Oracle Projects to Oracle Receivables (Oracle Receivables: Set Up Transactions Salespersons).

   **Note:** The first 30 characters of the employee’s full name must match the first 30 characters of the salesperson’s name, since Oracle Projects compares these values when interfacing to Oracle Receivables.

### Changing an Employee’s Name

In addition to changing an employee’s name in the Person window, complete the following steps.

**To Change an Employee’s Name:**

1. In Oracle Projects, update the resource list alias for the employee in all applicable resource lists (Resource Lists).

2. In Oracle Receivables, update the salesperson name for the employee, if applicable (Oracle Receivables: Set Up Transactions Salespersons).

### Terminating an Employee

In addition to terminating an employee in the Person window, complete the following steps:

**To Terminate an Employee:**

1. Remove/disable the employee from all applicable resource lists (Resource Lists).

2. Using the System Administrator responsibility, disable the employee’s AOL username (System Administrator: Navigate Security User Define).
3. In Oracle Purchasing, delete/disable the employee from the list of buyers (Oracle Purchasing: Setup Personnel Buyers).

4. In Oracle Receivables, delete/disable the employee from the list of salespeople (Oracle Receivables: Set Up Transactions Salespersons).

See Also

Employee and Employee Assignments: page 16 – 50

Enter Person Oracle Human Resources User’s Guide
Project Manufacturing

Oracle Project Manufacturing is a solution for companies that manufacture products using projects or contracts. Oracle Project Manufacturing combines three major applications:

- Oracle Projects, which provides the project costing, project billing, and project budgeting functions.
- Oracle Manufacturing
- Third-party project planning and scheduling systems (project management systems)

When used as a part of the Project Manufacturing functionality, Oracle Projects acts as a cost repository for manufacturing-related activities from other products in the Project Manufacturing suite.

The incorporation of Oracle Projects in the Project Manufacturing suite allows you to:

- Set up the WBS for a manufacturing project in Oracle Projects. All manufacturing costs are then tracked by project and task, and are imported to Oracle Projects using the Transaction Import process.
- Track projects and tasks defined in Oracle Projects throughout various manufacturing applications.
- Charge project costs from inventory and work in process to a project and task.
- Include project costs from manufacturing and distribution in your budget to actual cost analysis in Oracle Projects.

Importing Project Manufacturing Costs

When costs are incurred in Oracle Manufacturing that are related to a project, the Cost Collector process in Oracle Cost Management passes those costs to Oracle Projects. The Cost Collector finds all costed transactions in Manufacturing that have a project reference and passes the referenced transaction costs to the correct project, task, and expenditure type in Oracle Projects. Oracle Projects imports the costs using the Transaction Import process.

**Suggestion:** If you integrate with Oracle Manufacturing, use function security to prevent users from entering pre-approved
batch items with an expenditure type class of Inventory or Work in Process.

**Adjusting Project Manufacturing Transactions**

Transactions that are imported into Oracle Projects from Oracle Project Manufacturing cannot be adjusted in Oracle Projects. They must be adjusted in Oracle Project Manufacturing.

**See Also**

Overview of Transaction Import: page 4 – 73
Loading Project Manufacturing Costs: page 4 – 78
Transaction Import: page 10 – 34
Integrating with Oracle Inventory

Oracle Projects fully integrates with Oracle Inventory to allow you to enter inventory transactions in Oracle Inventory and transfer them to Oracle Projects. You can order and receive items into inventory before assigning them to a project. You can then assign the items to a project as they are taken out of or received into Oracle Inventory.

When you enter project–related transactions in Oracle Inventory, you enter the project information on the source transaction. Oracle Inventory and Oracle Projects carry the project information through from the Issue To or Receipt From transaction in Oracle Inventory to the project expenditure in Oracle Projects.

**Suggestion:** If you integrate with Oracle Inventory, use function security to prevent users from entering pre–approved batch items with an expenditure type class of Inventory or Work in Process.

Figure 12 – 6 illustrates the flow of project–related inventory transactions in a non–manufacturing environment.
The transactions are imported into Oracle Projects as accounted and costed. The cost distribution cannot be modified in Oracle Projects.

For information about transferring transactions from Oracle Inventory to Oracle General Ledger, please refer to the *Oracle Inventory User’s Guide*.

**Miscellaneous Transactions**

You enter project–related transactions using the Miscellaneous Transactions window in Oracle Inventory. You enter the following project–related information:

- Inventory Organization
- Expenditure Item Date as the Transaction Date
• Project
• Task
• Expenditure Type (optional)
  To understand whether you need to enter the expenditure type, see: Oracle Inventory Profile Options (Oracle Inventory User’s Guide).
• Organization

See Also

Performing Miscellaneous Transactions (Oracle Inventory User’s Guide)
Transaction Types (Oracle Inventory User’s Guide)

Costing

The next step in moving inventory transactions to Oracle Projects is to run the Cost Collector in Inventory. The Cost Collector is a batch job that you run using Standard Report Submission. After you run the Cost Collector, transactions are eligible for import from Oracle Inventory to Oracle Projects. The total Inventory Cost becomes the Raw Cost in Oracle Projects.

Project Cost Transfers

Oracle Inventory transfers expenditures to Oracle Projects using the Project Cost Transfers window.
  • Organization
  • Number of Days to Leave Costs Uncollected

The Project Cost Transfers window submits a batch job that transfers the amount and quantities of the inventory transactions to the Oracle Projects Transaction Import Interface table.
Transaction Import

To import the transactions, you submit the PRC: Transaction Import process. The transactions are imported as costed and accounted transactions with the expenditure type class and the transaction source that were defined during implementation.

Review Transaction Import

If transactions are rejected during the Transaction Import process, you can review and correct them using the Review Transactions window. After you correct transactions, you resubmit the Transaction Import process.

See Also

Transaction Import: page 4 – 73
Viewing Rejected Transactions: page 4 – 109

Oracle Inventory User’s Guide

Adjust Inventory Transactions

You can adjust inventory transactions as you adjust other expenditure items in Oracle Projects. Because inventory transactions are imported as costed and accounted, you must set up AutoAccounting rules for costing inventory transactions before processing the adjustments.

See Also

Expenditure Adjustments: page 4 – 25

Oracle Inventory User’s Guide
Integrating with Oracle Workflow

Oracle Projects provides the ability to integrate with Oracle Workflow to automate the following processes:

- Project Status Change
- Budget Status Change (Submission and Baseline)

Using the powerful abilities of Oracle Workflow, you can create, view, and modify business processes that determine the project and budget workflows. Workflow automatically routes the project or budget to the appropriate person for approval and notifies the preparer of its current approval status. The approval process updates the project or budget status as approvals are obtained or denied.

You decide which projects or budgets need to be routed through workflow, what is the approval chain, and what business rules must be met before the transaction can be approved.

Project and budget approval can be initiated using the Activity Management Gateway (AMG) or by using the standard product windows.

Oracle Projects provides a default project workflow process and a default budget workflow process. You can modify these processes and create additional processes to accommodate the needs of your business.

Default Workflow Processes

Oracle Projects provides default Workflow processes for project status changes and budget submission and baseline. You may customize the processes or create new processes, using the Oracle Workflow Builder.

If you want to create a new process to meet your company’s needs, use the Oracle Workflow Builder to create a new process, or copy the existing default and change its name before making extensive changes to it.

Customizing Workflow

When customizing a Workflow, we recommend that you customize the Workflow item processes and the loop counters, but not the messages. Instead, you should create a new message. The reasons are explained below:
• When you create a process definition, Oracle Workflow Builder assigns a new version number to an activity if you make changes to it. It saves the new version of the activity to the database without overwriting older versions of the activity. In Oracle Workflow, activities also have dates of effectivity so that at any point in time, only one version of the activity is “in effect”.

If a process is running, Oracle Workflow uses the version of the activity that was in effect when the process was initiated. It does not switch versions of the activity mid-way through the process. Since a process itself is an activity, a process definition always remains constant until the process instance completes.

• Oracle Workflow Builder does not maintain version information for objects such as item types, item type attributes, messages and lookup types. For these objects, their latest definition always applies, so you must consider whether a change to any of these objects is backwards compatible. If the modification affects existing processes, you should create a new object rather than edit the existing object.

See Also

Oracle Workflow Guide

Default Project Workflow Process: page 12 – 86

Default Budget Workflow Process: page 12 – 92

Project Status Change Workflow

When a project status change is integrated with Workflow in Oracle Projects, a project is routed to one or more destinations for approval when a status change is made, if Workflow is enabled for the project status and the project type.

Figure 12 – 7 shows a typical flow of status changes for a project. The names of projects statuses are user-defined, and the statuses you create for your business may be different from those in the example. You may have some projects that require several status changes, while other projects (those with a short duration, for example) may have fewer status changes, and may not require approval. Oracle Projects enables
you to implement the status flow you require for each project, and to use Workflow to automate the approvals and processes involved with each status.

Figure 12 – 7

Workflow integration is not limited to approval of a project or other status changes. You can also configure the system to initiate Workflow for any status change.

Examples of Project Life Cycles Using Workflow

Figure 12 – 8 shows a project status flow where Workflow is used for two status changes during the life of a project:

1. A user manually sets the status to *Submitted for Approval*. A Workflow process is initiated. If the Workflow process is successful, the status is updated to *Approved*.

2. A user manually sets the status to *Pending Close*. A Workflow process is initiated. If the Workflow process is successful, the status is updated to *Closed*.
In Figure 12–9, Workflow is used for each status change after the project is submitted for approval.

In Figure 12–10, approval Workflow is initiated as soon as the project is created. Another Workflow process sends notifications when the project status is changed to Approved #2. A third Workflow process...
generates transactions and submits processes when the project status is changed to *Pending Close*, and verifies that the processes have completed successfully before changing the status to *Closed*.

**Figure 12 – 10**

### Project Workflow Example #3

- **Approval workflow** is initiated when the project is created.
- This Workflow process sends notifications and may also require an approval. However, the process does not change the project’s status.
- Transactions or processes are required before a project can be closed. Workflow can generate the transactions or, processes (including other Workflow processes).

### Implementing Project Workflow

To use Workflow for project status changes, you must perform the following steps:

- Set up one or more project statuses with the Enable Workflow check box enabled. For each of these project statuses, specify the Success Project Status and Failure Project Status. See: Project Types: page 16 – 164 and Project Statuses: page 16 – 164.
- Set up one or more Project Types with the Use Workflow for Project Status Changes check box enabled. See: Project Types: page 16 – 164.
- Modify the Project Workflow process to perform the routing, notifications, and process initiations that you require for each status change.
- You can optionally use client extensions to further customize project and budget workflow rules. See: Project Workflow Extension: page 18 – 106.
Default Project Workflow Process

Oracle Projects provides a default project Workflow process, called PA Project Workflow. You may customize the process or create a new one, using the Oracle Workflow Builder. For more information on how to use the Oracle Workflow Builder, see the Oracle Workflow Guide.

The default project workflow process, consists of eighteen activity nodes. In the workflow diagram shown below, the process activity nodes are numbered for reference in the descriptions that follow. The numbered circles are not part of the process diagram.

Default Project Workflow Activities

Following is a description of each activity in the default project workflow process, listed by function name.

**Start (Node 1)**

This is a standard activity that marks the start of the process.

**Select Project Approver (Node 2)**

This activity selects the approver for the project by calling the client extension procedure `pa_client_extn_project_wf.select_project_approver`. The approver in
the default procedure is the immediate supervisor of the person who submitted the workflow.

This activity has two possible outcomes.

- If a project approver is found, the process branches to Node 10.
- If a project approver is not found, the process branches to Node 3.

### Notify Project Approver Not Found (Node 3)

This activity notifies the submitter of the project that no project approver was found. The submitter can optionally resubmit the project or terminate the submission.

- If the project is resubmitted, the process branches to Node 6.
- If the submission is terminated, the process branches to Node 4.

### Set Failure Status (Nodes 4, 8, and 12)

This activity sets the project status to the *Failure Status* indicated in the Project Statuses window. The process branches to an End (Failure) node.

### End (Failure) (Nodes 5, 9, 13, and 16)

This activity terminates the process and returns the result *Failure*.

### Verify Project Rules (Node 6)

This activity verifies that the project satisfies the requirements for approval by calling the client extension procedure `pa_client_extn_proj_status.verify_project_status_change`.

- If the verification rules are satisfied, the process branches to Node 2.
- If the verification rules are not satisfied, the process branches to Node 7.

### Notify: Project Failed Verification Rules (Node 7)

This activity notifies the submitter that the project failed the verification rules. The submitter may resubmit the project for approval or terminate the submission.

- If the project is resubmitted, the process branches to Node 6.
• If the submission is terminated, the process branches to Node 8.

Project Approval Subprocess (Node 10)
This activity runs the Project Approval Subprocess. See: Project Approval Subprocess: page 12 – 89
• If the Project Approval Subprocess succeeds, the process branches to Node 14.
• If the Project Approval Subprocess fails, the process branches to Node 11.

Notify: Project Rejected (Node 11)
This activity notifies the submitter that the status change for the project was rejected.
• If the submitter chooses to resubmit the project, the process branches to Node 6.
• If the submitter terminates the submission, the process branches to Node 12.

Set Success Status (Node 14)
This activity sets the project status to the Success Status indicated in the Project Statuses window.
• If the project status is successfully changed, the process branches to Node 17.
• If the status change is unsuccessful, the process branches to Node 15.

Notify: Project Status Change Failed (Node 15)
This activity notifies the submitter that the project status change failed.

The status change can fail if the project was changed after it was approved, so that it no longer complies with the project verification rules. An Oracle database error can also cause the failure.

Notify: Project Approved and Status Changed (Node 17)
This activity notifies the submitter that the project was approved and the project status was changed.
End (Success) (Node 18)

This activity terminates the process and returns the result *Success*.

**Project Approval Subprocess**

The Project Approval Subprocess is called by the default PA Project Workflow process. In the workflow diagram shown below, the process activity nodes are numbered for reference in the descriptions that follow.

Following is a description of each activity in the default Project Approval Subprocess.

**Start (Node 1)**

This is a standard activity that marks the start of the process.

**Notify: Project Approval Required (Node 2)**

This activity notifies the project approver that approval is required for the project status change.

- If the project approver approves the project, the subprocess branches to Node 5.
If the project approver rejects the project, the subprocess branches to Node 6.

If the activity times out, the subprocess branches to Node 3. The default time for the activity to time out is two days. You can use the Oracle Workflow Builder to change the timeout value to suit your business needs.

**Notify: Reminder, Project Approval Required (Node 3)**

This activity sends a reminder notification to the project approver.

- If the project approver approves the project, the subprocess branches to Node 5.
- If the project approver rejects the project, the subprocess branches to Node 6.
- If the activity times out, the subprocess branches to the Loop Counter (Node 4).

**Loop Counter (Node 4)**

This activity counts the number of times the subprocess has branched to this node.

- If the count has reached the Loop Limit (a constant that is set in this node), the subprocess branches to Node 6.
- If the count has not reached the Loop Limit, the subprocess returns to Node 3.

The loop counter defaults to a limit of 1. (You can change the default value of the loop counter.)

After the activity reaches the Loop Limit, the process sends one more reminder. If there is no response, the loop counter stops counting and branches to node 6.

**End (Approved) (Node 5)**

This activity ends the subprocess and returns the result *Approved*.

**End (Rejected) (Node 6)**

This activity ends the subprocess and returns the result *Rejected*. 
**Budget Workflow**

The flow of statuses for budgets in Oracle Projects is controlled by buttons in the Budgets windows. Figure 12 – 11 shows the status flow for budgets.

![Status Flow Diagram]

When Oracle Projects budgeting is integrated with Workflow, Workflow is initiated for budget approval when you choose the Submit button to submit the budget draft. The budget is routed via Workflow if you defined the budget type to use Workflow. You can further define rules in the budget workflow extension.

Oracle Projects also supplies a budget verification extension. Workflow calls this extension twice: once before it initiates the budget approval process, and again before it changes the budget status. This ensures that the verification rules for the status change are met, even if changes have been made to the budget during the approval process.

**See Also**

- Budget Workflow Extension: page 18 – 112.

**Implementing Budget Workflow**

To use Workflow for approving project budgets, you need to perform the following steps:
- Set up one or more budget types with the Use Workflow for Budget Status Change check box enabled. See: Budget Types: page 16 – 149.
- Modify the Budget Workflow process to perform the routing, notifications, and/or process initiation that you require for each status change.
- You can optionally use client extensions to further customize budget approval workflow rules. See: Budget Workflow Extension: page 18 – 112.

**Default Budget Workflow Process**

Oracle Projects provides a default budget workflow process, called PA Budget Workflow. You may customize the process or create a new one, using the Oracle Workflow Builder. For more information on how to use the Oracle Workflow Builder, see the *Oracle Workflow Guide*.

The default budget workflow process consists of eighteen activity nodes. In the workflow diagram shown below, the process activity nodes are numbered for reference in the descriptions that follow. The numbered circles are not part of the process diagram.
Default Budget Workflow Activities

Following is a description of each activity in the default budget workflow process, listed by function name.

Start (Node 1)
This is a standard activity that marks the start of the process.

Select Budget Approver (Node 2)
This activity selects the approver for the budget by calling the client extension procedure `pa_client_extn_budget_wf.select_budget_approver`.
This activity has two possible outcomes.
- If a budget approver is found, the process branches to Node 10.
- If a budget approver is not found, the process branches to Node 3.

Notify Budget Approver Not Found (Node 3)
This activity notifies the submitter of the budget that no budget approver was found. The submitter can optionally resubmit the budget or terminate the submission.
- If the budget is resubmitted, the process branches to Node 6.
- If the submission is terminated, the process branches to Node 4.

Reset Budget Status to Rejected (Nodes 4, 8, and 12)
This activity sets the budget status to the Rejected. The process branches to an End (Not Baselined) node.

End (Not Baselined) (Nodes 5, 9, 13, and 16)
This activity terminates the process and returns the result Not Baselined.

Verify Budget Rules (Node 6)
This activity verifies that the project satisfies the requirements for approval by calling the client extension procedure `pa_client_extn_budget.verify_budget_rules`. 
• If the verification rules are satisfied, the process branches to Node 2.
• If the verification rules are not satisfied, the process branches to Node 7.

**Notify: Budget Failed Verification Rules (Node 7)**

This activity notifies the submitter that the budget failed the verification rules. The submitter may resubmit the budget for approval or terminate the submission.

• If the budget is resubmitted, the process branches to Node 6.
• If the submission is terminated, the process branches to Node 8.

**Budget Approval Subprocess (Node 10)**

This activity runs the Budget Approval Subprocess. See: Budget Approval Subprocess: page 12 – 95

• If the Budget Approval Subprocess succeeds, the process branches to Node 14.
• If the Budget Approval Subprocess fails, the process branches to Node 11.

**Notify: Budget Rejected (Node 11)**

This activity notifies the submitter that the budget was rejected.

• If the submitter chooses to resubmit the budget, the process branches to Node 6.
• If the submitter terminates the submission, the process branches to Node 12.

**Baseline Approved Budget (Node 14)**

This activity sets the budget status to Baseline.

• If the budget baseline is successful, the process branches to Node 17.
• If the budget baseline is unsuccessful, the process branches to Node 15.
**Notify: Budget Baseline Failed (Node 15)**

This activity notifies the submitter that the budget baseline failed.

The baseline can fail if the budget was changed after it was approved, so that it no longer complies with the budget verification rules. An Oracle database error can also cause the failure.

**Notify: Budget Approved and Baselined (Node 17)**

This activity notifies the submitter that the budget was approved and baselined.

**End (Baselined) (Node 18)**

This activity terminates the process and returns the result *Baselined*.

**Budget Approval Subprocess**

The Budget Approval Subprocess is called by the default PA Budget Workflow process. In the workflow diagram shown below, the process activity nodes are numbered for reference.

![Workflow Diagram](Image)

The Budget Approval Subprocess works similarly to the Project Approval Subprocess: page 12 – 89.
See Also

Budget Workflow Extension: page 18 – 112.
This chapter gives an overview of the Oracle Projects Activity Management Gateway (AMG). The AMG provides a set of application programming interfaces (APIs) that enables you to integrate your project information with non-Oracle applications. For detailed information about the AMG APIs, please refer to the Oracle Projects Activity Management Gateway Technical Reference Manual.
Activity Management Gateway

**Attention:** Oracle Projects Activity Management Gateway is not included in, but is additional to, the Oracle Projects product. You cannot use any of the features described in this section unless you have purchased and are a licensed user of Oracle Projects Activity Management Gateway.

The Oracle Projects Activity Management Gateway (AMG) is an open interface to Oracle Projects that provides a central source of data. Using the AMG, you can create, update, and delete projects and budgets in external systems; export actuals from Oracle Projects for analysis in your external system; and interface performance measurements, such as percent complete and earned value, to Oracle Projects.

You can use the AMG application programming interfaces (APIs) to integrate Oracle Applications with a wide variety of external systems, including the following:

- Project planning and scheduling systems
- Sales management systems
- Work management systems
- Customer asset management and plant maintenance systems
- Project manufacturing systems
- Collaborative project planning and scheduling systems

Whichever external system you use, the AMG enables you to safely share information using standard Oracle–supported interfaces and exceed the functionality of the individual applications. For detailed technical information about the Activity Management Gateway APIs, refer to the *Oracle Projects Activity Management Gateway Technical Reference Manual*.

Project Management Integration Date Fields

To support integration with external systems, Oracle Projects stores numerous field values that are commonly present in project management systems. Oracle Projects windows do not display these fields, but the information is stored in the Oracle Projects database. These stored fields include the following project and task dates:

- Actual start and finish dates
- Early start and finish dates
- Late start and finish dates
- Scheduled start and finish dates
Activity Management Gateway Controls

**Attention:** Oracle Projects Activity Management Gateway is not included in, but is additional to, the Oracle Projects product. You cannot use any of the features described in this section unless you have purchased and are a licensed user of Oracle Projects Activity Management Gateway.

The Activity Management Gateway Controls windows enable you to keep information consistent between Oracle Projects and all integrated external systems.

Control Actions Window

Use the Control Actions window to set up controls over data imported to Oracle Projects from an external system. Entering an action in this window prevents users from performing the action in Oracle Projects on a record that originated in the specified external system. The actions available in this window currently include the following:

- Add Task
- Baseline Budget
- Delete Project
- Delete Task
- Update Budget
- Update Project Dates
- Update Project Description
- Update Project Name
- Update Project Number
- Update Project Organization
- Update Project Status
- Update Task Dates
- Update Task Description
- Update Task Name
- Update Task Number
- Update Task Organization
For example, consider the following scenario:

- You have imported a project from an external system.
- You have a business rule that states that project and task dates are always maintained in the external system.
- To ensure data integrity, you want to prevent projects and tasks that originate in the external system from being deleted in Oracle Projects.

To enforce these rules, you would enter the following actions in the Control Actions window for the source product (external system):

- Update Project Dates
- Update Task Dates
- Delete Project
- Delete Task

► To set up controls for integrated project data:

1. Navigate to the Control Actions window.
2. Enter or query the source product for which you want to set up controls.
3. For each action that you want to control:
   - Select the action
   - Select the budget type (for budget actions only)
   - Enter effective dates for the control
4. Save your work.

Source Products Window

Use the Source Products window to enter names and descriptions of the external systems you use in conjunction with Oracle Projects, or to modify effective dates for existing source products. If you wish to set up restrictions in the Control Actions window for a product, you must first enter the product as a source product.

Oracle Projects currently integrates with a number of commercial project management systems. As a result, Oracle Projects already contains Source Product records for these systems. To view these
records, select Find All from the Query menu in the Source Products window.

▶ **To enter or modify a source product:**

1. Navigate to the Source Products window.
2. Query or enter the name of the source product you want to add or change.
3. Enter or change the product description and effective dates.
4. Save your work.
Integration with Microsoft Project

Attention: Oracle Project Connect is not included in, but is additional to, the Oracle Projects product. You cannot use any of the features described in this section unless you have purchased and are a licensed user of both Oracle Projects Activity Management Gateway and Oracle Project Connect.

Oracle Project Connect enables Oracle Applications and Microsoft Project to safely share data and exchange information using the standard AMG APIs. These APIs support the two-way communication of project, task, resource, budget, and actuals information between Oracle Projects and Microsoft Project.

With the integration of Oracle Projects and Microsoft Project, you can:

- Enforce business rules, permission, security, and workflow across system boundaries. For example, sending a new project from Microsoft Project to Oracle Projects triggers an approval workflow. You can use Oracle’s central workflow engine for project and budget approvals.
- Download valid class categories and class codes from Oracle Projects so you can classify projects within Microsoft Project.
- Define Oracle Projects key members directly from Microsoft Project. Oracle Projects automatically grants these employees project and function access and update privileges based on their project roles.
- Prepare a cost budget or a forecast budget using Microsoft Project and develop a revenue budget using a separate system.

The implementation requirements for Oracle Project Connect include:

- Oracle Projects Release 10.7, Production 16.1 or higher
- Microsoft Windows 95 or NT Version 4.0
- Microsoft Project Version 4.1 or 4.1a

For detailed instructions about installing and using Oracle Project Connect, refer to the Oracle Project Connect User’s Guide (for Microsoft Project).
Overview of Microsoft Project

Microsoft Project is an easy-to-use desktop planning, analysis, and management tool. To help you keep projects on schedule and on budget, Microsoft Project enables you to:

- Create a thorough plan of the work to be accomplished and the resources necessary to complete each task
- Make proactive management decisions by identifying and correcting problems before they impact your budget or schedule

Microsoft Project allows you to visualize complex plans by splitting a project into manageable steps. By studying these steps, you can see in detail the relationships between tasks and which tasks have the greatest impact on your overall schedule, identify potential bottlenecks, and estimate the total project cost.

Where Information Originates

You enter different types of information in either Oracle Projects or Microsoft Project and interface the data to the other application. The figure below illustrates the data flow in this integration. The following paragraphs provide more detail about which types of information originate in each application and their uses.

Figure 13 – 1

Information flow between Microsoft Project and Oracle Projects
Microsoft Project to Oracle Projects

You enter the following information directly in Microsoft Project:

- Project and task definitions
- Budgets
- Percent complete

When initially sending projects from Microsoft Project, you can set preferences to specify how task numbers and names will appear in Oracle Projects. Once your project has been created in Oracle Projects, you can maintain your project and task definitions in Microsoft Project and automatically update them in Oracle Projects. You can even move a task within a project’s task structure.

With this integration, you can enter budgeted quantities for project resources and calculate budget amounts based on the cost rates stored in Oracle Projects. You can rework your budget as necessary and baseline it from within Microsoft Project.

You can also use the latest actuals information to determine percent complete in Microsoft Project and export this information to Oracle Projects for additional project tracking purposes.

Oracle Projects to Microsoft Project

You enter the following information directly in Oracle Projects:

- Project templates
- Resource definitions
- Transactions

In Oracle Projects, you define project templates and types that define specific accounting rules for a project. When sending a project to Oracle Projects, you select a template to serve as the foundation for the new project. Oracle Projects automatically creates a project based on the information received from Microsoft Project. You can load default data into these templates to ensure that your new projects include all the information required by your company policies.

Oracle Projects also stores definitions of labor and non–labor resources and shares this information with Microsoft Project. By sharing resource definitions across your project planning and enterprise business systems, you ensure consistency of information for reporting and analysis throughout your company.
Oracle Projects acts as the central repository for all transaction costs. Once you have collected and distributed these costs, you can send the actual costs, by task or by resource, to Microsoft Project for progress tracking and graphical analysis.
This chapter describes everything you need to know about integrating Oracle Projects with Oracle Project Analysis Collection Pack.
Overview of Oracle Project Analysis Collection Pack

Attention: Oracle Project Analysis Collection Pack is not included in, but is additional to, the Oracle Projects product. You cannot use any of the features described in this section unless you have purchased and are a licensed user of Oracle Project Analysis Collection Pack.

Oracle Project Analysis Collection Pack provides multidimensional analysis capabilities for project data. You can create a data warehouse solution using these features in several ways:

- Integrate information in the interface tables provided by Oracle Projects with Oracle Applications Data Warehouse (OADW). OADW automates the design, implementation, and ongoing administration of an enterprise-wide data warehouse or a line-of-business, subject-oriented data mart.
- Access project data warehouse information directly from the interface tables using OLAP tools, such as the Oracle Relational Access Administrator, the Oracle Relational Access Manager, the Oracle Sales Analyzer, or the Oracle Express Analyzer.
- Build a custom data warehouse by extracting project information from interface tables into flat files and uploading the information into the data warehouse. You can then analyze the information using OLAP tools, such as the Oracle Express Objects and the Oracle Express Analyzer.

OADW integration enables you to:

- Analyze actual cost and commitments (including purchase orders, requisitions, and supplier invoices) by the standard dimensions predefined by Oracle Projects, as listed below.
- Analyze budgets by the standard Oracle Projects dimensions.
- Compare a project’s actual costs and commitments with its budgeted costs by the service type dimension to aid in the future control of project costs.
- Rank the top or bottom projects across all organizations in your company in terms of the comparison of actual costs and commitments to budgeted costs.
- Compare actuals, commitments, and budgets across projects and organizations.
- Perform product line analysis to the extent that you model product lines using project classes and categories.
Oracle Projects predefines the following standard dimensions, which serve as categories by which you can analyze your project data:

- Project
- Resource
- Project organization
- Expenditure organization
- Service type
- Time
- Budget type
- Expenditure type
- Operating unit (if you have implemented multiple organization support)

Oracle Projects also predefines levels, which serve as subcategories for these dimensions, and hierarchies that store the relationships between each dimension and its levels. If the standard dimensions, levels, and hierarchies do not suit your business needs, you can create new dimensions, levels, and hierarchies.

You can also disable some of the standard Oracle Projects dimensions to accommodate your company’s business requirements. For detailed information about customizing your data warehouse data and metadata, refer to the Oracle Project Analysis Collection Pack Implementation Guide.

See Also

Implementing Oracle Project Analysis Collection Pack for Oracle Projects Integration: page 17 – 72

Oracle Applications Data Warehouse User’s Guide

Oracle Project Analysis Collection Pack Implementation Guide
Data Warehouse Uses

The following list provides just a few examples of applications for your data warehouse solution:

• Business analysis
• Forecasting
• Product line analysis

Business Analysis

You can analyze project performance and other details across various dimensions, such as projects and organizations. In addition, you can create variance reports to compare actual costs to budgeted amounts.

For example, you can create a graph that compares the actual costs for all projects by expenditure type for your company’s organizations, as illustrated in the following figure.
Forecasting

You can use historical profitability figures to estimate future revenue. Use estimated revenue figures in your budget planning and analysis.

**Note:** Oracle Project Analysis Collection Pack does not support this functionality directly. To perform forecasting, you must customize your implementation of Oracle Project Analysis Collection Pack.

Product Line Analysis

Monitor profitability and identify trends using project classes and categories to distinguish your different product lines.
Benefits of Multiple Dimensions

With multidimensional analysis capabilities, you can generate a variety of reports to view the information most important to your company. For example, you can perform the types of analysis listed below:

- **Top/Bottom Ranking.** Identify your 10 best and 10 worst projects in terms of margin.

- **Exception.** Display job grades for each consultant who has generated monthly revenues of less than $10,000.

- **Forecasting.** Calculate expected expenses and overhead amounts for the next quarter based on the last four quarters.

- **Trend.** Identify how business has changed over the past 52 weeks in a particular industry sector.

You can also combine different types of analysis in a single report. For example, you can search for values based on exception criteria and then generate a report that ranks the results, as illustrated in the following figures.
Selector features of Oracle Sales Analyzer enable you to create and format ranking reports. You can use your analysis tool to search for expenditure types based on their total values and rank the top five results, as illustrated above.
The resulting ranking report

The resulting report displays, in descending order, the expenditure types with the top five totals between $1000 and $200.

In addition, you can easily modify your analysis by changing one or more dimensions in your query. You can analyze your project information by selecting any of the standard dimensions available in a list of values (as illustrated in the following figure), or you can create your own.
Use the Selector window to choose and organize the dimensions of your query.
This chapter includes essays and information about running Oracle Projects for your business. Topics include:

- Project-Based Security
- Organizations in Oracle Projects
- Multiple Organization support
Project and Labor Cost Security in Oracle Projects

Oracle Projects provides three levels of project-based security to protect data ownership and sensitivity in relation to a given project or project template. For each level of security, Oracle Projects enforces default business rules depending on an employee’s relationship to a project, as illustrated below:

<table>
<thead>
<tr>
<th>Action</th>
<th>Key Member</th>
<th>Cross-Project</th>
<th>Other Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Query project information</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Update project information and perform functions on a project</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>View labor costs of detail expenditure items</td>
<td>✔️*</td>
<td>✔️</td>
<td></td>
</tr>
</tbody>
</table>

* Only if the user’s project role type is configured to view labor costs.

Table A – 1 (Page 1 of 1) Security for Enter Projects Window

You can override the default logic or add additional security criteria via the Project Security Client Extension. For a detailed description of the project security extension, see: Project Security Extension: page 18 – 16.

Key members are responsible for the management and administration of the project to which they are assigned. Each key member is assigned a project role type, which describes the type of role that the employee has on the project. Project role types include Project Manager and Project Administrator. You define whether each role type can view labor costs online and in reports.

Cross-project users can view expenditure details and update information for any project, even if they are not assigned as a key member to the project. Cross-project users log in to Oracle Projects under a cross-project responsibility. You define an Oracle Projects responsibility as a cross-project responsibility by setting the PA: Cross-Project Responsibility profile option value to Yes.

View Labor Cost Allowed

This level of security determines whether or not you can view labor costs (both raw and burdened). The default business rule in Oracle Projects is that you may view labor costs if you are:

- A key member for the project and your project role type allows you to view labor costs
- A cross-project user
If you are not permitted to view labor costs, the amount is not shown in the form field; that is, the field will be blank.

**How project security and function security work together**

Project security controls what projects you can view and update. Function security controls what functions you can perform. Together these two types of security allow you to control the which functions you can perform on which projects. You can perform the functions that are available to you for any projects for which you have access to update the project.

For example, assume you can have access to the function to generate asset lines in the Capital Projects workbench. You can perform this function only on the projects for which you have update access.

You will be able to view labor costs in reports and windows where only summary amounts are shown. Labor cost security applies only at the most detailed level where it can be determined that the entire amount displayed is labor only.

**See Also**

Function Security in Oracle Projects: page C – 2

**Windows Affected by Project and Labor Cost Security**

The following table identifies the windows that access project and labor cost security:

<table>
<thead>
<tr>
<th>Window</th>
<th>Query</th>
<th>Update</th>
<th>View Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Workbench</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Project Status Inquiry</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Budgets</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Capital Projects Workbench</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Project Funding Inquiry</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Invoice Review</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

Table A – 2 (Page 1 of 2) Windows Affected by Project and Labor Cost Security
## Windows Affected by Project and Labor Cost Security

<table>
<thead>
<tr>
<th>Window</th>
<th>Query</th>
<th>Update</th>
<th>View Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Report Submission (Single Project LOVs)</td>
<td>✔</td>
<td>✔</td>
<td>✗</td>
</tr>
<tr>
<td>Agreements (Funding Zone)</td>
<td>✔</td>
<td>✔</td>
<td>✗</td>
</tr>
<tr>
<td>Expenditure Inquiry</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

*Table A – 2 (Page 2 of 2) Windows Affected by Project and Labor Cost Security*

### Reports Affected by Project Security

#### MGT: Expenditure Detail

Only key members with labor cost access and cross–project users can view labor cost amounts for labor items.

#### MGT: Expenditure Summary

Only key members with labor cost access and cross–project users can view labor cost amounts for labor items.

### See Also

- Projects Window Reference: page 2 – 6
- Key Members (Project Option): page 2 – 42
- Profile Options in Oracle Projects: page B – 2
- Project Role Types: page 16 – 172
- Client Extensions: page 18 – 2
Organizations in Oracle Projects

This essay explains how Oracle Projects uses organizations and organization hierarchies and how to manage the changes to your Oracle Projects implementation when your organization structure changes. We include a case study to illustrate how to manage an organization structure change in Oracle Projects.

Overview of Organizations

The organizations and organization hierarchies of an enterprise are closely interrelated with the enterprise’s policies and procedures. To configure Oracle Projects to meet your business requirements, you must make critical implementation decisions regarding how you set up your organizations in Oracle Projects.

For optimum control, consistency, and trend analysis, it is simplest to keep the organization definitions stable. However, in a dynamic business environment, changes to organizations and organization structures are inevitable. When your organization structure changes, it is very important to understand the implications to your Oracle Projects implementation.

You can change the organization hierarchy setup in Oracle Projects to reflect changes to your company’s organization hierarchy. To maintain system control and enforce your business rules, it is important to plan and manage the change carefully. To do this, you must understand how organizations and organization hierarchies are used in Oracle Projects.

Terms Used in This Essay:

Following are definitions of the terms used in this essay.

Organization Classifications A set of system–defined attributes that categorize an organization. You set these attributes when you create the organization in the Define Organization window of Oracle Human Resources. The organization classifications that pertain specifically to Oracle Projects are:

- Project/Task Owning Organization
- Project Expenditure/Event Organization
- Project Invoice Collection Organization
Each organization classification may have additional information that is defined by the system. For example:

- Oracle Projects uses the project burdening hierarchy as additional information about a business group for the project burdening process.
- A project/task owning organization allows you to define what project type class (indirect, capital, or contract) the organization can own.

See Creating an Organization *Oracle Human Resources User’s Guide*

**Organization Hierarchy** A structure that defines the rollup relationships of the organizations within an enterprise. The topmost organization in an organization hierarchy is generally the business group, although this is not required by the system. The parent–child hierarchy relationships can be different (even reversed) in different organization hierarchies that are used for different business purposes.

**Organization Hierarchy Version** Oracle Human Resources allows you to create multiple versions of an organization hierarchy. When you assign an organization hierarchy in an Oracle Projects implementation, you also assign the version. The following organization hierarchy versions are assigned in Oracle Projects:

- A Project/Task Owning Organization Hierarchy Version is assigned to each operating unit.
- An Expenditure/Event Organization Hierarchy Version is assigned to each operating unit.
- A Default Reporting Organization Hierarchy Version is assigned to each operating unit. This hierarchy version can be overridden at reporting time.
- A Project Burdening Hierarchy Version is assigned to each business group.

**Start Organization** The branch of your organization hierarchy that you specify in Oracle Projects as the top of your hierarchy. When you choose a start organization as a reporting parameter, the start organization and all organizations below it are included in the report.

**Organization Hierarchy Branch** The subset of an organization hierarchy that is uniquely identified by the organization hierarchy version and the start organization. For example, in the Fremont Corporation Case Study: page 15 – 9, the Engineering organization hierarchy branch consists of the following organizations: Engineering, Electrical, Mechanical, Structural, and Environmental.
Corresponding to the Organization Hierarchy Versions defined above, the following Organization Hierarchy Branches are assigned to each operating unit:

- Project/Task Owning Organization Hierarchy Branch
- Expenditure/Event Organization Hierarchy Branch

## Organizations and Organization Hierarchies in Oracle Projects

You can define the following types of organizations for different uses in Oracle Projects:

### Project/Task Owning Organizations

Project/Task Owning Organizations can own projects and/or tasks in the operating unit. To own projects and tasks in an operating unit, an organization must have the following characteristics:

- The Project/Task Owning Organization Classification must be enabled.
- The organization must belong to the Project/Task Owning Organization Hierarchy Branch assigned to the operating unit.

### Expenditure/Event Organizations

Expenditure/Event Organizations can own project events, incur expenditures, and hold budgets for projects in the processing operating unit. To have these capabilities in the operating unit, an organization must have the following characteristics:

- The Project Expenditure/Event Organization classification must be enabled.
- The organization must belong to the Expenditure/Event Organization Hierarchy Branch assigned to the operating unit.

### HR Organization

Any organization that has the HR Organization classification enabled can have employees assigned to it.

Prior to Release 11, Oracle Projects required the HR organization classification for all project and expenditure organizations. With the additional organization classifications, this restriction is removed. You
don’t need to enable the HR organization classification for Oracle Projects unless you want to assign employees to the organization.

**Resource Organizations**

Resource Organizations are organizations that own resources and/or resource budgets. Any organization in the operating unit’s business group can own non-labor resources.

- Only HR organizations can have employees assigned to them.
- Oracle Projects does not have a classification requirement for an organization to own non-labor resources.

**Billing Schedule Organizations**

Billing Schedule Organizations are organizations that have their own billing schedules.

Any organization in the operating unit’s business group can have its own billing schedules.

**Project Burdening Hierarchy Organizations**

Burdening for costing uses the Project Burdening Hierarchy /Version set up in the business group for both the burden cost code multiplier setup and burdening. You set up different burden schedules if your business allows different ways to burden costs.

- Oracle Projects lets you assign burden multipliers to organizations in the Project Burdening Hierarchy Version. You can only assign burden cost code multipliers to organizations that are in the Project Burdening Hierarchy Version.
- Oracle Projects uses the Project Burdening Hierarchy Version associated with the business group and the burden schedule to calculate burdened cost. If Oracle Projects does not find the expenditure organizations in the Project Burdening Hierarchy Version during burden processing, the expenditure item is not burdened, and the burdened cost is equal to the raw cost.

For more information on burdening for costing, see Burden Schedules: page 5 – 21 and Burdening: page 5 – 16.

**Project Invoice Collection Organizations**

If your business decentralizes its invoice collection within an operating unit, you must enable the Project Invoice Collection Organizations
classification for each organization in which you want to process invoices.

Oracle Receivables uses transaction types to determine whether a transaction generates an open receivable balance and whether it posts to Oracle General Ledger. Each operating unit in Oracle Projects has at least two default transaction types to process invoices in Oracle Receivables. See Defining Transaction Types for Invoice Processing: page 17 – 55.

If your business decentralizes invoice collection, you must run the IMP: Create Invoice Organization Transaction Types process before you can successfully run the Interface Invoices to Oracle Receivables process. The IMP: Create Invoice Organization Transaction Types process creates a transaction type for each of the Project Invoice Collection Organizations that has the following characteristics:

- The organization has the Project Invoice Collection Organization classification enabled.
- The organization belongs to the Project/Task Owning Organization Hierarchy Branch assigned to the operating unit.

Oracle Projects uses the default transaction type if it cannot find a rollup project invoice collection organization for the invoice.

**Default Reporting Organization Hierarchy Version**

You can specify any Organization Hierarchy Version as the default hierarchy for Oracle Projects to report information associated with a group of organizations. For some reports, the rollup relationships within the Organization Hierarchy Version are used to report the accumulated project activities.

If an organization is missing in the selected Reporting Organization Hierarchy Version, the project activity is not reported.

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**Case Study: Organization Change in Fremont Corporation**

In this case study, we use Fremont Corporation to demonstrate how to use Oracle Projects to address organization changes.

In its original implementation, Fremont Corporation’s organization hierarchy contained four organizations directly subordinate to its business group. The four organizations have several subordinate organizations. Following is an illustration of Fremont Corporation’s initial organization hierarchy:
Due to the continued growth of its international construction business sector, Fremont Corporation sets up a separate organization for Europe, subordinate to the existing International organization, to manage its European construction projects. The new organization hierarchy is shown in the following illustration:
Business Assumptions

This case assumes there is no impact from the organization change on a multiple organizations architecture.

For information on multiple organization change, see Multi–Organization Support in Oracle Projects: page 15 – 20.

Business Requirements

Fremont Corporation identifies the following requirements for the organization changes:

- The organization changes take effect on 22–Sep–97. This date begins the tenth month and last quarter of fiscal year 1997. See Defining PA Periods: page 16 – 68.

- All active Europe projects and their corresponding tasks will be transferred and managed by the Europe organization. The rest of the international projects will still be owned by the International organization.
Europe will get some resources transferred from International. Europe will also acquire additional resources. Europe will be a cost center that will incur project costs, generate project revenue, and maintain its own budget.

Europe will have its own billing schedule with a higher international markup.

Burden Schedules are standardized at Fremont Corporation, and will not require any changes.

Fremont Construction customer invoices will continue to be processed and collected by Fremont Construction.

In addition to obtaining reports at each organization level, Fremont Corporation also wants reports at the Fremont Construction level (total construction business) and at the U.S. and International organization levels.

Planning the Organization Change

Oracle Projects provides the flexibility to allow adjustments made to meet real world organization changes. You must plan the necessary setup changes and processes to implement the changes according to your business requirements. Careful planning and analysis will ensure your business objectives are met.

When to Make the Change

Oracle Projects enables you to track project data on both a PA period and GL period basis. To have a clear audit trail for reporting and analysis, most businesses choose a new fiscal month, quarter, or year to implement any organization changes. You must make the necessary setup changes on or after the effective date of the organization change. See: Setup Changes Required for an Organization Change: page 15 – 14.

In our example, Fremont Corporation chooses to have the organization change take effect on 22–Sep–97. Any impacted projects, tasks and transactions that were processed before the system setup changes took place, and whose transaction date is on or after 22–Sep–97, must be adjusted to reflect the organization changes. Following is a summary of actions that Fremont Corporation takes.

Before the Organization Change

Before the changeover date of 22–Sep–97, Fremont Corporation must analyze, plan and document procedures for performing the
organization changes. They process project transactions as usual under the old organization setup.

To avoid adjustments, you can optionally delay processing transactions dated on or after the changeover date. However, you can use manual adjustments or the Oracle Projects Mass Update Batch process to adjust the transactions after they are processed.

### On or After the Organization Change

Fremont Corporation will complete the following steps on or after the date of the organization change:

1. **Process Transactions**

   Complete normal steps to finish processing transactions that will post to months prior to Fremont Corporation’s fiscal month 10 of 1997.

   Although not required by the system, you may want to perform steps to close the prior periods. This will prevent transactions from incorrectly posting to the prior GL or PA periods under the new organization setup.

2. **Perform Setup Changes**


3. **Assign New Organization to Projects, Tasks, and Transactions**

   Fremont Corporation must transfer some of the projects and tasks formerly associated with the International organization to the new Europe organization.

   They must also change transactions that were processed before the change, but that need to reflect the organization changes. This can be done by performing one or a combination of the following steps:

   - Manually update the project/task organization from International to Europe, using the Projects, Templates window. For an audit trail, Oracle Projects will create a mass update batch with a *Manual* prefixed name and *Completed* batch status.
   - Manually adjust transactions of affected projects or tasks that are on or after 22–Sep–97 to Europe.
   - Prepare the mass update batch. You can prepare the batch by using the Mass Update Batches window or through a customized process. Run the PRC: Mass Update Batch process.
Resolve any errors encountered during the process. See: Mass Update Batches: page 2 – 62.

The Mass Update Batch process will mark the affected expenditure items. You must manually adjust any outstanding events affected by the organization changes. You must also manually adjust any cost–based or event–based revenue or invoices affected by the organization change.

After making the adjustments, you must run the appropriate cost, revenue and invoice processes. For more detail on revenue and invoice adjustments, see: Accruing Revenue for a Project: page 7 – 27 and Invoicing a Project: page 7 – 47.

Setup Changes Required for an Organization Change

Some or all of the following implementation steps must be performed when you have an organization change.

1. Define Organizations

Implementation Checklist Step 3: page 16 – 7

- Define a new organization called Europe.
  - Enable the HR Organization classification to enable Europe to have employees
  - Enable the Expenditure/Event Organization classification so that Europe can incur project expenditures and have its own budgets and billing schedules.
  - Enable the Project/Task Owning Organization classification so that Europe can own projects.
  - Do not enable the Project invoice Collection Organization classification. Invoices for Europe are processed using transaction types associated with Fremont Construction.
- Define a new organization called U.S. No organization classifications are required for the U.S. organization.

2. Define the New Organization Hierarchy

Implementation Checklist Step 4: page 16 – 7

Fremont Corporation must update the organization hierarchy version, according to the new hierarchy.
Because Fremont Corporation has chosen to standardize the organization hierarchy version for all of its project processing, it only needs to make adjustment to the organization hierarchy named *Oracle Projects*, and the organization hierarchy version number 1. If Fremont Corporation had originally set up different organization hierarchy versions to meet different business policies, procedures, and processes for its business, each organization hierarchy version would have required updating.

3. **Assign a Project Burdening Hierarchy to the Business Group**

**Implementation Checklist Step 5: page 16 – 7**

Fremont Corporation will skip this step, because Fremont Corporation uses the same organization hierarchy version for project burdening that it uses for other business processes.

4. **Define Employees**

**Implementation Checklist Step 7: page 16 – 7**

Transfer and add employees to the Europe organization.

5. **Define Implementation Options**

**Implementation Checklist Step 9: page 16 – 8**

- If the organization change includes creating a new operating unit, implementation options required for a new operating unit must be set. See Implementation Steps for Each Additional Operating Unit: page 15 – 26
- If the Project/Task Owning Organization Hierarchy Branch of an operating unit will change as a result of the organization change, you must change the organization hierarchy /version and/or start organization assigned to the operating unit.
- If the Expenditure/Event Organization Hierarchy Branch will change, you must change the Expenditure/Event Organization Hierarchy Branch assigned to the operating unit.
• If the Default Reporting Organization Hierarchy Version will change, you must change the Reporting Organization Hierarchy Branch assigned to the operating unit.

Fremont Corporation can skip this step, since none of the above conditions are true for this organization change.

6. Define Cost Rates for Expenditure Types

Implementation Checklist Step 14: page 16 – 8

Update existing expenditure types and add new expenditure types based on the organization change.

Fremont Corporation does not need to add new expenditure types for their organization change. They have already set up standardized expenditure types for the corporation.

7. Define Non–Labor Resources

Implementation Checklist Step 15: page 16 – 8

Define non–labor resources for the new organization(s).

Fremont Corporation must update the non–labor resources PC and Minivan to add Europe as an additional owning organization:

<table>
<thead>
<tr>
<th>Non–Labor Resource</th>
<th>Description</th>
<th>Expenditure Type</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>PC on the HQ network</td>
<td>Computer Services</td>
<td>Europe</td>
</tr>
<tr>
<td>Minivan</td>
<td>Site visit minivan</td>
<td>Vehicle</td>
<td>Europe</td>
</tr>
</tbody>
</table>

Table 15 – 1 (Page 1 of 1) Define Non–Labor Resources

8. Define Expenditure Type Cost Rates

Implementation Checklist Step 18: page 16 – 9

Update rates for expenditure types and/or set up new expenditure type cost rates.

Fremont Corporation sets up higher expenditure cost rates for the expenditure type Computer Services, to cover the overall increased cost of supporting the Europe organization.
9. Define Usage Cost Rate Overrides

Implementation Checklist Step 19: page 16 – 9

Set up new usage cost rate overrides for the Europe organization.

Fremont Corporation sets up higher cost rates for minivans owned by the Europe organization.

<table>
<thead>
<tr>
<th>Non–Labor Resource</th>
<th>Expenditure Type</th>
<th>Organization</th>
<th>Usage Cost Rate Override</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minivan</td>
<td>Vehicle</td>
<td>Europe</td>
<td>60.00</td>
</tr>
</tbody>
</table>

Table 15 – 3 (Page 1 of 1) Usage Cost Rate Overrides

10. Define Employee Rates

Implementation Checklist Step 21: page 16 – 9

Define employee rates where required for changed rates and for new employees hired for the Europe organization.

11. Define Burden Schedules

Implementation Checklist Step 29: page 16 – 10

Update and/or add new burden schedules based on the organization change.

Fremont Corporation does not need to define new burden schedules.

12. Define Bill Rate Schedules

Implementation Checklist Step 34: page 16 – 10

Fremont Corporation must define a new bill rate schedule for the Europe organization, because Europe will have higher billing rates.

Expenditure Type | Unit of Measure | New Rate |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Services</td>
<td>Hours</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Table 15 – 2 (Page 1 of 1) Expenditure Type Cost Rates
13. Define Resource Lists

Implementation Checklist Step 48: page 16 – 11

Update resource lists that are affected by the organization changes. Add new organizations to the resource lists that group or maintain resource details by the organizations resource type.

14. Define Project Types

Implementation Checklist Step 58: page 16 – 12

Set up new project types you will need, using the new defaults such as bill rate schedules and burden schedules.

15. Define Project Templates

Implementation Checklist Step 59: page 16 – 12

Set up new project templates you will need, using new defaults such as project and task organizations.

16. Set Up AutoAccounting

Implementation Checklist Steps 71 through 89: page 16 – 14

Make changes to the AutoAccounting setup based on the organization change. Fremont Corporation must update the following Lookup Sets:

<table>
<thead>
<tr>
<th>Modify Lookup Sets:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Segment Value Lookups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intermediate Value (Organization)</strong></td>
</tr>
<tr>
<td>Add: Europe</td>
</tr>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
</tbody>
</table>
17. **Modify Client Extensions**

Modify any client extensions impacted by the change.

<table>
<thead>
<tr>
<th>Segment Value Lookups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intermediate Value</strong> (Organization)</td>
</tr>
<tr>
<td>Add: Europe</td>
</tr>
</tbody>
</table>
Multi–Organization Support in Oracle Projects

Beginning with Release 10.7, Oracle Projects supports multiple organizations in a single installation.

This essay describes the features and implementation of multiple organizations in Oracle Projects and is divided into the following sections:

Objectives of Multi–Organizational Support in Oracle Projects: page 15 – 20

Definitions of New Terms Used For Oracle Projects Multi–Organization: page 15 – 21

How Multiple Operating Units are Handled in Oracle Projects in a Multiple–Organization Installation: page 15 – 23

Implementation Steps for Each Additional Operating Unit: page 15 – 26

Case Study: Designing a Multiple Organization Installation: page 15 – 34

See Also

Multiple Organizations in Oracle Applications

Setting Up PTE for Multi–Organization Support: page 17 – 69

Objectives of Multi–Organization Support in Oracle Projects

The objectives of multi–organization support in Oracle Projects are:

• Support multiple organizations in a single installation.
• Secure data access for each operating unit.
• Integrate with other Oracle Applications that have already implemented multi–organization support.
• Enable some charge capability across operating units.

Multi–organization support in Oracle Projects Release 10.7 does not address:
• Multi-currency functionality that allows charging to one project in multiple currencies. This is planned for a future release.

• Intercompany accounting that would (1) enable transactions to generate entries in different sets of books and (2) automatically create the balancing entries.

Upgrading to Oracle Projects Multiple Organization

Customers running Oracle Projects with only one installation can implement the multi-organization features after running the standard upgrade to Oracle Projects Release 10.7.

Definitions of Terms Used in Oracle Projects Multiple Organization Support

**Chargeable Projects**

For each expenditure, chargeable projects are projects to which the expenditure can be charged or transferred. The displayed list of values of chargeable projects for an expenditure includes all projects in project operating units that share the following three characteristics with the expenditure operating unit:

- Same GL set of books
- Same HR business group
- Same PA period type

**Expenditure Operating Unit**

For an expenditure, the expenditure operating unit is the operating unit where the expenditure item was incurred against a project. The expenditure operating unit is the operating unit where the incurring employee submits and gets paid for time and expenses. It is the operating unit into which non-labor resources, commitments, and supplier invoices are entered.

**Expenditure Organization**

For timecards and expense reports, the expenditure organization is the organization to which the incurring employee is assigned, unless it is overridden by project or task using organization overrides.
For usage, supplier invoices, and purchasing commitments, the expenditure organization is the incurring organization entered on the expenditure.

**Legal Entity**

An organization that represents a legal company for which you prepare fiscal or tax reports. You assign tax identifiers and other relevant information to this entity.

**Operating Unit**

An organization that partitions data for subledger products (AP, AR, PA, PO, OE). It is roughly equivalent to a single pre-multi-organization installation.

**Project Chargeable Employees**

Project chargeable employees are employees included as labor resource pool to a project. The displayed list of values of project chargeable employees for a project includes all employees, as defined in Oracle Human Resources, who belong to the business group associated with the project operating unit.

**Project Burdening Organization Hierarchy**

For each business group, the project burdening organization hierarchy is the version of organization hierarchy that Oracle Projects uses to compile burden schedules for that business group. Each business group must designate one and only one version of an organization hierarchy as its project burdening organization hierarchy.

**Note:** In Oracle Projects implementation options, each operating unit is associated with an organization hierarchy version for project setup, invoice level processing, and project reporting. The project burdening organization hierarchy selected for the business group does not have to match the hierarchy version for a corresponding operating unit.

**Project Operating Unit**

The project operating unit is the operating unit within which the project is created.
Project Organization

The project organization is the organization that owns a project. This can be any organization displayed in the list of values when the project is defined. The project/task organization list of values contains organizations that are of the project/task organization type in the organization hierarchy below the start organization associated with the project operating unit.

PA Period Type

For each operating unit, the PA period type is the period type associated with the operating unit (the PA Period Type field in the PA implementation options). Oracle Projects uses the periods in the PA Period Type defined in the calendar of the operating unit’s set of books to populate each operating unit’s PA periods. The PA periods are mapped to GL periods when generating accounting transactions. The PA periods also drive the project summary for Project Status Inquiry.

See Also

Calendars Oracle General Ledger User’s Guide

How Multiple Operating Units are Handled in Oracle Projects in a Multiple–Organization Installation

Following are explanations of how each entity in Oracle Projects Release 10.7 handles multiple operating units (multiple organizations).

- Each project and project template is owned by one and only one operating unit (the project operating unit).
- Project numbers and project template numbers are unique across all operating units in a single installation.
- Customers are shared across operating units, while customer sites are associated with a specific operating unit.
- Customer agreements are owned by one operating unit and can fund projects within that operating unit only.
15 – 24 Oracle Projects User’s Guide

- Expenditures can be charged or transferred to any project as long as the expenditure operating unit and project operating unit share the same GL set of books, business group, and PA period type.

- Costs are processed in the expenditure operating unit into which costs were entered.
  - Expenditures are entered in the expenditure operating unit in Oracle Projects (timecards, expense reports and non-labor resource usage), AP (supplier invoices) or PO (requisitions and purchase orders).
  - Oracle Personal Time and Expense will identify the expenditure operating unit during the Submit Timecard and Expense Reports process. Each user in PTE is associated with one and only one expenditure operating unit. See: Overview of Oracle Personal Time and Expense: page 4 – 50.
  - Costs are calculated in the expenditure operating unit using cost rates set up for the expenditure operating unit, and are burdened based on the project burden schedule.
  - Accounting transactions are generated in the expenditure operating unit, and use the expenditure operating unit’s AutoAccounting or Account Generator process.
  - Supplier invoices for a project are interfaced from the expenditure operating unit in Oracle Payables to the same operating unit in Oracle Projects.
  - Labor cost is interfaced from the expenditure operating unit in Oracle Projects to the Oracle General Ledger set of books that is associated with the operating unit.
  - Expense reports entered in Oracle Projects are interfaced from the expenditure operating unit in Oracle Projects to the same operating unit in Oracle Payables. If the expense report is entered as an invoice in Oracle Payables, it is interfaced from the expenditure operating unit in Oracle Payables to the same operating unit in Oracle Projects.

- The Expenditure Inquiry window can be viewed in one of two modes:
  - Project Mode
    In project mode, Expenditure Inquiry displays expenditures specific to a project in the project operating unit.
  - Cross-Project Mode
In cross-project mode, Expenditure Inquiry displays expenditures in all chargeable projects in the expenditure operating unit.

- Revenue and invoices are processed by the project operating unit against transactions from any expenditure operating units.
  - Draft revenue and draft invoices are calculated in the project operating unit using the project operating unit’s bill rates, the project billing rate overrides, or the project labor multipliers.
  - Project costs charged across operating units must be processed in the expenditure operating unit before they can be processed as project revenue and invoices in the project operating unit.

**Note:** The Project Streamline Process will calculate costs for expenditure items incurred in the project operating unit only.

  - Accounting transactions for project billing are generated in the project operating unit using the project operating unit’s AutoAccounting.
  - Revenue is interfaced to Oracle General Ledger under the project operating unit, using the project operating unit’s AutoAccounting.
  - Invoices are interfaced to Oracle Receivables under the project operating unit.

- Transfers and splits will generate transactions in the same operating unit as the original transaction, although the transfer may be to any chargeable project.
- Project-oriented reports (reports that can be printed for a single project or a range of projects) are submitted from the project operating unit on project-related transactions across expenditure operating units.
- Project summary amounts are processed and stored in the project operating unit. Project Status Inquiry performs queries on projects within the project operating unit.
- Employee- or organization-oriented reports will report all transactions to chargeable projects entered within the operating unit from which the report is submitted.
- Each asset is capitalized from one and only one capital project to an Oracle Assets corporate book that is associated with the project operating unit’s set of books.
Implementation Steps for Each Additional Operating Unit

Many of the steps you perform to implement your first Oracle Projects operating unit define parameters and features that are shared across all operating units. To set up additional operating units, you only need to perform the steps that control parameters for an individual operating unit. Similarly, some Oracle Projects setup steps define parameters that are shared across operating units associated with the same business group. You only need perform these steps once for each business group.

The table below lists steps in the Oracle Projects Implementation Checklist that need to be repeated for each additional operating unit. If your implementation requires Oracle Projects integration with other Oracle applications, you must set up the other applications for each operating unit that requires integration. For comprehensive implementation information for each product, refer to the implementation instructions in the product's User's Guide, and to Multiple Organizations in Oracle Applications.

If you have multiple business groups in your organization structure, you must complete the setup for each business group before you perform the setup steps for the related operating units. For instructions on setting up business groups, see the Human Resources setup steps (steps 2 through 7) in the Oracle Projects Implementation Checklist: page 16 – 6.

As you set up each business group, you must select a responsibility that is associated with the business group you are setting up, so that the organizations are associated with the correct business group. The business group for each responsibility is set up in the profile option HR: Security Profile.

See Also

Oracle Projects Implementation Checklist: page 16 – 6

Oracle Projects Implementation Checklist for Oracle Projects Integration: page 16 – 18
Implementation Steps To Repeat for Each Operating Unit

The following implementation steps must be performed for each operating unit.

1. Define implementation options

Implementation Checklist Step 9: page 16 – 8

Each operating unit has its own implementation options. Oracle Projects implementation options determine how data is interfaced with other Oracle Applications and control cross-charging capability across operating units. In a multi-organization environment, expenditures can be charged to a project in a different operating unit from the expenditure operating unit, as long as the two operating units are associated with the same:

- GL Set of Books
- HR Business Group
- PA Period Type

► Automatic Project Numbering

If you use automatic project numbering, note that project numbers (including project template numbers) are unique across operating units. If a value is entered for next project number, the same number will be shown for all operating units that also use the automatic project numbering method.

► Automatic Invoice Numbering

Unlike project numbers, invoice numbers are unique within an operating unit, not across operating units. If automatic invoice numbering method is selected, the next invoice number is operating unit–specific.

Note: For a Project Billing implementation, the batch source field under the Billing alternate region is a required field. Oracle Projects predefines the RA batch source PA INVOICES and two transaction types, PA Invoice and PA Credit Memo. You must associate the transaction type with the batch source in AR. For new operating units, you must define these transaction types and batch source manually, before you define Implementation Options for the new operating unit. It is important to define the RA batch source as PA INVOICES.
because it is used as a context value in the Invoice Transaction flexfield for Oracle Projects.

See also: Implementation Options: page 16 – 56

2. Define PA periods

Implementation Checklist Step 10: page 16 – 8

Starting in Release 10.7, you define your PA Periods in the calendar associated with your GL set of books. When the PA Period Type is defined for the operating unit, the system will copy accounting periods from the calendar of the GL set of books. For more information on how to define Period Type and Accounting Periods, see Define Period Types and Adding Periods to a Calendar, Oracle General Ledger User’s Guide.

Each operating unit maintains its own PA period status. You use the Maintain PA Periods Status window to maintain the period status and the current reporting period. Additional PA Periods can be copied from the calendar by choosing the Copy from GL button. Once a transaction is posted to a PA period from any of the operating units, the Calendar window will not allow changes to the period date range.

Note: You must open and save a period before you can define it as the current reporting period.

See Also: PA Periods: page 16 – 65

3. Define cost rates for expenditure types

Implementation Checklist Step 18: page 16 – 9

Expenditure types are set up once and are shared across all operating units. However, the cost rates for expenditure types are specific to each operating unit. Each operating unit must have cost rates set up for expenditure types in which expenditures are expected to be incurred.

See also: Expenditure Type Cost Rates: page 16 – 90

4. Define usage cost rate overrides

Implementation Checklist Step 19: page 16 – 9

Non-Labor resources are set up once and are shared across all operating units. For each of the non-labor resources that an operating unit may put in service, you must set up a cost rate for the associated expenditure type. If you wish to have a non-labor resource with different cost rates in different operating units, you can define operating unit-specific usage
cost rate overrides for organizations in the business group associated with an operating unit.

See also: Usage Cost Rate Overrides: page 16 – 91

5. Define employee cost rates

Implementation Checklist Step 21: page 16 – 9

Employees are associated with a business group. An employee’s work can be charged to any of the operating units that are associated with the employee’s business group. If your business process allows an employee to work in a subset of these operating units, you must set up labor rates for each of the operating units in which the employee works. The system allows you to have different labor rates for the same employee in different operating units.

See also: Employee Cost Rates: page 16 – 95

6. Define bill rate schedules

Implementation Checklist Step 34: page 16 – 10

Bill rate schedules work similarly to cost rates. Each operating unit must have its own bill rates. You can have different bill rates for the same resource in different operating units.

See also: Bill Rate Schedules: page 16 – 125

7. Define project types

Implementation Checklist Step 58: page 16 – 12

You must set up project types for each operating unit. It is possible to have the same project type names in multiple operating units. However, each project type has its own attributes to control project processing by operating unit.

See also: Project Types: page 16 – 177

8. Define project templates

Implementation Checklist Step 59: page 16 – 12

Like project types and projects, project templates belong to only one operating unit. For each project type class, you must define at least one project template in order to define a project with that project type class.
Project templates can only be maintained and copied within an operating unit. However, project template numbers are unique across operating units. A project template number cannot duplicate any project or project template number within the Oracle Projects installation.

See also: Project Templates: page 2 – 15

9. Set up AutoAccounting for costs

Implementation Checklist Steps 71 through 78: page 16 – 14

AutoAccounting rules for costs are set up once for each chart of accounts. However, accounting rule assignments are operating unit–specific. The multi–organization Replicate Seed Data process will replicate system–defined function transactions in each operating unit you set up. For each operating unit, you must enable cost function transactions and assign proper accounting rules for Oracle Projects to use when automatically generating your cost accounting entries.

Note: Be sure to use partitioned tables (ending in _ALL) if you use SQL statement rules for your AutoAccounting or Account Generator. Since accounting rules may depend on data elements across operating unit boundaries, using the _ALL tables will maintain your ability to use the cross–charging feature supported by Oracle Projects in a multiple organization installation.

See Also

Accounting for Labor Costs: page 16 – 238
Accounting for Expense Report Costs: page 16 – 262
Accounting for Usage Costs: page 16 – 267
Accounting for Supplier Invoice Adjustment Costs: page 16 – 275
Accounting for Burdened Costs: page 16 – 249
10. Set up AutoAccounting for revenue and billing

Implementation Checklist Steps 79 through 89: page 16 – 14

AutoAccounting rules for revenue and billing are set up once for each Chart of Accounts. However, accounting rule assignments are operating unit–specific. The multi–organization Replicate Seed Data process will replicate system–defined function transactions in each operating unit you set up. For each operating unit, you must enable the revenue and billing function transactions and assign proper accounting rules for Oracle Projects to use when automatically generating your revenue and billing accounting entries.

Note: Be sure to use partitioned tables (ending in _ALL) if you use SQL statement rules for your AutoAccounting or Account Generator.

See Also

Accounting for Labor Revenue: page 16 – 254
Accounting for Expense Report Revenue: page 16 – 265
Accounting for Usage Revenue: page 16 – 270
Accounting for Supplier Invoices Revenue: page 16 – 278
Accounting for Event Revenue: page 16 – 279
Accounting for Revenue and Invoices: page 16 – 281

11. Define indirect projects for cost collection

Implementation Checklist Step 90: page 16 – 15

Projects are owned by an operating unit. If you want to use Oracle Projects to track costs your operating unit incurs, including work that is not directly associated with project work, you can define as many indirect projects as you need to record indirect costs.

See also: Accounting for Indirect Costs: page 16 – 115
12. Specify profile option values

Implementation Checklist Step 66: page 16 – 13

You use profile options to specify default values that affect system processes, system controls, and data entry. In a multi–organization environment, you can confine a profile option value to a specific operating unit by defining the profile options at the responsibility level. You should review the following Oracle Projects system profile options to determine if you want to define responsibility–level profile options values:

- PA: Allow Cross–Charging in Multi–Org
- PA: Cross–Project Responsibility
- PA: Debug Mode
- PA: Default Expenditure organization in AP/PO
- PA: Default Project Status
- PA: Default Public Sector

See also: Profile Options: page 16 – 211

Additional Steps Required If the Operating Unit Is Associated With a New Business Group:

The following implementation steps must be performed for each business group.

13. Define project burdening organization hierarchy

Implementation Checklist Step 5: page 16 – 7

Starting in Release 10.7, Oracle Projects now uses the project burdening hierarchy defined for each business group to compile burden schedules. Each business group must have one and only one version of the organization hierarchy designated as its project burdening hierarchy.

See also: Specifying a Project Burdening Hierarchy: page 16 – 43
14. Define burden schedules

Implementation Checklist Step 29: page 16 – 10

You must set up and compile burden schedules for each business group. Burden schedules are shared among operating units associated with the same business group. If organization burden multipliers are not explicitly defined in the Define Burden Schedule window, they will default from the next higher level organization in the Project Burdening Hierarchy defined for the business group.

See also: Burden Schedules: page 16 – 106

15. Define resource lists

Implementation Checklist Step 48: page 16 – 11

You must set up resource lists for each business group. Resource lists are shared among operating units associated with the same business group. You can define a resource list by copying it from an existing resource list in the same business group.

See also: Resources and Resource Lists: page 16 – 155
Case Study: Designing a Multiple Organization Installation

The following case study illustrates the issues to consider when implementing a multiple organization installation of Oracle Projects Release 10.7. Three different implementations of the model are presented to illustrate the system processing implications of choosing various multi-organization implementation options.

Summary of the Multi-Organization Model for Company XYZ:

Company XYZ has four divisions: Los Angeles, San Francisco, New York, and London. Los Angeles, San Francisco, and New York belong to the same legal entity (US) and London belongs to another legal entity (UK). The following three alternative multi-organization models are compared for XYZ’s Oracle Applications Implementation:

1. Example A
   - Two sets of books – US and UK
   - Two business groups – BG1 and BG2
   - Four operating units, all using the weekly PA period type:
     - Los Angeles is associated with the US set of books and business group BG1.
     - San Francisco and New York are associated with the US set of books and business group BG2.
     - London is associated with the UK set of books and business group BG2.

2. Alternative B
   - Two sets of books – US and UK.
   - One enterprise business group – BG1.
   - Four operating units, all using the weekly PA period type:
     - Los Angeles, San Francisco, and New York are associated with the US set of books and business group BG1
     - London is associated with the UK set of books and business group BG2.

3. Alternative C
   - Two sets of books – US and UK.
• One enterprise business group – BG1.
• Two operating units, both using the weekly PA period type:
  – US (consisting of divisions Los Angeles, San Francisco and New York) is associated with the US set of books and business group BG1.
  – London is associated with the UK set of books and business group BG2.

Example A: Multi–Org Model

Example A: PA Implementation Options Table

In Example A, Company XYZ defines the PA implementation options for its operating units as follows:

<table>
<thead>
<tr>
<th>Operating Unit</th>
<th>Set of Books</th>
<th>Currency</th>
<th>Business Group</th>
<th>Start Organization</th>
<th>PA Period Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles</td>
<td>US</td>
<td>USD</td>
<td>BG1</td>
<td>PORGA</td>
<td>Weekly</td>
</tr>
<tr>
<td>San Francisco</td>
<td>US</td>
<td>USD</td>
<td>BG2</td>
<td>PORGB</td>
<td>Weekly</td>
</tr>
<tr>
<td>New York</td>
<td>US</td>
<td>USD</td>
<td>BG2</td>
<td>PORGB</td>
<td>Weekly</td>
</tr>
<tr>
<td>London</td>
<td>UK</td>
<td>GBP</td>
<td>BG2</td>
<td>PORGB</td>
<td>Weekly</td>
</tr>
</tbody>
</table>
Example A: PA Implementation Options Diagram

Example A: HR Organizations, Labor Resources, and Projects

Business Scenario:
Employee EMPNY incurs expenditures and gets paid in New York. He is assigned to work on PROJ–SF which is owned by San Francisco and managed by employee EMPSF.
Set up project PROJ–SF:

- Use a San Francisco responsibility (since San Francisco is the project operating unit) to set up PROJ–SF and the Work Breakdown Structure.

- The Project/Task Organization LOV will show PORGB1, PORGB2, PORGB3, PORGB4, PORGB5, PORGB6 and PORGB7. PORGB1 is selected to be associated with PROJ–SF and its subordinate tasks.

- The expenditure operating unit for PROJ–SF can be either San Francisco or New York. London cannot be the expenditure operating unit for PROJ–SF because it is associated with a different set of books. Similarly, Los Angeles cannot be the expenditure operating unit for PROJ–SF because it is associated with a different business group.

- The Expenditure Organization can be any HR organization under BG2, which includes: BG2, PORGB, PORGBa, PORGBb, PORGBc, PORGB1, PORGB2, PORGB3, PORGB4, PORGB5, PORGB6 and PORGB7. (Note: you can use AutoAccounting and the Account Generator to map to the correct Balancing Segment Value and Cost Center Segment Value in order to generate account numbers for each operating unit).

- Project chargeable employees for PROJ–SF include EMPSF, EMPNY, and EMPLD because San Francisco, New York, and London share the same business group.

- Project PROJ–SF can use any Burden Schedule that is set up and/or updated in operating units that are associated with BG2 (San Francisco, New York and London).

Enter Expenditures:

- Employee EMPNY will submit timecards and expenses using a New York PA responsibility.

- Chargeable projects consist of PROJ–SF and PROJ–NY. PROJ–LD is not chargeable because it is associated with a different set of books, and PROJ–LA is not chargeable because it is associated with a different business group. EMPNY will charge to PROJ–SF in this case.

- The expenditure operating unit is New York.
• The expenditure organization is PORGB3, the HR organization assigned to EMPNY, unless an organization override is set up in project PROJ–SF.

• If project manager approval is required, the timecard and expenses will be routed to employee EMPSF for approval. (Note: routing can only go to an employee in the same business group.) The Review Timecards/Expense Reports window will display all routed expenditure batches and expenditures across operating units that share the same business group.

**Project Costing:**

• After approval, EMPNY’s timecard and expenses against PROJ–SF will be processed when New York runs the Cost Distribution process.

• The cost distribution lines are created in New York (the expenditure operating unit), using cost rates set up in New York. Burden costs are calculated using burden schedules tied to the projects.

• Project cost will go from the New York operating unit’s PA to US set of books (New York operating unit’s GL) with a process initiated by the New York responsibility.

• Expense reports will go from the New York operating unit’s PA to the New York operating unit’s AP with a process initiated by the New York responsibility. The New York operating unit’s AP will then pay expense reimbursement to EMPNY in USD (the functional currency of the operating unit).

• EMPNY can view all of his expenditures in New York on the Expenditure Inquiry Form using a New York Responsibility. EMPSF, the project manager, can view PROJ–SF specific expenditures including EMPNY’s timecard and expenses in the Expenditure Inquiry window, using a San Francisco Responsibility (since San Francisco is the project operating unit).

**Project Billing:**

• All revenue and invoice processes need to be performed in San Francisco (the project operation unit) using a San Francisco responsibility.

• The Generate Draft Revenue process will create revenue distribution lines in the San Francisco operating unit using project overrides or San Francisco’s bill rates.
• Borrowed and lent revenue will be processed according to the setup, because the expenditure organization (PORGB3) is different from the project organization (PORGB1).

• Use the San Francisco responsibility to query revenue figures in the Expenditure Inquiry window. You will see expenditures from all expenditure operating units (in this instance, San Francisco and New York).

• Use the San Francisco responsibility to run the Generate Invoice process.

• Project revenue will go from the San Francisco operating unit’s PA to US set of books (the San Francisco operating unit’s GL) with the revenue process initiated by the San Francisco responsibility.

• Invoices go from the San Francisco operating unit’s PA to the San Francisco operating unit’s AR with a process initiated by the San Francisco responsibility. Invoice numbering is processed according to the San Francisco operating unit’s implementation options.

**Alternative Considerations**

This section illustrates system process implications by comparing the above example with two alternative multi-organization models for Company XYZ. The intention is not to suggest a specific model, but show how different implementation configurations will affect Oracle Projects multi-organization processing.

**Alternative B: PA Implementation Options Table**

In Alternative B, Company XYZ defines one business group (BG1) for all of its operating units. The start organization is at the second level (PORGLA, PORGSF, PORGNY, and PORGLD). Items that differ from Example A are shown in bold type:
<table>
<thead>
<tr>
<th>Operating Unit</th>
<th>Set of Books</th>
<th>Currency</th>
<th>Business Group</th>
<th>Start Organization</th>
<th>PA Period Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles</td>
<td>US</td>
<td>USD</td>
<td>BG1</td>
<td>PORGLA</td>
<td>Weekly</td>
</tr>
<tr>
<td>San Francisco</td>
<td>US</td>
<td>USD</td>
<td>BG1</td>
<td>PORGSF</td>
<td>Weekly</td>
</tr>
<tr>
<td>New York</td>
<td>US</td>
<td>USD</td>
<td>BG1</td>
<td>PORGNY</td>
<td>Weekly</td>
</tr>
<tr>
<td>London</td>
<td>UK</td>
<td>GBP</td>
<td>BG1</td>
<td>PORGLD</td>
<td>Weekly</td>
</tr>
</tbody>
</table>

**Alternative B: PA Implementation Options Diagram**
Alternative B: HR Organizations, Labor Resources, and Projects

Compared with Example A, implementing Alternative B above will give Company XYZ:

- More flexibility in sharing resources. Projects owned by Los Angeles will also be in the chargeable project list of values for EMPNY.

- More restrictions on Project Organization. Since each operating unit is associated with a lower level Start Organization in the organization hierarchy, fewer Project/Task Organizations can be associated with a project. Project PROJ–SF and its tasks can have only PORGB1 and PORGB2 as their project/task organization. In Example A, project PROJ–SF and its tasks can have as their project/task organization any HR organization of the project/task organization type under BG2, which includes: PORGB1, PORGB2, PORGB3, PORGB4, PORGB5, PORGB6 and PORGB7.

- Easier enforcement of an enterprise–wide standard for burden schedules and resource lists. In Alternative B, there is only one
business group for the enterprise; therefore, burden schedules and resource lists are shared for the installation.

- The ability to share resources internationally. If XYZ allows an employee to enter expenditures in more than one operating unit, then it is possible to have the employee work on projects across sets of books. For example, EMPLD can use the London responsibility to charge to PROJ–LD, or any other operating unit’s responsibility to charge to PROJ–LA, PROJ–SF, or PROJ–NY. Expense reports will be paid in the functional currency of the operating unit. EMPLD will be paid in currency GBP for expenses incurred for PROJ–LD, and in currency USD for expenses incurred for PROJ–LA, PROJ–SF and PROJ–NY.

Alternative C: PA Implementation Options Table

In Alternative C, Company XYZ includes Los Angeles, San Francisco, and New York in one operating unit (US). The start organization is the business group, BG1. Items that differ from Alternative B are shown in bold type:

<table>
<thead>
<tr>
<th>Operating Unit</th>
<th>Set of Books</th>
<th>Currency</th>
<th>Business Group</th>
<th>Start Organization</th>
<th>PA Period Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>US</td>
<td>USD</td>
<td>BG1</td>
<td>BG1</td>
<td>Weekly</td>
</tr>
<tr>
<td>London</td>
<td>UK</td>
<td>GBP</td>
<td>BG1</td>
<td>BG1</td>
<td>Weekly</td>
</tr>
</tbody>
</table>
Alternative C: PA Implementation Options Diagram

Alternative C: HR Organizations, Labor Resources, and Projects
Compared with Example A and Alternative B, implementing Alternative C above will give Company XYZ:

- The same flexibility in sharing resources as in Alternative B.
- The same ability to share resources internationally as in Alternative B.
- No restrictions on associating any of the Project/Task Organizations to any project.
- Less autonomy in the US operating units (Los Angeles, San Francisco, and New York) but better reporting and processing at the US level:
  - Less flexibility in processing. Project costing and billing are done centrally for the US rather than by each of the three US operating units as in Example A and Alternative B.
  - Through AutoAccounting, you will still be able to maintain multiple Balancing Entities in GL and take advantage of the GL intercompany changes within the US entity. This will enable you to produce separate Balance Sheets for Los Angeles, San Francisco and New York.
  - Less data segregation and access restriction. For example, revenue and liability information are interfaced into one AR and one AP. Also, with a US responsibility, any employee in BG1 can charge expenses to a US project. Similarly, any organization in BG1 can be an Expenditure Organization for a US project.
  - More work would be required to produce reports at the Los Angeles, San Francisco and New York level in the sub-ledgers.
- Less system administration would be required. Setup is performed once for the US operating unit rather than three times (for Los Angeles, San Francisco, and New York).
- US standards, such as Project Type, Project Templates, Rates, and Accounting Rules are easier to enforce.
- Agreements can fund any of the projects in the US. In Alternative B, you need separate agreements for PROJ–LA, PROJ–SF, and PROJ–NY.
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Oracle® Projects User's Guide

Release 11

Volume 3
Oracle® Projects
User’s Guide

RELEASE 11
Volume 3
March 1998
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Glossary

Index
This chapter describes everything you need to know about implementing and setting up Oracle Projects.
Planning Your Implementation

As you plan your implementation of Oracle Projects, we recommend that you consider the implementation issues discussed in this section. Implementing a core system such as Oracle Projects is a complex and lengthy task. By carefully planning your implementation, you can save valuable time and prevent errors.

Note: If you plan to use Multiple Reporting Currencies (MRC) with Oracle Projects, additional setup steps are required. See: Multiple Reporting Currencies in Oracle Applications.

Your Implementation Team

Your implementation team creates and executes the implementation plan and makes most of the implementation decisions. Your implementation team makes many important decisions, from re-engineering your business procedures, to preparing for conversion, to determining your system requirements.

Your implementation team should be very broad-based, with representatives from your MIS, accounting, and project management departments. Ideally, the team is made up of staff who can dedicate a significant amount of time to implementation issues.

You should also appoint one member of your implementation team to head the implementation, facilitate resolution of issues, and act as liaison between your organization and Oracle Worldwide Customer Support and Oracle Consulting Services.

Implementation Decisions

Review your business procedures

Your implementation team should re-examine all your business procedures in light of the functionality in Oracle Projects. The terminology your business uses, your organization structure, your accounting practices, how you classify expenditures, and your reporting policies are just a few issues that will influence many decisions you make about your implementation of Oracle Projects.
Preparing your implementation data

Your implementation team must determine how to configure the features in Oracle Projects.

As you determine your implementation data, you must keep AutoAccounting in mind. The AutoAccounting feature in Oracle Projects derives values for account combinations based on project information for all accounting transactions in Oracle Projects. Consequently, the way you organize your chart of accounts affects your implementation data. For example, if you charge several expense accounts for varied expenditures such as meals, travel and lodging, and airfare, then you need to implement an expenditure type that corresponds to each expense account. You can use most of the implementation data that you define for Oracle Projects as inputs to the AutoAccounting rules that you define.

Data Conversion

Since data conversion from your existing systems is typically the most error–prone area of implementation, we recommend that your implementation team invest considerable time planning and testing it.

We recommend that you test your data conversion program carefully using sample data before you migrate to Oracle Projects. After conversion, you should verify the functionality of your data.

User Training

Plan training for all members of your company that will use Oracle Projects. You should include employees who interact directly with the software or who review the data that is reported from the system. The training may include steps in how to use the system to perform specific tasks and explanations of any new business policies that you may institute as a consequence of implementing Oracle Projects.
System Testing

Plan and execute extensive system testing of your enterprise solution – including the Oracle Applications and any systems that interface with the applications. Your system test environment should be as similar to your production system as possible. After you convert your data for testing, assign users to test the functions that they currently or will perform. Provide your testers with the appropriate hardware resources so you can accurately judge performance issues.
Overview of Setting Up Oracle Projects

This section contains an checklist that includes each task you need to perform to complete the implementation of Oracle Projects. It lists the steps required to implement Oracle Projects along with advanced implementation topics for you to consider.

Before you set up Oracle Projects, you should:

• Set up Oracle Application responsibilities and users for the implementation. See: Defining a Responsibility Oracle Applications System Administrator’s Guide.

Oracle Projects provides two responsibilities, Project Costing Super User and Project Billing Super User, depending on whether you install Oracle Project Costing or Oracle Project Billing.

To further help you implement Oracle Projects, this chapter walks you through a sample implementation for Fremont Corporation, a fictitious engineering, construction, and consulting firm. For each implementation step, we explain how Fremont implements its own policy, practice, or procedure in Oracle Projects. By studying Fremont’s implementation, you can learn more about how to implement your own policies, practices, and procedures using Oracle Projects. See: About Fremont Corporation: An Example of Setting Up Oracle Projects: page 16 – 22.

**Note:** Fremont Corporation may not have implemented all of the features available in this release of Oracle Projects.

Oracle Applications Implementation Wizard

If you are implementing more than one Oracle Applications product, you may want to use the Oracle Applications Implementation Wizard to coordinate your setup activities. The Implementation Wizard guides you through the setup steps for the applications you have installed, suggesting a logical sequence that satisfies cross-product implementation dependencies and reduces redundant setup steps. The Wizard also identifies steps that can be completed independently—by several teams working in parallel—to help you manage your implementation process most efficiently.

You can use the Implementation Wizard as a resource center to see a graphical overview of setup steps, read online help for a setup activity, to open the appropriate setup window. You can also document your implementation, for further reference and review, by using the Wizard to record comments for each step.
For more information, see: Oracle Applications Implementation Wizard User’s Guide.

**Setting up Underlying Oracle Applications Technology**

The setup steps in this chapter tell you how to implement the parts of Oracle Applications specific to Oracle Projects.

The Implementation Wizard guides you through the entire Oracle Applications setup, including system administration. However, if you do not use the Wizard, you need to complete several other setup steps, including:

- performing system-wide setup tasks such as configuring concurrent managers and printers
- managing data security, which includes setting up responsibilities to allow access to a specific set of business data and complete a specific set of transactions, and assigning individual users to one or more of these responsibilities

For more information, see: Oracle Applications System Administrator’s Guide.

Also, if your implementation uses Oracle Workflow to manage project or budget status changes, or to derive the Project Related Supplier Invoice Account via the Account Generator, you need to set up Oracle Workflow.

For more information, see: Oracle Workflow User’s Guide.

**Oracle Projects Implementation Checklist**

This checklist summarizes each of the steps you follow to implement Oracle Projects. It includes setup steps for data that may be shared with other Oracle Applications, but is required by Oracle Projects. If you have already defined this information when setting up other Oracle Applications, you can skip those steps. This shared data includes:

- Set of Books
- Employees and Organizations
- Customers

Since some implementation steps build upon information you define in other implementation steps, you should perform the steps in the order listed.
As you determine your implementation data, you must keep AutoAccounting in mind. The AutoAccounting feature in Oracle Projects derives values for account combinations based on project information for all accounting transactions in Oracle Projects. Consequently, the way you organize your chart of accounts affects your implementation data. For example, if you charge several expense accounts for varied expenditures such as meals, travel and lodging, and airfare, then you need to implement an expenditure type that corresponds to each expense account. You can use most of the implementation data that you define for Oracle Projects as inputs to the AutoAccounting rules that you define.

After you complete most implementation steps, you can submit reports to review your work and confirm that you have successfully completed the step. For example, after you complete entering Agreement types, you can submit the Agreement Types Listing. See: Implementation Listings: page 9 – 5.

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
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<tbody>
<tr>
<td></td>
<td><strong>Set of Books</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td><strong>Define your set of books.</strong> See: Oracle Applications Set of Books: page 16 – 26.</td>
<td>Required</td>
<td>Required</td>
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<tr>
<td></td>
<td><strong>Human Resources</strong></td>
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</tr>
<tr>
<td>Step 2</td>
<td><strong>Define locations.</strong> See: Locations: page 16 – 35</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 3</td>
<td><strong>Define organizations.</strong> See: Organizations: page 16 – 34</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 5</td>
<td><strong>Specify a project burdening hierarchy for each business group.</strong> See: Specifying a Project Burdening Hierarchy: page 16 – 43.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 6</td>
<td><strong>Define jobs.</strong> See: Jobs: page 16 – 46.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 7</td>
<td><strong>Define employees.</strong> See: Employees: page 16 – 50.</td>
<td>Required</td>
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</table>

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<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Customers</strong></td>
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<td></td>
</tr>
<tr>
<td>❑ Step 8</td>
<td><strong>Define customers.</strong> See: Customers: page 16 – 53.</td>
<td>Optional</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td><strong>Implementation Options and PA Periods</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❑ Step 9</td>
<td><strong>Define implementation options.</strong> See: Implementation Options: page 16 – 56. <em>ATTENTION: If you have a multiple organization installation, you must define implementation options for each operating unit.</em></td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>❑ Step 10</td>
<td><strong>Define PA periods.</strong> See: PA Periods: page 16 – 65. <em>ATTENTION: If you have a multiple organization installation, you must repeat this step for each operating unit.</em></td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td><strong>Expenditure Setup</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>❑ Step 11</td>
<td><strong>Define expenditure categories.</strong> See: Expenditure Categories: page 16 – 75.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>❑ Step 12</td>
<td><strong>Define revenue categories.</strong> See: Revenue Categories: page 16 – 76.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>❑ Step 13</td>
<td><strong>Define units.</strong> See: Units: page 16 – 77.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>❑ Step 14</td>
<td><strong>Define expenditure types.</strong> See: Expenditure Types: page 16 – 78.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>❑ Step 15</td>
<td><strong>Define non–labor resources.</strong> See: Non–Labor Resources: page 16 – 82. <em>Required if you use usages.</em></td>
<td>*Required</td>
<td>*Required</td>
</tr>
<tr>
<td>❑ Step 16</td>
<td><strong>Define transaction sources.</strong> See: Transaction Sources: page 16 – 86.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>❑ Step 17</td>
<td><strong>Implement transaction control extension, if needed (advanced implementation step).</strong> See: Transaction Control Extensions: page 18 – 27.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Non-Labor Costing Setup</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Step 18</td>
<td><strong>Define cost rates for expenditure types.</strong> See: Cost Rates for Expenditure Types: page 16 – 90. <strong>ATTENTION:</strong> If you have a multiple organization installation, you must repeat this step for each operating unit.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☐ Step 19</td>
<td><strong>Define usage cost rate overrides.</strong> See: Usage Cost Rate Overrides: page 16 – 91. <strong>ATTENTION:</strong> If you have a multiple organization installation, you must repeat this step for each operating unit.</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td><strong>Labor Costing Setup</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Step 21</td>
<td><strong>Define employee cost rates.</strong> See: Employee Cost Rates: page 16 – 95. <strong>ATTENTION:</strong> If you have a multiple organization installation, you must repeat this step for each operating unit.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>☐ Step 22</td>
<td><strong>Define labor cost multipliers.</strong> See: Labor Cost Multipliers: page 16 – 96.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>☐ Step 23</td>
<td><strong>Implement labor costing extension</strong> (advanced implementation step).** See: Labor Costing Extensions: page 18 – 36.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>☐ Step 24</td>
<td><strong>Implement labor transaction extension</strong> (advanced implementation step).** See: Labor Transaction Extensions: page 18 – 40.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>☐ Step 25</td>
<td><strong>Implement overtime processing</strong> (advanced implementation step). See: Overview of Implementing Overtime: page 17 – 4.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
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</table>

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<thead>
<tr>
<th>Step Number</th>
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<th>Project Costing</th>
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</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Step 27" /></td>
<td>Define burden cost codes. See: Burden Cost Codes: page 16 – 101.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td><img src="image" alt="Step 28" /></td>
<td>Define burden structures. See: Burden Structures: page 16 – 102</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td><img src="image" alt="Step 29" /></td>
<td>Define burden schedules. See: Burden Schedules: page 16 – 106. ATTENTION: If you have a multiple organization installation, you must repeat this step for each operating unit if the new operating unit is associated with a new business group.</td>
<td>Optional</td>
<td>Optional</td>
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</table>

**Billing Setup**

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Step 30" /></td>
<td>Define billing cycles. See: Billing Cycles: page 16 – 119.</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td><img src="image" alt="Step 31" /></td>
<td>Implement billing cycle extension (advanced implementation step). See: Billing Cycle Extension: page 18 – 122.</td>
<td>–</td>
<td>Optional</td>
</tr>
<tr>
<td><img src="image" alt="Step 32" /></td>
<td>Define payment terms. See: Payment Terms: page 16 – 122.</td>
<td>–</td>
<td>Optional</td>
</tr>
<tr>
<td><img src="image" alt="Step 33" /></td>
<td>Define agreement types. See: Agreement Types: page 16 – 123.</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td><img src="image" alt="Step 34" /></td>
<td>Define bill rate schedules. See: Bill Rate Schedules: page 16 – 125. ATTENTION: If you have a multiple organization installation, you must repeat this step for each operating unit.</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td><img src="image" alt="Step 35" /></td>
<td>Define invoice formats. See: Invoice Formats: page 16 – 129.</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td><img src="image" alt="Step 36" /></td>
<td>Define credit types. See: Credit Types: page 16 – 142.</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td><img src="image" alt="Step 37" /></td>
<td>Define event types. See: Event Types: page 16 – 143.</td>
<td>–</td>
<td>Optional</td>
</tr>
<tr>
<td><img src="image" alt="Step 38" /></td>
<td>Assign event types for cost–to–cost revenue. See: Assigning Event Types for Cost–to–Cost Revenue: page 16 – 146.</td>
<td>–</td>
<td>Optional</td>
</tr>
<tr>
<td>Step Number</td>
<td>Step Description</td>
<td>Project Costing</td>
<td>Project Billing</td>
</tr>
<tr>
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<td>----------------------------------------------------------------------------------------------------------------------------</td>
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</tr>
</tbody>
</table>
| ❑ Step 39  | **Implement Percent Complete Revenue Accrual and Invoicing**.  
See: Setup Requirements for Percent Complete Revenue and Invoicing: page 16 – 148.                                | –               | Optional       |
| ❑ Step 40  | **Implement labor billing extension** (advanced implementation step).  
See: Labor Billing Extensions: page 18 – 52.                                | –               | Optional       |
| ❑ Step 41  | **Implement billing extensions** (advanced implementation step).  
See: Billing Extensions: page 18 – 62.                                      | –               | Optional       |
| ❑ Step 42  | **Implement automatic invoice approve/release extension** (advanced implementation step).  
See: Automatic Invoice Approve/Release Extension: page 18 – 94.                | –               | Optional       |
| ❑ Step 43  | **Implement AR transaction type extension** (advanced implementation step).  
See: AR Transaction Type Extension: page 18 – 98.                             | –               | Optional       |
| ❑ Step 44  | **Implement cost accrual** (advanced implementation step).  
See: Revenue–Based Cost Accrual: page 7 – 73.                                | –               | Optional       |

**Budget Setup**

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
</table>
| ❑ Step 45  | **Define budget types.**  
See: Budget Types: page 16 – 149.                                                                                       | Optional       | Optional       |
| ❑ Step 46  | **Define budget entry methods.**  
See: Budget Entry Methods: page 16 – 150.                                                                                 | Required       | Required       |
| ❑ Step 47  | **Define budget change reasons.**  
| ❑ Step 48  | **Define resource lists.**  
**ATTENTION:** If you have a multiple organization installation, you must repeat this step for each operating unit if the new operating unit is associated with a new business group.  | Required       | Required       |
| ❑ Step 49  | **Implement budget calculation extension** (advanced implementation step).  
See: Budget Calculation Extensions: page 18 – 19.                                                                              | Optional       | Optional       |
<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>❑ Step 51</td>
<td>Implement budget workflow extension. See: Budget Workflow Extension: page 18 – 112.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

### Project Setup

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
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<tbody>
<tr>
<td>❑ Step 52</td>
<td>Define project statuses. See: Project Statuses: page 16 – 164.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>❑ Step 53</td>
<td>Define class categories and class codes. See: Project Classifications: page 16 – 167.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>❑ Step 54</td>
<td>Define service types. See: Service Types: page 16 – 170.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>❑ Step 55</td>
<td>Define project role types. See: Project Role Types: page 16 – 172.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>❑ Step 57</td>
<td>Define contact types. See: Contact Types: page 16 – 175.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>❑ Step 58</td>
<td>Define project types. See: Project Types: page 16 – 177. ATTENTION: If you have a multiple organization installation, you must repeat this step for each operating unit.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>❑ Step 59</td>
<td>Define project templates. See: Project Templates: page 2 – 15. ATTENTION: If you have a multiple organization installation, you must repeat this step for each operating unit.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>❑ Step 60</td>
<td>Implement project verification extension (advanced implementation step). See: Project Verification Extension: page 18 – 102.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>❑ Step 61</td>
<td>Implement project workflow extension. See: Project Workflow Extension: page 18 – 106.</td>
<td>Optional</td>
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</table>

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<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
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</thead>
<tbody>
<tr>
<td>Step 62</td>
<td><strong>Implement verify organization change extension.</strong> See: Verify Organization Change Extension: page 18 – 118.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**Project Status Setup**

<table>
<thead>
<tr>
<th>Step 63</th>
<th><strong>Define derived columns.</strong> See: Derived Columns for Project Status Inquiry: page 16 – 199.</th>
<th>Optional</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 64</td>
<td><strong>Define displayed columns.</strong> See: Non–Default Configuration for Project Status Inquiry: page 16 – 199.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 65</td>
<td><strong>Implement commitments from external systems</strong> (advanced implementation step). See: Implementing Commitments from External Systems: page 17 – 29</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

**General Setup**

<table>
<thead>
<tr>
<th>Step 66</th>
<th><strong>Specify profile option values.</strong> See: Profile Options: page 16 – 211. ATTENTION: If you have a multiple organization installation, you must repeat this step for each operating unit.</th>
<th>Optional</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 67</td>
<td><strong>Define descriptive flexfields.</strong> See: Descriptive Flexfields: page 16 – 216.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 68</td>
<td><strong>Define request groups for report and process security.</strong> See: Oracle Applications System Administrator’s Guide.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 70</td>
<td><strong>Define frequently–used folders.</strong> See: Customizing the Presentation of Data Oracle Applications User’s Guide and Administering Folders Oracle Applications System Administrator’s Guide. To see which windows are folder–enabled, see Navigator Paths in Oracle Projects: page A – 2.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 71</td>
<td><strong>Set up accounting for labor costs.</strong> See: Accounting for Labor Costs: page 16 – 238.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 72</td>
<td><strong>Set up accounting for expense report costs.</strong> See: Accounting for Expense Report Costs: page 16 – 262.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 73</td>
<td><strong>Set up accounting for usage costs.</strong> See: Accounting for Usage Costs: page 16 – 267.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 74</td>
<td><strong>Set up accounting for miscellaneous costs.</strong> See: Expenditure Type Classes 16 – 71.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 75</td>
<td><strong>Set up accounting for burden transactions.</strong> See: Expenditure Type Classes 16 – 71.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 76</td>
<td><strong>Set up accounting for WIP and Inventory costs, if you are using these expenditure type classes for costs other than those originating in Oracle Manufacturing and Oracle Inventory.</strong> See: Expenditure Type Classes 16 – 71.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 77</td>
<td><strong>Set up accounting for supplier invoice adjustment costs.</strong> See: Accounting for Supplier Invoice Adjustment Costs: page 16 – 275.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 78</td>
<td><strong>Set up accounting for total burdened costs.</strong> See: Accounting for Burdened Costs: page 16 – 249.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 79</td>
<td><strong>Set up accounting for labor revenue.</strong> See: Accounting for Labor Revenue: page 16 – 254.</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td>Step 80</td>
<td><strong>Set up accounting for expense report revenue.</strong> See: Accounting for Expense Report Revenue: page 16 – 265.</td>
<td>–</td>
<td>Required</td>
</tr>
</tbody>
</table>

Table 16 – 1 (Page 8 of 9)
<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 81</td>
<td><strong>Set up accounting for usage revenue.</strong> See: Accounting for Usage Revenue: page 16 – 270.</td>
<td></td>
<td>Required</td>
</tr>
<tr>
<td>Step 82</td>
<td><strong>Set up accounting for miscellaneous revenue.</strong> See: Expenditure Type Classes 16 – 71.</td>
<td></td>
<td>Required</td>
</tr>
<tr>
<td>Step 83</td>
<td><strong>Set up accounting for burden transactions revenue.</strong> See: Expenditure Type Classes 16 – 71.</td>
<td></td>
<td>Required</td>
</tr>
<tr>
<td>Step 84</td>
<td><strong>Set up accounting for inventory revenue.</strong> See: Expenditure Type Classes 16 – 71.</td>
<td></td>
<td>Required</td>
</tr>
<tr>
<td>Step 85</td>
<td><strong>Set up accounting for work in process revenue.</strong> See: Expenditure Type Classes 16 – 71.</td>
<td></td>
<td>Required</td>
</tr>
<tr>
<td>Step 86</td>
<td><strong>Set up accounting for supplier invoice revenue.</strong> See: Accounting for Supplier Invoices Revenue: page 16 – 278.</td>
<td></td>
<td>Required</td>
</tr>
<tr>
<td>Step 87</td>
<td><strong>Set up accounting for event revenue.</strong> See: Accounting for Event Revenue: page 16 – 279.</td>
<td></td>
<td>Required</td>
</tr>
<tr>
<td>Step 88</td>
<td><strong>Set up accounting for unbilled receivables, unearned revenue, and receivables.</strong> See: Accounting for Revenue and Invoices: page 16 – 281.</td>
<td></td>
<td>Required</td>
</tr>
<tr>
<td>Step 89</td>
<td><strong>Set up accounting for invoice write-offs.</strong> See: Accounting for Revenue and Invoices: page 16 – 281.</td>
<td></td>
<td>Required</td>
</tr>
</tbody>
</table>

**Indirect Projects for Cost Collection**

| Step 90     | **Define indirect projects for cost collection.** See: Accounting for Indirect Costs: page 16 – 115. **ATTENTION:** If you have a multiple organization installation, you must repeat this step for each operating unit. | Optional | Optional |

| Table 16 – 1 (Page 9 of 9) |
Advanced Implementation Topics Checklist

This section summarizes the areas in which you can extend the functionality of Oracle Projects to address company-specific requirements, with the implementation of client extensions and the development of new programs or the modification of existing ones.

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Extensions (also listed in the standard implementation checklist)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement project and labor cost security extension.</strong> See: Project Security Extension: page 18 – 16.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement budget calculation extension.</strong> See: Budget Calculation Extensions: page 18 – 19.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement transaction control extension.</strong> See: Transaction Control Extensions: page 18 – 27.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement labor transaction extension.</strong> See: Labor Transaction Extensions: page 18 – 40.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement labor costing extension.</strong> See: Labor Costing Extensions: page 18 – 36.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement labor billing extension.</strong> See: Labor Billing Extensions: page 18 – 52.</td>
<td>-</td>
<td>Optional</td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement billing extensions.</strong> See: Billing Extensions: page 18 – 62.</td>
<td>-</td>
<td>Optional</td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement automatic invoice approve/release extension.</strong> See: Automatic Invoice Approve/Release Extension: page 18 – 94.</td>
<td>-</td>
<td>Optional</td>
</tr>
<tr>
<td>-</td>
<td><strong>Implement AR transaction type extension.</strong> See: AR Transaction Type Extension: page 18 – 98.</td>
<td>-</td>
<td>Optional</td>
</tr>
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</table>

Table 16 – 2  (Page 1 of 2)
<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Implement project verification extension. See: Project Verification Extension: page 18 – 102.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>12</td>
<td>Implement project workflow extension. See: Project Workflow Extension: page 18 – 106.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>13</td>
<td>Implement budget workflow extension. See: Budget Workflow Extension: page 18 – 112.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>14</td>
<td>Implement verify organization change extension. See: Verify Organization Change Extension: page 18 – 118.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>15</td>
<td>Implement billing cycle extension. See: Billing Cycle Extension: page 18 – 122.</td>
<td>–</td>
<td>Optional</td>
</tr>
<tr>
<td>16</td>
<td>Implement cost accrual. See: Revenue-Based Cost Accrual: page 7 – 73.</td>
<td>–</td>
<td>Optional</td>
</tr>
<tr>
<td>17</td>
<td>Implement overtime processing. See: Overview of Implementing Overtime: page 17 – 4.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>18</td>
<td>Implement commitments from external systems. See: Implementing Commitments from External Systems: page 17 – 29</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>19</td>
<td>Implement custom reporting strategy. See: Custom Reporting Using Project Summary Amounts: page 17 – 34.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>20</td>
<td>Implement customer invoice printing strategy. See: Determining Your Invoice Printing Method: page 16 – 134.</td>
<td>–</td>
<td>Optional</td>
</tr>
</tbody>
</table>

Table 16 – 2  (Page 2 of 2)
Oracle Applications Implementation Checklist for Oracle Projects Integration

The following checklist includes the setup steps for other Oracle Applications that affect the integration of Oracle Projects with those applications. You should understand the implications of integration with Oracle Projects as you perform these setup steps for other Oracle Applications. See the Setup chapter of each product’s User’s Guide for comprehensive implementation information for the product.

You only need to complete the steps for the applications that you are implementing with Oracle Projects.

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Payables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✗ Step 1</td>
<td>Define your Payables Options for expense reports. See:</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>Payables Options: page 17 – 49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✗ Step 2</td>
<td>Specify profile options for project–related invoice entry. See:</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>Updating profile options for Integration with other Products: page 17 – 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✗ Step 3</td>
<td>Set up the Account Generator to generate the supplier invoice account. See:</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>The Account Generator in Oracle Projects: page 16 – 286</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✗ Step 4</td>
<td>Define project–related distribution sets. See: Project Related Distribution Sets:</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td>page 17 – 51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Purchasing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✗ Step 5</td>
<td>Specify profile options for project–related document entry. See:</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>Updating profile options for Integration with other Products: page 17 – 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>✗ Step 6</td>
<td>Set up the Account Generator to generate project–related accounts in Oracle Purchasing. See: The Account Generator in Oracle Projects: page 16 – 286</td>
<td>Required</td>
<td>Required</td>
</tr>
</tbody>
</table>

Table 16 – 3 (Page 1 of 4)
<table>
<thead>
<tr>
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<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
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</thead>
<tbody>
<tr>
<td>Oracle Receivables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 7</td>
<td>Specify system options for project invoice processing. See: Specifying system options: page 17 – 54</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td>Step 8</td>
<td>Define transaction types. Transaction Types for Invoice Processing: page 17 – 55</td>
<td>–</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 9</td>
<td>Specify profile options for project invoices. See: Updating profile options for Integration with other Products: page 17 – 44</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td>Step 11</td>
<td>Define salesperson for sales credit. See: Salespersons and Credit Types: page 17 – 59</td>
<td>–</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 12</td>
<td>Setting up tax for project invoices. See: Applying tax to project invoices: page 17 – 64</td>
<td>–</td>
<td>Required</td>
</tr>
<tr>
<td>Oracle Inventory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 13</td>
<td>Define project–related transaction types in Oracle Inventory. See: Oracle Inventory User’s Guide</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Oracle Project Manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 14</td>
<td>Install and implement Oracle Project Manufacturing. See: Oracle Project Manufacturing User’s Guide</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Oracle Workflow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 15</td>
<td>Install and implement Oracle Workflow. See: Oracle Workflow Guide</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 16</td>
<td>Implement Project Workflow. See: Implementing Project Workflow: page 12 – 85.</td>
<td>Required</td>
<td>Required</td>
</tr>
</tbody>
</table>

Table 16 – 3  (Page 2 of 4)
<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
<th>Project Costing</th>
<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 17</td>
<td>Implement Budget Workflow. See: Implementing Budget Workflow: page 12 – 91.</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 18</td>
<td>Implement project workflow extension. See: Project Workflow Extension: page 18 – 106.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 19</td>
<td>Implement budget workflow extension. See: Budget Workflow Extension: page 18 – 112.</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td><strong>Oracle Personal Time and Expense</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 21</td>
<td>Specify profile options for timesheet and expense report approval. See: Updating profile options for Integration with other Products: page 17 – 44 and AutoApprove Profile Options (Oracle Personal Time and Expense System Administrator’s Guide)</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 22</td>
<td>Define summary-level validation client extensions. See: Summary-Level Validation Extensions (Oracle Personal Time and Expense System Administrator’s Guide)</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 23</td>
<td>Define routing client extensions. See: Routing Extensions (Oracle Personal Time and Expense System Administrator’s Guide)</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 24</td>
<td>Define approval client extensions. See: Approval Extensions (Oracle Personal Time and Expense System Administrator’s Guide)</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Step 25</td>
<td>Define time or expense entry client extensions. See: Time or Expense Entry Extensions (Oracle Personal Time and Expense System Administrator’s Guide)</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td></td>
<td><strong>Oracle Activity Management Gateway</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 26</td>
<td>Specify profile option for product licensing. See: Updating profile options for Integration with other Products: page 17 – 44</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Step 27</td>
<td>Set up controls over imported data. See: Control Actions Window: page 13 – 4</td>
<td>Required</td>
<td>Required</td>
</tr>
</tbody>
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Table 16 – 3  (Page 3 of 4)
<table>
<thead>
<tr>
<th>Step Number</th>
<th>Step Description</th>
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<th>Project Billing</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Step 28</td>
<td><strong>Set up source products.</strong> See: Source Products Window: page 13 – 5</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>Oracle Project Analysis Collection Pack</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☑ Step 29</td>
<td><strong>Specify profile option for product licensing.</strong> See: Updating profile options for Integration with other Products: page 17 – 44</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>☑ Step 30</td>
<td><strong>Specify profile option for collection level.</strong> See: Updating profile options for Integration with other Products: page 17 – 44</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>☑ Step 31</td>
<td><strong>Revise standard metadata.</strong> See: Oracle Project Analysis Collection Pack Implementation Guide</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

Table 16 – 3  (Page 4 of 4)
About Fremont Corporation:  
An Example of Setting Up Oracle Projects

Fremont Corporation is a fictitious company based in Bay Grove, California, that provides engineering, construction, and services contracting to a wide variety of domestic and international customers. It consists of four divisions: Administration, Engineering, Construction, and Services.

These divisions are further divided into a number of groups. For example, Administration has four groups: the Executive Office, Human Resources, Finance, and Information Services.

To integrate its accounting needs, Fremont Corporation implements other Oracle Applications products such as Oracle General Ledger, Oracle Receivables, Oracle Purchasing, Oracle Payables, and Oracle Assets.

Fremont Corporation decides to implement Oracle Projects for each division and begins by forming an implementation team. This team, made up of managers who understand Fremont Corporation’s accounting and project management practices, decides how Fremont Corporation should implement Oracle Projects to best suit the
company’s business needs. They also define the policies, procedures, and requirements needed to complete the implementation.

Throughout this guide, whenever we discuss a particular aspect of implementation, we discuss how Fremont Corporation’s implementation team chooses to implement Oracle Projects. These examples are usually at the end of each implementation step and have a gray background.

Note: Fremont Corporation may not have implemented all of the features available in this release of Oracle Projects.
How to Use This Section

When it comes to implementing Oracle Projects, each business has different needs. Just as Oracle Projects lets you tailor project requirements to fit your business needs, the sections describing the setups of Oracle Projects are designed to be equally flexible. Here are some suggested ways to use these sections.

Use it as a Step–by–Step Implementation Guide

This guide gives you step–by–step instructions on how to implement Oracle Projects. Each step explains what other steps you should complete first, what the step accomplishes, and the mechanics of the step. After you plan your implementation, simply follow the steps and enter your business policies, procedures, and requirements using Oracle Projects forms.

Use it as a Tutorial

You can also use this guide as a learning aid by following Fremont Corporation’s Oracle Projects implementation. You can learn the mechanics of implementation and get something tangible when you finish—an Oracle Projects system with which you can experiment.

Use it as a Springboard to Plan Your Implementation

If you follow Fremont Corporation’s implementation, you will have a projects system that meets Fremont Corporation’s requirements, which may differ from your own. To design your own implementation plan, read through the examples and look for requirements that are similar to or different from your project needs. By studying Fremont Corporation’s implementation, you can learn more about how to implement your own policies, practices, and procedures using Oracle Projects.

Effective Dates

Most setup windows have fields for effective dates, which are the dates during which the item you are defining will be active and will appear on a list of values.

The From effective date is required, and the system usually defaults the system date in that field. The To effective date is usually optional; you
can leave this field blank if you want the item you are defining to be active indefinitely.

Date ranges are inclusive; an item becomes active on the From date and remains active through the end of the To date.

If you want to inactivate an item in the future, you can enter that future date in the To field.

For example, suppose you decide that you will no longer classify any projects as “Market Development” after the end of your calendar year. You set the Effective Date: To field to 31–DEC–2001, which prevents this classification code from appearing on lists of values, and prevents you from entering this classification code after December 31, 2001.

Similarly, you can prevent your employees from recording verbal payment agreements, effective tomorrow, by entering today’s date in the Effective Date: To field for the agreement type “Verbal.”

You can also use effective dates to record information that changes over time. For example, if you alter the bill rate for an employee on a specific date, you can enter the new bill rates and use the Effective Date fields to ensure that the old and the new bill rates are used as appropriate.
Oracle Applications Set of Books

A set of books identifies a company or fund within Oracle Applications that shares a common chart of accounts structure, calendar, and functional currency. When you set up Oracle Projects either as a standalone installation or integrated with other Oracle Applications, you need to set up one set of books for each set of products that share a common chart of accounts, calendar, and currency.

You perform the following steps to set up your Oracle Applications set of books:

- **Define your chart of accounts.** See: Defining Your Chart of Accounts, Oracle General Ledger User’s Guide
- **Define accounting period types.** See: Defining Period Types, Oracle General Ledger User’s Guide
- **Define your calendar.** See: Defining Calendars, Oracle General Ledger User’s Guide
- **Define a set of books.** See: Defining Sets of Books, Oracle General Ledger User’s Guide
- **Assign set of books to a responsibility.**

If you have already implemented a set of books while setting up a different Oracle Application, you can skip these steps.

**Suggestion:** For a description of Fremont Corporation’s set of books, including its calendar and chart of accounts; which is comprised of company, cost center, and account segments, see: Fremont Corporation Set of Books: page 16 – 27

Oracle Projects Considerations when Defining your Accounting Flexfield

**Dynamic Inserts**

The Oracle Projects AutoAccounting feature requires that you allow dynamic insertion of new account combinations. You must define your Accounting Flexfield structure with the Allow Dynamic Inserts options enabled. See: Defining Key Flexfield Structures, Oracle Applications Flexfield Guide.
Segment Qualifiers

Two Oracle Projects audit reports, the GL Cost Interface Audit Report and the GL Revenue Interface Audit Report, list account combinations and require the following flexfield segment qualifiers for your Accounting Flexfield:

- Cost Center Segment
- Natural Account Segment
- Balancing Segment

Fremont Corporation Set of Books

This section describes the set of books Fremont Corporation uses. It includes Fremont’s accounting periods and Accounting Flexfield, including company codes, account codes, and cost center codes.

You may want to familiarize yourself with Fremont’s chart of accounts if you plan to experiment with Fremont’s Oracle Projects implementation, or if you want to study the way Fremont implemented AutoAccounting.

Period Types and Periods

Fremont Corporation uses the following accounting period types in its calendar:

<table>
<thead>
<tr>
<th>Name</th>
<th>Number/Year</th>
<th>Year Type in Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week</td>
<td>52</td>
<td>Calendar</td>
</tr>
<tr>
<td>Month</td>
<td>12</td>
<td>Calendar</td>
</tr>
<tr>
<td>Quarter</td>
<td>4</td>
<td>Fiscal</td>
</tr>
<tr>
<td>Year</td>
<td>1</td>
<td>Fiscal</td>
</tr>
</tbody>
</table>

Fremont Corporation uses the following calendar periods.

Fremont Corporation defines a calendar named ‘Standard’ for their calendar periods; Fremont uses a 5–4–4 (or 13 week) calendar.
Set of Books

Fremont Corporation uses a set of books that specifies their calendar, functional currency, and account structure.

<table>
<thead>
<tr>
<th>Set of Books</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Fremont Corporation</td>
</tr>
<tr>
<td>Short Name</td>
<td>Fremont</td>
</tr>
<tr>
<td>Functional Currency</td>
<td>USD</td>
</tr>
<tr>
<td>Chart of Accounts</td>
<td>Fremont Corporation</td>
</tr>
<tr>
<td>Calendar</td>
<td>Standard</td>
</tr>
<tr>
<td>Period Type</td>
<td>Month</td>
</tr>
<tr>
<td>Allow Suspense Posting</td>
<td>No</td>
</tr>
<tr>
<td>Future Periods</td>
<td>2</td>
</tr>
<tr>
<td>Balance Intercompany Journals</td>
<td>Yes</td>
</tr>
<tr>
<td>Enable Budgetary Control</td>
<td>No</td>
</tr>
<tr>
<td>Require Budget Journals</td>
<td>No</td>
</tr>
</tbody>
</table>

Fremont Corporation Chart of Accounts Structure

Fremont Corporation uses a three-segment Accounting Flexfield to represent their chart of accounts. The Accounting Flexfield is constructed as follows:

*Company – Cost Center – Account*

For example, the account number 02–201–5100 corresponds to the Electrical group’s (02–201) expense account for private, billable labor expense (5100).

Company Codes

Fremont Corporation has four subordinate organizations within the business group; Fremont defines company segments for each organization. The Company segment is Fremont’s balancing segment.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>01</td>
</tr>
<tr>
<td>Fremont Engineering</td>
<td>02</td>
</tr>
<tr>
<td>Fremont Construction</td>
<td>03</td>
</tr>
<tr>
<td>---------------------</td>
<td>----</td>
</tr>
<tr>
<td>Fremont Services</td>
<td>04</td>
</tr>
</tbody>
</table>
Company and Cost Center Codes

Notice that each of the lowest level organizations (groups) in Fremont Corporation’s organization hierarchy corresponds to a cost center.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Company</th>
<th>Cost Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont Corporation</td>
<td>000</td>
<td></td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td>01</td>
<td>100</td>
</tr>
<tr>
<td>Executive Office</td>
<td>01</td>
<td>101</td>
</tr>
<tr>
<td>Human Resources</td>
<td>01</td>
<td>102</td>
</tr>
<tr>
<td>Finance</td>
<td>01</td>
<td>103</td>
</tr>
<tr>
<td>Information Services</td>
<td>01</td>
<td>104</td>
</tr>
<tr>
<td><strong>Fremont Engineering</strong></td>
<td>02</td>
<td>200</td>
</tr>
<tr>
<td>Electrical</td>
<td>02</td>
<td>201</td>
</tr>
<tr>
<td>Structural</td>
<td>02</td>
<td>202</td>
</tr>
<tr>
<td>Mechanical</td>
<td>02</td>
<td>203</td>
</tr>
<tr>
<td>Environmental</td>
<td>02</td>
<td>204</td>
</tr>
<tr>
<td><strong>Fremont Construction</strong></td>
<td>03</td>
<td>300</td>
</tr>
<tr>
<td>West</td>
<td>03</td>
<td>301</td>
</tr>
<tr>
<td>Midwest</td>
<td>03</td>
<td>302</td>
</tr>
<tr>
<td>East</td>
<td>03</td>
<td>303</td>
</tr>
<tr>
<td>South</td>
<td>03</td>
<td>304</td>
</tr>
<tr>
<td>International</td>
<td>03</td>
<td>305</td>
</tr>
<tr>
<td><strong>Fremont Services</strong></td>
<td>04</td>
<td>400</td>
</tr>
<tr>
<td>Data Systems</td>
<td>04</td>
<td>401</td>
</tr>
<tr>
<td>Risk Analysis</td>
<td>04</td>
<td>402</td>
</tr>
</tbody>
</table>
**Account Codes**

Fremont Corporation uses a similar set of accounts for each company and cost center, although not every company and cost center has each kind of account. The Account segment is Fremont’s natural account.

<table>
<thead>
<tr>
<th>Account</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>Cash</td>
<td>Asset</td>
</tr>
<tr>
<td>1100</td>
<td>Accounts Receivable</td>
<td>Asset</td>
</tr>
<tr>
<td>1101</td>
<td>Unbilled Receivables</td>
<td>Asset</td>
</tr>
<tr>
<td>1200</td>
<td>Inventory</td>
<td>Asset</td>
</tr>
<tr>
<td>1500</td>
<td>Intercompany</td>
<td>Asset</td>
</tr>
<tr>
<td>1600</td>
<td>Prepayments – Employee Advances</td>
<td>Asset</td>
</tr>
<tr>
<td>2100</td>
<td>Unearned Revenue</td>
<td>Liability</td>
</tr>
<tr>
<td>2200</td>
<td>Accounts Payable, Employee</td>
<td>Liability</td>
</tr>
<tr>
<td>2300</td>
<td>Payroll Clearing</td>
<td>Liability</td>
</tr>
<tr>
<td>2400</td>
<td>Asset Usage Clearing</td>
<td>Liability</td>
</tr>
<tr>
<td>2500</td>
<td>Accounts Payable, Supplier Invoice</td>
<td>Liability</td>
</tr>
<tr>
<td>3100</td>
<td>Retained Earnings</td>
<td>Ownership</td>
</tr>
<tr>
<td>4100</td>
<td>Private Professional Fee Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>4101</td>
<td>Public Professional Fee Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>4102</td>
<td>Private Borrowed and Lent</td>
<td>Revenue</td>
</tr>
<tr>
<td>4103</td>
<td>Public Borrowed and Lent</td>
<td>Revenue</td>
</tr>
<tr>
<td>4200</td>
<td>Computer Fee Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>4201</td>
<td>Vehicle and Equipment Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>4202</td>
<td>Misc Asset Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>4210</td>
<td>Usage Borrowed and Lent</td>
<td>Revenue</td>
</tr>
<tr>
<td>4300</td>
<td>ODC Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>4400</td>
<td>Subcontractor Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>4500</td>
<td>Bonus Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>4600</td>
<td>Other Misc Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>Account</td>
<td>Description</td>
<td>Type</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>5100</td>
<td>Private, Billable Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5101</td>
<td>Public, Billable Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5102</td>
<td>Private, Non–Billable Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5103</td>
<td>Public, Non–Billable Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5150</td>
<td>Marketing Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5151</td>
<td>Government Marketing Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5152</td>
<td>Research &amp; Development Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5153</td>
<td>Administration Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5154</td>
<td>Bid an Proposal Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5170</td>
<td>Holiday Time</td>
<td>Expense</td>
</tr>
<tr>
<td>5171</td>
<td>Sick Time</td>
<td>Expense</td>
</tr>
<tr>
<td>5172</td>
<td>Vacation Time</td>
<td>Expense</td>
</tr>
<tr>
<td>5173</td>
<td>Overtime Labor Cost</td>
<td>Expense</td>
</tr>
<tr>
<td>5199</td>
<td>Transfer Out to Inventory</td>
<td>Expense</td>
</tr>
<tr>
<td>5200</td>
<td>Travel &amp; Lodging Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5201</td>
<td>Meals Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5202</td>
<td>Miscellaneous Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5400</td>
<td>Computer Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5401</td>
<td>Vehicle and Equipment Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5402</td>
<td>Other Asset Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5500</td>
<td>Write–Offs</td>
<td>Expense</td>
</tr>
<tr>
<td>5600</td>
<td>Construction Subcontracting Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5610</td>
<td>Consulting Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5620</td>
<td>Miscellaneous Subcontract Expense</td>
<td>Expense</td>
</tr>
<tr>
<td>5630</td>
<td>Supplies</td>
<td>Expense</td>
</tr>
</tbody>
</table>
Employees and Organizations

Oracle Projects shares organization, job, and employee information with Oracle Human Resources. If your business does not currently use Oracle Human Resources, you define this data using the Oracle Human Resources windows provided with Oracle Projects. If you install Oracle Human Resources, you must define this data using an Oracle Human Resources login responsibility; you cannot use the windows provided with Oracle Projects.

Your implementation of Oracle Human Resources to work with Oracle Projects involves the following areas:

- Defining organizations and an organization hierarchy
- Defining jobs
- Entering employee information

If you have already implemented Oracle Human Resources, you can skip many of the steps included in this section. Ensure that the jobs and organizations you defined in Oracle Human Resources correspond to the data you want to use with Oracle Projects.
Organizations Overview

Organizations are departments, sections, divisions, companies, or other organizational units in your business. For example, Fremont Corporation organizations include the following hierarchy of divisions and groups:

- Administration division
  - Human Resources and Information Services groups
- Fremont Construction division
  - International group

If you work with contractors or other companies outside your business, you can define them as organizations that you denote as “external.” For example, you might define an organization as external to record a work site address at which employees are stationed for extended periods of time.

See Also

Organizations in Oracle Projects: page 15 – 5

Representing Organizations  Oracle Human Resources User’s Guide

Creating an Organization  Oracle Human Resources User’s Guide

Organization Classifications

To control how an organization is used in Oracle Projects, you enable one or more of the following Organization Classifications:

- **Project/Task Owning Organization.** Project/Task Owning Organizations are organizations that can own projects and/or tasks in the operating unit.

- **Project Expenditure/Event Organization.** Expenditure/Event Organizations are organizations that can own project events (labor and non-labor) and can incur expenditures for projects in the processing operating unit.

- **Project Invoice Collection Organization.** If your business decentralizes its invoice collection within an operating unit, you
must enable the Project Invoice Collection Organizations classification for each organization in which you want to process invoices.

For more information about the organization classifications used in Oracle Projects, see: Organizations in Oracle Projects: page 15 – 5.

Locations

You can define an unlimited number of locations using the Location window. Location names appear in a list of values in any field where you enter a location such as the Organization and Enter Person windows.

Although the Location window allows you to enter detailed information about a location, Oracle Projects requires only that you provide information in the Name field for each location.

You define a location for each address your business uses. Give each location a short name and then assign it to an individual organization or to an employee. A location is easier to type than a full address, especially if many employees or organizations use it. If several organizations are located at the same address, you assign the corresponding location to each organization.

For example, if WHQ is the location for World Headquarters and West is the location for a West coast office, you assign all organizations at World Headquarters the location WHQ, and all organizations at the West coast office the location West.

You can use locations for reporting purposes. For example, you might assign one location to your corporate headquarters and another location to your large branch office on the East coast. Both of these organizations may include several subordinate organizations. You can create custom reports using these locations, such as one that breaks down the total revenue by the location of a project–owning organization.

See Also

Organizations: page 16 – 34

Employees: page 16 – 50
SiteLocationsOracleHumanResourcesUser’sGuide

<table>
<thead>
<tr>
<th>Name</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Corporate Headquarters</td>
</tr>
<tr>
<td>City</td>
<td>Bay Grove</td>
</tr>
<tr>
<td>State</td>
<td>CA</td>
</tr>
<tr>
<td>Country</td>
<td>United States</td>
</tr>
</tbody>
</table>

Fremont’s implementation team defines a location for the East coast field office of the Fremont Construction business unit.

<table>
<thead>
<tr>
<th>Name</th>
<th>East</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Construction – East coast field office</td>
</tr>
<tr>
<td>City</td>
<td>Boston</td>
</tr>
<tr>
<td>State</td>
<td>MA</td>
</tr>
<tr>
<td>Country</td>
<td>United States</td>
</tr>
</tbody>
</table>

Fremont’s implementation team also defines a location for the International field office of the Fremont Construction business unit.

<table>
<thead>
<tr>
<th>Name</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Construction – International field office</td>
</tr>
<tr>
<td>City</td>
<td>Marseilles</td>
</tr>
<tr>
<td>State</td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>France</td>
</tr>
</tbody>
</table>

Organizations

After you identify your business group, you need to specify all the organizations within the business group. These organizations may be divisions, groups, or other organizational units, as well as organizations representing your external contractors.

Oracle Projects uses organizations for the following business purposes:

- Project/task managing organizations
- Employee assignments
- Expenditure entry
- Non-Labor resource ownership
- Budgeting
- Defining Resources for Project Status Reporting
- Burden cost processing
- Invoice and collections processing
- Reporting

You use the Organization window to specify all the organizations within your business group. Organizations you define here appear in lists of values in the Organization Name fields throughout Oracle Projects.

⚠️ **Attention:** When you define organizations, you need to assign Organization Classifications to each organization that you want to use in Oracle Projects. Oracle Projects recognizes only those organizations with a classification of HR Organization. See: Organization Classifications: page 16 – 34.

**See Also**

Creating an Organization *Oracle Human Resources User’s Guide*

Fremont Corporation consists of four divisions (Administration, Fremont Engineering, Fremont Construction, and Fremont Services), each of which includes several groups. Fremont’s implementation team enters the following information to define its organizations. All the organizations are internal.

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization Classification(s)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project Invoice Collection</td>
<td></td>
</tr>
<tr>
<td>Data Systems</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>East</td>
<td>Project/Expenditure/Event</td>
<td>East</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Project/Expenditure/Event</td>
<td>Project/Task Owning</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Environmental</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Executive Office</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Fremont Construction</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project Invoice Collection</td>
<td></td>
</tr>
<tr>
<td>Fremont Engineering</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project Invoice Collection</td>
<td></td>
</tr>
<tr>
<td>Fremont Services</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project Invoice Collection</td>
<td></td>
</tr>
<tr>
<td>Human Resources</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Information Services</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>International</td>
<td>Project/Expenditure/Event</td>
<td>International</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Mechanical</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Risk Analysis</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>Structural</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>Project/Expenditure/Event</td>
<td>HQ</td>
</tr>
<tr>
<td></td>
<td>Project/Task Owning</td>
<td></td>
</tr>
</tbody>
</table>
Organization Hierarchy

An organization hierarchy illustrates the relationships between your organizations. When you define a hierarchy, you tell Oracle Projects which organizations are subordinate to which other organizations. The topmost organization of an organization hierarchy is generally the business group.

You use the Organization Hierarchy window to specify your organization hierarchy. The organization hierarchy you define here appears in a list of values in the Implementation Options window.

You can create as many organization hierarchies as you need for different reporting and processing needs, and you can create multiple versions of an organization hierarchy. Oracle Projects uses the hierarchy version to determine which organizations are used for reporting and processing.

You specify a start organization to indicate which branch of your organization hierarchy you want Oracle Projects to recognize as the top of your hierarchy for a particular purpose. If you want to use your entire organization hierarchy, your top organization (generally the business group) is the start organization.

The following organization hierarchy versions are assigned in Oracle Projects:

- A Default Reporting Organization Hierarchy Version is assigned to each operating unit. See: Default Reporting Organization Hierarchy: page 16 – 58.
- A Project Burdening Hierarchy Version is assigned to each business group. See: Specifying a Project Burdening Hierarchy: page 16 – 43.

If you currently use Oracle Human Resources, you can use existing hierarchies for Oracle Projects or create new hierarchies. If you do not currently use Oracle Human Resources, you must specify at least one hierarchy for Oracle Projects. You can change these organization hierarchy versions at any time. The exception to this is the Project Burdening Hierarchy. See: Specifying a Project Burdening Hierarchy: page 16 – 43.
See Also

Organization Hierarchies  *Oracle Human Resources User’s Guide*
Fremont Corporation’s organization hierarchy contains four organizations directly subordinate to its business group. Those organizations in turn have several subordinate organizations of their own:

Fremont Corporation uses the following information to define its default reporting organization hierarchy:

**Default Reporting Organization Hierarchy**

<table>
<thead>
<tr>
<th>Name</th>
<th>Oracle Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>1</td>
</tr>
<tr>
<td>Number</td>
<td>1</td>
</tr>
</tbody>
</table>

Fremont Corporation defines subordinate organizations as displayed in the graphic above.
Business Groups

A business group is the highest level of organization and the largest grouping of employees across which you may report.

Oracle Human Resources includes a predefined organization named *Setup Business Group*. We recommend that you modify the definition of this predefined business group rather than defining a new one. If you define a new business group instead of modifying the predefined *Setup Business Group*, you need to set the *HR: Security Profile* profile option to point the security profile for the new business group. Oracle Human Resources automatically creates a security profile with the business group name when you define a new business group. Oracle Human Resources incorporates all other organizations you specify into the business group you define. See: Setting Up Security in Oracle HRMS (*Oracle Human Resources User’s Guide*).

You use the Organization window to retrieve the predefined *Setup Business Group* and change its name to the name of your business group to create your business group. The business group you define here appears in the list of values when you set up the *HR: Security Profile* profile option.

A business group is a special classification of an organization, so you also need to specify its organization type, location, and whether it is an internal or external organization. It is also essential to select the correct legislation code for a business group for correct functioning of Oracle Human Resources. You cannot change the legislation code after entering employees in a business group. See also: Entering Business Group Information (*Oracle Human Resources User’s Guide*).

**Attention:** Employees, organizations, and other entities are partitioned by business group. If you set up more than one business group, your data will be partitioned accordingly. In addition, classifying an organization as a business group is not reversible. Be sure to plan your business group setup carefully. For more information, refer to the *Oracle Human Resources User’s Guide*.

You must also specify required business group information. Note that even though you must fill in a value for every segment in the Business Group Flexfield, Oracle Projects uses only the following information:

- Short name
- Employee Number Generation
- Job Flexfield Structure
- Project Burdening Organization Hierarchy

You must define the Organization Hierarchy before you associate it with a Business Group (see: Organization Hierarchy: page 16 – 39).

Oracle Human Resources links the predefined Job Flexfield structure to your business group.

**Specifying a Project Burdening Hierarchy**

**Prerequisites**


**To specify project burdening hierarchies:**

1. Select an Oracle Projects responsibility with access to the Organization window associated with the Business Group for which you are entering Legal Entities and Operating Units.

   **Note:** Perform these steps in the corresponding Oracle Human Resources windows if you have installed that application.

2. Navigate to the Organizations window (Setup > Human Resources > Organizations > Define).

3. Define an organization or query organizations that you defined as a business group. You must define the hierarchy before you designate it as the project burdening hierarchy.

   **Note:** Depending on your enterprise organization structure and business process, it is possible for the Project Burdening Hierarchy Version to be different from the Project/Task Organization Hierarchy Version, Expenditure/Event Organization Hierarchy Version, or Default Project Reporting Organization Hierarchy Version the you defined for any operating units associated with the business group. The Cost Distribution processes will not burden expenditures for expenditure organizations that are not in the Project Burdening Hierarchy.
If you add a new organization to the Project Burdening Hierarchy Version, you must

- add new burden multipliers for that organization in the appropriate burden schedules, or
- use the multipliers inherited from the parent organization as the burden multipliers for the organization

If you want to add burden multipliers to a particular schedule version for the organization, you need to compile the affected schedule version.

If you use the parent organization multipliers, you must submit the PRC: Add New Organization Burden Compiled Multipliers process. This process adds multipliers for this organization to all burden schedules versions for which you did not explicitly add multipliers.

If you do not run this process, you will encounter a rejection reason of ‘Cannot find compiled multiplier’ for transactions charged to this organization.

See Also

Organizations: page 16 – 34

Fremont Corporation does not use Oracle Human Resources.

Fremont’s implementation team queries up the predefined Setup Business Group and enters the following information to define its business group:

**Organization**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Internal or External</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont Corporation</td>
<td>Company</td>
<td>Internal</td>
<td>HQ</td>
</tr>
</tbody>
</table>

**Organization Classifications**

*Business Group*

*HR Organization*
Fremont Corporation uses the following business group information, which is predefined with the Setup Business Group. Fremont needs to change only the Short Name and the Employee Number Generation field information.

To enter Business Group information, choose Business Group in the Organization Classifications zone, then choose Business Group Information in the Additional Organization zone.

**Business Group Information**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Name</td>
<td>Fremont</td>
</tr>
<tr>
<td>Employee Number Generation</td>
<td>Manual</td>
</tr>
<tr>
<td>Applicant Number Generation</td>
<td>Automatic</td>
</tr>
<tr>
<td>Grade Flexfield Structure</td>
<td>Grade Flexfield</td>
</tr>
<tr>
<td>Group Flexfield Structure</td>
<td>People Group Flexfield</td>
</tr>
<tr>
<td>Job Flexfield Structure</td>
<td>Job Flexfield</td>
</tr>
<tr>
<td>Costing Flexfield Structure</td>
<td>Costing Allocation Flexfield</td>
</tr>
<tr>
<td>Position Flexfield Structure</td>
<td>Position Flexfield</td>
</tr>
<tr>
<td>Legislation Code</td>
<td>United States</td>
</tr>
<tr>
<td>Currency</td>
<td>USD</td>
</tr>
</tbody>
</table>

**Project Burdening Hierarchy**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Hierarchy</td>
<td>Oracle Projects</td>
</tr>
<tr>
<td>Hierarchy Version</td>
<td>1</td>
</tr>
</tbody>
</table>
Jobs

You use the Job window to define jobs. You should consider how you want to use jobs in Oracle Projects before you define your Job Flexfield. Oracle Projects allows you to budget and bill based on jobs. You can also include job titles on your invoices.

To define jobs, you must complete the following steps:

• Define job flexfield value sets
• Define job flexfield segments
• Define job flexfield segment values
• Define job titles

See Also

Defining Jobs  *Oracle Human Resources User’s Guide*
Representing Jobs and Positions  *Oracle Human Resources User’s Guide*

Job Flexfield Value Sets

The implementation team defined one value set for each segment. The value set uses mixed character segments 15 characters long using a validation type of *Independent*.

| Fremont Corporation’s implementation team defines a value set named *Job Level* for the Job Flexfield level segment: |
|---|---|
| **Name** | Job Level |
| **Format Type** | Char |
| **Maximum Size** | 15 |
| **Alphabetic Characters** | Yes |
| **Uppercase Only** | No |
| **Validation Type** | Independent |

| Fremont Corporation’s implementation team defines a value set named *Job Discipline* for the Job Flexfield discipline segment: |
|---|---|
| **Name** | Job Discipline |
| **Format Type** | Char |
| **Maximum Size** | 15 |
Alphabetic Characters: Yes
Uppercase Only: No
Validation Type: Independent

Job Flexfield Segments

Now you are ready to define the Job Flexfield’s segments using the Key Flexfield Segments window.

You must use the Job Flexfield structure that you specified for your business group. Fremont used the default Job Flexfield structure for their business group.

You must use the columns SEGMENT1 and SEGMENT2 to properly report Job Level and Job Discipline segments in implementation reports and invoice formats. If you do not use these two columns, these values will be blank in reports and invoice formats; however, the job will be displayed correctly regardless of which segments you use. The level segment specifies the rank of a job, such as staff, senior, principal, and so on. The discipline segment specifies the job’s vocation, such as engineer, clerk, developer, and so on. For example, the Job Flexfield Senior Consultant tells you that holders of this job have a senior rank and do consulting work. However, you do not have to use two segments for your Job Flexfield, or the two recommended segments.

See Also

Defining Key Flexfields (Oracle Applications Flexfields User’s Guide)

Job Flexfield Segment Values

You need to specify valid values for the Job Flexfield segments. You use the Key Segment Values window to enter as many different values as you want. These values appear in a list of values in the Job window.

See Also

Defining Key Flexfield Segment Values Oracle Applications Flexfields User’s Guide
Fremont Corporation plans a job flexfield with two segments: Job Level and Job Discipline. These are held in SEGMENT1 and SEGMENT2 columns. Fremont Corporation uses three levels of seniority. The implementation team defines values for the job level segment:

<table>
<thead>
<tr>
<th>Level</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>Staff</td>
<td></td>
</tr>
</tbody>
</table>

Fremont Corporation employees work in one of four disciplines:

<table>
<thead>
<tr>
<th>Discipline</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clerk</td>
<td></td>
</tr>
<tr>
<td>Consultant</td>
<td></td>
</tr>
<tr>
<td>Draftsman</td>
<td></td>
</tr>
<tr>
<td>Engineer</td>
<td></td>
</tr>
</tbody>
</table>

**Job Titles**

When you finish defining your Job Flexfield, you use it to define individual job titles by combining different level and discipline segment values. For example, you can combine segment values to define job titles such as *Senior Engineer*, *Staff Scientist*, and so on.

You use the Job window to enter valid combinations of the two Job Flexfield segments and to provide effective dates.

**See Also**

Defining Jobs  *Oracle Human Resources User’s Guide*

Fremont Corporation has three levels each of Engineer and Consultant to recognize the greater expertise its employees gain over time. Fremont also has Staff Clerk and Staff Draftsman titles.

Fremont’s implementation team specifies the following active job titles based on the Job Flexfield segment values:

<table>
<thead>
<tr>
<th>Level</th>
<th>Discipline</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior</td>
<td>Engineer</td>
<td>Senior.Engineer</td>
</tr>
<tr>
<td>Staff</td>
<td>Engineer</td>
<td>Staff.Engineer</td>
</tr>
<tr>
<td>Principal</td>
<td>Engineer</td>
<td>Principal.Engineer</td>
</tr>
<tr>
<td>Type</td>
<td>Position</td>
<td>Department</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Staff</td>
<td>Clerk</td>
<td>Staff.Clerk</td>
</tr>
<tr>
<td>Staff</td>
<td>Draftsman</td>
<td>Staff.Draftsman</td>
</tr>
<tr>
<td>Senior</td>
<td>Consultant</td>
<td>Senior.Consultant</td>
</tr>
<tr>
<td>Staff</td>
<td>Consultant</td>
<td>Staff.Consultant</td>
</tr>
<tr>
<td>Principal</td>
<td>Consultant</td>
<td>Principal.Consultant</td>
</tr>
</tbody>
</table>
Employees and Employee Assignments

Use the Enter Person window to enter employee information. Oracle Projects requires the following information for employees:

- last name
- first name
- employee number
- start date
- organization
- job
- supervisor (for online expenditure approval)
- billing title
- expense address flag (home or office) for interfacing expense reports to Oracle Payables

**Attention:** If you have Oracle Human Resources installed, you cannot use Oracle Projects to define employee information. Use an Oracle Human Resources responsibility to define employees.

Use API to Load Employee Information

As an alternative to entering employee information manually, you can use an Application Programming Interface (API) to load employee data if you have fully installed Oracle Human Resources. The Oracle Human Resource Management Systems (HRMS) provides documentation on APIs for creating employee records in HRMS. Use the create_gb_employee API to create a UK employee, create_us_employee to create a US employee, and create_employee to create an employee for any other legislation.

For more information on these APIs, see APIs in This Release (*Oracle Human Resources User’s Guide*). For technical information about using the HRMS APIs, see: Technical Essays (*Oracle Human Resources Implementation Guide*).

See Also

Integrating with Oracle Human Resources: page 12 – 72
Fremont Corporation’s Human Resources department enters the following information for three employees.

Donald Gray:

**Employee:**
- **Last Name:** Gray
- **First Name:** Donald
- **Number:** 1000
- **Expense Address:** Office

**Assignment:**
- **Location:** HQ
- **Organization:** Risk Analysis
- **Job:** Principal Engineer
- **Employee Billing Title:** Engineer

James Robinson:

**Employee:**
- **Last Name:** Robinson
- **First Name:** James
- **Number:** 1001
- **Expense Address:** Office

**Assignment:**
- **Location:** HQ
- **Supervisor:** Gray, Donald
- **Organization:** Environmental
- **Job:** Senior Engineer
- **Employee Billing Title:** Geologist

Amy Marlin:
<table>
<thead>
<tr>
<th><strong>Employee:</strong></th>
<th><strong>Last Name</strong></th>
<th>Marlin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name</strong></td>
<td>Amy</td>
<td></td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>1002</td>
<td></td>
</tr>
<tr>
<td><strong>Expense Address</strong></td>
<td>Office</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Assignment:</strong></th>
<th><strong>Location</strong></th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supervisor</strong></td>
<td>Gray, Donald</td>
<td></td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>Data Systems</td>
<td></td>
</tr>
<tr>
<td><strong>Job</strong></td>
<td>Senior.Consultant</td>
<td></td>
</tr>
<tr>
<td><strong>Employee Billing Title</strong></td>
<td>Systems Analyst</td>
<td></td>
</tr>
</tbody>
</table>
Customers

You define customers in either the Customers or Customer Summary window. Customers can be defined either in Oracle Receivables or in Oracle Projects. See: Entering Customers (Oracle Receivables User’s Guide).

**Note:** You must define the option for customer numbering when you implement Oracle Projects, whether or not you have also installed Oracle Receivables. If you have both Oracle Projects and Oracle Receivables installed, you enter the Oracle Receivables system options related to customers in Oracle Projects’ System Options window.

In Oracle Projects, you use customers, customer addresses, and customer contacts to specify customers for which you are doing project work. Each Customer must have one primary bill–to address, one primary ship–to address, and one primary bill–to contact. The primary bill–to contact must be entered in the Primary Bill–To Contacts Role window and in the Business Purpose Details window.

**Note:** In a multiple organization environment, customers are shared across operating units. However, you must define customer addresses for each operating unit. If multiple operating units are doing project work with the same customer, each operating unit must have an address defined for the customer.

Fremont Corporation’s accounting department needs to add three customers to their customer database. Fremont uses the Quick Customer Entry form to define customers. Since each customer has only one address, the addresses are set up as the primary bill–to and ship–to sites. Each bill–to contact is identified as the primary bill–to contact since there is only one contact for each customer.

The City of San Francisco is a Fremont Corporation customer:

<table>
<thead>
<tr>
<th>Customer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>City of San Francisco</td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>1000</td>
</tr>
</tbody>
</table>
| **Address** | City Hall  
San Francisco, CA 94112, US |
| **Address** | City Hall  
San Francisco, CA 94112, US |
| **Bill** | Yes |
| **Ship** | Yes |
The Port of Oakland is another Fremont Corporation customer:

<table>
<thead>
<tr>
<th>Customer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>Port of Oakland</td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>1001</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Active</td>
</tr>
<tr>
<td><strong>Category</strong></td>
<td>Customer</td>
</tr>
<tr>
<td><strong>Profile Class</strong></td>
<td>DEFAULT</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>External</td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>10 E. Seaside</td>
</tr>
<tr>
<td></td>
<td>Oakland, CA 94130, US</td>
</tr>
<tr>
<td><strong>Bill</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Ship</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

Another Fremont Corporation customer is The Bay Group. The Bay Group has different bill to and ship to addresses:

<table>
<thead>
<tr>
<th>Customer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>The Bay Group</td>
</tr>
<tr>
<td><strong>Number</strong></td>
<td>1004</td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>120 Spear Street</td>
</tr>
<tr>
<td></td>
<td>San Francisco, CA 94120, US</td>
</tr>
<tr>
<td><strong>Bill</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Ship</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Market</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Contact</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Last Name</strong></td>
<td>Winston</td>
</tr>
<tr>
<td><strong>First</strong></td>
<td>Ed</td>
</tr>
<tr>
<td><strong>Title</strong></td>
<td>Mr.</td>
</tr>
<tr>
<td><strong>Job Title</strong></td>
<td>AP Supervisor</td>
</tr>
<tr>
<td><strong>Bill</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Ship</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Contact</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Last Name</strong></td>
<td>Davies</td>
</tr>
<tr>
<td><strong>First</strong></td>
<td>J</td>
</tr>
<tr>
<td><strong>Title</strong></td>
<td>Mr.</td>
</tr>
<tr>
<td><strong>Job Title</strong></td>
<td>AP Supervisor</td>
</tr>
<tr>
<td><strong>Bill</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Ship</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>Hunters Point</td>
</tr>
<tr>
<td></td>
<td>South San Francisco, CA 94168, US</td>
</tr>
<tr>
<td><strong>Bill</strong></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td><strong>Ship</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Market</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>
Implementation Options

After you implement other Oracle Applications to work with Oracle Projects, you can define Oracle Projects options in the Implementation Options window. The Implementation Options tell Oracle Projects how to interface data with other Oracle Applications.

Note: In a multiple organization environment, each operating unit has its own implementation options. Oracle Projects implementation options determine how data is interfaced with other Oracle Applications and control cross-charging capability across operating units. Expenditures can be charged to a project in a different operating unit from the expenditure operating unit, as long as the two operating units are associated with the same GL set of books, HR business group, and PA period type, and the profile option PA: Allow Cross-Charging in Multi-Org is set to Yes for that responsibility.

Prerequisites:


The Oracle Projects implementation options include the following groups of options:

- System Implementation Options: page 16 – 56
- Project Setup Implementation Options: page 16 – 59
- Costing Implementation Options: page 16 – 60
- Billing Implementation Options: page 16 – 62

System Implementation Options

Set of Books

If you are implementing Oracle Projects for a single organization, then you must specify a set of books to tell Oracle Projects which set of general ledger books to use. Oracle General Ledger, Oracle Receivables,
Oracle Payables, Oracle Purchasing, and Oracle Assets must also use this set of books. Specify the set of books you defined when you implemented Oracle General Ledger for Oracle Projects.

If your implementation of Oracle Projects is for multiple organizations, Set of Books is a display-only field. Its value defaults from the Legal Entity for the operating unit.

<table>
<thead>
<tr>
<th>Fremont Corporation uses only one set of books. (To review a complete description of Fremont Corporation’s set of books see: Fremont Corporation Set of Books: page 16 – 27.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Set of Books</strong></td>
</tr>
</tbody>
</table>

**Business Group**

Business Group is a display-only field. The value in this field defaults from the business group assigned to the responsibility using the HR: Security Profile profile option. See: Profile Options in Oracle Projects: page B – 2.

<table>
<thead>
<tr>
<th>Fremont Corporation specifies the <em>Fremont Corporation</em> business group in Oracle Projects.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Group</strong></td>
</tr>
</tbody>
</table>

**Summarization Period Type**

Specify a summarization period type, which is used when updating project summary amounts.

Oracle Projects maintains summary amounts as follows:

- Period–to–Date Amounts (PTD)
- Prior Period Amounts (PP)
- Year–to–Date Amounts (YTD)
- Project or Inception–to–Date Amounts (ITD)

You specify whether to maintain the summary period–to–date values (Period–to–Date and Prior Period) by PA Period or GL Period.

<table>
<thead>
<tr>
<th>Fremont Corporation summarizes amounts by PA Period.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summarization Period Type</strong>: PA Period</td>
</tr>
</tbody>
</table>
See Also

Updating Project Summary Amounts: page 8 – 15

Update Project Summary Amounts Process: page 10 – 52

**PA Period Type**

Specify a Period Type, which is used to copy Project Accounting Periods from the calendar associated with the GL Set of Books. If you copy PA Periods from GL, Oracle Projects copies all of the periods of this Period Type to set up the PA Periods.

In a multiple organization environment, the PA Period Type is specified for each operating unit.

**Default Reporting Organization Hierarchy:**

You specify an organization hierarchy and version to indicate which organization hierarchy of a Business Group you want Oracle Projects to use as the default reporting organization hierarchy. For more information on how Oracle Projects uses organizations, see: Organizations in Oracle Projects: page 15 – 5.

You specify a start organization to indicate which branch of your organization hierarchy you want Oracle Projects to recognize as the top of your hierarchy for reporting purposes. If you want to use your entire organization hierarchy, your top organization (generally the business group) is the start organization.

For example, if you define your organization hierarchy with four divisions under the top organization, you can specify one division as the start organization. Oracle Projects consequently recognizes only that division and its subordinate organizations as its default reporting hierarchy.

Fremont Corporation’s implementation team specifies the *Oracle Projects* organization hierarchy as the Default Reporting Organization.

Fremont Corporation is the start organization since Fremont uses Oracle Projects on a corporate–wide basis. In this case, Fremont Corporation is also the top organization and the business group.

**Default Reporting Organization Hierarchy**  Oracle Projects
Project Setup Implementation Options

**Project Numbering**

You specify whether you want Oracle Projects to number projects automatically, or whether you plan to enter project numbers manually.

If you want Oracle Projects to number each project automatically upon creation, then specify a starting project number. Automatic project numbers are numeric; they do not contain letters or special characters and are sequentially numbered.

If you want to choose your own project numbers, or if want your project numbers to include both alphabetic and numeric characters, choose the manual project numbering method. Manual project numbers can be either alphanumeric or numeric.

*Note: Project templates are always numbered manually. The Project Numbering implementation option does not affect how project templates are numbered.*

Fremont Corporation prefers alphanumeric, manually entered project numbers.

<table>
<thead>
<tr>
<th>Project Numbering Method</th>
<th>Manual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Number Type</td>
<td>Alphanumeric</td>
</tr>
</tbody>
</table>

If you already have alphanumeric project numbers, you can either continue entering alphanumeric project numbers manually, or you can switch from manual to automatic numbering. If you choose the latter, keep in mind that while your alphanumeric project numbers will always exist in their current form, Oracle Projects automatically generates all future project numbers using numbers only.

*Note: In a multiple organization installation of Oracle Projects, project numbers (including project template numbers) are unique across operating units. When automatic project numbering is used, if a value is entered for next project number, the same number will be shown for all operating units that also use the automatic project numbering method.*
Project/Task Owning Organization Hierarchy

You assign a project/task owning organization hierarchy to the operating unit to control which organizations can own projects and tasks. To own projects and/or tasks in the operating unit, an organization must have all of the following characteristics:

- The organization must belong to the project/task organization hierarchy assigned to the operating unit.
- The organization must have the project/task owning organization classification enabled.
- The project type class must be permitted to use the organization to create projects. This permission is determined when you define the organization.
- The organization must be active as of the system date.

Fremont Corporation’s implementation team specifies the Oracle Projects organization hierarchy as the Project/Task Owning Organization.

Fremont Corporation is the start organization for organizations owning projects and tasks.

<table>
<thead>
<tr>
<th>Project/Task Owning Organization Hierarchy</th>
<th>Oracle Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version Number</td>
<td>1</td>
</tr>
<tr>
<td>Start Organization</td>
<td>Fremont Corporation</td>
</tr>
</tbody>
</table>

Costing Implementation Options

Expenditure Cycle Start Day

You specify an Expenditure Cycle Start Day to indicate the day your seven-day expenditure week begins. If you specify Monday as the expenditure cycle start day, the week ending date on all expenditures, including timecards and expense reports, is the following Sunday. You can choose any day of the week as your expenditure cycle start day.

Fremont Corporation’s expenditure week begins on a Monday. That is, each timecard begins on a Monday and ends on a Sunday.

<table>
<thead>
<tr>
<th>Expenditure Cycle Start Day</th>
<th>Monday</th>
</tr>
</thead>
</table>
Enable Overtime Calculations

You specify whether you want to use the Overtime Calculation program to calculate and charge overtime hours automatically.

You may need to customize the Overtime Calculation program if your business wants to use automatic overtime calculation.

See Also

Overtime in Oracle Projects: page 17 – 2

<table>
<thead>
<tr>
<th>Enable Overtime Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont Corporation uses automatic overtime calculation.</td>
</tr>
</tbody>
</table>

Interface Cost to GL

If you want to interface costs with Oracle General Ledger, you need to enable the system options for labor and usage costs interface. If you set these fields to disabled, Oracle Projects does not interface cost transactions to Oracle General Ledger.

<table>
<thead>
<tr>
<th>Interface Labor Costs</th>
<th>Interface Usage Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont Corporation wants to interface costs with Oracle General Ledger.</td>
<td>Enabled</td>
</tr>
</tbody>
</table>

See Also

Integrating with Oracle General Ledger: page 12 – 9

Expenditure/Event Organization Hierarchy

You assign an expenditure/event organization hierarchy to the operating unit to control which organizations have the following capabilities:

- incur expenditures
• own project events
• be assigned to a resource list as a resource

To incur expenditures, own events, or be assigned to a resource list, an organization must have the following characteristics:

• The organization must be in the expenditure/event organization hierarchy assigned to the operating unit.
• The organization must have the project expenditure/event organization classification enabled.
• The organization must be active as of the system date.

Fremont Corporation’s implementation team specifies the Oracle Projects organization hierarchy as the Expenditure/Event Organization.

Administration is the start organization for organizations owning projects and tasks.

<table>
<thead>
<tr>
<th>Expenditure/Event Organization Hierarchy</th>
<th>Oracle Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version Number</td>
<td>1</td>
</tr>
<tr>
<td>Start Organization</td>
<td>Fremont Corporation</td>
</tr>
</tbody>
</table>

**Billing Implementation Options**

**Interface Revenue to GL**

Oracle Projects predefines journal entry sources and categories to identify the source for Oracle Projects revenue transactions in Oracle General Ledger.

If you want to interface revenue with Oracle General Ledger, you need to enable the system option for revenue interface. If you disable the option, Oracle Projects does not interface revenue transactions to Oracle General Ledger.

Fremont Corporation wants to interface revenue with Oracle General Ledger.

**Interface Revenue to GL**   Enabled
Invoice Numbering

Invoice Numbering Method
You specify whether you want Oracle Projects to number invoices automatically, or whether you plan to enter invoice numbers manually.

Invoice Numbering Type
Like manual project numbers, manual invoice numbers may be either alphanumeric or numeric. If you select Manual invoice numbering, you indicate whether you will use alphanumeric or numeric invoice numbers. If you select Automatic invoice numbering, Oracle Projects uses numeric numbering.

Next Number
If you want Oracle Projects to automatically number each invoice, you specify a starting invoice number.

Note: In a multiple organization installation, invoice numbers are unique within an operating unit, not across operating units (unlike project numbers). If automatic invoice numbering method is selected, the next invoice number is operating unit-specific.

<table>
<thead>
<tr>
<th>Fremont Corporation uses alphanumeric invoice numbers.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Invoice Numbering Method</strong></td>
</tr>
<tr>
<td><strong>Invoice Number Type</strong></td>
</tr>
</tbody>
</table>

Centralized Invoice Processing
You specify whether you want invoice processing to be centralized, or if you want Oracle Projects to process your invoices at the project invoice collection organization level.

By default, the Centralized Invoice Processing check box is enabled.

If you want all of the project invoices for the operating unit to be processed using the Oracle Projects seeded transaction types, leave the check box enabled.
With decentralized invoicing, you allow organizations to process their own invoice collections. See: Implementing Decentralized Invoice Processing: page 17 – 55

In the Fremont Corporation, each division has its own cost center, Fremont reports receivables at its Division level.

Centralized Invoice Processing

See Also

Defining Transaction Types for Invoice Processing: page 17 – 55

Invoice Batch Source

You need to specify an invoice batch source in Oracle Projects before you can interface invoices to Oracle Receivables.

Oracle Projects provides a predefined batch source name PROJECTS INVOICES; you must select this batch.

Fremont Corporation’s implementation team specifies the PROJECTS INVOICES invoice batch source.

See Also

Integrating with Oracle Receivables: page 12 – 54
PA Periods

Project accounting periods (PA periods) track Oracle Projects data on a periodic basis. Your PA periods may be more frequent than your GL accounting periods. You can use PA periods for budgeting and for accounting for cost and revenue. You set a current PA reporting period for Oracle Projects to summarize project amounts and to track project status. See: Setting the PA Reporting Period: page 16 – 69.

PA Periods and GL Periods Compared

If you want to report project information more frequently than your GL periods allow, you can define PA periods that are shorter than your GL periods. For example, you can define weekly PA periods and monthly GL periods. You can also create PA periods that match existing Oracle General Ledger accounting periods (GL periods). However, defining PA periods that overlap your GL periods can create the need for numerous adjustments and journal entries if you wish to reconcile Oracle Projects with your General Ledger.

Figure 16 – 2
PA Periods vs. GL Periods

For example, in the situation illustrated above, the second weekly PA period, P11–01–96, includes the ending date of a GL period. Based on the PA period ending date (11/03), transactions falling into PA Period P11–01–96 would post to the GL period ending November 30. Some of the transactions may actually have occurred in October; so these items would be inaccurately accounted for in GL.
In addition, there would be no easy way to reconcile Oracle Projects with GL, because at the October GL closing, Oracle Projects would be mid-period. Adjustments would be necessary to reconcile the two systems.

Alternatively, you can split PA periods that would otherwise overlap the end of a GL period into partial weeks. In the example above, period P11–01–96 has been split into two periods, one beginning 10/28 and ending 10/31 (P10–05–96), and the other beginning 11/01 and ending 11/03. However, this method is very vulnerable to error, since every user entering and processing transactions (including time sheets) during a split week must enter and process transactions in the correct partial-week period.

The recommended way to resolve this conflict is to use 5–4–4 GL periods to match weekly PA periods, or some other matching scheme if PA periods are other than weekly. At calendar year-end, GL journal entries must be made in any case, to compensate for overlapping periods.

**PA Period Effective Dates**

You assign effective dates to each PA period. The effective dates signal the beginning and end of the PA period.

*Note:* After a transaction is posted to a PA period from any operating unit, the Oracle General Ledger Accounting Calendar window will not allow changes to the period date range.
PA Period Open/Closed Status

You specify a status for each PA period. The status must be one of the following:

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
<th>Entry Allowed</th>
<th>Interface Transactions</th>
<th>Reopen Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Opened</td>
<td>New periods that are in the future, and in which you do not want to allow entry.</td>
<td>NO</td>
<td>NO</td>
<td>n/a</td>
</tr>
<tr>
<td>Future</td>
<td>Future periods in which you allow entry but not interfacing transactions.</td>
<td>YES</td>
<td>NO</td>
<td>n/a</td>
</tr>
<tr>
<td>Open</td>
<td>Current periods.</td>
<td>YES</td>
<td>YES</td>
<td>n/a</td>
</tr>
<tr>
<td>Pending Close</td>
<td>Use for correcting unprocessed items. You can set a period to this status without checking for unprocessed items.</td>
<td>NO</td>
<td>YES</td>
<td>n/a</td>
</tr>
<tr>
<td>Closed</td>
<td>You cannot close a period if unprocessed items exist. A closed period can be reopened at any time.</td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Permanently Closed</td>
<td>You cannot permanently close a period if unprocessed items exist. Once a period is permanently closed, you cannot reopen it.</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
</tbody>
</table>

Table 16-4 (Page 1 of 1)

At least one PA period must be specified as Open or Future in order for Oracle Projects processes to process transactions. The PA Period with a status of Open or Future that includes a project transaction date is the PA Period for the transaction. However, if the transaction date falls in a period that is not Open or Future, Oracle Projects will find the next Open or Future PA Period and use it as the PA Period for the transaction. Oracle Projects will reject the transaction if it cannot find a PA Period for the transaction.

Defining Future PA Periods for Period–Phased Budgeting

If you plan to use period–phased budgeting, you must define the future PA and GL periods in which you want to budget. The periods must first
Defining PA Periods

Prerequisites

- Define PA periods in the calendar associated with your GL Set of Books. PA periods are automatically copied from the GL Set of Books calendar according to the PA period type you set up in the Oracle Projects Implementation Options. Additional PA periods can be copied by pressing the Copy From GL button in the PA Periods window. See: Defining Period Types and Adding Periods to a Calendar (Oracle General Ledger User’s Guide)

- Set up implementation options. See: Implementation Options: page 16 – 56.

To define PA periods:

**Suggestion:** Define your PA periods for a full year when you implement Oracle Projects. Keep the number of Future or Open periods to a minimum to improve system performance on costing and revenue accrual.

1. Navigate to the Maintain PA Period Statuses window.
2. Choose Copy from GL to copy a set of PA Periods from a GL Calendar according to the PA period type indicated in the Oracle Projects Implementation Options.

Fremont Corporation tracks all project accounting data weekly. Since Fremont begins their expenditure week on a Monday, they also start their PA periods on a Monday. Fremont’s implementation team defines weekly PA periods for a full year. They assign the first two periods as having a status of Open, the next two with a status of Future, and all other future periods as Never Opened.

Changing the Status of a PA Period

To change the status of a PA period:

**Note:** If you implement Multiple Reporting Currencies, open and close PA periods in your primary set of books. Oracle
Projects automatically opens and closes PA periods in all of the associated reporting sets of books. You cannot close a PA period if outstanding transactions exist in your primary or associated reporting sets of books. See also: Multiple Reporting Currencies in Oracle Applications.

1. Navigate to the Maintain PA Period Statuses window.
2. Query the PA period for which you want to change the status.
3. Enter or select the new status.
4. Save.

Setting the PA Reporting Period

You must specify a current PA Reporting Period for Oracle Projects to summarize project amounts and to track project status.

➢ To set the PA Reporting Period:

1. Navigate to the Maintain PA Period Statuses (PA Periods) window.
2. Choose Set Reporting Period.
3. In the Next box, enter or select the PA period you want to set as the new current PA reporting period.
4. Choose OK.
Setting the PA Reporting Period to an Earlier Period

When you attempt to set the PA Reporting Period to an earlier period than the current PA Reporting Period, the system checks to see if any projects have been accumulated in a PA period later than the new PA Reporting Period. If this is the case, a message is displayed indicating that if you change the PA Reporting Period you must run the Refresh Project Summary Amounts process. You have the option to cancel the change or proceed with the change.

Note: Setting the PA reporting to a prior period may result in a large volume of additional processing if the change requires you to refresh the project summary amounts for most of your projects.

To see which projects would be affected by a PA Reporting Period change, you can run the Summarization Period Exceptions Report. See: Summarization Period Exceptions: page 9 – 48.

If you proceed with the change to an earlier PA Reporting Period when projects have been accumulated in a later PA period, you need to run the PRC: Refresh Project Summary Amounts process before viewing information in the Project Summary Inquiry (PSI) window. See: Refresh Project Summary Amounts: page 10 – 56.

PA Periods in a Multi–Organization Environment

In a multi–organization environment, each operating unit maintains its own PA period status. You use the Maintain PA Periods Status window to maintain the period status and the current reporting period.

Note: In a single organization environment, all projects in your implementation of Oracle Projects share the same PA Reporting Period.

See Also

Date Processing in Oracle Projects: page 11 – 2
Update Project Summary Amounts: page 10 – 52
Defining Period Types, Oracle General Ledger User’s Guide
Adding Periods to a Calendar, Oracle General Ledger User’s Guide
Expenditure Definitions

Overview of Expenditure Classifications

Expenditure Types

An expenditure type is a classification of cost that you assign to each expenditure item you enter in Oracle Projects. An expenditure type is made up of four elements:

- An expenditure category
- A revenue category
- A unit of measure
- One or more expenditure type classes

Expenditure categories are used to group expenditure types for costing. Revenue categories are used to group expenditure types for revenue and billing.

See Also

Expenditure Types: page 16 – 78

Expenditure Type Classes

An expenditure type class tells Oracle Projects how to process an expenditure item. Oracle Projects predefines all expenditure type classes.

Oracle Projects uses the following expenditure type classes to process labor costs for interfacing to Oracle General Ledger:

- Straight Time – Payroll straight time. Straight Time is the default expenditure type class associated with the PTE Time transaction source.
- Overtime – Overtime premium on a project

Oracle Projects uses the following expenditure type classes to process non-labor project costs:
• Expense Reports – Oracle Projects expense reports are interfaced to Oracle Payables for employee reimbursement. Expense Reports is the default expenditure type class associated with the PTE Expense transaction source.

• Usages – Asset usage costs are interfaced to Oracle General Ledger.

• Supplier Invoices – Oracle Payables supplier invoices are interfaced from Oracle Payables to Oracle Projects.

• Miscellaneous Transaction – Miscellaneous Transactions are used to track miscellaneous project costs. This expenditure type class is similar to usages. The difference is that, for miscellaneous transactions expenditure items, you are not required to specify a non–labor resource or a non–labor resource organization, as you are for usage expenditure items. Miscellaneous transactions may be used for the following costs:
  – Fixed assets depreciation
  – Allocations
  – Interest charges

• Burden Transaction – Burden transactions track burden costs that are calculated in an external system or calculated as separate, summarized transactions. These costs are created as a separate expenditure item that has a burdened cost amount, but has a quantity and raw cost value of zero. Burden transactions are interfaced to Oracle General Ledger. As with any other transaction in Oracle Projects, you can adjust and capitalize burden transactions, or accrue revenue or generate invoices for these transactions. See: Accounting for Total Burdened Costs: page 5 – 39.

Burden transactions that are not system–generated can be adjusted. See: Adjusting Burden Transactions: page 4 – 30.

• Work In Process – This expenditure type class is used for Project Manufacturing WIP transactions that are interfaced from Manufacturing to Oracle Projects. You can also use this expenditure type class when you import other manufacturing costs via Transaction Import or when you enter transactions via pre–approved batch entry.

• Inventory – This expenditure type class is used for the following transactions:
  – Project Manufacturing transactions that are interfaced from Manufacturing or Inventory to Oracle Projects.
Oracle Inventory Issues and Receipts that are interfaced from Oracle Inventory to Oracle Projects in a manufacturing or non-manufacturing installation.

You can also use this expenditure type class when you import other manufacturing costs via Transaction Import or when you enter transactions via pre-approved batch entry.

The expenditure type class determines how an expenditure item is processed. For example, if you assign the Straight Time expenditure type class to an expenditure type, Oracle Projects uses labor distribution to calculate the cost of an expenditure item with that expenditure type and expenditure type class. If you assign the Expense Reports expenditure type class to an expenditure type, Oracle Projects uses expense report distribution to calculate the cost of an expenditure item with that expenditure type and expenditure type class, and interfaces it to Oracle Payables for payment.

Non-Labor Resources

You must specify the non-labor resource for every usage item you charge to a project. For each expenditure type classified by a Usage expenditure type class, you also define non-labor resources and organizations that own each non-labor resource.
Expenditure Classifications: Examples

Expenditure Categories
- Labor
- Outside Services
- Product Development

Expenditure Types
- Administrative
  - UOM=Hours
- Clerical
  - UOM=Hours
- Consulting
  - UOM=Dollars
- Photo Processing
  - UOM=Dollars

Expenditure Type Classes
- Straight Time
- Overtime
- Supplier Invoices
  - Expense Reports
  - Usages

See Also

Non–Labor Resources: page 16 – 82
Expenditure Categories

An expenditure category describes the source of your organization’s costs. For example, an expenditure category with a name such as Labor refers to the cost of labor. An expenditure category with a name such as Supplier refers to the cost incurred on supplier invoices.

You use expenditure categories when you define organization overrides, for budgeting, and for transaction controls. In addition, you can use expenditure categories in your AutoAccounting rules and in your reporting. Expenditure categories are used for grouping expenditure types for costing.

Defining Expenditure Categories

To define expenditure categories:

1. In the Expenditure Categories window, enter a unique name for the expenditure category and enter its description.

2. Save your work.

See Also

Effective Dates: page 16 – 24

Expenditure Types Definition Listing: 9 – 9

Resources and Resource Lists: page 16 – 155

Fremont Corporation defines an expenditure category for each of the following expenditure categories:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Labor costs</td>
</tr>
<tr>
<td>Travel</td>
<td>Travel expenditures</td>
</tr>
<tr>
<td>In–House Recoverables</td>
<td>Use of corporate assets</td>
</tr>
<tr>
<td>Outside Services</td>
<td>Outside services</td>
</tr>
<tr>
<td>Material</td>
<td>Materials</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>Expenses, excluding travel</td>
</tr>
</tbody>
</table>
Revenue Categories

A revenue category describes a source of your organization’s revenue. For example, a revenue category with a name such as *Labor* refers to labor revenue.

Revenue categories are used for grouping expenditure types and event types for revenue and billing. You can use revenue categories for budgeting, for reporting purposes, and in your AutoAccounting rules. Revenue Categories are also used for grouping expenditure types for revenue and billing.

Defining Revenue Categories

► To define revenue categories:

1. In the Revenue Categories window, enter a unique name for the revenue category, and enter its description.
2. Save your work.

See Also

Effective Dates: page 16 – 24

Revenue Categories Listing: page 9 – 14

Resources and Resource Lists: page 16 – 155

Fremont Corporation defines revenue categories for labor and others for all other revenue.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee</td>
<td>Fee Earned</td>
</tr>
<tr>
<td>Labor</td>
<td>Labor Revenue</td>
</tr>
<tr>
<td>Other</td>
<td>Non-Labor Revenue</td>
</tr>
<tr>
<td>Payment</td>
<td>Payment</td>
</tr>
</tbody>
</table>
Units

A unit of measure records quantities or amounts of an expenditure item. You assign a unit to each expenditure type. For example, you can specify the unit of measure Miles when you define an expenditure type for personal car use. You enter the quantity of personal car use in miles, and Oracle Projects calculates the cost of using a personal car by mileage.

If you want to calculate the cost of computer services by the amount of time a user uses a computer, you can define an expenditure type for computer services and assign it the unit Hours.

Oracle Projects predefines the units Dollars and Hours.

Defining Units

To define a units of measure:

1. In the Units window, enter a unique name for the unit and a description.
2. Save your work.

See Also

Effective Dates: page 16 – 24
Units Definition Listing: page 9 – 15

Fremont Corporation uses the predefined units Currency and Hours; the implementation team defines additional units for miles and days.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currency</td>
<td>U.S. Dollars</td>
</tr>
<tr>
<td>Hours</td>
<td>Hours</td>
</tr>
<tr>
<td>Miles</td>
<td>Miles</td>
</tr>
<tr>
<td>Days</td>
<td>Days</td>
</tr>
</tbody>
</table>
**Expenditure Types**

When you define an expenditure type, you assign it a unit, an expenditure category, a revenue category, and one or more expenditure type classes.

You also specify whether an expenditure type requires a cost rate. An expenditure type with the following attributes requires a cost rate:

- A unit other than dollars
- A non-labor expenditure type class

See: Cost Rates: page 16 – 90.

For supplier invoice expenditure types, if you specify that a rate is required, Oracle Projects requires you to enter a quantity in Oracle Payables for invoice distributions using that expenditure type. When you interface the invoice distribution to Oracle Projects, Oracle Projects copies the quantity and amount to the expenditure item and calculates the rate. If you define a supplier invoice expenditure type with the Rate Required option disabled, then the quantity of the expenditure item is set to the amount you enter in Oracle Payables.

**Multiple Expenditure Type Classes Per Expenditure Type**

You can assign multiple expenditure type classes to an expenditure type. For example, an expenditure with the expenditure type *Materials* can have the expenditure type class *Supplier Invoice* if it originated in Oracle Payables, and the expenditure type class *Inventory* if it originated in Oracle Inventory. This example is illustrated below:

<table>
<thead>
<tr>
<th>Expenditure Type</th>
<th>Module Where Expenditure Originated</th>
<th>Expenditure Type Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials</td>
<td>Oracle Payables</td>
<td>Supplier Invoice</td>
</tr>
<tr>
<td>Materials</td>
<td>Oracle Inventory</td>
<td>Inventory</td>
</tr>
</tbody>
</table>

*Table 16 – 5 (Page 1 of 1) Example of Multiple Expenditure Type Classes for One Expenditure Type*

This feature allows you to use a single expenditure type to classify as many different costs as you require. You can use the same expenditure type for expenditures that have different origins (and therefore different accounting), but which should otherwise be grouped together for costing, budgeting, or summarization purposes.
Defining Expenditure Types

**Prerequisites**

- Define expenditure categories. See: Expenditure Categories: page 16 – 75.
- Define revenue categories. See: Revenue Categories: page 16 – 76.

**To define expenditure types:**

1. Navigate to the Expenditure Types window. Enter a unique name for the expenditure type.
2. Enter the expenditure category and revenue category you want to associate with this expenditure type.
3. Enter the unit of measure you want Oracle Projects to use when calculating the cost for this expenditure type. You must enter Hours for labor expenditure types.
4. If this expenditure type requires a cost rate, check the Rate Required check box, then choose Cost Rate to navigate to the Expenditure Cost Rates window and enter a cost rate and its effective date(s). If this expenditure type does not require a cost rate, do not check the Rate Required check box.

   **Note:** If you create a non–labor expenditure type without checking the Rate Required check box, you cannot subsequently require and enter a cost rate for that expenditure type. Instead, you must disable the expenditure type and create a new one that requires a cost rate and has a unique name. If you check the Rate Required check box when you create a non–labor expenditure type, you can change the cost rate at any time.

5. Enter a description for the expenditure type. You can optionally enter effective dates for the expenditure type.
6. Enter the expenditure type class you want Oracle Projects to use when determining how to process the expenditure item.
7. Save your work.
Fremont Corporation’s implementation team defines the following expenditure types.

Fremont defines cost rates for the expenditure types Computer Services, Vehicle, Personal Auto Use, and Field Equipment because these expenditure types use non-labor expenditure type classes and use units other than dollars. For these expenditure types, Fremont enables the Rate Required check box.

<table>
<thead>
<tr>
<th>Name</th>
<th>Unit</th>
<th>Description</th>
<th>Expenditure Category</th>
<th>Revenue Category</th>
<th>Expenditure Type Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative</td>
<td>Hours</td>
<td>Administrative labor hours</td>
<td>Labor</td>
<td>Labor</td>
<td>Straight Time</td>
</tr>
<tr>
<td>Clerical</td>
<td>Hours</td>
<td>Clerical labor hours</td>
<td>Labor</td>
<td>Labor</td>
<td>Straight Time</td>
</tr>
<tr>
<td>Other Labor</td>
<td>Hours</td>
<td>Other labor hours</td>
<td>Labor</td>
<td>Labor</td>
<td>Straight Time</td>
</tr>
<tr>
<td>Overtime</td>
<td>Hours</td>
<td>Overtime labor hours</td>
<td>Labor</td>
<td>Labor</td>
<td>Overtime</td>
</tr>
<tr>
<td>Professional</td>
<td>Hours</td>
<td>Professional labor hours</td>
<td>Labor</td>
<td>Labor</td>
<td>Straight Time</td>
</tr>
<tr>
<td>Air Travel</td>
<td>Dollars</td>
<td>Air travel expenses</td>
<td>Travel</td>
<td>Other</td>
<td>Expense Reports</td>
</tr>
<tr>
<td>Automobile Rental</td>
<td>Dollars</td>
<td>Auto rental expenses</td>
<td>Travel</td>
<td>Other</td>
<td>Expense Reports</td>
</tr>
<tr>
<td>Entertainment</td>
<td>Dollars</td>
<td>Entertainment expenses</td>
<td>Other Expenses</td>
<td>Other</td>
<td>Expense Reports</td>
</tr>
<tr>
<td>Meals</td>
<td>Dollars</td>
<td>Meal expenses</td>
<td>Travel</td>
<td>Other</td>
<td>Expense Reports</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>Dollars</td>
<td>Other expenses</td>
<td>Other Expenses</td>
<td>Other</td>
<td>Expense Reports</td>
</tr>
<tr>
<td>Category</td>
<td>Unit</td>
<td>Description</td>
<td>Reporting Category</td>
<td>Usages</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------</td>
<td>--------------------------------------------------</td>
<td>---------------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>Personal Auto Use</td>
<td>Miles</td>
<td>Personal auto mileage</td>
<td>Travel</td>
<td>Other Expense</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Services</td>
<td>Hours</td>
<td>Use of corporate computers</td>
<td>In–House Recoverables</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Usages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Equipment</td>
<td>Hours</td>
<td>Use of company equipment</td>
<td>In–House Recoverables</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Usages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Asset</td>
<td>Dollars</td>
<td>Use of other company asset</td>
<td>In–House Recoverables</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Usages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle</td>
<td>Days</td>
<td>Use of corporate vehicle</td>
<td>In–House Recoverables</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Usages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Dollars</td>
<td>Outside construction work</td>
<td>Outside Services</td>
<td>Other Supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Services</td>
<td>Invoices</td>
<td></td>
</tr>
<tr>
<td>Consulting</td>
<td>Dollars</td>
<td>Outside consultants</td>
<td>Outside Services</td>
<td>Other Supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Services</td>
<td>Invoices</td>
<td></td>
</tr>
<tr>
<td>Other Invoice</td>
<td>Dollars</td>
<td>Other outside work</td>
<td>Other Expenses</td>
<td>Other Supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Expenses</td>
<td>Invoices</td>
<td></td>
</tr>
<tr>
<td>Supplies</td>
<td>Dollars</td>
<td>Supplies</td>
<td>Other Expenses</td>
<td>Other Supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Expenses</td>
<td>Invoices</td>
<td></td>
</tr>
<tr>
<td>Misc Travel Expenses</td>
<td>Dollars</td>
<td>Misc travel expenses</td>
<td>Travel</td>
<td>Other Expense</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lodging</td>
<td>Dollars</td>
<td>Lodging expenses</td>
<td>Travel</td>
<td>Other Expense</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Dollars</td>
<td>Materials</td>
<td>Material</td>
<td>Other Supplier</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Invoices</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Non–Labor Resources

You specify a name and a description of an asset, or pool of assets, to define a non–labor resource. For example, you can define a non–labor resource with a name such as *Earth Mover* to represent one earth mover your business owns. You can also define a non–labor resource with a name such as *PC* to represent multiple personal computers your business owns.

Every usage item you charge to a project must specify the non–labor resource utilized and the non–labor resource organization that owns the resource. You must define a non–labor resource for each usage expenditure type.

When defining your non–labor resources, you can choose only expenditure types with the *Usage* expenditure type class.

You can use the non–labor resource organization in your AutoAccounting rules for usage cost and revenue.

**Prerequisites**

- Define expenditure types. See: Expenditure Types: page 16 – 78.

**Defining Non–Labor Resources**

**To define non–labor resources:**

1. In the Non–Labor Resources window enter a name, description, effective date(s), and a usage expenditure type for each non–labor resource your organization owns.

2. For each non–labor resource you define, enter the organization(s) to which the resource is assigned in the Organizations region. Enter the effective dates during which the resource is owned by each organization.

   The organizations you enter can include any organization from your organization hierarchy, regardless of whether the organization has the Expenditure Organization classification, and regardless of the start and end dates for the organization.

3. If you want to override the cost rate of the expenditure type by the resource and organization combination, choose Cost Rates and enter the cost rate and its effective date(s) in the Cost Rates Overrides window.
4. Save your work.

See Also

Effective Dates: page 16 – 24
Non–Labor Resources by Organization Listing: page 9 – 11

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Expenditure Type</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>PC on the HQ Network</td>
<td>Computer Services</td>
<td>Information Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Data Systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Finance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Risk Analysis</td>
</tr>
<tr>
<td>HQ1 Sequent</td>
<td>Headquarters Accounting Sequent</td>
<td>Computer Services</td>
<td>Information Services</td>
</tr>
<tr>
<td>VAX 9000</td>
<td>Data Systems VAX</td>
<td>Computer Services</td>
<td>Data Systems</td>
</tr>
<tr>
<td>Sparc</td>
<td>Engineering, Services Sun SparcStation</td>
<td>Computer Services</td>
<td></td>
</tr>
</tbody>
</table>
| Organizations                  | Fremont Engineering  
|                               | Fremont Services  
| Name                          | Survey  
| Description                   | Standard surveying equipment  
| Expenditure Type              | Field Equipment  
| Organizations                 | Fremont Engineering  
| Name                          | Van  
| Description                   | Heavy Duty Van  
| Expenditure Type              | Vehicle  
| Organizations                 | Fremont Construction  
|                               | West  
|                               | Midwest  
|                               | East  
|                               | South  
|                               | International  
| Name                          | Minivan  
| Description                   | Site Visit Minivan  
| Expenditure Type              | Vehicle  
| Organizations                 | Fremont Construction  
|                               | West  
|                               | Midwest  
|                               | East  
|                               | South  
|                               | International  
| Name                          | Pickup Truck  
| Description                   | Heavy Duty Pickup  
| Expenditure Type              | Vehicle  
| Organizations                 | West  
|                               | Midwest  
|                               | East  

Fremont Corporation’s implementation team assigns the expenditure type of Other Assets to all divisions; this non-labor resource provides a ‘bucket’ non-labor resource to capture miscellaneous items.

<table>
<thead>
<tr>
<th>Name</th>
<th>Other Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Other Assets</td>
</tr>
<tr>
<td>Expenditure Type</td>
<td>Other Assets</td>
</tr>
<tr>
<td>Organization Name</td>
<td>Administration</td>
</tr>
<tr>
<td></td>
<td>Fremont Construction</td>
</tr>
<tr>
<td></td>
<td>Fremont Engineering</td>
</tr>
<tr>
<td></td>
<td>Fremont Services</td>
</tr>
</tbody>
</table>
Transaction Sources

Transaction sources identify the source of external transactions you import into Oracle Projects using Transaction Import. For example, you can define the transaction source Payroll to identify expenditure items imported from an external payroll system.

Transaction Sources for PTE

Oracle Projects predefines two Oracle Personal Time and Expense (PTE) transaction sources:
- PTE EXPENSE for expense reports
- PTE TIME for timecards (expenditure type class of Straight Time)

Oracle Projects uses these transaction sources to import expenditures from Oracle Personal Time and Expense.

Transaction Sources for Manufacturing and Inventory Costs

Oracle Projects predefines three transaction sources for Oracle Manufacturing and Oracle Inventory costs:
- Inventory for manufacturing material costs
- Inventory Misc for inventory issues and receipts entered in the Miscellaneous Transactions window in Oracle Inventory
- Work In Process for manufacturing resource costs

Oracle Projects uses these transaction sources to import expenditures from Oracle Inventory and Oracle Manufacturing.

If you import transactions from another manufacturing system, you must define your own transaction source.

Transaction Source Options

Transaction Import processes transactions based on the options that you select for their transaction sources.

Default Expenditure Type Class

Oracle Projects uses the default expenditure type class that you assign to a transaction source if an expenditure type class is not specified in the interface table. Oracle Projects provides this option to facilitate the migration of data from earlier releases of Oracle Projects.
Costed

When a transaction source is specified as having costed transactions, this means that the raw cost amount of the transactions has already been calculated and will not be modified after being imported into Oracle Projects. None of the Oracle Projects processes will calculate raw cost amounts for these transactions. See: Loading Items as Costed or Uncosted: page 4 – 77.

The designation of a transaction as costed does not affect burdening, accounting, or interfacing to GL or AP. These processes are still performed on the transaction as they would be if it were imported as a non–costed transaction.

Cost Burdened

If you enable this option, all transactions originating from this transaction source must have burdened costs. If the transaction does not have a burdened cost amount, the burdened cost amount will default to the transaction's raw cost amount.

GL Accounted

Select this option to indicate whether transactions imported from this transaction source have already been accounted for in GL. Oracle Projects expects that the external system has already posted the raw and burdened costs to the appropriate debit and credit accounts. None of the Oracle Projects processes will transfer these costs to GL or AP. See: Loading Items as Accounted or Unaccounted: page 4 – 77.

This option is enabled for manufacturing or inventory transactions with a transaction source of Inventory, Inventory Misc, or Work In Process.

Allow Duplicate References

Enable this option to allow multiple transactions with this transaction source to use the same original system reference. If you enable this option, you cannot uniquely identify the item by transaction source and original system reference.

Modify Interface

If Transaction Import rejects transactions from a particular transaction source, this option allows users to modify the rejected transactions in the Review Transactions window in Oracle Projects after the import process is completed.
Allow Adjustments

If you enable this option, you can adjust imported transactions in Oracle Projects after you load them via Transaction Import. Adjustments that you can allow include any change that could result in a new GL account or cost amounts for an item, such as:

- Transferring an item to another project or task
- Splitting an item into two or more items (not allowed for burden transaction items)
- Recalculating costs (raw and burden)
- Reclassifying an item as billable or non–billable (or capitalizable or non–capitalizable)

**Note:** Raw cost values for transactions that were already costed when loaded into Oracle Projects will not be changed if you mark the item for cost recalculation.

If you do not allow users to adjust imported transactions in Oracle Projects, you must adjust the transaction in the originating external system and import the adjustment into Oracle Projects.

Purgeable

If you select this option for a transaction source, items successfully imported from this transaction source are automatically purged from the interface table when the import process completes.

MRC Amounts from External System (only in MRC environments)

If you have implemented Multiple Reporting Currencies, this option appears only in the Transaction Sources window for your primary set of books. Checking this option indicates that transaction amounts in your primary currency and each associated reporting currency are provided by an external system. Otherwise, Oracle Projects calculates reporting currency amounts based on the rates stored in the GL_DAILY_RATES table. If you enable this option, you must populate the PA_MC_TXN_INTERFACE_ALL table with the currency conversion rates and converted amounts for all transactions originating from that transaction source. For more information about reporting currencies, see: *Multiple Reporting Currencies in Oracle Applications.*
Defining Transaction Sources

To define a transaction source:

1. In the Transaction Sources window, enter the transaction source, and enter the expenditure type class.
2. Choose the desired options for the transaction source.
3. Enter the effective date(s) and a description.
4. Save your work.

See Also

Effective Dates: page 16 – 24
Overview of Oracle Personal Time and Expense: page 4 – 50
Project Manufacturing: page 12 – 75
Transaction Import: page 10 – 34
Transaction Import Interface: page 4 – 88
Transaction Sources Listing: page 9 – 15
Non–Labor Costing Definitions

Expenditure Type Cost Rates

An expenditure type cost rate is a dollar amount that Oracle Projects multiplies by the expenditure type unit to calculate cost.

Defining Cost Rates for Expenditure Types

You define a cost rate in the Expenditure Types window by selecting an expenditure type and entering a cost rate for it. You can select only a non–labor expenditure type that requires a cost rate. You cannot define a cost rate for a non–labor expenditure type that does not require a cost rate. Instead, you must disable the expenditure type and create a new one that requires a cost rate and has a unique name.

Note: In a multi–organization environment, expenditure types are set up once and are shared across all operating units. However, the cost rates for expenditure types are specific to each operating unit. Each operating unit must have cost rates set up for expenditure types in which expenditures are expected to be incurred.

Prerequisite

- Define Expenditure Types. See: Expenditure Types: page 16 – 78.

To define a cost rate for expenditure types:

- You define costs rates when you define expenditure types. See: Expenditure Types: page 16 – 78.

See Also

Units: page 16 – 77

Expenditure Cost Rates Listing: page 9 – 9
Fremont Corporation defines cost rates for the following expenditure types:

<table>
<thead>
<tr>
<th>Name</th>
<th>Unit</th>
<th>New Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Auto Use</td>
<td>Miles</td>
<td>0.25</td>
</tr>
<tr>
<td>Computer Services</td>
<td>Hours</td>
<td>7.00</td>
</tr>
<tr>
<td>Vehicle</td>
<td>Days</td>
<td>25.00</td>
</tr>
<tr>
<td>Field Equipment</td>
<td>Hours</td>
<td>24.00</td>
</tr>
</tbody>
</table>

**Usage Cost Rate Overrides**

When you defined non–labor resources, you assigned each asset an expenditure type with the *Usages* expenditure type class. The cost rates you define for each expenditure type consequently apply to all non–labor resources classified with that expenditure type.

You can define a usage cost rate override for any non–labor resource. Usage cost rate overrides are defined by the non–labor resource and organization. The cost rate override applies only to a specific non–labor resource owned by that organization; if there are multiple non–labor resources with that expenditure type or multiple owning organizations of the same resource, they retain the existing expenditure type cost rate you define.

For example, if you want to override the expenditure type cost rate of personal computers, you define a usage cost rate override for personal computers. All other non–labor resources that share the same expenditure type as the personal computers retain the existing expenditure type cost rate.

**Note:** In a multi–organization environment, non–labor resources are set up once and are shared across all operating units. For each of the non–labor resources that an operating unit may put in service, you must set up a cost rate for the associated expenditure type. If you wish to have a non–labor resource with different cost rates in different operating units, you can define operating unit–specific usage cost rate overrides for organizations in the business group associated with an operating unit.
Defining Usage Cost Rate Overrides

To define a cost rate for non–labor resources and an owning organization:

- You define usage cost rate overrides in the Non–Labor Resources window when you define Non–Labor Resources. See: Non–Labor Resources: page 16 – 82

See Also

Expenditure Types: page 16 – 78

Fremont Corporation’s implementation team overrides the expenditure type cost rate for PCs owned by the Data Systems group. The Computer Services expenditure type cost rate is $7.00 per hour; Fremont changes the rate to $3.00 per hour.

<table>
<thead>
<tr>
<th>Non–Labor Resource</th>
<th>PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure Type</td>
<td>Computer Services</td>
</tr>
<tr>
<td>Organization</td>
<td>Data Systems</td>
</tr>
<tr>
<td>Usage Cost Rate Overrides</td>
<td></td>
</tr>
<tr>
<td>Rate Override</td>
<td>3.00</td>
</tr>
</tbody>
</table>
Labor Costing Definitions

Compensation Rules

A compensation rule determines how an employee is paid. You define a compensation rule for each pay type your business uses. For example, you can define a compensation rule for pay types such as exempt, non–exempt, uncompensated, compensated, or hourly.

When an employee works overtime on a project, Oracle Projects processes the overtime hours according to the employee’s compensation rule. For example, if an employee’s compensation rule is Hourly, the employee is eligible for overtime pay; if the employee’s compensation rule is Exempt, the employee is not eligible for overtime pay.

You can also use compensation rules in your AutoAccounting rules.

Defining Compensation Rules

If your organization enters and calculates overtime hours manually, you can specify defaults for Oracle Projects to use when you enter overtime hours for an employee classified by this compensation rule. These values default to the Expenditure Items window.

Prerequisites

- Define an expenditure type with the expenditure types class Overtime. See: Expenditure Types: page 16 – 78 and Expenditure Type Classes: page 16 – 71.

To define a compensation rule:

1. In the Compensation Rules window, enter the Compensation Rule and the Overtime Expenditure Type that you want to associate with the compensation rule. Oracle Projects will use this expenditure type when it automatically creates overtime expenditure items.

   **Note:** You must define the compensation rules listed in the Fremont example below to use the example Overtime Calculation program provided by Oracle Projects.

2. If your organization enters and calculates overtime hours manually, use the Defaults for Overtime Entry region to specify the default project and task.
Note: If you want to assign a labor cost multiplier to a project’s task, you must enter a Project Number and a Task Number in the Defaults for Overtime Entry region.

3. Save your work.

See Also

Effective Dates: page 16 – 24

Overtime in Oracle Projects: page 17 – 2

Entering Pre–Approved Expenditure Batches: page 4 – 14

Compensation Rules Listing: page 9 – 7

Fremont Corporation uses the Oracle Projects Overtime Calculation program to automatically calculate overtime instead of calculating it manually. The following information defines only part of Fremont’s compensation rules definition.

**Compensation Rule**

**Name**
Exempt

**Overtime**

**Overtime**

**Expenditure Type**

**Compensation Rule**

**Name**

Hourly

**Overtime**

**Overtime**

**Expenditure Type**

**Compensation Rule**

**Name**
Compensated
Employee Cost Rates

An employee cost rate is the hourly rate you pay an employee. Each employee must have a cost rate and a compensation rule. The combination of a cost rate and a compensation rule determines the raw cost of using a particular employee on a project. Oracle Projects also uses an employee’s compensation rule to calculate that employee’s overtime premium if you implement Oracle Projects to automatically create overtime expenditure items.

Oracle Projects calculates an employee’s straight time labor cost using the hourly rate that you define.

\[(\text{Labor Hours} \times \text{Hourly Labor Cost Rate}) = \text{Straight Time Labor Cost}\]

Labor cost rates must start on an expenditure starting day, and employees can have only one labor cost rate per expenditure week. This means that you can change an employee’s cost rate only at the beginning of an expenditure week.

**Note:** In a multi-organization environment, employees are associated with a business group. An employee’s work can be charged to any of the operating units that are associated with the employee’s business group. If your business process allows an employee to work in a subset of these operating units, you must set up labor rates for each of the operating units in which the employee works. The system allows you to have different labor rates for the same employee in different operating units.

**Prerequisites**

- Define employees. See: Employees and Employee Assignments: page 16 – 50.
- Specify the expenditure cycle start day in the Implementation Options window. See: Implementation Options: page 16 – 56.
Defining Employee Cost Rates

To define an employee cost rate:

1. In the Employee Cost Rates window, enter either the Employee Name or Employee Number.
2. Enter the Compensation Rule and hourly Rate for the employee. Enter the Effective Dates during which the compensation rule and rate are valid for this employee.
3. Save your work.

See Also

Labor Cost Rates Listing: page 9 – 10
Labor Cost Rates By Organization Listing: page 9 – 10

Fremont Corporation uses the Exempt compensation rule for employees Donald Gray and Amy Marlin, and the Compensated compensation rule for James Robinson.

<table>
<thead>
<tr>
<th>Employee</th>
<th>Cost Rate</th>
<th>Compensation Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donald Gray</td>
<td>40/hr</td>
<td>Exempt</td>
</tr>
<tr>
<td>Amy Marlin</td>
<td>35/hr</td>
<td>Exempt</td>
</tr>
<tr>
<td>James Robinson</td>
<td>30/hr</td>
<td>Compensated</td>
</tr>
</tbody>
</table>

Labor Cost Multipliers

A labor cost multiplier is a value by which Oracle Projects multiplies an employee’s labor cost rate to calculate the employee’s overtime premium cost rate:

\[(\text{Labor Cost Rate}) \times (\text{Labor Cost Multiplier}) = \text{Overtime Premium Labor Cost Rate}\]

Oracle Projects then multiplies this overtime premium labor cost rate by the number of overtime hours an employee works to calculate the overtime premium for that employee:

\[(\text{Overtime Premium Labor Cost Rate}) \times (\text{OT Hours}) = \text{Overtime Premium}\]
You define a labor cost multiplier for each kind of overtime your business uses such as double time, or time and a half.

For example, if you pay an employee double time for all overtime hours, you define a labor cost multiplier of 1.0. You multiply the employee’s labor cost rate by 1.0 to calculate the employee’s overtime premium labor cost rate.

If you pay an employee time and a half for all overtime hours, you define a labor cost multiplier of 0.5 to calculate half the employee’s overtime premium labor cost rate.

An employee’s total labor cost is the overtime premium plus the total number of hours that employee worked multiplied by the employee’s labor cost rate:

\[(\text{Overtime Premium} + \text{Straight Time Labor Cost}) = \text{Total Labor Cost}\]

### Defining Labor Cost Multipliers

#### To define a labor cost multiplier:

1. In the Labor Cost Multipliers window, enter a unique Name for the labor cost multiplier you are defining. Enter a numeric value for the labor cost multiplier.
2. Save your work.

### See Also

Overtime in Oracle Projects: page 17 – 2

Labor Cost Multipliers Listing: page 9 – 10

Effective Dates: page 16 – 24

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Fremont Corporation uses labor cost multipliers for double time, time and a half, and uncompensated overtime. The negative multiplier for uncompensated overtime reverses the cost of any overtime hours for those individuals who do not get paid overtime.

<table>
<thead>
<tr>
<th>Name</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Time</td>
<td>1.0</td>
</tr>
<tr>
<td>Time and Half</td>
<td>0.5</td>
</tr>
<tr>
<td>--------------</td>
<td>-----</td>
</tr>
<tr>
<td>Uncompensated OT</td>
<td>-1.0</td>
</tr>
</tbody>
</table>
Burden Costing Definitions

Burden Costing is a method of applying burden costs to raw costs, allowing you to track the total burdened costs of your projects.

To implement burdening, perform the following steps:

- Define burden structures. See: Burden Structures: page 16 – 102
- Use the View Burdened Costs window to test your cost plus processing setup. See: View Burdened Costs window: page 16 – 113.

Fremont Corporation’s burden costing consists of the following configurations:

- Multiple burden structures
- Firm and provisional schedules
- Separate burden structures for different purposes

See Also

Overview of Costing: page 5 – 2
Accounting for Total Burdened Costs: page 5 – 39

Cost Bases and Cost Base Amount Types

Cost bases refer to the bases of raw costs used for applying burden costs. You assign cost bases to burden structures, and then specify the types of raw costs that are included in the cost base along with the types of burden costs that are applied to the cost base.

You can also use cost bases as groupings of expenditure types for use in billing extension calculations. These cost bases are not used for burdening, and are defined with a cost base type other than Burden Cost. When you assign these cost bases with a type other than Burden Cost to a burden structure, you can specify expenditure types for the
cost base, but you cannot specify burden cost codes for the cost base since the cost base is not used for burdening.

Cost base types refer to the use of cost bases. Oracle Projects predefines the cost base types Burden Cost and Other. Cost bases with the type Burden Cost are used in burden calculations. Cost bases with a type other than Burden Cost are not included in burden calculations; these cost bases are used for grouping expenditure types for different purposes, such as for billing extension calculations.

► To define cost bases and cost base types:

1. In the Cost Bases window, enter a unique name for the cost base. In the Report Order field, specify the order in which this cost base should appear for reporting purposes. In the Type field, specify the type of this cost base. Enter a description of the cost base.

2. If you want to define a cost base type, choose Cost Base Type and enter a Cost Base Type and Description in the Cost Base Types window.

3. Save your work.

See Also

Effective Dates: page 16 – 24

Fremont defines the following cost bases. All of the cost bases have a type of Burden Cost, since they are used to group types of raw costs that are directly related to calculating burdened costs. Fremont does not define any additional cost base types.

<table>
<thead>
<tr>
<th>Cost Base</th>
<th>Report Order</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>10</td>
<td>Burden Cost</td>
</tr>
<tr>
<td>Material</td>
<td>20</td>
<td>Burden Cost</td>
</tr>
<tr>
<td>Expenses</td>
<td>30</td>
<td>Burden Cost</td>
</tr>
</tbody>
</table>
Burden Cost Codes

Burden cost codes represent the types of costs that you want to allocate to raw costs. You can use burden cost codes for internal costing, revenue generation, and billing. You can also use burden cost codes to report and account for on burden cost recovery components in Oracle Projects.

Prerequisite

- Define an Expenditure Type for burden cost codes that will be processed as separate, summarized burden transactions. See: Expenditure Types: page 16 – 78.

To define a burden cost code:

1. In the Burden Cost Codes window, enter the Burden Cost Code and a Description.
2. Optionally assign an expenditure type to the burden cost code for creating separate burden transactions.

The expenditure type you enter must have the Burden Transactions expenditure type class assigned to it. (Only expenditure types with the Burden Transactions expenditure type class assigned to them are displayed in the list of values for this field).

3. Save your work.

Fremont defines many burden cost codes that correspond to the company’s burden costs.

<table>
<thead>
<tr>
<th>Burden Cost Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fringe</td>
<td>Employer paid payroll costs, insurance, and pension</td>
</tr>
<tr>
<td>Overhead</td>
<td>Support staff, equipment rental, supplies, building rent, facilities</td>
</tr>
<tr>
<td>G&amp;A</td>
<td>Corporate expenses like corporate staff and marketing</td>
</tr>
<tr>
<td>Materials Handling</td>
<td>Materials handling costs</td>
</tr>
</tbody>
</table>
Burden Structures

Burden structures group cost bases for a given use, and specify what types of raw costs are included in each cost base, and what burden costs are applied to the raw costs in each cost base. Your company may define many different burden structures; for example, you may define one for internal costing, one for revenue generation, and one for billing.

Defining Burden Structures

**Prerequisites**

- Define Expenditure Types. See: Expenditure Types: page 16 – 78.

**To define a burden structure:**

1. In the Burden Structures window, enter a unique name and description for the burden structure.
2. Select Additive if you want to apply each burden cost code assigned to a cost base using the same precedence when calculating burden costs. Additive schedules automatically provide a default value of 1 to each burden cost code in the structure. Select Precedence if you want to specify the order in which each burden cost code in a cost base should be applied to raw costs.
3. Select Allowed if users can use this burden structure when defining a burden schedule override for a project or task. Select Default if you want this burden structure to appear as the default structure for
burden schedule overrides for projects and tasks. You can only select one default structure for burden schedule overrides.

4. Enter the names of the cost bases included in this burden structure. If you need to define additional cost bases, choose the Cost Bases button.

   Suggestion: After you enter a cost base, we recommend that you enter all of the associated expenditure types and burden cost codes for the cost base before you enter the next cost base.

5. Enter the burden cost codes associated with a particular cost base. If you are using a precedence based structure, enter the precedence in which you want to apply each burden cost code to raw costs within the cost base. If you need to define a new burden cost code, choose the New Burden Cost Codes button.

6. Enter the expenditure types associated with a particular cost base. Expenditure types represent the types of raw costs within a cost base.

   Each expenditure type can belong to only one cost base having a type of Burden Cost within each burden structure so that transactions of that expenditure type are not burdened more than once.

   If you do not assign an expenditure type to a cost base, transactions using that expenditure type are not burdened. The burden cost for these transactions equals the raw cost of the transaction.

7. Save your work.

See Also

Effective Dates: page 16 – 24

Copying Burden Structures

When you copy a burden structure, Oracle Projects copies the following assignments from the existing (“From”) structure to the new (“To”) structure:

- Cost base assignments
- Burden cost codes
- Expenditure types
To copy a burden structure:

1. In the Burden Structures window, review the copy from structure to ensure that it contains the information you want to copy to the new structure.
2. Clear the form and create the To structure containing header information only.
3. Save your work.
4. Choose the Copy Structure button. The To field automatically defaults to the current copy To structure.
5. Enter the name of the copy From structure.
6. Choose OK.

Fremont defines two burden structures: one standard corporate labor structure and one structure for building up costs for cost plus processing.

<table>
<thead>
<tr>
<th>Structure</th>
<th>Labor Only Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure Type</td>
<td>Additive</td>
</tr>
<tr>
<td>Structure Usage in Override Schedule</td>
<td>Allowed</td>
</tr>
<tr>
<td>Cost Base = Labor</td>
<td></td>
</tr>
<tr>
<td>Burden Cost Codes</td>
<td>Precedence</td>
</tr>
<tr>
<td>Overhead</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Expenditure Types**
  - Administrative
  - Clerical
  - Other Labor
  - Professional
  - Double Time
  - Time and Half

<table>
<thead>
<tr>
<th>Structure</th>
<th>CP Buildup Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure Type</td>
<td>Precedence</td>
</tr>
<tr>
<td>Structure Usage in Override Schedule</td>
<td>Allowed, Default</td>
</tr>
<tr>
<td>Cost Base = Labor</td>
<td></td>
</tr>
<tr>
<td>Burden Cost Codes</td>
<td>Precedence</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Overhead</td>
<td>10</td>
</tr>
<tr>
<td>Fringe</td>
<td>20</td>
</tr>
<tr>
<td>G&amp;A</td>
<td>30</td>
</tr>
</tbody>
</table>

**Expenditure Types**
- Administrative
- Clerical
- Other Labor
- Professional
- Double Time
- Time and Half

**Cost Base = Materials**

<table>
<thead>
<tr>
<th>Burden Cost Codes</th>
<th>Precedence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials Handling</td>
<td>25</td>
</tr>
<tr>
<td>G&amp;A</td>
<td>30</td>
</tr>
</tbody>
</table>

**Expenditure Types**
- Material

**Cost Base = Expenses**

<table>
<thead>
<tr>
<th>Burden Cost Codes</th>
<th>Precedence</th>
</tr>
</thead>
<tbody>
<tr>
<td>G&amp;A</td>
<td>30</td>
</tr>
</tbody>
</table>

**Expenditure Types**
- Air Travel
- Automobile Rental
- Entertainment
- Equipment Rental
- Lodging
- Meals
- Misc. Travel Expenses
- Other Expenses
- Other Invoice
Burden Schedules

Use the Burden Schedules window to define firm and provisional burden schedules. When you create a schedule, you associate a burden structure to the schedule. You can create an unlimited number of schedules; for example, you may define unique schedules for the different purposes of internal costing, revenue, and invoicing.

You must set up and compile burden schedules for each business group. Burden schedules are shared among operating units associated with the same business group. If organization burden multipliers are not explicitly defined in the Define Burden Schedule window, they will default from the next higher level organization in the Project Burdening Hierarchy defined for the business group.

You assign burden schedules to project types, projects, or tasks; project type assignments provide default schedules to a project. Whenever special multipliers are negotiated for a project, you can create project or task burden schedule overrides with the negotiated burden multipliers.

**Prerequisites**

- Define business groups. See: Business Groups: page 16 – 42.

**Defining Burden Schedules**

To define a burden schedule:

1. In the Burden Schedules window, enter the name and description of the burden schedule you are defining.

   Enter the default burden structure for this schedule, which is automatically used whenever you create a new revision. You can see the structure of a particular revision when you review revision details. You can change the default structure of the schedule at any time. Oracle Projects uses the new default structure for any new
revisions that you create. You can update the default structure to create revisions that use a different burden structure for a given burden schedule.

2. Choose the Type of schedule, either Firm or Provisional.

3. In the Versions region, define revisions. You may have many different revisions of a particular schedule; for example, you may have a schedule revision for each quarter in your fiscal year. You also create schedule revisions when you want to use a new burden structure, enter new burden multipliers, or apply actual rates to provisional multipliers.

The start and end dates for revisions in a provisional schedule must match GL periods. For firm schedules, Oracle Projects provides you with the flexibility to use any date as the start or end date.

Whenever you create a new schedule revision, Oracle Projects automatically closes the previous open revision. The end date defaults to the date preceding the start date of the new revision.

Enable the Hold checkbox if you want to hold this schedule revision from compiling.

Choose the Details button to review the details of a particular revision.

Choose Actual if you want to apply actual multipliers to provisional revisions. See: Applying Actuals: page 16 – 111.

4. In the Multipliers region, enter multipliers for a schedule revision. You also use this region to compile burden multipliers.

Choose Copy to copy multipliers from one schedule revision to a new revision. See: Copying Multipliers: page 16 – 108.

5. Save your work.

6. After you have completed entry of all multipliers, choose Compile to compile new multipliers. When you compile a schedule, Oracle Projects automatically submits the Compile Rate Schedule Revision process. You can also use the Compile All Burden Schedule Revisions process to compile multiple schedules at one time.

See Also

Effective Dates: page 16 – 24
Copying Multipliers

Use the Copy Multipliers window to copy multipliers from one schedule revision to another. Using this feature, you can copy multipliers across schedules and schedule revisions. However, you can only copy multipliers between revisions that use the same burden structure.

**Note:** You must create and save the Copy To revision before you can copy multipliers to the new revision.

Fremont defines different schedules to calculate burden cost for labor costing, internal costing, and billing. Fremont defines three burden schedules:

- Labor Billing Only
- Internal Costing
- Cost Plus Billing

Initially, provisional multipliers are used in the billing schedule. As better estimates are available, Fremont defines new revisions of burden schedules. Fremont defines the labor burden and internal costing schedules with firm multipliers, because the multipliers should not change for the year. Provisional multipliers are ultimately replaced by actual multipliers.

Fremont’s implementation team first defines the standard schedule to use for labor costing on specific indirect projects. This schedule is based on firm multipliers, and consists of two revisions, one for 1993, and one for 1994.

**Burden Schedule for Labor Burden Only**

<table>
<thead>
<tr>
<th>Name</th>
<th>Labor Burden Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Burden schedule for labor costing</td>
</tr>
<tr>
<td>Structure</td>
<td>Labor Only Structure</td>
</tr>
<tr>
<td>Type</td>
<td>Firm</td>
</tr>
</tbody>
</table>

**Revisions**

<table>
<thead>
<tr>
<th>Name</th>
<th>1993 Multipliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date</td>
<td>01–JAN–1993</td>
</tr>
<tr>
<td>End Date</td>
<td>31–DEC–1993</td>
</tr>
</tbody>
</table>
Fremont’s implementation team next defines the standard schedule to use for internal costing of contract and capital projects. This schedule is based on firm multipliers, and consists of one revision.

### Burden Schedule for Labor Costing
- **Name**: Internal Costing
- **Description**: Burden schedule for internal costing
- **Structure**: CP Buildup Structure
- **Type**: Firm

### Revisions
- **Name**: Revision 1
Next, Fremont’s implementation team defines the standard schedule to use for billing. This schedule is based on provisional multipliers, and consists of two schedule revisions: one for each half of the calendar year. Burden costs for Overhead are higher for the Administration group, and lower for other divisions of Fremont Corporation.

**Burden Schedule for Billing**

- **Name**: Cost Plus Billing
- **Description**: Burden schedule for billing purposes
- **Structure**: CP Buildup Structure
- **Type**: Provisional

**Revisions**

- **Name**: 1993–1 Prov Multipliers
  - **Start Date**: 28–DEC–1992
  - **End Date**: 27–JUN–1993

**Multipliers**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Burden Cost Code</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont Corporation</td>
<td>Overhead</td>
<td>1.05</td>
</tr>
<tr>
<td>Fremont Corporation</td>
<td>G&amp;A</td>
<td>0.15</td>
</tr>
<tr>
<td>Fremont Corporation</td>
<td>Fringe</td>
<td>0.35</td>
</tr>
<tr>
<td>Fremont Corporation</td>
<td>Materials Handling</td>
<td>0.05</td>
</tr>
<tr>
<td>Administration</td>
<td>Overhead</td>
<td>1.10</td>
</tr>
</tbody>
</table>
Applying Actuals

You apply actuals by creating an actual schedule revision which replaces one or more provisional revisions. When you apply actual multipliers, the multipliers are applied retroactively to all transactions that were
processed using the provisional revision being replaced. After you apply actual multipliers, you must process existing items to recalculate cost, revenue, or invoice amounts.

**To apply actuals:**

1. In the Burden Schedules window, review the provisional schedule revisions that you want to replace with actual multipliers. Enter an End Date for any open provisional revisions if they do not already have an End Date.
2. Choose the Actual button to navigate to the Apply Actuals window.
3. Create an actual revision by entering a revision name in the Actual Revisions field.
4. Select the specific provisional revisions that you want to replace with the actual revision.
   The effective dates of the actual revision defaults from the earliest provisional revision and the latest provisional revision respectively.
5. Choose OK to return to the Burden Schedules window. Notice that Oracle Projects creates a new revision for the actual revision you specified.
6. Enter actual burden multipliers in the Multipliers region. When you are finished entering actual multipliers, save your changes.
7. Remove the hold placed on the actual revision.
8. Save your work.
9. Choose the Compile button to complete the task.

**Changing Burden Schedules**

You can correct burden multipliers within a schedule revision, or you can create new schedule revisions to correct multipliers. After you create a burden schedule revision, or update your current schedule, you need to compile the multipliers.

**To correct burden multipliers:**

If you need to correct a multiplier within a particular burden schedule revision, you just change the multiplier for the organization and burden cost code. You can correct multipliers for any schedule type.
1. Correct the burden schedule revision by changing multipliers, adding new multipliers, or deleting existing multipliers in the Multipliers region.

2. Choose Compile to compile the new multipliers for the revision.

When you compile the schedule revision, Oracle Projects marks all items that were processed using the burden schedule revision. You must reprocess these items by running the appropriate cost, revenue, and invoice processes.

To create a new revision:

If you do not want to apply corrected multipliers retroactively, but want the new multipliers to affect all expenditure items in the future, create a new schedule revision. You use start and end dates to indicate the time period of the revision.

1. Create a new revision (or copy it from existing revision). Based on the start date of new revision, the old revision is automatically closed with an end date as the date preceding the new revision start date.

2. Enter organizations and multipliers in the Multipliers region.

3. Choose Compile to compile the new schedule revision.

When you compile the schedule revision, Oracle Projects marks all items that were processed using the burden schedule and have an expenditure item date that falls in the new revision’s date range. You must then reprocess these items by running the appropriate cost, revenue, and invoice processes.

View Burdened Costs Window

Use this window to view the total burdened cost for particular project transaction criteria. You can also use this window to test your burden structure and burden schedule implementation.

To use this window, enter values in the first six fields of this window. Then choose Burden to obtain values for total burdened amounts in the Costing, Revenue, and Invoice fields. If the revenue and invoice totals are blank, the project is either an indirect or capital project or the criteria does not use a burden schedule for revenue accrual and invoicing.

To see the burden cost components that make up the total amounts, select the Costing, Revenue, or Invoice checkboxes in the Details region.
You can also view additional information about the burden schedule and burden cost code used to calculate the total burdened amount, such as the input multiplier and the compiled multiplier.
Indirect Costs

You can use Oracle Projects to track all costs your business incurs, including work that is not directly associated with project work.

You define as many indirect projects as you need to record various indirect costs.

Suggestion: Use multiple tasks to organize distinct subcategories of an indirect cost source. For example, if you record employee time off costs in one project, you can define tasks such as Sick Hours, Vacation, and Paid Holidays.

When your employees fill out their weekly timecards, they specify, as applicable, the project and task that corresponds to the appropriate indirect cost.

For example, if an employee takes a sick day during the expenditure week, that employee’s timecard displays the indirect project and task your business uses for time off hours, along with one or more additional projects and tasks on which the employee has worked.

The following examples illustrate how Fremont Corporation defined indirect projects for cost collection:

- Tracking Administrative Labor Costs: page 16 – 115
- Tracking Employee Time Off Costs: page 16 – 117
- Tracking Overtime and Premium Labor Costs: page 17 – 2

Note: In a multi-organization environment, projects are owned by an operating unit. You can define as many indirect projects as you need in each operating unit to record indirect costs.

Tracking Administrative Labor Costs

Fremont Corporation records all labor hours its employees spend on general administrative work in an indirect project.

Fremont generally consolidates a variety of administrative labor hours in one indirect project; occasionally, however, Fremont creates a distinct administrative work project to record hours spent on specific efforts. For example, Fremont created an indirect project to record hours spent on implementing Oracle Applications.

Members of Fremont’s administrative support staff submit weekly timecards showing hours to be charged to the indirect project for
administrative work. In addition, project managers periodically charge hours to this project for the time they spend writing semiannual performance reviews and performing other administrative tasks.

Fremont uses the resulting project information, together with a summary of other expenses such as rent, insurance, and cost of capital, to periodically review its bill rates and markups to ensure that the company is recovering the cost of labor.

Fremont uses the Projects window to enter the following administrative work project.

<table>
<thead>
<tr>
<th>Project</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Admin</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Administrative Work</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>This project is used to record general administrative work. All costs are charged to the cost center of the employee performing the work.</td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Finance</td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td>Permanent</td>
<td></td>
</tr>
<tr>
<td>Public Sector</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Overhead</td>
<td></td>
</tr>
</tbody>
</table>

Define administration tasks

Since Fremont consolidates all administrative labor hours, the Administrative Work project needs only one task:

<table>
<thead>
<tr>
<th>Task</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Number</td>
<td>Admin</td>
<td></td>
</tr>
<tr>
<td>Task Name</td>
<td>Administrative Work</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>This task holds general administrative labor</td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Finance</td>
<td></td>
</tr>
<tr>
<td>Service Type</td>
<td>Administration</td>
<td></td>
</tr>
</tbody>
</table>

Fremont implemented AutoAccounting to use the Administration service type to charge administrative labor to the appropriate expense account.
Tracking Employee Time Off Costs

Fremont Corporation records time off hours in an indirect project. These hours represent one source of Fremont’s overhead costs since Fremont cannot charge the hours directly to a paying customer’s project and, therefore, earns no revenue for them.

When a Fremont employee uses sick, vacation, or holiday benefits, the employee fills out a timecard as usual, but indicates the time off project rather than a direct project on which the employee may also work. Fremont uses different project tasks to distinguish between hours employees record as sick time, vacation time, or holiday time.

Fremont uses the Projects window to enter the following time off project.

<table>
<thead>
<tr>
<th>Project:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
</tr>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Organization</td>
</tr>
<tr>
<td>Status</td>
</tr>
<tr>
<td>Public Sector</td>
</tr>
<tr>
<td>Type</td>
</tr>
</tbody>
</table>

Define time off tasks

Fremont defines three different tasks for the Time Off project to distinguish between sick hours, vacation hours, and holiday hours. Fremont assigns each task a different service type and implements AutoAccounting to use the service type on each task to distribute time off costs to the appropriate expense accounts. See: Defining Service Types: page 16 – 170.
<table>
<thead>
<tr>
<th>Task Number</th>
<th>Sick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Name</td>
<td>Sick Hours</td>
</tr>
<tr>
<td>Description</td>
<td>This task holds all sick hours for Fremont Corporation</td>
</tr>
<tr>
<td>Organization</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Service Type</td>
<td>Sick</td>
</tr>
<tr>
<td>Task Number</td>
<td>Vacation</td>
</tr>
<tr>
<td>Task Name</td>
<td>Vacation Hours</td>
</tr>
<tr>
<td>Description</td>
<td>This task holds all vacation hours for Fremont Corporation</td>
</tr>
<tr>
<td>Organization</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Service Type</td>
<td>Vacation</td>
</tr>
<tr>
<td>Task Number</td>
<td>Holiday</td>
</tr>
<tr>
<td>Task Name</td>
<td>Holiday Hours</td>
</tr>
<tr>
<td>Description</td>
<td>This task holds all holiday hours for Fremont Corporation</td>
</tr>
<tr>
<td>Organization</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Service Type</td>
<td>Holiday</td>
</tr>
</tbody>
</table>

**See Also**

Accounting Transactions for Costs: page 11 – 12
Billing

Complete the following steps to set up Oracle Projects for billing:

- **Define payment terms.** See: Payment Terms: page 16 – 122.
- **Define agreement types.** See: Agreement Types: page 16 – 123.
- **Define bill rate schedules.** See: Bill Rate Schedules: page 16 – 125.
- **Define invoice formats.** See: Invoice Formats: page 16 – 129.
- **Define credit types.** See: Credit Types: page 16 – 142.
- **Define event types.** See: Event Types: page 16 – 143.
- **Implement billing extensions, if needed.** See: Billing Extensions: page 18 – 62.
- **Implement labor billing extension, if needed.** See: Labor Billing Extensions: page 18 – 52.

Billing Cycles

One of the factors that impact invoice generation is how often and on what dates a project is billed. A project’s billing schedule is determined by the company rules, the agreement entered between your company and the customer, and the project type.

You must define billing cycles that fulfill your business needs, and assign a billing cycle to each project. The billing processes derive the next billing date based on the billing cycle definition.

You can define and maintain as many billing cycles as you need. A billing cycle code can optionally call a customized client extension to derive the next billing date.

Defining Billing Cycles

To define a billing cycle:

1. In the Billing Cycles window, specify the billing cycle name, type, value, effective dates, and a description of the billing cycle.
2. Save your work.

See Also

Billing Cycle Extension: page 18 – 122
Components of an Invoice: page 7 – 53
Project Types Window Reference: Billing Information: page 16 – 182
Creating a Project Template: page 2 – 28
Billing Setup: page 2 – 48

Billing Cycles Window Reference

**Name.** Enter a unique, descriptive name for the billing cycle.

**Type.** Select the bill cycle type that you want to associate with the billing cycle. You can choose any predefined billing cycle type:

**Bill Cycle Days**
The cycle is defined by the number of days that elapse between each automatic invoice generation date for a project. The entry you make under Value is the number of days in the cycle.

**Date of Month**
Billing is done on the same day of each calendar month. You enter the bill date under Value.

Bill dates 29 through 31 are valid in some months only. For the months in which the date is invalid, Oracle Projects uses the last day of the month.

**Last Day of Month**
The last day of each calendar month.

**First Day of Month**
The first day of each calendar month.

**Last Weekday of Month**
The last of a particular weekday in each calendar month. You enter the weekday under Value.

**First Weekday of Month**
The first of a particular weekday in each calendar month. You enter the weekday under Value.

**Project Completion Date**
Completion date of the project.
Oracle Projects Setup and Implementation

On the same day of each week. You enter the weekday under Value.

This type is used to indicate that the logic to derive the billing date has been coded in a billing cycle extension. You must customize the billing cycle extension to calculate the billing cycle that you require.

**Value.** Enter the value that completes the information for the billing cycle type you entered. Following are the valid entries, depending on the billing cycle type:

- **Integer**
  For the Bill Cycle Days type, enter an integer greater than or equal to zero.

- **Range 1 through 31**
  For the Date of Month type, enter an integer in the range 1 through 31.

- **Monday through Sunday**
  For the Last Weekday of Month, First Weekday of Month, or Weekday Each Week type, select a weekday. Valid entries are Monday through Sunday.

- **User-Defined**
  For a user-defined billing cycle type, the Value can be anything meaningful for the client extension. Oracle Projects is seeded with three validated values (two date values and one day in the week value). You can specify two additional non-validated values.

  Weekdays are stored in the database as integers 1 to 7 for Monday to Sunday.

**Effective Dates.** Enter the Effective Dates during which the billing cycle is valid.

**Description.** Enter a description for the billing cycle.
Payment Terms

You associate payment terms with your customer invoices to determine your customer’s payment schedule. You specify payment terms when you define agreement types and agreements in Oracle Projects. These payment terms are used for each invoice that is funded by a particular agreement. Payment terms can include discount percents for early payment and due dates for a total invoice or for parts of an invoice.

You use the Oracle Receivables Payment Terms window to define payment terms that reflect your company’s procedures.

See Also

Payment Terms  Oracle Receivables User’s Guide

Agreement Types: page 16 – 123

Since Fremont Corporation uses 30 Net which is predefined, the implementation team does not define any other payment terms.
Agreement Types

Agreement types categorize the various kinds of agreements you negotiate with clients. For example, you can define one agreement type for all verbal agreements and another for all agreements using purchase orders.

If you define an agreement type and limit revenue, any project funded by that agreement type stops accruing revenue and generating invoices when it reaches the revenue limit. If you define an agreement type and do not limit revenue, any project funded by that agreement type issues a warning when the revenue limit is exceeded, but does not stop accruing revenue or generating invoices. This is referred to as a *hard limit* or a *soft limit*.

Defining Agreement Types

**Prerequisite**
- Define Payment Terms. See: Payment Terms: page 16 – 122.

**To define an agreement type:**

1. In the Agreement Types window, enter a Name and Description of the agreement type you want to define.

   If you want payment terms to default when you enter an agreement with this agreement type, enter the Default Terms.

   Enable the Default Revenue Limit option if you want the Hard Limit option of the Agreements widow to be enabled by default when you enter an agreement with this agreement type.

2. Save your work.

**See Also**

Effective Dates: page 16 – 24

Agreement Types Listing: page 9 – 5
Fremont Corporation enforces revenue limits on purchase orders and change orders, since these types of agreements always cover specific work. The retainer letter and service agreement types are defined with a disabled Revenue Limit option, since the exact amount of these kinds of agreements is usually not known immediately. The terms default for all agreements is net payment within 30 days of receiving the invoice.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Terms Default</th>
<th>Revenue Limit Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Order</td>
<td>Customer Purchase Order</td>
<td>30 Net</td>
<td>Enabled</td>
</tr>
<tr>
<td>Change Order</td>
<td>Change to a Purchase Order</td>
<td>30 Net</td>
<td>Enabled</td>
</tr>
<tr>
<td>Retainer Letter</td>
<td>Retainer Letter</td>
<td>30 Net</td>
<td>Disabled</td>
</tr>
<tr>
<td>Service Agreement</td>
<td>Service Agreement</td>
<td>30 Net</td>
<td>Disabled</td>
</tr>
<tr>
<td>Verbal Agreement</td>
<td>Non-Written Agreement</td>
<td>30 Net</td>
<td>Disabled</td>
</tr>
</tbody>
</table>
Bill Rate Schedules

A bill rate schedule maintains the rates and percentage markups over cost that you charge clients for your labor and non–labor expenditures. You can define bill rate schedules for your entire organization, or define separate bill rate schedules for individual business units.

You specify one of the following schedule types for each bill rate schedule you define:

- **Employee** – Use this type to define standard hourly bill rates or percentage markups by employee.
- **Job** – Use this type to define standard hourly bill rates by job title.
- **Non–Labor** – Use this type to define standard bill rates or percentage markups by non–labor expenditure type or non–labor resource. All expenditure types that you want to bill must be enabled. If you want to bill at cost, you must enter a 0% markup.

  **Note:** In a multi–organization environment, each operating unit must have its own bill rates. You can have different bill rates for the same resource in different operating units.

Defining Bill Rate Schedules

**Prerequisites**

- Define Organizations. See: Organizations: page 16 – 34
- Define Expenditure Types. See: Expenditure Types: page 16 – 78.

**To define a bill rate schedule:**

1. In the Bill Rate Schedules window enter a schedule name and a description of the schedule.
2. Specify the organization that uses the schedule.
The organization you enter can be any organization from your organization hierarchy, regardless of whether the organization has the Expenditure Organization classification, and regardless of the start and end dates for the organization.

3. Specify a schedule type.

4. Depending on the schedule type, specify bill rates or markups for employees, job titles, or non-labor expenditure types.

5. Save your work.

**Attention:** Retroactive changes to bill rates and markups do not automatically create adjustments. You need to adjust and recalculate revenue for affected items manually.

---

**See Also**

Standard Bill Rate Schedules Listing: page 9 – 15

Fremont Corporation uses two bill rate schedules based on employees: a standard corporate bill rate schedule, and a special bill rate schedule for hazardous work used only in the Fremont Engineering’s Environmental group.

The first employee bill rate schedule is the Standard schedule.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Fremont Corporation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule</td>
<td>Standard</td>
</tr>
<tr>
<td>Description</td>
<td>Corporate standard bill rates</td>
</tr>
<tr>
<td>Schedule Type</td>
<td>Employee</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employee</th>
<th>Bill Rate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>James Robinson</td>
<td>120/hr</td>
<td></td>
</tr>
<tr>
<td>Donald Gray</td>
<td>140/hr</td>
<td></td>
</tr>
<tr>
<td>Amy Marlin</td>
<td>130/hr</td>
<td></td>
</tr>
</tbody>
</table>

The next employee bill rate schedule is Fremont Engineering’s Hazardous Work schedule.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule</td>
<td>Hazardous Work</td>
</tr>
</tbody>
</table>
Fremont Corporation uses a bill rate schedule based on job for its Construction group, which often bids using block rates for highly competitive jobs.

**Organization**  
Fremont Construction

**Schedule**  
Block Rates

**Description**  
Construction block rate schedule

<table>
<thead>
<tr>
<th>Job</th>
<th>Bill Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Engineer</td>
<td>140/hr</td>
</tr>
<tr>
<td>Staff Engineer</td>
<td>85/hr</td>
</tr>
<tr>
<td>Principal</td>
<td>200/hr</td>
</tr>
<tr>
<td>Staff Clerk</td>
<td>55/hr</td>
</tr>
<tr>
<td>Staff Draftsman</td>
<td>75/hr</td>
</tr>
<tr>
<td>Senior Consultant</td>
<td>150/hr</td>
</tr>
<tr>
<td>Staff Consultant</td>
<td>95/hr</td>
</tr>
<tr>
<td>Principal Consultant</td>
<td>200/hr</td>
</tr>
<tr>
<td>Category</td>
<td>Rate</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Air Travel</td>
<td>5</td>
</tr>
<tr>
<td>Automobile Rental</td>
<td>5</td>
</tr>
<tr>
<td>Personal Auto Use</td>
<td>0.26/mi</td>
</tr>
<tr>
<td>Meals</td>
<td>5</td>
</tr>
<tr>
<td>Entertainment</td>
<td>0</td>
</tr>
<tr>
<td>Other Expense</td>
<td>5</td>
</tr>
<tr>
<td>Computer Services</td>
<td>10/hr</td>
</tr>
<tr>
<td>Computer Services VAX 9000</td>
<td>40/hr</td>
</tr>
<tr>
<td>Computer Services HQ1 Seq</td>
<td>30/hr</td>
</tr>
<tr>
<td>Computer Services Sparc</td>
<td>15/hr</td>
</tr>
<tr>
<td>Vehicle</td>
<td>90/day</td>
</tr>
<tr>
<td>Vehicle Van</td>
<td>70/day</td>
</tr>
<tr>
<td>Field Equipment</td>
<td>8/hr</td>
</tr>
<tr>
<td>Other Asset</td>
<td>20</td>
</tr>
<tr>
<td>Consulting</td>
<td>30</td>
</tr>
<tr>
<td>Construction</td>
<td>40</td>
</tr>
<tr>
<td>Other Invoice</td>
<td>20</td>
</tr>
<tr>
<td>Supplies</td>
<td>10</td>
</tr>
</tbody>
</table>
Invoice Formats

An invoice format determines how Oracle Projects creates an invoice line. In the Invoice Formats window, you can define different formats for labor, non-labor, and retention invoice line items. You can specify how you want to summarize expenditure items, which fields you want an invoice line to display, and the order in which you want each field to appear. You can also include free-form text on an invoice line.

You select a grouping option to specify which expenditure items you want to summarize in an invoice line, and to specify whether an invoice line item is labor, non-labor, or retention. The choice of fields you can display in an invoice line depends on which grouping option you choose.

You select one or more of these fields to appear in one line, specify the start and end position for each field, and whether to right justify the field’s value. You also specify the free-form text you want printed in the invoice line for a Text field.

Oracle Projects predefines numerous grouping options for both labor and non-labor invoice format types.

Defining Invoice Formats

To define an invoice format:

1. In the Invoice Formats window, specify an invoice format name, format type and a grouping option for it. You must also specify a From effective date.
2. Specify start and end positions for each field you want to include in the invoice line and any text that you want to display in the line.
3. Save your work.

See Also

Invoice Printing: page 16 – 134
Invoice Formats Listing: page 9 – 9
Invoice Formats Window Reference

**Name.** Enter a unique, descriptive name for this invoice format.

**Format Type.** Enter a format type for this invoice format. This type controls what invoice formats you see for labor, non-labor, and retention when you enter invoice formats using the *Projects* window. Oracle Projects provides you with the following format types:

- **Labor.** Specify how you want to format labor expenditure items on an invoice line when you bill labor items.
- **Non–Labor.** Specify how you want to format non–labor expenditure items on an invoice line when you bill non–labor items.
- **Retention.** Specify how you want to format invoice lines that include a percentage of retention when you bill your retention amounts.

**Grouping.** Enter a grouping option for this invoice format. You can choose any grouping option available for this invoice format’s type. A grouping option specifies what fields are the primary grouping of items into invoice lines.

**Start Position.** Choose a numeric value between 1 and 240 to specify the start position of where you want the value for this field to appear in an invoice line description.

**End Position.** Choose a numeric value between 1 and 240 to specify the end position of where you want the value for this field to end in an invoice line description.

**Field Name.** Enter the field you want to display on an invoice line for this position. You can choose any invoice line field available for this invoice format’s grouping option. Enter *Text* if you want to enter literal text in this position.

**Text.** Enter the literal text you want Oracle Projects to display as the value for this field in an invoice line for this position. Oracle Projects skips this field unless you have entered *Text* in the previous field.

**Right Justify** Enable this option if you want this field value to appear right justified between the start and end positions you specify. Leave disabled if you do not want this field to appear right justified for this position. Oracle Projects enables this option for all numeric field values. Otherwise, Oracle Projects disables it.
Fremont Corporation uses three labor invoice formats, two non-labor invoice formats, and one invoice format for retention.

### Labor Invoice Formats:

#### Invoice Format

<table>
<thead>
<tr>
<th>Name</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format Type</td>
<td>Labor</td>
</tr>
<tr>
<td>Grouping</td>
<td>Job</td>
</tr>
</tbody>
</table>

#### Invoice Format Details

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Field Name</th>
<th>Text</th>
<th>Right Justify</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>Job</td>
<td></td>
<td>Disabled</td>
</tr>
<tr>
<td>35</td>
<td>50</td>
<td>Total Hours</td>
<td></td>
<td>Enabled</td>
</tr>
<tr>
<td>52</td>
<td>57</td>
<td>Text</td>
<td>Hours</td>
<td>Disabled</td>
</tr>
</tbody>
</table>

#### Invoice Format

<table>
<thead>
<tr>
<th>Name</th>
<th>Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format Type</td>
<td>Labor</td>
</tr>
<tr>
<td>Grouping</td>
<td>Employee</td>
</tr>
</tbody>
</table>

#### Invoice Format Details

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Field Name</th>
<th>Text</th>
<th>Right Justify</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>Employee Full Name</td>
<td></td>
<td>Disabled</td>
</tr>
<tr>
<td>40</td>
<td>50</td>
<td>Billing Title</td>
<td></td>
<td>Disabled</td>
</tr>
<tr>
<td>55</td>
<td>70</td>
<td>Total Hours</td>
<td></td>
<td>Enabled</td>
</tr>
<tr>
<td>72</td>
<td>77</td>
<td>Text</td>
<td>Hours</td>
<td>Disabled</td>
</tr>
</tbody>
</table>

#### Invoice Format

<table>
<thead>
<tr>
<th>Name</th>
<th>Job by Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format Type</td>
<td>Labor</td>
</tr>
<tr>
<td>Grouping</td>
<td>Top Task, Job</td>
</tr>
</tbody>
</table>

#### Invoice Format Details

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Field Name</th>
<th>Text</th>
<th>Right Justify</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>Top Task Name</td>
<td></td>
<td>Disabled</td>
</tr>
</tbody>
</table>
### Non–Labor Invoice Formats:

**Invoice Format**

<table>
<thead>
<tr>
<th>Name</th>
<th>Expenditure Type</th>
<th>Format Type</th>
<th>Non–Labor</th>
<th>Grouping</th>
<th>Expenditure Type</th>
</tr>
</thead>
</table>

**Invoice Format Details**

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Field Name</th>
<th>Text</th>
<th>Right Justify</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>Expenditure Type</td>
<td></td>
<td>Disabled</td>
</tr>
<tr>
<td>35</td>
<td>40</td>
<td>Total Amount</td>
<td></td>
<td>Enabled</td>
</tr>
<tr>
<td>42</td>
<td>50</td>
<td>Units</td>
<td></td>
<td>Disabled</td>
</tr>
</tbody>
</table>

**Invoice Format**

<table>
<thead>
<tr>
<th>Name</th>
<th>Expenditure Type by Task</th>
<th>Format Type</th>
<th>Non–Labor</th>
<th>Grouping</th>
<th>Expenditure Type by Task</th>
</tr>
</thead>
</table>

**Invoice Format Details**

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Field Name</th>
<th>Text</th>
<th>Right Justify</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>Top Task Name</td>
<td></td>
<td>Disabled</td>
</tr>
<tr>
<td>35</td>
<td>50</td>
<td>Expenditure Type</td>
<td></td>
<td>Enabled</td>
</tr>
<tr>
<td>55</td>
<td>60</td>
<td>Non–Labor Resource</td>
<td></td>
<td>Disabled</td>
</tr>
<tr>
<td>62</td>
<td>67</td>
<td>Total Amount</td>
<td></td>
<td>Enabled</td>
</tr>
<tr>
<td>70</td>
<td>75</td>
<td>Units</td>
<td></td>
<td>Disabled</td>
</tr>
</tbody>
</table>

**Retention Invoice Formats:**

**Invoice Format**

<table>
<thead>
<tr>
<th>Name</th>
<th>Retention Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format Type</td>
<td>Retention</td>
</tr>
<tr>
<td>Grouping</td>
<td>Retention</td>
</tr>
</tbody>
</table>

**Invoice Format Details**

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Field Name</th>
<th>Text</th>
<th>Right Justify</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Retention Percentage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start</td>
<td>End</td>
<td>Field Name</td>
<td>Text</td>
<td>Right Justify</td>
</tr>
<tr>
<td>-------</td>
<td>-----</td>
<td>--------------------</td>
<td>-----------</td>
<td>---------------</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>Retention Percentage</td>
<td>Enabled</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>Text</td>
<td>% Retention</td>
<td>Disabled</td>
</tr>
</tbody>
</table>
Determining Your Invoice Printing Method

Oracle Projects provides you with powerful methods to create, adjust, and review invoices. When the invoices are approved and ready to bill, you print them to send to your clients. Formatting and printing invoices is an important step in the invoicing flow; your clients must accept the format of your invoices along with the content before they will pay the invoice.

You should determine your company’s invoice printing strategy as part of your implementation process.

Considerations for your Company’s Invoice Printing Strategy

Company requirements and constraints

You need to consider your company’s invoice printing requirements and constraints as factors in formulating an appropriate invoice printing strategy for your company. These considerations may include:

- the groups in your organization that create and print invoices
- the printers and types of printers available for printing invoices
- the preformatted paper that your company uses to print invoices
- the frequency of creating and printing invoices in your organization
- the timing of invoice printing in the invoicing flow
- the different types of invoice layouts required by groups in your company or for certain types of projects
- the exact layout of the invoice, including the header and detail regions, when printed on paper
- the detail backup reports required for invoicing

With this information, you can begin considering your options for developing how your company will print invoices.

Oracle Applications printing options

Oracle Projects interfaces invoices to Oracle Receivables for printing. You can print invoices from Oracle Projects or from Oracle Receivables. Oracle Receivables provides an invoice printing program. You should examine the format of the Oracle Receivables invoices and the invoice
You can print invoices from Oracle Projects. To do this, you need to write a custom invoice printing program. The benefits of printing invoices from Oracle Projects rather than Oracle Receivables is that you can print invoices once they are released in Oracle Projects without waiting until the invoices are interfaced to Oracle Receivables.

You may create a custom report which you use to download released invoices data from Oracle Projects into a spreadsheet, word processor, or any other tool to do flexible formatting.

**Attention:** If you print or download invoices from Oracle Projects, you should process only released invoices. With this precaution, you ensure that the invoice is not changed after it is printed. Invoices cannot be changed once they are released in Oracle Projects; the released invoices may be credited but not changed.

**Suggestion:** If you print or download invoices from Oracle Projects, you can record the date that the invoice is processed using the *Extracted Date* column in the draft invoices table. Oracle Projects does not currently use this column.

If you tax some invoice lines, you must print invoices with taxable lines after the invoices are interfaced to Oracle Receivables because the Oracle Receivables AutoInvoice program calculates the tax for taxable invoice lines of Oracle Projects invoices. You can print the invoices from Oracle Receivables or from Oracle Projects. If you print from Oracle Projects, you need to report the tax data from the Oracle Receivables invoice tables.

If you want to print the remit to address on the invoice, you must print invoices after the invoices are interfaced to Oracle Receivables because Oracle Receivables determines the remit to address for invoices.

**Invoice Formats as Part of Your Company’s Invoice Printing Solution**

All of these invoice printing strategies, which use different applications and different tools, rely on the invoice data that is created in Oracle Projects. You can control the format of the invoices using invoice formats. You should consider the definition of your invoice formats as part of your invoice printing solution.

The sections below describe what an invoice format is, how to define and use invoice formats, how the Generate Draft Invoice process uses invoice formats to select and group expenditure items on an invoice line.
Some sample invoice formats and the resulting invoice lines are also illustrated.

**What is an invoice format?**

An invoice format determines how Oracle Projects creates an invoice line for a project that is billed based on time and materials. You can define different formats for labor, non-labor, and retention invoice line items. You can specify how you want to summarize expenditure items, which fields you want an invoice line to display, and the order in which you want each field to appear. You can also include free-form text in an invoice line.

You define invoice formats in Oracle Projects which will create invoice lines formatted in a way that meets your business needs. The invoice lines can then be printed, subtotaled, and totalled in the detail region when you print the invoice.

**Defining Invoice Formats**

Before you define invoice formats, you must consider your business requirements for invoice formatting, particularly:

- the layout of the invoice, including the header and detail regions, when printed on paper
- the different types of invoice layouts required by groups in your company or for certain types of projects

You can define different formats for labor, non-labor, and retention invoice lines. You can define as many invoice formats as you need for different types of projects or organizations.

You need to determine if your company’s taxing requirements affect your invoice formats. You may need to define invoice formats to tax specific invoice lines. See: Applying Tax to Project Invoices: page 17 – 64.

When you define contract project types during implementation, you specify default invoice formats for labor and non-labor invoice lines. These invoice formats provide default values to all projects that are classified by the project type. See: Invoice Formats: page 16 – 129 and Project Types: page 16 – 177.

**Using Invoice Formats**

When you enter a contract project, the invoice formats are defaulted from the project type that you selected for the project. You can override
the default invoice formats in the Projects form using any of the formats defined during implementation.

When you generate invoices for the project, the Generate Draft Invoice process looks to the project to determine which format to use when grouping expenditure items on an invoice.

**Processing Invoice Lines Using Invoice Formats**

The Generate Draft Invoice process performs the following steps to create invoice lines:

- Selects eligible expenditure items for invoicing
- Groups selected expenditure items according to the grouping defined for a project’s invoice format
- Selects expenditure item information and adds text objects to produce final invoice lines as determined by the invoice format detail on the project invoice format

Figure 16 – 4 illustrates how you can create and format invoice lines.

Before the expenditure items are processed for billing, Generate Draft Invoice sets the job, job title, and employee billing title for all labor items for easier processing of invoice formats.
Creating and Formatting Invoice Lines

Figure 16 – 4 Creating and Formatting Invoice Lines

Sample Expenditure Item Lines:
- / James Robinson / Senior.Consultant / Task 1.0.1 / Labor / 8 Hours / San Francisco...
- / Amy Marlin / Staff Engineer / Task 3.4.2 / Expenses / 34.27 Dollars / Salt Lake City...
- / Anthony Patch / Van – 2x12 / Asset / 214 Miles / Seattle...
- / James Robinson / Senior.Consultant / Task 1.0.1 / Labor / 3 Hours / San Francisco...
- / Amy Marlin / Staff Engineer / Task 3.4.2 / Labor / 6 Hours / Salt Lake City...

Sample Expenditure Item Lines:
(Grouping of Invoice Format = ‘Employee’, Format Type = ‘Labor’):
- / James Robinson / Senior.Consultant / Task 1.0.1 / Labor / 8 Hours / Salt Lake City...
- / James Robinson / Senior.Consultant / Task 1.0.1 / Labor / 3 Hours / San Francisco...
- / James Robinson / Senior.Consultant / Task 1.0.1 / Labor / 3 Hours / San Francisco...

EXPENDITURE ITEM INFORMATION

Employee Last Name Job Total Hours Hrs @ $ Bill Rate

Marlin, Staff Engineer 6.00 Hrs @ $135.00
Robinson, Senior Consultant 11.00 Hrs @ $250.00

Invoice Formats – Sample Invoice Lines

The invoice formats of three sample projects are listed below along with the resulting invoice lines created from the expenditure items invoiced on the project. You can study these sample invoice formats and resulting invoice lines to help you determine how to define your company’s invoice formats.
### Project A

#### Labor Invoice Format

Grouping: Employee  
Invoice Detail: Employee Last Name, Employee First Name, Job, Total Hours, Hrs @ $ Bill Rate

#### Non-Labor Invoice Format

Grouping: Expenditure Type  
Invoice Detail: Expenditure Type, Total Amount, Units

#### Retention Invoice Format

Grouping: Retention  
Invoice Detail: Retention Percentage, % Retention

#### Sample Invoice Line Items:

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Bill</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlisle , Jeff Senior Consultant</td>
<td>45.0 Hrs @ $</td>
<td>180.00</td>
</tr>
<tr>
<td>Connors , Zach Staff Consultant</td>
<td>12.5 Hrs @ $</td>
<td>100.00</td>
</tr>
<tr>
<td>Martin , Amy Principal Consultant</td>
<td>20.0 Hrs @ $</td>
<td>200.00</td>
</tr>
<tr>
<td>Computer Services</td>
<td>54.00 Hours</td>
<td>540.00</td>
</tr>
<tr>
<td>10% Retention</td>
<td></td>
<td>-1389.00</td>
</tr>
</tbody>
</table>

Total Amount 12501.00
## Project B

### Labor Invoice Format

Grouping: Work Site, Job  
Invoice Detail: Site: **Work Site City**  Services Level: **Job**  Hours: **Total Hours**

### Non-Labor Invoice Format

Grouping: Work Site, Category, Type  
Invoice Detail: Site: **Work Site City**  Expenditure Type  Non-Labor Resource  Total Amount  Units

### Sample Invoice Line Items:

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Bill</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site: Pittsburgh  Services Level: Principal Draftsman  Hours: 16.5</td>
<td></td>
<td>3712.50</td>
</tr>
<tr>
<td>Site: Pittsburgh  Services Level: Staff Consultant  Hours: 10.5</td>
<td></td>
<td>1417.50</td>
</tr>
<tr>
<td>Site: Salt Lake City  Services Level: Staff Consultant  Hours: 8.0</td>
<td></td>
<td>1080.00</td>
</tr>
<tr>
<td>Site: San Francisco  Services Level: Senior Engineer  Hours: 22.0</td>
<td></td>
<td>3890.00</td>
</tr>
<tr>
<td>Site: San Francisco  Services Level: Staff Consultant  Hours: 13.0</td>
<td></td>
<td>1755.00</td>
</tr>
<tr>
<td>Site: San Francisco  Services Level: Principal Draftsman  Hours: 18.0</td>
<td></td>
<td>4090.00</td>
</tr>
<tr>
<td>Site: Salt Lake City  Computer Services  PC  1.00  Hours</td>
<td></td>
<td>10.00</td>
</tr>
<tr>
<td>Site: San Francisco  Computer Services  386 Laptop  2.00  Hours</td>
<td></td>
<td>30.00</td>
</tr>
<tr>
<td>Site: San Francisco  Computer Services  PC  8.00  Hours</td>
<td></td>
<td>80.00</td>
</tr>
<tr>
<td>Site: San Francisco  Computer Services  Sparc  6.50  Hours</td>
<td></td>
<td>325.00</td>
</tr>
</tbody>
</table>

**Total Amount**: 16310.00
Project C

Labor Invoice Format

<table>
<thead>
<tr>
<th>Grouping</th>
<th>Top Task</th>
<th>Employee</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Invoice Detail</th>
<th>Top Task Number</th>
<th>Top Task Name</th>
<th>Employee Full Name</th>
<th>Total Hours</th>
<th>Hours at the hourly rate of $</th>
<th>Bill Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Labor Invoice Format</td>
<td>Top Task Number</td>
<td>Top Task Name</td>
<td>--</td>
<td>Expenses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sample Invoice Line Items:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Bill Amount</th>
</tr>
</thead>
</table>

| 2.0 | Analysis | Marlin, Ms. Amy T. | 8.0 Hours at the hourly rate of $135.00 | 1080.00 |
| 2.0 | Analysis | Robinson, Mr. James A. | 10.5 Hours at the hourly rate of $175.00 | 1837.50 |
| 3.0 | Design | Connors, Mr. Zach | 16.5 Hours at the hourly rate of $135.00 | 2160.00 |
| 3.0 | Design | Robinson, Mr. James A. | 18.0 Hours at the hourly rate of $175.00 | 3150.00 |
| 2.0 | Analysis | -- | Expenses | 325.00 |
| 3.0 | Design | -- | Expenses | 687.00 |

Total Amount 9239.50
Credit Types

Oracle Projects lets you award different kinds of revenue credit to your employees, such as sales credit, marketing credit, or quota credit. You can credit one or more employees for a specific project or task.

For example, if you want to credit an employee for bringing in a contract in a market sector for which you currently have few or no projects, you can define a credit type with a name such as Diversity Credit. After you define the project, you specify the employee as a credit receiver of Diversity Credit.

Defining Credit Types

To define a credit type:

1. In the Credit Types window, enter the credit type and its description.
2. Save your work.

See Also

Transferring Sales Credit to Oracle Receivables: page 17 – 59
Effective Dates: page 16 – 24
Credit Types Listing: page 9 – 8

Fremont Corporation awards Marketing Credit to a marketing staff member who generates a lead. Fremont also awards Quota Credit to a staff member who brings in a project.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Credit</td>
<td>Credit for generating leads</td>
</tr>
<tr>
<td>Quota Credit</td>
<td>Credit for acquiring a project</td>
</tr>
</tbody>
</table>
Event Types

Unlike labor costs or other billable expenses, a bonus your business receives for completing a project ahead of schedule is not attributable to any expenditure item.

In these cases, you use an event, rather than an expenditure item, to account for a bonus or other sum of money. An event is an entry assigned to a top task or project that generates revenue and/or billing activity, but is not directly related to any expenditure items.

You classify events by event type. When you define an event type, you assign it one of the predefined classifications. When you enter an event, its event type classification determines how the event affects revenue and billing for a particular project.

You can define as many event types as you need, but you cannot create additional classifications.

Defining Event Types

To define an event type:

1. In the Event Types window, specify an event type, a description of the event, a revenue category, and a event type class.
2. Save your work.

See Also

Event Types Listing: page 9 – 8
Automatic Events: page 18 – 64

Event Types Window Reference

Event Type. Enter a unique, descriptive name for this event type.

Revenue Category. Enter the revenue category that you want to associate with this event type.

Class. Enter a classification for this event type to determine how an event affects the revenue and billing for a particular project. Oracle Projects provides you with the following classifications:
• **Automatic.** An *Automatic* classification generates an automatic event for revenue or invoice amounts that may be positive or negative, depending on your implementation of billing extensions. See: Billing Extensions: page 18 – 62.

• **Deferred Revenue.** A *Deferred Revenue* classification generates an invoice for the amount of the event, and has no immediate effect on revenue.

• **Invoice Reduction.** An *Invoice Reduction* classification reduces the amount of an invoice without affecting revenue. For example, you can use an invoice reduction event to give a discount to a customer on a particular invoice.

• **Manual.** A *Manual* classification allows you to enter both a revenue amount and a bill amount. These two amounts can be different. Classify an event type as manual when you need to indicate different revenue and bill amounts.

• **Scheduled Payment.** A *Scheduled Payment* classification generates an invoice for the amount of the event. Oracle Projects marks expenditure items on the project being invoiced on a first–in first–out (FIFO) basis up to the amount of the event. When you use this classification, you can show details on an invoice even though the details are not used to calculate the bill amount.

  **Attention:** The *Scheduled Payment* classification may be used only if the project uses Event based billing.

• **Write–On.** A *Write–On* classification causes revenue to accrue for the amount of the write–on. A Write–On also adds the write–on amount to the subsequent invoice. Revenue and invoice amounts are identical. For example, when your business earns a bonus for completing a project on time or under budget, you can define an event type with the Write–On classification to account for the bonus amount. A write–on causes revenue to accrue and generates an invoice to bill your client for the bonus amount.

• **Write–Off.** A *Write–Off* classification reduces revenue by the amount of the write–off.

Table 16 – 6 describes how each event type classification affects revenue and billing.
<table>
<thead>
<tr>
<th>Classification</th>
<th>Revenue Effect</th>
<th>Billing Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic</td>
<td>Depends on billing extension definition</td>
<td>Depends on billing extension definition</td>
</tr>
<tr>
<td>Deferred Revenue</td>
<td>No effect</td>
<td>Bill for amount of event</td>
</tr>
<tr>
<td>Invoice Reduction</td>
<td>No effect</td>
<td>Reduce a bill by amount of event</td>
</tr>
<tr>
<td>Manual</td>
<td>Accrue amount of event</td>
<td>Bill for amount of event</td>
</tr>
<tr>
<td>Scheduled Payment</td>
<td>No effect</td>
<td>Bill for amount of event, FIFO</td>
</tr>
<tr>
<td>Write-Off</td>
<td>Reduce by amount of event</td>
<td>No effect</td>
</tr>
<tr>
<td>Write-On</td>
<td>Accrue amount of event</td>
<td>Bill for amount of event</td>
</tr>
</tbody>
</table>

Table 16 – 6 Event Type Classifications (Page 1 of 1)

Fremont Corporation uses all of the event type classifications to account for a number of situations. Fremont assumes most event revenue is from labor, and they want to track revenue from these event types as variations to labor revenue: Cost-to-Cost revenue, Bonus, and Write-Off.

<table>
<thead>
<tr>
<th>Event Name</th>
<th>Description</th>
<th>Classification</th>
<th>Revenue Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonus</td>
<td>Performance bonus</td>
<td>Write–On</td>
<td>Labor</td>
</tr>
<tr>
<td>Cost–to–Cost Revenue</td>
<td>Cost–to–cost revenue</td>
<td>Automatic</td>
<td>Labor</td>
</tr>
<tr>
<td>Fee</td>
<td>Fee earned</td>
<td>Automatic</td>
<td>Fee</td>
</tr>
<tr>
<td>Invoice Reduction</td>
<td>Invoice reduction</td>
<td>Invoice Reduction</td>
<td>Payment</td>
</tr>
<tr>
<td>Manual</td>
<td>Manual event</td>
<td>Manual</td>
<td>Fee</td>
</tr>
<tr>
<td>Milestone</td>
<td>Progress payment</td>
<td>Scheduled Payment</td>
<td>Payment</td>
</tr>
<tr>
<td>Payment</td>
<td>Scheduled payment</td>
<td>Scheduled Payment</td>
<td>Payment</td>
</tr>
<tr>
<td>Prebill</td>
<td>Advance payment</td>
<td>Deferred Revenue</td>
<td>Payment</td>
</tr>
<tr>
<td>Retainer</td>
<td>Retainer payment</td>
<td>Deferred Revenue</td>
<td>Payment</td>
</tr>
</tbody>
</table>
Setting Up Cost–to–Cost Revenue

If your company uses the cost–to–cost billing method (denoted by a distribution rule of COST), you need to assign a default event type to the predefined billing extensions of Cost–to–Cost Revenue and Cost–to–Cost Invoice. Oracle Projects automatically calls and executes two predefined billing extensions for cost–to–cost revenue accrual and invoicing methods. Oracle Projects creates automatic events for the revenue and invoice amounts.

Assigning Event Types

Prerequisite


To Assign Event Types For Cost–to–Cost Revenue:

1. In the Billing Extensions window, query the two billing extensions and assign an event type to the Default Event Type field.
2. Save your work.

Assigning Budget Types

You can change the cost and revenue budget types used as input for this extension. For example, you can use the forecast cost budget instead of the approved cost budgets. To make this change, change the cost budget type and revenue budget type on the predefined billing extension.

See Also

Effective Dates: page 16 – 24

Overview of Billing Extensions: page 18 – 63
Fremont Corporation assigns the automatic event type of *Cost-to-Cost Revenue* to the two predefined billing extensions, *Cost-to-Cost Revenue* and *Cost-to-Cost Invoice*. 
Setup Requirements for Percent Complete Revenue and Invoicing

To generate revenue or draft invoices using percent complete, you must complete the following steps:

Billing Extension:

- You must create two event types with the event class *automatic* (one for revenue and one for invoicing), and associate each with one of the following predefined billing extensions, depending on whether you are generating revenue or invoices:
  - Percent Complete Revenue
  - Percent Complete Invoicing

Project Setup:

- The revenue distribution rule for the project must be one of the following rules:
  - Use the Event/Work rule if you want to accrue revenue based on percent complete.
  - Use the Work/Event or Cost/Event rule if you want to generate invoices based on percent complete.
  - Use the Event/Event rule if you want to both accrue revenue and generate invoices based on percent complete.
- You must enter percent complete at the funding level.
- The billing extensions are predefined to be assigned to the project (Project Specific attribute = Yes). If you want to assign an extension to the project type, you can make a copy of the predefined extension and then change the Project Specific attribute to No. You then assign the extension to the appropriate project types. You may also want to deactivate the predefined extensions by setting the end date.
You complete the following steps for budget definitions:

- **Define budget types.** See: Define Budget Types: page 16 – 149.
- **Define budget entry methods.** See: Budget Entry Methods: page 16 – 150.
- **Define resource lists.** See: Resources and Resource Lists: page 16 – 155.

### Budget Types

Budget types identify the different kinds of budgets that you enter for your projects. Every project budget that you enter is classified by a budget type.

Each budget type is defined as either a cost budget type or a revenue budget type. For budgets using cost budget types, you can enter quantities, raw cost, and burdened costs. For budgets using revenue budget types, you can enter quantities and revenue amounts.

You can use any budget type for project status tracking.

Oracle Projects predefines four budget types:

- Approved Cost Budget
- Approved Revenue Budget
- Forecast Cost Budget
- Forecast Revenue Budget

You can define additional budget types during implementation. For example, your company may want to create a separate budget from the Approved Cost Budget to track “what if” scenarios for future project alternatives.

### Defining Budget Types

1. Navigate to the Budget Types window.
2. Enter a unique name and description for the budget type and whether the budget is a cost or revenue budget type. This affects what amounts you can enter for the budget.


4. Select Cost Budget or Revenue Budget as the Amount Type.

5. If you want to enable Workflow for the budget type, check the Use Workflow for Budget Status Change check box. See: Integrating with Oracle Workflow: page 12 – 81.

6. Save your work.

<table>
<thead>
<tr>
<th>Name</th>
<th>Amount Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forecast at Completion</td>
<td>Cost Budget</td>
</tr>
</tbody>
</table>

Fremont Corporation defines one additional budget type to track the forecast cost budget. Each project manager can enter the forecasted budget amount at completion using this budget type.

**Budget Entry Methods**

Budget entry methods specify and control how you can enter a budget, including these options:

- what level in the work breakdown structure that you enter the budget
- what time period you use for budgeting, if any
- whether you enter budget amounts by categories (resources)
- what budget amounts you enter for the budget

Budget entry methods simplify budget entry by leading you through the budget entry windows to enter the data that you need.

Budget entry methods also provide a way to enforce consistent budget entry across similar projects, which facilitates cross-project reporting.

You select a budget entry method when you create a draft for a project. You also specify the default budget entry method for each project type.

Oracle Projects predefines three budget entry methods:

- By lowest tasks and Date Range, Categorized by Resources
- By lowest tasks and GL Period, Categorized by Resources
• By lowest tasks and PA Period, Categorized by Resources

You can define additional budget entry methods during implementation.

Defining Budget Entry Methods

To define a budget entry method:

1. Navigate to the Budget Entry Methods window.
2. Enter the name of the budget entry method.
3. Select the entry level. The entry level can be project, top tasks, lowest tasks, or top and lowest tasks.
4. Select Categorized by Resources if you want the budget to be categorized.
5. Select the time phased type. The choices are Date Range, GL Period, PA Period, or None.
6. Select the enterable fields from the displayed list.
7. Save your work.

See Also

Effective Dates: page 16 – 24
Entering a Budget Draft: page 3 – 15

Fremont Corporation defines the following budget entry methods which address the various budgeting requirements of their projects. The following two budget entry methods are used for projects that track budgets at a detail level using lowest level tasks or top tasks and PA periods. This is a company policy for all capital and contract projects.

<table>
<thead>
<tr>
<th>Name</th>
<th>Lowest Task by PA Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Level</td>
<td>Lowest Task</td>
</tr>
<tr>
<td>Categorized by Resource</td>
<td>Yes</td>
</tr>
<tr>
<td>Time Phased By</td>
<td>PA Period</td>
</tr>
</tbody>
</table>
Fremont defines the next budget entry method for use in indirect projects, which are allowed to have non–categorized amounts at the project level, but must be defined by GL period.

<table>
<thead>
<tr>
<th>Name</th>
<th>Project by GL Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Level</td>
<td>Project</td>
</tr>
<tr>
<td>Categorized by Resource</td>
<td>Yes</td>
</tr>
<tr>
<td>Time Phased By</td>
<td>GL Period</td>
</tr>
<tr>
<td>Cost Enterable Fields</td>
<td>Quantity, Raw Cost, Burdened Cost</td>
</tr>
<tr>
<td>Revenue Enterable Fields</td>
<td>None</td>
</tr>
</tbody>
</table>

Fremont defines the next two budget entry methods to record the forecast budget for all projects. The forecast budget can be entered at either the project or top task levels.

<table>
<thead>
<tr>
<th>Name</th>
<th>Project at Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry Level</td>
<td>Project</td>
</tr>
<tr>
<td>Categorized by Resource</td>
<td>No</td>
</tr>
<tr>
<td>Time Phased By</td>
<td>None</td>
</tr>
<tr>
<td>Cost Enterable Fields</td>
<td>Quantity, Raw Cost, Burdened Cost</td>
</tr>
<tr>
<td>Revenue Enterable Fields</td>
<td>Revenue</td>
</tr>
</tbody>
</table>
Fremont defines the next two budget entry methods for use with revenue budgets on contract projects that use cost plus contracts. These budget entry methods require entry of budget categories. For cost plus projects, project users need to define the fee component of the revenue budget for use in the fee calculation. Fremont defines two entry methods to accommodate both project level funding and top task funding.

These two budget entry methods may also be used for forecast budgets.

<table>
<thead>
<tr>
<th>Name</th>
<th>Top Task Level by Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entry Level</strong></td>
<td>Project</td>
</tr>
<tr>
<td><strong>Categorized by Resource</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Time Phased By</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Cost Enterable Fields</strong></td>
<td>Quantity, Raw Cost, Burdened Cost</td>
</tr>
<tr>
<td><strong>Revenue Enterable Fields</strong></td>
<td>Revenue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Project Level by Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entry Level</strong></td>
<td>Project</td>
</tr>
<tr>
<td><strong>Categorized by Resource</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Time Phased By</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Cost Enterable Fields</strong></td>
<td>Quantity, Raw Cost, Burdened Cost</td>
</tr>
<tr>
<td><strong>Revenue Enterable Fields</strong></td>
<td>Revenue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Top Task Level by Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entry Level</strong></td>
<td>Top Task</td>
</tr>
<tr>
<td><strong>Categorized by Resource</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Time Phased By</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Cost Enterable Fields</strong></td>
<td>Quantity, Raw Cost, Burdened Cost</td>
</tr>
<tr>
<td><strong>Revenue Enterable Fields</strong></td>
<td>Revenue</td>
</tr>
</tbody>
</table>
Budget Change Reasons

You can define budget change reasons used to record why a budget changed. You can enter a budget change reason for a budget version as well as for individual budget lines.

Defining Budget Change Reasons

To define a budget change reason:

1. Navigate to the Budget Change Reasons window.
2. Enter the name, description of the budget change reason.
3. Save your work.

See Also

Effective Dates: page 16 – 24

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Entry Error</td>
<td>Change due to data entry error</td>
</tr>
<tr>
<td>Estimating Error</td>
<td>Error in initial estimating</td>
</tr>
<tr>
<td>Scope Change</td>
<td>Change in project scope</td>
</tr>
<tr>
<td>Burden Multiplier Change</td>
<td>Change in burden multipliers</td>
</tr>
</tbody>
</table>
Resources and Resource Lists

To effectively manage your projects, you must track the activities and resources used on the project.

- Activities of a project are tasks, which are defined in a work breakdown structure, needed to track project work. See: Overview of Projects and Tasks: page 2 – 2
- Resources are labor, services, materials, equipment, and other amounts needed to track, complete, and account for project work

You use resources in Oracle Projects for budgeting and summarization of actuals and commitments for project status tracking.

Note: You must set up resource lists for each business group. Resource lists are shared among operating units associated with the same business group. You can define a resource list by copying it from an existing resource list in the same business group.

Refer to the following sections to set up resources and resource lists:


See Also

Overview of Project Budgets: page 3 – 2
Project Status Inquiry: page 8 – 2
Defining Resource Lists: page 16 – 159
Case Study: Summary Amounts for Reporting: page 18 – 141

Overview of Resources and Resource Lists

This section provides an overview of how you define and use resources in Oracle Projects.
Resources
You use resources as flexible groupings by which you want to
• Budget
• Summarize actuals

You can define resources as employees, organizations, jobs, suppliers, expenditure categories, revenue categories, expenditure types, or event types.

Resource Lists
Your company has a unique way that it uses and tracks similar types of resources for similar kinds of project work. You can define resource lists to create a set of similar resources that you typically use on specific kinds of project work.

You can define a simple list of resources or a two level hierarchy of resource groups and resources. You can select the resource groups as either expenditure categories or revenue categories. The two level hierarchy of resources allows you to budget and review actuals at a higher level using the resource group and then you can drill down to the resources for more details. Oracle Projects summarizes actuals and commitments using the lowest level in the resource list and then rolls up the amounts to the resource group. You can budget using either the resource group or the resource.

You can define different types of resources below each resource group. For example, you may create resources of employees and jobs for the Labor expenditure category, resources of Suppliers under Outside Services, and expenditure types under all other expenditure categories. This type of flexibility allows you to define different types of resources below each resource group as required to best track the actuals under that resource group.

You can define lists of resources which classify the budget and actuals in different ways. Resource lists provide multiple roll up structures for summarizing actuals and commitments for cross project reporting. For example, you may define one resource list by employee and another by job for reviewing actuals using different roll ups.

See Also

Overview of Project Budgets: page 3 – 2
Resource Lists Window Reference

When you define a resource list, you specify the following values:

Resource List

**Name**  Enter a unique name that identifies the resource list.

**Group Resources By**  You can group resources by expenditure category, revenue category, or neither.

If you have selected to group resources by expenditure category or revenue category, then you must enter the resource groups. If you have selected not to use grouping, then you skip the resource groups region and directly enter your resources.

Resource Groups

**Group**  Select expenditure categories or revenue categories as your resource groups. You should include all expenditure categories or revenue categories in your resource list.

**Alias**  Enter an alias name for the resource group which is displayed when you are budgeting and viewing project status.

**Order**  Specify the order in which you want to view the resource groups in Project Status Inquiry. This allows you to order the categories with the highest visibility first. For example, if Labor is your primary cost, you may choose to display the Labor expenditure category as the first resource group, followed by Travel and Outside Services expenditure categories.

**Enabled**  You can disable the resource group so that Oracle Projects does not allow entry of budgets using the resource group, nor use it when summarizing actuals by resources below that resource group.

Resources

**Type**  Select the type of resource that you want to enter. You can choose from the following resources:

- Employee
• Job
• Organization
• Supplier
• Expenditure Type
• Event Type
• Expenditure Category
• Revenue Category

**Resource** Choose a resource from the list of values for the resource type.

**Alias** Enter an alias name for the resource which is displayed when you are budgeting and viewing project status.

**Order** Specify the order by which you want to view the resources in Project Status Inquiry. This allows you to order the resources with the highest visibility first. For example, you may want to display more senior jobs first so you order the resources of job in the following order: Principal Consultant, Senior Consultant, Staff Consultant.

**Enabled** You can disable the resources so that Oracle Projects does not allow entry of budgets using the resource, nor use it when summarizing actuals by resources.

**Identifying Labor Resources**

Oracle Projects automatically determines which resources and resource groups in a resource list are labor resources. Resources that are tracked as labor are as follows:

• Expenditure types with an expenditure type class of *Straight Time* or *Overtime*
• Expenditure categories and revenue categories that classify at least one expenditure type with an expenditure type class of *Straight Time* or *Overtime*
• All employees, jobs, and organizations defined below a resource group (expenditure category or revenue category) that is a labor resource group, or that are defined in a resource list without groups

The unit of measure of a labor resource is set to hours. Oracle Projects summarizes the quantities budgeted and incurred by labor resources as labor hours at the project, task, and resource levels. You can see all other
quantities other than labor hours at the resource level only; they are not summarized to the project and task levels.

**Determining the UOM for Resources**

As you enter the resources in a list, Oracle Projects automatically determines the unit of measure for the resources, as follows:

- Expenditure type resources use the unit of measure of the expenditure type
- Resources of employees, jobs, and organizations use a unit of measure of Hours
- Resources that are tracked as labor use a unit of measure of Hours

All other resources do not have a default unit of measure. You can only enter budgeted quantities for resources with a unit of measure.

**See Also**

Overview of Resources and Resource Lists: page 16 – 155

---

**Defining Resource Lists**

You can define a new resource list by either entering the list or copying a list from an existing one.

**Note:** Oracle Projects plans to deliver APIs to maintain resources in a resource list with the production release of Oracle Projects. This will simplify the creation and maintenance of resource lists.

**To define a new resource list:**

1. Navigate to the Resource Lists form.
2. Enter the resource list name and choose how you want to group the resource list.
3. If you choose to group the resource list by expenditure category or revenue category, you enter the resource groups. Select the resource group, and override the alias and order if necessary. Then enter the

If you decide not to use grouping for the resource list, you enter the resources; you do not need to enter resource groups.

4. In the Resources region, select the resource type and resource, and override the alias and order, as necessary.

5. Save your work.

6. Continue to enter all the resource groups and/or resources for your resource list.

► **To create a new resource list by copying from an existing list:**

1. Navigate to the Resource Lists form.

2. Enter the resource list name and select how you want to group the resource list.

3. Choose Copy From and enter the resource list that you want to copy.

4. Choose OK. Oracle Projects automatically displays the new resource groups and resources.

5. Edit the resource list, as necessary.

6. Save your work.

► **To add a resource to an existing resource list:**

1. Navigate to the Resource Lists form.

2. Find the resource list that you want to change and add the resource.

3. Save your work.

► **To remove a resource from a resource list:**

1. Navigate to the Resource Lists form.

2. Find the resource list that you want to remove. You can delete a resource from a resource list only if you have yet not used the resource.

   If you have already used the resource for budgeting or to create summary amounts, you cannot delete the resource. However, you can disable the resource for future use in budgeting and summary amounts by unchecking the Enabled box.

3. Save your work.
Note: You should also consider if you need to update project summary amounts after changing a resource list that was previously used for summarization. See: Updating Project Summary Amounts: page 8–15.

See Also

Changing the Resource List after the Resource List is Used in Summarization: page 8–20

Overview of Resources and Resource Lists: page 16–155

Assigning Resource Lists to Projects

During project template and project setup, you assign resource lists to a project to indicate which resource lists you want to use for summarizing project actuals only information for project status tracking.

You can assign resource lists to project templates, which get copied to every project you create from the templates. This type of template setup facilitates cross-project reporting by using the same resource list across similar projects.

Oracle Projects requires that every project have at least one resource list assignment; this is to ensure that you can view actuals information in the Project Status windows and project status reports if no budget was created for the project. When you create a project template, Oracle Projects automatically assigns a resource list to the project template using the resource list specified on the project type for use in Status Reporting, and creates it as the default drilldown resource inquiry list to use in the Project Status windows. When you baseline a budget for the project, Oracle Projects automatically assigns the resource list used for the budget to the project, so that you can easily report actuals against budget using the resources that you used for budgeting.

You can assign additional resource lists by which you want to view summarized actuals in the Project Status Inquiry form or in your own custom reports. When you define additional resource list assignments, you must enter the following values:

**Resource List**  You can select any active resource list.
Use Oracle Projects tracks if the resource list is used for a given budget type or for status reporting. You can only select Status Reporting when you enter a new resource list assignment.

Drilldown Default You use this check box to specify the default resource list to use when you drill down to view the resource status in the Project Status window. If necessary, you can change the resource list that you use for reviewing resource status in the Project Status Inquiry form; the change is effective only for the current session.

To assign a resource list to a project or project template:
1. Navigate to the Projects form.
2. Find the project or project template to which you want to assign the resource list.
3. In the Project window, select the Resource List Assignment option.
4. In the Resource List Assignments window, enter the resource list and specify if it is the drilldown default for Project Status Inquiry.
5. Save your work.

See Also

Project Summary Amounts: page 8 – 10
Project Status Inquiry: page 8 – 2
Overview of Resources and Resource Lists: page 16 – 155
Defining Resource Lists: page 16 – 159

Fremont Corporation uses many resource lists. The resource list shown below, All by Organization, has a two–level hierarchy. At the higher level (Resource Groups), resources are summarized into either labor, travel, outside services, material, in–house recoverables, or other expenses. The second level (Resources) defines groupings for a second layer of summarization.

Resource List: All by Organization
Group Resources by: Expenditure Category

Resource Groups:
<table>
<thead>
<tr>
<th>Resource Group</th>
<th>Alias</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Labor</td>
<td>1</td>
</tr>
<tr>
<td>Travel</td>
<td>Travel</td>
<td>2</td>
</tr>
<tr>
<td>Outside Services</td>
<td>Outside Services</td>
<td>3</td>
</tr>
<tr>
<td>Material</td>
<td>Material</td>
<td>4</td>
</tr>
<tr>
<td>In–House Recoverables</td>
<td>In–House Recoverables</td>
<td>5</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>Other Expenses</td>
<td>6</td>
</tr>
</tbody>
</table>

**Resources:**

<table>
<thead>
<tr>
<th>Resource Type</th>
<th>Resource</th>
<th>Alias</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>Risk Analysis</td>
<td>Risk Analysis</td>
<td>1</td>
</tr>
<tr>
<td>Organization</td>
<td>Data Systems</td>
<td>Data Systems</td>
<td>2</td>
</tr>
<tr>
<td>Organization</td>
<td>Mechanical</td>
<td>Mechanical</td>
<td>3</td>
</tr>
<tr>
<td>Organization</td>
<td>Midwest</td>
<td>Midwest</td>
<td>4</td>
</tr>
<tr>
<td>Organization</td>
<td>South</td>
<td>South</td>
<td>5</td>
</tr>
<tr>
<td>Organization</td>
<td>East</td>
<td>East</td>
<td>6</td>
</tr>
<tr>
<td>Organization</td>
<td>West</td>
<td>West</td>
<td>7</td>
</tr>
<tr>
<td>Organization</td>
<td>International</td>
<td>International</td>
<td>8</td>
</tr>
<tr>
<td>Organization</td>
<td>Environmental</td>
<td>Environmental</td>
<td>9</td>
</tr>
<tr>
<td>Organization</td>
<td>Structural</td>
<td>Structural</td>
<td>10</td>
</tr>
<tr>
<td>Organization</td>
<td>Human Resources</td>
<td>Human Resources</td>
<td>11</td>
</tr>
<tr>
<td>Organization</td>
<td>Finance</td>
<td>Finance</td>
<td>12</td>
</tr>
<tr>
<td>Organization</td>
<td>Information Services</td>
<td>Information Services</td>
<td>13</td>
</tr>
</tbody>
</table>
Project Definition

Project Statuses

A project status indicates the status of the project. The project status can be used to control what processing is allowed at various stages of a project. Every project must have a valid status.

Oracle Projects predefines the following project statuses:

- Unapproved
- Submitted
- Approved
- Rejected
- Pending Close
- Closed

Note: If your system was upgraded from Release 10 to the current release, you will also see the predefined project status Active, which was defined in prior releases of Oracle Projects.
Defining project statuses

► To define a project status:

1. In the Project Statuses window, enter a unique project status name.

2. Select a System Status to map to the project status. Every project status must map to one of the five predefined system statuses. The predefined System Statuses are:
   • Unapproved
   • Submitted
   • Approved
   • Pending Close
   • Closed

3. Enter a description for the project status.

4. Enter Effective Dates.

5. If you want this project status to be eligible for use as the starting status for a new project, check the Starting Status check box. See: Project Status of a New Project: page 2 – 33.

6. If you want to initiate workflow when a project is updated to this status, select Workflow from the alternative region poplist. Check the Enable Workflow check box and enter the following fields:
   • Item Type. Enter the name of the Workflow Item Type to be used for this status.
   • Process. Enter the name of the Workflow Process to submit for this status.
   • Success Status. Enter the project status to assign to a project upon successful completion of project workflow.
   • Failure Status. Enter the project status to assign to a project if project workflow fails. (This can be the same as the current project status.)

For more information about project workflow, see: Project Workflow: page 12 – 82.

7. The Status Controls region contains a list of Actions that are allowed or restricted for each project status.

When you create a new project status, the System Status you have selected for the project status determines which Actions are allowed for a project to which the project status is assigned. If you want to
change the default permissions, you can optionally check or uncheck the Allow check box. The Default check box is display-only, and contains the original setting of the Allow check box.

For some System Statuses, there are Allow check boxes that cannot be changed. For example, if a project status maps to the Closed System Status, the project status cannot allow Create New Transactions.

Following are the project status Actions:

- **Create New Transactions.** New transactions include transfers, but not splits.
- **Adjust Transactions**
- **Generate Revenue**
- **Generate Invoices**
- **Capitalise Assets**
- **Include in Status Reporting.** Include in Project Status Inquiry and management reports that show summary project information.

8. Save your work.

**See Also**

Integrating with Oracle Workflow: page 12 – 81
Effective Dates: page 16 – 24
Project Statuses Listing: page 9 – 14
Transaction Control Extensions: page 18 – 27
Project Classifications (Class Categories and Class Codes)

You define project classifications to group your projects according to categories you define. A project classification includes a class category and a class code. The category is a broad subject within which you can classify projects. The code is a specific value of the category.

For example, if you want to know the market sector to which a project belongs, you can define a class category with a name such as Market Sector. You can define class codes for this category such as Waste Cleanup, Risk Analysis, and Environmental Engineering.

You can create a report that displays projects classified by a particular category. For example, if you classify your projects by market sector, you can create reports showing which market sectors generate the most revenue. Or, your marketing department could run a report to determine which markets need to be pursued more aggressively.

Oracle Projects does not predefine any class categories or class codes.

Defining class categories and class codes

1. Navigate to the Class Categories and Codes window.
2. Enter a unique Class Category name and a Description.
3. Specify whether the class category is mandatory for every project you define.
   - Enable if all projects must have a code assigned to this class category. Do not enable if this class category is optional. If you do not enable this option, you cannot use this class category in your AutoAccounting rules.
4. Specify whether you want to use the class category in your AutoAccounting rules.
   - Suggestion: For each project, you can use only one code with one class category for use with AutoAccounting rules. If an AutoAccounting category already exists within a particular date range, assign an end date to the existing AutoAccounting category and then create a new one.
5. Specify whether you want to allow entry of only one class code with this class category for a project.
   - Note: Defining multiple class codes for one category for a project may affect reporting by class category; defining multiple
class codes may cause your numbers to be included more than once.

6. Enter the Name, Description, and Effective Dates for each class code.

7. Save your work.

See Also

Effective Dates: page 16 – 24

Fremont Corporation classifies each project by market sector and funding source. Since Fremont Corporation tries to diversify its contracts, tracking this information is very important to corporate management; therefore, both categories are mandatory for any projects Fremont defines.

The first project class category Fremont defines is Market Sector. The codes for this category indicate the market sector to which a particular project belongs.

**Class Category**

<table>
<thead>
<tr>
<th>Name</th>
<th>Market Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Market sector in which project work takes place</td>
</tr>
<tr>
<td>Mandatory</td>
<td>Yes</td>
</tr>
<tr>
<td>AutoAccounting</td>
<td>No</td>
</tr>
<tr>
<td>Pick One Code Only</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Class Codes**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td>Structural design and engineering</td>
</tr>
<tr>
<td>Mechanical</td>
<td>Mechanical design and engineering</td>
</tr>
<tr>
<td>Electrical</td>
<td>Electrical design and engineering</td>
</tr>
<tr>
<td>Impact</td>
<td>Environmental impact studies</td>
</tr>
<tr>
<td>Environmental</td>
<td>Environmental design and planning</td>
</tr>
<tr>
<td>Data</td>
<td>Data services</td>
</tr>
<tr>
<td>Risk</td>
<td>Risk analysis services</td>
</tr>
<tr>
<td>------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Utilities</td>
<td>Utility/Power Plant construction</td>
</tr>
<tr>
<td>Waste</td>
<td>Disposal/Recycle facility construction</td>
</tr>
</tbody>
</table>

The second project class category Fremont Corporation uses is Funding Source. The class codes indicate whether the project is being funded privately or publicly. For publicly funded projects, the class code also indicates at what level the project is funded: Federal, State or Local, or Foreign. Fremont Corporation uses these class codes to produce a report detailing the ratio of public versus private projects.

### Class Category

<table>
<thead>
<tr>
<th>Name</th>
<th>Funding Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Source of funding for project</td>
</tr>
<tr>
<td>Mandatory</td>
<td>Yes</td>
</tr>
<tr>
<td>AutoAccounting</td>
<td>No</td>
</tr>
<tr>
<td>Pick One Code Only</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Class Codes

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>Funded by a federal agency</td>
</tr>
<tr>
<td>State or Local</td>
<td>Funded by state or local government</td>
</tr>
<tr>
<td>Foreign</td>
<td>Funded by a foreign government</td>
</tr>
<tr>
<td>Private</td>
<td>Funded by the private sector, foreign or domestic</td>
</tr>
</tbody>
</table>
Service Types

Service types are broad categories of work that employees may perform during the life of a project. When you define a work breakdown structure for a project, you assign a service type to each project task you define to indicate what type of work the task involves.

You can use service types to create more informative or detailed reporting across tasks. You can also use service types in your AutoAccounting setup.

Defining service types

> To define a service type:

1. In the Service Types window, specify a name and description of the service type.
2. Save your work.

See Also

Effective Dates: page 16 – 24

Service Types Listing: page 9 – 14

Fremont Corporation relies upon service types in its AutoAccounting rules to process indirect labor items. Fremont has an account for each type of indirect labor cost, such as vacation hours and sick hours.

Fremont’s implementation team defines a service type for each kind of indirect labor. Fremont’s implementation team maps each service type to the appropriate expense account when it implements AutoAccounting.

Fremont’s implementation team also defines several service types for direct work; these service types are used only for reporting purposes.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Work</td>
<td>Work in the field</td>
</tr>
<tr>
<td>Lab Work</td>
<td>Work in a corporate laboratory</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Documentation</td>
<td>Preparing documentation</td>
</tr>
<tr>
<td>R &amp; D</td>
<td>Indirect Research and Development</td>
</tr>
<tr>
<td>Administration</td>
<td>Administrative Work</td>
</tr>
<tr>
<td>Marketing</td>
<td>Indirect Marketing</td>
</tr>
<tr>
<td>B &amp; P</td>
<td>Bid &amp; Proposal work</td>
</tr>
<tr>
<td>Vacation</td>
<td>Vacation hours</td>
</tr>
<tr>
<td>Sick</td>
<td>Sick hours</td>
</tr>
<tr>
<td>Holiday</td>
<td>Holiday hours</td>
</tr>
<tr>
<td>Overtime</td>
<td>Overtime hours</td>
</tr>
</tbody>
</table>
Project Role Types

You define project role types to control which employees can view and update project information in Oracle Projects. A project role type also determines whether holders of that role can query labor costs. Employees assigned project roles have access to maintain projects in Oracle Projects; you do not have to define all employees who perform work on a project with a project role.

For example, if you define a project role type with a name such as Project Consultant, you specify whether this project role permits access to a project’s labor costs. If you decide not to permit access to project labor cost data, no employee assigned the project role of Project Consultant may view the labor costs for any projects to which they are assigned when they have that project role type.

Oracle Projects predefines the following role type:

- Project Manager

Only one employee may be assigned the Project Manager role at any time during the life of a project. Oracle Projects predefines the Project Manager with access to view labor costs; by default, any employee assigned the Project Manager role can query labor costs.

Defining project role types

1. In the Project Role Types window, enter a unique name and description for this project role type.
   If holders of this project role type can view a project’s labor costs, enable the View Labor Cost option.

2. Save your work.

See Also

Effective Dates: page 16 – 24
Project Role Types Listing: page 9 – 13
Fremont Corporation distinguishes between two types of project leaders: managers and coordinators. Project Managers are authorized to see labor costs, but Project Coordinators are not.

Fremont Corporation uses the following role types, and allows holders of those roles to see the cost of labor as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>View Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td>Project Manager</td>
<td>Enabled</td>
</tr>
<tr>
<td>Project Coordinator</td>
<td>Project Coordinator</td>
<td>Disabled</td>
</tr>
</tbody>
</table>
Project Customer Relationships and Contact Types

Project customer relationships help you manage projects that involve multiple clients by specifying the various relationships your customers can have with a project. A customer has exactly one relationship with a given project; one or more customers can have the same relationship with a project.

For example, most projects have a single customer who is the main client on the project; you can define a relationship with a name such as Primary to indicate the major client on a project.

Contact types specify how the contacts of a particular customer are involved with a project. You can use project contacts to direct certain pieces of correspondence, such as invoices, to the appropriate customer contact.

For example, if your client identifies a specific employee as the technical resource for questions about that client’s project, you can classify that employee using a contact type. First, you create a contact type with a name such as Technical. Later, when you define a project or modify your definition of that project, you assign the Technical contact type to the appropriate customer contact.

Defining Project Customer Relationships

To define project customer relationships:

1. In the Project Customer Relationships window, enter the Name and Description of the project relationship you want to define.
2. Save your work.

See Also

Effective Dates: page 16 – 24
Project Contact Types Listing: page 9 – 13
Project Customer Relationships Listing: page 9 – 13
Fremont Corporation distinguishes between the major client of a project and collateral clients who have less involvement than the major client. Fremont also distinguishes between major and collateral clients who help pay for a project, or who do not pay at all.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>Client is contributing majority of payment</td>
</tr>
<tr>
<td>Secondary</td>
<td>Client is contributing partial payment</td>
</tr>
<tr>
<td>Non-Paying</td>
<td>Client is involved with project, but is contributing no payment</td>
</tr>
</tbody>
</table>

Defining contact types

You define a contact type by specifying a contact type name and description.

Oracle Projects predefines two contact types:

- Billing
- Shipping

Oracle Projects addresses invoices to the billing contact you specify when you define a project. All contract projects require a billing contact.

To define contact types:

1. In the Contact Types window, enter the Name and Description of the contact type you want to define.
2. Save your work.

See Also

Effective Dates: page 16 – 24

Fremont Corporation’s client management policies call for directing all correspondence to the appropriate customer contact in a client’s organization. To implement these policies, Fremont Corporation uses the predefined contact types and defines the following ones:
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>Acts as technical resource for the project</td>
</tr>
<tr>
<td>Contract</td>
<td>Administers the contract</td>
</tr>
</tbody>
</table>
Project Types

A project type is a primary classification for the projects your business manages. A project type provides controls on how Oracle Projects processes the projects, along with defaults for project setup. You can use the project type for reporting and for AutoAccounting. You must set up at least one project type to create projects in Oracle Projects. The project type provides the following information:

- General information, including the class of project of either Indirect, Capital, or Contract, and the default service type to use when creating tasks
- Starting status of a project
- Costing information for burdening cost
- Burden cost accounting parameters
- Budget controls for defaults and entry of budgets
- Asset capitalization information (for capital project types)
- Billing information, including defaults for billing cycle, billing schedules, and invoice formats (for contract project types)
- Distribution rules allowed for the project type (for contract project types)
- Billing assignments (for contract project types)
• Workflow parameters

Default Starting Project Status

You must enter a Default Starting Project Status for each project type you create. The Default Starting Project Status is used as follows:

• When a project template is created, the Default Starting Project Status for the template’s project type is used as the project template’s status.

• When a project is created by copying an existing project or project template, the project status of the new project is the same as the current status of the existing project or project template, unless that project status is not a valid starting status. If the project status of the existing project or project template is not a valid starting status, then the new project is created with a status equal to the Default Starting Project Status of the project’s Project Type.

Project Types in a Multi–Organization Environment

In a multi–organization environment, you must set up project types for each operating unit. It is possible to have the same project type names in multiple operating units. However, each project type has its own attributes to control project processing by operating unit.

See Also

Defining Project Types: page 16 – 184

Project Types for Fremont Corporation (Example Setup): page 16 – 184

Project Types Window Reference

General Information (for all project types)

Name. The name of the project type.
**Class.** The project type class for the project type. You choose from the values of Indirect, Capital, or Contract. You can only define contract project types using Oracle Project Billing.

**Service Type.** The default service type to use when creating new top tasks.

**Default Starting Project Status.** The default initial status for projects of this type. You select from the list of values of all eligible project statuses. This is a required field.

---

**See Also**

Effective Dates: page 16 – 24

**Costing Information (for all project types)**

- **Burdened.** Indicates whether to burden raw costs charged to projects using this project type for internal costing purposes.

- **Schedule.** The burden schedule to use as the default cost burden schedule. You enter a schedule only if the project type is burdened. If the project type is burdened, this field is required.

- **Allow Schedule Override.** Indicates whether you can override the default cost burden schedule when entering and maintaining projects and tasks. If you want to ensure that all projects of a project type use the same schedule for internal costing, do not check this box. If you want to allow update of the cost burden schedule on the projects and tasks, check this box. You can enter this only if you enabled the Burdened check box.

---

**See Also**

Overview of Costing: page 5 – 2

**Burden Cost Accounting Information (for project types that use burdening)**

- **Burden Cost on Same Transaction / Different Transaction.** Indicates whether burden amounts will be stored in the same expenditure item as
the raw cost (Same), or summarized in separate expenditure items (Different).

**Account for Burden Components in Separate Project/Task.** This option is available if you selected Same in the previous field. If this option is selected, burden amounts are also accounted for in a separate project/task.

**Project/Task for Separate Burden Component Accounting.** The project and task where burden amounts will be accounted for.

*Suggestion:* While it is not required, it is recommended that you select an indirect project for separate accounting of burden amounts, to avoid duplicate posting of the amounts.

---

**Budget Control (for all project types)**

**Allow Cost Budget Entry.** Indicates if you allow entry of cost budget types.


**Allow Revenue Budget Entry.** Indicates if you allow entry of revenue budget types. You may choose to not allow entry of revenue budgets for indirect or capital projects. You must enter a revenue budget for a contract project before it can accrue revenue and be billed.

**(Revenue Budget) Entry Method.** The default budget entry method for revenue budgets. See: Defining Budget Entry Methods: page 16 – 150.


**Resource List for Status Reporting.** The default resource list to use for summarizing project amounts for status reporting. You must enter a value to ensure that you can view information in the Project Status windows and project status reports, even when you have not baselined a budget for the project. You typically select the same resource list as one of the resource lists you use for budgeting. When you create a new project template from scratch, Oracle Projects automatically creates a resource list assignment using this resource list.
Capitalization Information (for capital project types only)

**CIP Cost Type.** For the project type, you determine whether to capitalize CIP costs at their burdened or raw cost amount.

**CIP Grouping Method.** You assign a Grouping Method to each type to determine the amount of summarization you want for the asset lines you generate. You can assign one of the following Grouping Methods to your project type:

- Expenditure Category
- Expenditure Category, Nonlabor Resource
- Expenditure Type
- Expenditure Type, Nonlabor Resource
- All (highest level of summarization)

**Require Complete Asset Definition.** You specify whether an asset definition must be complete in Oracle Projects before you can send capitalized costs to Oracle Assets. If you choose this option, you do not need to enter additional required information for the imported asset line in the Prepare Mass Additions window in Oracle Assets. The Asset Interface process places asset lines with complete definitions directly into the Post queue in Oracle Assets. If the asset definition is not complete or allowed, you must complete the asset definition for the asset in the Prepare Mass Additions window in Oracle Assets.

See Also

About Capital Projects: page 6 – 2

**Workflow Control**

**Enable Workflow for Projects.** If you enable this check box, projects with this project type will initiate Workflow for all workflow–eligible project statuses. See: Project Statuses: page 16 – 164.

**Enable Workflow for Budgets.** If you enable this check box, projects with this project type will initiate Workflow for all eligible project budgets. See: Budget Types: page 16 – 149.
See Also

Integrating with Oracle Workflow: page 12 – 81

Billing Information (for contract project types only)

**Billing Offset Days.** The default number of days that elapse between the project start date and the date of the project’s first invoice.

**Billing Cycle.** The default billing cycle for projects of this type. See: Billing Cycles: page 16 – 119.

**Funding Level.** The level at which you allow funding for contract projects of this project type. You can choose from the values of Project, Top Task, or Both.

**Labor Schedule Type.** The type of labor schedule that you want to use for the default labor billing schedule. You can choose either Burden or Bill Rate. This controls what type of schedule you enter in the next region.

**Non–Labor Schedule Type.** The type of non–labor schedule that you want to use for the default labor billing schedule. You can choose either Burden or Bill Rate. This controls what type of schedule you enter in the next region.

**Revenue (Burden Schedule).** The burden schedule used for revenue accrual which defaults. If you select Burden as the labor and non–labor schedule type, you use this schedule for both labor and non–labor items.

**Invoice (Burden Schedule).** The burden schedule used for invoicing which defaults. If you select Burden as the labor and non–labor schedule type, you use this schedule for both labor and non–labor items.

**(Bill Rate Schedule) Organization.** The organization that owns the labor or non–labor bill rate schedule that you want to default.

**(Bill Rate) Schedule.** The name of labor or non–labor bill rate schedule that you want to default.

**Labor Invoice Format.** The labor invoice format that defaults.

**Non–Labor Invoice Format.** The non–labor invoice format that defaults.
Billing Assignments (for contract project types only)

Name. You select billing extensions which are used in revenue accrual and/or invoicing.

Amount, Percentage. You may also enter an amount or percentage which may be used in the billing extension calculation.

Active. You may disable the billing assignment for use in future processing by unchecking the Active flag.

Distribution Rules (for contract project types only)

Name. You select the distribution rules that can be allowed for any project of this project type. You can choose any predefined distribution rule:

- Cost/Cost: Accrue revenue and bill using the ratio of actual cost to budgeted cost (percent spent).
- Cost/Event: Accrue revenue using the ratio of actual cost to budgeted cost (percent spent), bill based on events.
- Cost/Work: Accrue revenue using the ratio of actual cost to budgeted cost (percent spent), bill as work occurs.
- Event/Event: Accrue revenue and bill based on events.
- Event/Work: Accrue revenue based on events, bill as work occurs.
- Work/Event: Accrue revenue as work occurs, bill based on events.
- Work/Work: Accrue revenue and bill as work occurs.

Default. Check the box if you want to use the distribution rule as the default value for projects of this project type. You can only have one default distribution rule for each project type.

See Also

Setting Up Contract Projects: page 7 – 4
Defining Project Types

Prerequisites

- Define bill rate schedules (for contract project types). See: Bill Rate Schedules: page 16 – 125.
- Define budget entry methods. See: Budget Entry Methods: page 16 – 150.

To define a new project type:

1. Open the Project Types window.
2. Enter the project type information, including any options appropriate for the project type class. See: Project Types Window Reference: page 16 – 178.
3. Save your work.

See Also

Project Types: page 16 – 177

Project Types for Fremont Corporation (Example Setup)

Fremont Corporation uses Oracle Projects to manage indirect, capital, and contract projects. They have decided to define the following project types.
Indirect Project Types

Fremont Corporation’s implementation team defines these indirect project types:

- Overhead
- Bid & Proposal
- R&D

Fremont Corporation’s implementation team defines a project type for overhead costs. Fremont uses overhead projects to record overhead costs that may or may not be associated with a particular project. For example, Fremont records its word processing and editorial costs in an overhead project. This project type is not burdened.

<table>
<thead>
<tr>
<th>Name</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Indirect</td>
</tr>
<tr>
<td>Service Type</td>
<td>Administration</td>
</tr>
<tr>
<td>Description</td>
<td>Project used to store the overhead charges of the project–managing organization</td>
</tr>
</tbody>
</table>

**Budget Control**

- Allow Cost Budget Entry: Yes
- (Cost) Entry Method: Project by GL Period
- (Cost) Resource List: Labor by Job, Non–Labor by Expenditure Type
- Allow Revenue Budget Entry: No
- Resource List for Status Reporting: Labor by Job, Non–Labor by Expenditure Type

Fremont Corporation’s implementation team also defines a project type for Bid and Proposal work. This is an indirect project type because costs incurred are not billed back to the client. Fremont uses Bid and Proposal projects to record the costs associated with bidding for a prospective contract. This project type is not burdened.
Fremont Corporation also defines a new project type for research and development projects.

<table>
<thead>
<tr>
<th>Name</th>
<th>R &amp; D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Indirect</td>
</tr>
<tr>
<td>Service Type</td>
<td>R &amp; D</td>
</tr>
<tr>
<td>Description</td>
<td>Projects for research and development</td>
</tr>
</tbody>
</table>

**Costing Information**

<table>
<thead>
<tr>
<th>Burdened</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule</td>
<td>Labor Burden Only</td>
</tr>
<tr>
<td>Allow Schedule Override</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Budget Control**

<table>
<thead>
<tr>
<th>Allow Cost Budget Entry</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Cost) Entry Method</td>
<td>Project by GL Period</td>
</tr>
<tr>
<td>(Cost) Resource List</td>
<td>Labor by Job, Non-Labor by Expenditure Type</td>
</tr>
</tbody>
</table>

---

**Name** | Bid & Proposal  
**Class** | Indirect  
**Service Type** | B & P 
**Description** | Collect bid and proposal costs 

**Budget Control**

<table>
<thead>
<tr>
<th>Allow Cost Budget Entry</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Cost) Entry Method</td>
<td>Project by GL Period</td>
</tr>
<tr>
<td>(Cost) Resource List</td>
<td>Labor by Job, Non-Labor by Expenditure Type</td>
</tr>
</tbody>
</table>

---

**Name** | R & D  
**Class** | Indirect  
**Service Type** | R & D 
**Description** | Projects for research and development 

**Costing Information**

<table>
<thead>
<tr>
<th>Burdened</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule</td>
<td>Labor Burden Only</td>
</tr>
<tr>
<td>Allow Schedule Override</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Budget Control**

<table>
<thead>
<tr>
<th>Allow Cost Budget Entry</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Cost) Entry Method</td>
<td>Project by GL Period</td>
</tr>
<tr>
<td>(Cost) Resource List</td>
<td>Labor by Job, Non-Labor by Expenditure Type</td>
</tr>
</tbody>
</table>
### Capital Project Types

Fremont Corporation’s implementation team defines these capital project types:

- Product Development
- Infrastructure

Fremont summarizes all CIP costs by expenditure category for capitalization in Oracle Assets, and requires that all asset information be specified in Oracle Projects before interfacing costs to Oracle Assets.

Fremont Corporation’s implementation team defines a project type for product development in which they capitalize the burdened costs for the project work.

<table>
<thead>
<tr>
<th><strong>Name</strong></th>
<th>Product Development</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class</strong></td>
<td>Capital</td>
</tr>
<tr>
<td><strong>Service Type</strong></td>
<td>Lab Work</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Product development projects for which costs are burdened, and later capitalized</td>
</tr>
</tbody>
</table>

**Costing Information**

<table>
<thead>
<tr>
<th><strong>Schedule</strong></th>
<th>Internal Costing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Allow Override</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Budget Control**

| **Allow Cost Budget Entry** | Yes |
| **(Cost) Entry Method** | Top Task by PA Period |
| **(Cost) Resource List** | Labor by Job, Non-Labor by Expenditure Type |
| **Allow Revenue Budget Entry** | No |
Fremont Corporation’s implementation team defines a project type for infrastructure improvements, which involve work on their buildings. They capitalize the raw costs of infrastructure projects.

**Resource List for Status Reporting**
- Labor by Job, Non–Labor by Expenditure Type

**Capitalization Information**
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CIP Cost Type</strong></td>
<td>Burdened</td>
</tr>
<tr>
<td><strong>CIP Grouping Method</strong></td>
<td>Expenditure Category</td>
</tr>
<tr>
<td><strong>Require Complete Asset Definition</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

| Name           | Infrastructure               |
| Class          | Capital                      |
| Service Type   | Field Work                   |
| Description    | Capital improvements to infrastructure. |

**Costing Information**
- **Burdened**: Yes
- **Schedule**: Labor Burden Only

**Budget Control**
- **Allow Cost Budget Entry**: Yes
- **(Cost) Entry Method**: Top Task by PA Period
- **(Cost) Resource List**: Labor by Job, Non–Labor by Key Supplier
- **Allow Revenue Budget Entry**: No
- **Resource List for Status Reporting**: Labor by Job, Non–Labor by Expenditure Type

**Capitalization Information**
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CIP Cost Type</strong></td>
<td>Raw</td>
</tr>
<tr>
<td><strong>CIP Grouping Method</strong></td>
<td>Expenditure Category</td>
</tr>
<tr>
<td><strong>Require Complete Asset Definition</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>
Contract Project Types

Fremont Corporation’s implementation team defines these contract project types:

- Time and Materials
- Fixed Price
- Cost Plus

Fremont has many time and materials projects in which they charge their clients for the time spent performing the work and the cost of materials and expenses used in completing the project.

<table>
<thead>
<tr>
<th>Name</th>
<th>Time and Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Contract</td>
</tr>
<tr>
<td>Service Type</td>
<td>Field work</td>
</tr>
<tr>
<td>Description</td>
<td>Project is billed on a time and materials basis</td>
</tr>
</tbody>
</table>

**Costing Information**

- Burdened: Yes
- Schedule: Internal Costing
- Allow Schedule Override: No

**Budget Control**

- Allow Cost Budget Entry: Yes
- (Cost) Entry Method: Top Task by PA Period
- (Cost) Resource List: Labor by Job
- Allow Revenue Budget Entry: Yes
- (Revenue) Entry Method: Project Level by Category
- (Revenue) Resource List: Types by Revenue Categories
- Resource List for Status Reporting: Labor by Job, Non–Labor Expenditure Types

**Billing Information**

- Funding Level: Both
Fremont’s implementation team defines a project type for fixed price contracts. Fremont’s fixed price projects do not depend on the time it takes for Fremont to complete a project or the cost of the resources used to complete the project. Thus they will use the distribution rule of Cost/Event.

**Labor Schedule Type**  Bill Rate Schedule  
**Organization**  Fremont Corporation  
**Schedule**  Standard  
**Non–Labor Schedule Type**  Bill Rate Schedule  
**Organization**  Fremont Corporation  
**Schedule**  Standard Non–Labor  
**Labor Invoice Format**  Job  
**Non–Labor Invoice Format**  Expenditure Type  

### Distribution Rules

<table>
<thead>
<tr>
<th>Name</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost/Work</td>
<td>No</td>
</tr>
<tr>
<td>Work/Event</td>
<td>No</td>
</tr>
<tr>
<td>Work/Work</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Name**  Fixed Price  
**Class**  Contract  
**Service Type**  Field work  
**Description**  Project is completed for a fixed price.

### Costing Information

<table>
<thead>
<tr>
<th>Burdened</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow Schedule Override</td>
<td>No</td>
</tr>
<tr>
<td>Schedule</td>
<td>Internal Costing</td>
</tr>
</tbody>
</table>

### Budget Control

<p>| Allow Cost Budget Entry | Yes |</p>
<table>
<thead>
<tr>
<th>(Cost) Entry Method</th>
<th>Top Task by PA Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Cost) Resource List</td>
<td>Labor by Job</td>
</tr>
<tr>
<td>Allow Revenue</td>
<td>Yes</td>
</tr>
<tr>
<td>Budget Entry</td>
<td></td>
</tr>
<tr>
<td>(Revenue) Entry Method</td>
<td>Project Level by Category</td>
</tr>
<tr>
<td>(Revenue) Resource List</td>
<td>Types by Revenue Categories</td>
</tr>
<tr>
<td>Resource List for Status Reporting</td>
<td>Labor by Job, Non–Labor by Expenditure Type</td>
</tr>
</tbody>
</table>

**Billing Information**

<table>
<thead>
<tr>
<th>Funding Level</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor Schedule Type</td>
<td>Bill Rate Schedule</td>
</tr>
<tr>
<td>Organization</td>
<td>Fremont Corporation</td>
</tr>
<tr>
<td>Schedule</td>
<td>Standard</td>
</tr>
<tr>
<td>Non–Labor Schedule Type</td>
<td>Bill Rate Schedule</td>
</tr>
<tr>
<td>Organization</td>
<td>Fremont Corporation</td>
</tr>
<tr>
<td>Schedule</td>
<td>Standard Non–Labor</td>
</tr>
<tr>
<td>Labor Invoice Format</td>
<td>Job</td>
</tr>
<tr>
<td>Non–Labor Invoice Format</td>
<td>Expenditure Type</td>
</tr>
</tbody>
</table>

**Distribution Rules**

<table>
<thead>
<tr>
<th>Name</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost/Event</td>
<td>No</td>
</tr>
</tbody>
</table>

Fremont’s implementation team defines a project type for cost plus projects. Fremont uses an burden schedule for internal costing, a burden schedule for labor items, and a standard bill rate schedule for non–labor items.

Fremont also specifies a billing extension for Fee to calculate fee for every cost plus project.

<table>
<thead>
<tr>
<th>Name</th>
<th>Cost Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Contract</td>
</tr>
</tbody>
</table>
### Service Type
Field work

### Description
Project uses cost plus processing

### Costing Information
- **Burdened**: Yes
- **Schedule**: Internal Costing
- **Allow Schedule Override**: No

### Budget Control
- **Allow Cost Budget Entry**: Yes
- **(Cost) Entry Method**: Top Task by PA Period
- **(Cost) Resource List**: Labor by Job
- **Allow Revenue Budget Entry**: Yes
- **(Revenue) Entry Method**: Project Level by Category
- **(Revenue) Resource List**: Type by Revenue Categories

### Resource List for Status Reporting
- **Labor by Job**

### Billing Information
- **Funding Level**: Both
- **Labor Schedule Type**: Burden Schedule
- **Revenue Schedule**: Cost Plus Billing
- **Invoice Schedule**: Cost Plus Billing
- **Non–Labor Schedule Type**: Bill Rate Schedule
- **Organization**: Fremont Corporation
- **Schedule**: Standard Non–Labor
- **Labor Invoice Format**: Employee
- **Non–Labor Invoice Format**: Expenditure Type

### Billing Assignments
- **Name**: Default
### Distribution Rules

<table>
<thead>
<tr>
<th>Name</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost/Work</td>
<td>No</td>
</tr>
<tr>
<td>Work/Work</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Fee: Yes
Project Status Inquiry Setup

Oracle Projects provides a default configuration for the Project Status Inquiry columns. Please review the default configuration to determine whether you need to change it to satisfy your business requirements. If the default configuration meets your business needs, you do not need to set up project status inquiry.

The Project Status window reads the view generated from the Project Status Inquiry Columns window. The installation of Oracle Projects automatically generates this view.

See Also

Project Status Inquiry: page 8 – 2

Dynamic Currency Formatting in PSI

Dynamic currency formatting works in two ways in Project Status Inquiry:
Currency amounts on the Events, Commitments and Actuals Drilldown windows are automatically displayed according to the currency format that you set up in Oracle General Ledger.

For the Project, Task and Resource Status windows, you can mark columns as currency amounts. The columns marked as currency amounts are displayed according to the functional currency format. See: Currency Formatting in Project, Task, and Resource Windows: page 16 – 202.

See Also

Dynamic Currency (Oracle Applications System Administrator’s Guide)

Common User Profile Options (Oracle Applications User’s Guide)

Default Configuration for Project Status Inquiry

You can view the default configuration for the Project, Task, and Resource Status windows from the Project Status Inquiry (PSI) Columns window. If you can use these defaults, you do not need to make any changes in the PSI Columns window.

The following sections describe the default PSI configuration for projects, tasks, and resources, including the order indicator, type (text or number), column prompt, and full column description for each default column. For the columns whose definition contains more than one data item, the table also includes a description of the formula. The actual formulas can be viewed under Definition in the PSI Columns window. The project and task PSI columns share the same default configuration, while the resource PSI columns have a slightly different default configuration.

Project and Task PSI Columns

The default Project and Task folders use 27 columns (three text and 24 numeric).
<table>
<thead>
<tr>
<th>Order</th>
<th>Column Prompt</th>
<th>Column Description / Formula Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project or Task</td>
<td>Project Number or Task Number</td>
<td>Text</td>
</tr>
<tr>
<td>2</td>
<td>Project Name or Task Name</td>
<td>Project Name or Task Name</td>
<td>Text</td>
</tr>
<tr>
<td>3</td>
<td>Ovr Bgt</td>
<td>Over Budget: Displays an asterisk (*) if the ITD actual burdened cost is greater than 110% of the ITD burdened cost budget amount; if not over budget, column is blank.</td>
<td>Text</td>
</tr>
<tr>
<td>4</td>
<td>ITD – Rev Bgt</td>
<td>ITD (Inception–to–date) revenue budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>5</td>
<td>ITD – Act Rev</td>
<td>ITD actual revenue</td>
<td>Number</td>
</tr>
<tr>
<td>6</td>
<td>ITD – Cst Bgt</td>
<td>ITD current burdened cost budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>7</td>
<td>ITD – Act Cost</td>
<td>ITD actual burdened cost</td>
<td>Number</td>
</tr>
<tr>
<td>8</td>
<td>Commit Amt</td>
<td>PTD (Period–to–date) commitment burdened cost</td>
<td>Number</td>
</tr>
<tr>
<td>9</td>
<td>PTD – Cst Bgt</td>
<td>PTD current burdened cost budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>10</td>
<td>PTD – Act Cost</td>
<td>PTD actual burdened cost</td>
<td>Number</td>
</tr>
<tr>
<td>11</td>
<td>ITD – Bgt Hrs</td>
<td>ITD current labor hours budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>12</td>
<td>ITD – Act Hrs</td>
<td>ITD actual labor hours</td>
<td>Number</td>
</tr>
<tr>
<td>13</td>
<td>PTD – Bgt Hrs</td>
<td>PTD current labor hours budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>14</td>
<td>PTD – Act Hrs</td>
<td>PTD actual labor hours</td>
<td>Number</td>
</tr>
<tr>
<td>15</td>
<td>Tot – Rev Bgt</td>
<td>Total current revenue budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>16</td>
<td>Tot – Cst Bgt</td>
<td>Total current burdened cost budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>17</td>
<td>Tot – Bgt Hrs</td>
<td>Total current labor hours budget amount</td>
<td>Number</td>
</tr>
</tbody>
</table>

Table 16–7 (Page 1 of 2) Default Project and Task PSI Columns
<table>
<thead>
<tr>
<th>Order</th>
<th>Column Prompt</th>
<th>Column Description / Formula Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Tot – Orig Rev Bgt</td>
<td>Total original revenue budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>19</td>
<td>Tot – Orig Cst Bgt</td>
<td>Total original burdened cost budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>20</td>
<td>Tot – Orig Bgt Hrs</td>
<td>Total original labor hours budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>21</td>
<td>ITD – Orig Rev Bgt</td>
<td>ITD original revenue budget amount</td>
<td>Number</td>
</tr>
<tr>
<td>22</td>
<td>Fin % Cmplt</td>
<td>Financial percentage complete: ITD actual burdened cost / total current burdened cost budget amount $\times 100$</td>
<td>Number</td>
</tr>
<tr>
<td>23</td>
<td>Hrs % Cmplt</td>
<td>Hours percentage complete: ITD actual labor hours / (Total current budget labor hours $\times 100$)</td>
<td>Number</td>
</tr>
<tr>
<td>24</td>
<td>Est to Cmplt</td>
<td>Estimate to Complete: Total current burdened cost budget amount – (ITD actual burdened cost + PTD commitment burdened cost)</td>
<td>Number</td>
</tr>
<tr>
<td>25</td>
<td>Tot Cst – ITD</td>
<td>ITD total cost: ITD actual burdened cost + PTD commitment cost</td>
<td>Number</td>
</tr>
<tr>
<td>26</td>
<td>Bgt Mgn</td>
<td>Budgeted margin: Total current revenue – Total current burdened cost</td>
<td>Number</td>
</tr>
<tr>
<td>27</td>
<td>Act Mgn – ITD</td>
<td>ITD Actual margin: ITD actual revenue – ITD actual burdened cost</td>
<td>Number</td>
</tr>
</tbody>
</table>

Table 16 – 7 (Page 2 of 2) Default Project and Task PSI Columns

**Resource PSI Columns**

The default Resource folder uses 29 columns (3 text and 26 numeric). The default columns for the Resource folders are the same as the default columns for the Project and Task folders, with the following exceptions:
<table>
<thead>
<tr>
<th>Order</th>
<th>Column Prompt</th>
<th>Column Description / Formula Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Resource</td>
<td>The Resource Alias</td>
<td>Text</td>
</tr>
<tr>
<td>2</td>
<td>Resource Name</td>
<td>The Resource Name</td>
<td>Text</td>
</tr>
<tr>
<td>22</td>
<td>ITD – Act Qty</td>
<td>ITD (Inception–to–date) actual quantity</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(NOTE: Only quantities that are not labor hours will be displayed.)</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Tot – Bgt Qty</td>
<td>Total current budget quantity (NOTE: Only quantities that are not labor hours will be displayed.)</td>
<td>Number</td>
</tr>
<tr>
<td>24</td>
<td>Fin % Cmplt</td>
<td>Financial percentage complete:</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ITD actual burdened cost / total current budget burdened cost × 100</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Hrs % Cmplt</td>
<td>Hours percentage complete:</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ITD actual labor hours / total current budget labor hours × 100</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Est to Cmplt</td>
<td>Estimate to Complete:</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total current budget burdened cost – (ITD actual burdened cost + PTD commitment burdened cost)</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Tot Cst – ITD</td>
<td>ITD total cost:</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ITD actual burdened cost + PTD commitment cost</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Bgt Mgn</td>
<td>Budgeted margin:</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total current revenue – total current burdened cost</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Act Mgn – ITD</td>
<td>ITD Actual margin:</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ITD actual revenue – ITD actual burdened cost</td>
<td></td>
</tr>
</tbody>
</table>

Table 16 – 8  (Page 1 of 1) Default Resource PSI Columns

**Rounding in Default Columns**

The expressions used to define the default PSI columns provided with Oracle Projects include a rounding factor of zero (round to the nearest
whole number). For example, the definition of ITD – Act Rev (ITD actual revenue) is:

- \( \text{ROUND}(\text{NVL(A.REVENUE_ITD,0),0}) \)

If you want decimal values (cents, for example) to appear in the ITD actual revenue figure, you change the final zero to a higher number (2 for cents, or 3 if you want to see fractions of cents).

If the ROUND expression is present but no value is given for the rounding factor, the expression is rounded to 0 decimal places.

You should use rounding in each expression, particularly if the expression includes a calculation.

**Note:** The ROUND expression will work only if you have not checked the Currency checkbox for a PSI column in the PSI Columns window. If you check the Currency checkbox, the column displays amounts based on the currency format defined in Oracle General Ledger.

---

**Non–Default Configuration for Project Status Inquiry**

If the default configuration does not meet your business needs, you can configure Project Status Inquiry to display alternate columns. You can display the information that is important for managing your business by defining rules to derive alternate column values to display in the Project Status window.

Project Status Inquiry (PSI) uses a maximum of 33 columns: 3 text columns for descriptions or comments, and 30 numeric columns for ratios, percentages, and amounts. Each status folder (project, task, and resource) in Project Status Inquiry can display all or a portion of the columns available to that folder.

**Note:** Each folder can display only values that are appropriate to the folder type. For example, only a Resource PSI folder can display quantities.

**Considerations for Your Company’s PSI Column Strategy**

Consider the following points before altering your PSI column configuration:

- Each status folder can have an entirely different combination of columns.
• You can define rules for columns that read data from any table or view in an Oracle database. See: PSI Extension: page 16 – 203.

• Altering column definitions can degrade your product’s performance. You should consider the performance implications of any new column definition.

Defining Non–Default Columns

You can use one of three methods to alter your PSI column setup during implementation to better suit your company’s needs:

1. Select different text or numeric column definitions using the list of values in the Project Status Inquiry Columns window. See: Using Lists of Values: page 16 – 201.


Attention: If you make any changes in the PSI Columns window, you must save your changes and choose Generate View before the Project Status window will reflect your changes. You do not have to generate a view if you have changed only your client extension.

If PSI determines that a column value is blank (Definition field in the PSI Columns window left blank) or a NULL value (PSI unable to process SQL expression), the Project Status window will display a zero (for numeric column types) or leave the field blank (for text columns). To leave the value field blank for a numeric column, you must enter TO_NUMBER(null) in the Definition field in the PSI Columns window.

Column Setup Window

You can accomplish the first two methods by using the PSI Columns window (choose Setup, Project Status Columns from the Navigator). These are not only simpler than the third option; they will also give better performance results.

Regardless of which method you choose to change your PSI column configuration, you enter column prompts in the PSI Column window. The Project Status window always reads column prompts from the view generated by this window.
Using Lists of Values

Using the first method, you select from 120 column definitions in the list of values for the column definition you want to change. Oracle Projects displays a list of values for either text or numeric column definitions, depending on the column type of the active field. Numeric column definitions are preceded by one of the following letters:

• A = actual amounts (cost and revenue)
• C = cost budget amounts
• M = commitment amounts
• R = revenue budget amounts

Attention: When you have made and saved your changes, choose Generate View to ensure that the appropriate project status folder (project, task, or resource) will reflect your changes.

Using SQL Expressions

The second method involves selecting a column definition from the list of values in the PSI Columns window, then modifying it with SQL expressions, as described in the examples below.

Example 1: Hours Percentage Complete

The definition of the Hours Percentage Complete column, one of the default PSI columns provided with Oracle Projects, is:

```
ROUND(DECODE(C.BASELINE_LABOR_HOURS_TOT,0,0,
(A.LABOR_HOURS_ITD/C.BASELINE_LABOR_HOURS_TOT) * 100),0)
```

The formula divides ITD labor hours by the total budgeted labor hours to obtain the percent complete. If total budgeted labor hours equal zero, zero is returned as the result. Following is an explanation of each element of this definition:

• ROUND(x,y)
  Round the expression x to y decimal places. If no value is given for y, round to 0 decimal places.
• DECODE(w,x,y,z)
  If the expression w results in the value x, return the value y; otherwise, return the value z.
• x/y
Divide $x$ by $y$. Other common operators are: * (multiply), + (add), and – (subtract).

- $x \times 100$

Multiply $x$ by 100. This is added to the definition to move the decimal point for a percentage expression.

Example 2: Over Budget

The Over Budget column, another default PSI column provided with Oracle Projects displays an asterisk if the project is more than 10% over its budget, and is blank otherwise. The definition for the column is:

```
DECIDE
(SIGN((NVL(C.BASELINE_BURDENED_COST_ITD,0) * 1.1) – (NVL (A.BURDENED_COST_ITD,0) + NVL
(A.BURDENED_COST_ITD,0) + NVL
(M.CMT_BURDENED_COST_PTD,0))))),-1,"*",NULL)
```

This definition contains some additional elements:

- **SIGN**($x$)
  
  If $x$ is a positive number or 0, SIGN($x$) = 1. If $x$ is a negative number, SIGN($x$) = –1.

- **NVL**($x$, $y$)

  If $x$ is not null, return $x$. Otherwise, return $y$.

Currency Formatting in Project, Task, and Resource Windows

You can use the Project Status Column Setup window to mark selected column definitions as currency amounts. Columns marked as currency amounts are displayed in Project Status Inquiry according to the functional currency format.

- **To mark columns as currency amounts:**
  1. Navigate to the Project Status Inquiry Columns window. Select Project, Task, or Resource in the Folder region.
  2. Check the Currency check box for each column definition you want to mark as a currency amount.
PSI Extension

You can also use a PSI client extension to derive an alternate column value, even if you have entered a column definition in the PSI Columns window. To use a client extension, you must:

- write the logic in a PL/SQL procedure and then store the procedure in the database
- define the column prompt for the column in the Project Status Inquiry Columns window

The PSI extension consists of three functions, one for each status folder (project, task, and resource). Each function has a parameter or “switch” that you can enable to run only that part of the client extension. You can run all, none, or any combination of the functions. By default, all three switches are disabled. If you want to use the PSI client extension, please refer to the Oracle Projects section of the Oracle Applications Installation Manual for Windows Clients.

If you enable the PSI client extension, the Project Status window displays the column prompts defined in the PSI Columns window and the values calculated by the extension. Because the values calculated by the client extension override values defined in the PSI Columns window, you do not need to enter a definition for a column whose value will ultimately be calculated by a client extension.

Note: If the extension returns a NULL value, the Project Status window reads the value defined in the PSI Columns window.

Running the PSI extension will degrade the product’s performance; therefore define your client extensions with as narrow a scope as possible.

See Also

Oracle Applications Installation Manual for Windows Clients

Writing the PSI Extension

Oracle Projects provides a template package that contains the procedure that you can modify to implement the PSI client extension. The name of the package is pa_client_extn_status, and the name of the procedure is getcols.
Print out and review the following files before you begin writing your PSI client extension. These files are located in the Oracle Projects admin/sql directory.

PAXVPS2B.pls. PSI Extension Package Body Template. This file contains the procedure that you modify to implement the PSI client extension. You can define as many procedures as you want within this package or within the predefined procedure.

PAXVPS2S.pls PSI Extension Package Specification Template. If you create procedures outside the predefined procedure within the PA_Client_Extn_Status package, you must also modify this file to include those new procedures.

⚠️ **Warning:** Do not change the name of the getcols procedure. In addition, do not change the parameter names, parameter types, or parameter order in your procedure.

💡 **Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.


**Package.Procedure**

The following table lists the parameters that Oracle Projects provides for the PSI client extension, `pa_client_extn_status.getcols`.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project</td>
</tr>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the task. This value is set to 0 if called for the project level columns</td>
</tr>
<tr>
<td>X_resource_list_member_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the resource. This value is set to 0 if called for project or task level columns</td>
</tr>
</tbody>
</table>

Table 16 – 9 (Page 1 of 2) PSI Extension Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_cost_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier of the cost budget type displayed in PSI. This value is NULL when called from the resource status folder.</td>
</tr>
<tr>
<td>X_rev_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier of the revenue budget type displayed in PSI. This value is NULL when called from the resource status folder.</td>
</tr>
<tr>
<td>X_status_view</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier of the status folder: PROJECTS, TASKS, or RESOURCES</td>
</tr>
<tr>
<td>X_pa_install</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier of the Oracle Projects product installed: BILLING or COSTING. BILLING includes all default PSI columns. COSTING includes all but the actual revenue and revenue budget columns.</td>
</tr>
<tr>
<td>X_derived_col1 through X_derived_col3</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Three alphanumeric derived columns. Each can have up to 255 characters. Note: Column 1 refers to the first column in both the PSI Columns and the Project Status windows, Column 2 refers to the second column in each window, etc.</td>
</tr>
<tr>
<td>X_derived_col4 through X_derived_col_33</td>
<td>OUT</td>
<td>NUMBER</td>
<td>30 numeric derived columns. Note: Column 4 refers to the fourth column in both the PSI Columns and the Project Status windows, Column 5 refers to the fifth column in each window, etc.</td>
</tr>
</tbody>
</table>

### See Also

Project Summary Amounts: page 8 – 10
Tips for Setting Up Project Status Inquiry (PSI)

Definitions of Terms Used in This Section:

- **base view** A view used to provide information in a window. Each base view can have up to 33 columns. The base views used by the Project Status Inquiry (PSI) window are generated in the Column Setup window when you choose the Generate View button.

- **cursor** A pointer to a row in the database.

- **derived column** A PSI column in which the displayed amount is derived from stored amounts using a subset of SQL expressions.

- **lower-level PSI views** Views that were designed to improve PSI performance. These 40 or more views are used by the default PSI columns and any others that you define in the Column Setup window. The lower-level PSI views use function calls and other sophisticated technical devices. Because of their complexity and the fact that they may change from release to release, the lower-level PSI views are not documented in the Oracle Projects Technical Reference Manual (TRM).

- **super views** Views that contain all summarized values. The super views each contain up to 126 columns. Each super view contains all available accumulation columns for a project, task, or resource. (Some columns, such as quantities, are only applicable for resources.)

Following are the super views:

- PA_STATUS_PROJ_V Project Status Window view
- PA_STATUS_TASK_V Task Status Window view
- PA_STATUS_RSRC_V Resource Status Window view

PSI Setup Tips

1. **Keep the following facts in mind when writing the PSI client extension:**
   - You do not need to enter a column definition for any column if your PSI extension will calculate the column’s value.
   - Even if you use a PSI extension to calculate a column’s value, the column’s prompt always comes from the PSI Columns window.
   - If you change only the PSI extension, you do not need to generate a new view for the Project Status window to reflect your changes.
• If your extension returns a NULL column value, the Project Status window will display the column value defined in the PSI Columns window.

• Since using the PSI extension degrades the product’s performance, you should limit the extension’s scope as much as possible.

2. **Define as many columns as possible using the Column Setup window rather than the PSI extension.**

   The Column Setup window creates views that yield better performance than calls to the PSI client extension, which is called by Post–Query triggers in PSI. This means that as each row is displayed on the PSI screen, a trigger calls the extension! This can cause performance delays, since the system will be sitting and thinking before displaying each row.

   For best performance, define as many of the PSI columns as possible in the Column Setup window.

   There are restrictions to using the Column Setup window for derived numbers:

   • The expression for each column must use the column names defined in the column definition list of values. No other columns or tables may be referenced in the Column Setup window.

   • Conditional logic is limited to the SQL "decode", "sign", and "nvl" functions. These functions are described in the Project Status Inquiry Setup section of the *Oracle Projects User’s Guide*.

   If the PSI window you want to design requires very complex conditional logic or select statements on column names or tables other than those displayed in the column definition list of values, then use the PSI client extension.

3. **Use the “super views” when customizing the PSI Client Extension**

   Use the super views when you customize the PSI client extension. The super views probably contain all the information you want to display, and they are documented in the *Oracle Projects Technical Reference Manual* (TRM).

   **Attention:** Each of the super views contains amounts for all levels of the WBS (work breakdown structure) and all resources. Therefore, you only need one cursor for each status window. For example, if budgets are maintained for the lowest–level tasks on a given project, then the parent task budget amounts will be the sum of their corresponding child task budget amounts. The
sample code in the PSI client extension demonstrates how to execute one cursor in each view.

The resource super view (PA_STATUS_RSRC_V) contains two sets of data: project–level resources and task–level resources. The sample code in the PSI client extension demonstrates how to point to project–level or task–level data.

4. You only need to use one cursor for multiple levels in the WBS.

Example: Suppose you want your PSI client extension to calculate ten percent of Accumulated Cost ITD. The project has the following three tasks:

<table>
<thead>
<tr>
<th>Task</th>
<th>Accumulated Cost ITD</th>
<th>Calculation</th>
<th>Derived Column Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>(100 * .10)</td>
<td>10</td>
</tr>
<tr>
<td>1.1</td>
<td>60</td>
<td>(60 * .10)</td>
<td>6</td>
</tr>
<tr>
<td>1.2</td>
<td>40</td>
<td>(40 * .10)</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 16 – 10   (Page 1 of 1)

As shown in the sample code below, you can display these amounts by defining one cursor and calculation for each row. Because the amounts are stored for all levels of the Task WBS, only one cursor and calculation needs to be executed for each task in the WBS.

Sample code to calculate 10% of Accumulated Cost ITD:

The select statement includes the following code:

SELECT nvl(burdened_cost_itd, 0) INTO p_burdened_cost_itd FROM pa_status_rsrc_v WHERE project_id = x_project_id AND task_id = x_task_id AND resource_list_member_id = x_resource_list_member_id;

The following line does the calculation and assigns the result to column 30:

x_derived_col_30 := ROUND(p_burdened_cost_itd * .1)

Remember, for each row in the WBS, you only need to execute a calculation once in the PSI client extension.

5. Make sure that default columns prompts are defined in the Column Setup window.
If you have made changes in the Column Setup window and subsequently generated views that have errors, you must correct the definitions in the Column Setup window and choose Generate. Even if you are using the PSI client extension, valid base views and default column prompts must have been generated in the Column Setup window.

6. **You can select which of the three status windows uses the PSI client extension.**

You can have one PSI window that calls the extension and another that does not call the extension.

- If you want a PSI window to call the client extension for any of its columns, set the extension switch for that window type (project, task, or resource) to Y.
- If you do not want a PSI window to call the client extension for any of its columns, set the extension switch for that window type to N (the default setting).

The switches are indicated in the client extension as follows:

- Project Status Window: ProjCustomExtn
- Task Status Window: TaskCustomExtn
- Resource Status Window: RsrcCustomExtn

This information is also described under Project Status Inquiry Setup, *Oracle Projects User’s Guide*.

7. **You can combine Column Setup window definitions and PSI client extension calls.**

Within the same PSI window, you can define some columns in the Column Setup window and define other columns in the PSI client extension. You can also define a column in both the Column Setup window and the client extension. For example:

1. If the client extension switch for a PSI window is set to N, then PSI uses the column definitions in the Column Setup window.
2. If the following conditions are true, then PSI use the client extension value:

   - The client extension switch for a PSI window is set to Y
   - A column definition is defined in the Column Setup window
   - A column definition is defined in the client extension
   - The client extension returns a non–null value
3. If the following conditions are true, then PSI uses the Column Setup window value:
   • The client extension switch for a PSI window is set to Y
   • A column definition is defined in the Column Setup window
   • A column definition is defined in the client extension
   • The client extension returns a null value

4. If the column definition in Column Setup is defined, and a column definition in the client extension is defined, and the switch is set to Y, the value that shows in PSI is determined as follows:
   • If the client extension returns a non-null value for the PSI column, the client extension non-null value is displayed in PSI.
   • If the client extension returns a null value, then whatever is defined in Column Setup is displayed in PSI.

5. If you want to display a blank in the PSI window for a numeric column, you must type the following in the Column Setup column definition: `TO_NUMBER(null)`
   If either nothing, blank or null is specified in the Column Setup window for a numeric column definition, then the PSI window displays a zero.

8. **You can display two text column values in one text column.**

   You cannot set up the PSI status windows to display more than three text columns. Instead, use the PSI client extension to concatenate two values (such as two dates) in a string. Assign the string to one of the three text columns.
Profile Options

Specify Profile Options

You use profile options to specify default values that affect system processes, system controls, and data entry. Your System Administrator needs to set up Oracle Projects profile options in the System Profile Values Window. See: Setting User Profile Options Oracle Applications System Administrator’s Guide.

We recommend that you set up the following Oracle Projects application level profile options that affect system processing. To read detailed information about each profile option in Oracle Projects, see Oracle Projects Profile Options (Appendix B).

Multi–Organization Considerations for Profile Options Values

In a multi–organization environment, you can confine a profile option value to a specific operating unit by defining the profile options at the responsibility level. You should review the following Oracle Projects system profile options to determine if you want to define responsibility–level profile option values:

- PA: Cross–Project Responsibility
- PA: Debug Mode
- PA: Default Expenditure Organization in AP/PO
- PA: Default Project Status
- PA: Default Public Sector

You can also set the profile option MO: Operating Unit to specify which operating unit a particular responsibility corresponds to. For more details about implementing multiple organization support, see: Multiple Organizations in Oracle Applications Release 10.7.

See Also

Oracle Projects Profile Options (See Appendix B)
Fremont Corporation’s implementation team sets the following profile options that affect Oracle Projects processing:

**Level = Application** **Application = Oracle Projects**

<table>
<thead>
<tr>
<th>Profile</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA: Expenditures Per Set</td>
<td>500</td>
</tr>
<tr>
<td>PA: Expenditure Items Per Set</td>
<td>1000</td>
</tr>
<tr>
<td>PA: Cost Distribution Lines Per Set</td>
<td>2000</td>
</tr>
<tr>
<td>PA: Projects Per Set</td>
<td>500</td>
</tr>
</tbody>
</table>

**Default Profile Options**

In addition, Oracle Projects predefines default values for the following profile options. You may want to review the values set for these profile options and modify them according to your site’s needs.

<table>
<thead>
<tr>
<th>PROFILE</th>
<th>USE</th>
<th>LEVEL(S) MAINTAINED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax: Allow Ad Hoc Changes</td>
<td>Billing</td>
<td>Site, Application, Responsibility, and User</td>
</tr>
<tr>
<td>Tax: Allow Override of Customer Exemptions</td>
<td>Billing</td>
<td>Site, Application, Responsibility, and User</td>
</tr>
<tr>
<td>Tax: Allow Override of Tax Code</td>
<td>Billing</td>
<td>Site, Application, Responsibility, and User</td>
</tr>
<tr>
<td>AR: Transaction Flexfield QuickPick Attribute</td>
<td>Billing</td>
<td>Site, Application, Responsibility, and User</td>
</tr>
<tr>
<td>AR: Use Invoice Accounting For Credit Memos</td>
<td>Billing</td>
<td>Site, Application, Responsibility, and User</td>
</tr>
<tr>
<td>PA: Borrowed Lent Percentage Amount</td>
<td>Billing</td>
<td>Site</td>
</tr>
<tr>
<td>PA: Projects Per Set</td>
<td>Billing</td>
<td>Application</td>
</tr>
</tbody>
</table>

*Table 16–11 (Page 1 of 3)*
<table>
<thead>
<tr>
<th>PROFILE</th>
<th>USE</th>
<th>LEVEL(S) MAINTAINED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA: Receivables Invoice Line UOM</td>
<td>Billing</td>
<td>Site</td>
</tr>
<tr>
<td>PA: Allow Cross-Charging in Multi-Org</td>
<td>Costing</td>
<td>Responsibility</td>
</tr>
<tr>
<td>PA: Allow Override of PA Distributions in AP/PO</td>
<td>Costing</td>
<td>Site, Application, Responsibility, and User</td>
</tr>
<tr>
<td>PA: AutoApprove Expense Reports</td>
<td>Costing</td>
<td>Application</td>
</tr>
<tr>
<td>PA: AutoApprove Timesheets</td>
<td>Costing</td>
<td>Application</td>
</tr>
<tr>
<td>PA: Cost Distribution Lines Per Set</td>
<td>Costing</td>
<td>Application</td>
</tr>
<tr>
<td>PA: Default Burden Schedule Type</td>
<td>Costing</td>
<td>Site</td>
</tr>
<tr>
<td>PA: Default Expenditure Organization in AP/PO</td>
<td>Costing</td>
<td>Site, Application, Responsibility, and User</td>
</tr>
<tr>
<td>PA: Expenditure Items Per Set</td>
<td>Costing</td>
<td>Application</td>
</tr>
<tr>
<td>PA: Expenditures Per Set</td>
<td>Costing</td>
<td>Application</td>
</tr>
<tr>
<td>PA: Summarize Expense Report Lines</td>
<td>Costing</td>
<td>Application</td>
</tr>
<tr>
<td>PA: Tasks to Display for Expenditure Entry</td>
<td>Costing</td>
<td>Site, Application, Responsibility, and User</td>
</tr>
<tr>
<td>PA: Default Project Status</td>
<td>Project Entry</td>
<td>Site</td>
</tr>
<tr>
<td>PA: Default Public Sector</td>
<td>Project Entry</td>
<td>Site</td>
</tr>
<tr>
<td>PA: Debug Mode</td>
<td>Reports and Processes</td>
<td>any</td>
</tr>
<tr>
<td>PA: Cross-Project Responsibility</td>
<td>Security</td>
<td>Responsibility</td>
</tr>
</tbody>
</table>

Table 16 – 11  (Page 2 of 3)
<table>
<thead>
<tr>
<th>PROFILE</th>
<th>USE</th>
<th>LEVEL(S) MAINTAINED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA: Streamline Process Sleep Interval</td>
<td>Streamline Processing</td>
<td>Application</td>
</tr>
<tr>
<td>PA: Dual Accumulation Mode</td>
<td>Summarization</td>
<td>Application</td>
</tr>
<tr>
<td>PA: ADW Installed</td>
<td>General</td>
<td>Application</td>
</tr>
<tr>
<td>PA: ADW Collect Top Tasks</td>
<td>General</td>
<td>Application</td>
</tr>
<tr>
<td>PA: Allowed to Use AMG</td>
<td>General</td>
<td>Responsibility</td>
</tr>
<tr>
<td>PA: Collection Pack Licensed</td>
<td>General</td>
<td>Responsibility</td>
</tr>
<tr>
<td>PA: Display Find Tasks</td>
<td>General</td>
<td>Site, Application, Responsibility,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and User</td>
</tr>
<tr>
<td>GL: Set of Books Name</td>
<td>General</td>
<td>Site, Application, and Responsibility</td>
</tr>
<tr>
<td>PA: Project Costing Installed</td>
<td>General</td>
<td>Set during Oracle Project Costing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Installation</td>
</tr>
<tr>
<td>PA: Selective Flexfield Segment for</td>
<td>General</td>
<td>Application</td>
</tr>
<tr>
<td>AutoAccounting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MO: Operating Unit</td>
<td>General</td>
<td>Site, Responsibility</td>
</tr>
</tbody>
</table>

Table 16 – 11 (Page 3 of 3)

See Also

Updating Profile Options for Integration With Other Products: page 17 – 44

Personal Profile Values Window (Oracle Applications User’s Guide)
Overview of Setting User Profiles (Oracle Applications System Administrator’s Guide)

Common User Profile Options (Oracle Applications User’s Guide)
Descriptive Flexfields

Use Descriptive Flexfields to customize your application to fit your unique business needs. For example, you may want to:

- Record the reason for adding new funding lines to a project
- Record the location of work performed on a task by latitude and longitude

You can also create context–sensitive Descriptive Flexfields that let you enter information based on the value you entered in another field. For example, you may want to:

- Enter the likelihood of winning a B & P project
- Enter the purpose of the meal for each meal’s expense report item

See Also

Descriptive Flexfields in Oracle Projects: page D – 2

AR: Transaction Flexfield QuickPick Attribute: page 17 – 45

Defining Descriptive Flexfields Oracle Applications Flexfields Guide
AutoAccounting and the Account Generator

The following AutoAccounting topics are discussed in this section:

- Overview of AutoAccounting: page 16 – 217
- Implementing AutoAccounting: page 16 – 219
- AutoAccounting Sample Implementation: Fremont Corporation: page 16 – 235
- AutoAccounting Functions: page 16 – 237

The following Account Generator topics are discussed in this section:

- Using the Account Generator in Oracle Projects: page 16 – 286
- Implementing the Account Generator for Oracle Projects: page 16 – 288

Overview of AutoAccounting

Oracle Projects creates many different accounting transactions throughout its business cycle. For example, posting labor cost debits and labor revenue credits requires several accounting transactions. Since the accounting practices and account structure are unique for your business, Oracle Projects provides a flexible mechanism—AutoAccounting—to let you specify how to determine the correct general ledger account for each transaction.

Examples of accounting practices you can implement using AutoAccounting include:

"Charge central headquarters with all advertising costs regardless of which region those advertisements benefit."

"Credit payroll costs to the payroll liability account belonging to the division for which an employee works."

"Assign revenue from subcontractors to the company and cost center managing the project."

When you implement AutoAccounting, you define the rules governing which general ledger accounts Oracle Projects uses under which circumstances. Oracle Projects uses the rules you define whenever it performs an accounting transaction.
How AutoAccounting works

For each accounting transaction, you define rules to determine the appropriate account to charge. Each accounting transaction is identified by an AutoAccounting function. AutoAccounting functions are components of programs that you submit to generate accounting entries.

AutoAccounting Functions

The following table (Table 16 – 12) shows each AutoAccounting function; it also tells you what business activities Oracle Projects is performing when it uses that AutoAccounting function.

Depending upon your implementation of Oracle Projects, you probably need to implement most, or all, AutoAccounting functions.

<table>
<thead>
<tr>
<th>AUTOACCOUNTING FUNCTION</th>
<th>BUSINESS ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue and Billing</td>
<td></td>
</tr>
<tr>
<td>Event Revenue Account</td>
<td>Determines revenue account for revenue events</td>
</tr>
<tr>
<td>Expense Report Revenue Account</td>
<td>Determines revenue account for expense report items</td>
</tr>
<tr>
<td>Labor Revenue Account</td>
<td>Determines revenue account for labor items</td>
</tr>
<tr>
<td>Labor Revenue Borrowed Account</td>
<td>Determines labor revenue borrowed account, which is the credit side of the borrowed and lent transaction</td>
</tr>
<tr>
<td>Labor Revenue Lent Account</td>
<td>Determines labor revenue lent account, which is the debit side of the borrowed and lent transaction</td>
</tr>
<tr>
<td>Revenue and Invoice Accounts</td>
<td>Determines accounts to track revenue and receivables</td>
</tr>
<tr>
<td>Supplier Invoice Revenue Account</td>
<td>Determines revenue account for supplier invoice items</td>
</tr>
<tr>
<td>Usage Revenue Account</td>
<td>Determines revenue account for usage items</td>
</tr>
<tr>
<td>Usage Revenue Borrowed Account</td>
<td>Determines usage revenue borrowed account, which is the credit side of the borrowed and lent transaction</td>
</tr>
<tr>
<td>Usage Revenue Lent Account</td>
<td>Determines usage revenue lent account, which is the debit side of the borrowed and lent transaction</td>
</tr>
</tbody>
</table>

Table 16 – 12  (Page 1 of 2)  AutoAccounting Functions
### Costing

<table>
<thead>
<tr>
<th>Account Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expense Report Cost Account</td>
<td>Determined cost account for expense report items.</td>
</tr>
<tr>
<td>Expense Report Liability Account</td>
<td>Determines liability account for expense report costs</td>
</tr>
<tr>
<td>Labor Cost Account</td>
<td>Determines cost account for all labor items, including straight time and overtime</td>
</tr>
<tr>
<td>Labor Cost Clearing Account</td>
<td>Determines clearing account for labor costs</td>
</tr>
<tr>
<td>Supplier Invoice Cost Account</td>
<td>Determines cost account for adjusted supplier invoice items.</td>
</tr>
<tr>
<td>Total Burdened Cost Credit</td>
<td>Determines credit account for total burdened costs for all items on burdened projects</td>
</tr>
<tr>
<td>Total Burdened Cost Debit</td>
<td>Determines debit account for total burdened costs for all items on burdened projects</td>
</tr>
<tr>
<td>Usage Cost Account</td>
<td>Determines cost account for usage items</td>
</tr>
<tr>
<td>Usage Cost Clearing Account</td>
<td>Determines clearing account for usage costs</td>
</tr>
</tbody>
</table>

Table 16 – 12 (Page 2 of 2)  AutoAccounting Functions

---

### Implementing AutoAccounting

To implement AutoAccounting, you define AutoAccounting rules to generate account combinations, then assign a set of rules to each AutoAccounting transaction you want to use for your company. You do not define AutoAccounting rules for each project or contract.

Implement your Oracle Projects system with your AutoAccounting plan in mind. AutoAccounting derives values for account combinations based on project information for all accounting transactions in Oracle Projects. Consequently, the way you organize your chart of accounts affects your implementation data. You can use most of the implementation data that you define for Oracle Projects as inputs to the AutoAccounting rules that you define.

**To implement AutoAccounting:**

1. Design your AutoAccounting setup based on your implementation data.
Defining AutoAccounting Rules

Each AutoAccounting rule you define supplies one Accounting Flexfield segment value at a time. Thus, you need to specify one AutoAccounting rule for each segment in your Accounting Flexfield for each AutoAccounting transaction you want to use.

Some of the AutoAccounting rules you define can be quite simple, such as always supplying a constant company code or natural account. Others can draw upon context information (parameters), such as the revenue category for a particular posting or the organization that owns a particular asset. You can even use multiple parameters to provide a segment value.

You can reuse the same AutoAccounting rules for many different functions and their transactions.

You define rules based on project information that you enter. You can use these AutoAccounting parameters as input values to your rules.

Note: AutoAccounting does not use Flexfield security rules when determining a valid account combination. You must define your AutoAccounting rules to determine the appropriate account based on the rules required by your company.

AutoAccounting Parameters

AutoAccounting allows you to use the AutoAccounting parameters as inputs for your AutoAccounting rules. The following table lists these parameters.

Not all of the parameters in the table are available for all functions. Submit the AutoAccounting Functions Listing for a complete listing of all of the parameters available for each function.
<table>
<thead>
<tr>
<th>AUTOACCOUNTING PARAMETER</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Code</td>
<td>AutoAccounting class code on the project. <strong>Note:</strong> Since you can define many project classification categories, the <strong>Class Code</strong> parameter always corresponds to the one classification category that you specified as the AutoAccounting classification category.</td>
</tr>
<tr>
<td>Compensation Rule</td>
<td>Compensation rule of the employee who incurs the expenditure.</td>
</tr>
<tr>
<td>Employee Number</td>
<td>Employee number of the employee who incurs the expenditure.</td>
</tr>
<tr>
<td>Event Num</td>
<td>Event number of the event.</td>
</tr>
<tr>
<td>Event Organization</td>
<td>Organization for the event.</td>
</tr>
<tr>
<td>Event Organization ID</td>
<td>Internal ID of the organization for the Event.</td>
</tr>
<tr>
<td>Event Type</td>
<td>The classification of the event.</td>
</tr>
<tr>
<td>Expenditure Category</td>
<td>Expenditure category of the expenditure item.</td>
</tr>
<tr>
<td>Expenditure Item ID</td>
<td>Internal ID that identifies each expenditure item.</td>
</tr>
<tr>
<td>Expenditure Organization</td>
<td>Organization that incurs the expenditure.</td>
</tr>
<tr>
<td>Expenditure Organization ID</td>
<td>Internal ID of the organization that incurs the expenditure.</td>
</tr>
<tr>
<td>Expenditure Type</td>
<td>Expenditure type of the expenditure item.</td>
</tr>
<tr>
<td>Labor Cost Multiplier</td>
<td>Labor cost multiplier of the task charged.</td>
</tr>
<tr>
<td>Non–Labor Resource</td>
<td>Non–labor resource utilized for the expenditure.</td>
</tr>
<tr>
<td>Person ID</td>
<td>Internal ID of the employee who incurs the expenditure.</td>
</tr>
</tbody>
</table>

Table 16 – 13 (Page 1 of 2) AutoAccounting Functions
<table>
<thead>
<tr>
<th>AUTOACCOUNTING PARAMETER</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project ID</td>
<td>Internal ID of the project being charged.</td>
</tr>
<tr>
<td>Project Number</td>
<td>The number of the project being charged.</td>
</tr>
<tr>
<td>Project Organization</td>
<td>Project–managing organization.</td>
</tr>
<tr>
<td>Project Organization ID</td>
<td>Internal ID of the project–managing organization.</td>
</tr>
<tr>
<td>Project Type</td>
<td>Project type of the project charged.</td>
</tr>
<tr>
<td>Revenue Category</td>
<td>Revenue category of the expenditure item.</td>
</tr>
<tr>
<td>Task ID</td>
<td>Internal ID of the task charged.</td>
</tr>
<tr>
<td>Task Number</td>
<td>Task number of task charged.</td>
</tr>
<tr>
<td>Task Organization</td>
<td>Task–managing organization.</td>
</tr>
<tr>
<td>Task Organization ID</td>
<td>Internal ID of the task–managing organization.</td>
</tr>
<tr>
<td>Task Service Type</td>
<td>Service type of the task charged.</td>
</tr>
<tr>
<td>Top Task ID</td>
<td>Internal ID of the highest level parent task of the task charged.</td>
</tr>
<tr>
<td>Top Task Number</td>
<td>Task number of the highest level parent task of the task charged.</td>
</tr>
<tr>
<td>Supplier Type</td>
<td>Supplier type of the supplier on the invoice.</td>
</tr>
</tbody>
</table>

Table 16–13  (Page 2 of 2)  AutoAccounting Functions

See Also

AutoAccounting Functions Listing: page 9–5
Selecting an Intermediate Value Source

To define an AutoAccounting rule, you first specify an intermediate value (an “input” for the rule). You can draw an intermediate value from one of three intermediate value sources:

- **Constant**: Always supply a particular intermediate value (usually an Accounting Flexfield segment code)
- **Parameter**: Use a predefined parameter as an intermediate value; make the rule context-sensitive based on one value
- **SQL Select Statement**: Execute a SQL select statement to retrieve an intermediate value; make the rule dependent on multiple values and/or conditional statements
Using a Predefined Parameter

When you define an AutoAccounting rule, you can use a predefined parameter as an input value. Examples of parameters that you can use as context information include the project–managing organization, or the expenditure type of an expenditure item (see Table 16–13 for a complete list of AutoAccounting parameters.)

For example, suppose you want to define an AutoAccounting rule that provides a region code based upon the organization that is managing a project. You specify an intermediate value source of Parameter, since the project–managing organization is a predefined parameter; you specify Project Organization as the parameter name.

SQL statements to derive new parameters

AutoAccounting rules with SQL statements are intended to process rules that are dependent on more than one parameter. They are not intended to derive additional parameters using SQL which accesses application tables.

This type of use may affect processing performance and may not be supported based on the AutoAccounting function. If you determine that you need rules that reference application tables to derive additional values not provided by the AutoAccounting parameters, please contact your Oracle technical support representative before proceeding.

Using a SQL Select Statement in AutoAccounting Rules

You can define rules to read any value by using a SQL select statement. You should consider the performance implications of using SQL statements. Although many companies have implemented AutoAccounting SQL statement rules in a production environment, you should tune your SQL statement and test the AutoAccounting setup against volume data to check their performance quality before implementation.
Examples of AutoAccounting Rules with a SQL statement

The business rule translates to this logic:

**If Project Type is ‘Overhead’**

then use Expenditure Organization  
else use Project Organization

<table>
<thead>
<tr>
<th>Rule</th>
<th>Name</th>
<th>Description</th>
<th>Intermediate Value Source</th>
<th>SQL Select Statement</th>
<th>Segment Value Source</th>
<th>Lookup Set</th>
<th>Rule Parameters</th>
</tr>
</thead>
</table>
|      |      | Indirect Cost Center | SQL Statement | select decode(:1,  :2, :3,  ’Overhead’)  
 from sys.dual | Segment Value Lookup Set | Organization to Cost Center |  |
|      |      | Determine the cost center for indirect costs, using Expenditure Organization for Overhead projects and Project Organization for all other indirect projects | | | | |

In another example, Fremont Corporation wants to base the account segment value on the first descriptive flexfield segment for the expenditure item (PA_EXPENDITURE_ITEMS_ALL.ATTRIBUTE1).

<table>
<thead>
<tr>
<th>Rule</th>
<th>Name</th>
<th>Description</th>
<th>Intermediate Value Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Descriptive flexfield segment</td>
<td>SQL Statement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Populate the AutoAccounting account segment value with the first descriptive flexfield segment value in the expenditure item.</td>
<td></td>
</tr>
</tbody>
</table>
The SQL statement in the first example uses the SQL function of `decode`, which provides if/then logic – it compares values of an expression to determine a resulting value.

The `decode` statement refers the table `sys.dual` which always contains only one record.

For more information on the function ‘decode’, refer the SQL Language Reference Manual. For more information on the table ‘dual’, refer to the Oracle RDBMS Database Administrator’s Guide.

**Notation of SQL statement rule**

You reference parameters in the SQL Statement with a colon followed by a number; for example as :1. You then map the parameter number in the SQL statement to the appropriate parameter number and parameter in the Rule Parameters for the rule. In the example above, :1 maps to the Project Type parameter which is listed as parameter 1 under Rule Parameters.

You must define rule parameters with SQL statement rules. You must reference each parameter that you use with a different number, even if you are using the same parameter many times in a SQL statement.

You can use up to 19 rule parameters per rule. You must reference the rule parameter sequence numbers in numerical order. For example, :3 cannot be referenced before :2.

You must not add a semicolon at the end of the SQL statement.

**Selecting a Segment Value Source**

After you specify an intermediate value, you specify one of the following segment value sources to indicate whether the intermediate value is already a valid segment value or whether AutoAccounting needs to translate it into a segment value using a lookup set:
You do not always need to use a lookup set when you write an AutoAccounting rule. If you define a simple constant rule, you probably do not need to use a lookup set to supply a segment value, since you generally supply a valid segment value as the constant.

For example, if you use a constant intermediate value, such as account number 4100, the intermediate value is already a segment value and therefore needs no translation. Or, if the value of a parameter already is a suitable segment value (as might be the case if you use the project number as part of your chart of accounts), you do not need a lookup set to translate it into a segment value.

However, if you use a parameter–based intermediate value such as an organization name, you need to specify the name of a lookup set that maps the names of organizations to the corresponding segment value.

You need to define a lookup set before you can use it in a rule. However, if you prefer to define your rules before completing your lookup sets, you can define each lookup set’s name and description, then define the intermediate values and segment values later.

**AutoAccounting Rules Window Reference**

Use this window to define and maintain AutoAccounting rules. You define AutoAccounting rules to generate account combinations. After you define rules, you assign a set of rules to each AutoAccounting transaction you want to use.

You assign rules to AutoAccounting transactions using the Assign Rules window.

**Rule Name.** Enter a unique, descriptive name for this AutoAccounting rule.

**Intermediate value region**

Use this region to define an AutoAccounting rule and its attributes such as whether it is based on a constant value, a predefined parameter, or a SQL select statement. Depending on a rule’s...
intermediate value source, you also use this region to enter its constant value, parameter, or SQL select statement.

**Source.** Enter the source from which you want to determine an intermediate value for this rule. Oracle Projects provides the following intermediate value sources:

- **Constant.** Use a particular intermediate value which is not context sensitive (usually an Accounting Flexfield segment code).
- **Parameter.** Use a predefined parameter as an intermediate value; make rule context-sensitive based on one value.
- **SQL Select Statement.** Execute a SQL select statement to retrieve an intermediate value; make rule context sensitive based on more than one value.

**Value.** If you specified *Constant* as this rule’s intermediate value source, enter the value you want Oracle Projects to supply as the intermediate value.

If you specified *Parameter* as this rule’s intermediate value source, enter the parameter you want Oracle Projects to supply as the intermediate value.

If you specified *SQL Select Statement* the SQL Editor appears when you enter this field. Enter the statement you want Oracle Projects to use to retrieve an intermediate value.

**Segment Value region**

**Source.** Select the segment value source that you want Oracle Projects to use to derive an Accounting Flexfield segment value from the intermediate value. Oracle Projects provides the following segment value sources:

- **Intermediate Value.** Choose this source if this rule’s intermediate value is already a valid segment value.
- **Segment Value Lookup Set.** Choose this source if this rule’s intermediate value is not a valid segment value and must be mapped to a segment value through a lookup set.

**Lookup Set.** Select the lookup set that you want Oracle Projects to use to derive an Accounting Flexfield segment value. If you specified *Intermediate Value* as this rule’s segment value source, Oracle Projects skips this field.
Lookup Sets button. This button navigates to the AutoAccounting Lookup Sets window.

Rule Parameters region
If you specified SQL Select Statement as this rule’s intermediate value source, use this zone to define each parameter included in the SQL select statement this AutoAccounting rule uses.

If you specified either Constant or Parameter as this rule’s intermediate value source, Oracle Projects skips this region.

Sequence. Enter the numeric value that corresponds to a parameter in the SQL select statement this AutoAccounting rule uses.

Parameter Name. Select the parameter that corresponds to the sequence number you entered in the previous field. You can choose any AutoAccounting parameter.

See Also
Defining AutoAccounting Rules: page 16 – 220

Defining a Lookup Set
To define a lookup set, you specify pairs of values. For each intermediate value, you specify a corresponding account segment value. One or more related pairs of intermediate values and segment values form a lookup set.

For example, if the phrase "World Headquarters" corresponds to a Company segment value of 01, use World Headquarters as the intermediate value and 01 as the segment value.

Or, suppose your business has five major regions (Northeast, South, Middle States, Southwest, and West), and you have a Region segment
in your Accounting Flexfield. You probably need to create a lookup set that maps region names to the corresponding region code:

<table>
<thead>
<tr>
<th>Name</th>
<th>Region Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Map region names to the corresponding Accounting Flexfield region segment code</td>
</tr>
</tbody>
</table>

**Segment Value Lookups**

<table>
<thead>
<tr>
<th>Intermediate Value</th>
<th>Segment Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>01</td>
</tr>
<tr>
<td>South</td>
<td>02</td>
</tr>
<tr>
<td>Middle States</td>
<td>03</td>
</tr>
<tr>
<td>Southwest</td>
<td>04</td>
</tr>
<tr>
<td>West</td>
<td>05</td>
</tr>
</tbody>
</table>

You may need several lookup sets to map organizations to cost centers, expenditure types to account codes, event types to account codes, or for other situations where the segment value depends upon a particular predefined parameter.

You can use a lookup set more than once; several AutoAccounting rules can use the same lookup set.

You define and modify lookup sets using the AutoAccounting Lookup Sets window.

**AutoAccounting Lookup Sets Window Reference**

Use this form to define, view, and maintain AutoAccounting lookup sets.

**Name.** Enter a unique, descriptive name for this lookup set.

**Segment Value Lookup Region**

Use this zone to specify an intermediate value, and then map that intermediate value to a specific segment value of your Accounting Flexfield.

AutoAccounting matches an intermediate value derived from an AutoAccounting rule with an intermediate value in the lookup set and
determines the corresponding segment value you specify to derive an account code from your chart of accounts.

**Intermediate Value.** Enter the intermediate value that you want to map to an Accounting Flexfield segment value.

Ensure that you have entered a valid intermediate value. Valid intermediate values are those that match intermediate values that may be derived from AutoAccounting rules. Values must match exactly in case and spelling. For example, if you are mapping organization intermediate values to cost center segment values, you cannot enter ‘RISK ANALYSIS’ for an organization with the name of ‘Risk Analysis’.

If AutoAccounting does not find a matching intermediate value in the lookup set, AutoAccounting provides an error message (Incomplete AutoAccounting Rules) notifying you that it could not build an Accounting Flexfield combination. You must correct your AutoAccounting setup and resubmit the process that triggered the AutoAccounting error.

**Segment Value.** Enter the Accounting Flexfield segment value that you want to map to with this intermediate value.

Ensure that you have entered a valid segment value. Valid segment values are those that are defined for your Accounting Flexfield segments. Values must match exactly numerically.

If AutoAccounting does not find a matching segment value in the lookup set, AutoAccounting provides an error message (Invalid Accounting Flexfield) notifying you that it could not build a valid Accounting Flexfield combination. You must correct your AutoAccounting setup and resubmit the process that triggered the AutoAccounting error.

---

**Assigning Rules to Transactions**

When you are assigning rules to an AutoAccounting function, you may want to assign different rules to different conditions. For example, you may want to account for indirect projects using one set of rules, and use two different sets of rules for billable items and nonbillable items on contract projects.

To make it easy to do this, Oracle Projects provides function transactions to each function, which identifies commonly used conditions in which you may want to assign different rules.
The following chart lists examples of function transactions under the Labor Cost Account function:

<table>
<thead>
<tr>
<th>FUNCTION TRANSACTIONS</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect, Private Labor</td>
<td>All items on indirect, private projects</td>
</tr>
<tr>
<td>Indirect, Public Labor</td>
<td>All items on indirect, public projects</td>
</tr>
<tr>
<td>Indirect, All</td>
<td>All labor items on indirect projects</td>
</tr>
<tr>
<td>Capital, Private, Capital</td>
<td>Capitalizable labor items on capital, private projects</td>
</tr>
<tr>
<td>Capital, Private, Non-Capital</td>
<td>Non-capitalizable labor items on capital, private projects</td>
</tr>
<tr>
<td>Capital, All</td>
<td>All labor items on capital projects</td>
</tr>
<tr>
<td>Contract, All</td>
<td>All labor items on a contract project</td>
</tr>
</tbody>
</table>

You can assign rules to function transactions for each AutoAccounting function.

You complete the following steps to assign AutoAccounting rules to AutoAccounting functions and transactions:

- Enable each transaction you want to use
- For each transaction you enable, you specify an AutoAccounting rule for each segment of your Accounting Flexfield

**Enabling AutoAccounting transactions**

You tell Oracle Projects which AutoAccounting rules to use, under which circumstances, by assigning rules to transactions. In cases where an AutoAccounting function consists of several distinct transactions, you assign rules to each transaction you want to use. These rule assignments then determine which general ledger account AutoAccounting uses to process that transaction. Oracle Projects attempts to use the most appropriate transaction; if you have not enabled that transaction, it tries to use the fallback transaction.
For example, the Labor Revenue Account function, which Oracle Projects uses to credit a revenue account for labor revenue, consists of three transactions:

- Public Labor Revenue
- Private Labor Revenue
- All Labor Revenue

When Oracle Projects needs to credit a revenue account for labor performed on a public project, it first checks whether you have enabled the Public Labor Revenue transaction. If the transaction is enabled, Oracle Projects uses the AutoAccounting rules you assigned to the transaction to determine which account to credit.

If you have not enabled the Public Labor Revenue transaction, Oracle Projects checks the “fallback” transaction All Labor Revenue.

**Suggestion:** If your accounting practices do not distinguish between the contexts, you can simplify your AutoAccounting implementation by not enabling transactions; instead, you could implement only the All transaction.

You enable a transaction using the Assign AutoAccounting Rules window:

**Defining segment rule pairings**

After you enable a transaction, you match each segment in your Accounting Flexfield with the appropriate AutoAccounting rule. For example, if you have a two–segment Accounting Flexfield containing a Company segment and an Account segment, you assign one rule to the Company segment and one rule to the Account segment.

You use the Assign AutoAccounting Rules window to enable AutoAccounting transactions and assign rules to them.

**Assign AutoAccounting Rules Window Reference**

Use this window to assign an AutoAccounting rule to each segment of your Accounting Flexfield for the AutoAccounting transactions you want to use.

**Name.** Select the name of the AutoAccounting function for which you want to enable one or more transactions and assign rules. If you do not want to limit your search to a particular function, leave this field blank.
Oracle Projects predefines AutoAccounting functions; you cannot modify them, or define additional transactions.

**Function Transactions region**

Use this region to view the AutoAccounting transactions associated with this AutoAccounting function, and to enable each transaction you want to use.

Oracle Projects predefines AutoAccounting transactions; you cannot modify them, or define additional transactions.

**Name.** Oracle Projects displays each AutoAccounting transaction available for this AutoAccounting function.

**Enabled.** Check on this option if you want to enable this AutoAccounting transaction. Do not check the option if you do not want to enable this AutoAccounting transaction.

You can assign AutoAccounting rules to your Accounting Flexfield segments for this transaction regardless of whether you check or don’t check this option. However, if you do not check the option, AutoAccounting does not recognize the associated rule assignment.

**Suggestion:** If your business does not distinguish between each kind of transaction, enable the ALL transaction.

**Note:** If you do not enable any transactions, Oracle Projects automatically uses the ALL transaction.

**Segment Rule Pairings region**

Use this region to assign an AutoAccounting rule to each segment of your Accounting Flexfield for each transaction you want to use.

**Number.** Enter the number that corresponds to the Accounting Flexfield segment to which you want to assign an AutoAccounting rule for this transaction. You need to enter either a number or a segment name to identify an Accounting Flexfield segment.

**Note:** You need to start your numbering sequence with the number zero (0).

**Segment Name.** Select the name of the segment to which you want to assign an AutoAccounting rule for this transaction. If you have already selected a number, Oracle Projects automatically displays the corresponding segment name.

**Rule Name.** Enter the AutoAccounting rule that you want to assign to this Accounting Flexfield segment for this transaction.
**Rule Button.** You can choose this button to navigate to the Define Rules window.

**AutoAccounting Sample Implementation: Fremont Corporation**

The sample AutoAccounting Implementation table, shown on the following two pages, illustrates Fremont Corporation’s implementation of AutoAccounting. Each rule assigned to an AutoAccounting function appears under the appropriate Accounting Flexfield segment column.

<table>
<thead>
<tr>
<th>AutoAccounting Function</th>
<th>AutoAccounting Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Company Segment</td>
</tr>
<tr>
<td>Supplier Invoice Costs Account: page 16 – 276</td>
<td>– Project Company</td>
</tr>
<tr>
<td>Labor Cost Account: page 16 – 238</td>
<td>– Employee Company</td>
</tr>
<tr>
<td>Supplier Invoice Revenue Account: page 16 – 278</td>
<td>– Project Company</td>
</tr>
<tr>
<td>Labor Revenue Account: page 16 – 256</td>
<td>– Employee Company</td>
</tr>
<tr>
<td>Labor Revenue Borrowed Account: page 16 – 258</td>
<td>– Project Company</td>
</tr>
</tbody>
</table>

Table 16 – 14 AutoAccounting Sample Implementation (Page 1 of 2)
<table>
<thead>
<tr>
<th>AutoAccounting Function</th>
<th>AutoAccounting Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Company Segment</td>
</tr>
<tr>
<td>Total Burdened Cost Debit</td>
<td>– Employee Company</td>
</tr>
<tr>
<td>Total Burdened Cost Credit</td>
<td>– Employee Company</td>
</tr>
</tbody>
</table>

Table 16 – 14 AutoAccounting Sample Implementation (Page 2 of 2)
AutoAccounting Functions

In this section, we describe the AutoAccounting functions that you need to implement to process accounting transactions for each of the following areas:

**Note:** AutoAccounting rules are set up once for each chart of accounts. However, accounting rule assignments are operating unit–specific. In a multi–organization environment, you can use the multi–organization Replicate Seed Data process to replicate system–defined function transactions in each operating unit you set up. For each operating unit, you must enable cost function transactions or revenue and billing function transactions and assign proper accounting rules for Oracle Projects to use when automatically generating your accounting entries.

- **Labor**
  - Accounting for Labor Costs: page 16 – 238
  - Accounting for Burdened Cost: page 16 – 249
  - Accounting for Labor Revenue: page 16 – 254

- **Expense Reports**
  - Accounting for Expense Report Costs: page 16 – 262
  - Accounting for Expense Report Revenue: page 16 – 265

- **Usages**
  - Accounting for Usage Costs: page 16 – 267
  - Accounting for Usage Revenue: page 16 – 270

- **Supplier Invoices**
  - Accounting for Supplier Invoice Adjustment Costs: page 16 – 275
  - Accounting for Supplier Invoices Revenue: page 16 – 278

- **Events**
  - Accounting for Event Revenue: page 16 – 279

- **Revenue and Invoices**
  - Accounting for Revenue and Invoices: page 16 – 281
Accounting for Labor Costs

In this section, we describe the AutoAccounting functions that are related to labor distribution and interface to Oracle General Ledger.

When you run the PRC: Distribute Labor Costs process, Oracle Projects calculates labor cost amounts based upon employee labor cost rates and compensation rules. After calculating labor costs, Oracle Projects uses the Labor Cost Account transactions to debit an expense account for raw labor costs.

The Labor Cost Account function consists of the following transactions:

- Indirect Private Labor
- Indirect Public Labor
- Private Billable Labor
- Private Non-Billable Labor
- Public Billable Labor
- Public Non-Billable Labor
- All Labor
- Capital, All
- Contract, All
- Indirect, All
- Capital, Private, Capital
- Capital, Private, non-Capital
- Capital, Public, Capital
- Capital, Public, non-Capital
The choice of transaction depends upon whether the labor cost corresponds to a public sector or private sector project, a billable or non-billable labor item, and whether it is direct or indirect labor. If your business does not distinguish between specific types of labor costs, you can enable the All Labor transaction.

Fremont tracks its labor costs by company and cost center. Each company and cost center has its own set of labor accounts for private labor costs, public labor costs, and other labor-related costs. Fremont Corporation uses 12 expense accounts to record raw labor costs:

- Private, Billable Labor Cost (5100)
- Public, Billable Labor Cost (5101)
- Private, Non-Billable Labor Cost (5102)
- Public, Non-Billable Labor Cost (5103)
- Marketing Labor Cost (5150)
- Government Marketing Labor Cost (5151)
- Research & Development Labor Cost (5152)
- Administration Labor Cost (5153)
- Bid & Proposal Labor Cost (5154)
- Holiday Time (5170)
- Sick Time (5171)
- Vacation Time (5172)
- Overtime Labor Cost (5173)

(Refer to Fremont Corporation Set of Books: page 16 – 27 for a complete list of the Fremont Corporation account numbers.)

For contract and indirect labor costs, Fremont's accounting department charges labor costs to the company and cost center for which an employee works. Fremont charges overhead costs to the project-managing organization.

Since Fremont distinguishes between public and private; billable and non-billable; and between contract and indirect labor costs, it enables the six very specific Labor Cost Account transactions rather than enabling only the general All Labor transaction.
Since Fremont’s Accounting Flexfield includes a Company segment and a Cost Center segment, one of the first steps to implement the Labor Cost Account function is to specify how to associate specific organizations with specific companies and cost centers. Since each organization is part of a particular company, and each organization has its own cost center, determining company codes and cost centers is not very complex.

Recall that Fremont is composed of four business units: Administration, Fremont Engineering, Fremont Construction, and Fremont Services. Each of these business units is considered a company and has a distinct company code in the Accounting Flexfield. Administration is company 01, Fremont Engineering is company 02, Fremont Construction is company 03, and Fremont Services is company 04.

For both public and private contract labor, Fremont charges labor costs to the company and cost center corresponding to the organization of the employee who performed the labor.

For indirect labor on privately funded projects, such as general administration, corporate marketing, or R&D, Fremont Corporation charges labor costs to specific labor accounts different from the accounts for ordinary project-driven labor. Similarly, Fremont charges holiday time, sick time, and vacation time to other indirect labor accounts.

Fremont uses service types to distinguish different kinds of indirect, private labor costs. Fremont can create a lookup set that maps service types to the appropriate expense account.

To implement the Labor Cost Account function, Fremont’s implementation team defines three lookup sets:

- One lookup set to map organizations to companies
- One lookup set to map organizations to cost centers
- One lookup set to map service types to each Fremont’s six expense accounts for indirect labor

Fremont defines eight rules to implement the Labor Cost Account function:

- One rule supplies the appropriate value for the Company segment of Fremont’s Accounting Flexfield; Fremont uses a lookup set to define this rule
- One rule supplies the appropriate value for the Cost Center segment; Fremont uses a lookup set to define this rule
Six rules supply the appropriate account code for the Account segment; the indirect, private labor rule uses a lookup set, and the other five use constant values.

Define a Lookup Set:

**Name**: Organization to Company  
**Description**: Map organization to the appropriate company code

**Segment Value Lookups**

<table>
<thead>
<tr>
<th>Intermediate Value (Organization)</th>
<th>Segment Value (Company Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>01</td>
</tr>
<tr>
<td>Executive Office</td>
<td>01</td>
</tr>
<tr>
<td>Fremont Corporation</td>
<td>01</td>
</tr>
<tr>
<td>Human Resources</td>
<td>01</td>
</tr>
<tr>
<td>Finance</td>
<td>01</td>
</tr>
<tr>
<td>Information Services</td>
<td>01</td>
</tr>
<tr>
<td>Fremont Engineering</td>
<td>02</td>
</tr>
<tr>
<td>Electrical</td>
<td>02</td>
</tr>
<tr>
<td>Structural</td>
<td>02</td>
</tr>
<tr>
<td>Mechanical</td>
<td>02</td>
</tr>
<tr>
<td>Environmental</td>
<td>02</td>
</tr>
<tr>
<td>Fremont Construction</td>
<td>03</td>
</tr>
<tr>
<td>West</td>
<td>03</td>
</tr>
<tr>
<td>Midwest</td>
<td>03</td>
</tr>
<tr>
<td>East</td>
<td>03</td>
</tr>
<tr>
<td>South</td>
<td>03</td>
</tr>
<tr>
<td>International</td>
<td>03</td>
</tr>
<tr>
<td>Fremont Services</td>
<td>04</td>
</tr>
<tr>
<td>Data Systems</td>
<td>04</td>
</tr>
<tr>
<td>Risk Analysis</td>
<td>04</td>
</tr>
</tbody>
</table>

Define a Lookup Set:
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization to Cost Center</td>
<td>Map organization to the appropriate cost center code</td>
</tr>
</tbody>
</table>

### Segment Value Lookups

<table>
<thead>
<tr>
<th>Intermediate Value (Organization)</th>
<th>Segment Value (Cost Center Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont Corporation</td>
<td>000</td>
</tr>
<tr>
<td>Administration</td>
<td>100</td>
</tr>
<tr>
<td>Executive Office</td>
<td>101</td>
</tr>
<tr>
<td>Human Resources</td>
<td>102</td>
</tr>
<tr>
<td>Finance</td>
<td>103</td>
</tr>
<tr>
<td>Information Services</td>
<td>104</td>
</tr>
<tr>
<td>Fremont Engineering</td>
<td>200</td>
</tr>
<tr>
<td>Electrical</td>
<td>201</td>
</tr>
<tr>
<td>Structural</td>
<td>202</td>
</tr>
<tr>
<td>Mechanical</td>
<td>203</td>
</tr>
<tr>
<td>Environmental</td>
<td>204</td>
</tr>
<tr>
<td>Fremont Construction</td>
<td>300</td>
</tr>
<tr>
<td>West</td>
<td>301</td>
</tr>
<tr>
<td>Midwest</td>
<td>302</td>
</tr>
<tr>
<td>East</td>
<td>303</td>
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<tr>
<td>South</td>
<td>304</td>
</tr>
<tr>
<td>International</td>
<td>305</td>
</tr>
<tr>
<td>Fremont Services</td>
<td>400</td>
</tr>
<tr>
<td>Data Systems</td>
<td>401</td>
</tr>
<tr>
<td>Risk Analysis</td>
<td>402</td>
</tr>
</tbody>
</table>

### Define a Lookup Set:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect Labor Cost</td>
<td>Map the service type for labor on indirect projects to indirect cost accounts</td>
</tr>
</tbody>
</table>

### Segment Value Lookups
### Define a Rule to Determine Company Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Employee Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Map an employee's organization to a company</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Parameter</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Expenditure Organization</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Segment Value Lookup Set</td>
</tr>
<tr>
<td>Lookup Set</td>
<td>Organization to Company</td>
</tr>
</tbody>
</table>

### Define a Rule to Determine Cost Center Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Employee Cost Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Map an employee's organization to a cost center</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Parameter</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Expenditure Organization</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Segment Value Lookup Set</td>
</tr>
<tr>
<td>Lookup Set</td>
<td>Organization to Cost Center</td>
</tr>
</tbody>
</table>

### Define a Rule to Determine Account Segment Value: (Indirect Private Labor)

<table>
<thead>
<tr>
<th>Name</th>
<th>Indirect Private Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Indirect private labor cost account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Parameter</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Task Service Type</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Segment Value Lookup Set</td>
</tr>
<tr>
<td>Lookup Set</td>
<td>Indirect Labor Cost</td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Account Segment Value: (Indirect Public Labor)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Government Marketing Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Government marketing labor cost account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>5151</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Account Segment Value: (Private Billable Labor)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Private, Billable Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Private, Billable labor cost account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>5100</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Account Segment Value: (Private Non–Billable Labor)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Private, Non–Billable Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Private, Non–Billable labor cost account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>5102</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Account Segment Value: (Public Billable Labor)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Public, Billable Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Public, Billable labor cost account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
</tbody>
</table>
Define a Rule to Determine Account Segment Value: (Public Non-Billable Labor)

**Name**: Public, Non-Billable Labor  
**Description**: Public, Non-Billable labor cost account  
**Intermediate Value Source**: Constant  
**Constant**: 5103  
**Segment Value Source**: Intermediate Value

Enable the Indirect Private Labor Transaction and Assign Rules:

**Function Name**: Labor Cost Account  
**Transaction Name**: Indirect, Private Labor

<table>
<thead>
<tr>
<th>Segment Rule Pairings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Enable the Indirect Public Labor Transaction and Assign Rules:

**Function Name**: Labor Cost Account  
**Transaction Name**: Indirect, Public Labor

<table>
<thead>
<tr>
<th>Segment Rule Pairings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>
Enable the Private Billable Labor Transaction and Assign Rules:

*Function Name:* Labor Cost Account  
*Transaction Name:* Private, Billable Labor

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Employee Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Employee Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Private, Billable Labor</td>
</tr>
</tbody>
</table>

Enable the Private Non-Billable Labor Transaction and Assign Rules:

*Function Name:* Labor Cost Account  
*Transaction Name:* Private, Non-Billable Labor

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Employee Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Employee Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Private, Non-Billable Labor</td>
</tr>
</tbody>
</table>

Enable the Public Billable Labor Transaction and Assign Rules:

*Function Name:* Labor Cost Account  
*Transaction Name:* Public Billable Labor

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Employee Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Employee Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Public, Billable Labor</td>
</tr>
</tbody>
</table>
Enable the Public Non–Billable Labor Transaction and Assign Rules:

**Function Name:** Labor Cost Account  
**Transaction Name:** Public Non–Billable Labor

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Employee Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Employee Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Public, Non–Billable Labor</td>
</tr>
</tbody>
</table>

When you run the **PRC: Interface Labor Costs to Gener Ledger** process, Oracle Projects credits a payroll clearing liability account to balance the labor expense account it debits when you run the **PRC: Distribute Labor Costs** process. The process then transfers both the liability credits and the expense debits to the Oracle General Ledger interface tables so you can post them to the general ledger.

The Labor Cost Clearing Account function consists of the following transaction:

- **Clearing Account**

The Clearing Account transaction determines which account AutoAccounting credits for payroll liabilities.

Fremont Corporation uses one payroll clearing account for each division of the corporation. For example, the Structural group does not have its own payroll clearing account; payroll liabilities for the Electrical, Structural, Mechanical, and Environmental organizations are all credited to the Fremont Engineering division’s payroll clearing account 02–200–2200. That is, labor costs are cleared to the cost center associated with the division to which an employee belongs.

Fremont uses one liability account to record payroll liability:

- **Payroll Clearing (2200)**

To implement the Labor Cost Clearing Account function, Fremont defines two rules:

- One rule to find the division cost center of an employee’s owning organization
• One rule to determine the liability account

Fremont defines a lookup set to map organizations to the appropriate division cost center. Fremont uses the lookup set to define a rule to supply a value for the Cost Center segment of its Accounting Flexfield.

Fremont uses an existing rule to supply a value for the Company segment.

Define a Lookup Set:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Org to Division Cost Center</td>
<td>Map organization to the cost center of the division to which it is subordinate</td>
</tr>
</tbody>
</table>

Segment Value Lookups

<table>
<thead>
<tr>
<th>Intermediate Value (Organization)</th>
<th>Segment Value (Cost Center Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fremont Corporation</td>
<td>100</td>
</tr>
<tr>
<td>Administration</td>
<td>100</td>
</tr>
<tr>
<td>Executive Office</td>
<td>100</td>
</tr>
<tr>
<td>Human Resources</td>
<td>100</td>
</tr>
<tr>
<td>Finance</td>
<td>100</td>
</tr>
<tr>
<td>Information Services</td>
<td>100</td>
</tr>
<tr>
<td>Fremont Engineering</td>
<td>200</td>
</tr>
<tr>
<td>Electrical</td>
<td>200</td>
</tr>
<tr>
<td>Structural</td>
<td>200</td>
</tr>
<tr>
<td>Mechanical</td>
<td>200</td>
</tr>
<tr>
<td>Environmental</td>
<td>200</td>
</tr>
<tr>
<td>Fremont Construction</td>
<td>300</td>
</tr>
<tr>
<td>West</td>
<td>300</td>
</tr>
<tr>
<td>Midwest</td>
<td>300</td>
</tr>
<tr>
<td>East</td>
<td>300</td>
</tr>
<tr>
<td>South</td>
<td>300</td>
</tr>
<tr>
<td>International</td>
<td>300</td>
</tr>
<tr>
<td>Fremont Services</td>
<td>400</td>
</tr>
<tr>
<td>Data Systems</td>
<td>400</td>
</tr>
</tbody>
</table>
Risk Analysis

<table>
<thead>
<tr>
<th>Define a Rule to Determine Cost Center Segment Value:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Intermediate Value Source</strong></td>
</tr>
<tr>
<td><strong>Parameter Name</strong></td>
</tr>
<tr>
<td><strong>Segment Value Source</strong></td>
</tr>
<tr>
<td><strong>Lookup Set</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Define a Rule to Determine Account Segment Value:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Intermediate Value Source</strong></td>
</tr>
<tr>
<td><strong>Constant</strong></td>
</tr>
<tr>
<td><strong>Segment Value Source</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enable the Clearing Account Transaction and Assign Rules:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function Name:</strong></td>
</tr>
<tr>
<td><strong>Transaction Name:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Segment Rule Pairings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

**Accounting for Burdened Cost**

In this section, we describe the AutoAccounting functions that are related to burden cost distribution and interface to Oracle General Ledger.
When you run the PRC: Distribute Total Burdened Cost process, Oracle Projects creates two burdened cost distribution lines for the total burdened cost. One distribution line holds the burden cost debit and the other distribution line holds the burden cost credit. Oracle Projects creates these two distributions for all expenditure items charged to projects which are defined to burden costs.

Note: Set up the Total Burdened Cost functions only if you want to account for total burdened cost for burdened cost accounting.

The Total Burden Costs Debit/Credit function consists of the following functions: Total Burdened Cost Debit and Total Burdened Cost Credit. Each of these functions consist of the following transactions:

- All Burdened
- Capital, All
- Capital, Private, Capital
- Capital, Private, Non-Capital
- Capital, Public, Capital
- Capital, Public, Non-Capital
- Contract, All
- Indirect Private Burdened
- Indirect Public Burdened
- Indirect, All
- Private Billable burdened
- Private Non-Billable Burdened
- Public Billable Burdened
- Public Non-Billable Burdened

If you want Oracle Projects to calculate burdened labor costs, you need to implement the following two transactions for the Labor Cost Account function:

- Burdened Cost Credit
- Burdened Cost Debit
Fremont Corporation uses one expense account and one asset account to record burdened cost:

- Transfer Out to Inventory (5199)
- Inventory (1200)

Fremont defines one rule to supply the Transfer Out to Inventory account code for the Total Burdened Cost Credit transaction; this rule reverses the fully burdened cost from the employee’s owning organization.

Because Fremont credits the Transfer Out to Inventory account of the employee’s owning organization, Fremont can use existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield for the Total Burdened Cost Credit transaction.

Fremont defines one rule to supply the Inventory account code for the Total Burdened Cost Debit transaction; this rule debits an asset account of the project–managing organization.

Because Fremont debits the Inventory account of the project–managing organization, Fremont needs to define two rules to supply values for the Company and Cost Center segments of its Accounting Flexfield for the Total Burdened Cost Debit transaction. (Fremont uses these two rules nearly as frequently as it uses the Employee Company and Employee Cost Center rules.)

Define a Rule to Determine Company Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Project Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Map the project–managing organization to a company</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Parameter</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Project Organization</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Segment Value Lookup Set</td>
</tr>
<tr>
<td>Lookup Set</td>
<td>Organization to Company</td>
</tr>
</tbody>
</table>

Define a Rule to Determine Cost Center Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Project Cost Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Map the project–managing organization to a cost center</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Parameter</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Project Organization</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Segment Value Lookup Set</td>
</tr>
</tbody>
</table>
Lookup Set: Organization to Cost Center

Define a Rule to Determine Account Segment Value:

- **Name**: Transfer Out to Inventory
- **Description**: Expense account used to reverse burdened labor cost from the employee’s owning organization.
- **Intermediate Value Source**: Constant
- **Constant**: 5199
- **Segment Value Source**: Intermediate Value

Define a Rule to Determine Account Segment Value:

- **Name**: Inventory
- **Description**: Inventory asset account records burdened labor cost incurred on a project
- **Intermediate Value Source**: Constant
- **Constant**: 1200
- **Segment Value Source**: Intermediate Value

Enable the Burdened Cost Credit Transaction and Assign Rules:

- **Function Name**: Total Burdened Cost Credit
- **Transaction Name**: All Burdened

<table>
<thead>
<tr>
<th>Segment Rule Pairings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Enable the Burdened Cost Debit Transaction and Assign Rules:

- **Function Name**: Total Burdened Cost Debit
- **Transaction Name**: All Burdened
<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Inventory</td>
</tr>
</tbody>
</table>
Accounting for Labor Revenue

In this section, we describe the three AutoAccounting functions that are related to labor revenue. We also include a description of how Fremont Corporation implements each function.

Oracle Projects uses the Labor Revenue Account function to calculate revenue you earn for labor items. The resulting labor revenue is generally awarded to either a project–managing organization, or an employee’s owning organization; this labor revenue does not include borrowed and lent labor revenue.

The Labor Revenue Borrowed Account and Labor Revenue Lent Account functions allow you to record revenue in both a project–managing organization and in an employee’s owning organization (when these two organizations are different).

The organization to which you award revenue (using the Labor Revenue Account function) becomes the lending organization; Oracle Projects uses the Labor Revenue Lent Account transactions to debit a revenue account of the lending organization.

The organization to which you do not award revenue (using the Labor Revenue Account function) becomes the borrowing organization; Oracle Projects uses the Labor Revenue Borrowed Account transactions to credit a revenue account of the borrowing organization.

When you run the **PRC: Generate Draft Revenue** process, Oracle Projects compares the project–managing organization and the employee’s owning organization to determine whether to use the Labor Revenue Borrowed Account and Labor Revenue Lent Account functions when it calculates labor revenue you earn. Oracle Projects creates borrowed and lent revenue distribution lines for projects having a distribution of WORK only, since revenue created for COST projects are created as events, and borrowed and lent revenue is based on expenditure items.

If the project–managing organization is the same as the employee’s owning organization, Oracle Projects uses only the Labor Revenue Account function to credit a revenue account; the Labor Revenue Borrowed Account and Labor Revenue Lent Account functions are not necessary.

If the project–managing organization is not the same as the employee’s owning organization, Oracle Projects first ensures that you have enabled the Labor Revenue Borrowed Account and Labor Revenue Lent Account functions, and then uses them to create revenue credit and debit entries for borrowed and lent labor revenue. The borrowed and lent entries are in addition to the labor revenue credits Oracle projects.
Projects creates using the Labor Revenue Account transactions. If you do not want to record borrowed and lent labor revenue entries, do not implement the Labor Revenue Borrowed Account and Labor Revenue Lent Account functions.

The Labor Revenue Borrowed Account and Labor Revenue Lent Account functions are distinct from the Labor Revenue Account function to allow you to separate borrowed and lent labor revenue into as many different accounts as you separate labor revenue.

You can set the PA: Borrowed Lent Percentage Amount profile option if you want to create percentage amounts of borrowed and lent revenue during revenue calculation. If you do not specify a percentage amount when you implement borrowed and lent functions, Oracle Projects uses a value of 100 percent when calculating revenue amounts.

See Also

Oracle Projects Profile Options (Appendix B)

Fremont Corporation always awards labor revenue to the employee’s owning organization even if the employee worked on a project owned by a different organization.

However, Fremont also awards the project–managing organization with labor revenue earned on behalf of one of its projects. Fremont uses the Labor Revenue Borrowed Account and Labor Revenue Lent Account functions to record labor revenue in both organizations.

The net result of the borrowed entry and the lent entry is zero across all organizations. However, the entries allow both the employee’s owning organization and the project–managing organization to report labor revenue earned.
Fremont uses revenue credited to the project–managing organization for reporting purposes only.

Oracle Projects uses the Borrowed and Lent functions only in cases where the employee’s owning organization is different from the project–managing organization. AutoAccounting uses the Labor Revenue Borrowed Account transactions to credit a revenue account of the project–managing organization, and uses the Labor Revenue Lent Account transactions to debit a revenue account of the employee’s owning organization. (Each company and cost center at Fremont has a separate borrowed and lent account for private revenue and another account for public revenue.)

When you run the PRC: Generate Draft Revenue process, Oracle Projects uses the Labor Revenue Account transactions to credit a revenue account for labor items.

The Labor Revenue Account function consists of the following transactions:

- Private Labor Revenue
- Public Labor Revenue
- All Labor Revenue

Fremont awards labor revenue to the employee’s owning organization, and, when applicable, awards labor revenue to the project–managing organization using borrowed and lent revenue accounts.

Fremont enables the Private Labor Revenue and Public Labor Revenue transactions to distinguish revenue earned between private and public projects.

Fremont Corporation uses two accounts to record labor revenue:

- Private Professional Fee Revenue (4100)
- Public Professional Fee Revenue (4101)

To implement the Labor Revenue Account function, Fremont defines two rules:

- One rule to determine the revenue account for private labor revenue
- One rule to determine the revenue account for public labor revenue

Fremont uses one rule in the Private Labor Revenue transaction and one rule in the Public Labor Revenue transaction.
Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield for both transactions.

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Intermediate Value Source</th>
<th>Constant</th>
<th>Segment Value Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Fee Revenue</td>
<td>Private Professional Fee Revenue</td>
<td>Constant</td>
<td>4100</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Intermediate Value Source</th>
<th>Constant</th>
<th>Segment Value Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Fee Revenue</td>
<td>Public Professional Fee Revenue</td>
<td>Constant</td>
<td>4101</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Enable the Private Labor Revenue Transaction and Assign Rules:**

Function Name: Labor Revenue Account
Transaction Name: Private Labor Revenue

**Segment Rule Pairings**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Employee Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Employee Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Private Fee Revenue</td>
</tr>
</tbody>
</table>

**Enable the Public Labor Revenue Transaction and Assign Rules:**

Function Name: Labor Revenue Account
Transaction Name: Public Labor Revenue

**Segment Rule Pairings**
Oracle Projects uses the Labor Revenue Borrowed Account transactions to credit a revenue account of either the project-managing organization or the employee’s owning organization (depending upon the organization to which you award revenue using the Labor Revenue Account function).

The Labor Revenue Borrowed Account function consists of the following transactions:

- Private Labor Borrowed
- Public Labor Borrowed
- All Labor Borrowed

Fremont Corporation uses two accounts to record borrowed and lent labor revenue:

- Private Borrowed and Lent (4102)
- Public Borrowed and Lent (4103)

Fremont enables both the Private Labor Borrowed and Public Labor Borrowed transactions to distinguish revenue totals between private and public projects.

To implement the Labor Revenue Borrowed Account function, Fremont defines two rules:

- One rule to determine the borrowed and lent account for private labor revenue
- One rule to determine the borrowed and lent account for public labor revenue

Fremont uses one rule in the Private Labor Borrowed transaction and one rule in the Public Labor Borrowed Account transaction.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield for both transactions.

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Employee Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Employee Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Public Fee Revenue</td>
</tr>
<tr>
<td>Description</td>
<td>Private revenue borrowed and lent</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------</td>
<td></td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>4102</td>
<td></td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
<td></td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Public Borrowed and Lent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Public revenue borrowed and lent</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>4103</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Enable the Private Labor Borrowed Transaction and Assign Rules:**

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Labor Revenue Borrowed Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Name:</td>
<td>Private Labor Borrowed</td>
</tr>
</tbody>
</table>

**Segment Rule Pairings**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Private Borrowed and Lent</td>
</tr>
</tbody>
</table>

**Enable the Public Labor Borrowed Account Transaction and Assign Rules:**

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Labor Revenue Borrowed Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Name:</td>
<td>Public Labor Borrowed</td>
</tr>
</tbody>
</table>

**Segment Rule Pairings**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
</tbody>
</table>
Oracle Projects uses the Labor Revenue Lent Account transactions to debit a revenue account of either the employee’s owning organization or the project-managing organization (depending upon the organization to which you award revenue using the Labor Revenue Account function).

The Labor Revenue Lent Account function consists of the following transactions:

- Private Labor Lent
- Public Labor Lent
- All Labor Lent

Fremont Corporation implements the Labor Revenue Lent Account function using the rules it defined for the Labor Revenue Borrowed Account function.

Fremont enables both the Private Labor Lent and Public Labor Lent Account transactions to distinguish revenue totals between private and public projects.


Enable the Private Labor Lent Transaction and Assign Rules:

Function Name: Labor Revenue Lent Account
Transaction Name: Private Labor Lent

Segment Rule Pairings

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Employee Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Employee Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Private Borrowed and Lent</td>
</tr>
</tbody>
</table>

Enable the Public Labor Lent Transaction and Assign Rules:

Function Name: Labor Revenue Lent Account
Transaction Name: Public Labor Lent
<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Employee Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Employee Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Public Borrowed and Lent</td>
</tr>
</tbody>
</table>
When you run the PRC: Distribute Expense Reports Costs process, Oracle Projects calculates and distributes costs originating from expense reports, and uses the Expense Report Cost Account transactions to determine which expense account to debit for expense report costs.

The Expense Report Cost Account function consists of the following transactions:

- All Expenses
- Capital, All
- Capital, Private, Capital
- Capital, Private, Non-Capital
- Capital, Public, Capital
- Capital, Public, Non-Capital
- Contract, All
- Indirect Private Expenses
- Indirect Public Expenses
- Indirect, All
- Private, Billable Expenses
- Private, Non-Billable Expenses
- Public, Billable Expenses
- Public, Non-Billable Expenses

Fremont posts expense report costs to the project-managing organization’s cost center, and relies upon expenditure type to determine which account to debit.

Although the Expense Report Cost Account function consists of transactions that distinguish between public and private; and between billable and non-billable expenses, Fremont does not differentiate between any of these characteristics in its chart of accounts. Therefore, rather than enabling the six very specific transactions, Fremont’s accounting department enables just the general All Expenses transaction.

Fremont Corporation uses three accounts to record expense report costs:
To implement the Expense Report Cost Account function, Fremont defines a lookup set to map expenditure types to each of its three expense accounts. Fremont uses the lookup set to define a rule to supply an account code for the Account segment of its Accounting Flexfield.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

**Define a Lookup Set:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp Type to Expense Account</td>
<td>Map the expenditure type for expense report items to the appropriate expense account</td>
</tr>
</tbody>
</table>

**Segment Value Lookups**

<table>
<thead>
<tr>
<th>Intermediate Value (Expenditure Type)</th>
<th>Segment Value (Account Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Travel</td>
<td>5200</td>
</tr>
<tr>
<td>Automobile Rental</td>
<td>5200</td>
</tr>
<tr>
<td>Personal Auto Use</td>
<td>5200</td>
</tr>
<tr>
<td>Meals</td>
<td>5201</td>
</tr>
<tr>
<td>Entertainment</td>
<td>5202</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>5202</td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expense Report Cost</td>
<td>Determine expense report cost account based on the expenditure type</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intermediate Value Source</th>
<th>Parameter Name</th>
<th>Segment Value Source</th>
<th>Lookup Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter</td>
<td>Expenditure Type</td>
<td>Segment Value Lookup Set</td>
<td>Exp Type to Expense Account</td>
</tr>
</tbody>
</table>
Enable The All Expenses Transaction and Assign Rules:

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Expense Report Cost Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Name:</td>
<td>All Expenses</td>
</tr>
</tbody>
</table>

**Segment Rule Pairings**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Expense Report Cost</td>
</tr>
</tbody>
</table>

When you run the **PRC: Interface Expense Reports to Payables** process, Oracle Projects interfaces expense report costs to the Oracle Payables Invoice Import feature, and uses a transaction to credit an accounts payable liability account.

The Expense Report Liability Account function consists of the following transaction:

- AP Liability Account

The Expense Report Liability Account function is very similar to the Labor Cost Clearing Account function. Instead of determining a payroll clearing liability account, the Expense Report Liability Account function determines an accounts payable liability account.

Fremont Corporation uses one account to record accounts payable to employees:

- Accounts Payable, Employee (2400)

To implement the Expense Report Liability Account function, Fremont defines a rule to supply an account code for the Account segment of its Accounting Flexfield. This rule always supplies account 2400, the only accounts payable liability account in Fremont’s chart of accounts.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>AP Employee Liability</th>
</tr>
</thead>
</table>
Expense Report Revenue Account Function

When you run the PRC: Generate Draft Revenue process, Oracle Projects uses the Expense Report Revenue Account transactions to credit a revenue account for expense report items.

The Expense Report Revenue Account function consists of the following transactions:

- Private Expense Report Revenue
- Public Expense Report Revenue
- All Expense Report Revenue

Expense Report revenue is posted to the project–managing organization’s Expense Report Revenue account. Since Fremont does not differentiate between public and private projects when it calculates expense report revenue, it enables only the All Expense Report Revenue transaction.

Fremont Corporation uses one revenue account to record expense report revenue:
• Expense Report Revenue (4300)

To implement the Expense Report Revenue Account function, Fremont defines a rule to supply the Expense Report Revenue account code for the Account segment of its Accounting Flexfield. The Expense Report Revenue account is always 4300 since Fremont’s chart of accounts uses only one account.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

Define a Rule to Determine Account Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Intermediate Value Source</th>
<th>Constant</th>
<th>Segment Value Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expense Report Revenue</td>
<td>Determine the expense report revenue account</td>
<td>Constant</td>
<td>4300</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

Enable the All Expense Report Revenue Transaction and Assign Rules:

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Expense Report Revenue Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Name:</td>
<td>All Expense Report Revenue</td>
</tr>
</tbody>
</table>

Segment Rule Pairings

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Expense Report Revenue</td>
</tr>
</tbody>
</table>
When you run the PRC: Distribute Usage and Miscellaneous Costs process, Oracle Projects uses the Usage Cost Account transactions to debit an expense account for raw usages costs.

The Usage Cost Account function consists of the following transactions:

- All Usages
- Capital, All
- Capital, Private, Capital
- Capital, Private, Non-Capital
- Capital, Public, Capital
- Capital, Public, Non-Capital
- Contract, All
- Indirect, All
- Indirect, Private Usages
- Indirect, Public Usages
- Private, Billable Usages
- Private, Non-Billable Usages
- Public, Billable Usages
- Public, Non-Billable Usages

Since Fremont’s chart of accounts accounts for all usage costs in the same way, regardless of the type of project, Fremont’s accounting department enables only the All Usages transaction.

Usages costs are posted to the organization that owns the non-labor resource; expenditure type determines which expense account AutoAccounting debits.

Fremont Corporation charges usages costs to one of three expense accounts, depending upon the expenditure type:

- Computer Expense (5400)
- Vehicle and Equipment Expense (5401)
- Other Asset Expense (5402)

To implement the Usage Cost Account function, Fremont defines three rules:
Fremont defines a lookup set to map expenditure types to the appropriate expense account. Fremont uses the lookup set to define the expense account rule. Fremont uses existing lookup sets to define the other two rules.

**Define a Lookup Set:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Usage to Expense</strong></td>
<td>Map the expenditure type for a usage item to the appropriate expense account</td>
</tr>
</tbody>
</table>

**Segment Value Lookups**

<table>
<thead>
<tr>
<th>Intermediate Value</th>
<th>Segment Value (Account Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computer Services</strong></td>
<td>5400</td>
</tr>
<tr>
<td><strong>Vehicle</strong></td>
<td>5401</td>
</tr>
<tr>
<td><strong>Field Equipment</strong></td>
<td>5401</td>
</tr>
<tr>
<td><strong>Other Asset</strong></td>
<td>5402</td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Company Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resource Company</strong></td>
<td>Find the company of the non–labor resource owning organization</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intermediate Value Source</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non–Labor Resource Org</strong></td>
<td><strong>Organization to Company</strong></td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Cost Center Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resource Cost Center</strong></td>
<td></td>
</tr>
</tbody>
</table>
**Usage Cost Clearing Account Function**

When you run the PRC: *Interface Usage and Miscellaneous Costs to General Ledger* process, Oracle Projects credits an asset usages liability account to balance the usages expense account it debits when you run the PRC: *Distribute Usage and Miscellaneous Costs* process. The process then transfers both the liability credits and the expense debits to the Oracle General Ledger interface tables so you can post them to the general ledger.

The Usage Cost Clearing Account function consists of the following transactions:

---

**Table: Define a Rule to Determine Account Segment Value**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Resource Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Resource Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Usage Costs</td>
</tr>
</tbody>
</table>
Clearing Account

Oracle Projects uses the Clearing Account transaction to determine which account to credit for asset usage liabilities.

Fremont Corporation uses one liability account to record asset usage liabilities:
- Asset Usage Clearing (2300)

To implement the Usage Cost Clearing Account function, Fremont defines a rule to supply an account code for the Account segment of its Accounting Flexfield. The asset usage liability account is always 2300 since Fremont uses only one account in its chart of accounts.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Usage Clearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Usage clearing liability account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>2300</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Enable the Clearing Account Transaction and Assign Rules:**

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Usage Cost Clearing Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Name:</td>
<td>Clearing Account</td>
</tr>
</tbody>
</table>

**Segment Rule Pairings**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Resource Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Resource Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Usage Clearing</td>
</tr>
</tbody>
</table>

**Accounting for Usage Revenue**

Generating usage revenue is very similar to generating labor revenue. Oracle Projects generates usage revenue and, if you like, borrowed and lent usage revenue.
Oracle Projects uses the Usage Revenue Account function to calculate revenue you earn for labor items. The resulting usage revenue is awarded to either a project–managing organization, or a non–labor resource’s owning organization; this usage revenue does not include borrowed and lent labor revenue.

The Usage Revenue Borrowed Account and Usage Revenue Lent Account functions allow you to record revenue in both a project–managing organization and in a non–labor resource’s owning organization (when these two organizations are different).

The organization to which you award revenue (using the Usage Revenue Account function) becomes the lending organization; Oracle Projects uses the Usage Revenue Lent Account transactions to debit a revenue account of the lending organization.

The organization to which you do not award revenue (using the Usage Revenue Account function) becomes the borrowing organization; Oracle Projects uses the usage Revenue Borrowed Account transactions to credit a revenue account of the borrowing organization.

When you run the **PRC: Generate Draft Revenue** process, Oracle Projects compares the project–managing organization and the non–labor resource’s owning organization to determine whether to use the Usage Revenue Borrowed Account and Usage Revenue Lent Account functions when it calculates usage revenue you earn.

If the project–managing organization is the same as the non–labor resource’s owning organization, Oracle Projects uses only the Usage Revenue Account function to credit a revenue account; the Usage Revenue Borrowed Account and Usage Revenue Lent Account functions are not necessary.

If the project–managing organization is not the same as the non–labor resource’s owning organization, Oracle Projects first ensures that you have enabled the Usage Revenue Borrowed Account and Usage Revenue Lent Account functions, and then uses them to create revenue credit and debit entries for borrowed and lent usage revenue. The borrowed and lent entries are in addition to the usage revenue credits Oracle Projects creates using the Usage Revenue Account transactions. If you do not want to record borrowed and lent usage revenue entries, do not implement the Usage Revenue Borrowed Account and Usage Revenue Lent Account functions.

The Usage Revenue Borrowed Account and Usage Revenue Lent Account functions are distinct from the Usage Revenue Account function to allow you to separate borrowed and lent usage revenue into as many different accounts as you separate usage revenue.
Usage Revenue Account Function

When you run the PRC: Generate Draft Revenue process, Oracle Projects uses the Usage Revenue Account transactions to credit a revenue account for usage items.

The Usage Revenue Account function consists of the following transactions:

- Private Usage Revenue
- Public Usage Revenue
- All Usage Revenue

If your business does not distinguish usage revenue earned between private and public projects, you can enable the All Usage Revenue transaction.

Fremont always awards usage revenue to the resource-owning organization, and awards usage revenue to the project-managing organization using borrowed and lent revenue accounts. Since Fremont does not distinguish revenue earned between private and public projects, it enables just the All Usage Revenue transaction.

Fremont Corporation uses three revenue accounts to record usage revenue, depending upon the expenditure type:

- Computer Fee Revenue (4200)
- Vehicle and Equipment Revenue (4201)
- Misc. Asset Revenue (4202)

To implement the Usage Revenue Account function, Fremont defines a rule to determine the revenue account for usage revenue.

Fremont defines a lookup set to map expenditure types to the appropriate revenue account. Fremont uses the lookup set to define the revenue account rule.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

Define a Lookup Set:

<table>
<thead>
<tr>
<th>Name</th>
<th>Usage to Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Map the expenditure type for usage items to the appropriate revenue account</td>
</tr>
</tbody>
</table>

Segment Value Lookups

<table>
<thead>
<tr>
<th>Intermediate Value (Expenditure Type)</th>
<th>Segment Value (Account Code)</th>
</tr>
</thead>
</table>
Define a Rule to Determine Account Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage Revenue</td>
<td>Map usage items to revenue accounts using the usage expenditure type</td>
</tr>
</tbody>
</table>

Enable the All Usage Revenue Transaction and Assign Rules:

Function Name: Usage Revenue Account
Transaction Name: All Usage Revenue

Segment Rule Pairings

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Resource Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Resource Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Usage Revenue</td>
</tr>
</tbody>
</table>

Oracle Projects uses the Usage Revenue Borrowed Account transactions to credit a revenue account of either the project–managing organization or the non–labor resource’s owning organization (depending upon the organization to which you award revenue using the Usage Revenue Account function).

The Usage Revenue Borrowed Account function consists of the following transactions:

- Private Usage Borrowed
- Public Usage Borrowed
- All Usage Borrowed
Fremont enables only the All Usage Borrowed Account transaction since it does not separate revenue totals between private and public projects.

Fremont Corporation uses one revenue account to record borrowed and lent usage revenue:

- Usage Borrowed and Lent (4210)

To implement the Usage Revenue Borrowed Account function, Fremont defines a rule to supply an account code for the Account segment of its Accounting Flexfield.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Usage Borrowed and Lent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Usage borrowed and lent account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>4210</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Enable the All Usage Borrowed Transaction and Assign Rules:**

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Usage Revenue Borrowed Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Name:</td>
<td>All Usage Borrowed</td>
</tr>
</tbody>
</table>

**Segment Rule Pairings**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Usage Borrowed and Lent</td>
</tr>
</tbody>
</table>

**Usage Revenue Lent Account Function**

Oracle Projects uses the Usage Revenue Lent Account transactions to debit a revenue account of either the project–managing organization or the non–labor resource’s owning organization (depending upon the organization to which you award revenue using the Usage Revenue Account function).
The Usage Revenue Lent Account function consists of the following transactions:

- Private Usage Lent
- Public Usage Lent
- All Usage Lent

Fremont Corporation implements the Usage Revenue Lent Account function using the rule it defined for the Usage Revenue Borrowed Account function.

Fremont enables only the All Usage Lent transaction since it does not separate revenue totals between private and public projects.

Enable the All Usage Lent Transaction and Assign Rules:

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Usage Revenue Lent Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Name:</td>
<td>All Usage Lent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Resource Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Resource Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Usage Borrowed and Lent</td>
</tr>
</tbody>
</table>

Accounting for Supplier Invoice Adjustment Costs

When you enter project-related supplier invoices in Oracle Payables, the Oracle Payables Invoices Summary or detail window invokes the Account Generator in real time. The Account Generator derives the Accounting Flexfield values based on the project information that you entered in a similar way that AutoAccounting works in Oracle Projects processes. See: Implementing the Account Generator for Oracle Projects: page 16 – 288.

Oracle Projects then creates an expenditure item for each project-related supplier invoice distribution line in Oracle Payables.

You can adjust the supplier invoice expenditure items in Oracle Projects to transfer or split the items. Oracle Projects processes these supplier invoice adjustments using the Supplier Invoice Cost Account AutoAccounting function.
Attention: When you set up your rules to account for supplier invoice costs, you need to ensure that your assignments and rules in AutoAccounting and Account Generator derive the same values.

Oracle Projects uses the Supplier Invoice Cost Account transactions to debit the appropriate expense account for supplier invoice adjustment costs.

The Distribute Supplier Costs function is called by the Distribute Supplier Invoice Adjustments program.

The Supplier Invoice Cost Account function consists of the following transactions:

- All Supplier Invoices
- Capital, All
- Capital, Private, Capital
- Capital, Private, Non-Capital
- Capital, Public, Capital, Capital, Public, Non-Capital
- Contract, All
- Indirect, All
- Indirect, Private Invoices
- Indirect, Public Invoices
- Private, Billable Invoices
- Private, Non-Billable Invoices
- Public, Billable Invoices
- Public, Non-Billable Invoices

Fremont posts supplier invoice costs to the project-managing organization’s cost center; expenditure type determines which expense account AutoAccounting debits.

Fremont does not distinguish between supplier invoice expenditures for public/private, or capital, contract, or indirect projects, or for billable/non-billable expenditure items. Therefore, Fremont enables only the All Supplier Invoices transaction.

Fremont Corporation uses three expense accounts to record supplier invoice costs:

- Construction Subcontracting Expense (5600)
To implement the Supplier Invoice Cost Account function, Fremont defines a lookup set to map expenditure types to each of its three expense accounts. Fremont uses the lookup set to define a rule to supply an account code for the Account segment of its Accounting Flexfield.

### Define a Lookup Set:
**Name**: Supplier Invoice Cost  
**Description**: Map supplier invoice expenditure types to appropriate cost account

### Segment Value Lookups

<table>
<thead>
<tr>
<th>Intermediate Value (Expenditure Type)</th>
<th>Segment Value (Account Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>5600</td>
</tr>
<tr>
<td>Consulting</td>
<td>5610</td>
</tr>
<tr>
<td>Other Invoice</td>
<td>5620</td>
</tr>
<tr>
<td>Supplies</td>
<td>5630</td>
</tr>
</tbody>
</table>

### Define a Rule to Determine Account Segment Value:
**Name**: Supplier Invoice Costs  
**Description**: Accounts Payable supplier invoice costs  
**Intermediate Value Source**: Parameter  
**Parameter Name**: Expenditure Type  
**Segment Value Source**: Segment Value Lookup Set  
**Lookup Set**: Supplier Invoice Cost

### Enable the All Supplier Invoices Transaction and Assign Rules:
**Function Name**: Supplier Invoice Cost Account  
**Transaction Name**: All Supplier Invoices
When you run the PRC: Generate Draft Revenue process, Oracle Projects uses the Supplier Invoice Revenue Account transactions to credit a revenue account for supplier invoice items.

The Supplier Invoice Revenue Account function consists of the following transactions:

- All Invoice Revenue
- Private Invoice Revenue
- Public Invoice Revenue

Fremont enables only the All Invoice Revenue transaction since it does not separate revenue earned between private and public projects.

Fremont Corporation uses one revenue account to record supplier invoice revenue:

- Subcontractor Revenue (4400)

To implement the Supplier Invoice Revenue Account function, Fremont defines a rule to supply the Subcontractor Revenue account code for the Account segment of its Accounting segment.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

### Define a Rule to Determine Accounting Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subcontractor Revenue</td>
<td>Subcontractor Revenue</td>
</tr>
</tbody>
</table>

Segment Rule Pairings

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Supplier Invoice Costs</td>
</tr>
</tbody>
</table>
### Accounting for Event Revenue

Expenditure items are not the only source from which you earn revenue. You create events to write-on bonus revenue, or write-off uncollectible revenue. When you run the **PRC: Generate Draft Revenue** process, Oracle Projects credits a revenue account for event types with the Write-On, Manual or Automatic classifications, or debits an expense account for event types with the Write-Off classification. Although there are other event type classifications, they do not affect revenue.

### Event Revenue Account Function

Depending upon the classification of an event type, Oracle Projects uses the Event Revenue Account transactions to calculate revenue credits for write-ons, or expense debits for write-offs.

The Event Revenue Account function consists of the following transactions:

- Revenue Write-Off Events
- Revenue Write-On Events

Fremont Corporation posts both write-offs and bonus revenue to the project-managing organization.

Fremont uses one expense account to record write-offs and one revenue account to record write-ons:
To implement the Event Revenue Account function, Fremont defines two rules:

- One rule to supply the Write–Offs account code for the Account segment of its Accounting Flexfield
- One rule to supply the Bonus Revenue account code for the Account segment of its Accounting Flexfield

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Write–Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Revenue write–off expense account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>5500</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Define a Rule to Determine Account Segment Value:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Bonus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Performance and other bonus revenue account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>4500</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

**Enable the Write–Off Transaction and Assign Rules:**

**Function Name:** Event Revenue Account  
**Transaction Name:** Revenue Write–Off Event

**Segment Rule Pairings**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
</tbody>
</table>
Enable the Write–On Transaction and Assign Rules:

**Function Name:** Event Revenue Account  
**Transaction Name:** Write–On

<table>
<thead>
<tr>
<th>Segment Rule Pairings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Accounting for Revenue and Invoices

You need to implement each Revenue and Invoice Accounts transaction to allow AutoAccounting to determine the appropriate asset, liability, and expense accounts. Consequently, this section is organized by transaction.

When you run the PRC: Interface Revenue to General Ledger process and then the PRC: Interface Invoices to Receivables process, Oracle Projects uses the Revenue and Invoice Accounts function to determine which accounts to use when it interfaces draft revenue and draft invoices.

The Revenue and Invoice Accounts function consists of the following transactions:

- Unbilled Receivable Account
- Accounts Receivable
- Unearned Revenue Account
- Invoice Write–Off Account

Fremont Corporation assigns draft revenue and invoices to the project–managing organization when it interfaces revenue or invoices. Since each organization at Fremont has four separate accounts for unbilled receivables, accounts receivable, unearned revenue, and write–offs, implementing each Revenue and Invoice Accounts transaction is straightforward.
Unbilled Receivable Account transaction

When you run the PRC: Interface Revenue to General Ledger process, Oracle Projects may debit an asset account (usually an unbilled receivables account). This transaction balances the various revenue accounts that Oracle Projects credits when you run the PRC: Generate Draft Revenue process.

Fremont corporation uses one asset account to record unbilled receivables:
- Unbilled Receivables (1101)

To implement the Unbilled Receivables transaction, Fremont defines a rule to supply the Unbilled Receivables account code for the Account segment of its Accounting Flexfield.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

Define a Rule to Determine Account Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Intermediate Value Source</th>
<th>Constant</th>
<th>Segment Value Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unbilled Receivables</td>
<td>Unbilled receivables asset account</td>
<td>Constant</td>
<td>1101</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

Enable the Unbilled Receivables Transaction and Assign Rules:

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Transaction Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue and Invoice Accounts</td>
<td>Unbilled Receivable Account</td>
</tr>
</tbody>
</table>

Segment Rule Pairings

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Unbilled Receivables</td>
</tr>
</tbody>
</table>
Accounts Receivable transaction

When you run the PRC: Interface Invoices to Receivables process, Oracle Projects may debit an asset account (usually an accounts receivable account). This transaction is balanced by a credit to the unbilled receivables asset account or the unearned revenue liability account, based on the revenue and invoice balances of the project.

Fremont Corporation uses one asset account to record accounts receivable:
- Accounts Receivable (1100)

To implement the Accounts Receivable transaction, Fremont defines a rule to supply the Accounts Receivable account code for the Account segment of its Accounting Flexfield.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

Define a Rule to Determine Account Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Accounts Receivable</td>
</tr>
<tr>
<td>Description</td>
<td>Accounts receivable asset account</td>
</tr>
<tr>
<td>Intermediate Value Source</td>
<td>Constant</td>
</tr>
<tr>
<td>Constant</td>
<td>1100</td>
</tr>
<tr>
<td>Segment Value Source</td>
<td>Intermediate Value</td>
</tr>
</tbody>
</table>

Enable the Accounts Receivable Transaction and Assign Rules:

<table>
<thead>
<tr>
<th>Function Name</th>
<th>Transaction Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue and Invoice Accounts</td>
<td>Accounts Receivable</td>
</tr>
</tbody>
</table>

Segment Rule Pairings:

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Accounts Receivable</td>
</tr>
</tbody>
</table>
Unearned Revenue Account transaction

When you bill a client for an invoice amount that is greater than the revenue accrued for the project, Oracle Projects uses the Unearned Revenue Account transaction.

When you run the PRC: Interface Invoices to Receivables process, Oracle Projects may credit a liability account (usually an unearned revenue account). This transaction balances the receivables asset account that Oracle Projects credits.

Fremont Corporation uses one liability account to record unearned revenue:

- Unearned Revenue (2100)

To implement the Unearned Revenue transaction, Fremont defines a rule to supply the Unearned Revenue account code for the Account segment of its Accounting Flexfield.

Fremont uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

Define a Rule to Determine Account Segment Value:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unearned Revenue</td>
<td>Unearned revenue liability account</td>
</tr>
</tbody>
</table>

Intermediate Value Source: Constant

Constant: 2100

Segment Value Source: Intermediate Value

Enable the Unearned Revenue Transaction and Assign Rules:

Function Name: Revenue and Invoice Accounts

Transaction Name: Unearned Revenue Account

Segment Rule Pairings

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Unearned Revenue</td>
</tr>
</tbody>
</table>
Invoice Write–Off Account transaction

When you write–off an uncollectible invoice, Oracle Projects uses the Invoice Write–Off Account transaction.

When you run the **PRC: Interface Invoices to Receivables** process, Oracle Projects may debit an expense account (usually a write–off account) and credits an asset account (usually an accounts receivable account).

Fremont Corporation uses one expense account to record invoice write–offs:

- Write–Offs (5500)

To implement the Write–Off transaction, Fremont uses an existing rule to supply the Write–Offs account code for the Account segment of its Accounting Flexfield.

Fremont also uses existing rules to supply values for the Company and Cost Center segments of its Accounting Flexfield.

**Enable the Write–Off Transaction and Assign Rules:**

<table>
<thead>
<tr>
<th>Function Name:</th>
<th>Revenue and Invoice Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Name:</td>
<td>Invoice Write–Off Account</td>
</tr>
</tbody>
</table>

**Segment Rule Pairings**

<table>
<thead>
<tr>
<th>Number</th>
<th>Segment Name</th>
<th>Rule Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Company</td>
<td>Project Company</td>
</tr>
<tr>
<td>1</td>
<td>Cost Center</td>
<td>Project Cost Center</td>
</tr>
<tr>
<td>2</td>
<td>Account</td>
<td>Write–Off</td>
</tr>
</tbody>
</table>
Using the Account Generator in Oracle Projects

This essay describes how to use and customize the Account Generator to integrate Oracle Projects with Oracle Payables and Oracle Purchasing.

The Account Generator uses Oracle Workflow to derive account code combinations. Oracle Payables and Oracle Purchasing use the Account Generator to determine the account code combinations for requisitions, purchase orders, and supplier invoices based on the project information you enter.

You define functions and processes to derive the Accounting Flexfield combinations. You can optionally customize the Account Generator for each set of books that you have defined.

We recommend that you read the following sections with this chapter when you implement the Account Generator for Oracle Projects: Account Generator (Oracle Applications Flexfields Guide), and the Oracle Workflow Guide.

Generating Accounts for Oracle Purchasing

Oracle Purchasing uses the Account Generator for all requisitions and purchase orders, whether they are project-related or not. Oracle Purchasing provides a set of default Account Generator processes for the accounts it needs to build.

In Oracle Purchasing, the following accounts are generated by the Account Generator:

• Purchase Order Charge Account
• Purchase Order Budget Account
• Purchase Order Variance Account
• Purchase Order Accrual Account
• Requisition Charge Account
• Requisition Budget Account
• Requisition Variance Account
• Requisition Accrual Account

Oracle Purchasing provides the default Account Generator processes for these accounts. If you want to derive the accounts based on project information, you must change the default processes to use the project information.
For more information about using the Account Generator when you integrate Oracle Projects with Oracle Purchasing, read the following essay: Using the Account Generator in Oracle Purchasing *(Oracle Purchasing User’s Guide)*.

For an example of a workflow process based on project information, see: Customizing the Account Generator for Oracle Projects: page 16 – 291.

### Generating Accounts for Oracle Payables

When you enter invoices in Oracle Payables that are not associated with a project, you must enter the account number. When you enter invoices that are associated with a project, Oracle Payables calls the Account Generator from the invoice entry windows to generate the invoice charge account. The name for the Workflow item type that identifies this process is *Project Supplier Invoice Account Generation*.

Oracle Projects provides a default process that you must customize for your installation. If you use the process without customizing it, the process returns an error message.

Oracle Projects also provides a sample Account Generator process that demonstrates how you can use the item type to generate the Project Supplier Invoice Charge Account.

### See Also

How the Account Generator Compares to AutoAccounting: page 16 – 301

Overview of the Account Generator *(Oracle Applications Flexfields Guide)*

*Oracle Workflow Guide*
Implementing the Account Generator for Project–Related Payable Invoices in Oracle Projects

In Release 10, several Oracle Applications products used FlexBuilder to derive account code combinations. In Release 11, FlexBuilder is replaced by the Account Generator. Account Generator provides implementation teams with enhanced flexibility and a better user interface by using Oracle Workflow.

If you are upgrading from Release 10 and you used FlexBuilder in Release 10, then you should review this section and perform an Account Generator setup as part of your upgrade. To plan the upgrade, follow the guidelines in the FlexBuilder chapter of the Oracle Applications Upgrade Preparation Manual.

If you are implementing Oracle Projects for the first time, you need to review this essay to learn how Oracle Projects uses the Account Generator to build Accounting Flexfield code combinations. Consider your needs for your Account Generator process for each set of books that uses a unique Accounting Flexfield structure.

Each Account Generator workflow is called an item type. Oracle Projects provides the following Account Generator item type:

- Project Supplier Invoice Account Generation

The Project Supplier Invoice Charge Account item type contains the following workflow processes:

- Generate Default Account
- Generate Account Using FlexBuilder Rules
- Sample Process for Account Generation

In many Account Generator settings, you can choose to user either the default Account Generator process or a customized version of the default Account Generator process for each Accounting Flexfield structure and set of books. When you implement the Account Generator to integrate Oracle Projects with Oracle Payables, you must customize the default Account Generator process. If you do not customize the process, it generates an error.

**Prerequisites to Using the Account Generator with Oracle Projects**

Before using the Account Generator on a production database in Oracle Projects to generate the supplier invoice charge account, you must:

- Define your Accounting Flexfield structure for each set of books.
Define flexfield segment values and validation rules.

For each set of books, customize the default Account Generator process, test your customizations, and choose the process for a flexfield structure, if necessary.

The Generate Default Account Process

Oracle Projects provides a default Account Generator process, called Generate Default Account. This process is called from the Oracle Payables invoice entry windows to generate the invoice charge account. You must customize this process or create a new one, using the Oracle Workflow Builder. If you use the Generate Default Account Process without customizing it, the process returns an error message.

To customize the process, you replace the function named “Dummy Default Account Generator” (which is Node 2 in the diagram below) with your customized procedure for account generation.

If you want to create a new process to meet your company’s needs, use the Oracle Workflow Builder to create a new process, or copy the existing default process and change its name. You must then assign the process to the Accounting Flexfield structure. See: Assigning an Account Generator Process to an Accounting Flexfield Structure: page 16 – 296.

The Generate Default Account process consists of five activity nodes. In the workflow diagram shown below, the process activity nodes are numbered for reference in the descriptions that follow. The numbered circles are not part of the process diagram.
Start Generating Code Combination (Node 1)
This is a standard activity that marks the start of the process.

Dummy Default Account Generator (Node 2)
In its original (shipped) configuration, this activity returns an error message. In order for this process to return an account code combination, you must replace this function with your customized procedure for account generation.

This activity has two possible outcomes:
- If the function fails, the process branches to Node 3.
- If the function succeeds, the process branches to Node 4.

Abort Generating Code Combinations (Node 3)
This activity ends the code combination process after a failure of the function in Node 2.

Validate Code Combination (Node 4)
This node contains the standard Flexfield function for validating a code combination. For this function to work, the attribute value *New code combinations* must be set to *True*.

End Generating Code Combination (Node 5)
This activity ends the code combination generation process.

The Generate Account Using FlexBuilder Rules Process
If you used FlexBuilder in a previous release to generate account combinations, you can use the Generate Account Using FlexBuilder Rules process to replicate your FlexBuilder setup automatically, without changing any of your predefined FlexBuilder Rules, and without customizing the Account Generator. The Generate Account Using FlexBuilder Rules process includes a function generated during your upgrade from Release 10 to Release 11.

If you are upgrading from Release 10, follow the guidelines in the FlexBuilder chapter of the *Oracle Applications Upgrade Preparation Manual*. 
If you want to change your FlexBuilder Rules after you upgrade, you must define your rules starting with the default Account Generator process.

---

**The Sample Process for Account Generation**

We have provided the Sample Process for Account Generation to demonstrate a sample customization of the Account Generator. The sample process shows how the Workflow functions and attributes can be used to derive account code combinations.

For a detailed description of the sample process, see: Customization Example: page 16 – 292.

---

**Customizing the Account Generator for Oracle Projects**

You must customize the default Account Generator process or create a new one, using the Oracle Workflow Builder. If you do not, Oracle Projects will display an error message when the process is called from the Oracle Payables invoice entry windows.

If you want to create a new process to meet your company’s needs, use the Oracle Workflow Builder to create a new process, or copy the existing default and change its name before making extensive changes to it.

For more information on the generic features and functions of the Account Generator, see the Customizing the Account Generator section of the *Oracle Applications Flexfields Guide*.

For more information on how to use the Oracle Workflow Builder, see the *Oracle Workflow Guide*.

---

**See Also**

Customizing the Account Generator (*Oracle Applications Flexfields Guide*)

*Oracle Workflow Guide*
Customization Example

We have provided the Sample Process for Account Generation to demonstrate the use of several standard functions you can use to generate account segments, including the following functions:

- Start
- Compare Text
- Assign Value

The sample also illustrates the use of SQL procedures, AutoAccounting lookup sets, workflow attributes, and constants for Supplier Invoice Account Generation.

The Sample Process for Account Generation consists of eleven activity nodes. In the workflow diagram shown below, the process activity nodes are numbered for reference in the descriptions that follow.

Sample Invoice Account Generation Activities

Following is a description of each activity in the sample process for Supplier Invoice Account Generation. You can create all the components for an activity in the graphical Oracle Workflow Builder except for the PL/SQL stored procedures that the function activities call.

Start Generating Code Combination (Node 1)

This is a standard activity that marks the start of the process.
Assign Value to Company Segment Using a Constant (Node 2)

This activity assigns a constant value, 01, to the Company segment.

This node and nodes 5, 6, and 8 use the Assign Value to a Segment function, which is provided by the standard flexfield workflow. For detailed information about this function, see Account Generator (Oracle Applications Flexfields Guide).

Test Whether Project Type is Overhead (Node 3)

This activity tests whether the project type is Overhead. The test value is set to the item attribute Project Type. The reference value is the constant Overhead. The test can have two possible results:

- **Equal**: The project type is Overhead.
- **Not Equal**: The project type is not Overhead.

If the result is Equal, the process branches to node 6. Otherwise, the process branches to node 4.

Node 3 uses the Compare Text function provided in the standard workflow.

Get Segment Value Using a Lookup (Node 4)

Node 4 is executed only if the project type is not Overhead. This activity performs a lookup to determine the Cost Center segment. The lookup uses an AutoAccounting lookup set and an intermediate value (expenditure organization).

The function can have two possible results:

- **Success**: The lookup was successful.
- **Failure**: The lookup was not successful.

If the result is Success, the process branches to node 5. If not, the process branches to node 11.

Node 4 uses the Segment Lookup Set Value function, `pa_acc_gen_wf_pkg.pa_seg_lookup_set_value`. You can use this function to retrieve an intermediate value from an AutoAccounting lookup set that you defined in Oracle Projects. See: Segment Lookup Set Value Function: page 16 – 297.
Assign Lookup Result to Cost Center Segment (Node 5)

This activity assigns the value found in Node 4 to the Cost Center segment. The process then branches to Node 7.

Assign Flexfield2 (parameter) to Cost Center Segment (Node 6)

Node 6 is executed only if the project type is Overhead. This activity assigns the value of Invoice Descriptive Flexfield Attribute 4 to the Cost Center segment.

This assumes that the Invoice Descriptive Flexfield Attribute 4 holds a valid value for the Cost Center segment.

Sample Function to Get Segment Value Using SQL (Node 7)

Node 7 uses a SQL procedure to derive the value for the Account segment.

The sample SQL package and procedure are contained in the file PAXTMPFB.pls. This file is located in the Oracle Projects admin/sql directory. The SQL procedure is named pa_wf_fb_sample_pkg.pa_wf_sample_sql_fn. The sample procedure contains detailed documentation.

The sample function derives the segment value and sets the value in the Lookup Set Value attribute. If you write your own functions, you should create and set your own attributes.

If the process encounters an error during any of the steps, the function branches to Node 12.

Note: When you define a SQL function, you can define attributes for the function. The procedure reads the current values of the item attributes it requires, then uses the attributes to derive the segment. However, in the sample process, no attributes are required for this function.

Assign Value to Account Segment After SQL Function (Node 8)

Node 8 assigns a the segment value derived in Node 7 to the Account segment.

Validate Code Combination (Node 9)

Node 9 contains the standard Flexfield function for validating a code combination. For this function to work correctly in Oracle Projects, the attribute value New code combinations must be set to True.
End Generating Code Combination (Node 10)

This activity ends the code combination generation process.

Abort Generating Code Combination (Node 11)

This activity ends the code combination process after a failure of the lookup in Node 4. This is a standard flexfield function. For detailed information about this function, see the Account Generator section of the Oracle Applications Flexfields Guide.

Abort Generating Code Combination (Node 12)

This activity ends the code combination process after a failure of the sample SQL function in Node 7. This is a standard flexfield function. For detailed information about this function, see the Account Generator section of the Oracle Applications Flexfields Guide.

Testing a Customized Account Generator Process

You should test any modified Account Generator process before using it on a production database.

You can test the supplier invoice account generation process by calling the function `pa_acc_gen_wf_pkg.ap_inv_generate_account` in a PL/SQL block. Table 16 – 15 lists the parameters of this function.

Oracle Projects provides an example of how to test this function. The example is in the procedure `pa_wf_fb_sample_pkg.test_ap_inv_account` in the file PAXTMPFB.pls in the admin/sql directory.

Return value: BOOLEAN

In Table 16 – 15, the following attributes are descriptive flexfield values entered in the Oracle Payables invoice header:

- P_ATTRIBUTE_CATEGORY
- P_ATTRIBUTE1 through P_ATTRIBUTE15

The following attributes are descriptive flexfield values entered for each Oracle Payables invoice distribution:

- P_DIST_ATTRIBUTE_CATEGORY
- P_DIST_ATTRIBUTE1 through P_DIST_ATTRIBUTE15
### Table 16 – 15 (Page 1 of 1)

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Type</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>P_PROJECT_ID</td>
<td>NUMBER(15)</td>
<td>IN</td>
</tr>
<tr>
<td>P_TASK_ID</td>
<td>NUMBER(15)</td>
<td>IN</td>
</tr>
<tr>
<td>P_EXPENDITURE_TYPE</td>
<td>VARCHAR2(30)</td>
<td>IN</td>
</tr>
<tr>
<td>P_VENDOR_ID</td>
<td>NUMBER</td>
<td>IN</td>
</tr>
<tr>
<td>P_EXPENDITURE_ORGANIZATION_ID</td>
<td>NUMBER(15)</td>
<td>IN</td>
</tr>
<tr>
<td>P_EXPENDITURE_ITEM_DATE</td>
<td>DATE</td>
<td>IN</td>
</tr>
<tr>
<td>P_BILLABLE_FLAG</td>
<td>VARCHAR2(1)</td>
<td>IN</td>
</tr>
<tr>
<td>P_CHART_OF_ACCOUNTS_ID</td>
<td>NUMBER</td>
<td>IN</td>
</tr>
<tr>
<td>P_ATTRIBUTE_CATEGORY</td>
<td>VARCHAR2(150)</td>
<td>IN</td>
</tr>
<tr>
<td>P_ATTRIBUTE1 through P_ATTRIBUTE15</td>
<td>VARCHAR2(150)</td>
<td>IN</td>
</tr>
<tr>
<td>P_DIST_ATTRIBUTE_CATEGORY</td>
<td>VARCHAR2(150)</td>
<td>IN</td>
</tr>
<tr>
<td>P_DISTATTRIBUTE1 through P_DISTATTRIBUTE15</td>
<td>VARCHAR2(150)</td>
<td>IN</td>
</tr>
<tr>
<td>X_RETURN_CCID</td>
<td>NUMBER(15)</td>
<td>OUT</td>
</tr>
<tr>
<td>X_CONCAT_SEGS</td>
<td>VARCHAR2</td>
<td>OUT</td>
</tr>
<tr>
<td>X_CONCAT_IDS</td>
<td>VARCHAR2</td>
<td>OUT</td>
</tr>
<tr>
<td>X_CONCAT_DESCRS</td>
<td>VARCHAR2</td>
<td>OUT</td>
</tr>
<tr>
<td>X_ERROR_MESSAGE</td>
<td>VARCHAR2</td>
<td>OUT</td>
</tr>
</tbody>
</table>

If the function returns the value *FALSE*, an error has occurred during account generation. Use the value in X_ERROR_MESSAGE to determine the error message.

If the value of X_RETURN_CCID is –1, it indicates that the code combination that was created using the rules does not yet exist.

### Assigning an Account Generator Process to an Account Flexfield Structure

If you have customized your Account Generator process for an Account Generator item type and have assigned a new name to it, you must associate the new process name with the appropriate Accounting Flexfield structure and item type. You use the Account Generator Processes window to change this association.
If you made customizations to the default process, but did not change the name of it, you do not need to perform this step.

See: Choosing the Process for a Flexfield Structure (Oracle Applications Flexfields Guide).

**Setting the Account Generator Profile Option**

The Account Generator:Purge Runtime Data profile option ensures that data used to build account combinations is purged after the Account Generator has completed. For more information, see: Profile Options in Oracle Projects: page B – 2.

See: Test Your Account Generator Setup (Oracle Applications Flexfields Guide).

**Segment Lookup Set Value Function**

Oracle Projects provides the Segment Lookup Set Value function, which you can use in your workflows to retrieve an intermediate value from an AutoAccounting lookup set that you defined in Oracle Projects.

The Segment Lookup Set Value function uses two attributes, Lookup Set Name and Intermediate Value. The segment value that results from the combination of the Lookup Set and the Intermediate Value is defined using the AutoAccounting Lookup Sets window. The function derives the segment value and assigns it to the attribute Lookup Set Value, which you can then assign to a segment using the Assign Value to Segment function.

In the Sample Process, this function is used in Node 4 (Get Segment Value Using a Lookup). The Lookup Set Name attribute is set to SAMPLE_LOOKUP_SET. The Intermediate Value is the Expenditure Organization Name, which is an item attribute. The function sets the Lookup Set Value attribute, which is then assigned to the Cost Center segment in Node 5.

**Supplier Invoice Account Generation Attributes**

Attributes are defined for the Project Supplier Invoice Account Generation item type to fully identify the supplier invoice for which the Account Generator generates a charge account. The attributes are listed by display name in Table 16 – 16.
In Table 16 – 15, the following attributes are descriptive flexfield values entered in the Oracle Payables invoice header:

- Descriptive Flexfield Attribute Category
- Descriptive Flexfield Attribute 1 through 15

The following attributes are descriptive flexfield values entered for each Oracle Payables invoice distribution:

- Distribution Descriptive Flexfield Attribute Category
- Distribution Descriptive Flexfield Attribute 1 through 15

<table>
<thead>
<tr>
<th>Display Name</th>
<th>Description</th>
<th>Type</th>
<th>Length</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project ID</td>
<td>Project Identifier</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task ID</td>
<td>Task Identifier</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure Type</td>
<td>Expenditure Type</td>
<td>Text</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Supplier Identifier</td>
<td>Supplier Identifier</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billable Flag</td>
<td>Billable Flag</td>
<td>Text</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Project Class Code</td>
<td>Project Class Code</td>
<td>Text</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Expenditure Category</td>
<td>Expenditure Category</td>
<td>Text</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Direct Flag</td>
<td>Direct Flag</td>
<td>Text</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Expenditure Item Date</td>
<td>Expenditure Item Date</td>
<td>Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure Organization Name Identifier</td>
<td>Expenditure Organization Identifier</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure Organization Name</td>
<td>Expenditure Organization Name</td>
<td>Text</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Project Number</td>
<td>Project Number</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Project Organization Name</td>
<td>Project Organization Name</td>
<td>Text</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Project Organization Identifier</td>
<td>Project Organization Identifier</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Type</td>
<td>Project Type</td>
<td>Text</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Public Sector Flag</td>
<td>Public Sector Flag</td>
<td>Text</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Table 16 – 16 Attributes for Project Supplier Invoice Account Generator (Page 1 of 3)
<table>
<thead>
<tr>
<th>Display Name</th>
<th>Description</th>
<th>Type</th>
<th>Length</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue Category</td>
<td>Revenue Category</td>
<td>Text</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Task Organization Identifier</td>
<td>Task Organization Identifier</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Organization Name</td>
<td>Task Organization Name</td>
<td>Text</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Task Service Type</td>
<td>Task Service Type</td>
<td>Text</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Top Task Identifier</td>
<td>Top Task Identifier</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top Task Number</td>
<td>Top Task Number</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Supplier Employee Number</td>
<td>Supplier Employee Number</td>
<td>Text</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Supplier Person ID</td>
<td>Supplier Person ID</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier Type</td>
<td>Supplier Type</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Chart of Accounts ID</td>
<td>Chart of Accounts ID</td>
<td>Number</td>
<td></td>
<td>101</td>
</tr>
<tr>
<td>Chart of Accounts ID</td>
<td>Chart of Accounts ID</td>
<td>Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>This attribute is present in all Account Generator item types.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lookup Set Value</td>
<td>Lookup Set Value</td>
<td>Text</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This attribute is used by the Segment Lookup Set Value function to store the result of a lookup.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error Message</td>
<td>Error Message</td>
<td>Text</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Descriptive Flexfield Attribute Category</td>
<td>Descriptive Flexfield Attribute Category</td>
<td>Text</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Descriptive Flexfield Attribute 1–15</td>
<td>Descriptive Flexfield Attribute 1–15</td>
<td>Text</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

Table 16 – 16 Attributes for Project Supplier Invoice Account Generator (Page 2 of 3)
<table>
<thead>
<tr>
<th>Display Name</th>
<th>Description</th>
<th>Type</th>
<th>Length</th>
<th>Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution Descriptive Flexfield Attribute Category</td>
<td>Distribution Descriptive Flexfield Attribute Category</td>
<td>Text</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Distribution Descriptive Flexfield Attribute 1–15</td>
<td>Distribution Descriptive Flexfield Attribute 1–15</td>
<td>Text</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

Table 16 – 16 Attributes for Project Supplier Invoice Account Generator (Page 3 of 3)
How the Account Generator Compares to AutoAccounting

You can implement the Account Generator to create the same accounting transactions that are created using your AutoAccounting implementation. This section compares the Account Generator to AutoAccounting to help you understand and implement the Account Generator based on your knowledge of AutoAccounting.

A function in AutoAccounting is equivalent to an item type in Workflow.

A parameter in AutoAccounting is equivalent to an attribute in Workflow.

The definition and assignment of rules to segments in AutoAccounting are equivalent to a process in Workflow.

See Also

Converting from FlexBuilder (Oracle Applications Flexfields Guide)

Assigning a Constant to a Segment

This section describes the steps required to assign a constant to a segment using the Account Generator.

<table>
<thead>
<tr>
<th>Account Generator Functionality</th>
<th>Similar Functionality in AutoAccounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign a constant to a segment</td>
<td>Assign a constant AutoAccounting rule to a segment</td>
</tr>
</tbody>
</table>

To assign a constant value to a segment, you perform the following steps:

1. Drag and drop the Assign Value to Segment function from the Standard Flexfield item type to your account generation process.
2. Connect this function to prior and subsequent steps.
3. Select Properties for this function.
4. In the Comment field, you can optionally specify a comment to describe the action being performed in this step.
5. Select the Attribute Values tab and enter the values for the four attributes.
6. For the Value attribute, select Constant as the Value Type. Enter the constant under Value.

This function is used in Node 2 of the sample Account Generator process for Oracle Projects. See: Customization Example: page 16 – 292.

For detailed information about this function, see Account Generator (Oracle Applications Flexfields Guide).

Assigning an Attribute Parameter to a Segment

This section describes the steps required to assign an attribute parameter to a segment using the Account Generator.

<table>
<thead>
<tr>
<th>Account Generator Functionality</th>
<th>Similar Functionality in AutoAccounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign an attribute parameter to a segment</td>
<td>Assign an AutoAccounting rule that uses a parameter, which becomes the segment value (a lookup set is not used)</td>
</tr>
</tbody>
</table>

To assign an attribute to a segment, you perform the following steps:

1. Drag and drop the Assign Value to Segment function from the Standard Flexfield item type to your account generation process.
2. Connect this function to prior and subsequent steps.
3. Select Properties for this function.
4. In the Comment field, you can optionally specify a comment to describe the action being performed in this step.
5. Select the Attribute Values tab.
6. For the Value attribute, select Item Attribute as the Value Type. Then select the attribute whose value will be assigned to the segment.

For detailed information about this function, see Account Generator (Oracle Applications Flexfields Guide).

Assigning a Lookup Set Value to a Segment

<table>
<thead>
<tr>
<th>Account Generator Functionality</th>
<th>Similar Functionality in AutoAccounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign a lookup set value to a segment</td>
<td>Assign an AutoAccounting rule that passes a parameter to a lookup set to determine the segment value</td>
</tr>
</tbody>
</table>
Deriving a Segment Value via SQL Statements or If Conditions

<table>
<thead>
<tr>
<th>Account Generator Functionality</th>
<th>Similar Functionality in AutoAccounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derive a segment value via SQL statements or If conditions</td>
<td>Use an AutoAccounting rule that derives the intermediate value or segment value via a SQL statement.</td>
</tr>
</tbody>
</table>

You typically use SQL statements for if/then logic. With the Account Generator, you can do this with either conditional nodes (used in Nodes 3, 4, 5, and 6 in the sample Account Generator process for Oracle Projects) or SQL functions (used in Nodes 7 and 8 in the sample Account Generator process for Oracle Projects). See: Customization Example: page 16 – 292.

SQL Functions

You must follow Workflow standards when writing SQL procedures for the Account Generator. The values of any attributes required can be retrieved within the procedure code using calls to the standard Workflow functions. The final value determined by the procedure is copied into one of the attributes. This value can be then assigned to a segment.

SQL functions are illustrated in Nodes 7 and 8 in the sample Account Generator process for Oracle Projects. See: Customization Example: page 16 – 292.

See Also

The Sample Process for Account Generation: page 16 – 291

Overview of AutoAccounting: page 16 – 217

Oracle Applications Flexfields Guide
Advanced Implementation Issues

This chapter describes advanced issues for implementing and setting up Oracle Projects.
Tracking Overtime and Premium Labor Costs

You can use Oracle Projects to track the cost of overtime and other premium compensation, allowing you to determine the true cost of labor.

Overview of Labor Costing

When you enter timecards in Oracle Projects, you charge the total hours an employee worked to the project(s) on which the employee worked.

When an employee works overtime, in addition to charging the total hours an employee worked to the project(s) on which the employee worked, you calculate and charge the overtime hours and costs. Therefore, the employee’s pay includes two components:

- Straight time cost (straight time and overtime hours)
- Overtime or premium cost (overtime hours only)

Straight time cost

Straight time cost is the dollar amount that an employee is normally paid for straight time (or regular) hours worked. Oracle Projects calculates straight time cost using an employee’s hourly labor cost rate:

\[
\text{(Hours Worked \times Hourly Labor Cost Rate)}
\]

You charge an employee’s straight time hours to the project(s) on which the employee worked.

Overtime cost

Overtime cost, also referred to as premium cost, is the extra dollar amount that an employee is paid for overtime hours worked. Oracle Projects calculates overtime cost using a labor cost multiplier that corresponds to the kind of overtime worked:

\[
\text{(Hours Worked \times Hourly Labor Cost Rate \times Labor Cost Multiplier)}
\]

You can charge an employee’s overtime hours to the indirect project that collects all overtime costs or to the project on which the employee worked.
Costing straight time and overtime hours

You charge the total hours an employee works to the project(s) on which that employee worked regardless of overtime hours. Additionally, you charge a project in which you collect overtime to calculate and track the overtime cost.

For example, if Don Gray worked 10 hours of overtime (Time and Half) on a bid and proposal project for Fremont Corporation, you charge 10 hours to the bid and proposal project (total hours worked), and 10 hours to the project on which you collect overtime (total overtime premium hours worked). In this case, the project on which you collect overtime is an indirect project. Oracle Projects calculates the cost of Gray’s time using the following information:

- Gray’s labor cost rate is $40.00 per hour
- The labor cost multiplier for Time and Half is 0.5

Thus, Gray is paid $600 for the 10 hours he worked. Table 17 – 1 illustrates how Oracle Projects calculates this total:

<table>
<thead>
<tr>
<th>Type of Cost</th>
<th>Project</th>
<th>Hours</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight Time</td>
<td>B&amp;P</td>
<td>10</td>
<td>$400.00 (10 Hours x $40.00)</td>
</tr>
<tr>
<td>Overtime</td>
<td>OT</td>
<td>10</td>
<td>$200.00 (10 Hours x $40.00 x .05)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>10</td>
<td>$600.00</td>
</tr>
</tbody>
</table>

Table 17 – 1 Sample Labor Hours (Page 1 of 1)

There are few things to note about straight time and overtime:

- When summing total hours for an employee, only include straight time hours. If both straight time and overtime hours were summed, the overtime hours would be double counted. For example, Gray’s total hours equal 10, not 20
- When summing total overtime hours for an employee, include overtime hours only. In the example, above, the 10 hours Gray worked are recognized as overtime
- When summing total cost for an employee, include both straight time and overtime costs. For example, Gray’s total cost is his straight time cost ($400.00) plus his overtime cost ($200.00)
• The straight time and overtime costs are burdened based on your burden costing setup and whether your burden costs on the projects are charged

Overview of Tracking Overtime

You can track overtime premium costs in Oracle Projects in two primary ways:

• Charge to an indirect project. See: Implementing Overtime Charged to an Indirect Project: page 17 – 4.
• Charge to a project on which overtime was worked. See: Implementing Overtime Charged to a Project on Which You Have Worked (Case Study): page 17 – 13.

Implementing Overtime Charged to an Indirect Project (Case Study)

If you charge overtime costs to an indirect project, you can use Oracle Projects to record the premium your business pays employees for overtime hours they work. Your business can then recover overtime costs with higher bill rates or higher overhead rates.

This section describes each implementation step you need to complete to set up Oracle Projects to charge overtime costs to an indirect project. Each step includes an example of how Fremont Corporation implements overtime.

Fremont Corporation records all overtime labor hours in one indirect project. Fremont regards these hours as overhead, and does not directly bill clients for overtime premiums. (Fremont accounts for overtime labor cost in its bill rates.)

Fremont implements the Oracle Projects Overtime Calculation extension to calculate overtime hours automatically.

Complete the following steps to implement an indirect project to collect overtime premium costs:

• Implement the Oracle Projects Overtime Calculation extension
• Define overtime expenditure types
• Define compensation rules
• Define labor cost multipliers
• Enter an overtime project
• Define overtime tasks
• Update compensation rules
• Assign a labor cost multiplier for each overtime task
• Implement AutoAccounting

**Implement the Overtime Calculation extension**

You can specify the way you want to use the Overtime Calculation extension in the Implementation Options window. See: Enable Overtime Calculations: page 16 – 61 and Overtime Calculation Extension: page 18 – 56.

Fremont uses the standard Overtime Calculation extension without modifying it. The extension already recognizes the kinds of overtime Fremont uses.

Note: If you want to use the standard Overtime Calculation extension without modifying it, you must define the compensation rules, Overtime expenditure type, and overtime project and tasks just as Fremont Corporation does.

**Define overtime expenditure types**

You need to define at least one overtime expenditure type. You use the Expenditure Types window to define overtime expenditure types classified by the Overtime expenditure type class. See: Expenditure Types: page 16 – 78.

Fremont’s implementation team defined one overtime expenditure type.

<table>
<thead>
<tr>
<th>Name</th>
<th>Overtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure Type Class</td>
<td>Overtime</td>
</tr>
</tbody>
</table>

**Define compensation rules**

You define compensation rules to identify different pay types. Each employee is assigned a compensation rule, which determines how Oracle Projects calculates overtime for each employee.

Fremont uses three pay types to determine how an employee is paid. Fremont defined the following three compensation rules during an earlier phase of its implementation of Oracle Projects.

**Note:** These compensation rules are referenced in the Overtime Calculation extension. If you define different compensation rules, you must change the Overtime Calculation extension to reference your compensation rules.

<table>
<thead>
<tr>
<th>Compensation Rule</th>
<th>Name</th>
<th>Exempt</th>
<th>Overtime</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overtime Type</td>
<td>Exempt</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Hourly</td>
<td>Overtime</td>
<td></td>
</tr>
<tr>
<td>Overtime</td>
<td>Compensated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure Type</td>
<td>Overtime</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Define labor cost multipliers**

For each type of overtime your business uses, you need to define a corresponding labor cost multiplier. Later, you assign the appropriate labor cost multiplier to each overtime task.


Fremont defines a labor cost multiplier for each kind of overtime it uses.

<table>
<thead>
<tr>
<th>Name</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time and Half</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Uncompensated OT uses a multiplier of –1.0 to create a negative overtime cost in the overtime project. The negative cost reverses the straight time cost charged to the project on which the employee worked. The total cost for an employee’s uncompensated overtime is, thus, $0.00, since the overtime cost reverses the straight time cost.

**Enter one or more overtime projects**

You can define one indirect project to hold all of your company’s overtime costs, or you can define many indirect projects – one for each group or office of your company – to make it easier to enter and report overtime by group or office. For example, you can create an overtime project for each office. You then charge each employee’s overtime hours to the overtime project for the office to which they are assigned.

If you decide to use more than one indirect project to hold your company’s overtime costs and you are using automatic overtime calculation, you must include the logic in your Overtime Calculation extension to charge the overtime hours to the appropriate overtime project.

You use the Projects window to define your overtime projects. See: Project Entry: page 2 – 31.

Fremont Corporation uses just one indirect project to record overtime hours.

**Note:** This project number is referenced in the Overtime Calculation extension. If you define a different project number for your overtime project, you must change the Overtime Calculation extension to reference that project.

**Project:**

<table>
<thead>
<tr>
<th><strong>Number</strong></th>
<th>OT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>Overtime Premium</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>This project is the corporate bucket for all overtime labor hours</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>Human Resources</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Permanent</td>
</tr>
</tbody>
</table>
Define overtime tasks

For each overtime project, you must define a task for each type of overtime your business uses. Different types of overtime use different labor cost multipliers to calculate overtime costs. Examples of overtime include the following:

- Time and Half
- Double Time
- Uncompensated Overtime

If you are using automatic overtime calculation, you must include the logic in your Overtime Calculation extension to charge overtime hours to the appropriate overtime task.

You can use either the Tasks option of the Projects window to define overtime tasks. See: Entering Tasks for a Project: page 2 – 35.

Note: These task numbers are referenced in the Overtime Calculation extension. If you define different task numbers for your overtime project, you must change the Overtime Calculation extension to reference those numbers.

Fremont defines a task for double time overtime. The Overtime Calculation extension recognizes employees with either the Compensated or Hourly compensation rule as eligible for double time.

<table>
<thead>
<tr>
<th>Task</th>
<th>Task Number</th>
<th>Task Name</th>
<th>Description</th>
<th>Organization</th>
<th>Service Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Double</td>
<td>Double Time</td>
<td>Double time overtime labor hours</td>
<td>Human Resources</td>
<td>Overtime</td>
</tr>
</tbody>
</table>

Fremont defines a task for time-and-half overtime. The Overtime Calculation extension recognizes employees with either the Compensated or Hourly compensation rule as eligible for time and a half.
### Task

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Half</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Name</td>
<td>Time and Half</td>
</tr>
<tr>
<td>Description</td>
<td>Time and a half overtime labor hours</td>
</tr>
<tr>
<td>Organization</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Service Type</td>
<td>Overtime</td>
</tr>
</tbody>
</table>

The third project task is for uncompensated overtime; the Overtime Calculation extension recognizes employees with the Exempt compensation rule as not eligible for overtime.

### Task

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Uncomp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Name</td>
<td>Uncompensated</td>
</tr>
<tr>
<td>Description</td>
<td>Uncompensated overtime labor hours</td>
</tr>
<tr>
<td>Organization</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Service Type</td>
<td>Overtime</td>
</tr>
<tr>
<td>Task Number</td>
<td>Uncomp</td>
</tr>
</tbody>
</table>

### Update compensation rules

You need to update your compensation rules by specifying an overtime project as a default project. If you do not specify a default project, you cannot assign labor cost multipliers to the overtime tasks in that project.

Listing an overtime project in each of your compensation rules identifies that project as a project for recording overtime, and thus, a project for which you can assign labor cost multipliers to overtime tasks.

If you use manual overtime calculation, the project you specify as a default displays in the Expenditure Items window when you enter an employee’s overtime hours in Oracle Projects. (You can override this value if you like.)

You use the Compensation Rules window to update your compensation rules.

Fremont uses the Compensation Rules window to list the Overtime Premium project as a default project in its compensation rules.

Fremont specifies the expenditure type it defined with the Overtime expenditure type class for all three of its compensation rules.
Since employees with the Hourly or Compensated compensation rule are eligible for either time and a half or double time overtime, Fremont does not specify a task name for either of these rules.

Since employees with the Exempt compensation rule are not eligible for overtime compensation, their overtime hours are always charged to the Uncompensated task. Fremont, therefore, specifies this task for the Exempt rule.

<table>
<thead>
<tr>
<th>Compensation Rule</th>
<th>Name</th>
<th>Overtime</th>
<th>Expenditure Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hourly</td>
<td>Overtime</td>
<td>Overtime</td>
</tr>
</tbody>
</table>

**Defaults for Manual Overtime Expenditure Entries**

| Project Number | OT          |
| Project Name   | Overtime Premium |
| Task Number    | Overtime       |

**Compensation Rule**

<table>
<thead>
<tr>
<th>Name</th>
<th>Compensated</th>
</tr>
</thead>
</table>

**Defaults for Manual Overtime Expenditure Entries**

| Project Number | OT          |
| Project Name   | Overtime Premium |
| Task Number    | Overtime       |

**Compensation Rule**

<table>
<thead>
<tr>
<th>Name</th>
<th>Exempt</th>
</tr>
</thead>
</table>

**Defaults for Manual Overtime Expenditure Entries**

| Project Number | OT          |
| Project Name   | Overtime Premium |
Assign a labor cost multiplier to each overtime task

For each overtime project, you assign the appropriate labor cost multiplier to each overtime task.

After you specify an overtime project in the Compensation Rules window, you can assign a labor cost multiplier to each task in that project using the Task Details window in the Projects window. See: Entering Tasks for a Project: page 2 – 35.

Note: The Labor Cost Multiplier field is available only for lowest tasks on projects you specify as part of a compensation rule.

Oracle Projects calculates the cost of an overtime item based on the labor cost multiplier of the task to which you charge the item.

For double time overtime, Fremont records a premium amount equal to an employee’s labor cost, thus doubling the total costs.

<table>
<thead>
<tr>
<th>Project</th>
<th>OT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Overtime Premium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
</tr>
<tr>
<td>Name</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labor Cost Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Multiplier</td>
</tr>
</tbody>
</table>

For time and a half overtime, Fremont records an additional one half the employee’s labor cost for every overtime hour the employee works.

<table>
<thead>
<tr>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
</tr>
<tr>
<td>Name</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
</tr>
</tbody>
</table>
For uncompensated overtime, Fremont records a negative premium amount to reverse the straight time costs of the overtime hours charged. (Fremont does not incur overtime costs for an Exempt employee’s overtime hours.)

<table>
<thead>
<tr>
<th>Project</th>
<th>Number</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OT</td>
<td>Overtime Premium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
<th>Number</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Uncomp</td>
<td>Uncompensated Overtime</td>
</tr>
</tbody>
</table>

Implement AutoAccounting to charge appropriate expense accounts

When you implement AutoAccounting, you can charge straight time costs to a labor expense account and overtime costs to an overhead or overtime expense account.

To charge straight time and overtime to different accounts, you define an AutoAccounting rule based on expenditure type, expenditure category, service type, compensation rule, or labor cost multiplier. See: Accounting for Labor Costs: page 16 – 238.

Or, if you want to charge all labor costs to one account, you can define a constant rule.

Fremont implemented AutoAccounting to use the service type to charge overtime labor costs to the following expense account: 5173 – Overtime Labor Costs : page 16 – 238.

Each of the three overtime tasks (Double Time, Time and Half, and Uncompensated) uses the Overtime service type.
Implementing Overtime Charged to a Project on Which You Have Worked (Case Study)

The section demonstrates how to design client extensions that solve the business problem of charging and billing overtime premium transactions to projects on which the overtime is worked.

Business Rule

The first step in the design process is to determine the business rule that you want to solve using client extensions.

**Business Rule:** Create overtime premium transactions charged to the contract project on which the overtime was worked.

You charge overtime premium costs to the project and task on which the overtime is worked. You also bill the overtime premium costs at cost, and bill all straight time hours based on the billing methods defined for the project and task.

Employees identify the overtime hours worked on their timecard with one of the following expenditure types:

- Double Time
- Time and Half

The appropriate overtime premium multipliers are defined based on the type of overtime work, as identified by the overtime expenditure types.

**Note:** This is a different method of accounting for overtime premium costs than charging overtime premium to a indirect project as supported by the Overtime Calculation extension provided by Oracle Projects

**Suggestion:** If you determine that you need to use both the Labor Transaction Extension and the Overtime Calculation extension to process overtime for your employees, you need to ensure that you have defined conditions in each of these functions so that each transaction is processed by only one of these functions, based on your company policies.

The following chart displays an example of the transactions that may exist on a project for which overtime is charged according to this business rule.
### List Business Requirements

After you define the business rule you want to solve using client extensions, list the business requirements behind the business problem. This will help ensure that you are acknowledging all of the aspects of the business problem during the design stage.

- Create overtime premium items for any overtime charged to projects on timecards
- Charge the overtime premium costs to the same project that incurred the straight time costs for the overtime worked
- Calculate raw cost overtime premium using the appropriate labor cost multiplier and the source transaction raw cost amount
- Overtime premium is not burdened
- Bill overtime premium at cost. (Straight time is billed using appropriate bill or burden rates based on the project setup.)
- Separate items are required for the overtime premium and the straight time, to bill the overtime premium and straight time differently
- Overtime premium costs are not accounted for differently than straight time costs

### Required Extensions

To implement charging and billing overtime to a contract project, you use two extensions:

---

<table>
<thead>
<tr>
<th>Source</th>
<th>Expenditure Type Class</th>
<th>Quantity</th>
<th>Cost Rate</th>
<th>Raw Cost</th>
<th>Bill Rate</th>
<th>Billable Status</th>
<th>Bill Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td>Straight Time</td>
<td>8</td>
<td>$40</td>
<td>$320</td>
<td>$140</td>
<td>Yes</td>
<td>$1,120</td>
</tr>
<tr>
<td>Time and Half (Source Transaction)</td>
<td>Straight Time</td>
<td>2</td>
<td>$40</td>
<td>$80</td>
<td>$140</td>
<td>Yes</td>
<td>$280</td>
</tr>
<tr>
<td>Time and Half Premium</td>
<td>Overtime</td>
<td>0</td>
<td>20 (40 X .5)</td>
<td>$40 (A)</td>
<td>N/A</td>
<td>Yes</td>
<td>$40 (B)</td>
</tr>
</tbody>
</table>

(A) Raw Cost = Raw Cost Amount X Time and Half Premium Multiplier: $80 X .5
(B) Bill Amount = Raw Cost Amount of Overtime Premium Transaction: (A) = (B)

Table 17-2  (Page 1 of 1) Overtime Premium to Contract Project Example
• Labor Transaction Extension to create the overtime premium transactions as related transactions
• Labor Billing Extension to determine the bill amount of the overtime premium transactions

Suggestion: Review the PL/SQL code that corresponds to the implementation of this case study in the files PAXCCETB.pls and PAXICTMB.pls located in the Oracle Projects admin/sql directory.

Additional Implementation Data

Before you start charging overtime to a contract project, you need to create the appropriate implementation data to implement this business requirement.

First, you define expenditure types classified with the Straight Time expenditure type class; these expenditure types are used by employees to identify overtime worked when recording their timecards.

Next, you define expenditure types classified with the Overtime expenditure type class, which is used to identify the overtime premium transactions. These expenditure types are named using the corresponding expenditure type that identifies the overtime worked along with the word Premium concatenated to the end of it. For example, the Double Time Premium expenditure type holds the overtime premium costs for the overtime worked identified by the expenditure type of Double Time.

<table>
<thead>
<tr>
<th>Expenditure Type</th>
<th>Expenditure Type Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Time</td>
<td>Straight Time</td>
</tr>
<tr>
<td>Time and Half</td>
<td>Straight Time</td>
</tr>
<tr>
<td>Double Time Premium</td>
<td>Overtime</td>
</tr>
<tr>
<td>Time and Half Premium</td>
<td>Overtime</td>
</tr>
</tbody>
</table>

Table 17 – 3  (Page 1 of 1)

Finally, you define the appropriate overtime premium multipliers using the labor cost multipliers functionality in Oracle Projects. You define the labor cost multiplier name to match the expenditure type name for which the labor cost multiplier is used. For example, an overtime multiplier for double time is recorded in a labor cost multiplier with a name of Double Time and a multiplier value of 1.
With this implementation data, you can easily add more types of overtime, without having to change your labor transaction extension to calculate the overtime premium costs. For example, if you want to add *Time and Quarter* in which the overtime premium costs are calculating using a multiplier of .25, you define two new expenditure types of *Time and Quarter* and *Time and Quarter Premium*. You then define a new labor cost multiplier with the name of *Time and Quarter*, and a multiplier value of .25. After defining this data, you have completed the implementation of a new type of overtime which can be processed in the labor transaction extension that you defined to create overtime premium transactions using this implementation data.

**Attributes of Straight Time Transactions**

You do not need to use a client extension to create the straight time transactions; they are created within the standard processing of Oracle Projects when you enter timecard items. However, you may wish to review some of the attributes of the straight time transactions to help you determine what additional information you need for the related transactions for overtime premium costs.

**Raw Cost Calculation.** Cost straight time items according to the standard processing of Oracle Projects (*hours × employee hourly cost rate*).

**Burdening.** Burden straight time cost based on project and task setup using the standard cost plus processing of Oracle Projects.

**Billable Status.** All straight time transactions are billable, as determined by the project and task setup.

**Bill Amount.** Bill straight time labor as determined by the billing setup for projects and tasks using standard billing methods.

**Accounting.** Account for all straight time costs and revenue to contract projects according to your AutoAccounting rules.

**Creating Overtime Premium Transactions.** To create the overtime premium transactions for each overtime transaction recorded on a timecard, use the Labor Transactions Extension. See: Labor Transactions Extensions: page 18 – 40.
**Suggestion:** Review the file PAXCCETB.pls to see the PL/SQL code that creates the overtime premium transactions.

**Identifying Overtime Transactions.** You can identify the overtime transactions for which to create overtime premium transactions based on the implementation data defined for this business requirement. You create overtime premium transactions for all overtime transactions classified with an expenditure type name that also exists as a labor cost multiplier name. This functionality is illustrated in the example in the template files for the labor transaction extension.

You could also have identified these transactions by explicitly listing the appropriate expenditure type values in your labor transaction extension. However, with this method, any time you wanted to implement a new overtime type, you would have had to change the explicit list of overtime expenditure types in your labor transaction extension.

**Note:** There are many ways to implement a solution to a business requirement using client extensions. However, as illustrated by these two methods just described, you can see that one way may be superior to any other method to reduce maintenance of the extension. This type of implementation requires creative design skills along with an understanding of the client extensions, the PL/SQL language, and the Oracle Projects data structures.

**Assigning Expenditure Types.** Create overtime premium related transactions for source labor transactions charged with specific expenditure types.

For example, for any expenditure item with an expenditure type of Double Time or Time and Half, you want to create a related transaction to record the overtime premium costs. You create the related transaction with the associated overtime premium expenditure type. Based on your implementation data, you know that the overtime premium expenditure types uses the same name as the overtime expenditure type with the word *Premium* concatenated to the end of it. These overtime expenditure types and their corresponding overtime premium expenditure types are listed below.

<table>
<thead>
<tr>
<th>Source Expenditure Type</th>
<th>Related Transaction Expenditure Type</th>
<th>Related Transaction Expenditure Type Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Time</td>
<td>Double Time Premium</td>
<td>Overtime</td>
</tr>
<tr>
<td>Time and Half</td>
<td>Time and Half Premium</td>
<td>Overtime</td>
</tr>
</tbody>
</table>
Charging to a Project and Task. Charge the related transaction to the same project and task as the source transaction, since the business requirements specify that all overtime premium transactions are charged to the same project as the overtime worked.

In this case, you do not need to explicitly specify the project and task values when you call the CreateRelatedItem procedure in your labor transaction extension. If you do not specify these values, the CreateRelatedItem procedure automatically charges the related transaction to the same project and task as the source transaction.

Calculating Raw Cost. Cost overtime premium items according to the following formula:

\[ \text{Source transaction raw cost amount} \times \text{appropriate labor cost multiplier} \]

You have defined labor cost multipliers with names that match the expenditure types which identify the overtime hours worked. Use the appropriate labor cost multiplier to calculate the overtime premium transaction raw cost.

For example, if the expenditure type of the related transaction is *Time and Half Premium*, calculate the raw cost of the related transaction according to the raw cost amount of the source transaction times the labor cost multiplier of .5.

Billing Overtime Premium Transactions

To establish the bill amount of the related transactions for overtime premium, you use the Labor Billing Extension. See: Labor Billing Extensions: page 18 – 52.

**Suggestion:** Review the file PAXICTMB.pls to see the PL/SQL code that calculates the bill amount of the overtime premium transactions.

Identifying Overtime Premium Transactions

Identify all billable transactions classified with the *Overtime* expenditure type class.

Oracle Projects passes only billable transactions to the labor billing extension, so you only need to include logic based on the expenditure type class to identify the appropriate transactions.

**Note:** This assumes that all expenditure types classified with the *Overtime* expenditure type class are to be billed in this way. If this is not true in your case, you can explicitly list the expenditure types to which this rule applies.
Calculating Bill Amount

According to the business requirements, bill overtime premium transactions based on the raw cost of the overtime premium transaction.

For all transactions that you identified with the Overtime expenditure type class, you set the bill amount equal to the raw cost.

For all other labor transactions, you do not set the bill amount in the labor billing extension. Oracle Projects then uses the standard billing methods to calculate the bill amounts for these transactions.

Other Design Considerations for Related Transactions

Determining Billable Status

You set the billable status of the related transactions based on the setup of project/task transaction controls.

Accounting for Revenue

Charge all overtime premium charged to contract projects using the same accounts that straight time labor is charged on those projects.

Displaying Related Transactions on an Invoice

Display overtime premium on separate invoice line from straight time transactions.

You can do this by defining the appropriate labor invoice format to group straight time and overtime premium transactions on different invoice lines. You may do this by grouping the labor invoice lines by expenditure type or by expenditure category or revenue category, if you have straight time and overtime premium expenditure types assigned to different expenditure categories or revenue categories.

Testing Your Implementation

You must test your client extension to ensure that you have correctly implemented this business requirement.

Below are listed the basic steps that you may perform to test your implementation. You should develop detailed test cases, which include the appropriate implementation and project data and the resulting cost, revenue, and invoice amounts for the transactions.
1. Create labor transactions using *Double Time* and *Time and Half* expenditure types charged to a contract project

2. Process for costing, revenue accrual, and invoicing

3. Review results of related transactions to ensure that the related transactions are correctly created and processed. Verify the following values of the related transactions:
   - Raw cost
   - Burdened cost
   - Raw cost account
   - Billable flag
   - Bill amount
   - Revenue amount
   - Revenue account
   - Item is included on an invoice

4. Release invoice

5. Change cost rate of the employee for which you created the overtime premium transactions

6. Mark overtime transactions for cost recalculation

7. Process for costing, revenue accrual, and invoicing

8. Review results of related items with new cost rate to ensure that the related transactions are properly processed (use the values in step 3)

9. Change the related transactions to be non-billable (independent of the source transaction)

10. Process for costing, revenue accrual, and invoicing

11. Review the results of resulting credit memo (you created this when you changed the billable status of the related transactions)

12. Interface cost, revenue, and invoices

13. Review summarized amounts by expenditure types to ensure that cost and revenue amounts are correct for the overtime and overtime premium expenditure types
Calculating and Entering Overtime

After you completely set up your projects to collect overtime, you need to calculate overtime hours and enter them in Oracle Projects.

You calculate overtime hours and charge the hours to your overtime project using one of the following methods:

- Manually calculate overtime hours and charge them to your indirect project.
- Use a client extension or use the labor client extensions to calculate and charge the hours to your projects automatically.

**Attention:** You need to specify an overtime calculation method using the Implementation Options window during your implementation of Oracle Projects. See: Implementation Options: page 16 – 56.

**Manual overtime calculation and entry**

You can manually enter overtime hours along with straight time hours using the Expenditure Batches window.

When a timecard clerk enters pre-approved timecards, the clerk calculates an employee’s overtime manually based on company overtime policies and the employee’s compensation rule.

The clerk charges an employee’s overtime hours to the overtime project and appropriate overtime task using an expenditure type that is classified with a expenditure type class of *Overtime*.

For example, suppose Pat Miller, a compensated employee turns in the timecard shown in the following table:
Fremont Corporation – Time Report

<table>
<thead>
<tr>
<th>Employee Name: Pat Miller</th>
<th>Number: 1030</th>
<th>Organization: Structural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project/Task Number: TM4/1.0</td>
<td>Project/Task Name: Engineering Survey/Collect Data</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Hours</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>April 18</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td>April 19</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td>April 20</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td>April 21</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>April 22</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Saturday</td>
<td>April 23</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Sunday</td>
<td>April 24</td>
<td>52</td>
<td></td>
</tr>
</tbody>
</table>

Table 17 – 5 Sample Timecard (Page 1 of 1)

According to Fremont Corporation’s policy, Miller is entitled to time and a half overtime for the first 40 hours she works beyond 40 hours per week. When the accounting department enters Miller’s timecard into Oracle Projects, a clerk enters the following two timecard lines:

- 52 hours of straight time charged to the engineering survey project
- 12 hours of overtime charged to the overtime project, Time and Half task

The first line records 52 hours of straight time labor cost charged to the engineering survey project, which is costed using Miller’s hourly labor cost rate.

Note: Fremont Corporation enters summary timecards for the expenditure week. They do not enter daily timecard lines.

The second line accounts for the overtime premium Fremont pays Miller for her overtime hours. The 12 overtime hours are charged to Fremont’s indirect project, Time and Half task; the task’s labor cost multiplier (0.5) calculates half Miller’s labor cost rate.

A few things to note about manual entry of overtime in the Expenditure Batches window are:

- The expenditure item date can be set in two different ways, depending upon whether overtime is calculated for the week or a day. Generally, overtime is calculated for the week, so the clerk
sets the expenditure item date of the overtime item to the week ending date. If overtime is calculated based on daily hours, the clerk can enter the overtime for each day or can summarize the overtime and enter the total overtime hours with a date of the end of the week. This is a company policy decision, but it is recommended that you enter overtime with the week ending date to reduce the number of overtime entries.

- After the clerk selects an Overtime expenditure type, the project and task default from the overtime project and task specified for the employee’s compensation rule. You can override these values.

- Oracle Projects calculates the cost of the expenditure item using the labor cost multiplier that is assigned to the overtime task to which it is charged.

- All expenditure item dates must be within the expenditure week ending date of the timecard.

Employees who enter their own timecards in Oracle Personal Time and Expense cannot manually enter overtime. Timecard clerks calculate overtime based on timecards entered by employees, then enter the overtime hours using the Expenditure Batches window.

**Automatic overtime calculation and entry**

You can use the Overtime Calculation extension or labor client extensions to automatically calculate and charge all overtime hours to the project and tasks you specify according to your business policies.

Unlike manual overtime calculation, in which you calculate and enter overtime hours when you enter timecards, you can use automatic overtime calculation to calculate and charge overtime hours to a project and task when your accounting department distributes labor costs. Employees and timecard clerks, thus, enter only straight time hours.

Using the example, above, but this time using automatic overtime calculation, if Pat Miller works 52 hours on an engineering survey, the clerk in the accounting department enters only one line:

- 52 hours of time charged to the engineering survey project

When the accounting department distributes labor costs, the PRC: Distribute Labor Costs process runs the Overtime Calculation extension, or the labor client extension which automatically calculates overtime hours, and creates the following new expenditure item in a new expenditure and expenditure batch:
• 12 hours charged to the overtime project, Time and Half task

Oracle Projects uses two expenditure items to process Miller’s labor cost whether you use manual or automatic overtime calculation; the difference is how and when the overtime items are calculated and entered.

See Also

Labor Costing Extensions: page 18 – 36
Labor Transaction Extensions: page 18 – 40

Overtime Calculation

Oracle Projects includes a standard Overtime Calculation extension that supports three kinds of overtime. You probably need to customize this extension to support the kinds of overtime your business uses.

The Overtime Calculation extension determines which kind of overtime to award an employee based on the assigned compensation rule and hours worked. Table 17 – 6 illustrates the overtime policy that the overtime calculation extension delivered with Oracle Projects provides as an example for you to use as a starting point:

<table>
<thead>
<tr>
<th>Kind of Overtime</th>
<th>Compensation Rule</th>
<th>Pay</th>
<th>When to Apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hourly</td>
<td></td>
<td>Time and Half</td>
<td>First 4 hours beyond 8 per day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Double Time</td>
<td>Every hour beyond 12 per day</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Every hour on weekends</td>
</tr>
<tr>
<td>Compensated</td>
<td></td>
<td>Time and Half</td>
<td>First 40 hours beyond 40 per week</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Double Time</td>
<td>Every hour beyond 80 per week</td>
</tr>
</tbody>
</table>

Table 17 – 6 Sample Overtime Policy (Page 1 of 2)
The Overtime Calculation Extension

If you want to use automatic overtime calculation, you need to enable the Overtime Calculation extension using the Implementation Options window.

Before you enable the Overtime Calculation extension, you need to set up your overtime project, and, if necessary, customize the Overtime Calculation extension to implement your company's overtime policy. The Overtime Calculation extension is a client extension that, if enabled, is called by the PRC: Distribute Labor Costs process.

See: Overtime Calculation Extension: page 18 – 56.

Overtime Adjustments

To handle overtime adjustment processing, the Overtime Calculation extension sums the amount of existing overtime hours for the employee and week, along with summing the total hours of straight time for the employee and week. Before overtime items are created, the Overtime Calculation extension compares the new total overtime hours with the existing overtime hours. If a difference exists between the new total overtime hours and the existing overtime hours, the existing overtime hours are fully reversed before a new overtime expenditure item is created for the new calculated overtime hours. If a difference does not exist, no new overtime items are created.

For example, a week after Pat Miller charged 52 hours to the engineering survey project, Miller submits an adjusting timecard for the previous week to charge an additional 2 hours to the survey project. The timecard clerk enters a timecard line:

- 2 hours of straight time charged to the engineering survey project

The Overtime Calculation had originally calculated and created 12 hours of overtime. With this new timecard line, Miller is entitled to 14 hours of overtime. The Overtime Calculation extension creates two overtime items to record this adjustment:

---

<table>
<thead>
<tr>
<th>Kind of Overtime</th>
<th>Compensation Rule</th>
<th>Pay</th>
<th>When to Apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exempt</td>
<td>Uncompensated</td>
<td>Every hours beyond 40 hours per week</td>
<td></td>
</tr>
</tbody>
</table>

Table 17 – 6 Sample Overtime Policy (Page 2 of 2)
• –12 hours of overtime charged to the overtime project, Time and Half task
• 14 hours of overtime charged to the overtime project, Time and Half task

These two items together record the adjusting 2 hours of overtime.

Overtime adjustments that reduce the overtime hours are processed in the same way as overtime adjustments that increase the overtime hours. The original overtime item is fully reversed and a new overtime item is created to record the new overtime hours.

Adjusting Overtime

Occasionally, you may need to revise the number of hours on a timecard, which may affect the number of overtime hours you want to charge to an overtime project.

If you use manual overtime entry, a clerk must manually revise the overtime hours, and re-enter them when timecard hours are changed.

If you use automatic overtime calculation, the Overtime Calculation extension or other client extensions automatically handle adjustments to overtime hours that result from straight time adjustments.

**Manual overtime adjustments**

Overtime adjustment hours are entered the same way that straight time adjustment hours are entered.

If the adjustment hours increase the total number of hours, create a new expenditure item to record the positive number of hours that is the difference between the original number of hours entered and the new total number of hours to be entered.

If the adjustment hours decrease the total number of hours, create a new expenditure item to fully reverse the original amount of overtime hours and create a new item to enter the new amount of overtime hours. An expenditure item with negative hours must match an existing expenditure item based on the person, expenditure item date, expenditure type, project, and task. The numbers of hours reversed must equal the total number of hours of the original item.

To illustrate the way adjustments are entered, we will use Pat Miller’s timecard as discussed in previous sections (See page 17 – 21).
Increasing Overtime Hours

Assume Pat Miller charged 52 hours to the engineering survey project as described earlier. A week later, Miller submits an adjusting timecard for the previous week to charge an additional 2 hours to the engineering survey project. This increases the number of hours worked to 54 hours for the week; this also increases the number of overtime hours from 12 to 14 hours for the week. The timecard clerk enters an adjusting timecard with the expenditure ending date set to the previous week ending date and enters the following two timecard lines to record this adjustment:

- 2 hours of straight time charged to the engineering survey project
- 2 hours of overtime charged to the overtime project, Time and Half task

These two timecard lines record the hours and cost for the additional 2 hours for the previous week.

Decreasing Overtime Hours

Again, assume Pat Miller charged 52 hours to the engineering survey project. A week later, Miller submits an adjusting timecard for the previous week to back out 2 hours charged to the engineering survey project. This adjustment decreases the number of hours worked to 50 hours for the week; this also decreases the number of overtime hours from 12 to 10 hours for the week. The timecard clerk enters an adjusting timecard with the expenditure ending date set to the previous week ending date and enters the following timecard lines to record this adjustment:

- 52 hours of straight time charged to the engineering survey project
- 50 hours of straight time charged to the engineering survey project
- 12 hours of overtime charged to the overtime project, Time and Half task
- 10 hours of overtime charged to the overtime project, Time and Half task

The net result of these lines is a reduction of 2 straight time hours, and a reduction of 2 overtime hours.

The two reversing lines must match the existing items entered the previous week, based on the employee, expenditure item date, expenditure type, project, and task, and must fully reverse the existing item.

Reversing Overtime

Another type of overtime adjustment may result if overtime hours are incorrectly charged to the wrong overtime task. To handle this, the
timecard clerk reverses the incorrect item and enters a new item charged
to the correct overtime task.

Assume Pat Miller’s 12 overtime hours charged to the Time and Half
overtime task, should have been charged to the Double Time overtime
task. The timecard clerk enters two timecard lines:

- 12 hours of overtime charged to the overtime project, Time and
  Half task
- 12 hours of overtime charged to the overtime project, Double
  Time task

These two lines record the adjustment to correct the overtime hours
entered.

**Automatic overtime adjustments**

Timecard clerks or employees enter straight time adjustment items that
increase or reduce the number of hours worked during a week using the
Expenditure Batches window. After these items are costed by the PRC:
Distribute Labor Costs process, the Overtime Calculation extension or
other client extensions identify the employees and weeks that may
potentially have new overtime to process, sums the hours required to
calculate overtime, and then calculates overtime.

See Also

Overtime Calculation Extension: page 18 – 56.
Integrating Commitments from External Systems

You can modify what Oracle Projects considers a committed amount for project status tracking. By default, Oracle Projects defines commitments as all project-related requisitions and purchase orders in Oracle Purchasing and supplier invoices in Oracle Payables that are not yet interfaced to Oracle Projects. This includes all approved and pending approval requisitions, purchase orders, and supplier invoices. You may want to include only approved requisitions and purchase orders in the committed cost amounts. See: Integrating with Oracle Purchasing and Oracle Payables: page 12 – 35.

You can also integrate commitments from an external system, other than Oracle Purchasing and Oracle Payables, for project status tracking.

You modify what is included as the commitment amounts by changing the view, pa_commitment_txns_v, that Oracle Projects reads for the commitment transactions.

For more information about tracking of commitments, see: Project Summary Amounts: page 8 – 10.

Default Configuration of Commitments View

The default configuration provided by Oracle Projects upon installation for the configurable commitments view, pa_commitment_txns_v, includes unions of the following views:

- **pa_proj_req_distributions**
  All open requisitions in Oracle Purchasing, irrespective of approval status.

- **pa_proj_po_distributions**
  All open purchase orders in Oracle Purchasing, irrespective of approval status.

- **pa_proj_ap_inv_distributions**
  All supplier invoices in Oracle Payables that are not yet interfaced to Oracle Projects.

Modifying the Commitments View

You modify the pa_commitment_txns_v to change how Oracle Projects track commitments.
• To change which requisitions and purchase orders in Oracle Purchasing and supplier invoices in Oracle Payables are considered as commitments, modify the default select or where clause statements in the view or substitute other Oracle Purchasing and Oracle Payables views as needed.

• To include commitments from an external system, create a new view called pa_commitments_outside_system_v to read your external commitments and include it in the pa_commitment_txns_v view.

Oracle Projects provides a template script that includes the view definition with an example of integrating commitments from an external system. The name of the script is PACMTVW.sql and is located in the Oracle Projects admin/sql directory.

**Required Fields in External Commitments View**

When you create the pa_commitments_outside_system_v view for external commitments, you must include the following columns in this view:

<table>
<thead>
<tr>
<th>Column</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT_ID</td>
<td>NUMBER(15)</td>
<td>The identifier of the project</td>
</tr>
<tr>
<td>TASK_ID</td>
<td>NUMBER(15)</td>
<td>The identifier of the task</td>
</tr>
<tr>
<td>TRANSACTION_SOURCE</td>
<td>VARCHAR2(30)</td>
<td>Source of the commitment. Set this to OUTSIDE_SYSTEM</td>
</tr>
<tr>
<td>LINE_TYPE</td>
<td>VARCHAR2(1)</td>
<td>Type of the commitment line. Use one of the following values:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R for requisitions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P for purchase orders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I for supplier invoices</td>
</tr>
<tr>
<td>EXPENDITURE_ITEM_DATE</td>
<td>DATE</td>
<td>The expenditure item date of the commitment</td>
</tr>
<tr>
<td>PA_PERIOD</td>
<td>VARCHAR2(20)</td>
<td>PA Period of the commitment. Use the current reporting period. See Determining Periods below</td>
</tr>
<tr>
<td>GL_PERIOD</td>
<td>VARCHAR2(15)</td>
<td>GL Period of the commitment. Use the GL period of the current reporting period. See Determining Periods below</td>
</tr>
</tbody>
</table>

Table 17 – 7  (Page 1 of 2)
### Column Description Table

<table>
<thead>
<tr>
<th>Column</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORGANIZATION_ID</td>
<td>NUMBER</td>
<td>The identifier of the expenditure organization</td>
</tr>
<tr>
<td>EXPENDITURE_TYPE</td>
<td>VARCHAR2(30)</td>
<td>The expenditure type. Use an expenditure type with an expenditure type class of Supplier Invoices.</td>
</tr>
<tr>
<td>EXPENDITURE_CATEGORY</td>
<td>VARCHAR2(30)</td>
<td>The expenditure category of the expenditure type</td>
</tr>
<tr>
<td>REVENUE_CATEGORY</td>
<td>VARCHAR2(30)</td>
<td>The revenue category of the expenditure type</td>
</tr>
<tr>
<td>SYSTEM_LINKAGE_FUNCTION</td>
<td>VARCHAR2(30)</td>
<td>The expenditure type class of the expenditure type. Set this to VENDOR_INVOICES.</td>
</tr>
<tr>
<td>TOT_CMT_RAW_COST</td>
<td>NUMBER</td>
<td>The raw cost amount</td>
</tr>
<tr>
<td>TOT_CMT_BURDENED_COST</td>
<td>NUMBER</td>
<td>The burdened cost amount. See Burdening Commitments below</td>
</tr>
</tbody>
</table>

*Table 17-7  (Page 2 of 2)*

### Determining PA and GL Periods

You should define your view to set the PA period and GL period to the current reporting period. To do this, include this statement in your view:

```sql
SELECT period_name
    , gl_period_name
    , ....
FROM pa_periods p
    , ....
WHERE p.current_pa_period_flag = 'Y'
AND ....
```

### Burdening Commitments

You can burden your commitment amounts using the burden schedule that you have assigned to the task for internal costing purposes. See: Burdening: page 5 – 16.
To burden the commitment amounts, you call the following functions in the select statement for the TOT_CMT_BURDENED_COST and CMT_IND_COMPILED_SET_ID columns of your view definition:

- `pa_burden_cmts.get_cmt_burdened_cost`
- `pa_burden_cmts.get_cmt_compiled_set_id`

Oracle Projects provides an example of burdening commitments in the PACMTVW.sql in the Oracle Projects admin/sql directory.

The `pa_burden_cmts.get_cmt_burdened_cost` function calculates the total burdened cost. If it cannot calculate the burdened cost or encounters an error, it returns the raw cost. You pass the following values to this function:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the task</td>
</tr>
<tr>
<td>X_expenditure_item_date</td>
<td>IN</td>
<td>DATE</td>
<td>The expenditure item date</td>
</tr>
<tr>
<td>X_expenditure_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The expenditure type</td>
</tr>
<tr>
<td>X_organization_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the expenditure organization</td>
</tr>
<tr>
<td>X_schedule_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The type of burden schedule. Set this to C</td>
</tr>
<tr>
<td>X_raw_cost</td>
<td>IN</td>
<td>NUMBER</td>
<td>The amount to be burdened</td>
</tr>
</tbody>
</table>

Table 17 – 8  (Page 1 of 1)

The `pa_burden_cmts.get_cmt_compiled_set_id` function determines the compiled set id, which identifies the set of burden multipliers used to calculate the burdened amount. You can use the compiled set ID for reporting individual burden components of the burdened cost. This value is only populated when you burden the costs. If it cannot find the compiled set ID or it encounters an error, it returns null. You pass the following values to this function:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the task</td>
</tr>
<tr>
<td>X_expenditure_item_date</td>
<td>IN</td>
<td>DATE</td>
<td>The expenditure item date</td>
</tr>
</tbody>
</table>

Table 17 – 9  (Page 1 of 2)
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_organization_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the organization</td>
</tr>
<tr>
<td>X_schedule_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The type of burden schedule. Set this to C</td>
</tr>
</tbody>
</table>

Table 17-9  (Page 2 of 2)
Custom Reporting Using Project Summary Amounts

You can use project summary amounts for your custom project status inquiries and reports. Oracle Projects provides views and APIs for use toward this objective. To view the current reporting period for the project summary amounts, navigate to the PA Periods window and query the PA Period with the Reporting Period box checked.

See Also

Project Status Inquiry: page 8 – 2
Project Summary Amounts: page 8 – 10

Management Reports

You may need to modify Oracle Projects management reports, and write additional reports to monitor project status the way that your business requires. You can use existing Oracle Projects reports as templates to develop your own management reports.

All Oracle Projects reports are written using Oracle Reports, making it easier for you to customize reports.

Oracle Projects provides many views to make it easier to report summary and detail project information for Oracle Projects standard reports and custom reporting. Many of the standard reports use these reporting views.

Custom Reporting Summarization Views

Oracle Projects provides two sets of views for custom reporting on summarization summary amounts:

- Work Breakdown or WBS summarization views
- Resource summarization views

Both sets of views contain project and task-level summary amounts. The WBS summarization views have summary level amounts for projects and tasks. The resource summarization views have summary amounts by project and resource as well as task and resource.
Each set of views contains views with prior–period, period–to–date, year–to–date, inception–to–date, and project summary amounts for the following:

- actual costs and revenue
- revenue budgets
- cost budgets
- commitments

**Work Breakdown Summarization Views**

The WBS summarization views are as follows:

- pa_accum_wbs_act_v
  WBS Summarization Actuals View: This view contains summary amounts of actual costs and revenue by project and task.

- pa_accum_wbs_rev_bgt_v
  WBS Summarization Revenue Budget View: This view contains summary amounts of revenue budgets by project and task.

- pa_accum_wbs_cost_bgt_v
  WBS Summarization Cost Budget View: This view contains summary amounts of cost budgets by project and task.

- pa_accum_wbs_cmt_v
  WBS Summarization Commitments View: This view contains summary amounts of commitments by project and task.

These views also contain limited task information, such as project number and name, indented task numbers and names, task start and completion dates, and task manager name.

You can refer to the Oracle Projects Revenue, Costs, Budgets by Work Breakdown Structure Report as an example of how to use these views for reporting. See: Revenue, Costs, Budgets by Work Breakdown Structure: page 9 – 29.

**Resource Summarization Views**

The resource summarization views are as follows:

- pa_accum_rsrs_act_v
Resource Summarization Actuals View: This view contains summary amounts of actual costs and revenue by project and resource and task and resource.

- pa_accum_rscc_rev_bgt_v

Resource Summarization Revenue Budget View: This view contains summary amounts of revenue budgets by project and resource and task and resource.

- pa_accum_rscc_cost_bgt_v

Resource Summarization Cost Budget View: This view contains summary amounts of cost budgets by project and resource and task and resource.

- pa_accum_rscc_cmt_v

Resource Summarization Commitments View: This view contains summary amounts of commitments by project and resource and task and resource.

You can refer to the following Oracle Projects reports for examples of how to use these views for reporting:

- Revenue, Costs, Budgets by Resources (Project Level): page 9 – 27
- Task – Revenue, Costs, Budgets by Resources: page 9 – 28

Custom Reporting Strategies with WBS and Resource Reporting Summarization Views

The following custom reporting strategies pertain to both sets of reporting summarization views.

Since both sets of views contain project and task–level summary amounts, you must be careful to select the appropriate rows:

- For project–level rows, the task_id is zero
- For task–level rows, the task_id is greater than zero

When designing the data model in Oracle Reports, you will need to consider the following information:

- Unless you create a higher–level view for one or more of the reporting summarization views, Oracle Projects requires separate query groups for each view used in a report.

  Because of performance implications, higher–level views are not recommended.
• It will be necessary to drive the views off a table, such as the PA_TASKS table, for a WBS report or a resource list for a resource report.

• With respect to the budget views, there can be one or more budget rows for a given project, task, or resource.

  You may need to either join on the ‘budget_type_code’ or filter on it in a query group.

  To report multiple budget types for each project or task, you must create a query group for each budget type.

• If you design your data model to report by budget type and resource list, you can assume that only one resource list is assigned to each budget type.

To facilitate resource list–driven reporting, Oracle Projects provides the view, ‘pa_resource_list_members_v’. This provides the following functionality:

• A resource list with indented second–level resources within each respective resource group

• Columns to facilitate the ordering of resource groups and their related second–level resources

To use this view in your custom reports, you can add the following to the resource–list query:

• Use the ‘alias’ view column to automatically display an indented resource list

• Include an order–by clause, such as the following, to ensure the proper ordering of resource groups and related second–level resources:

  ```
  order by parent_sort_order, sort_order
  ```

**Actuals API**

Oracle Projects also provides a package that contains an API to give you additional control for custom summarization reporting. You can use the API to get amounts by a specific Oracle Projects or Oracle General Ledger period, a specific range of Oracle Projects or Oracle General Ledger periods and by various transaction attributes as follows:

• Project, task, and resource combinations

• All levels of the project work breakdown structure

• Oracle Projects or Oracle General Ledger period
• Oracle Projects or Oracle General Ledger period ranges
• Various transaction attributes from the following:
  – employee
  – job
  – organization
  – supplier
  – expenditure type
  – event type
  – non–labor resource
  – expenditure category
  – revenue category
  – non–labor resource organization
  – event type classification
  – expenditure type classification

The name of the package is **pa_accum_api**, and the name of the procedure is **get_proj_accum_actuals**. You can get actual amounts only if you successfully ran the Update Project Summary process for the project.

This procedure returns the actual cost, revenue, and commitment amounts by:

**Package.Procedure**

The following table lists the parameters that Oracle Projects provides for the API, **pa_accum_api.get_project_accum_actuals**. (See files PAAAPIS.pls and PAAAPIB.pls under the admin directory.)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the project</td>
</tr>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the task</td>
</tr>
</tbody>
</table>

Table 17 – 10  (Page 1 of 3)
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_resource_list_member_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the resource</td>
</tr>
<tr>
<td>X_period_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the period type</td>
</tr>
<tr>
<td>X_from_period_name</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the start period</td>
</tr>
<tr>
<td>X_to_period_name</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the end period</td>
</tr>
<tr>
<td>X_person_id</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the employee transaction attribute</td>
</tr>
<tr>
<td>X_job_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the job transaction attribute</td>
</tr>
<tr>
<td>X_organization_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the organization transaction attribute</td>
</tr>
<tr>
<td>X_vendor_id</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the supplier transaction attribute</td>
</tr>
<tr>
<td>X_expenditure_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the expenditure type transaction</td>
</tr>
<tr>
<td>X_event_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the event type transaction attribute</td>
</tr>
<tr>
<td>X_non_labor_resource</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the non–labor resource transaction</td>
</tr>
<tr>
<td>X_expenditure_category</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the expenditure category transaction</td>
</tr>
<tr>
<td>X_revenue_category</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the revenue category transaction</td>
</tr>
<tr>
<td>X_non_labor_resource_org_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier for the non–labor resource organization</td>
</tr>
<tr>
<td>X_event_type_classification</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the event type classification transaction attribute</td>
</tr>
<tr>
<td>X_system_linkage_function</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the expenditure type class function</td>
</tr>
</tbody>
</table>

Table 17 – 10  (Page 2 of 3)
Additional Information about Parameters

**Using the Identifier for the Task**
When retrieving project–level amounts, this parameter can be null.

**Using the Identifier for the Resource**
When retrieving aggregate project or task amounts, this parameter can be null.

**Using the Identifier for the Period Type**
You use this parameter to tell the procedure that you are expect summary amounts by either Oracle Projects or Oracle General Ledger period. Allowable values are as follows:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_week_ending_date</td>
<td>IN</td>
<td>DATE</td>
<td>The identifier for the week ending date transaction attribute</td>
</tr>
<tr>
<td>X_revenue</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>revenue amount</td>
</tr>
<tr>
<td>X_raw_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>raw cost amount</td>
</tr>
<tr>
<td>X_burdened_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>burdened cost amount</td>
</tr>
<tr>
<td>X_quantity</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>quantity</td>
</tr>
<tr>
<td>X_labor_hours</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>labor hours</td>
</tr>
<tr>
<td>X_billable_raw_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>billable raw cost amount</td>
</tr>
<tr>
<td>X_billable_burdened_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>billable burdened cost amount</td>
</tr>
<tr>
<td>X_billable_quantity</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>billable quantity</td>
</tr>
<tr>
<td>X_billable_labor_hours</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>billable labor hours</td>
</tr>
<tr>
<td>X_cmt_raw_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>commitment raw cost amount</td>
</tr>
<tr>
<td>X_cmt_burdened_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>commitment burdened cost amount</td>
</tr>
<tr>
<td>X_unit_of_measure</td>
<td>INOUT</td>
<td>VARCHAR2</td>
<td>unit of measure</td>
</tr>
<tr>
<td>X_err_stage</td>
<td>INOUT</td>
<td>VARCHAR2</td>
<td>error stage</td>
</tr>
<tr>
<td>X_err_code</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>error code</td>
</tr>
</tbody>
</table>

Table 17 – 10   (Page 3 of 3)
• 'P' for Oracle Projects Period
• 'G' for Oracle General Ledger Period

Using the From–Period Names and To–Period Names

You must pass these two parameters to the procedure with the following constraints:

• If the period type is Oracle Projects Period, then both period names must be Oracle Projects period names. Otherwise, Oracle General Ledger period names must be used for both parameters

• If you are retrieving amounts for one period, you must specify the same period name for both parameters

• For a range of periods, the from period name must be earlier than the to period name

Custom Reporting Strategies for Summarization API

To see how the API can be used for reporting, refer to the following Oracle Projects reports:

• Revenue, Cost, Budgets by Resources (Project Level)
• Task – Revenue, Cost, Budgets by Resources

Budget API

You can use the budget API for custom reporting. This API gets budget data for any baselined budget. You can get the budget data without running the Update Project Summary process.

The Budget API returns budget amounts by:

• Project, task, and resource combinations
• All levels of the project work breakdown structure
• All levels of the resource breakdown structure
• Oracle Projects or Oracle General Ledger period
• Oracle Projects or Oracle General Ledger period ranges
• Budget type

The Budget API can return summary amounts for budgets assigned to any level of the project and task work breakdown structure, providing you pass the task_id corresponding to the budgeted level to the Budget API. For example, if a project is budgeted at the top task and you pass a lower task to the Budget API, the Budget API will return zero budget amounts.
The name of the summarization package is `pa_accum_api` and the name of the budget procedure is `get_proj_accum_budgets`.

**Package.Procedure**

The following table lists the parameters that Oracle Projects provides for the Budget API, `pa_accum_api.get_proj_accum_budgets`.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project.</td>
</tr>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the task. Set to zero if budgeting at the project level.</td>
</tr>
<tr>
<td>X_resource_list_member_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource list member. The value is null for project and task combinations.</td>
</tr>
<tr>
<td>X_period_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier for the PA or GL Period: ‘P’ for PA periods or ‘G’ for GL periods.</td>
</tr>
<tr>
<td>X_from_period_name</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The start period of the period range.</td>
</tr>
<tr>
<td>X_to_period_name</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The end period of the period range.</td>
</tr>
<tr>
<td>X_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The identifier of the budget type associated with the budget columns.</td>
</tr>
<tr>
<td>X_base_raw_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Baseline raw cost budget</td>
</tr>
<tr>
<td>X_base_burdened_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Baseline burdened cost budget</td>
</tr>
<tr>
<td>X_base_revenue</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Baseline revenue budget</td>
</tr>
<tr>
<td>X_base_quantity</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Baseline quantity budget. This column returns zero for project and task level combinations.</td>
</tr>
<tr>
<td>X_base_labor_quantity</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Baseline labor quantity</td>
</tr>
<tr>
<td>X_unit_of_measure</td>
<td>INOUT</td>
<td>VARCHAR2</td>
<td>Unit of measure. If the API finds multiple values, this column returns null. Otherwise, this column returns the unit of measure.</td>
</tr>
</tbody>
</table>

Table 17-11 (Page 1 of 2) Budget API Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_orig_raw_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Original raw cost budget</td>
</tr>
<tr>
<td>X_orig_burdened_cost</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Original burdened cost budget</td>
</tr>
<tr>
<td>X_orig_revenue</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Original revenue budget</td>
</tr>
<tr>
<td>X_orig_quantity</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Original quantity budget</td>
</tr>
<tr>
<td>X_orig_labor_quantity</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Original labor quantity</td>
</tr>
<tr>
<td>X_err_stage</td>
<td>INOUT</td>
<td>VARCHAR2</td>
<td>Error stage</td>
</tr>
<tr>
<td>X_err_code</td>
<td>INOUT</td>
<td>NUMBER</td>
<td>Error code</td>
</tr>
</tbody>
</table>

Table 17 – 11  (Page 2 of 2)  Budget API Parameters
Implementing Oracle Projects for Integration With Other Applications

The following topics are discussed in this section:

Updating Profile Options for Integration with Other Products: page 17 – 44

Implementing Oracle Payables for Oracle Projects Integration: page 17 – 48

Implementing Oracle Purchasing for Oracle Projects Integration: page 17 – 52

Implementing Oracle Receivables for Oracle Projects Integration: page 17 – 53

Implementing Oracle Personal Time and Expense for Oracle Projects Integration: page 17 – 68

Implementing Activity Management Gateway for Oracle Projects Integration: page 17 – 71

Implementing Oracle Project Analysis Collection Pack for Oracle Projects Integration: page 17 – 72

Updating Profile Options for Integration With Other Products

When you implement integration with other Oracle Products, your System Administrator needs to update the following profile options in the System Profile Values Window. See: Setting User Profile Options Oracle Applications System Administrator’s Guide.

Payables and Purchasing

• PA: Allow Override of PA Distributions in AP/PO
• PA: Default Expenditure Organization in AP/PO
• PA: Tasks to Display for Expenditure Entry

Payables Only

• PA: Summarize Expense Report Lines
Receivables Only

- PA: Receivables Invoice Line UOM
- AR: Tax: Allow Ad Hoc Tax Changes
- AR: Tax: Allow Override of Customer Exemptions
- AR: Tax: Allow Override of Tax Code
- AR: Use Invoice Accounting For Credit Memos
- AR: Transaction Flexfield QuickPick Attribute

General Ledger

- GL: Set of Books Name

Personal Time and Expense

- PA: AutoApprove Timesheets
- PA: AutoApprove Expense Reports

Activity Management Gateway

- PA: Allowed to Use AMG

Oracle Project Analysis Collection Pack

- PA: ADW Collect Top Tasks
- PA: ADW Installed
- PA: Collection Pack Licensed

See Also

Profile Options in Oracle Projects: page B – 2
Profile Options: page 16 – 211
Fremont Corporation sets the PA: Allow Override of PA Distributions in AP/PO profile option to No because they do not want end users to override the Projects distributions created in Oracle Payables and Oracle Purchasing.

<table>
<thead>
<tr>
<th>Option</th>
<th>User Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA: Allow Override of PA Distributions in AP/PO</td>
<td>No</td>
</tr>
</tbody>
</table>

Fremont Corporation sets the PA: Default Expenditure Organization in AP/PO profile option to Fremont Corporation.

<table>
<thead>
<tr>
<th>Option</th>
<th>User Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA: Default Expenditure Organization in AP/PO</td>
<td>Fremont Corporation</td>
</tr>
</tbody>
</table>

Fremont Corporation sets the PA: Tasks to Display for Expenditure Entry to Chargeable Tasks, because they want the tasks list of values to display only a project’s chargeable tasks when entering expenditures online (pre-approved expenditures in Oracle Projects, purchase orders and requisitions in Oracle Purchasing, or supplier invoices in Oracle Payables).

<table>
<thead>
<tr>
<th>Option</th>
<th>User Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA: Tasks to Display for Expenditure Entry</td>
<td>Chargeable Tasks</td>
</tr>
</tbody>
</table>

Fremont Corporation sets the PA: Summarize Expense Report Lines profile option to Yes because they want expense report lines in any given expense report to be summarized by code combination ID when users transfer expense reports to Oracle Payables.

<table>
<thead>
<tr>
<th>Option</th>
<th>User Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA: Summarize Expense Report Lines</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Fremont Corporation sets the PA: Receivables Invoice Line UOM profile option to Each after defining a unit of measure of Each in Oracle Receivables.

<table>
<thead>
<tr>
<th>Option</th>
<th>User Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA: Receivables Invoice Line UOM</td>
<td>Each</td>
</tr>
</tbody>
</table>
Fremont Corporation sets the **AR: Tax: Allow Ad Hoc Tax Changes** profile option to **No** because they do not want to enable end users to change tax rates in the Transactions window in Oracle Receivables.

<table>
<thead>
<tr>
<th><strong>Option</strong></th>
<th><strong>User Setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>AR: Tax: Allow Ad Hoc Tax Changes</td>
<td>No</td>
</tr>
</tbody>
</table>

Fremont Corporation sets the **AR: Tax: Allow Override of Customer Exemptions** profile option to **No** to prevent users from entering unapproved exemptions into Oracle Receivables.

<table>
<thead>
<tr>
<th><strong>Option</strong></th>
<th><strong>User Setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>AR: Tax: Allow Override of Customer Exemptions</td>
<td>No</td>
</tr>
</tbody>
</table>

Upon installation of Oracle Projects, Oracle Receivables automatically changes the **AR: Tax: Allow Override of Tax Code** profile option to **Yes**.

<table>
<thead>
<tr>
<th><strong>Option</strong></th>
<th><strong>User Setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>AR: Tax: Allow Override of Tax Code</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Fremont Corporation sets the **AR: Use Invoice Accounting For Credit Memos** profile option to **No**.

<table>
<thead>
<tr>
<th><strong>Option</strong></th>
<th><strong>User Setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>AR: Use Invoice Accounting For Credit Memos</td>
<td>No</td>
</tr>
</tbody>
</table>

Fremont Corporation sets the **AR: Transaction Flexfield QuickPick Attribute** to **INTERFACE_HEADER_ATTRIBUTE1**, since they want the project number to appear as the project attribute displayed in QuickPicks in Oracle Receivables.

<table>
<thead>
<tr>
<th><strong>Option</strong></th>
<th><strong>User Setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>AR: Transaction Flexfield QuickPick</td>
<td>INTERFACE_HEADER_ATTRIBUTE1</td>
</tr>
</tbody>
</table>

Fremont Corporation sets the **GL: Set of Books Name** profile option to **Fremont Corporation**.

<table>
<thead>
<tr>
<th><strong>Option</strong></th>
<th><strong>User Setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>GL: Set of Books Name</td>
<td>Fremont Corporation</td>
</tr>
</tbody>
</table>
Implementing Oracle Payables for Projects Integration

You can import Projects expense reports into Payables so that you can use Payables to pay them. You can also use supplier and invoice information you enter in Payables to create expenditure items for projects in Oracle Projects. You need to complete the following steps to integrate Oracle Payables with Oracle Projects:

- Defining Payables Options: page 17 – 49
- Updating Profile Options for Integration with other Products: page 17 – 44
- Implementing the Account Generator for Oracle Projects: page 16 – 288
- Defining Project Related Distribution Sets: page 17 – 51

Read this section in conjunction with the set up steps for Oracle Purchasing in the Oracle Payables User’s Guide.

See Also

Integrating Expense Reports with Oracle Payables: page 12 – 20
Integrating Oracle Purchasing and Oracle Payables: page 12 – 35
Oracle Projects Implementation Checklist for Oracle Projects Integration: page 16 – 18
Defining Payables Options

When you integrate Oracle Projects with Oracle Payables, you define the following options in the Expense Reports region of the Payables Options window of Oracle Payables.

You import Oracle Projects expense reports to Oracle Payables and then use Oracle Payables to pay the expense reports. The employee must be a supplier to successfully import expense reports. You can either manually enter all employees as suppliers, or you must enable the Automatically Create Employee as Supplier Payables option. If you enable the option, you can set defaults for the suppliers that the system creates during Invoice Import.

Automatically Create Employee as Supplier

If you do not manually enter employees as suppliers, enable the Payables option for automatically creating suppliers from employee information. If you enable this option, Oracle Payables enters the employee as a supplier the first time it imports an expense report for the employee. Payables Invoice Import cannot create invoices from expense reports if the employee is not a supplier and you have not enabled this Payables option.

Terms/Pay Group/Payment Priority

If you enable the Automatically Create Employee as Supplier option in the Expense Report Payables Options, Oracle Payables will use the default values you supply to create the supplier records during Invoice Import.

Apply Advances

This option determines the default value for the Apply Advances option in the Expense Report window. If you enable this option, Oracle Payables applies advances to employee expense reports if the employee has any outstanding paid advances.

Hold Unmatched Expense Report Invoices

If you enable the Automatically Create Employee as Supplier Payables option, this option defaults for the suppliers and supplier sites Payables creates during Invoice Import. When this option is enabled for a supplier site, Payables requires that you match each invoice for a supplier site to a purchase order.
See Also

Payables Options  *Oracle Payables User’s Guide*

Suppliers  *Oracle Payables User’s Guide*

Integrating Expense Reports with Oracle Payables: page 12 – 20

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Fremont Corporation’s accounting department prefers to have Oracle Payables create supplier entries for employees who submit expense reports.

**Payables Option**

*Automatically Create Employee as Supplier*  Enabled
Defining Project–Related Distribution Sets

In the Distribution Sets window of Oracle Payables, you can define project–related distribution sets. When you assign a project–related distribution set to an invoice you are entering, Payables automatically creates project related invoice distributions for the invoice.

See Also

Distribution Sets Oracle Payables User’s Guide
Implementing Oracle Purchasing for Projects Integration

Oracle Projects integrates with Oracle Purchasing to allow you to report committed costs and obligations against your projects. Using Oracle Purchasing, you can enter project-related requisitions and purchase orders, and then report committed costs of requisitions and purchase orders that are outstanding against your projects in Oracle Projects.

Your implementation of Oracle Purchasing involves the following steps. You will complete these steps during Payables integration:

- Updating Profile Options for Integration With Other Products: page 17 – 44
- Using the Account Generator in Oracle Projects: page 16 – 286

If you have Oracle Purchasing installed, read this section in conjunction with the set up steps for Oracle Purchasing in the Oracle Purchasing User’s Guide.

See Also

Oracle Projects Implementation Checklist for Oracle Projects Integration: page 16 – 18

Integrating Oracle Purchasing and Oracle Payables: page 12 – 35
Implementing Oracle Receivables for Oracle Projects Integration

Oracle Projects interfaces with Oracle Receivables to process your invoices and track customer payments.

Your implementation of Oracle Receivables for use with Oracle Projects involves the following areas:

- Specifying system options: page 17 – 54
- Defining transaction types for invoice processing: page 17 – 55
- Updating profile options for integration with other products: page 17 – 44
- Defining Automatic Accounting in Oracle Receivables: page 17 – 58
- Defining Salespersons and Credit Types: page 17 – 59

Oracle Projects predefines all of the information required for the Oracle Receivables AutoInvoice program to process Oracle Projects invoices.

If you have Oracle Receivables installed, you should read this section in conjunction with the set up steps for Oracle Receivables in the Oracle Receivables user’s Guide.

⚠️ **Attention:** If you are implementing Oracle Project Costing, please keep in mind that the implementation steps for Oracle Receivables in this section are not a part of your implementation process. You can skip this section.

See Also

Oracle Projects Implementation Checklist: page 16 – 18

Integrating with Oracle Receivables: page 12 – 54
Specifying Oracle Receivables System Options

Your first step in implementing Oracle Receivables involves specifying system parameters that pertain to Oracle Projects.

You use the System Options window to view and update the system options Oracle Receivables uses. When you specify your Receivables system options, see: System Options Oracle Receivables User’s Guide.

Purge Interface Tables Option

You need to tell Oracle Receivables AutoInvoice to purge rows from its interface tables. When you tieback invoices, Oracle Projects’s processing requires that successfully processed rows are purged from Oracle Receivable’s interface tables. You must enable the Purge Interface Tables option for Oracle Projects to correctly interface and tie back invoices to Oracle Receivables. This option is located in the AutoInvoice zone of the Invoices and Customers alternate region.

Require Salesrep Option

If you are not interfacing salesrep credit information to Oracle Receivables from Oracle Projects, you must disable the Require Salesrep option. If you are interfacing salesrep information, enable the Require Salesrep option. This option is located in the miscellaneous alternate region.

See the following essay for more setup information: Defining Salesreps and Credit Types: page 17 – 59.

Fremont Corporation’s implementation team enables the Purge Interface Tables option.

Invoice Options

**Purge Interface Tables**
- Enabled

Fremont Corporation’s implementation team disables the Require Salesrep option.

Invoice Options

**Require Salesrep**
- Disabled
Defining Transaction Types for Invoice Processing

Oracle Projects generates draft invoices and uses Oracle Receivables features to post them to Oracle General Ledger, and maintain and track customer payments on them. Oracle Receivables uses transaction types to determine whether the transaction generates an open receivable balance and whether it posts to Oracle General Ledger.

Oracle Projects predefines two transaction types to process your invoices in Oracle Receivables:

- An invoice transaction type *(Projects Invoice)*
- An invoice credit memo transaction type *(Projects Credit Memo)*

Verify predefined PROJECTS INVOICES Batch Source values are correct

Before you make changes to the transaction types for invoicing, verify that the predefined PROJECTS INVOICES Batch Source is accurate. You should see the following values:

<table>
<thead>
<tr>
<th>Name:</th>
<th>PROJECTS INVOICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Project Accounting Invoices</td>
</tr>
<tr>
<td>Type:</td>
<td>Imported</td>
</tr>
<tr>
<td>Active:</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic Batch Numbering:</td>
<td>No</td>
</tr>
<tr>
<td>Automatic Invoice Numbering:</td>
<td>No</td>
</tr>
<tr>
<td>Standard Transaction Type:</td>
<td>Projects Invoice</td>
</tr>
<tr>
<td>Credit Memo Batch Source:</td>
<td>NULL</td>
</tr>
</tbody>
</table>

Oracle Projects assigns a transaction type to an invoice transaction in one of two ways, depending on how your business decides to process invoices:

Implementing Decentralized Invoicing

With decentralized invoicing, you allow organizations to process their own invoice collections. Oracle Projects and Oracle Receivables provide you with a way to easily report and query invoices in Oracle Receivables by organization.

When you interface draft invoices to the Oracle Receivables interface tables, Oracle Projects locates the project managing organization and moves up the organization hierarchy “tree” to the lowest-level Project
Invoice Collection organization at or above the project managing organization to assign the appropriate transaction type to each invoice.

After validation, the AutoInvoice Import Program moves the draft invoices and their assigned transaction types into the Oracle Receivables invoice tables. When you use this method, you can run reports and process Oracle Receivables invoices by organization by selecting the Project Invoice Collection organization name for the transaction type parameter.

To implement decentralized invoicing:

1. Determine which organizations process invoices.
2. Define those organizations with the Project Invoice Collection Organization classification enabled. See: Organizations: page 16 – 34.
3. Define or update the Project/Task Owning Organization Hierarchy to include the relevant Project Invoice Collection organizations. See: Organization Hierarchy: page 16 – 39.
5. Run the IMP: Create Invoice Organization Transaction Types program. This program defines transaction types for you in Oracle Receivables with the same name as the project invoice collection organization. You can rerun this program any time you add new organizations or change organization names.

Attention: You must run the IMP: Create Invoice Organization Transaction Types program before you can successfully interface invoices from Oracle Projects if you specify an organization type in the Invoice Processing Organization Level of the Billing Implementation Options.

Implementing Centralized Invoicing

With centralized invoicing, one group or organization processes all invoices. All Oracle Projects invoices are created in Oracle Receivables with the same invoice type of Projects Invoice or Projects Credit Memo for the processing operating unit.

If you select Centralized Invoicing (the system default) in Oracle Projects Implementation Options, Oracle Projects assigns the default
transaction types assigned to the invoice batch source specified in the Oracle Projects implementation options.

The predefined transaction types are the default transaction types of the Projects invoice batch source. After validation, AutoInvoice assigns the default values from the invoice batch source to invoices and copies those transaction types into the invoice tables.

**AR Transaction Type Extension**

You can also use the AR Transaction Type Extension to determine the AR transaction type when you interface invoices to Oracle Receivables. See: AR Transaction Type Extension: page 18 – 98. You can use this extension whether you use centralized or decentralized invoicing.

**See Also**

Create Invoice Organization Transaction Types : page 10 – 2

Implementation Options: page 16 – 56

Defining Automatic Accounting in Oracle Receivables

Because the Automatic Accounting feature in Oracle Receivables is different from the AutoAccounting feature in Oracle Projects, you need to define Automatic Accounting for both Oracle Receivables and Oracle Projects.

The Oracle Receivables Automatic Accounting feature determines default general ledger accounts for your invoice transactions. You need to implement Oracle Receivables AutoAccounting before you can run the Oracle Receivables AutoInvoice feature.

However, Oracle Projects invoices do not use the AutoAccounting transactions created by Oracle Receivables. The accounting transactions determined by the AutoAccounting feature in Oracle Projects are passed to the AutoInvoice interface tables and are used by AutoInvoice when creating invoices in Oracle Receivables. The only AutoAccounting codes in Oracle Receivables that are used for Oracle Projects invoices are those for tax. If you use AutoInvoice to import invoices from another source, you need to define AutoAccounting codes that apply to those invoices.

You use the Oracle Receivables Accounting window to set up automatic account codes for the following account types. You need to define account codes for each account type.

- AutoInvoice Clearing
- Freight
- Receivable
- Revenue
- Tax
- Unbilled Receivable
- Unearned Revenue

You provide specific information to indicate how you want Oracle Receivables to generate the account codes.

See Also

Automatic Accounting  Oracle Receivables User’s Guide
Salesreps and Credit Types

You can interface sales credit information for project invoices to Oracle Receivables for sales commission reporting. If you choose to not interface sales credit information to Oracle Receivables, you can use credit receiver information in Oracle Projects for reporting purposes. This essay describes how to implement Oracle Receivables and Oracle Projects for the method your company chooses.

Transferring Sales Credit to Oracle Receivables

If you want to interface sales credit information to Oracle Receivables, during your implementation of Oracle Receivables for Oracle Projects, you enable the Require Salesrep option in the System Options window. This section continues your implementation of sales credit receivers.

You can interface sales credit information to Oracle Receivables for project invoices. Sales credit information is based on credit receivers you enter in Oracle Projects. If you interface sales credits to Oracle Receivables, the credit receiver must be a salesrep in Oracle Receivables and the credit type must be a sales credit type in Oracle Receivables.

You enter credit receivers at the project level using the Credit Receivers window located under the Billing Information option. You interface the information to Oracle Receivables by enabling the Transfer to AR option.

Set the Require Salesrep option

If you want to interface sales credit information to Oracle Receivables, enable the Require Salesrep option in the System Options window in Oracle Receivables.

Define sales credit types

You use the Oracle Order Entry Sales Credit Types window to define the type of credit you want to allocate to salesreps in Oracle Receivables for project invoices. You can use sales credit types to determine if sales credit is a quota or non–quota amount. See: Defining Sales Credit Types Oracle Order Entry User’s Guide.

Note: If you do not have Oracle Order Entry installed, use the predefined sales credit type of Quota Sales Credit when you define salesreps. Using this sales credit type allows you to use sales credits without having Oracle Order Entry installed.
Define salesreps

When you interface Oracle Projects invoices to Oracle Receivables, Oracle Projects assigns a primary salesrep to the invoice and interfaces sales credit lines for the invoice based on the project’s credit receivers. Oracle Projects assigns the project manager on the project as the primary salesrep as long as the project manager is defined as a salesrep in Oracle Receivables. Using the primary salesrep as the criteria, you can use Oracle Receivables reports and windows to review invoices by project manager. If you want to use this type of functionality, you must define all project managers as salesreps in Oracle Receivables.

Oracle Projects also credits the sales credit lines for the invoice using the project’s credit receivers specified for interface to Oracle Receivables. You must define all employees that may be credit receivers for which you want to interface sales credit as salesreps in Oracle Receivables.

Use the Oracle Receivables Salesreps window to define salesreps. You assign a sales credit type to salesreps when you define them.

Attention: The name you enter in the Salesreps window must be identical to the name you enter in the Oracle Human Resources Enter Person window. Use the following format when you define salesreps: Last name, Prefix, First name (Middle name).

Set the Allow Sales Credits option

If you want to send salesrep information to Oracle Receivables, you need to enable the Allow Sales Credits option in the Invoice Sources window for the predefined batch source of PROJECTS INVOICES. When you set this option to Yes, Oracle Receivables ensures that sales credit lines are assigned valid credit types as defined in Oracle Order Entry and have valid salesreps as defined in Oracle Receivables.

The Allow Sales Credit option is located in the AutoInvoice Processing Options alternative region of the Invoice Sources window. If you navigate to the Batch Source alternative region and query by Name = PROJECTS INVOICES, you will then be able to go to the AutoInvoice Processing Options alternative region. The AutoInvoice Processing Options region is only available for batch sources with type = Imported. See also: Define Invoice Sources Oracle Receivables User’s Guide).

To transfer sales credit information to Oracle Receivables:

1. Set the Require Salesrep System Option in Oracle Receivables to Yes.
2. Define sales credit types using the Oracle Order Entry Sales Credit Types form, or use the predefined sales credit type of Quota Sales Credit, if Oracle Order Entry is not installed.

3. Define as salesreps in Oracle Receivables all project managers and other employees who may be credit receivers.

4. Enable the Allow Sales Credits option in the AutoInvoice Processing Options alternative region of the Invoice Sources window in Oracle Receivables.

5. Enter credit receivers for your contract projects using the Credit Receivers windows in the Billing Information option at the project level.

See Also

Employees: page 16 – 50

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**Reporting Credit Information in Oracle Projects**

You can assign credit receivers in Oracle Projects for invoices at the project level, using credit types that you define in Oracle Projects. You do not have to interface salesrep credit information to Oracle Receivables; you can use Oracle Projects tables to create custom reports on the information.

You use credit receivers in Oracle Projects to award different kinds of revenue credit to your employees, such as marketing credit or quota credit. For example, if you want to credit an employee for bringing in a contract in a market sector for which you currently have few or no projects, you can define a credit type with a name such as *Diversity Credit*. After you define the project, you specify the employee as a credit receiver of Diversity Credit.

---

**Disable the Require Salesrep option**

If you do not want to interface sales credit information to Oracle Receivables, during your implementation of Oracle Receivables for Oracle Projects disable the Require Salesrep option of the Define System Options window.
Define Credit Types

You use the Oracle Projects Credit Types window to specify the kind of revenue credit you want to assign employees in Oracle Projects. Oracle Projects predefines the credit type of Quota Credit. See: Credit Types: page 16 – 142.

Fremont Corporation awards Marketing Credit to a marketing staff member who generates a lead. Fremont also awards Quota Credit to a staff member who brings in a project.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Credit</td>
<td>Credit for generating leads</td>
</tr>
<tr>
<td>Quota Credit</td>
<td>Credit for acquiring a project</td>
</tr>
</tbody>
</table>

Set the Allow Sales Credits option

If you do not want to send sales credit information to Oracle Receivables, you leave this option set to No. See also: Define Invoice Sources Oracle Receivables User’s Guide.

Fremont Corporation’s implementation team enables the Allow Sales Credits option.

**Miscellaneous Options**

| Allow Sales Credits | Disabled |

Define Salesreps

Oracle Projects assigns the primary salesrep as the manager on the project, if you have defined the project manager as a salesrep in Oracle Receivables. Using the primary salesrep as the criteria, you can use Oracle Receivables reports and forms to review invoices by project manager. If you want to use this type of functionality, you must define all project managers as salesreps in Oracle Receivables.

**Attention:** The name you enter in the Salesreps window must be identical to the name you enter in Oracle Human Resources Enter Person window. Use the following format when you define salesreps: Last Name, Title, First name (Middle Name).

► **To report sales credit information in Oracle Projects only:**

1. Set the Require Salesrep System Option in Oracle Receivables to No.
2. Define sales credit types using the Oracle Projects Credit Types form.

3. Define all project managers as salesreps in Oracle Receivables. This way you can still retrieve AR information by primary salesrep in Oracle Receivables.

4. Leave the Allow Sales Credits option in the AutoInvoice Processing Options alternative region of the Invoice Sources window in Oracle Receivables disabled.

5. Create custom reports on the credit receiver information in the Oracle Projects table.
Applying Tax to Project Invoices

Oracle Projects and Oracle Receivables allow you to tax customers for work performed based on tax requirements of your company, your customers, and tax authorities.

Customers and tax authorities may have many different tax requirements. A customer may be tax exempt for all services provided. One tax authority may require taxing all labor and materials, while another authority requires that only labor is taxed.

Oracle Projects lets you specify, on a line–by–line basis, which invoice lines you want to tax. Oracle Receivables determines the appropriate tax rate based upon your tax implementation. Oracle Receivables allows you to calculate tax based on customer shipping addresses and tax codes.

Implementation

If your business policies, and the tax laws that govern your business, require you to tax customers for work performed, you need to define the following information in Oracle Receivables and in Oracle Projects.

Oracle Receivables

You can tax Oracle Projects invoices using the tax calculation method of Sales Tax, which is based on customer shipping addresses, or using the method of Value Added Tax, which is based on tax codes assigned to customers or customer addresses.

Define tax authorities, codes, and rates in Oracle Receivables

Refer to the following essay for more details on implementing tax in Oracle Receivables.

Note: Be sure to define at least one tax code of Location in Oracle Receivables if you are using Sales Tax.

Verify transaction types

All transaction types used for Oracle Projects invoices need to be set to not calculate tax. This ensures that only project invoice lines that you specify as taxable are taxed, instead of processing all project invoices lines as taxable automatically. You disable the Tax Calculation option for transaction types used for project invoices in the Transaction Types window in Oracle Receivables.
The predefined transaction types of Projects Invoice and Projects Credit Memo are defined to not calculate tax. If you use the Create Invoice Organization transaction type process to create transaction types, the types are automatically created with the appropriate options since Oracle Projects copies the options for the predefined transaction types.

Set tax profile option

You need to enable the Oracle Receivables Tax: Allow Override profile option to allow overrides of the standard tax calculations when you import invoices from Oracle Projects into Oracle Receivables using AutoInvoice.

Your System Administrator uses the System Profile Values window to set up profile options. See: Setting User Profile Options Oracle Applications System Administrators Guide.

Oracle Projects

You complete the following step to implement tax for Oracle Projects invoices:

Define invoice formats

You define labor and non–labor invoice formats to separate taxable expenditure items and work sites from non–taxable expenditure items and work sites.

If you need to tax or not depending on the type of expense incurred or kind of labor performed, you need an invoice format that separates taxable items from non–taxable items.

A project may involve many task work sites. You can tax the project according to the different task work sites, by defining invoice formats which group by work site. Oracle Receivables then calculates tax using the work site of the invoice line. If your invoice formats do not include a grouping by work site, Oracle Projects uses the project customer work site for calculating tax for taxable invoice lines.

Oracle Projects includes many predefined grouping options, such as Work Site, Expenditure Type and Top Task, Work Site, Expenditure Category.

See Also

Invoice Formats: page 16 – 129
Processing Taxable Invoice Lines

If you want to tax customer invoices, you perform the following steps in Oracle Projects when you process customer invoices:

**Specify work site for projects and tasks**

You need to specify a work site for every project customer to be billed. The work site is a shipping address of the customer. You specify a customer work site in the Customers window, which is accessible from the Projects form.

You can also specify task work sites, which may be different from the project customer work site, in the Task Detail window, which is accessible from the Tasks window of the Projects form. If you use invoice formats that group by work site, you can bill work performed according to the task work sites. If you do not group invoice formats by work site, Oracle Receivables calculates tax for taxable invoice lines using the project customer work site. See: Project Entry: page 2–31 and Entering Project and Task Options: page 2–59.

**Generate an invoice**

When you generate a draft invoice, the Generate Draft Invoice process groups expenditure items into invoice lines based on the invoice formats you specify for the project. The Generate Draft Invoice process bills one event per invoice line. Each invoice line is created as non-taxable.

**Identify taxable invoice lines**

Your project administration and accounting staff who understand your organization’s tax requirements should review the draft invoices and identify the lines to be taxed. You specify an invoice line as taxable using the in Invoice Review form. After you release an invoice, you cannot change the taxable status of an invoice line.

**Interface invoices to Oracle Receivables**

After you release an invoice, you interface invoices to Oracle Receivables.

The Interface Invoices to Receivables process interfaces invoice lines to the Oracle Receivables interface tables.
The Oracle Receivables AutoInvoice process creates invoices in Oracle Receivables from the invoice lines in the interface table. When creating the invoices in Oracle Receivables, the AutoInvoice process calculates tax for taxable invoice lines based on the work site of the invoice line and the taxable status of the customer.

Oracle Receivables stores the tax information for each invoice. This tax information includes the amount, the rate, and the liability account to which the tax is posted.

**Report and view tax information in Oracle Receivables**

You can report company tax liabilities using Oracle Receivables reports.

You can print tax information on a customer invoice using the Oracle Receivables invoice printing program or using a custom invoice printing program which reports tax information from the Oracle Receivables invoice tables.

You can view tax information using the Oracle Receivables View Invoice Image form.
Implementing Oracle Personal Time and Expense for Oracle Projects Integration

Attention: Oracle Personal Time and Expense is not included in, but is additional to, the Oracle Projects product.

Oracle Projects integrates with Oracle Personal Time and Expense (PTE) to provide the feature of personal labor and expense data entry while disconnected from your Oracle Projects production database.

Your implementation of PTE involves the following steps. You will complete these steps during PTE integration:

- Updating Profile Options for Integration with other Products: page 17 – 44 (optional)
- Defining summary–level validation client extensions (optional)
- Defining routing client extensions (optional)
- Defining approval client extensions (optional)
- Defining time or expense entry client extensions (optional)

See Also

Overview of Oracle Personal Time and Expense: page 4 – 50
Oracle Projects Implementation Checklist: page 16 – 18
Client Extensions and AutoApprove Profile Options (Oracle Personal Time and Expense System Administrator’s Guide)
Setting Up PTE for Multi–Organization Support

If you implement multiple organizations in Oracle Projects, you need to populate the PA_PTE_MORG_EMP_TAB table before users can submit PTE expenditures. In Release 10.7, this table was named PA_PTE_MULTI_ORG_EMP_MAP. The values in this table determine the operating unit into which the employee’s time and expenses are collected. You can populate this table using either of the following methods:

- Run a custom script
- Use the PTE Employee Assignment to Operating Unit window

Create your own SQL script to populate the PA_PTE_MORG_EMP_TAB table based on any conditions you include in your select statement. Because there is a unique index on the PERSON_ID column in this table, the table must contain only one record per PTE user.

You can also use the PTE Employee Assignment to Operating Unit window to populate and maintain the table one record at a time.

Alternately, you can modify the PAPTEMAP.sql script to update the PA_PTE_MULTI_ORG_EMP_MAP view. This script is located in the $PA_TOP/admin/sql directory. The view must contain only one record for each PTE user, identified by PERSON_ID.

For more information about the PA_PTE_MORG_EMP_TAB table, refer to the Oracle Personal Time and Expense System Administrator’s Guide. See also: PA_PTE_MORG_EMP_TAB in the Oracle Projects Technical Reference Manual.

Perform the following steps to use the PTE Employee Assignment to Operating Unit window to add information to, update information in, or delete information from the PA_PTE_MORG_EMP_TAB table.

See Also

Multi–Organization Support in Oracle Projects: page 15 – 20

To add an employee to an operating unit using the PTE Employee Assignment to Operating Unit window:

1. In the Navigator window, choose Setup > Expenditures > PTE–Multiple Org.
2. Choose Edit > New Record.
3. Use the list of values button to choose the employee’s name or number. Choosing a value for either field will automatically populate both fields.

**Note:** An employee’s name and number must be unique within a business group.

4. Use the list of values button to choose the employee’s operating unit. The list of values will display the name and organization ID of each operating unit that belongs to your business group.

**Note:** To populate this table with information from different business groups, you must define a responsibility within each business group that can access this window. You can maintain information only for the business group associated with the responsibility under which you log into Oracle Projects.

5. Save your work.

---

**To revise information for an employee already assigned to an operating unit using the PTE Employee Assignment to Operating Unit window:**

1. In the Navigator window, choose Setup > Expenditures > PTE–Multiple Org.
2. Query the record(s) that you need to update.
3. Use the list of values button to choose the revised information for a given employee.
4. Save your work.

**Note:** Changes you make to operating unit assignments affect all subsequent PTE expenditures. Existing PTE expenditures will not reflect these changes.

---

**To delete an employee from an operating unit using the PTE Employee Assignment to Operating Unit window:**

1. In the Navigator window, choose Setup > Expenditures > PTE–Multiple Org.
2. Query the record(s) that you want to delete.
3. Select each record to be deleted and choose Edit > Delete Record.
4. Save your work.
Implementing Activity Management Gateway for Oracle Projects Integration

Attention: Oracle Projects Activity Management Gateway is not included in, but is additional to, the Oracle Projects product. You cannot use any of the features described in this section unless you have purchased and are a licensed user of Oracle Projects Activity Management Gateway.

You can use Oracle Projects Activity Management Gateway (AMG) to integrate Oracle Projects with non–Oracle applications. Share projects, budgets, resources, actuals, and percent complete data between your systems while preserving controls you have defined in each application.

Your implementation of AMG involves steps that you must perform within Oracle Projects. You can write PL/SQL code to develop your own integration application, or you can purchase an existing integration application. Whether you create a new or use an existing application, complete the following steps to implement AMG:

- Updating Profile Options for Integration with other Products: page 17 – 44
- Defining the external application as a source product
- Restricting access (query or update) to data originating from the source product (optional)

If you use AMG, read this section in conjunction with the setup steps for AMG in the Oracle Projects Activity Management Gateway Technical Reference Manual.

See Also

Oracle Projects Implementation Checklist: page 16 – 18
Control Actions Window: page 13 – 4
Source Products Window: page 13 – 5
Implementing Oracle Project Analysis Collection Pack for Oracle Projects Integration

Attention: Oracle Project Analysis Collection Pack is not included in, but is additional to, the Oracle Projects product. You cannot use any of the features described in this section unless you have purchased and are a licensed user of Oracle Project Analysis Collection Pack.

Implementing Oracle Project Analysis Collection Pack enables you to perform multidimensional analysis of project information across projects and organizations.

Your implementation of Oracle Project Analysis Collection Pack involves the following steps. You will complete these steps during Oracle Project Analysis Collection Pack integration:

- Updating Profile Options for Integration with other Products: page 17 – 44
- Enabling or disabling standard dimensions: page 17 – 72

If you use Oracle Project Analysis Collection Pack, read this section in conjunction with the setup steps for Oracle Project Analysis Collection Pack in the Oracle Project Analysis Collection Pack Implementation Guide.

See Also

Overview of Oracle Project Analysis Collection Pack: page 14 – 2
Oracle Projects Implementation Checklist: page 16 – 18

Oracle Project Analysis Collection Pack Implementation Guide

Oracle Applications Data Warehouse Installation Manual

Enabling or Disabling Standard Dimensions

Your company may not require all of the standard dimensions provided by Oracle Project Analysis Collection Pack. Disabling any unnecessary dimensions can improve the performance of Oracle Project Analysis Collection Pack and your data warehouse by reducing the
amount of information processed by collection programs and by minimizing the size of your data mart and data warehouse.

⚠️ **Warning:** Plan and execute all of your customizations before you load information into the interface tables and generate your data warehouse. Performing customizations after you implement and use the data warehouse requires the regeneration of the data warehouse, which can be very time-consuming.

To enable or disable a standard dimension using the Dimensions window:

📌 **Attention:** You must disable dimensions before freezing the data warehouse metadata in the OADW repository and before customizing your collection views. If you subsequently enable or disable a dimension after you have generated the OADW runtime warehouse, you must regenerate the runtime warehouse to collect data based on the new set of dimensions.

1. From the Navigator window, choose Setup > Collection Pack > Dimensions.
2. Check the Enable check box next to the dimension you want to enable, or uncheck it if you want to disable the dimension.
3. Save your changes.
4. Choose Regenerate Views to regenerate the collection views based on the new set of dimensions.

The view generation process creates a view definition file in the concurrent processes log file. You can use the concurrent request log file to extract the script to customize the view definition file after the generation process has executed successfully.

Disabling a dimension replaces the column representing the dimension with –1 or UNKNOWN, depending on the datatype of the column.

📌 **Attention:** You must submit the PRC: Refresh Dimension and Fact Tables process after you regenerate your views to update information based on your changes if you ran either collection process before enabling or disabling the dimensions.
This chapter describes everything you need to know about designing and writing client extensions in Oracle Projects.
Client Extensions

Oracle Projects provides flexibility in processing projects. However, many companies have business requirements that are unique to their company. To address these unique requirements, Oracle Projects provides several client extensions which enable you to extend the functionality of the product to implement and automate company-specific business rules. Client extensions allow you to automate these rules within the standard processing flow of Oracle Projects, without having to customize the software.

Table 18–1 lists the client extensions and their predefined template procedure files. The template procedure files are stored in the Oracle Projects admin/sql directory.

<table>
<thead>
<tr>
<th>Client Extension</th>
<th>Package Specification File</th>
<th>Package Body File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval Extension <em>(Oracle Personal Time and Expense System Administrator’s Guide)</em></td>
<td>PAXTRT1S.pls</td>
<td>PAXTRT1B.pls</td>
</tr>
<tr>
<td>AR Transaction Type Extension: page 18–98</td>
<td>PAXITRXS.pls</td>
<td>PAXITRXB.pls</td>
</tr>
<tr>
<td>Automatic Invoice Approve/Release Extension: page 18–98</td>
<td>PAXPIACS.pls</td>
<td>PAXPIACB.pls</td>
</tr>
<tr>
<td>Billing Cycle Extension: page 18–122</td>
<td>PAXIBCXS.pls</td>
<td>PAXIBCXB.pls</td>
</tr>
<tr>
<td>Billing Extensions: page 18–62</td>
<td>PAXITMPS.pls</td>
<td>PAXITMPB.pls</td>
</tr>
<tr>
<td>Budget Calculation Extension: page 18–19</td>
<td>PAXBCECS.pls</td>
<td>PAXBCECB.pls</td>
</tr>
<tr>
<td>Budget Verification Extension: page 18–109</td>
<td>PAXBCECS.pls</td>
<td>PAXBCECB.pls</td>
</tr>
<tr>
<td>Budget Workflow Extension: page 18–112</td>
<td>PAWBFCES.pls</td>
<td>PAWBFCEB.pls</td>
</tr>
<tr>
<td>Burden Cost Accounting Extension</td>
<td>PAXCCEBS.pls</td>
<td>PAXCCEBB.pls</td>
</tr>
</tbody>
</table>

Table 18–1 Client Extensions (Page 1 of 3)
<table>
<thead>
<tr>
<th>Client Extension</th>
<th>Package Specification File</th>
<th>Package Body File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Accrual Billing Extension</td>
<td>PAXICOS.pls</td>
<td>PAXICOSB.pls</td>
</tr>
<tr>
<td>Costing Extension</td>
<td>PAXCHCE.pls</td>
<td>PAXCHCEB.pls</td>
</tr>
<tr>
<td>Labor Billing Extension: page 18 – 52</td>
<td>PAXICTM.pls</td>
<td>PAXICTMB.pls</td>
</tr>
<tr>
<td>Labor Costing Extension: page 18 – 36</td>
<td>PAXCCEC.pls</td>
<td>PAXCCEC.pls</td>
</tr>
<tr>
<td>Labor Transaction Extension: page 18 – 40</td>
<td>PAXCET.pls</td>
<td>PAXCETB.pls</td>
</tr>
<tr>
<td>Overtime Calculation Extension: page 18 – 56</td>
<td>PAXDLCO.pls</td>
<td>PAXDLCOB.pls</td>
</tr>
<tr>
<td>Percent Complete Billing Extension</td>
<td>PAXPCT.pls</td>
<td>PAXPCTB.pls</td>
</tr>
<tr>
<td>Project and Labor Cost Security Extension: page 18 – 16</td>
<td>PAPSECX.pls</td>
<td>PAPSECXB.pls</td>
</tr>
<tr>
<td>Project Verification Extension: page 18 – 102</td>
<td>PAXPCEC.pls</td>
<td>PAXPCEB.pls</td>
</tr>
<tr>
<td>Project Workflow Extension: page 18 – 106</td>
<td>PAXWPC.pls</td>
<td>PAXWPCB.pls</td>
</tr>
<tr>
<td>Routing Extension (Oracle Personal Time and Expense System Administrator's Guide)</td>
<td>PAXTRT.pls</td>
<td>PAXTRTEB.pls</td>
</tr>
<tr>
<td>Summary–Level Extension (Oracle Personal Time and Expense System Administrator's Guide)</td>
<td>PAXTGTC.pls</td>
<td>PAXTGTCB.pls</td>
</tr>
<tr>
<td>Time or Expense Entry Extension (Oracle Personal Time and Expense System Administrator's Guide)</td>
<td>PAXPTEC.pls</td>
<td>PAXPTEB.pls</td>
</tr>
</tbody>
</table>

Table 18 – 1 Client Extensions (Page 2 of 3)
To define company specific rules using client extensions, you design and write these rules using PL/SQL procedures; these procedures are called during specific points in the standard processing flow of Oracle Projects.

These procedures that you write are extensions rather than customizations because they are supported features within the product and are easily upgradable between releases of the product. Customizations are changes made to the base product which are not supported and are not easily upgraded.

⚠️ **Warning:** You must not directly insert or update records in any Oracle Applications tables; performing these activities with extensions is not supported by Oracle Corporation. You must use the public, predefined procedures that Oracle Projects provides to insert or update records in Oracle Projects tables.

⚠️ **Attention:** You are responsible for the support and upgrade of the logic within the procedures that you write, which may be impacted by changes between releases of the Oracle Applications.

This essay provides you with an overview of the client extensions available in Oracle Projects, along with the common steps in implementing client extensions.

**Types of Client Extensions**

You can implement any of the client extensions to help you address your company’s business requirements. The client extensions are described in more detail in sections that follow this overview essay. Following are brief descriptions of some of the client extensions:

<table>
<thead>
<tr>
<th>Client Extension</th>
<th>Package Specification File</th>
<th>Package Body File</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Control Extensions: page 18 – 27</td>
<td>PAXTTCXS.pls</td>
<td>PAXTTCXB.pls</td>
</tr>
<tr>
<td>Verify Organization Change Extension: page 18 – 118</td>
<td>PAXORCES.pls</td>
<td>PAXORCEB.pls</td>
</tr>
</tbody>
</table>

Table 18 – 1 Client Extensions (Page 3 of 3)
Project and Labor Cost Security Extensions

Project and Labor Cost Security extensions allow you to override the default security API delivered with Oracle Projects. You can define finer distinctions of who has access to a project. An example of a rule that you can define is:

- Any key member with a role of Market Sector Manager cannot update the projects to which they are assigned.

Budget Calculation Extensions

Budget calculation extensions allow you to define your own rules for calculating budget amounts.

Cost Budgets

You can implement budget calculation extensions to calculate raw cost and/or burdened cost amounts in a Cost Budget. An example of a rule that you can define is:

- Calculate raw cost and burdened cost for an employee based on the number of hours entered.

Revenue Budgets

You can also implement budget calculation extensions to calculate revenue amounts in a Revenue Budget. An example of a rule you can define is:

- Calculate revenue for the job entered using the number of hours entered.

Oracle Projects calls your budget extension when you are entering budget quantities and amounts.

Transaction Control Extensions

Transaction control extensions allow you to define your own rules that validate company–specific expenditure entry policies. Some examples of rules that you may define are:

- You cannot charge labor hours for a future date.
- You cannot charge new transactions to projects for which the work is complete; you can only transfer items to these projects.
- You can only charge supplies to overhead projects.
• You can only charge to tasks that are managed by the organization you are assigned to.

You can also define company policies regarding default billable classifications of transactions. Some examples of rules that you may define are:

• All entertainment expenses are non-billable for all projects.
• All administrative staff labor hours are non-billable on projects that are billed as time and materials.

Oracle Projects calls your transaction control extension procedure whenever a new transaction is created: via pre-approved and online entry, transaction import, transfer between projects/tasks, and project-related entry in Oracle Purchasing and Oracle Payables.

Labor Costing Extensions

Labor costing extensions allow you to calculate the raw cost of individual labor transactions based on methods other than the standard method, which calculates raw cost using the number of hours multiplied by the employee’s hourly cost rate. Some examples of labor costing methods you can implement are:

• Standard cost rates by job
• Capped labor cost rates
• Multiple cost rates per employee

Oracle Projects calls your labor costing extension in the Distribute Labor Costs process.

Labor Transaction Extensions

Labor transaction extensions allow you to create additional labor transactions based on individual source labor transactions that you enter on timecards. Some examples of labor transactions extensions you can implement are:

• Create overtime premium transactions which are charged to the same project on which the overtime work is performed, based on company overtime policies
• Create fringe benefit transactions for specific cost amounts, which are charged to the same project that the source labor is charged to.
• Create surcharge costs for hazardous work performed
Oracle Projects calls your labor transaction extension in the Distribute Labor Costs process.

**Labor Billing Extensions**

Labor billing extensions allow you to calculate the bill amount of individual labor transactions based on methods not currently supported by Oracle Projects. An example of a labor billing method you can implement is:

- Bill labor straight time hours using bill rates and bill overtime premium hours at cost

Oracle Projects calls your labor billing extension in the Generate Draft Revenue process.

**Billing Extensions**

Billing extensions allow you to automatically calculate summary revenue and invoice amounts during revenue and invoice generation based on billing methods not currently supported by Oracle Projects. These billing amounts are accounted for using events. Some examples of billing extensions you can implement are:

- Surcharge
- Fee

**Implementing Client Extensions**

The implementation of client extensions primarily consists of the following three steps:

- Determining your business requirements
- Designing client extension logic
- Writing PL/SQL procedures

Each of these steps requires a specific expertise. The analysis and design portions require an implementation team member who is functionally knowledgeable about the company specific business rules, the implementation of Oracle Projects for your company, and the conceptual flow of the client extensions. The PL/SQL coding portion requires an implementation team member who is technically knowledgeable with PL/SQL and the Oracle Projects data structures.
Typically, the implementation requires two or more people to provide these types of expertise. If two or more people are involved in this implementation process, they must work together throughout the cycle.

### Determining Your Business Requirements

The first step of implementing client extensions is to determine if you need to use the client extensions. You can do this by following these steps, which are part of the process of any Oracle Projects implementation:

**Step 1.** Clearly define and document your company specific business requirements and rules.

**Step 2.** Determine if these business rules are handled by the standard functionality of Oracle Projects.

**Step 3.** For those business rules not handled by the standard functionality, review the client extensions and determine if the client extension can help address the specific business rules, based on your documented business requirements.

### Example of Determining Need for Client Extension

Let's look at an example of this process.

**Step 1.** Your company has defined this policy:

> You can only charge supplies to overhead projects

**Step 2.** You review the standard functionality of transaction controls in Oracle Projects and find that you can implement what can be charged or not charged to a specific project or task using transaction controls. The rule regarding supplies is applicable to all projects that are not overhead projects. You could implement this rule by procedurally defining transaction controls for every non-overhead project, but that is impractical.

**Step 3.** You decide that you can use transaction control extensions to implement this company-wide policy regarding supplies.
Designing Client Extensions

Designing your client extension is the most significant part of implementing client extensions. If you create careful, thorough design and specifications in this stage, you can expect more ease in writing the PL/SQL procedure and a more successful client extension implementation. This design cycle involves the following aspects:

**Step 1.** Understand the appropriate client extension, including its intended purpose, its processing flow, the predefined place that it is called, and its input values.

Each essay in this chapter describes the processing flow for a client extension. Since each client extension may be processed differently by Oracle Projects, you should carefully review the flow and additional design information we provide for each extension.

**Step 2.** Define and document the requirements and logic of your business rules under all possible conditions. This logic includes the required inputs, the calculations performed, and the corresponding outputs.

**Step 3.** Determine the data elements required to drive your rules and how you will select or derive each of the required elements. Define additional implementation data and document additional business procedures of using the system based on the requirements of your business rules.

**Step 4.** Step through various business scenarios to ensure that your logic handles each condition as you expect. You can use these scenarios as test cases when you test your actual client extension definition and procedure.

**Step 5.** Hand off detailed specification of logic to the technical resource who will write the PL/SQL procedure.

**Determining Data Elements**

**Predefined Parameters**

Oracle Projects provides predefined parameters for your use in client extensions. The program which calls and executes the client extension passes in values for the predefined parameters, which define the context of what transaction is being processed.
Derived Parameters

You can derive additional parameters from the predefined parameters. For example, a client extension may have a predefined parameter of PROJECT_ID, which is the identifier of the project. Your business rule needs project type, so you derive the project type from the PROJECT_ID.

You can also use descriptive flexfield segments to hold additional data as inputs into your rules. When you write the PL/SQL procedure, you select from the descriptive flexfield segment column which holds the appropriate input value.

You can derive data for any Oracle table as input into your rules, as long as you can derive the appropriate values based on the predefined input values passed into the PL/SQL procedure.

Example of Designing Client Extension

Let’s use our earlier transaction control extension example to illustrate these design steps.

Step 1. After studying transaction control extensions, you have decided to use transaction control extensions to implement the following policy:

You can only charge supplies to overhead projects

Step 2. You define the logic for the transaction control extension as:

IF charging supplies
THEN IF charging to overhead projects
THEN OK
ELSE error message
You can only charge supplies to overhead projects
ELSE OK

Step 3. You now determine the required data elements to identify what transactions are supplies and what projects are overhead projects.

You decide that the expenditure type of Supplies specifies the type of charge, and that the project type of Overhead specifies the type of project.

The transaction control extension predefined parameters include expenditure type and project ID. You can derive the project type of the project using the project ID.
You have already defined these values as implementation data.

Project Type: Overhead
Expenditure Type: Supplies

When using these data elements, the logic for the transaction control extension is as follows:

IF Expenditure Type = Supplies
THEN IF Project Type = Overhead
    THEN OK
    ELSE error message
ELSE OK

Step 4. You step through several scenarios of different types of charges to different types of projects. Your logic handles all of the scenarios.

Step 5. You are ready to hand off this specification to your technical resource.

Writing PL/SQL Procedures

To help you to write PL/SQL procedures for client extensions, we first provide you with a brief technical background of PL/SQL procedures. Then, we provide you with information on how to use predefined procedures and parameters in writing your own procedures. We recommend that you read the PL/SQL User’s Guide and Reference Manual to learn more about PL/SQL.

Packages

Packages are database objects that group logically related PL/SQL types, objects, and subprograms. Packages usually consist of two files: a package specification file and a package body file. The specification file is the interface to your applications; it declares the types, variables, constants, exceptions, cursors, and subprograms available for use in the package. It contains the name of the package and procedures function declarations. The package body defines cursors and subprograms, contains the actual PL/SQL code for the procedures, and so implements the specification.
Procedures

Procedures are subprograms within a package that are invoked by the application and perform a specific action. Procedures define what parameters will be passed in as context for the program, how the inputs are processed, and what output is returned. A procedure consists of the following elements:

**Inputs**

Each procedure has predefined input parameters, which must be passed in the predefined order. The parameters identify the transaction being processed and the context in which the program is called. You can derive additional inputs from any Oracle table based on the predefined input parameters.

**Logic**

The procedure uses the inputs and performs any logical processing and calculations. The program can be a simple program, such that it returns a fixed number, or it can be a complex algorithm that performs a number of functions.

**Outputs**

Each procedure returns whatever value you define it to return. For example, your procedure for transaction control extensions may return a null value if the transaction passes all validation rules; or an error message if validation fails.

**Syntax for Procedures**

A procedure consists of two parts: the specification and the body. The procedure specification begins with the keyword PROCEDURE and ends with the procedure name or a parameter list. The procedure body begins with the keyword IS and ends with the keyword END followed by an optional procedure name. The procedure body has three parts: a declarative part, an executable part, and an optional error handling part. You write procedures using the following syntax:

```
PROCEDURE name [ (parameter [, parameter,...]) ] IS
   [local declarations]
BEGIN
   executable statements
   [EXCEPTION
     exception handlers]
END [name];
```

The parameter syntax above expands to the following syntax:

```
var_name [IN | OUT | IN OUT] datatype [{:= | DEFAULT} value]
```
For more information, refer to the *PL/SQL User’s Guide and Reference Manual*.

**Using Template Procedures**

Oracle Projects provides you with template procedures for each client extension that you can use to write your own procedures. Each procedure contains predefined parameters that are passed into the procedure by the program that calls the procedure; you cannot change these predefined input parameters.

The Client Extensions table: page 18 – 4 lists each client extension and its predefined template procedure filenames. The template procedure files are stored in the Oracle Projects admin/sql directory.

**Suggestion:** Review the appropriate files before you design and implement a client extension. They provide a lot of useful information, including the predefined input parameter list and example case studies.

**Suggestion:** You should make a copy of these template files in a directory used by your company to store code that you have written. You should make changes to these copies of the files instead of writing directly into these template files. These template files will be replaced when the software is upgraded between releases. Use your modified files to reinstall your procedures after an upgrade to a new release of Oracle Projects.

**Writing Logic in Your PL/SQL Procedures**

You write the logic in the PL/SQL procedures based on the functional specifications created during the design process. Before you begin to write the client extension PL/SQL procedures, you should have a clear understanding of the client extension procedures; including the inputs and outputs, the error handling of the extension, along with any example procedures provided for each extension. Read the appropriate client extension essays and template procedures to obtain detailed information about the client extensions.

As you determine how to best write the client extension, you should consider these issues:

- Can I derive every derived input parameter based on the data structures known?
- What outputs should the client extension return?
- How does the client extension handle exceptions?
- Are there procedures which I can write which are reusable across similar client extensions?
- How I can write logical, well commented code that is easy to maintain and debug?
- How do I test and debug this client extension?
- Are there any performance considerations in the client extension? If so, what are they and how do I address them?

**Attention:** You must not commit data within your PL/SQL procedure. Oracle Projects processes that call your procedures handle the commit logic.

### Storing Your Procedures

After you write your procedures and ensure that the specification file correctly includes any procedures that you have defined, you need to compile and store the procedures in the database in the Applications Oracle username. You must install the package specification before the package body.

The syntax for compiling and storing PL/SQL procedures is included in the template procedure files. Assuming you have written your procedures using copies of these template procedure files, you can use these steps to compile and store your procedures:

Change to the directory in which your files are stored (use the command that is appropriate to your operating system)

```
$ sqlplus <apps username>/<apps password>
```

```
SQL> @<spec_filename>.pls <apps username> <apps password>
```

```
SQL> @<body_filename>.pls <apps username> <apps password>
```

For example, you use the following commands to install your transaction control extensions (assuming your Oracle Applications Oracle username/password is apps/apps):

```
$ sqlplus apps/apps
```

```
SQL> @PAXTTXCS.pls apps apps
```

```
SQL> @PAXTTXCB.pls apps apps
```

If you encounter compilation errors in trying to create your packages and its procedures, you must debug the errors, correct your package definitions, and try to create your packages again. You must successfully compile and store your package and its procedures in the database before you can use the client extensions in Oracle Projects.
Testing Your Procedures

After you have created your client extension procedures, you must test your client extension definitions within the processing flow of Oracle Projects to verify the results are as you expect.
Project Security Extension

Oracle Projects provides a client extension, PA_SECURITY_EXTN, that enables you to override the default security and implement your own business rules for project and labor cost security. This extension applies only to Oracle Projects windows and not to reports. Some examples of rules that you may define are:

- Only users who belong to the same organization as the project organization can access the project (organization-based security). Sample code for this example is included in the client extension package.
- All project administrators can view and update projects to which they are assigned, but project managers can only view those projects to which they are assigned.
- Some responsibilities can view or update only capital projects (for an environment where users who handle capital projects do not handle contract and indirect projects).

Considerations for Project Security Extension Logic

You should determine the logic and the additional data elements your client extension requires before you write it. We recommend that you consider the following design issues for the project security extension:

- What are the conditions or circumstances in which project or labor security is based? What types of users? How will you identify the users? What types of projects? How will you identify the projects?
- Do you want the users to view the project but not update it, or do you want to block the project from their online queries?
- Does the type of security for a given user or set of projects change depending on the module?
- How does project security interact with the function security defined for the responsibility?
- Consider the performance implications of the logic that you write. The extension is called for every project during online queries.
Writing the Project Security Extension

Oracle Projects provides a template package that contains the procedure that you can modify to implement the project security extension. The name of the package is `pa_security_extn`, and the name of the procedure is `check_project_access`.

Print out and review the following files before you begin writing your project security client extension. These files are located in the Oracle Projects admin/sql directory.

- **PAPSECXB.pls.** Project Security Extension Package Body Template. This file contains the procedure that you modify to implement the project security extension. You can define as many procedures as you want within this package or within the predefined procedure.

- **PAPSECXS.pls** Project Security Extension Package Specification Template. If you create procedures outside the predefined procedure within the PA_Security_Extn package, you must also modify this file to include those new procedures.

⚠️ **Warning:** Do not change the name of the `check_project_access` procedure. In addition, do not change the parameter names, parameter types, or parameter order in your procedure.

💡 **Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.


### Package.Procedure

The following table lists the parameters that Oracle Projects provides for the project security extension, `pa_security_extn.check_project_access`.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project or project template</td>
</tr>
<tr>
<td>X_person_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the person</td>
</tr>
</tbody>
</table>

Table 18 – 2 (Page 1 of 2) Project Security Extension Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_cross_project_user</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Indicates if the user is a cross-project user Y/N</td>
</tr>
<tr>
<td>X_calling_module</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Module in which the project security extension is called; Oracle Projects sets this value for each module in which it calls the security extension. The values are listed below.</td>
</tr>
<tr>
<td>X_event</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Type of query level to check upon which you can define specific rules: ALLOW_QUERY ALLOW_UPDATE VIEW_LABOR_COSTS</td>
</tr>
<tr>
<td>X_value</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Values to specify if result of the event: Y/N</td>
</tr>
</tbody>
</table>

Table 18 – 2 (Page 2 of 2) Project Security Extension Parameters

Additional Information about Parameters

The parameter X_calling_module allows you to write security rules based on the module in which the extension is called. The values are as follows:

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAXBUEBU</td>
<td>Budgets window</td>
</tr>
<tr>
<td>PAXCARVW</td>
<td>Capital Projects window</td>
</tr>
<tr>
<td>PAXINEAG</td>
<td>Agreements window</td>
</tr>
<tr>
<td>PAXINRVW</td>
<td>Invoice Review window</td>
</tr>
<tr>
<td>PAXINVPF</td>
<td>Project Funding Inquiry window</td>
</tr>
<tr>
<td>PAXPREPR</td>
<td>Projects window</td>
</tr>
<tr>
<td>PAXTRAPE.PROJECT</td>
<td>Project Expenditure Inquiry window</td>
</tr>
<tr>
<td>PAXURVPS</td>
<td>Project Status Inquiry window</td>
</tr>
</tbody>
</table>

Table 18 – 3 (Page 1 of 1) Additional Information About Parameters

Refer to the PA_Security_Extn procedure for the most up-to-date information about values for X_calling_module.
Budget Calculation Extensions

Budget calculation extensions allow you to control how Oracle Projects processes budgets. You can make the following types of changes:

- Facilitate budget entry by defining your own rules for calculating budget amounts, based on the quantities and raw cost amounts that you enter.
- Use function security to control whether users can override the calculated amount, based user responsibility. The functions pertaining to this feature have names that begin with ”Budget: Line Source”. See: Function Security: page C – 2.

Types of Calculations

Using budget calculation extensions, you can calculate the following budget amounts:

**Raw Cost**

Oracle Projects calls the budget calculation extension for raw cost after you enter a *Quantity* in a Cost Budget’s budget line. If you define rules in the budget calculation extension which return a value, Oracle Projects displays the amount in the *Raw Cost* amount field.

Some examples of rules that you can define are:

- Calculate *Raw Cost* for an employee based on the number of *Hours* entered
- Calculate *Raw Cost* for vehicle usage based on the number of *Days* entered

**Burdened Cost**

Oracle Projects calls the budget calculation extension for burdened cost either after you enter a *Quantity* for a budget line of a Cost Budget, or after you enter the *Raw Cost*, deriving the burdened cost from the raw cost.

If you define rules in the budget calculation extension which return a value, Oracle Projects displays the amount in the *Burdened Cost* amount field.

Some examples of rules that you can define are:

- Calculate *Raw Cost* and *Burdened Cost* for an employee based on the number of *Hours* entered
• Calculate Burdened Cost for computer usage charges based on the Raw Cost entered

Revenue
Oracle Projects calls the budget calculation extension for revenue after you enter a Quantity for a Revenue Budget’s budget line. If you define rules in the budget calculation extension which return a value, Oracle Projects displays the amount in the Revenue field.

Some examples of rules that you can define are:
• Calculate Revenue for an employee using a standard bill rate assigned to the task
• Calculate Revenue for the Job entered using the number of Hours entered

All Budget Amounts
Oracle Projects also calls the budget extension to calculate budget amounts when you enter the Resource, Dates, and Quantity, and when you change the resource or dates for existing amounts

Designing Budget Calculation Extensions
You should determine the logic and the additional data elements your client extensions require before you write them. We recommend that you consider the following design issues for budget calculation extensions:
• What conditions should be true for a budget before it can be baselined?
• What are the conditions or circumstances under which you will derive the raw, burdened and revenue budget amounts?
• How will you determine the rate to calculate the amount?
• How will you store the rates: in Oracle Projects tables or in custom tables?
• When can the derived amounts be overridden by the user?
• In what order should the budget calculations be executed if you have multiple rules?
Writing Budget Calculation Extensions

Oracle Projects provides a template package that contains the procedures that you modify to control the rules used for calculating a budget.

The name of the package is `PA_Client_Extn_Budget`. The names of the procedures are:

- calc_raw_cost
- calc_burdened_cost
- calc_revenue

Print out and review the following files before you begin writing budget calculation extensions. These files are located in the Oracle Projects admin/sql directory.

- `PAXBCECB.pls` Budget Calculation Extension Package Body Template. This file contains the procedure that you modify to implement budget calculation extensions. You can define as many procedures as you want within this package or within the predefined procedure.

- `PAXBCECS.pls` Budget Calculation Extension Package Specification Template. If you create procedures outside the predefined procedure within the `PA_Client_Extn_Budget` package, you must also modify this file to include those new procedures.

**Warning:** Do not change the name of the budget calculation extension procedure. In addition, do not change the parameter names, parameter types, or parameter order in your procedure.

**Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Writing PL/SQL Procedures: page 18 – 11.

Package Procedures

calc_raw_cost

Table 18 – 4 lists the parameters that Oracle Projects provides for the budget calculation extension for raw cost.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_budget_version_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the budget version.</td>
</tr>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project.</td>
</tr>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the task. Set to zero if budgeting at the project level.</td>
</tr>
<tr>
<td>X_resource_list_member_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource list member.</td>
</tr>
<tr>
<td>X_resource_list_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource list.</td>
</tr>
<tr>
<td>X_resource_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource.</td>
</tr>
<tr>
<td>X_start_date</td>
<td>IN</td>
<td>DATE</td>
<td>The start date of the budget line.</td>
</tr>
<tr>
<td>X_end_date</td>
<td>IN</td>
<td>DATE</td>
<td>The end date of the budget line.</td>
</tr>
<tr>
<td>X_period_name</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The effective period of the budget line (if any).</td>
</tr>
<tr>
<td>X_quantity</td>
<td>IN</td>
<td>NUMBER</td>
<td>The quantity of the budget line.</td>
</tr>
<tr>
<td>X_raw_cost</td>
<td>IN</td>
<td>NUMBER</td>
<td>The raw cost of the budget line.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OUT</td>
<td>Oracle Projects passes in the raw cost from the Budgets form. An amount is then returned by the extension.</td>
</tr>
<tr>
<td>X_product_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The product code of the product where the budget line originated.</td>
</tr>
</tbody>
</table>
Table 18 – 4   (Page 2 of 2)  Raw Cost Budget Calculation Extension Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_error_code</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Error handling code.</td>
</tr>
<tr>
<td>X_error_message</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>User–defined error message.</td>
</tr>
</tbody>
</table>

calc_burdened_cost

Table 18 – 5 lists the parameters that Oracle Projects provides for the budget calculation extension for burdened cost.

Table 18 – 5   (Page 1 of 2)  Burdened Cost Budget Calculation Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_budget_version_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the budget version.</td>
</tr>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project.</td>
</tr>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the task. Set to zero if budgeting at the project level.</td>
</tr>
<tr>
<td>X_resource_list_member_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource list member.</td>
</tr>
<tr>
<td>X_resource_list_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource list.</td>
</tr>
<tr>
<td>X_resource_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource.</td>
</tr>
<tr>
<td>X_start_date</td>
<td>IN</td>
<td>DATE</td>
<td>The start date of the budget line.</td>
</tr>
<tr>
<td>X_end_date</td>
<td>IN</td>
<td>DATE</td>
<td>The end date of the budget line.</td>
</tr>
<tr>
<td>X_period_name</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The effective period of the budget line (if any).</td>
</tr>
<tr>
<td>X_quantity</td>
<td>IN</td>
<td>NUMBER</td>
<td>The quantity of the budget line.</td>
</tr>
<tr>
<td>X_raw_cost</td>
<td>IN</td>
<td>NUMBER</td>
<td>The raw cost of the budget line.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Usage</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>X_burdened_cost</td>
<td>IN/OUT</td>
<td>NUMBER</td>
<td>The burdened cost of the budget line. Oracle Projects passes in the raw cost from the Budgets form. An amount is then returned by the extension.</td>
</tr>
<tr>
<td>X_product_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The product code of the product where the budget line originated.</td>
</tr>
<tr>
<td>X_error_code</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Error handling code.</td>
</tr>
<tr>
<td>X_error_message</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>User-defined error message.</td>
</tr>
</tbody>
</table>

Table 18 – 5  (Page 2 of 2) Burdened Cost Budget Calculation Parameters

**Suggestion:** Use the Cost Plus API to calculate the burdened cost amount using the burdened multipliers you have defined for the project or task. See: Cost Plus API: page 18 – 124.

calc_revenue

Table 18 – 6 lists the parameter that Oracle Projects provides for the budget calculation extension for revenue.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_budget_version_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the budget version.</td>
</tr>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project.</td>
</tr>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the task. Set to zero if budgeting at the project level.</td>
</tr>
<tr>
<td>X_resource_list_member_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource list member.</td>
</tr>
<tr>
<td>X_resource_list_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource list.</td>
</tr>
<tr>
<td>X_resource_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource.</td>
</tr>
</tbody>
</table>

Table 18 – 6  (Page 1 of 2) Revenue Budget Calculation Parameters
### Table 18 – 6 (Page 2 of 2) Revenue Budget Calculation Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_start_date</td>
<td>IN</td>
<td>DATE</td>
<td>The start date of the budget line.</td>
</tr>
<tr>
<td>X_end_date</td>
<td>IN</td>
<td>DATE</td>
<td>The end date of the budget line.</td>
</tr>
<tr>
<td>X_period_name</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The effective period of the budget line (if any).</td>
</tr>
<tr>
<td>X_quantity</td>
<td>IN</td>
<td>NUMBER</td>
<td>The quantity of the budget line.</td>
</tr>
<tr>
<td>X_revenue</td>
<td>IN</td>
<td>NUMBER</td>
<td>The revenue of the budget line. Oracle Projects passes in the raw cost from the Budgets form. An amount is then returned by the extension.</td>
</tr>
<tr>
<td>X_product_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The product code of the product where the budget line originated.</td>
</tr>
<tr>
<td>X_error_code</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Error handling code.</td>
</tr>
<tr>
<td>X_error_message</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>User-defined error message.</td>
</tr>
</tbody>
</table>

### Additional Information About Parameters

#### Error Handling

Use the `x_error_code`, `x_error_message`, `p_error_code`, and `p_error_message` parameters to help resolve error conditions should your procedure fail.

The `x_err_code` or `p_error_code` parameter indicates the processing status of your procedure as follows:

**Suggestion:** Ensure that you are returning the status of the budget calculation procedure to the procedure that you are calling the budget calculation extension from to help resolve error conditions.

- **x_error_code = 0**  The procedure executed successfully.
x_error_code < 0  An Oracle error occurred and the process did not complete.

x_error_code > 0  An application error occurred and the process did not complete.

If x_error_code or p_error_code is set to a nonzero value in the client extension, then the following message is displayed in the form:

’Calculate raw cost budget’ client extension error
<x_error_code>: <x_error_message>.
Transaction Control Extensions

Transaction control extensions allow you to define your own rules to implement company-specific expenditure entry policies. Some examples of rules that you may define are:

- You cannot charge labor hours for a future date
- You cannot charge new transactions to projects for which the work is complete; you can only transfer items to these projects
- You can only charge to tasks that are managed by the organization you are assigned to
- All entertainment expenses are non-billable

Validation

You can use transaction control extensions to provide additional validation based on any type of data you enter in Oracle Projects. For example, you can check the project status for a particular project during expenditure entry.

You can validate any transaction entered into Oracle Projects, including transactions from other Oracle Applications and from external systems. For example, you can validate project-related supplier invoices entered into Oracle Payables. You can also validate items that you transfer from one project to another.

Transaction control extensions validate expenditures items one at a time; all validation is done for each expenditure item. Oracle Projects checks each expenditure item during data entry; the transaction is validated before you commit it to the database.

Processing

Oracle Projects processes transaction control extensions after the standard validation performed for expenditure entry, and after validating any transaction controls entered at the project or task level.

1. **Standard validation**
   - Transaction is within start and completion dates of project/task
   - Project status is not *Closed*
   - Task is chargeable
   - Transaction controls at project/task level
2. Transaction control extension validation

---

**Designing Transaction Control Extensions**

You should determine the logic and the additional data elements your client extensions require before you write them. We recommend that you consider some additional design issues for transaction control extensions:

- What are the business rules?
- What validation is required? Under what conditions does it apply?
- Are there any exceptions to the validation? How are exceptions handled?
- In what order should the transaction controls be executed if you have multiple rules?
- What error message should users see when entering a transaction not allowed by transaction control extensions?
- Are there any rules to set the default billable or capitalizable status of transactions?

---

**See Also**

Designing Client Extensions: page 18 – 9

---

**Writing Transaction Control Extensions**

Oracle Projects provides a template package that contains the procedure that you modify to implement transaction control extensions. The name of the package is `patcx`, the name of the procedure is `tc_extension`.

Print out and review the following files before you begin writing transaction control extensions. These files are located in the Oracle Projects admin/sql directory.

- `PAXTTCXB.pls`. Transaction Control Extension Package Body Template. This file contains the procedure that you
modify to implement transaction control extensions. You can define as many procedures as you like within this package or within the predefined procedure.

PAXTTCXS.pls Transaction Control Extension Package Specification Template. If you create procedures outside the predefined procedure within the patcx package, you must also modify this file to include those new procedures.

**Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.

We recommend that you use the PL/SQL User’s Guide and Reference Manual and the Oracle Projects Technical Reference Manual as reference material while defining procedures:

**Writing Error Messages**

You write error messages that will be displayed in forms when a transaction control violation is encountered. Use these messages to tell users why a particular transaction cannot be entered, based on validation in the procedure. These messages also appear on the Transaction Import exception report and indicate the reasons why transactions may be rejected by Transaction Import.

Be sure to define your messages under the Oracle Projects application. If you define your messages using the prefix PATXC, Oracle Projects will protect them during an upgrade.


If you are using any of the following processes or products, you must define the message in the character–based form as well as the GUI window:

- Transaction Import
- Character–based forms in other products
- Oracle Personal Time and Expense

If you define the message in the GUI window, the messages are stored in the table FND_NEW_MESSAGES. If you are defining the messages in the character–based form, the messages are stored in the table
Please make sure that the message name is identical in both tables prefixed with `PATXC`.

**Package.Procedure**

**patx.tc_extension**

Table 18 – 7 lists the parameters that Oracle Projects provides for the transaction control extension. All values are passed from the expenditure item being validated.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project.</td>
</tr>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the task.</td>
</tr>
<tr>
<td>X_expenditure_item_date</td>
<td>IN</td>
<td>DATE</td>
<td>The date of the expenditure item.</td>
</tr>
<tr>
<td>X_expenditure_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The type of expenditure.</td>
</tr>
<tr>
<td>X_non_labor_resource</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The non–labor resource; for usage items only.</td>
</tr>
<tr>
<td>X_incurred_by_person_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the person incurring the transaction.</td>
</tr>
<tr>
<td>X_quantity</td>
<td>IN</td>
<td>NUMBER</td>
<td>The quantity of the transaction.</td>
</tr>
<tr>
<td>X_transferred_from_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the original expenditure item for which a new item is interfacing to a new project.</td>
</tr>
<tr>
<td>X_incurred_by_org_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The organization incurring the transaction.</td>
</tr>
<tr>
<td>X_nl_resource_org_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the non–labor resource organization; for usages only.</td>
</tr>
<tr>
<td>X_transaction_source</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The transaction source of items imported using Transaction Import.</td>
</tr>
</tbody>
</table>

Table 18 – 7 (Page 1 of 2) Transaction Control Extension Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_calling_module</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The module calling the extension.</td>
</tr>
<tr>
<td>X Entered_by_user_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the user that entered the transaction.</td>
</tr>
<tr>
<td>X_attribute_category</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Expenditure item descriptive flexfield context.</td>
</tr>
<tr>
<td>X_attribute1–10</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Expenditure item descriptive flexfield segments.</td>
</tr>
<tr>
<td>X_billable_flag</td>
<td>IN/OUT</td>
<td>VARCHAR2</td>
<td>Determines whether or not a transaction is billable or capitalizable.</td>
</tr>
<tr>
<td>X_outcome</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>The outcome of the procedure.</td>
</tr>
</tbody>
</table>

Table 18–7 (Page 2 of 2) Transaction Control Extension Parameters

**Additional Information About Parameters**

**Using Attributes**
For the X_attribute parameters, you can use any attribute from the expenditure item descriptive flexfield. These parameters are not available for modules outside Oracle Projects.

**Using Quantity**
You can use the quantity parameter for validation using Oracle Projects and Oracle Payables features. However, keep in mind that Oracle Purchasing does not pass a value for this parameter.

**Using Incurred by Person**
Oracle Projects passes the person who is incurring the transaction. This value is always specified for labor and expense report items. It is optional for usage items, because you can enter usage logs which are incurred by an organization, and not an employee.
Oracle Payables passes a parameter value for supplier invoice transactions if the supplier of the invoice is an employee; otherwise this value is blank for supplier invoice transactions.

Oracle Purchasing does not pass a value for this parameter for requisitions and purchase orders transactions.

**Using Billable/Capitalizable Flag**

Oracle Projects passes in the billable value (contract projects) or capitalizable value (capital projects) that it has determined from the project and task transaction controls and the task billable status for this parameter. You can override this value based on logic that you write in your procedure. You can pass back a value of Y or N to specify the default billable or capitalizable status of a transaction. If you do not pass back a value, or if you pass back an invalid value, Oracle Projects uses the original value that it determined before calling the transaction control extension procedure.

**Using Outcome Parameter**

Use the X_outcome parameter to pass back the outcome of the procedure. If the transaction successfully passes all applicable transaction control extension rules that you defined, leave the X_outcome parameter value as a null value. Oracle Projects then knows that this transaction passed all transaction control validation.

If the transaction does not pass a rule that you define, set the X_outcome value to the appropriate error message name that will be displayed to the user.

**Using Calling Module**

The calling module parameter indicates where the transaction control extension is being called from. You can base the logic of your extension on the calling module. For example, if Transaction Import is the calling module (PAXTRTRX), then allow only certain types of transactions to be charged to specific projects.

Below is a list of the possible values for the X_calling_module parameter. Note that these values are case-sensitive and are passed exactly as they appear.

When transaction controls is called by Oracle Purchasing and Oracle Payables, the validation is performed when you enter project-related information for requisitions, purchase orders, and supplier invoices.
The validation is also performed when you enter or update the project–related information for distribution lines.

**APXINENT**  
Invoices Workbench in Oracle Payables. This value is passed when Transaction Controls is called to validate project–related information entered on a supplier invoice.

**CreateRelatedItem**  
CreateRelatedItem procedure called in the labor transactions extension procedure. This value is passed when CreateRelatedItem calls Transaction Controls to validate related transactions in the labor transactions extension procedure.

**PAVVIT**  
Interface Supplier Invoices from Payables. This value is passed when Transaction Controls is called to validate expenditure items being created from project–related supplier invoice distribution lines interfaced from Oracle Payables into Oracle Projects.

**PAXTREPE**  
Pre–Approved Expenditures. This value is passed when Transaction Controls is called to validate unapproved expenditure items being entered or updated in the Enter Pre–Approved Expense Reports form.

**PAXTRTRX**  
Transaction Import. This value is passed when Transaction Controls is called by the Transaction Import program to validate transactions before they are loaded into Oracle Projects.

**PAXEXCOP/PAXTEXCB**  
Copy Pre–Approved Timecards/Copy Expenditures. This value is passed when Transaction Controls is called to validate new expenditure items being created using the Copy Pre–Approved Timecards feature.

**PAXPRRPE**  
Adjust Project Expenditures. This value is passed when Transaction Controls is called to validate a new expenditure item that is being created as a result of an expenditure item transfer performed in the Adjust Project Expenditures form.

**POXPOEPO**  
Purchase Orders in Oracle Purchasing. This value is passed when Transaction Controls is called to validate project–related information entered on a purchase order.
Requisitions in Oracle Purchasing. This value is passed when Transaction Controls is called to validate project–related information entered on a requisition.

Releases in Oracle Purchasing. This value is passed when Transaction Controls is called to validate project–related information when you enter releases against purchase orders.

Preferences in Oracle Purchasing.

Frequently Asked Questions

**Can I Call Other Procedures within the Extension?**

You can call other procedures. As long as you can determine the inputs and perform the validation for a particular rule, your extensions can be as flexible as you want them to be.

**Can I Allow Exceptions to a Particular Rule?**

Yes; for example, you can allow exceptions to a rule that applies to a project type by limiting the rule to particular projects for the project type in the procedure logic.

**Can I Perform Validation on Groups of Expenditure Items?**

Currently, you cannot perform validation on groups of expenditure items.

**How Many Error Messages Can My Procedure Return?**

Your procedure can return one error message, which is the first error message that Oracle Projects encounters in your procedure.

See Also

Case Study: New Charges Not Allowed: page 18 – 128

Case Study: Organization–Based Transaction Controls: page 18 – 130
Labor Costing Extensions

Labor costing extensions allow you to derive raw cost amounts for individual labor transactions. Some examples of labor costing extensions you may define are:

- Standard cost rate by job
- Capped labor cost rates
- Multiple cost rates per employee

You can use labor costing extensions to implement unique costing methods other than the standard method, which calculates raw cost using the number of hours multiplied by the employee’s hourly cost rate. For example, you may want to calculate the raw cost using a capped labor rate for specific employees.

Processing

Oracle Projects processes labor costing extensions during labor cost distribution before calculating standard raw cost amounts. If Oracle Projects encounters a labor costing extension that derives the raw cost amount of a labor transaction, it skips the standard raw cost calculation section for that transaction.

See Also


Designing Labor Costing Extensions

You should determine the logic and the additional data elements your client extensions require before you write them. You should consider the additional design issues for labor costing extensions:

- What are the conditions and circumstances in which you cannot use the standard raw cost calculation method supported by Oracle Projects?
- How is the raw cost amount calculated in these cases?
• How do you identify labor transactions that meet these conditions?
• How do you store rates and other additional information that your calculations may require? How are the rates and other information maintained?
• What are the exception conditions for your labor costing extension? What is the exception handling if you cannot find a rate that should exist?

See Also

Designing Client Extensions: page 18 – 9

Writing Labor Costing Extensions

Oracle Projects provides a template package and procedure that you use as the basis of your labor costing extension procedures. The name of the package is PA_Client_Extn_Costing, the name of the procedure is Calc_Raw_Cost.

Print out and review the following files before you begin writing labor costing extensions. The files are located in the Oracle Projects admin/sql directory.

PAXCCECB.pls. Labor Costing Extension Package Body Template. This file contains the procedure that you modify to implement labor costing extensions. You can define as many procedures as you like within this package or within the predefined procedure.

PAXCCECS.pls Labor Costing Extension Package Specification Template. If you create procedures within the package outside the predefined procedure, you must also modify this file.

Suggestion: After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.
PA_Client_Extn_Costing.Calc_Raw_Cost

Table 18 – 8 lists the parameters that Oracle Projects provides for the labor costing procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_expenditure_item_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the expenditure item.</td>
</tr>
<tr>
<td>x_sys_linkage_function</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The expenditure type class of the expenditure item.</td>
</tr>
<tr>
<td>x_raw_cost</td>
<td>IN OUT</td>
<td>NUMBER</td>
<td>The raw cost amount.</td>
</tr>
<tr>
<td>x_status</td>
<td>IN OUT</td>
<td>NUMBER</td>
<td>The status of the procedure.</td>
</tr>
</tbody>
</table>

Table 18 – 8   (Page 1 of 1)  Labor Costing Extension Parameters

Using Raw Cost

The raw cost amount that your procedure calculates is assigned to the x_raw_cost parameter. Leave this value blank if you want to use the standard costing method which uses the employee’s hourly cost rate.

If you pass a value to this parameter, Oracle Projects calculates the raw cost rate of the transaction using the x_raw_cost parameter value divided by the number of hours.

Using Status

Use the x_status parameter to handle error conditions for your procedure. This parameter indicates the processing status of your extension as follows:

- **x_status = 0**  The extension executed successfully.
- **x_status < 0**  An Oracle8 error occurred and the process did not complete. Oracle Projects writes an error message to the process log file.
- **x_status > 0**  An application error occurred. Oracle Projects writes a rejection reason to PA_EXPENDITURE_ITEMS.COST_DIST_REJECTION_CODE and does not cost the
transaction. You can review the rejection reason in the labor cost distribution exception report.
Labor Transaction Extensions

Labor transaction extensions allow you to create additional transactions for individual labor items charged to projects. For example, you may wish to create additional transactions for hazardous work performed for every labor transaction charged to certain projects. Here are some other examples of labor transactions extensions you can implement:

- Create overtime premium transactions for overtime hours based on company overtime policies
- Create fringe benefit transactions which are charged to the same project the source labor was charged to

You can create additional transactions for straight time labor transactions and overtime labor transactions. You create additional labor transactions based on the source labor transactions that you enter on timecards.

Related Transactions

Additional transactions that are created for labor transactions are referred to as related transactions. All related transactions are associated with a source transaction and are attached to the expenditure item ID of the source transaction. You can identify and process the related transactions by referring to the expenditure item ID of the source transaction.

You create related transactions to process a raw cost amount separately than the source transaction raw cost amount. Related transactions can be burdened, billed, and accounted for independently of the source transaction.

Processing

Oracle Projects processes labor transaction extensions during labor cost distribution. When you distribute labor costs, the labor transaction extension is processed after the raw cost calculation of the source transactions. This allows you to derive the cost of the related transaction from the cost of the source transaction.

You also use the labor transaction extension to calculate new cost amounts for related transactions if the source transaction is recosted.

If you are using the Labor Transaction Extension to create overtime premium transactions, you may not need to use the Overtime
Calculation program that Oracle Projects provides. If you determine that you need to use both the Labor Transaction Extension and the Overtime Calculation program, you need to ensure that you have defined conditions so that each transaction is processed by only one of these processes, based on your company policies.

See Also

Distributing Labor Costs: page 5 – 8

Tracking Overtime and Premium Labor Costs: page 17 – 2

Adjustments to Related Transactions: page 4 – 30

Designing Labor Transaction Extensions

We recommend that you determine the logic and the additional data elements your client extensions require before you write them.

We recommend that you consider the additional design issues for labor transaction extensions:

- What are the conditions in which your company needs to create related items? Why are you creating related items instead of using another method like burdening to account for additional costs?
- How do you identify labor transactions that meet these conditions?
- What related transactions should be created in these cases?
- What project and task are the related transactions charged to?
- What expenditure types are used for the related transactions?
- How is the raw cost of the related transaction calculated? Is it based on the raw cost of the source transaction or based on some other calculation?
- Is the related transaction burdened? If so, you need to set up your cost plus implementation so that the transaction is burdened.
• How is the related transaction’s cost accounted for? Is the raw cost accounting for related transactions different from the accounting for source transactions? Is the total burdened cost accounting different (if you use total burdened cost accounting)? You need to define your AutoAccounting rules for labor costs appropriately.

• How is the billable status of each related transaction determined? Do you need to create a transaction control extension rule to properly specify the related transaction’s billable status?

• Are the related transactions billed? If so, under what conditions? How is the bill amount calculated under the different billing methods? Do you need to use a labor billing extension to bill these transactions?

• Is the related transaction’s revenue accounted for differently than the source transactions? If so, how? You need to define your AutoAccounting rules for labor revenue appropriately.

• What are the exception conditions for your labor transaction extension? For example, what is the exception handling if you cannot find a rate for the related transaction if the related transaction’s raw cost is not directly based on the source transaction’s raw cost?

See Also

Designing Client Extensions: page 18 – 9

Writing Labor Transaction Extensions

Oracle Projects provides a template package and procedure that you use as the basis of your labor transaction extension procedures. The name of the package is PA_Client_Extn_Txn, the name of the procedure is Add_Transactions.

Print out and review the following files before you begin writing labor transaction extensions. The files are located in the Oracle Projects admin/sql directory.
Labor Transaction Extension Package Body Template. This file contains the procedure that you modify to implement labor transaction extensions. You can define as many procedures as you like within this package or within the predefined procedure.

Labor Transaction Extension Package Specification Template. If you create procedures within the package outside the predefined procedure, you must also modify this file.

Oracle Projects also provides two public procedures that you use within the Add_Transactions procedure for the following purposes:

- Creating Related Transactions
- Updating Related Transactions

**Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.

### Adding Transactions

Use the Add_Transactions procedure to add related transactions for source transactions. Within this procedure, you write logic to create related new transactions and update the raw cost of related transactions when they are marked for cost recalculation. You calculate the raw cost of related transactions in this procedure only; Oracle Projects does not calculate the raw cost of related transactions in any other way. Use the two procedures discussed later in this section for processing related transactions within this procedure.

### Package.Procedure

**PA_Client_Extn_Txn.Add_Transactions**

Table 18–9 lists the parameters that Oracle Projects provides for the add related transactions procedure.
### Creating Related Transactions

Use this procedure to create related transactions within the logic of the Add Transactions procedure. This procedure exists in the `pa_transactions` package; you cannot change this procedure.

The related transaction is linked to the same employee’s timecard as the source transaction. The transaction is created with a quantity of 0, in order to maintain the proper number of hours for the employee’s timecard, even when related transactions exist.

#### Package.Procedure

**pa_transactions.CreateRelatedItem**

Table 18 – 10 listed the parameters that Oracle Projects provides for the create related transactions procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_source_exp_item_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the source transaction.</td>
</tr>
<tr>
<td>x_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project to charge the related transaction to.</td>
</tr>
<tr>
<td>x_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the task.</td>
</tr>
<tr>
<td>x_expenditure_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The expenditure type of the related transaction.</td>
</tr>
</tbody>
</table>

Table 18 – 10 (Page 1 of 2) Create Related Item Parameters
### Updating Related Transactions

Use this procedure to update the raw cost amount of existing related transactions within the logic of your labor transaction extension when related transactions are marked for cost recalculation. This procedure exists in the `pa_transactions` package; you cannot change this procedure.

#### Package.Procedure

**pa_transactions.UpdateRelatedItem**

Table 18 – 11 lists the parameters that Oracle Projects provides for the update related transactions procedure.
**Parameter** | **Usage** | **Type** | **Description**
---|---|---|---
x_expenditure_item_id | IN | NUMBER | The identifier of the related expenditure item.
x_raw_cost | IN | NUMBER | The new raw cost of the related transaction.
x_raw_cost_rate | IN | NUMBER | The new raw cost rate of the related transaction.
x_status | OUT | NUMBER | Status of the procedure.

Table 18 – 11 (Page 1 of 1) Update Related Item Parameters

**Additional Information About Parameters**

**Using Project and Task in the CreateRelatedItem Procedure**
You can optionally pass the project and task parameter values to the CreateRelatedItem procedure.

If you do not pass project and task information, Oracle Projects charges the related transaction to the same project and task that the source transaction is charged to.

If you do pass project and task information, Oracle Projects uses these values to ensure that the transaction can be charged based on the transaction control validation for that project and task. If the related transaction passes all transaction control rules, then the related transaction is created with that project and task. You must pass both a project and task value to override the source transaction’s project and task.

**Using Userid in the CreateRelatedItem procedure**
You must provide an input value for the X_userid parameter for the CreateRelatedItem procedure. Oracle Projects passes this value to the transaction control procedure, which is called before the related transaction is created. You may have defined logic in your transaction control extensions that uses the userid value. You typically pass the user of the person who created the source transaction, but you can pass any userid that you want to the CreateRelatedItem procedure.
Using an Override Organization in CreateRelatedItem Procedure

Use the x_override_to_org_id to override the source transaction’s expenditure organization to another organization, such as the project organization for the related transaction.

If a value is provided for this parameter when calling the create related transactions procedure, and it is a valid organization, then that value is stored as the expenditure item’s override organization regardless of the existence of any other cost distribution overrides defined for the project.

This organization is then used when calculating burdened amounts for the related transaction. It is also used as the input value for any AutoAccounting rules that use the expenditure organization parameter.

However, the source transaction expenditure organization is what the create related transaction procedure passes to the transaction controls procedure for validation. This is done to retain consistency with expenditure entry forms which always send the incurred by (or expenditure organization) organization value. The expenditure organization parameter is used in Transaction Control Extensions by clients who want to control expenditure entry by what organization is charging to the project.

Therefore, the override organization value is used only for burdening and AutoAccounting.

Using Outcome in the CreateRelatedItem Procedure

Oracle Projects uses the X_outcome parameter to pass back the rejection reason encountered in the application logic of the CreateRelatedItem procedure. For example, if the related transaction is rejected by the transaction controls validation called in the CreateRelatedItem procedure, then the reason is assigned to the X_outcome parameter.

Using Status in both Procedures

Use the x_status parameter to handle error conditions for your procedure. This parameter indicates the processing status of your extension as follows:

- **x_status = 0**: The extension executed successfully.
- **x_status < 0**: An Oracle8 error occurred and the process did not complete. Oracle Projects writes an error message to the process log file.
An application error occurred. Oracle Projects writes a rejection reason to PA_EXPENDITURE_ITEMS.COST_DIST_REJECTION_CODE and does not cost the source and related transactions. You can review the rejection reason in the labor cost distribution exception report.

The two related transaction procedures pass your labor transaction procedure the outcome of their processing in this same way as you pass the outcome of your labor transaction extension procedure to the labor distribution process.

Frequently Asked Questions

What Does the CreateRelatedItem Procedure Do?

This procedure does the following:

- Ensures all input parameter values are valid values
- Ensures that the expenditure type is classified with an expenditure type class of Straight Time or Overtime
- Validates that the transaction passes all transaction controls validation rules, including logic in transaction control extensions
- Determines the billable status of the related transaction using the same method used for all Oracle Projects transactions
- If the transaction is valid, creates related labor expenditure item that:
  - Is attached to the source transaction’s expenditure
  - Has quantity of 0 (to maintain the number of hours for the employee’s timecard, even when related items exist for that timecard)
  - Uses the source transaction’s project and task unless you specify project and task input values
  - Uses the source transaction’s expenditure item date and bill hold value
  - Uses the source transaction’s organization unless you specify an override organization

\[ x_{\text{status}} > 0 \]
What Happens if the Source Transaction is Not Costed?
If the source transaction is not costed because it is rejected during cost distribution, the labor transaction extension is not called for that transaction. Therefore, related transactions for rejected source transactions will not be created or costed.

Can I Create Multiple Related Transactions for a Single Item?
Yes, you can create multiple related transactions for a given source transaction based on the logic in your labor transaction extension.

How Do I Identify Related Transactions?
You identify related transactions by referring to the expenditure item id of the source transaction.

In the expenditure inquiry forms and reports within Oracle Projects, you can identify related transactions based on your implementation data used for related transactions, particularly the expenditure type. Oracle Projects displays all related transactions immediately after the source transaction.

What if Some Parameters Are Not Passed to CreateRelatedItem?
All parameters that are not passed to the related transactions procedure are read from the source transaction; except for quantity, billable status, and expenditure type. The quantity is set to 0 for the related transactions. The billable status is derived based on the transaction controls and transaction control extensions that you define. Expenditure type is a required parameter that you provide.

What if a Related Transactions Does Not Pass Validation?
If a related transaction does not pass validation in the CreateRelatedItem procedure, Oracle Projects does not create the related item, and marks the source transaction with a cost distribution rejection reason specifying that an error was encountered in the labor transaction extension procedure. The source item is not marked as cost distributed and is displayed in the exception output report in the Distribute Labor Costs process.
Where Can I Establish the Billable or Capitalizable Status of Related Transactions?

The related transaction’s billable or capitalizable status is derived using transaction controls and task billable or capitalizable status like all other transactions. You can further derive the billable or capitalizable status of related transactions by including logic in the transaction control extension procedure to look at related transactions based on certain criteria, and then setting the billable or capitalizable flag. The transaction control package, which establishes the billable or capitalizable status, is called within the CreateRelatedItem procedure.

How Does the Transaction Controls Procedure Identify Related Transactions?

The transaction control procedure, which establishes the billable or capitalizable status and validates transactions, is called within the CreateRelatedItem procedure.

The transaction control extension identifies related transactions by the x_module of the CreateRelatedItem procedure. When the calling procedure (CreateRelatedItems) calls transaction controls, the x_module is set to CreateRelatedItem.

Can I Calculate Raw Cost Amounts of Related Transactions Using Burden Costing?

You can use the Cost Plus API to determine raw cost amounts of related transactions based on your burden costing setup.

See Also

Cost Plus Application Programming Interface (API): page 18 – 124

Adjusting Related Transactions

Whenever an adjustment is performed on a source transaction that requires the item to be backed out (transfer, split, manual reversal through the Pre–Approved Expenditure form), Oracle Projects creates reversals for the related transactions of the source transaction.
You cannot independently process related transactions from the source transactions. However, there are adjustment actions for which related transactions are processed with the source transaction.

See Also

Adjustments to Related Transactions: page 4 – 30
Labor Billing Extensions

Labor billing extensions allow you to derive labor billing amounts for individual labor transactions. You can use labor billing extensions to implement unique labor billing methods. Some examples of labor billing extensions you may define are:

- Bill overtime premium hours at cost
- Bill based on volume of work performed

Processing

Oracle Projects processes labor billing extensions for activity based billing during revenue generation. During processing, if Oracle Projects encounters a transaction that has a derived bill amount from a labor billing transaction, it skips the standard bill amount and rate calculation section of the revenue process for that transaction.

See Also

Revenue Flow: page 7 – 27


Designing Labor Billing Extensions

You should determine the logic and the additional data elements your client extensions require before you write them. We recommend that you consider the additional design issues for labor billing extensions:

- What are the conditions and circumstances in which you cannot use the standard, activity based billing methods (identified by the WORK distribution rule) supported by Oracle Projects?
- How is the bill amount calculated in these cases?
- How do you identify labor transactions that meet these conditions?
• How do you store rates and other information that your calculations may require? How are the rates and other information maintained?

• What are the exception conditions for your labor billing extension? What is the exception handling if you cannot find a rate that should exist?

See Also

Designing Client Extensions: page 18 – 9

Writing Labor Billing Extensions

Oracle Projects provides a template package and procedure that you use as the basis of your labor billing extension procedures. The name of the package is **PA_Client_Extn_Billing**, the name of the procedure is **Calc_Bill_Amount**.

Print out and review the following files before you begin writing labor billing extensions. The files are located in the Oracle Projects admin/sql directory.

- **PAXICTMB.pls**. Labor Billing Extension Package Body Template. This file contains the procedure that you modify to implement labor billing extensions. You can define as many procedures as you like within this package or within the predefined procedure.

- **PAXICTMS.pls**. Labor Billing Extension Package Specification Template. If you create procedures within the package outside the predefined procedure, you must also modify this file.

**Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.
Table 18–12 lists the parameters that Oracle Projects provides for the labor billing extension.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_expenditure_item_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the expenditure item.</td>
</tr>
<tr>
<td>x_sys_linkage_function</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The expenditure type class of the expenditure item.</td>
</tr>
<tr>
<td>x_amount</td>
<td>IN OUT</td>
<td>NUMBER</td>
<td>The bill amount.</td>
</tr>
<tr>
<td>x_bill_rate_flag</td>
<td>IN OUT</td>
<td>VARCHAR2</td>
<td>Indicates if bill rate should be set.</td>
</tr>
<tr>
<td>x_status</td>
<td>IN OUT</td>
<td>NUMBER</td>
<td>The status of the procedure.</td>
</tr>
</tbody>
</table>

**Additional Information About Parameters**

**Using Bill Rate**

Return one of the following values as the x_bill_rate_flag parameter value to specify if the amount that you have derived is based on a bill rate or a percent markup:

- **B** (specifies bill rate)
- **M** (specifies markup, default if null)

If you specify that your amount is based on a bill rate, Oracle Projects populates the bill rate of the expenditure item by dividing the bill amount by the number of hours. If you specify that your amount is a markup, Oracle Projects does not set the bill rate.

**Using Status**

Use the x_status parameter to handle error conditions for your procedure. This parameter indicates the processing status of your extension as follows:
The extension executed successfully.

An Oracle8 error occurred and the process did not complete. Oracle Projects writes an error message to the process log file and rolls back the transactions processed for the entire project.

An application error occurred. Oracle Projects writes a rejection reason to `PA_EXPENDITURE_ITEMS.REV_DIST_REJECTION_CODE` and does not mark items as revenue distributed. You can review the rejection reason in the revenue generation exception report.

\[
x_{\text{status}} = 0 \\
x_{\text{status}} < 0 \\
x_{\text{status}} > 0
\]
Overtime Calculation Extension

The overtime calculation extension allows you to define your own rules to implement company-specific overtime calculation policies. The extension calculates overtime costs and charges them to an indirect project other than the project where the labor was charged.

**Note:** If you want to charge overtime to the project where the labor was charged, consider creating items via the labor transaction extension. See: Labor Transaction Extensions: page 18 – 40.

For more information on the context and setup of overtime calculations, see: Implementing Overtime Charged to an Indirect Project: page 17 – 4.

**Processing**

Oracle Projects calls the Overtime Calculation Extension during the Distribute Labor Costs process.

**See Also**

- Tracking Overtime and Premium Labor Costs: page 17 – 2
- Designing Client Extensions: page 18 – 9

**Designing Overtime Calculation Extensions**

Oracle Projects provides a template Overtime Calculation extension. You can use the template to understand the extension, and then make appropriate changes to meet your business needs. Before modifying the extension, read the following essay and related case studies on implementing overtime: Tracking Overtime and Premium Labor Costs: page 17 – 2.
Implementing Your Company’s Overtime Calculation Extension

If you decide to use automatic overtime calculation, you can implement your company’s overtime policies using the template Overtime Calculation extension as a starting point.

Your technical staff can customize the Overtime Calculation extension to accommodate the overtime rules that your business uses.

We recommend that you complete the following steps to implement your company’s Overtime Calculation extension:

• Define and document your overtime policy
• Use your documented overtime policy to determine the kind of implementation data you need to drive automatic overtime calculation. This implementation data may include compensation rules, expenditure types, labor cost multipliers, and an overtime project and tasks
• Define the implementation data necessary to drive automatic overtime calculation
• Have your technical staff code your overtime policy in the Overtime Calculation extension
• Test your implementation data and Overtime Calculation extension to ensure that it correctly implements your company’s overtime policies

A few additional notes about implementing the Overtime Calculation extension are:

• Define all overtime expenditure types with an end date so that timecard clerks cannot enter overtime through the Pre–Approved Expenditures window
• Base automatic overtime calculation on weekly overtime rules. Oracle Projects is designed to process weekly timecards; all expenditure item dates of a timecard must be within the expenditure week ending date of the timecard. Therefore, automatic overtime calculation is most easily performed based on weekly overtime rules

How the Overtime Calculation Extension Processes Overtime

The Overtime Calculation extension template follows these steps to process overtime:
• Determines all employees and corresponding weeks which may include new overtime to process. The Overtime Calculation extension calculates and creates overtime only for employees with timecards processed in the run of Distribute Labor Costs that calls the Overtime Calculation extension. These employees and weeks are identified by the request_id of the straight time expenditure items that are costed before the Overtime Calculation extension is called.

• Sums the hours required to calculate overtime for identified employees and weeks. The standard Overtime Calculation extension sums the total hours for the week and the total hours for each day of the week, relying on the timecard entry validation rule that all labor expenditure item dates must be within the expenditure week ending date of the timecard.

• Calculates overtime hours based on the hours worked, the employee’s compensation rule, and other criteria you might specify. The standard Overtime Calculation extension calculates overtime for an employee and a week based on the employee’s compensation rule using the three compensation rules described in the case study. See: Implementing Overtime Charged to an Indirect Project: page 17 – 4.

• Creates overtime expenditure items for each type of overtime for which the employee is eligible. The overtime item is charged to the overtime project and appropriate overtime task that is specified in the Overtime Calculation extension using the overtime expenditure type defined for the employee’s compensation rule. The expenditure item date is set to the week ending date. The expenditure item is assigned the labor cost multiplier that is associated with the overtime task to which it is charged.

The extension creates a new expenditure for each person and week that has new overtime items. The new expenditures are assigned to an expenditure batch created in the Overtime Calculation extension. The expenditure batch name is based on the Request ID number, and uses the prefix “PREMIUM”. For example, an expenditure batch run under Request ID 1205 would be named PREMIUM – 1205.

• Lists employees with new overtime items on the Overtime Calculation Report.

After the Overtime Calculation extension has completed, the Distribute Labor Costs process costs the new overtime items.
Writing the Overtime Calculation Extension

Oracle Projects provides a template package that contains the procedures that you modify to implement overtime calculation. The name of the package is `pa_calc_overtime`.

Print out and review the following files before you begin writing the overtime calculation extension. These files are located in the Oracle Projects admin/sql directory.

- **PAXDLCOB.pls**: Overtime Calculation Extension Body Template. This file contains the procedure that you modify to implement overtime calculation. You can define as many procedures as you like within this package or within the predefined procedure.

- **PAXDLCOS.pls**: Overtime Calculation Extension Specification Template. If you create procedures outside the predefined procedure within the `pa_calc_overtime` package, you must also modify this file to include those new procedures.

**Suggestion**: After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.

We recommend that you use the PL/SQL User’s Guide and Reference Manual and the Oracle Projects Technical Reference Manual as reference material while defining procedures:

Structure of the Overtime Calculation Report

The Overtime Calculation Report is an output report generated by the Distribute Labor Costs process, using procedures in the Overtime Calculation extension. The report is only generated if you have implemented the Overtime Calculation extension.

The name of the template report is `PAXDLIOT.rdf`. It is located in the Oracle Projects reports directory. You do not need to modify this report. You should only need to modify the PL/SQL procedures in the overtime calculation extension template package. See: Writing the Overtime Calculation Extension: page 18 – 59.

Figure 18 – 1 shows the structure of the Overtime Calculation Report. The procedures you are most likely to modify to implement your company’s overtime rules are marked with an asterisk (*) in the diagram.
The report first calls the Check_Overtime_Tasks_Exist procedure. This procedure looks for overtime projects and tasks and returns all relevant task names, up to a maximum of five. These tasks determine the column titles in the report.

Next, the report queries the database for all records processed by the Distribute Labor Costs process. The report then calls the Process_Overtime procedure. This procedure determines the amount and type of overtime for each employee and period, creates new expenditure items for these values, and passes the values back to the report.

Calc_Overtime and Calc_Daily_Overtime are procedures used by the Process_Overtime procedure. You can decide whether to use these procedures in your customized extension.
Your extension must also adjust overtime that relates to any adjustments made to the original transactions. For best results, use the Process_Overtime procedure to create the new overtime records, as this procedure handles all the inserts and updates to the Oracle Projects tables.
Billing Extensions

Billing extensions allow you to implement and automate company-specific billing methods. With billing extensions, you can automatically calculate summary revenue and invoice amounts during revenue and invoice generation based on unique billing methods. These billing amounts are accounted for using events. Some examples of billing extensions you can implement are:

- Fee
- Surcharge
- Retention

This essay describes the implementation steps of billing extensions, as well as the processing of billing extensions and automatic events within Oracle Projects.

We also provide you with detailed information about designing and writing billing extensions, including information about public procedures and views you can use in your billing extensions to derive additional information. Finally, we provide you with information to help you test and debug billing extensions.

⚠️ Warning: The public procedures and views in the Oracle Projects billing extensions are intended for use only in billing extensions for the Generate Draft Revenue/Generate Draft...
Invoice process. These public procedures and views will not work standalone or in any other client extensions.

⚠️ **Warning:** Do not use the PL/SQL commands Commit and Rollback in your billing extension code.

### Overview of Billing Extensions

To use the billing extension functionality, you must implement billing extensions and assign them to projects. Oracle Projects processes active billing extensions and accounts for the calculated revenue and invoice amounts.

### Implementation

To implement your company-specific billing methods, you first design and write rules to calculate billing amounts using PL/SQL procedures. You then enter the billing extension definition in Oracle Projects to specify additional information (such as the procedure name to call) that is used by the revenue and invoice programs to process the extension.

### Assignments

You assign billing extensions to project types, projects, or top tasks. When you assign a billing extension, you can specify a percentage and/or an amount to use as inputs into your billing extension calculation.

### Budget Type

You can specify which budget type to use as input to calculations that use budgeted amounts. If no value is given for budget type, the billing extension uses the Approved Cost Budget and/or Approved Revenue Budget. See: Retrieving Budget Amounts: page 18–84.

### Processing

When you run the revenue or invoice processes, Oracle Projects looks for active billing assignments. When an assignment is found, the processes read the billing extension definition and call the appropriate procedure. If there are multiple active assignments for a project or task, Oracle Projects calls the extension in ascending order based on the processing order specified in the billing extension definition.
Oracle Projects executes top task level assignments once for each top task. Billing extensions assigned to the project and the project type are executed once for each project, except in the case of task level funding. If a project uses task level funding, Oracle Projects executes billing extensions assigned to the project and the project type, once for each authorized top task on the project.

**Automatic Events**

Your billing extension calculates revenue and invoice amounts and creates one or more *Automatic* events to account for the revenue and invoice amounts. Oracle Projects processes these events as it does other manually entered events. You can store audit amounts for these events in the audit columns of the Events table.

Automatic events are events having an event type classification of *Automatic*. With automatic events, you can increase or decrease revenue and invoice amounts. You can also independently specify revenue and invoice amounts for the events. If an event has both a nonzero revenue amount and a nonzero invoice amount, you must use the same sign for both amounts. Some examples of revenue and invoice amounts for these events are:

- Revenue = $100, Invoice = $0
- Revenue = $100, Invoice = $200
- Revenue = –$100, Invoice = –$100
- Revenue = $0, Invoice = –$100

**See Also**

Event Types: page 16 – 143
Overview of Implementation Steps

To implement billing extensions in Oracle Projects according to your company’s method of doing business, perform the following steps.

**Step 1  Design billing extensions**

Carefully plan the definition of billing extensions before you begin writing them. Typically, the logic of your billing extensions are dependent on your company’s implementation of Oracle Projects. Consider the following issues when designing your billing extensions:

- Logic of billing extensions
- Additional implementation data required

**Step 2  Write and store PL/SQL procedures**

After you design your billing extensions, write the PL/SQL procedures that define the logic of the billing extensions.

After you write your procedures, store them in the database and test them to ensure that your billing extension logic works as expected.
Step 3  **Define billing extensions**
Define your billing extensions, which specify the PL/SQL procedure name and additional information for Oracle Projects to use when processing billing extensions.
You use the Billing Extensions window to define billing extensions.
This step assumes that an event type has already been defined for the default event type. For a discussion of automatic events created by billing extensions, see: Automatic Events: page 18 – 64.

Step 4  **Assign billing extensions to project types**
Assign billing extensions to the appropriate project types if you have defined non–project–specific billing extensions. Your project users will assign the project–specific billing extensions to projects and tasks as they define projects.
You use the Project Types form to assign billing extensions to project types.

**See Also**

Designing Billing Extensions: page 18 – 66
Writing Billing Extension Procedures: page 18 – 79
Defining Billing Extensions: page 18 – 92
Defining Project Types: page 16 – 184

**Designing Billing Extensions**
Before you begin designing billing extensions, you should familiarize yourself with the three classes of billing extensions to understand the complexity of the business problem you are trying to solve.
There are also specific questions of client extension design that are unique to determining the requirements and logic of your billing extensions. We list these questions in the pages that follow, and then address some of these issues in further detail in the Concepts of Billing Extension Definitions section: page 18 – 69.
Understanding Billing Extensions Classes

There are three primary classes of billing extensions that you can write; the classes differ by how you calculate the revenue and invoice amounts:

Class 1: Based on a function of the revenue and invoice amounts included on draft revenue and invoices

An example is a Surcharge billing extension, which is typically a percentage of the invoice amount. This is the simplest class of billing extension to design and write.

Class 2: Based on values independent of the amounts included on draft revenue and invoices.

An example is the percent complete revenue accrual method, which is based on the physical percent complete entered for the project multiplied by the budget revenue amount. The calculated amount is independent of other amounts included on the revenue and invoice. In many cases, this class of billing extensions may be the only method used to calculate revenue and invoice amounts for the project, particularly if you are using Event based revenue accrual and invoicing.

Class 3: Based on the attributes of a group of transactions included on draft invoices, for which the billing extension calculates the amount to bill for these transactions.

For example, you may wish to calculate the revenue and invoice amounts based on number of days worked, rather than the actual hours worked which are recorded on the timecard. Another example is volume discounts on an invoice, in which you provide discounts based on the volume of transactions billed. You calculate the amount to bill for the group of transactions without specifying a bill amount for each transaction.

To properly track which individual transactions are billed using an automatic event, you must set up your projects to include these transactions on an invoice, but without an invoice amount. These transactions must have a nonzero revenue amount and an invoice amount of zero. Oracle Projects includes these transactions on the invoice on a net zero adjustment line which you cannot review in the forms, but that you can read from the database in your billing extension. You can set up a project to process transactions in this way by using different revenue and invoice burden schedules; the revenue schedule determines the appropriate revenue amounts and the invoice schedule calculates a invoice amount equal to zero.
Oracle Projects links the detail transactions to the invoice on a net zero adjustment invoice line, and you hold and account for the summary bill amount for these transactions using an automatic event included on the invoice. You can then write custom reports to list the detail transactions that backup the summary event amount.

You can only implement this class of billing extensions for invoicing amounts. You cannot use this class for revenue amounts calculated during revenue generation.

**Designing Billing Extensions**

You should carefully design billing extensions before implementing them in Oracle Projects. Careful planning of your billing extension helps to ensure that you are calculating and accounting for revenue and invoice amounts according to your company–specific rules. See: Designing Client Extensions: page 18–9.

You should consider the additional design issues for billing extensions:

- Are you calculating a revenue amount, an invoice amount, or both? Are the amounts generated during revenue accrual, invoice generation, or both?
- How are the amounts calculated? What are the inputs to the calculation?
- How are the inputs derived?
- How are the amounts processed: (1) for reporting purposes (2) for accounting purposes, (3) for invoicing?
- How are the attributes of the automatic event set: event type, event organization, event description, completion date?
- Under what conditions is this calculation used? What types of projects? What types of billing terms?
- How is the billing extension processed for adjustments? Adjustments are defined as revenue credits or invoice credit memos, based on other transactions.
- Can this billing extension be called with other billing extensions on the same project/task? If so, what is the dependency and order of your billing extensions?
- What is the exception handling if some input values cannot be found?
- How is the logic affected if the inputs change over time?
• Is there a limit on the amount calculated? If so, what is the logic?
• Are there implications of the level at which the project is funded – either the project level or the top task level? If so, what are they?

Once you answer these questions, you should have the appropriate information to define a billing extension in Oracle Projects and to document the functional specifications for your technical resource to use in writing the PL/SQL procedure.

Concepts in Billing Extension Definitions

When you enter billing extension definitions, you specify parameters that specify how your billing extension is processed in Oracle Projects. This section explains some of these parameters.

Calling Process

You specify if the billing extension is called by the revenue generation program, the invoice generation program, or both programs.

When you call billing extensions during revenue generation, you can create events with a revenue amount, or with a revenue amount and a bill amount, as long as the revenue amount is nonzero.

When you call billing extensions during invoice generation, you can create events with a bill amount, or with a revenue amount and a bill amount, as long as the bill amount is nonzero.

The following table provides examples of events with various revenue and bill amounts that you can create in the two calling processes.

<table>
<thead>
<tr>
<th>Billing Extension</th>
<th>Event</th>
<th>Revenue Amount</th>
<th>Bill Amount</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Called in Generate Draft Revenue</td>
<td>1</td>
<td>1</td>
<td>100</td>
<td>Bill amount is not processed until revenue for the event is distributed</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>100</td>
<td>Revenue event only</td>
</tr>
</tbody>
</table>

Table 18 – 13 Calling Process: Example Events (Page 1 of 2)
If you create an event with both revenue and bill amounts, the revenue amount and the bill amount do not have to be the same. You can create positive or negative event amounts with billing extensions.

You can create a billing extension that is called by both revenue generation and invoice generation. You would do this if your billing calculation is similar for both the revenue and bill amounts, with the exception that the event revenue amount is based on the accrued revenue, and the event bill amount is based on the amount invoiced. You can write your procedure to have the same logic for the calculation but to use the appropriate input of either accrued revenue or amount invoiced into your calculation. With this approach of writing one procedure and one billing extension, you can avoid duplication of your logic. In addition, your project users only need to assign one billing extension to their projects, instead of two billing extensions – one for revenue accrual and one for invoicing.

**Calling Place**

There are several predefined places within the revenue generation and invoice generation programs where your billing extension can be called when processing a project:

- Pre-Processing
- Delete Processing
- Cancel Invoice Processing
- Write-Off Invoice Processing
- Adjustment Processing
- Regular Processing
- Post-Regular Processing
• Post–Processing

The following figures illustrate the order in which these steps are executed after the project is selected for revenue accrual or invoice generation.

**Figure 18–3**

When Revenue Processes Call Billing Extensions

### Revenue Deletion Processing
- Call PRE Billing Extension
- Call DEL Billing Extension
- Delete Revenue Processing
- Call POST Billing Extension

### Revenue Adjustment Processing
- Call PRE Billing Extension
- Call ADJ Billing Extension
- Adjustment Revenue Processing
- Call POST Billing Extension

### Revenue Regular Processing
- Call PRE Billing Extension
- Call REG Billing Extension
- Regular Revenue Processing
- Automatic Revenue Event Processing
- Call POST–REG Billing Extension
- Automatic Revenue Event Processing
- Call POST Billing Extension
Pre-processing billing extensions are called before any revenue accrual or invoice calculations for a project. The Generate Draft Revenue and Generate Draft Invoices processes do not allow you to create automatic events in this calling place. An example of a preprocessing billing extension is to place all unbilled, unpaid supplier invoice items on hold, so that they are not billed; and to release the billing hold on any unbilled, paid supplier invoice transactions that are on hold. You can then bill the paid supplier invoice items during standard invoice processing.
Delete Processing

*Delete processing* billing extensions are called after revenue is billed and before any revenue accrual or invoice calculations for a project; this is only applicable to invoicing billing extensions. The Generate Draft Invoices process does not allow you to create automatic events in this calling place.

Cancel Invoice Processing

*Cancel invoice processing* billing extensions are called after the invoice cancellation for a project. This is only applicable to invoice billing extensions. The Generate Draft Invoices process does not allow you to create automatic events in this calling place.

Write–Off Invoice Processing

*Write–off invoice processing* billing extensions are called after the invoice write–off processing for a project. This is only applicable to invoice billing extensions. The Generate Draft Invoices process does not allow you to create automatic events in this calling place.

Adjustment

*Adjustment* processing creates crediting revenue and invoices that credit existing revenue or invoices. Oracle Projects creates crediting revenues and invoices due to changes in revenue or invoice amounts or in the revenue general ledger account. These credits are created for one or more individual transactions which have previously been processed and included on a draft revenue or invoice; these changes in amounts or accounts result from adjustment actions on the individual transactions.

You can create automatic events in this step. If you transfer these events to Oracle Receivables for autoinvoicing, link the automatic event invoice lines to their corresponding events in the original invoice. See: Inserting Events: page 18 – 82. Oracle Projects calls a billing extension in this step after all of the crediting revenue and invoices are created.

Regular

*Regular* processing creates non–crediting revenue and invoices. Oracle Projects creates revenue and invoices based on individual transactions and events that have not previously been processed for revenue accrual and invoicing.

You can create automatic events in this step. Oracle Projects calls a billing extension in this step after all non–crediting revenues and invoices are created.

Post–Regular

*Post–regular processing* billing extensions create events based on all prior revenue generated in order to base the calculation on the total revenue accrued, including other automatic events. An example of a post–regular processing billing extension is cost accrual based on the revenue generated. See: Revenue–Based Cost Accrual: page 7 – 73.

Post–Processing

*Post–processing* billing extensions are called after all of the adjustment, regular, and post–regular processing is complete. The Generate Draft Revenue and Generate Draft Invoices processes do not allow you to
create automatic events in this calling place. All of the revenue and invoice processing is complete before this step is executed. An example of a post-processing billing extension is to notify a project manager when an invoice greater than $25,000 is created.

The following table shows an example of the different automatic events created by using different calling places for a billing extension based on a percentage of the amount invoiced.

<table>
<thead>
<tr>
<th>Period</th>
<th>Invoice Number</th>
<th>Invoice Credited</th>
<th>Invoice Amount</th>
<th>Regular &amp; Adjustment</th>
<th>Regular Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td>1000</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1</td>
<td>−500</td>
<td>−50</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1500</td>
<td></td>
<td>150</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>Summary:</td>
<td>2000</td>
<td></td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>

Table 18 – 14 Calling Place: Example Events (Page 1 of 1)

The billing extension called only during regular processing accounted for the total amount invoiced, including the credited amount during regular processing as illustrated by the event created for invoice number three.

**Transaction Independent**

Once you determine the inputs to your calculations, you can determine if your billing extension calculation is solely dependent on other transactions being processed, or if your calculation can be executed without any other transactions being processed. Transactions refer to expenditure items and events.

**Transaction independent** billing extensions are executed for each project with an active billing assignment, even if there are no transactions to process. This type of billing extension relies on an input other than billable transactions on a project. If this input changes, the calculated billing amount changes, which you want to record. For example, the cost-to-cost revenue accrual method, which relies on the budgeted cost and revenue amounts. If the budgeted cost or budgeted revenue changes, the revenue amount changes. You want to record this
revenue amount change even if no other transactions are processed in revenue generation. This category includes the class of billing extensions that calculate revenue and invoice amounts based on values independent of the amounts included on draft revenue and invoices.

**Note:** If you design a billing extension to be transaction independent, it will be executed in every run of the revenue or invoice processes.

**Transaction dependent** billing extensions are executed only if there are other transactions processed. An example of this type of billing extension is surcharge in which you calculate a percentage of the amount billed. You do not want to bill surcharge if no other transactions are billed.

Transaction dependent billing extensions are called only if billable expenditure items and events exist that need to be processed. For example, there may be new transactions that are set to Non–Billable, which are not going to generate any revenue or bill amount and will not cause the billing extension to be called. This category includes billing extensions that calculate revenue and invoice amounts based on (i) a function of the revenue and invoice amounts included on draft revenue and invoices, or (ii) the attributes of a group of transactions included on draft invoices.

The following table shows an example of transaction dependent and transaction independent billing extensions. Billing extension 1, which is transaction dependent, calculates 10% of the invoice amount. Billing extension 2, which is transaction independent, bills $100 per period regardless of amount invoiced in that period.

<table>
<thead>
<tr>
<th>Period</th>
<th>Invoice Number</th>
<th>Invoice Credited</th>
<th>Invoice Amount</th>
<th>Transaction Dependent</th>
<th>Transaction Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td>1000</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1</td>
<td>−500</td>
<td>−50</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1500</td>
<td></td>
<td>150</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 18–15 Transaction Independent Example: Example Events (Page 1 of 2)
Relationship between Calling Place and Transaction Independent

The parameters for calling place and transaction independent are related.

You should call any transaction dependent billing extension in both regular and adjustment processing. This will ensure that all adjustments, including those that do not result in a new non-crediting amount, are properly accounted for. For example, you may have a non-billable adjustment which reverses amounts, but does not process any new non-crediting amounts.

You only need to call your transaction independent billing extension once during processing for a project, which can be done during regular processing. You typically do not call transaction independent billing extensions during adjustment processing.

The table below summarizes how you should set up the calling place and transaction independent parameters in your billing extension definition, based on the type of billing extension calculation.

<table>
<thead>
<tr>
<th>Billing Extension Calculation</th>
<th>Regular</th>
<th>Adjustment</th>
<th>Transaction Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based solely on transactions</td>
<td>✔️</td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>Based on inputs other than</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>transactions</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 18 – 16 Calling Place and Transaction Independent Parameters (Page 1 of 1)

There are exceptions to the general rule described in Table 18 – 16. You may define a billing extension as transaction dependent, but to be called only during regular processing. For example, you want to charge interest on outstanding invoices, but only want to include the interest on an invoice that has other transactions included on it. The
interest calculation itself is a transaction independent calculation, but you define it as transaction dependent so that it is calculated only when other transactions are processed for an invoice. You do not want to create invoices with only an interest amount.

**Project-Specific**

You need to determine if your billing extension implements a company policy across projects or if it is applicable only to specific projects for which it is negotiated.

*Project-specific* billing extensions are those methods which are applicable only to specific projects for which they are negotiated. Project users assign these billing extensions to projects and top tasks; you cannot assign these billing extensions to project types.

*Non-project-specific* billing extensions are those methods which implement company policy across projects. You assign these billing extensions to project types; the billing extension applies to all projects of that project type. Project users cannot assign these billing extensions to projects.

**Suggestion:** You can include conditional logic in your procedure to allow exceptions to project type rules.

**Event Attributes**

When designing billing extensions, you can specify the attributes of automatic events that are created by billing extensions. You can use the following default values or override the defaults for any of these attributes.

<table>
<thead>
<tr>
<th>Event Attribute</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Type</td>
<td>Defaults to event type on billing extension; event type must have an event type classification of <em>Automatic</em>.</td>
</tr>
<tr>
<td>Event Description</td>
<td>Defaults to event description on billing extension.</td>
</tr>
<tr>
<td>Event Organization</td>
<td>Defaults to managing organization of project or task to which the event is assigned.</td>
</tr>
</tbody>
</table>

Table 18 – 17 (Page 1 of 2) Attributes of Automatic Events
<table>
<thead>
<tr>
<th>Event Attribute</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion Date</td>
<td>Accrue through date for events created during revenue generation, bill through date for events created during invoice generation.</td>
</tr>
<tr>
<td>Revenue Amount</td>
<td>For billing extensions called in revenue generation, must specify revenue amount.</td>
</tr>
<tr>
<td></td>
<td>For billing extensions called in invoice generation, can optionally specify revenue amount; revenue amount is not processed until invoice on which the event is billed is released.</td>
</tr>
<tr>
<td>Bill Amount</td>
<td>For billing extensions called in invoice generation, must specify bill amount.</td>
</tr>
<tr>
<td></td>
<td>For billing extensions called in revenue generation, can optionally specify bill amount; bill amount is not processed until revenue for the event is accrued.</td>
</tr>
<tr>
<td>Descriptive Flexfield Segments</td>
<td>Can pass any value as long as the value is valid with the descriptive flexfields you have defined for events.</td>
</tr>
<tr>
<td>Audit Columns in Events</td>
<td>For values used in billing extension calculations. NOTE: not displayed to the user, but available in the table. See: Insert events: page 18 – 82.</td>
</tr>
</tbody>
</table>

**Budget Attributes**

When designing billing extensions, you can specify the attributes of budgets that are used by billing extensions. You can use the following default values or override the defaults for any of these attributes.

<table>
<thead>
<tr>
<th>Budget Attribute</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Budget Type Code</td>
<td>Defaults to Approved Cost Budget.</td>
</tr>
<tr>
<td>Revenue Budget Type Code</td>
<td>Defaults to Approved Revenue Budget.</td>
</tr>
</tbody>
</table>

**Table 18 – 17 (Page 2 of 2) Attributes of Automatic Events**

**Table 18 – 18 (Page 1 of 1) Attributes of Budgets**
Writing Billing Extension Procedures

Oracle Projects revenue and invoice generation programs call your billing extension procedures which define the logic to calculate and create automatic events according to your rules.

Your procedure can call other procedures or views. You can use predefined procedures and views, or you can write your own procedures. We discuss these predefined procedures and views in more detail in the pages that follow.

Procedure Template

Oracle Projects provides a template package and procedure that you use as the basis of your billing extension procedures.

Print out and review the following files before you begin writing billing extensions. The files are located in the Oracle Projects admin/sql directory.

<table>
<thead>
<tr>
<th>File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAXITMPS.pls</td>
<td>Billing Extension Package Specification Template. This file contains the procedure that you modify to implement billing extensions. You can define as many procedures as you like within this package or within the predefined procedure.</td>
</tr>
<tr>
<td>PAXITMPB.pls</td>
<td>Billing Extension Package Body Template. If you create procedures within the package outside the predefined procedure, you must also modify this file.</td>
</tr>
</tbody>
</table>

The following table lists the parameters that Oracle Projects provides for the billing extension procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project of the billing assignment.</td>
</tr>
<tr>
<td>X_top_task_id *</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the top task of the billing assign. This parameter has a value in the following cases: 1) Billing extension assigned to top task 2) Project for which a billing extension is applicable is funded at the top task level. The billing extension is executed once for each authorized top task belonging to the project.</td>
</tr>
</tbody>
</table>

Table 18 – 19 (Page 1 of 2) Billing Extension Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_calling_process</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Specifies whether the revenue or invoice program is calling the billing extension. The possible values of this parameter are Revenue or Invoice.</td>
</tr>
<tr>
<td>X_calling_place</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Specifies where the billing extension is called in the revenue or invoice program. Possible values are PRE, POST, REG, or ADJ.</td>
</tr>
<tr>
<td>X_amount</td>
<td>IN</td>
<td>NUMBER</td>
<td>The amount entered on the billing assignment.</td>
</tr>
<tr>
<td>X_percentage</td>
<td>IN</td>
<td>NUMBER</td>
<td>The percentage entered on the billing assignment.</td>
</tr>
<tr>
<td>X_rev_or_bill_date</td>
<td>IN</td>
<td>DATE</td>
<td>Specifies the accrue through date if called by revenue generation, or the bill through date if called by invoice generation.</td>
</tr>
<tr>
<td>X_bill_extn_assignment_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>ID of the billing assignment being processed. Use this to select information (such as descriptive flex-field values) from the billing assignment.</td>
</tr>
<tr>
<td>X_bill_extension_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>ID of the billing extension being processed. Use this to select information (such as descriptive flex-field values) from the billing extension definition.</td>
</tr>
<tr>
<td>X_request_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Request ID of the current run.</td>
</tr>
</tbody>
</table>

* You cannot create project level events for projects using task level funding. You must write your billing extensions so that they work if they are called with or without this parameter.

Table 18 – 19  (Page 2 of 2) Billing Extension Parameters

Views and Procedures You Can Use

Oracle Projects provides public, predefined procedures and views that you can use within your billing extension procedures for the Generate Draft Revenue and Generate Draft Invoice processes to derive amounts and create events. These procedures are created in a package named `pa_billing_pub`.

**Note:** You cannot use the public billing extension procedures or views by themselves or from any other client extension.
In the pages that follow, we provide you with a description of each procedure, information about the parameters available for the procedure, and any additional information you need to use the procedure in your billing extension. Use these procedures and views to:

- Calculate amounts: page 18 – 81
- Identify transactions processed in the current run: page 18 – 81
- Insert events: page 18 – 82
- Retrieve budget amounts: page 18 – 84
- Handle error conditions: page 18 – 86

Calculating Amounts

Oracle Projects provides two views that you can use to identify detail expenditure items included on draft revenue and draft invoices processed in a given run. Use these views in your calculations for transaction dependent billing extensions. The views display the detail transactions processed for the context in which a billing extension is called, which consists of a project, a top task (if task level assignment), a calling place, and a request ID.

- PA_BILLING_REV_TRANSACTIONS_V (use this in procedures that are called during revenue generation)
- PA_BILLING_INV_TRANSACTIONS_V (use this in procedures that are called during invoice generation)

Identifying Process Run Information

Oracle Projects provides four views that you can use to identify the detail revenue and invoice transactions processed in the current run.

- PA_BILLING_REV_DELETION_V displays the draft revenues that will be deleted in the current draft revenue generation run. Use this view in the billing extension called during the deletion processing of revenue generation.
- PA_BILLING_REV_INV_DELETION_V displays the draft invoices that will be deleted in the current draft revenue generation run. Use this view in the billing extension called during the deletion processing of revenue generation.
- PA_BILLING_INV_DELETION_V displays the draft invoices that will be deleted in the current draft invoice generation run.
Use this view in the billing extension called during the deletion processing of invoice generation.

- PA_BILLING_INV_PROCESSED_V displays the invoices that were processed in the current run.

Inserting Events

Use the insert_events procedure to create automatic events in the events table. You must use this procedure when creating events using billing extensions, as it contains validation that ensures the data integrity of the events that you create.

If this procedure encounters an error, it displays an error message in the log file of the process that called the procedure and does not create an event.

Package.Procedure

**pa_billing_pub.insert_event**

Listed below are the parameters available for the insert_event procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_rev_amt</td>
<td>IN</td>
<td>REAL</td>
<td>Revenue amount of event.</td>
</tr>
<tr>
<td>X_bill_amt</td>
<td>IN</td>
<td>REAL</td>
<td>Bill amount of event.</td>
</tr>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>ID of the project to which the event is assigned.</td>
</tr>
<tr>
<td>X_event_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Event type of event. If a default is not specified, you must provide a value. Event type must have an event type classification of AUTOMATIC.</td>
</tr>
<tr>
<td>X_top_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>ID of the top task to which the event is assigned.</td>
</tr>
<tr>
<td>X_organization_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>ID of event organization.</td>
</tr>
</tbody>
</table>

Table 18 – 20   (Page 1 of 2) Insert Event Parameters
## Insert Event Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_completion_date</td>
<td>IN</td>
<td>DATE</td>
<td>Completion date of event.</td>
</tr>
<tr>
<td>X_event_description</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Description of event. If you do not specify a default event description, you must provide a value here.</td>
</tr>
<tr>
<td>X_event_num_reversed</td>
<td>IN</td>
<td>NUMBER</td>
<td>Original automatic event number.</td>
</tr>
<tr>
<td>X_attribute_category</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Descriptive flexfield context.</td>
</tr>
<tr>
<td>X_attribute1–10</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Descriptive flexfield segments.</td>
</tr>
<tr>
<td>X_audit_amounts1–10</td>
<td>IN</td>
<td>NUMBER</td>
<td>Audit amounts for events.</td>
</tr>
<tr>
<td>X_cost_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Audit cost budget type code.</td>
</tr>
<tr>
<td>X_rev_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Audit revenue budget type code.</td>
</tr>
<tr>
<td>X_error_message</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Error message text.</td>
</tr>
<tr>
<td>X_status</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Status indicating whether an error occurred. Valid values are: =0 Successful validation &lt;0 Oracle error (message will be written into a log file) &gt;0 Application error</td>
</tr>
</tbody>
</table>

### Note:
- If the billing extension is called by revenue generation only, you must set the revenue amount to a nonzero number. You can also set the bill amount. If the revenue amount is positive, the bill amount must also be positive.
- If the billing extension is called by invoice generation, you must set the bill amount to a nonzero number. You can also set the revenue amount. If the bill amount is positive, the revenue amount must also be positive.
If the billing extension creates a new automatic event from a transaction adjustment, the billing extension looks for the original event number (X_event_num_reversed). If the billing extension finds no value, you will receive the error message “You must have specified original event number for ADJ automatic event.”

**Note:** Oracle Projects provides a view that you can use to identify original automatic event information of the current project, top task, and the credited invoices of the current request:

- PA_BILLING_ORIG_EVENTS_V

---

**Retrieving Budget Amounts**

Use the get_budget_amount procedure to retrieve baselined budgeted cost or revenue amounts for use in your calculations.

**Package.Procedure**

**pa_billing_pub.get_budget_amount**

Listed below are the parameters available for the get_budget_amount procedure. You must specify a value for the **X2_project_id** parameter for this procedure. You can optionally use the **X2_task_id** parameter to derive the budget amount for a task.

The parameters include input and output parameters for cost and revenue budget type codes.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>ID of project to retrieve baselined budget amounts.</td>
</tr>
<tr>
<td>X2_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>ID of top task to retrieve current budget amounts; you must also specify the project ID when you use this parameter.</td>
</tr>
<tr>
<td>X2_revenue_amount</td>
<td>OUT</td>
<td>REAL</td>
<td>Baselined revenue budget amount for project or task.</td>
</tr>
</tbody>
</table>

Table 18 – 21 (Page 1 of 3) Get Budget Amount Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2_cost_amount</td>
<td>OUT</td>
<td>REAL</td>
<td>Baseline cost budget amount for project or task.</td>
</tr>
<tr>
<td>p_cost_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Cost budget type code to be used for calculating cost budget amount. If this value is not specified, the cost budget type in the billing extension setup table is used. If no value is entered in the billing extension setup table, the Approved Cost Budget is used.</td>
</tr>
<tr>
<td>p_rev_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Revenue budget type code to be used for calculating revenue budget amount. If this value is not specified, the revenue budget type in the billing extension setup table is used. If no value is entered in the billing extension setup table, the Approved Revenue Budget is used.</td>
</tr>
<tr>
<td>X_cost_budget_type_code</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Cost budget type code that was used for calculating the cost budget in this public API.</td>
</tr>
<tr>
<td>X_rev_budget_type_code</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Revenue budget type code that was used for calculating the revenue budget in this public API.</td>
</tr>
</tbody>
</table>

Table 18 – 21  (Page 2 of 3)  Get Budget Amount Parameters
Error Handling

Use the insert_message procedure to create debugging and error messages in the PA_BILLING_MESSAGES table. When you encounter a problem with billing extensions, you can review these messages in the log file of the revenue and invoice processes that call the billing extension, or you can review the error message table. See the Oracle Projects Technical Reference Manual Addendum for more information.

Package.Procedure

pa_billing_pub.insert_message

Listed below are the parameters available for the insert_message procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_inserting_procedure_name</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Name of procedure that is inserting the message.</td>
</tr>
<tr>
<td>X_message</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The free text to display as the message in the log file.</td>
</tr>
<tr>
<td>X_attribute1–15</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Descriptive flexfield segments of billing message. These attributes appear in the billing messages table only.</td>
</tr>
</tbody>
</table>

Table 18 – 22   (Page 1 of 2)  Insert Message Parameters
### Additional Considerations for Writing Procedures

You should understand the following issues and determine how they affect your PL/SQL procedure.

#### Hard Limits and Automatic Events

Oracle Projects processes automatic events as it does manual events. When events are processed for a project that is at the hard limit, only those events that fully fit under the hard limit are processed. If the event amount does not fully fit under the hard limit, it is created but not processed on a draft revenue or invoice until there is enough funding available. Deleting the revenue does not delete the event; however, regenerating the revenue creates a new duplicate event. Once you raise the hard limit, Oracle Projects processes both events, which will lead to duplicate event amounts.

To avoid the creation of duplicate events, you can include logic in your billing extension to create an automatic event only if no unprocessed automatic events exist or if it will fit under the hard limit and be processed accordingly. Otherwise, the billing extension does not create the event, and you should delete the revenue without releasing it. If you do release the revenue, you need to calculate and insert the event manually.

In some transaction independent cases, you may wish to insert an amount that fits under the limit. In most transaction dependent cases, you should insert the entire amount, regardless of the limit to account for amounts based on processed transactions.

### Table 18 – 22  (Page 2 of 2)  Insert Message Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_error_message</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Error message text.</td>
</tr>
<tr>
<td>X_status</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Status indicating whether an error occurred. Valid values are:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>=0  Successful validation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;0  Oracle error (message will be written into a log file)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;0  Application error</td>
</tr>
</tbody>
</table>

Client Extensions in Oracle Projects  18 – 87
**Suggestion:** If you are creating positive and negative event amounts, create the negative amount first, so that it increases available funding.

### Multiple Customers and Automatic Events

Oracle Projects processes automatic events as it does manual events. With multiple customer projects, events are split between the customers based on the customer billing percentage.

If you include hard limit logic in your procedure, you need to consider multiple customers and hard limit processing.

### Creating Multiple Events in Same Calling Place in Same Run

It is possible for one or more billing extensions to create events in the same calling place in the same run. All billing extensions are executed in the calling place before any of the automatic events are included on the invoice or revenue. You need to consider the issues in the case in which one billing extension is dependent on the amount of other events processed in that calling place in the same run.

For example, assume you are processing a surcharge extension and a retention extension in the regular processing section of invoice generation. The surcharge is executed before the retention based on the processing order of the billing extension definition. The surcharge event is created but is not yet included on the invoice. The retention extension relies on the total invoice amount. To get the total invoice amount, the retention extension must account for the surcharge event which is not yet included on the invoice.

You must include logic in your billing extension to read any automatic event created for projects and tasks in the same run and calling place.

---

**Tips on Writing and Debugging Procedures**

You can make testing and debugging your billing extension procedure much easier by writing your procedure in a very methodical, structured approach as suggested below. Your functional and technical resources should work together to validate the billing extension.
Step 1  **Create own billing extension to create event of a given amount**

The first step is to create a very simple billing extension using the template files. You perform these steps to create an automatic event using a billing extension.

- Copy the template files to your own files
- Change the package and procedure names
- Add one call to the insert_event procedure to create an event of a given amount
- Store the procedure in the database
- Define a billing extension in Oracle Projects using this procedure
- Assign the billing extension to a **test** project
- Process the project through revenue and invoice generation; you should run the process that is appropriate for the billing extension
- Verify that an event is created for the given amount

Step 2  **Test each SQL statement in SQL*Plus**

After you verify that your billing extension works in an integrated flow, you can begin to build the logic of your billing extension. You first write and test each SQL statement in SQL*Plus. You focus on each SQL statement independently until you have verified all of the SQL statements.

**Note:** Be sure that the appropriate SQL statements handle both project level and top task level billing assignments.

If you are writing transaction dependent billing extensions, you should create the appropriate transactions on your test project and then process the transactions through revenue accrual or invoicing. Note the request ID of the process. All of the transactions are marked with this request ID, so you can use the request ID in testing your SQL statements in SQL*Plus. You can then use one of the following views to read the appropriate transactions processed by the request ID.

- PA_BILLING_REV_TRANSACTIONS_V
- PA_BILLING_INV_TRANSACTIONS_V

The views use PL/SQL functions, which are included in the view definition, to determine the appropriate project, task, calling place, and request ID variables for which the billing extension is being run. These variables are set by the revenue generation and invoice generation...
processes before the billing extension is executed. If you do not set these variables, then the view returns all records for that project and task in SQL*Plus. You can set these variables for your SQL*Plus session by running the papgblob.sql script which exists in the admin/sql directory. You can test your SQL statements using views with the variables that you want.

**Step 3**  
**Add SQL statements one at a time and test in an integrated flow**

After you test and verify each SQL statement that you plan to use in your billing extension, you can add one SQL statement at a time to your billing extension definition. Each time after you add a new part of the logic to the billing extension, you should then test your billing extension in an integrated revenue or invoice flow through Oracle Projects to verify the logic that you just added. Continue this cycle for all of your SQL statements to be included in your billing extension procedure.

You may take another approach by adding all of your logic to the billing extension and then performing integrated testing. This method is harder to debug when you encounter problems.

**Step 4**  
**Do full integrated testing of billing extension**

After your billing extension logic is complete, you need to perform full integrated testing to validate all of the business cases and conditions that your billing extension must handle. This is where you use the business cases and test plans that you created in the design stage of the your billing extension implementation.

You must ensure that your billing extension works when using both project level and task level funding, if your company uses both levels of funding.

If you have written a transaction dependent billing extension, you should test the processing flow for these adjustment actions to ensure that your billing extension properly processes transactions with these adjustment actions:

- Revenue recalculation with and without change in the amount
- Transfer to the same project, which results in the same amount
- Transfer to a different task, which results in a different amount
- Split transaction
- Transfer to a different project
• Billable to non-billable reclassification

Once you have verified all of the integrated test cases, you have completed your billing extension implementation.

Other Debugging Tips

• Make sure that the name seeded in pa_billing_extensions.procedure_name is exactly the same as the package.procedure_name if your procedure is stored in the database

• Make sure that the package.procedure_name does not exceed 30 characters

• Make sure that your procedure is compiled and stored in the database

• Make sure that there is not another invalid or outdated procedure executing instead of the procedure you intend to execute. Inactivate all other extensions at the appropriate level to ensure that only the extension you expect to execute is executing.
Defining Billing Extensions

You define billing extensions to automatically calculate and create revenue and invoice amounts.

When you define billing extensions, you specify detailed information that determines when the billing extensions are called, which processes call them, and what information is required upon entry of the billing extension.

Fremont Corporation defines one billing extension for communication surcharge. This billing extension calculates communication charge as a percent of the amount invoiced.

<table>
<thead>
<tr>
<th>Name</th>
<th>Communication Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calling Process</td>
<td>Invoice</td>
</tr>
</tbody>
</table>

**Default Event Values**

<table>
<thead>
<tr>
<th>Type</th>
<th>Surcharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Communication Charge</td>
</tr>
</tbody>
</table>

**Checkboxes Checked:**

- Adjustment Processing
- Regular Processing
- Percentage
- Project Specific

**Default Budget Types**

<table>
<thead>
<tr>
<th>Cost</th>
<th>Approved Cost Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>Approved Revenue Budget</td>
</tr>
</tbody>
</table>

Some extensions are provided by Oracle Projects. These extensions are all marked with a checkmark in the Predefined flag check box. When this box is checked, it is not possible to change the contents of the following fields:

- Procedure
- Order
- Revenue Budget Type
- Calling Processes
- Required Inputs
- Other Parameters
• Calling Place

See Also

Overview of Client Extensions: page 18 – 2
Automatic Invoice Approve/Release Extension

The Automatic Invoice Approve/Release Extension allows you to make automatic approval and release of invoices a part of the Generate Draft Invoice process.

Processing

Oracle Projects calls the Automatic Invoice Approve/Release Extension during invoice generation. During processing, if the extension returns an approval flag or release flag set to yes, then the process approves (and releases, if applicable) the invoice.

See Also

Designing Client Extensions: page 18 – 9


Designing Invoice Approve/Release Extensions

You must determine to what extent the Automatic Invoice Approve/Release Extension will be used across your projects. We recommend that you consider these design issues:

- What are the conditions and circumstances that require your project invoices to be automatically approved?
- What are the conditions and circumstances that require your project invoices to be automatically approved and released?
- What types of projects need to have this feature implemented?

Writing Automatic Invoice Approve/Release Extensions

Oracle Projects provides a template package and procedure that you use as the basis of your automatic invoice approve.release extension
procedures. The name of the template package is `pa_client_extn_inv_actions`. The names of the procedures are:

- `approve_invoice`
- `release_invoice`

Print out the following files before you begin writing automatic invoice approve/release extensions. The files are located in the Oracle Projects admin/sql directory.

- **PAXPIACS.pls**: Invoice Action Client Extension Package Specification Template. If you create procedures outside the predefined procedure within the `pa_client_extn_inv_actions` package, you must also modify this file to include those new procedures.

- **PAXPIACB.pls**: Invoice Action Client Extension Package Body Template. This file contains the procedure that you can modify to implement the automatic invoice approve/release extension.

  **Suggestion**: After you write the procedure, do not forget to compile it and store it in the database. See: Writing PL/SQL Procedures: page 18 – 11.

### Package Procedures

**pa_client_extn_inv_actions.approve_invoice**

Table 18 – 23 lists the parameters that Oracle Projects provides for the invoice approval extension.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>p_project_id</code></td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project to which the draft invoice number is attached.</td>
</tr>
<tr>
<td><code>p_draft_invoice_num</code></td>
<td>IN</td>
<td>NUMBER</td>
<td>The draft invoice number.</td>
</tr>
<tr>
<td><code>p_invoice_class</code></td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The class of the invoice.</td>
</tr>
<tr>
<td><code>p_invoice_amount</code></td>
<td>IN</td>
<td>NUMBER</td>
<td>Amount on the invoice.</td>
</tr>
</tbody>
</table>

Table 18 – 23 (Page 1 of 2) Automatic Invoice Approve Extension Parameters
Table 18 – 23  (Page 2 of 2)  Automatic Invoice Approve Extension Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_approve_flag</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Invoice approval flag. Valid values:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y = Yes (approve invoice)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>any other value = do not approve</td>
</tr>
<tr>
<td>x_status</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Status of the procedure:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0 = successful execution</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&lt;0 = Oracle8 error</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&gt;0 = application error</td>
</tr>
</tbody>
</table>

Table 18 – 24 lists the parameters that Oracle Projects provides for the invoice release extension.

pa_client_extn_inv_actions.release_invoice

Table 18 – 24  (Page 1 of 2)  Invoice Release Extension Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project to which the draft invoice number is attached.</td>
</tr>
<tr>
<td>p_draft_invoice_num</td>
<td>IN</td>
<td>NUMBER</td>
<td>The draft invoice number.</td>
</tr>
<tr>
<td>p_invoice_class</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The class of the invoice.</td>
</tr>
<tr>
<td>p_invoice_amount</td>
<td>IN</td>
<td>NUMBER</td>
<td>Amount on the invoice.</td>
</tr>
<tr>
<td>x_release_flag</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Invoice release flag. Valid values:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y = Yes (release invoice)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>any other value = do not release</td>
</tr>
<tr>
<td>x_ra_invoice_date</td>
<td>OUT</td>
<td>DATE</td>
<td>Receivable invoice date. Validation on this parameter is performed only when</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>x_release_flag = Y.</td>
</tr>
</tbody>
</table>
Additional Information About Parameters

Using Invoice Class

The valid values of x_invoice_class are:

<table>
<thead>
<tr>
<th>Invoice Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INVOICE</td>
<td>regular invoice</td>
</tr>
<tr>
<td>CREDIT_MEMO</td>
<td>crediting invoice</td>
</tr>
<tr>
<td>WRITE_OFF</td>
<td>write–off invoice</td>
</tr>
<tr>
<td>CANCEL</td>
<td>canceling invoice</td>
</tr>
</tbody>
</table>

Using Status

Use the x_status parameter to handle error conditions for your procedure. This parameter indicates the processing status of your extension as follows:

- \( x_{\text{status}} = 0 \)  
  The extension executed successfully.

- \( x_{\text{status}} < 0 \)  
  An Oracle8 error occurred and the process did not complete. Oracle Projects writes an error message to the process log file.

- \( x_{\text{status}} > 0 \)  
  An application error occurred. Oracle Projects writes a rejection reason to the PA_DISTRIBUTION_WARNINGS table. The invoice is not approved or released.
**AR Transaction Type Extension**

The AR Transaction Type Extension enables you to determine the AR transaction type when you interface invoices to Oracle Receivables.

**Processing**

Oracle Projects calls the AR Transaction Type Extension during the Transfer Invoices to Oracle Receivables process.

**See Also**

Designing Client Extensions: page 18 – 9

*PL/SQL User’s Guide and Reference Manual*

*Oracle Projects Technical Reference Manual*

**Designing AR Transaction Type Extensions**

You must determine what types of projects need to have this feature implemented.

**Writing AR Transaction Type Extensions**

Oracle Projects provides a template package and procedure that you use as the basis of your AR transaction type extension procedures. The name of the template package is *pa_client_extn_inv_transfer*. The name of the procedure is *get_ar_trx_type*.

Print out the following files before you begin writing AR transaction type extensions. The files are located in the Oracle Projects admin/sql directory.

- **PAXITRXB.pls**  
  AR Transaction Type Extension Package Body Template. This file contains the procedure that you can modify to implement the AR transaction type extension.
AR Transaction Type Extension Package Specification Template. If you create procedures outside the predefined procedure within the pa_client_extn_inv_transfer package, you must also modify this file to include those new procedures.

**Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Writing PL/SQL Procedures: page 18 – 11.

### Package Procedure

**pa_client_extn_inv_transfer.get_ar_trx_type**

Table 18 – 25 lists the parameters that Oracle Projects provides for the AR transaction type extension.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project to which the draft invoice number is attached.</td>
</tr>
<tr>
<td>p_draft_invoice_num</td>
<td>IN</td>
<td>NUMBER</td>
<td>The draft invoice number.</td>
</tr>
<tr>
<td>p_invoice_class</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The class of the invoice.</td>
</tr>
<tr>
<td>p_invoice_amount</td>
<td>IN</td>
<td>NUMBER</td>
<td>Amount on the invoice.</td>
</tr>
<tr>
<td>p_ar_trx_type_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the AR Transaction Type to be used for the invoice. Oracle Projects uses its setup tables to determine the default AR transaction type and then passes it to the template.</td>
</tr>
</tbody>
</table>

Table 18 – 25  (Page 1 of 2)  AR Transaction Type Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_ar_trx_type_id</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Identifier of the AR Transaction Type determined by the extension. After validation, Oracle Projects uses this transaction type to interface invoices to Oracle Receivables.</td>
</tr>
</tbody>
</table>
| x_status          | OUT   | NUMBER | Status of the procedure:  
0 = successful execution  
<0 = Oracle8 error  
>0 = application error |

Table 18 – 25 (Page 2 of 2) AR Transaction Type Parameters

Additional Information About Parameters

Using Invoice Class

The valid values of x_invoice_class are:

- INVOICE: regular invoice
- CREDIT_MEMO: crediting invoice
- WRITE_OFF: write–off invoice
- CANCEL: canceling invoice

Using Status

Use the x_status parameter to handle error conditions for your procedure. This parameter indicates the processing status of your extension as follows:

- \( x_{\text{status}} = 0 \)  
The extension executed successfully.
- \( x_{\text{status}} < 0 \)  
An Oracle8 error occurred and the process did not complete. Oracle Projects writes an error message to the process log file.
- \( x_{\text{status}} > 0 \)  
An application error occurred. Oracle Projects writes a rejection reason to the PA_DISTRIBUTION_WARNINGS table. The invoice is not approved or released.
Project and Budget Workflow–Related Extensions

Oracle Projects provides several client extensions and procedures that enable you to apply specific business rules when determining whether Oracle Workflow is enabled for project and budget status changes, and what the workflow processes do.

Following is a list of the workflow–related client extensions:

- **Project Verification Extension:** page 18 – 102
  The project verification extension enables you to define rules for the following purposes:
  - To determine whether a project can change its project status
  - To determine whether to call Workflow for a project status change

- **Project Workflow Extension:** page 18 – 106
  The project workflow extension enables you to define rules to identify the approver for a project status change.

- **Budget Verification Extension:** page 18 – 109
  The budget verification extension enables you to define rules for validating a budget before its status is changed to *Submitted*.

- **Budget Workflow Extension:** page 18 – 112
  The budget workflow extension enables you to define rules for the following purposes:
  - To identify the approver of a budget status change
  - To determine whether to call Workflow for a budget status change
  - To start the Workflow process

In addition, the `verify_budget_rules` procedure enables you to define budget verification rules that apply only when Workflow is used for budget status changes.
Project Verification Extension

The Project verification extension contains procedures that enable you to define rules for the following purposes:

- To determine whether a project can change its project status
- To determine whether to call Workflow for a project status change

Processing

Oracle Projects calls the Project Verification Extension when a change of status is requested for a project.

See Also

Designing Client Extensions: page 18 – 9


Designing Project Verification Extensions

You must determine what business rules you want to apply when a project status change is selected for a project. See also: Project Statuses: page 16 – 164

Writing Project Verification Extensions

Oracle Projects provides a template package and procedure that you use as the basis of your project verification extension procedures. The name of the template package is `pa_client_extn_proj_status`.

Print out the following files before you begin writing project verification extensions. The files are located in the Oracle Projects admin/sql directory.
Package Procedures

verify_project_status_change

Use this procedure to define requirements a project must satisfy to change from one project status to another. Detailed instructions for modifying the procedure are included in the package body.

Table 18 – 26 lists the parameters that Oracle Projects provides for the verify_project_status_change procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_calling_module</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The module that called the extension.</td>
</tr>
<tr>
<td>x_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project.</td>
</tr>
<tr>
<td>x_old_proj_status_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The current project status code.</td>
</tr>
<tr>
<td>x_new_proj_status_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The new project status code.</td>
</tr>
<tr>
<td>x_project_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The project type of the project.</td>
</tr>
<tr>
<td>x_project_start_date</td>
<td>IN</td>
<td>DATE</td>
<td>The project start date.</td>
</tr>
<tr>
<td>x_project_end_date</td>
<td>IN</td>
<td>DATE</td>
<td>The project end date.</td>
</tr>
</tbody>
</table>

Suggestion: After you write the procedures, do not forget to compile the extension and store it in the database. See: Writing PL/SQL Procedures: page 18 – 11.
check_wf_enabled

When Oracle Projects determines whether to call Workflow for a project status change, it bases the decision on the settings in the project status record and the project type. You can use this procedure to override those settings and/or add additional requirements.

Table 18 – 27 lists the parameters that Oracle Projects provides for the check_wf_enabled procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_project_status_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The current project status code.</td>
</tr>
<tr>
<td>x_project_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The project type of the project.</td>
</tr>
<tr>
<td>x_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Usage</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>x_wf_enabled_flag</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Flag indicating whether Workflow is enabled for the status change. Value is either Y or N.</td>
</tr>
<tr>
<td>x_err_code</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Error handling code.</td>
</tr>
</tbody>
</table>

Table 18 – 27  (Page 2 of 2) Check Workflow Enabled Parameters
Project Workflow Extension

The project workflow extension enables you to customize the workflow processes for changing project statuses.

Processing

The default project workflow process calls the project workflow extension to determine the project approver.

See Also

Designing Client Extensions: page 18 – 9

Designing Project Workflow Extensions

You must determine how you want to identify the approver for a project status change. See also: Project Statuses: page 16 – 164

Writing Project Workflow Extensions

Oracle Projects provides a template package and procedure that you use as the basis of your project workflow extension procedures. The name of the template package is pa_client_extn_project_wf.

Print out the following files before you begin writing project verification extensions. The files are located in the Oracle Projects admin/sql directory.

PAWFPCES.pls   Project Workflow Extension Package Specification Template. If you create procedures outside the predefined procedure within the
Client Extensions in Oracle Projects

<pa_client_extn_project_wf package, you must also modify this file to include those new procedures.

**Suggestion:** After you write the procedures, do not forget to compile the extension and store it in the database. See: Writing PL/SQL Procedures: page 18 – 11.

### Package Procedures

#### select_project_approver

This procedure returns the project approver ID to the calling workflow process. You can modify the procedure to add rules to determine who can approve a project. The default procedure returns the ID of the supervisor of the person who submitted the project status change.

Table 18 – 28 lists the parameters that Oracle Projects provides for the select_project_approver procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project.</td>
</tr>
<tr>
<td>p_workflow_started_by_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the person who submitted the project status change.</td>
</tr>
<tr>
<td>p_project_approver_id</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Identifier of the project approver.</td>
</tr>
</tbody>
</table>

Table 18 – 28 (Page 1 of 1) Select Project Approver Parameters

#### start_project_wf

This procedure starts the workflow process for project status changes.

Table 18 – 29 lists the parameters that Oracle Projects provides for the start_project_wf procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project.</td>
</tr>
<tr>
<td>p_item_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The workflow item type.</td>
</tr>
</tbody>
</table>

Table 18 – 29 (Page 1 of 2) Start Project Workflow Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_process</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Name of the workflow process.</td>
</tr>
<tr>
<td>p_out_item_key</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>The workflow item key.</td>
</tr>
<tr>
<td>p_err_stack</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Error handling stack.</td>
</tr>
<tr>
<td>p_err_stage</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Error handling stage.</td>
</tr>
<tr>
<td>p_err_code</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Error handling code.</td>
</tr>
</tbody>
</table>

Table 18 – 29  (Page 2 of 2)  Start Project Workflow Parameters
Budget Verification Extension

The budget verification extension allows you to define rules for validating a budget before its status is changed.

Designing the Budget Verification Extension

You should determine your requirements for baselining budgets. For more information, see: Submitting a Draft: page 3 – 31 and Baselining a Draft: page 3 – 35.

See Also

Designing Client Extensions: page 18 – 9

Writing the Budget Verification Extension

Oracle Projects provides a template package that contains the procedures that you modify to control the rules for baselining a budget.

The name of the package is PA_Client_Extn_Budget. The name of the procedure is verify_budget_rules.

Print out and review the following files before you begin writing budget calculation extensions. These files are located in the Oracle Projects admin/sql directory.

PAXBCECB.pls  Budget Calculation Extension Package Body Template. This file contains the budget calculations procedures, and also the procedure that you modify to implement budget verification extensions. You can define as many procedures as you want within this package or within the predefined procedure.

PAXBCECS.pls  Budget Calculation Extension Package Specification Template. If you create procedures outside the predefined procedure within the PA_Client_Extn_Budget package, you must also modify this file to include those new procedures.
Warning: Do not change the name of the budget calculation extension procedure. In addition, do not change the parameter names, parameter types, or parameter order in your procedure.

Suggestion: After you write the procedure, do not forget to compile it and store it in the database. See: Writing PL/SQL Procedures: page 18 – 11.


Package.Procedure

verify_budget_rules

You can use this procedure to build additional validations that Oracle Projects checks whenever a budget is submitted or baselined. The parameter p_event passes a value of either SUBMIT or BASELINE, to indicate the desired status of the budget being tested.

Table 18 – 30 lists the parameters that Oracle Projects provides for the verify budget rules procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_draft_version_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the draft version.</td>
</tr>
<tr>
<td>p_mark_as_original</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Identifies the Mark as Original request.</td>
</tr>
<tr>
<td>p_event</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Identifies the requested status of the budget. Value is either SUBMIT or BASELINE.</td>
</tr>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project.</td>
</tr>
<tr>
<td>p_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The budget type code.</td>
</tr>
<tr>
<td>p_resource_list_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the resource list for the budget.</td>
</tr>
<tr>
<td>p_project_type_class_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The project type class code of the budget’s project.</td>
</tr>
</tbody>
</table>

Table 18 – 30 (Page 1 of 2) Budget Verification Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_created_by</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the person who created the budget.</td>
</tr>
<tr>
<td>p_calling_module</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The module that called the extension.</td>
</tr>
<tr>
<td>p_warnings_only_flag</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>Indicates the level of errors the procedure generated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y indicates that only warnings were generated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N indicates that one or more errors were generated.</td>
</tr>
<tr>
<td>p_err_msg_count</td>
<td>OUT</td>
<td>NUMBER</td>
<td>The number of warnings and errors that the procedure generated.</td>
</tr>
<tr>
<td>p_error_code</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Error handling code.</td>
</tr>
<tr>
<td>p_err_stage</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Error handling stage.</td>
</tr>
<tr>
<td>p_err_stack</td>
<td>IN OUT</td>
<td>VARCHAR2</td>
<td>Error handling stack.</td>
</tr>
</tbody>
</table>

Table 18 – 30  (Page 2 of 2)  Budget Verification Parameters
Budget Workflow Extension

The budget workflow extension enables you to customize the workflow processes for changing the status of a budget.

Processing

Oracle Projects calls the budget workflow process to determine whether to call Oracle Workflow to baseline a budget, and which workflow process to call.

The default budget workflow process calls the budget workflow extension to determine the budget approver.

See Also

Designing Client Extensions: page 18 – 9


Designing Budget Workflow Extensions

You must determine what rules you want to apply when determining whether to call Oracle Workflow to baseline a budget, and when selecting the budget approver.

Writing Budget Workflow Extensions

Oracle Projects provides a template package and procedure that you use as the basis of your budget workflow extension procedures. The name of the template package is `pa_client_extn_budget_wf`.

Print out the following files before you begin writing budget verification extensions. The files are located in the Oracle Projects admin/sql directory.
Budget Workflow Extension Package Body Template. This file contains the procedures that you can modify to implement the extension.

Budget Workflow Extension Package Specification Template. If you create procedures outside the predefined procedure within the pa_client_extn_budget_wf package, you must also modify this file to include those new procedures.

Suggestion: After you write the procedures, do not forget to compile the extension and store it in the database. See: Writing PL/SQL Procedures: page 18 – 11.

Package Procedures

budget_wf_is_used

When Oracle Projects determines whether to call Oracle Workflow for a budget status change, it bases the decision on the settings in the budget type and the project type. You can use this procedure to override those settings and/or add additional requirements.

Table 18 – 31 lists the parameters that Oracle Projects provides for the budget_wf_is_used.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_draft_version_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the version of the budget.</td>
</tr>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project.</td>
</tr>
<tr>
<td>p_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The budget type code.</td>
</tr>
<tr>
<td>p_pm_product_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The project management product code.</td>
</tr>
<tr>
<td>p_result</td>
<td>IN/OUT</td>
<td>VARCHAR2</td>
<td>Result of the procedure. Value is either Y or N.</td>
</tr>
<tr>
<td>p_err_code</td>
<td>IN/OUT</td>
<td>NUMBER</td>
<td>Error handling code.</td>
</tr>
</tbody>
</table>

Table 18 – 31  (Page 1 of 2)  Budget Workflow Enabled Parameters
**Table 18 – 31 (Page 2 of 2) Budget Workflow Enabled Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_err_stage</td>
<td>IN OUT</td>
<td>VARCHAR2</td>
<td>Error handling stage.</td>
</tr>
<tr>
<td>p_err_stack</td>
<td>IN OUT</td>
<td>VARCHAR2</td>
<td>Error handling stack.</td>
</tr>
</tbody>
</table>

**start_budget_wf**

This procedure starts the workflow process for budget status changes. The procedure also contains the name of the workflow process that is called. The process indicated in the default procedure is PABUDWF.

Table 18 – 32 lists the parameters that Oracle Projects provides for the start_budget_wf procedure.

**Table 18 – 32 (Page 1 of 2) Start Budget Workflow Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_draft_version_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the version of the budget.</td>
</tr>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project.</td>
</tr>
<tr>
<td>p_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The budget type code.</td>
</tr>
<tr>
<td>p_mark_as_original</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Indicates whether the user has requested that the budget be marked as the original budget.</td>
</tr>
<tr>
<td>p_item_type</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>The workflow item type.</td>
</tr>
<tr>
<td>p_item_key</td>
<td>OUT</td>
<td>VARCHAR2</td>
<td>The workflow item key.</td>
</tr>
<tr>
<td>p_err_code</td>
<td>IN OUT</td>
<td>NUMBER</td>
<td>Error handling code.</td>
</tr>
</tbody>
</table>
Table 18 – 32  (Page 2 of 2)  Start Budget Workflow Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_err_stage</td>
<td>IN OUT</td>
<td>VARCHAR2</td>
<td>Error handling stage.</td>
</tr>
<tr>
<td>p_err_stack</td>
<td>IN OUT</td>
<td>VARCHAR2</td>
<td>Error handling stack.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>verify_budget_rules</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You can use this procedure to specify budget verification rules that are applied only when Oracle Workflow is used for budget status changes. This procedure is called by the procedure pa_budget_wf.baseline_budget.

Table 18 – 33 lists the parameters that Oracle Projects provides for the verify_budget_rules procedure.

Table 18 – 33  (Page 1 of 2)  Verify Budget Rules Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_item_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The workflow item type.</td>
</tr>
<tr>
<td>p_item_key</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The workflow item key.</td>
</tr>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project.</td>
</tr>
<tr>
<td>p_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The budget type code.</td>
</tr>
<tr>
<td>p_workflow_started_by_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the person who submitted the project status change.</td>
</tr>
<tr>
<td>p_event</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Identifies the requested status of the budget. Value is either SUBMIT or BASELINE.</td>
</tr>
</tbody>
</table>

Table 18 – 33  (Page 1 of 2)  Verify Budget Rules Parameters
select_budget_approver

This procedure is called by Oracle Workflow to determine the budget approver. You can use this procedure to add rules for determining who will approve a budget. The default procedure returns the ID of the supervisor of the person who requested the budget status change.

Table 18 – 34 lists the parameters that Oracle Projects provides for the select_budget_approver procedure.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_item_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The workflow item type.</td>
</tr>
<tr>
<td>p_item_key</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The workflow item key.</td>
</tr>
<tr>
<td>p_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project.</td>
</tr>
<tr>
<td>p_budget_type_code</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The budget type code.</td>
</tr>
<tr>
<td>p_workflow_started_by_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the person who requested the budget status change.</td>
</tr>
<tr>
<td>p_budget_baseliner_id</td>
<td>OUT</td>
<td>NUMBER</td>
<td>Identifier of the person selected to approve the budget status change.</td>
</tr>
</tbody>
</table>

Table 18 – 34 (Page 1 of 1) Select Budget Approver Parameters
See Also

Budget Calculation Extensions: page 18 – 19
Verify Organization Change Extension

The Verify Organization Change Extension enables you to build business rules to determine whether an organization change is allowed for a Project/Task Owning Organization, and to define the error messages that are used when the rules are violated.

Processing

Oracle Projects calls the Verify Organization Change Extension during the Mass Update Batches process, and in the Projects window when the project or task owning organization is changed.

See Also

Designing Client Extensions: page 18 – 9


Writing the Verify Organization Change Extension

Oracle Projects provides a template package and procedure that you use as the basis of your verify organization change extension procedures. The name of the template package is `pa_org_client_extn`. The name of the procedure is `verify_org_change`.

Print out the following files before you begin writing verify organization change extensions. The files are located in the Oracle Projects admin/sql directory.

<table>
<thead>
<tr>
<th>File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAXORCEB.pls</td>
<td>Verify Organization Change Extension Package Body Template. This file contains the procedure that you can modify to implement the extension.</td>
</tr>
<tr>
<td>PAXORCES.pls</td>
<td>Verify Organization Change Extension Package Specification Template. If you create procedures outside the predefined procedure within the <code>pa_org_client_extn</code> package, you must also modify this file to include those new procedures.</td>
</tr>
</tbody>
</table>
Suggestion: After you write the procedure, do not forget to compile it and store it in the database. See: Writing PL/SQL Procedures: page 18 – 11.

Package Procedure

pa_org_client_extn.verify_org_change

Table 18 – 35 lists the parameters that Oracle Projects provides for the verify organization change extension.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_insert_update_mode</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Value = INSERT if the project/task record has not been saved in the database. Value = UPDATE if the record exists in the database.</td>
</tr>
<tr>
<td>X_calling_module</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>PAXPREPR if this extension is called from the Projects window. PAXBAUPD if this extension is called from the Process Mass Update Batches process.</td>
</tr>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the project to be updated.</td>
</tr>
<tr>
<td>X_task_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the task to be updated. The value is NULL when the extension is called to verify a project organization change.</td>
</tr>
<tr>
<td>X_old_value</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the current organization of the project or task.</td>
</tr>
<tr>
<td>X_new_value</td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the new organization to be assigned to the project or task.</td>
</tr>
<tr>
<td>X_project_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Identifier of the project type of the project.</td>
</tr>
</tbody>
</table>

Table 18 – 35 (Page 1 of 3) Verify Organization Change Parameters
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>X_project_start_date</code></td>
<td>IN</td>
<td>DATE</td>
<td>Start date of the project.</td>
</tr>
<tr>
<td><code>X_project_end_date</code></td>
<td>IN</td>
<td>DATE</td>
<td>End date of the project.</td>
</tr>
<tr>
<td><code>X_public_sector_flag</code></td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Public sector flag on the project.</td>
</tr>
<tr>
<td><code>X_task_manager_person_id</code></td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the manager of the task.</td>
</tr>
<tr>
<td><code>X_service_type</code></td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Service type code of the task.</td>
</tr>
<tr>
<td><code>X_task_start_date</code></td>
<td>IN</td>
<td>DATE</td>
<td>Start date of the task.</td>
</tr>
<tr>
<td><code>X_task_end_date</code></td>
<td>IN</td>
<td>DATE</td>
<td>End date of the task.</td>
</tr>
<tr>
<td><code>X_entered_by_user_id</code></td>
<td>IN</td>
<td>NUMBER</td>
<td>Identifier of the user who entered the project/ task.</td>
</tr>
<tr>
<td><code>X_attribute_category</code></td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Attribute category of the project or task.</td>
</tr>
<tr>
<td><code>X_attribute_1 through X_attribute_10</code></td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Attribute values 1 through 10 of the project or task.</td>
</tr>
<tr>
<td><code>X_pm_product_code</code></td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Project management product code specified for the project or task.</td>
</tr>
<tr>
<td><code>X_pm_project_reference</code></td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Project management product reference specified for the project.</td>
</tr>
<tr>
<td><code>X_pm_task_reference</code></td>
<td>IN</td>
<td>VARCHAR2</td>
<td>Project management task reference specified for the task.</td>
</tr>
</tbody>
</table>

Table 18 – 35  (Page 2 of 3)  Verify Organization Change Parameters
### See Also

Function Security in Oracle Projects: page C – 2
Billing Cycle Extension

You can use a billing cycle client extension to derive the next billing date for a project. To use a client extension, you must write the logic in a PL/SQL procedure and then store the procedure in the database.

To use the billing cycle extension for any project, you must set the project’s Billing Cycle Type to *User-Defined*.

*Note:* If a billing cycle extension used in the Invoice Generation Process returns a NULL value for the next billing date, the project will not be picked up for Invoice Processing.

Writing the Billing Cycle Extension

Oracle Projects provides a template package that contains the procedure that you can modify to implement the billing cycle client extension. The name of the package is `pa_client_extn_bill_cycle`, and the name of the procedure is `get_next_billing_date`.

Print out and review the following files before you begin writing your billing cycle client extension. These files are located in the Oracle Projects admin/sql directory.

- **PAXIBCXS.pls**  
  Billing Cycle Extension Package Specification Template. If you create procedures outside the predefined procedure within the PA_Client_Extn_Bill_Cycle package, you must also modify this file to include those new procedures.

- **PAXIBCXB.pls**  
  Billing Cycle Extension Package Body Template. This file contains the procedure that you modify to implement the billing cycle client extension. You can define as many procedures as you want within this package or within the predefined procedure.

⚠️ **Warning:** Do not change the name of the `get_next_billing_date` procedure, the parameter names, parameter types, or parameter order in your procedure. In addition, do not use the PL/SQL commands Commit and Rollback in your billing extension code.

⚠️ **Warning:** For the `get_next_billing_date` function, define the `pragma RESTRICT_REFERENCES` as WNDS, WNPS. For more information, refer to the *PL/SQL User’s Guide and Reference Manual*. 

**Suggestion:** After you write the procedure, do not forget to compile it and store it in the database. See: Storing Your Procedures: page 18 – 14.

We recommend that you keep the following documentation on hand as reference material while defining procedures: the *PL/SQL User’s Guide and Reference Manual* and the *Oracle Projects Technical Reference Manual*.

**Package.Function**

*pa_client_extn_bill_cycle.get_next_billing_date*

Table 18 – 5 lists the parameters that Oracle Projects provides for the billing cycle client extension. The function returns a value for the next billing date.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X_project_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the project.</td>
</tr>
<tr>
<td>X_project_start_date</td>
<td>IN</td>
<td>DATE</td>
<td>The start date of the project.</td>
</tr>
<tr>
<td>X_billing_cycle_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The identifier of the billing cycle code.</td>
</tr>
<tr>
<td>X_bill_thru_date</td>
<td>IN</td>
<td>DATE</td>
<td>The bill–through date entered for the process.</td>
</tr>
<tr>
<td>X_last_bill_thru_date</td>
<td>IN</td>
<td>DATE</td>
<td>The last bill–through date of the project.</td>
</tr>
</tbody>
</table>

Table 18 – 36 (Page 1 of 1) Billing Cycle Extension Parameters
Cost Plus Application Programming Interface (API)

Oracle Projects provides a procedure you can use to call the Cost Plus Application Programming Interface. This procedure retrieves an amount based on your burden cost setup. You can specify the burden schedule, effective date, expenditure type, and organization to retrieve the burden cost amount based on the criteria you specify.

For example, you can use this procedure to derive the raw cost amount of a related transaction using a specific burden schedule of rates and the project organization as inputs.

**Attention:** Any amounts calculated using the API will not show up in cost plus detail views that display the burden cost breakdown. Also, if you update rates for the burden schedule, you must manually mark all items that are affected by the rate changes.

**Stored Procedure**

`pa_cost_plus.get_burden_amount`

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>burden_schedule_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The schedule id of the burden schedule used to calculate the burden amount.</td>
</tr>
<tr>
<td>effective_date</td>
<td>IN</td>
<td>DATE</td>
<td>The date used to find the burden schedule revision to calculate the burden amount.</td>
</tr>
<tr>
<td>expenditure_type</td>
<td>IN</td>
<td>VARCHAR2</td>
<td>The type of expenditure item used to find a cost base.</td>
</tr>
<tr>
<td>organization_id</td>
<td>IN</td>
<td>NUMBER</td>
<td>The id of the organization used to find a multiplier.</td>
</tr>
<tr>
<td>raw_amount</td>
<td>IN</td>
<td>NUMBER</td>
<td>The raw amount for which the burden amount is calculated.</td>
</tr>
<tr>
<td>burden_amount</td>
<td>IN OUT</td>
<td>NUMBER</td>
<td>The calculated burden amount.</td>
</tr>
</tbody>
</table>

Table 18 – 37  (Page 1 of 2)
### Table 18 – 37   (Page 2 of 2)

**Error Handling**

Use the status and stage parameters to help resolve error conditions should your procedure fail.

The status parameter indicates the processing status of your procedure as follows:

- **status = 0**
  - The procedure executed successfully.

- **status < 0**
  - An Oracle8 error occurred and the process did not complete.

  **Suggestion:** Ensure that you are returning the status of the cost plus procedure to the procedure that you are calling the cost plus API from to help resolve error conditions.

- **status > 0**
  - See stage parameter.

The stage parameter shows you where in the processing of the cost plus API the procedure failed. Use the stage parameter to resolve the specific problem that caused your procedure to fail.

#### Stage Meanings

<table>
<thead>
<tr>
<th>Stage</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Cannot find a revision for the given burden schedule and effective date</td>
</tr>
<tr>
<td>200</td>
<td>Cannot find the burden structure</td>
</tr>
</tbody>
</table>
Meaning

<table>
<thead>
<tr>
<th>Stage</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>Expenditure type is not in a cost base in the burden structure</td>
</tr>
<tr>
<td>400</td>
<td>There is no active compiled set for the given burden schedule and organization</td>
</tr>
<tr>
<td>500</td>
<td>There is no compiled multiplier for the given qualification</td>
</tr>
</tbody>
</table>

Table 18 – 38  (Page 2 of 2)

See Also

Labor Transaction Extensions: page 18 – 40

Example of Using Cost Plus API

This section provides you with an example of how to use the API to calculate the burden amount according to a specific business requirement.

Business Requirement: Determine the burden amount based on the following criteria.

Burden Schedule: CP burden schedule (burden schedule id: 60)
Effective Date: 03–MAR–94
Expenditure Type: Professional
Organization: Data Systems (Organization id: 18)
Raw Amount: 1,000

You would use the following PL/SQL procedure to obtain the burden amount for this business requirement using the cost plus API.

```sql
pa_cost_plus.get_burden_amount(60,
    '03–MAR–94',
    'Professional',
    18,
    1000,
```
burden_amount,
burden_sch_rev_id,
compiled_set_id,
status,
stage);
if (status = 0) then
    -- use the calculated burden_amount to implement your
    -- business requirement
end if;
Case Study: New Charges Not Allowed

This section demonstrates how to solve the business problem of not allowing new charges to projects for which the work is complete.

Business Rule

The first step in the design process is to determine the business rule that you want to solve using client extensions.

Business Rule: New Charges Not Allowed

Projects for which the work is complete do not allow new transactions to be charged. These projects, however, allow new transactions resulting from transfers between projects to properly account for the project work performed.

Requirements

After you define the business rule you want to solve using client extensions, list the business requirements behind the business problem. This will help ensure that you are acknowledging all of the aspects of the business problem during the design stage.

• Do not allow new expenditure items to be charged to projects having a project status of Processing Only
• Allow expenditure items to be transferred to projects having a project status of Processing Only
• Display an error message when a user tries to enter new expenditure items charged to projects having a project status of Processing Only
• Do not allow any exceptions to this business rule

You could easily implement an exception to this rule regarding new charges from transfers only. An exception to this rule is to also allow supplier invoice transactions, which are typically received after the project work is complete.
**Required Extension**

To implement the business rule of controlling new charges to projects for which the work is complete, use the **Transaction Control Extension**.

**Suggestion:** Review the sample PL/SQL code that corresponds to the implementation of this case study in the file named PAXTTCXB.pls in Oracle Projects admin/sql directory.

**Additional Implementation Data**

You need to define a new project status of **Processing Only**.

**Design Considerations**

**Identifying Transferred Items**

You know if the item you are validating is a transfer from another project or task by looking at the value of the x_transferred_from_id parameter passed into your extension.

**Determining Project Status**

The project status is not passed as a parameter to the transaction control extension. Therefore, you need to derive this value from the project ID.

**Defining an Error Message**

If an item is a new item being charged to a project with a project type having the status of **Processing Only**, you want to display an error message to the user. The user can then change the project assignment of the new expenditure item to a different project.

You define an error message with the text, “You cannot create new items for **Processing Only** projects”. 
Case Study: Organization–Based Transaction Controls

The section demonstrates how to solve the business problem of implementing organization–based transaction controls.

Business Rule

The first step in the design process is to determine the business rule that you want to solve using client extensions.

Business Rule: Organization–Based Transaction Controls.

All administrative work must be charged to tasks that are managed by the employee’s organization or the expenditure organization for transactions for which an employee is not specified.

Requirements

After you define the business rule you want to solve using client extensions, list the business requirements behind the business problem. This will help ensure that you are acknowledging all of the aspects of the business problem during the design stage.

- Tasks with a service type of Administration allow charges only for employees assigned to the same organization as the task–owning organization
- For usages not associated with a specific employee, the expenditure item must have been charged by the same expenditure organization as the task organization
- Display an error message when a user tries to enter an expenditure item that violates this rule
- Do not allow any exceptions to this business rule

You can easily implement an exception to this rule, in which this rule does not apply to any projects that are managed by the Executive office. This exception exists because the Executive office uses resources throughout the company to perform important administrative work. The Executive office does not want to set up projects with a task for every organization that may help with the project work.
**Required Extension**

To implement the business rule of organization–based transaction controls, use the **Transaction Control Extension**.

**Suggestion:** Review the sample PL/SQL code that corresponds to the implementation of this case study in the file named PAXTTCXB.pls in the Oracle Projects admin/sql directory.

---

**Additional Implementation Data**

You need to define a new task service type of *Administration*.

---

**Design Considerations**

**Determining Incurred by Organization**

Since the incurred by organization of each transaction being evaluated is passed to the transaction control extension procedure, you do not need to derive the organization.

**Determining Task Organization**

Task organization is not passed as a parameter to the transaction control extension. Therefore, you need to derive this value.

**Determining Task Service Type**

The task service type is not passed as a parameter to the transaction control extension. Therefore, you need to derive this value.

**Defining an Error Message**

If an item being charged to a task violates this rule, you want to display an error message to the user. The user can then change the task assignment to a different value.

You define an error message with the text, “Only the task–owning organization can charge to this task”.

---
Case Study: Default Billable Status by Expenditure Type

The section demonstrates how to solve the business problem of specifying a default billable status based on expenditure type.

Business Rule

The first step in the design process is to determine the business rule that you want to solve using client extensions.

**Business Rule:** Determine Default Billable Status by Expenditure Type

All *Entertainment* charges are non–billable for all projects.

Requirements

After you define the business rule you want to solve using client extensions, list the business requirements behind the business problem. This will help ensure that you are acknowledging all of the aspects of the business problem during the design stage.

- Transactions with an expenditure type of *Entertainment* are non–billable for all projects, regardless of the task’s billable status
- There are no exceptions to this rule within the client extension; exceptions for negotiated billing of *Entertainment* expenses are marked as billable using the Adjust Project Expenditures form.
- Do not return an error message to the user for any expenditure types of *Entertainment*; simply set the billable status to non–billable for affected transactions.

Required Extension

To implement the business rule of determining the default billable status by expenditure type, use the **Transaction Control Extension**.

**Suggestion:** Review the sample PL/SQL code that corresponds to the implementation of this case study, view the file named PAXTTCXB.pls in the Oracle Projects admin/sql directory.
Additional Implementation Data

You need to define a new expenditure type of *Entertainment*.

Design Considerations

**Deriving Additional Information**

Since the expenditure type of each transaction being evaluated is passed to the transaction control extension procedure, you do not need to derive any additional data to implement this business rule.

**Determining Billable Status**

You can simply code your procedure to look at the expenditure_type parameter; if the expenditure type is Entertainment, set the x_billable_flag parameter to N to implement this business rule.
Case Study: Surcharge

The section demonstrates how to design a billing extension that solves the business problem of billing surcharge on project invoices.

Business Rule

The first step in the design process is to determine the business rule that you want to solve using client extensions.

Business Rule: Surcharge

Charge an additional surcharge to an invoice based on a percentage of the labor amount invoiced. This surcharge is referred to as Communication Charge.

Business Requirements

After you define the business rule you want to solve using client extensions, list the business requirements behind the business problem. This will help ensure that you are acknowledging all of the aspects of the business problem during the design stage.

- The surcharge is applicable only for projects for which it is negotiated. Project users specify the communication charge when they record the billing terms during project setup.
- You calculate this surcharge as follows:
  - \( Surcharge = \text{Surcharge Percentage} \times \text{Labor Amount Invoiced} \)
- Usually, the percentage is 2%. However, some project managers are beginning to negotiate 2.5% or 3% surcharges.

Required Extensions

You have determined that you will create a billing extension to automatically handle the Communication Charge within the invoicing cycle.

Suggestion: To review the sample PL/SQL code that corresponds to the implementation of this case study, view the
file named PAXITMPS.pls in the Oracle Projects admin/sql directory.

Additional Implementation Data

You must define additional data for this billing extension which includes the following:

- Event type of *Surcharge* with an event type classification of *Automatic*
- Descriptive flexfield segment on the Communication Charge billing assignments to hold the event description that users can enter to override the default description
- Descriptive flexfield segment on the Communication Charge billing extension to hold the corporate default percentage for communication charge

In addition, you must include the steps to enter a communication charge for projects in your company’s procedures manual.

Design Requirements

You must consider and answer these additional questions for your billing extension.

**Revenue or Invoice Amount?**

Are you calculating a revenue amount, an invoice amount, or both?
Are the amounts generated during revenue accrual, invoice generation, or both?

- The Communication Surcharge generates only an invoice amount during the invoice generation process. There is no effect on revenue.

**How is the Amount Calculated?**

What are the inputs to the calculation?

\[
\text{Surcharge} = \text{Surcharge Percentage} \times \text{Labor Invoiced}
\]
What is the Calling Place?
This billing extension is called in both Regular and Adjustment processing, to account for regular transactions and for revenue and invoice credits.

How are the Inputs Derived?
- Surcharge Percentage is entered by a project user who defines the billing terms of the project. This will be entered on the billing assignment. If the percent is not specified, read the corporate default from the descriptive flexfield.
- Labor Amount Invoiced is the labor bill amount on an invoice, excluding overtime billed on the invoice.

How is the Amount Processed?
You need to determine how the amounts are processed for different purposes: 1) for reporting purposes (2) for accounting purposes, (3) for invoicing?
- There are no special reporting requirements
- There is no special accounting effect for an invoicing event.
- The default event description for the billing extension is Communication Charge. The project users can override the value by setting the optional descriptive flexfield segment called ’Event Description’, which will be used to override the default event description.

Automatic Event Attributes?
You need to determine the various attributes of the automatic event, including: event type, event organization, event description, completion date.
- The event uses the default event type of Surcharge from the billing extension definition.
- The event organization is defaulted to the project or task organization. This organization is not used in processing or reporting these events.
- The event description is set as noted in the previous question.
- The completion date is set to the bill through date of the invoice.
When is the Surcharge Billing Extension Used?

Under what conditions is this calculation used? What types of projects? What types of billing terms?

- The communication surcharge is applicable for all projects for which it is negotiated.

How is the Billing Extension Processed for Adjustments?

Adjustments are defined as revenue credits or invoice credit memos, based on other transactions.

- The surcharge must be accounted for on all invoices and invoice credit memos.

Can This Billing Extension be Called with other Billing Extensions?

Can this billing extension be called with other billing extensions on the same project/task? If so, what is the dependency and order of your billing extensions?

- A project can have a communication surcharge along with other billing extensions. The communication surcharge must be processed before the other billing extensions.

What is the Processing if Some Input Values Cannot be Found?

- If no percentage is specified on the billing assignment, use the corporate default value of 2%. This default value is held on the billing extension definition in a descriptive flexfield.

- If no labor is billed, then no surcharge is billed.

How is the Logic Affected if the Inputs Change?

- The surcharge percentage could change, but the user must disable the existing billing assignment and enter a new billing assignment with a new percentage. This new percentage is then automatically processed.

Is there a Limit on the Amount Calculated?

Is there a limit on the amount calculated? If so, what is the logic?

- There is no specific limit on the communication charge.
Funding Level?

Are there implications of the level at which the project is funded – either the project level or the top task level? If so, what?

- There are no special implications.

See Also

Designing Client Extensions: page 18 – 9

Designing Billing Extensions: page 18 – 66

Billing Extension Definition

With the answers from these questions and your understanding of the billing extension definition, you can specify the billing extension definition of Communication Charge. An example is listed below.

**Note:** The Percentage is not a required input for every billing assignment of Communication Charge, since there is a corporate default percentage that will be used when project users do not enter a negotiated percentage.

**Suggestion:** You can use the same PL/SQL procedure for another billing extension that uses the same logic of adding a surcharge based on a percentage multiplied by the labor amount invoiced.

<table>
<thead>
<tr>
<th>Billing Extension</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>Communication Charge</td>
</tr>
<tr>
<td><strong>Procedure</strong></td>
<td>pa_demo_surcharge.execute</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Calculate surcharge to invoice based on percentage of labor invoiced</td>
</tr>
<tr>
<td><strong>Order</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

**Default Event Values**

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Surcharge</th>
</tr>
</thead>
</table>
### Event Description

<table>
<thead>
<tr>
<th>Calling Place</th>
<th>Communication Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>No</td>
</tr>
<tr>
<td>Invoice</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Required Inputs

<table>
<thead>
<tr>
<th>Required Inputs</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Percentage</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Other Parameters

<table>
<thead>
<tr>
<th>Other Parameters</th>
<th>Project Specific</th>
<th>Transaction Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Specific</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

### Testing

You specify the following test cases to use in testing your billing extension procedure.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Run</th>
<th>Inv Num</th>
<th>Inv Num Credited</th>
<th>Inv Amt</th>
<th>Invoice Labor Amt</th>
<th>%</th>
<th>Comm Charge Amt</th>
</tr>
</thead>
<tbody>
<tr>
<td>No labor invoiced</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1000</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Credit memo</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>–500</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Labor invoiced for first time</td>
<td>3</td>
<td>12000</td>
<td>10000</td>
<td>10000</td>
<td>2</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>

Table 18 – 39 Example Test Cases for Communication Charge (Page 1 of 2)
<table>
<thead>
<tr>
<th>Scenario</th>
<th>Run</th>
<th>Inv Num</th>
<th>Inv Num Credited</th>
<th>Inv Amt</th>
<th>Invoice Labor Amt</th>
<th>%</th>
<th>Comm Charge Amt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit memo due to rate change</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>-5000</td>
<td>-5000</td>
<td>2</td>
<td>-100</td>
</tr>
<tr>
<td>Labor with new bill rates</td>
<td>5</td>
<td></td>
<td></td>
<td>6000</td>
<td>6000</td>
<td>2</td>
<td>120</td>
</tr>
<tr>
<td>Communication Charge % was changed</td>
<td>4</td>
<td>6</td>
<td></td>
<td>5000</td>
<td>5000</td>
<td>3.5</td>
<td>175</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
<td>18500</td>
<td>16000</td>
<td>395</td>
<td></td>
</tr>
</tbody>
</table>

Table 18 – 39 Example Test Cases for Communication Charge (Page 2 of 2)

You now have all of the components of your functional design to give to your technical resource for writing the PL/SQL procedures.
Case Study: Summary Amounts for Reporting

Read this section to gain a better understanding of how Oracle Projects summarizes project actual and budget amounts by resource lists and periods. Following is a case study involving a sample project performed by Fremont Corporation.

Background of Market Analysis Project

This case study illustrates how you can maintain project summary amounts and use them for custom reporting.

Project and Work Breakdown Structure

Fremont Corporation has been contracted to perform a market study and present the findings. It is a six week project involving several different resources. The project number is PAR01.

James Robinson is the project manager, and has planned the following project work breakdown structure and resources:

<table>
<thead>
<tr>
<th>Task Number</th>
<th>Task Name</th>
<th>Start Date</th>
<th>Completion Date</th>
<th>Planned Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Analysis</td>
<td></td>
<td></td>
<td>Marlin, Travel, Outside Services</td>
</tr>
<tr>
<td>1.1</td>
<td>Onsite client interviews</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Computer Model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2.1</td>
<td>Create model</td>
<td></td>
<td></td>
<td>Sr. Consultant, In-House Recoverables</td>
</tr>
<tr>
<td>1.2.2</td>
<td>Run tests</td>
<td></td>
<td></td>
<td>Sr. Consultant</td>
</tr>
<tr>
<td>2</td>
<td>Presentation</td>
<td></td>
<td></td>
<td>Robinson, Travel</td>
</tr>
</tbody>
</table>

Amy Marlin will lead the first phase of the analysis, which is to conduct client interviews at the client site. The client site is located in a different city than Marlin’s office; therefore, she will be incur some travel costs. Robinson plans to use an outside consulting firm to help with a specialized area of the interview process. He has not yet arranged for a specific outside consulting firm to help with the work, but he knows the dates when they are needed and the amount that he can spend for outside consulting.

The second phase of the analysis is to create and run tests in a computer model based on the input from the client interviews. Robinson knows
that it will take the skills of a senior consultant to create and run tests in this model, but he is still looking for an available resource. Creating and using the model requires extensive computer resources, for which Robinson is reserving one of the high powered, company–owned computers.

Robinson will present the findings to the client after the analysis is complete. He will travel to the client site to give this presentation.

See the worksheet WBS Plan above for the work breakdown of this project.

Project Resource List Assignments

For employee utilization, Fremont Corporation uses these resource lists:

- Labor by Employee and Job, Non–Labor by Expenditure Type
- Labor by Organization, Non–Labor by Expenditure Type

Oracle Projects automatically assigns these lists when you use a project template to create the new project, because they are assigned to the project template.

Fremont Corporation defines the following resource lists:
<table>
<thead>
<tr>
<th>Resource List</th>
<th>Resource Group</th>
<th>Resource</th>
<th>Resource Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor by Employee and Job, Non-Labor by Expenditure Type</td>
<td>Labor</td>
<td>Gray, Donald</td>
<td>Employee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marlin, Amy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Robinson, James</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Principal Consultant</td>
<td>Job</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Senior Consultant</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff Consultant</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Principal Engineer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Senior Engineer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff Engineer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff Draftsman</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff Clerk</td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td>Air Travel</td>
<td></td>
<td>Expenditure Type</td>
</tr>
<tr>
<td></td>
<td>Automobile Rental</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lodging</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Misc Travel Expense</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Personal Auto Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside Services</td>
<td>Consulting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In–House Recoverables</td>
<td>Computer Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Field Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Asset</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vehicle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenses</td>
<td>Entertainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equipment Rental</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Expense</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Invoice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Resource Lists

<table>
<thead>
<tr>
<th>Resource List</th>
<th>Resource Group</th>
<th>Resource</th>
<th>Resource Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor by Organization, Non–Labor by Expenditure Type</td>
<td>Labor</td>
<td>Risk Analysis</td>
<td>Organization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data Systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electrical</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Mechanical</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Midwest</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>South</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Environmental</td>
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<tr>
<td></td>
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<td>Structural</td>
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<td></td>
<td>Human Resources</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Finance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information Services</td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td></td>
<td>Air Travel</td>
<td>Expenditure Type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automobile Rental</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Lodging</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meals</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Misc Travel Expense</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal Auto Use</td>
<td></td>
</tr>
<tr>
<td>Outside Services</td>
<td>Consulting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In–House Recoverables</td>
<td>Computer Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Field Equipment</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Other Asset</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vehicle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenses</td>
<td>Entertainment</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Equipment Rental</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Other Expense</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Invoice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Robinson creates the cost and revenue budget for the project. The following cost budget worksheet shows raw and burdened cost budgets.

<table>
<thead>
<tr>
<th>Task</th>
<th>Resource</th>
<th>Period</th>
<th>Qty.</th>
<th>UOM</th>
<th>Raw Cost</th>
<th>Burdened Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Marlin</td>
<td>P12-02-95</td>
<td>30</td>
<td>Hours</td>
<td>1,500</td>
<td>3,750</td>
</tr>
<tr>
<td></td>
<td>Travel</td>
<td>P12-02-95</td>
<td></td>
<td></td>
<td>1,000</td>
<td>1,200</td>
</tr>
<tr>
<td></td>
<td>Marlin</td>
<td>P12-03-95</td>
<td>30</td>
<td>Hours</td>
<td>1,500</td>
<td>3,750</td>
</tr>
<tr>
<td></td>
<td>Travel</td>
<td>P12-03-95</td>
<td></td>
<td></td>
<td>1,000</td>
<td>1,200</td>
</tr>
<tr>
<td></td>
<td>Outside Services</td>
<td>P12-04-95</td>
<td>500</td>
<td></td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>1.2.1</td>
<td>Senior Consultant</td>
<td>P01-01-96</td>
<td>40</td>
<td>Hours</td>
<td>2,000</td>
<td>5,000</td>
</tr>
<tr>
<td></td>
<td>In-House Recoverables</td>
<td>P01-01-96</td>
<td>500</td>
<td></td>
<td>750</td>
<td></td>
</tr>
<tr>
<td>1.2.2</td>
<td>Senior Consultant</td>
<td>P01-02-96</td>
<td>80</td>
<td>Hours</td>
<td>4,000</td>
<td>10,000</td>
</tr>
<tr>
<td>2</td>
<td>Robinson</td>
<td>P01-03-96</td>
<td>50</td>
<td>Hours</td>
<td>5,000</td>
<td>12,500</td>
</tr>
<tr>
<td></td>
<td>In-House Recoverables</td>
<td>P01-03-96</td>
<td>1,000</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Travel</td>
<td>P01-03-96</td>
<td>1,500</td>
<td>1,800</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTAL:</td>
<td></td>
<td></td>
<td></td>
<td>24,000</td>
<td>45,950</td>
</tr>
</tbody>
</table>
Transactions and Commitments

Transactions and one commitment are charged to the project. A small number of transactions are charged to different employees, across multiple Oracle Projects PA periods, for the duration of the project.

Typically, open commitments are recognized in the current reporting period. To help illustrate this, an open commitment is recognized in the first period of the project. In the last period of the project, the commitment is closed. The effect of opening and closing the commitment is reflected in the exhibits.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Org.</td>
<td>Resource</td>
<td></td>
<td></td>
<td></td>
<td>By Employee and Job</td>
</tr>
<tr>
<td>ACTUALS</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marlin</td>
<td>Data Systems</td>
<td>10-Dec-95</td>
<td>Professional</td>
<td>PAR01</td>
<td>1.1</td>
<td>30 hrs.</td>
<td>1,050</td>
<td>3,061</td>
<td>P12-02-95</td>
<td>Marlin, Amy</td>
<td>Data Systems</td>
<td></td>
</tr>
<tr>
<td>Marlin</td>
<td>Data Systems</td>
<td>10-Dec-95</td>
<td>Air Travel</td>
<td>PAR01</td>
<td>1.1</td>
<td>800</td>
<td>800</td>
<td>920</td>
<td>P12-02-95</td>
<td>Air Travel</td>
<td>Data Systems</td>
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</tr>
<tr>
<td>Marlin</td>
<td>Data Systems</td>
<td>17-Dec-95</td>
<td>Professional</td>
<td>PAR01</td>
<td>1.1</td>
<td>30 hrs.</td>
<td>1,050</td>
<td>3,061</td>
<td>P12-03-95</td>
<td>Marlin, Amy</td>
<td>Data Systems</td>
<td></td>
</tr>
<tr>
<td>Marlin</td>
<td>Data Systems</td>
<td>17-Dec-95</td>
<td>Air Travel</td>
<td>PAR01</td>
<td>1.1</td>
<td>750</td>
<td>750</td>
<td>863</td>
<td>P12-03-95</td>
<td>Air Travel</td>
<td>Data Systems</td>
<td></td>
</tr>
<tr>
<td>Prothia</td>
<td>Data Systems</td>
<td>31-Dec-95</td>
<td>Professional</td>
<td>PAR01</td>
<td>1.2.1</td>
<td>40 hrs.</td>
<td>1,000</td>
<td>2,915</td>
<td>P01-01-96</td>
<td>Sr. Consultant</td>
<td>Data Systems</td>
<td></td>
</tr>
<tr>
<td>Prothia</td>
<td>Data Systems</td>
<td>31-Dec-95</td>
<td>Computer Services</td>
<td>PAR01</td>
<td>1.2.1</td>
<td>Info. Services</td>
<td>Computer</td>
<td>280</td>
<td>280</td>
<td>280</td>
<td>P01-01-96</td>
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<tr>
<td>Prothia</td>
<td>Data Systems</td>
<td>7-Jan-95</td>
<td>Professional</td>
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<td>80 hrs.</td>
<td>2,000</td>
<td>5,851</td>
<td>P01-02-96</td>
<td>Sr. Consultant</td>
<td>Data Systems</td>
<td></td>
</tr>
<tr>
<td>Prothia</td>
<td>Data Systems</td>
<td>7-Jan-95</td>
<td>Computer Services</td>
<td>PAR01</td>
<td>2</td>
<td>Info. Services</td>
<td>Computer</td>
<td>350</td>
<td>350</td>
<td>350</td>
<td>P01-02-96</td>
<td>Computer Services</td>
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<td>Robinson</td>
<td>Environmental</td>
<td>14-Jan-95</td>
<td>Professional</td>
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<td>50 hrs.</td>
<td>1,500</td>
<td>4,373</td>
<td>P01-03-96</td>
<td>Robinson, James</td>
<td>Environmental</td>
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</tr>
<tr>
<td>Robinson</td>
<td>Environmental</td>
<td>14-Jan-95</td>
<td>Air Travel</td>
<td>PAR01</td>
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<td>1,450</td>
<td>1,450</td>
<td>1,668</td>
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<td>Air Travel</td>
<td>Environmental</td>
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<td>COMMITMENTS</td>
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<tr>
<td>10-Dec-95</td>
<td>Consulting</td>
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<td>5,200</td>
<td>5,200</td>
<td>P12-02-95</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15,430 26,522</td>
</tr>
</tbody>
</table>

Purchase order created for outside interview consulting firm for period P12-02-95 and interfaced from Accounts Payable to Oracle Projects in period P01-03-96, but posted to P12-02-95.
Reviewing Amounts in Project Status Inquiry

The project amounts are summarized for the current reporting period of P01–02–96. Fremont Corporation set up the following PA periods:

<table>
<thead>
<tr>
<th>PA Period</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>P12–01–95</td>
<td>27–NOV–95</td>
<td>03–DEC–95</td>
</tr>
<tr>
<td>P12–02–95</td>
<td>04–DEC–95</td>
<td>10–DEC–95</td>
</tr>
<tr>
<td>P12–03–95</td>
<td>11–DEC–95</td>
<td>17–DEC–95</td>
</tr>
<tr>
<td>P12–04–95</td>
<td>18–DEC–95</td>
<td>24–DEC–95</td>
</tr>
<tr>
<td>P01–01–96</td>
<td>25–DEC–95</td>
<td>31–DEC–95</td>
</tr>
<tr>
<td>P01–02–96</td>
<td>01–JAN–96</td>
<td>07–JAN–96</td>
</tr>
<tr>
<td>P01–03–96</td>
<td>08–JAN–96</td>
<td>14–JAN–96</td>
</tr>
<tr>
<td>P01–04–96</td>
<td>15–JAN–96</td>
<td>21–JAN–96</td>
</tr>
<tr>
<td>P01–05–96</td>
<td>22–JAN–96</td>
<td>28–JAN–96</td>
</tr>
<tr>
<td>P02–01–96</td>
<td>29–JAN–96</td>
<td>04–FEB–96</td>
</tr>
<tr>
<td>P02–02–96</td>
<td>05–FEB–96</td>
<td>11–FEB–96</td>
</tr>
<tr>
<td>P02–03–96</td>
<td>12–FEB–96</td>
<td>18–FEB–96</td>
</tr>
<tr>
<td>P03–01–96</td>
<td>26–FEB–96</td>
<td>03–MAR–96</td>
</tr>
<tr>
<td>P03–02–96</td>
<td>04–MAR–96</td>
<td>10–MAR–96</td>
</tr>
<tr>
<td>P03–03–96</td>
<td>11–MAR–96</td>
<td>17–MAR–96</td>
</tr>
<tr>
<td>P03–04–96</td>
<td>18–MAR–96</td>
<td>24–MAR–96</td>
</tr>
</tbody>
</table>

Robinson reviews the transactions online in the Project Status Inquiry windows.

Initially, Robinson reviews the summary amounts for the entire project in the Project Status window. Only one row of summary actuals and budgets display on the Project Status window. Note the open commitment amount.

**EXHIBIT I: Initial Project Status View for First Reporting Period**

<table>
<thead>
<tr>
<th>Resource List:</th>
<th>Labor by Employee and Job, Non-Labor by Expenditure Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Period:</td>
<td>P01–02–96</td>
</tr>
<tr>
<td>Project</td>
<td>PP Cost</td>
</tr>
<tr>
<td>PAR01</td>
<td>5,750</td>
</tr>
</tbody>
</table>
Then, using the 'Labor by Employee & Job, Non–Labor by Expenditure Type' resource list, Robinson drills down to the Resource Status window to view the major resource groups budgeted for the project. For each resource group, Robinson subsequently drills down again to the supporting second–level resources, actuals and budgets.

EXHIBIT II: Initial Resource Status View

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>5,000</td>
<td>2,915</td>
<td>10,000</td>
<td>5,831</td>
<td>15,000</td>
<td>8,746</td>
<td>22,500</td>
<td>14,868</td>
<td>7,632</td>
</tr>
<tr>
<td>Travel</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Outside Services</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>5,000</td>
</tr>
<tr>
<td>In–house Services</td>
<td>750</td>
<td>280</td>
<td>–</td>
<td>350</td>
<td>350</td>
<td>630</td>
<td>750</td>
<td>630</td>
<td>120</td>
</tr>
</tbody>
</table>

EXHIBIT III: Drilldown to Resources

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>5,000</td>
<td>2,915</td>
<td>10,000</td>
<td>5,831</td>
<td>15,000</td>
<td>8,746</td>
<td>22,500</td>
<td>14,868</td>
<td>7,632</td>
</tr>
<tr>
<td>Marlin, Amy</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>7,500</td>
<td>6,122</td>
<td>1,378</td>
<td></td>
</tr>
<tr>
<td>Robinson, James</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Sr. Consultant</td>
<td>5,000</td>
<td>2,915</td>
<td>10,000</td>
<td>5,831</td>
<td>15,000</td>
<td>8,746</td>
<td>15,000</td>
<td>8,746</td>
<td>6,254</td>
</tr>
<tr>
<td>Travel</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>2,400</td>
<td>1,783</td>
<td>617</td>
<td></td>
</tr>
<tr>
<td>Air Travel</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>1,783 (1,783)</td>
</tr>
<tr>
<td>Outside Services</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>5,000</td>
<td>–</td>
<td>5,000</td>
<td>5,200</td>
</tr>
<tr>
<td>Consulting</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>In–house Services</td>
<td>750</td>
<td>280</td>
<td>–</td>
<td>350</td>
<td>350</td>
<td>630</td>
<td>750</td>
<td>630</td>
<td>120</td>
</tr>
<tr>
<td>Computer Services</td>
<td>–</td>
<td>280</td>
<td>–</td>
<td>350</td>
<td>–</td>
<td>630</td>
<td>–</td>
<td>630</td>
<td>(630)</td>
</tr>
</tbody>
</table>

Robinson also wants to see employee utilization by organization. So, he selects an alternate resource list, 'Labor by Organization, Non–Labor by Expenditure Type'. Subsequently, he drills down from the Project Status window to the second–level resources on the Resource Status window.
EXHIBIT IV: Alternate Organizational Drilldown to Resources

Current Period: P01–02–96

Resource List: Labor by Organization, Non–Labor by Expenditure Type

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>–</td>
<td>2,915</td>
<td>–</td>
<td>5,831</td>
<td>–</td>
<td>8,746</td>
<td>–</td>
<td>14,868</td>
<td>(14,868)</td>
<td>–</td>
</tr>
<tr>
<td>Data Systems</td>
<td>–</td>
<td>2,915</td>
<td>–</td>
<td>5,831</td>
<td>–</td>
<td>8,746</td>
<td>–</td>
<td>14,868</td>
<td>(14,868)</td>
<td>–</td>
</tr>
<tr>
<td>Travel</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Air Travel</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>1,783</td>
<td>(1,783)</td>
<td>–</td>
</tr>
<tr>
<td>Outside Services</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>5,200</td>
</tr>
<tr>
<td>Consulting</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>5,200</td>
</tr>
<tr>
<td>In–house</td>
<td>–</td>
<td>280</td>
<td>–</td>
<td>350</td>
<td>–</td>
<td>630</td>
<td>–</td>
<td>630</td>
<td>(630)</td>
<td>–</td>
</tr>
<tr>
<td>Recoverables</td>
<td>–</td>
<td>280</td>
<td>–</td>
<td>350</td>
<td>–</td>
<td>630</td>
<td>–</td>
<td>630</td>
<td>(630)</td>
<td>–</td>
</tr>
<tr>
<td>Computer Services</td>
<td>–</td>
<td>280</td>
<td>–</td>
<td>350</td>
<td>–</td>
<td>630</td>
<td>–</td>
<td>630</td>
<td>(630)</td>
<td>–</td>
</tr>
</tbody>
</table>

Summary Amounts After Current Reporting Period Change

When the reporting period changes to P01–03–96, Robinson once again reviews the Project and Resource Status of project PAR01.

The prior period, period–to–date, year–to–date, and inception–to–date actuals and budgets have changed to reflect the new reporting period’s actuals and budgets. The commitment amount no longer appears on the status windows because it is closed in an earlier reporting period.

EXHIBIT V: Initial Project Status View After Current Reporting Period Change

Current Period: P01–03–96

Resource List: Labor by Employee and Job, Non–Labor by Expenditure Type

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PAR01</td>
<td>10,000</td>
<td>6,181</td>
<td>15,300</td>
<td>6,040</td>
<td>31,050</td>
<td>15,416</td>
<td>45,950</td>
<td>28,521</td>
<td>17,429</td>
<td>–</td>
</tr>
</tbody>
</table>

EXHIBIT VI: Initial Resource Status View After Current Reporting Period Change

Current Period: P01–03–96

Resource List: Labor by Employee and Job, Non–Labor by Expenditure Type
**EXHIBIT VII:** Initial Resource Status View After Current Reporting Period Change

**Resource List:** Labor by Employee and Job, Non-Labor by Expenditure Type

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>10,000</td>
<td>5,831</td>
<td>12,500</td>
<td>4,373</td>
<td>27,500</td>
<td>13,119</td>
<td>35,000</td>
<td>19,241</td>
<td>15,759</td>
<td>–</td>
</tr>
<tr>
<td>Travel</td>
<td>–</td>
<td>–</td>
<td>1,800</td>
<td>1,668</td>
<td>1,800</td>
<td>1,668</td>
<td>4,200</td>
<td>3,450</td>
<td>750</td>
<td>–</td>
</tr>
<tr>
<td>Outside Services</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>In–house Recoverables</td>
<td>–</td>
<td>350</td>
<td>1,000</td>
<td>–</td>
<td>1,750</td>
<td>630</td>
<td>1,750</td>
<td>630</td>
<td>1,120</td>
<td>–</td>
</tr>
<tr>
<td>Marlin, Amy</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Robinson, James</td>
<td>–</td>
<td>–</td>
<td>12,500</td>
<td>4,373</td>
<td>12,500</td>
<td>4,373</td>
<td>4,200</td>
<td>4,373</td>
<td>8,127</td>
<td>–</td>
</tr>
<tr>
<td>Sr. Consultant</td>
<td>10,000</td>
<td>5,831</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Travel</td>
<td>–</td>
<td>–</td>
<td>1,800</td>
<td>1,668</td>
<td>1,800</td>
<td>1,668</td>
<td>4,200</td>
<td>3,450</td>
<td>750</td>
<td>–</td>
</tr>
<tr>
<td>Air Travel</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>1,668</td>
<td>–</td>
<td>1,668</td>
<td>–</td>
<td>3,450</td>
<td>(3,450)</td>
<td>–</td>
</tr>
<tr>
<td>Outside Services</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>5,000</td>
<td>5,200</td>
<td>(200)</td>
</tr>
<tr>
<td>Consulting</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>5,000</td>
<td>5,200</td>
<td>(200)</td>
</tr>
<tr>
<td>In–house Recoverables</td>
<td>–</td>
<td>350</td>
<td>1,000</td>
<td>–</td>
<td>1,750</td>
<td>630</td>
<td>1,750</td>
<td>630</td>
<td>1,120</td>
<td>–</td>
</tr>
<tr>
<td>Computer Services</td>
<td>–</td>
<td>350</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>630</td>
<td>–</td>
<td>630</td>
<td>(630)</td>
<td>–</td>
</tr>
</tbody>
</table>

**Summary Amounts After Budget Changes**

During the last period of the project, Robinson receives a change order from the clients based on recent negotiations for increased scope, so he can now increase all budgets by ten percent. He baselines the new budget version, reruns the update project summary amounts process, and reviews the status of the project once more.
All prior period, period–to–date, year–to–date, and inception–to–date budgets now reflect a ten percent increase. The actuals remain unchanged.

EXHIBIT VIII: Initial Project Status View After Budgets Baselined for a Ten Percent Across the Board Increase

<table>
<thead>
<tr>
<th>Current Period:</th>
<th>P01–03–96</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource List:</td>
<td>Labor by Organization, Non–Labor by Expenditure Type</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project</th>
<th>PP Cost</th>
<th>PP Actual</th>
<th>PTD Cost</th>
<th>PTD Actual</th>
<th>YTD Cost</th>
<th>YTD Actual</th>
<th>ITD Cost</th>
<th>ITD Actual</th>
<th>Variance</th>
<th>Cmt Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAR01</td>
<td>11,000</td>
<td>6,181</td>
<td>16,830</td>
<td>6,040</td>
<td>34,155</td>
<td>15,416</td>
<td>50,545</td>
<td>28,521</td>
<td>22,024</td>
<td>–</td>
</tr>
</tbody>
</table>
This appendix describes the default navigator paths for each window on the Oracle Projects menu.
Navigator Paths in Oracle Projects

This section shows the default navigation paths for most of the windows in Oracle Projects as they are supplied. In addition, the table below provides a page number reference for the description of each window in this manual, or a reference for the descriptions of windows that are located in other manuals.

You can find descriptions for those windows used throughout Oracle Applications in the Oracle Applications User’s Guide and the Oracle Applications Flexfields Guide.

<table>
<thead>
<tr>
<th>See XXX</th>
<th>Refer to this manual for a complete window description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flex</td>
<td>Oracle Applications Flexfields Guide</td>
</tr>
<tr>
<td>GL</td>
<td>Oracle General Ledger User’s Guide</td>
</tr>
<tr>
<td>SysAd</td>
<td>Oracle Applications System Administration User’s Guide</td>
</tr>
<tr>
<td>User</td>
<td>Oracle Applications User’s Guide</td>
</tr>
</tbody>
</table>

The responsibility that you use determines which of these windows you can use and how you access them. Your system administrator sets up navigation menus and task flows for your responsibility. The system administrator may also create customized versions of some of these windows using different window titles.

Folder Technology

The windows marked with an asterisk (*) use folder technology, which allows you to customize your folder’s appearance using the Folder menu option. Folder–enabled windows are designated by a folder icon in the window’s upper left corner. Your system administrator manages which users or responsibilities can access or own various folders. For more information see: Administering Folders Oracle Applications System Administrator’s Guide.

<table>
<thead>
<tr>
<th>Window Title</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting Calendar</td>
<td>(See GL)</td>
</tr>
<tr>
<td></td>
<td>Setup &gt; Financials &gt; Calendar &gt; Periods</td>
</tr>
</tbody>
</table>
Agreement ................................. 7 – 10
Billing > Agreements

AR Payment Terms .......................... 16 – 122
Setup > Billing > Payment Terms

Agreement Template ......................... 7 – 18
Setup > Billing > Agreement Templates

Agreement Types .......................... 16 – 123
Setup > Billing > Agreement Types

Assign AutoAccounting Rules ............. 16 – 233
Setup > AutoAccounting > Assign Rules

Assign Security Rules ........................ (See Flex)
Setup > Flexfields > Descriptive > Security > Assign
Setup > Flexfields > Key > Security > Assign
Setup > Flexfields > Validation > Security > Assign

AutoAccounting Lookup Sets ............... 16 – 230
Setup > AutoAccounting > Lookup Sets

AutoAccounting Rules ...................... 16 – 227
Setup > AutoAccounting > Rules

Bill Rate Schedules ......................... 16 – 125
Setup > Billing > Bill Rate Schedules

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Setup > Budgets > Entry Methods

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Setup > Budgets > Budget Types

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Budgets

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Setup > Costing > Burden > Cost Codes

Burden Schedules .......................... 16 – 106
Setup > Costing > Burden > Schedules
Burden Structures .............................................. 16 – 102
  Setup > Costing > Burden > Structures

Capital Projects .................................................. 6 – 2
  Capital Projects

Class Categories and Codes ................................. 16 – 167
  Setup > Projects > Classifications

Compensation Rules ............................................. 16 – 93
  Setup > Costing > Labor > Compensation Rules

Completed Requests ................................. (See User)
  Other > Requests > View

Contact Types .................................................. 16 – 175
  Setup > Project > Customers > Contact Types

Control Actions .................................................. 13 – 4
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See Also

Oracle Applications Character Mode to GUI Menu Path Changes
This appendix describes profile options that affect the operation of your Oracle Projects application. We provide a brief description of each profile option that you can view and/or set, and tell you at which levels to set the profile option. In addition, we provide descriptions of the Oracle Projects application profile options that are available only to your System Administrator.
Profile Options in Oracle Projects

During your implementation, you set a value for each profile option in Oracle Projects to specify how Oracle Projects controls access to and processes data. Generally, your System Administrator sets and updates profile values using the System Profile Values window to set up profile options. See: Setting User Profile Options (Oracle Applications System Administrator’s Guide).

Users can also update certain profile options that are defined to be updated by end users. Users can set their personal profile options in the Personal Profile Values window.

Overview of User Profile Options

For each profile option, we give a brief overview of how Oracle Projects uses that profile, and tell you which levels you can use to set or update its value.

PA: ADW Collect Top Tasks
Indicates whether the collection program collects dimension and fact table information at the top task level. By default, this profile option is set to No.

Note: You cannot currently collect task-level information if you integrate Oracle Projects with Oracle Project Analysis Collection Pack.

Attention: You should set this profile before you start collecting information for the interface tables. If you change this profile option after you have run the collection process, then you must reload the interface tables using the Refresh Dimension and Fact Tables process.

This profile option is visible to the System Administrator and updatable at the application level.

The internal name for this profile option is PA_ADW_COLLECT_TOP_TASKS.

PA: ADW Installed
Indicates if Oracle Project Analysis Collection Pack is installed. This profile is automatically set to Yes when you install Oracle Project Analysis Collection Pack. Oracle Projects does not use this profile.
Oracle Applications Data Warehouse uses it only for integration with Oracle Projects.

Available values are listed below:

**Yes**
- Only the core Oracle Projects product (either Oracle Project Billing or Oracle Project Costing) is installed.
- Oracle Project Analysis Collection Pack functionality will be available.

**No**
- Oracle Project Analysis Collection Pack is not installed, and related functions will not be available.

**(No value)**
- Equivalent to No

This profile option is visible to the System Administrator at the application level. You cannot update this profile option.

The internal name for this profile option is `PA_ADW_INSTALLED`.

**PA: Allow Cross-Charging in Multi-Org**

If you have implemented multiple organization support, this profile indicates whether to allow users to charge expenditure items to projects in other operating units that share the same Business Group, PA Period Type, and Set of Books as the user’s operating unit.

**Yes**
- User is allowed to charge expenditure items to projects in other operating units that share the same Business Group, PA Period Type, and Set of Books as the user’s operating unit.

**No**
- User is not allowed to charge expenditure items to other operating units.

**(No value)**
- Equivalent to Yes

This profile option is visible to the user and the System Administrator and updatable at the responsibility level.

The internal name for this profile option is `PA_CROSS_CHARGE_PROJECT`.

**PA: Allow Override of PA Distributions in AP/PO**

Indicates whether a user is allowed to update the Accounting Flexfield combination that is generated by FlexBuilder for Oracle Projects distributions in Oracle Payables and Oracle Purchasing. Available values are as follows:
User is allowed to update and override the generated Account.

No

User is not allowed to update and override the generated Account.

(No value)

Equivalent to Yes

This profile option is visible to the System Administrator and updatable at the site, application, responsibility, and user levels.

The internal name for this profile option is PA_ALLOW_FLEXBUILDER_OVERRIDES.

**PA: Allowed to Use AMG**

Indicates whether you have purchased and are a licensed user of Activity Management Gateway.

Available values are listed below:

---

**Yes**  
Activity Management Gateway has been purchased and licensed. Entitles the user to features and support. You must enable this profile option to use any application that is based on Activity Management Gateway.

**No**  
Default value is No, meaning that user does not have access to AMG features or support.

(No value)

Equivalent to No

This profile option is visible to the System Administrator and updatable at the site level.

The internal name for this profile option is PA_AMGLICENSED.

**PA: AutoApprove Expense Reports**

Indicates whether to automatically approve expense reports submitted from Oracle Personal Time and Expense.

Indicates whether Oracle Projects calls a routing extension when you import an expense report that originates in Oracle Personal Time and Expense.

**Yes**  
Oracle Projects automatically imports the expense report into Oracle Projects as an Approved expenditure. You do not need to route or review your expense reports.
Default value is No; in other words, expense reports are not automatically approved. They require review and approval.

Equivalent to No

This profile option is visible to the System Administrator and is updatable at the application level.

The internal name for this profile option is PA_PTE_AUTOAPPROVE_ER.

**PA: AutoApprove Timesheets**

Indicates whether to automatically approve timesheets submitted from Oracle Personal Time and Expense.

Indicates whether Oracle Projects calls a routing extension when you import a timesheet that originates in Oracle Personal Time and Expense.

Default value is No; in other words, timesheets are not automatically approved and require review and approval.

Equivalent to No

This profile option is visible to the System Administrator and is updatable at the application level.

The internal name for this profile option is PA_PTE_AUTOAPPROVE_TS.

**PA: Borrowed Lent Percentage Amount**

Indicates the percent to use for borrowed and lent revenue for organizations. For example, you company may have a policy that a borrowing organization receives 20% credit for revenue, while the receiving organization gets 80% of the revenue. Assuming your AutoAccounting setup credits the revenue to the lending organizations, your borrowed and lent percentage is 20%.

You can specify any amount greater or equal to zero. If you do not specify a percentage amount, and implement borrowed and lent functions using AutoAccounting, Oracle Projects uses a value of 100 percent when calculating revenue amounts.
This profile option is visible to the System Administrator and is updatable at the site level.

The internal name for this profile option is PA_BORROWED_LENT_PERCENTAGE.

**PA: Collection Pack Licensed**

Indicates whether you have purchased and are a licensed user of Oracle Project Analysis Collection Pack.

Available values are listed below:

**Yes**
Oracle Project Analysis Collection Pack has been purchased and licensed. Entitles the user to features and support. You must enable this profile option to use any features of Oracle Project Analysis Collection Pack.

**No**
Default value is No, meaning that user does not have access to Oracle Project Analysis Collection Pack features or support.

**(No value)**
Equivalent to No

This profile option is visible to the System Administrator and updatable at the site level.

The internal name for this profile option is PA_ADW_LICENSED.

**PA: Cost Distribution Lines Per Set**

Indicates the number of cost distribution lines to process in each set. This profile affects the following processes:

- PRC: Interface Labor Costs to General Ledger
- PRC: Interface Total Burdened Costs to General Ledger
- PRC: Interface Usage Costs to General Ledger
- PRC: Tieback Expense Reports from Payables

A logical unit of work is performed on a set of cost distribution lines before the work is committed. For example, the PRC: Interface Labor Costs to General Ledger process performs the following tasks on a set of cost distribution lines before committing the set to the database:

- Processes the set through AutoAccounting
- Interfaces the set to Oracle General Ledger
You can choose any numeric value to set this profile option, as long as it does not cause your system to exceed memory and database rollback segment sizes, and it is large enough to avoid unnecessary database accesses.

If you do not set this profile value, most of the processes use a default of 2000 cost distribution lines per set, but this value is operating system dependent.

This profile option is visible to the System Administrator and updatable at the application level.

The internal name for this profile option is PA_NUM_CDL_PER_SET.

**PA: Cross–Project Responsibility**

Indicates if a responsibility allows Cross–Project access. Available values are as follows:

- **Yes**
  A holder of this responsibility can view and update any project

- **No**
  A holder of this responsibility can view and update only those projects for which the holder is assigned as a key member

- **(No value)**
  Equivalent to No

Oracle Projects predefines a value of **Yes** for this profile for the Project Billing Super User and Project Costing Super User responsibilities upon installation.

This profile option is visible to the System Administrator and updatable at the responsibility level.

The internal name for this profile option is PA_SUPER_PROJECT.

**PA: Debug Mode**

Indicates if Oracle Projects reports and processes are run in debug mode. The debug mode enables a tracing feature and causes additional messages to be printed to the log file. Available values are listed below:

- **Yes**
  System is operating in debug mode

- **No**
  System is operating in normal mode

- **(No value)**
  Equivalent to No

Oracle Projects predefines a value of **No** for this profile upon installation.

This profile option is available at any level.
This profile option is visible to the user and System Administrator and updatable at the application, responsibility, and user levels.

The internal name for this profile option is PA_DEBUG_MODE.

**PA: Default Burden Schedule Type**

Indicates the default burden schedule type when entering a standard burden schedule using the Burden Schedules form. Valid values are listed below:

- **Firm**  
  Firm schedule type
- **Provisional**  
  Provisional schedule type

Oracle Projects predefines a value of *Firm* for this profile upon installation.

This profile option is visible to the System Administrator and updatable at the site level.

The internal name for this profile option is PA_IND_RATE_SCHEDULE_TYPE.

**PA: Default Expenditure Organization in AP/PO**

Indicates the default expenditure organization for project–related information in Oracle Payables and Oracle Purchasing.

You can select any organization that has a classification of HR Organization.

This profile option is visible to the user and System Administrator and updatable at the site, application, responsibility, and user levels.

The internal name for this profile option is PA_DEFAULT_EXP_ORG.

**PA: Default Public Sector**

Indicates if a project is public sector when a user enters a project using the Projects form. Available values are listed below:

- **Yes**  
  By default, any new project is public sector
- **No**  
  By default, any new project is not public sector
- **(No value)**  
  Equivalent to No

Oracle Projects predefines a value of *No* for this profile upon installation.

This profile option is visible to the System Administrator and updatable at the site level.
The internal name for this profile option is PA_DEFAULT_PUBLIC_SECTOR.

**PA: Display Find Tasks**
Indicates whether to display the Find Tasks window when a user chooses Tasks in the Projects, Templates window. Available values are listed below:

- **Yes** Tasks displays the Find Tasks window, and Oracle Projects automatically queries the top tasks (WBS Level = 1)
- **No** Tasks does not display the Find Tasks window
- **(No value)** Equivalent to No

This profile option is visible to the user and System Administrator and is updatable at the site, application, responsibility, and user levels.

The internal name for this profile option is PA_DISPLAY_FIND_TASKS.

**PA: Dual Accumulation Mode**
Indicates whether to run the Release 10.5 accumulation along with the new summarization in Release 10.7 to provide a transition path when upgrading to Oracle Projects Release 10.7.

- **Yes** Perform both new summarization and old accumulation functions
- **No** Perform only new summarization functions
- **(No value)** Equivalent to No

This profile option is visible to the System Administrator and is updatable at the application level.

The internal name for this profile option is PA_DUAL_ACCUMULATION_MODE.

**PA: Expenditure Items Per Set**
Indicates the number of expenditure items to process in each set. This profile option affects the following processes:

- PRC: Distribute Labor Costs
- PRC: Distribute Usage Costs
• PRC: Distribute Expense Report Costs
• PRC: Distribute Supplier Invoice Adjustments
• PRC: Distribute Total Burdened Costs
• PRC: Generate Draft Revenue
• PRC: Compute Forecast Labor Revenue

A logical unit of work is performed on a set of expenditure items before the work is committed. For example, the PRC: Distribute Labor Costs process performs the following tasks on a set of expenditure items before committing the set to the database:

• Cost distributes the set
• Processes the set through AutoAccounting
• Creates cost distribution lines

You can choose any numeric value to set this profile option, as long as it does not cause your system to exceed memory and database rollback segment sizes, and it is large enough to avoid unnecessary database accesses.

If you do not set this profile value, most of the processes use a default of 1000 expenditure items, but this value is operating system dependent.

This profile option is visible to the System Administrator and updatable at the application level.

The internal name for this profile option is PA_NUM_EXP_ITEMS_PER_SET.

**PA: Expenditures Per Set**

Indicates the number of expenditures to process in each set. This profile option affects the following processes:

• PRC: Interface Expense Reports to Payables
• PRC: Interface Supplier Invoice Adjustment Costs to Payables

A logical unit of work is performed on a set of expenditures before the work is committed. For example, the PRC: Interface Expense Reports process performs the following tasks on a set of expenditures before committing the set to the database:

• Selects expenditures and expenditure items
• Determines the liability account for each expenditure (for expense reports)
• Interfaces to Oracle Payables

You can choose any numeric value to set this profile option, as long as it does not cause your system to exceed memory and database rollback segment sizes, and it is large enough to avoid unnecessary database accesses.

If you do not set this profile value, most of the processes use a default of 500 expenditures, but this value is operating system dependent.

This profile option is visible to the System Administrator and updatable at the application level.

The internal name for this profile option is PA_NUM_EXPENDITURES_PER_SET.

**PA: Project Costing Installed**

Indicates if Oracle Project Costing is installed. For an Oracle Project Costing installation, this profile is automatically set to Yes during installation.

Available values are listed below:

- **Yes**: Only Oracle Project Costing is installed. Oracle Project Billing functionality will not be used.
- **No**: Oracle Projects, which includes Oracle Project Costing and Oracle Project Billing, is installed.
- **(No value)**: Equivalent to No

This profile option is visible to the System Administrator at the site level. You cannot update this profile option.

The internal name for this profile option is PA_PROJECT_COSTING_INSTALLED.

**PA: Projects Per Set**

Indicates the number of projects to process in each call to AutoAccounting. This profile option affects the following processes:

- PRC: Interface Revenue to General Ledger
- PRC: Interface Invoices to Receivables

This profile option affects the amount of memory allocated for processing the specified number of projects through AutoAccounting. A single logical unit of work is performed independently of this profile variable.
You can choose any numeric value to set this profile option, so long as it does not cause your system to exceed memory and database rollback segment sizes, and it is large enough to avoid unnecessary database accesses.

If you do not set this profile value, most of the processes use a default of 100 projects, but this value is operating system dependent.

This profile option is visible to the System Administrator and updatable at the application level.

The internal name for this profile option is PA_NUM_PROJECTS_PER_SET.

**PA: Receivables Invoice Line UOM**

Indicates the unit of measure to use for all invoice lines interfaced from Oracle Projects and created in Oracle Receivables. Oracle Receivables requires a unit of measure for each invoice line. Oracle Projects creates each invoice line with a quantity of 1, a unit of the unit type you specify in your profile option, and an amount equal to the dollar amount of the invoice line as it appears in Oracle Projects.

You need to define a unit of measure class before you define a unit of measure, since Oracle Receivables requires that you associate each unit of measure you define with a unit of measure class. Oracle Projects recommends that you define a unit of measure of *Each* or *EA* in Oracle Receivables for use with this profile. You must define a unit of measure and a unit of measure class before you can set this profile option. For detailed information, see the Oracle Receivables User’s Guide.

If you are using Oracle Projects without Oracle Receivables, you do not need to set this profile. Oracle Projects uses the value *EA*.

You can choose from any unit of measure defined in Oracle Receivables. This profile option is visible to the System Administrator and updatable at the site level.

The internal name for this profile option is PA_AR_INVOICE_UOM.

**PA: Rule–Based Optimizer**

Oracle Projects does not currently use this profile option, although you can view it using the Application Developer responsibility. The internal name for this profile option is PA_RULE_BASED_OPTIMIZER.
PA: Selective Flexfield Segment for AutoAccounting

Represents the segment number to be picked when building the flexfield select segment that queries the combination table. This is the most selective accounting flexfield segment to be used in AutoAccounting validation.

You set this profile option to the segment number to use. The segment number must start with 1.

This profile option is visible to the System Administrator and updatable at the application level.

**Attention:** For optimum performance, it is recommended that you set this value.

The internal name for this profile option is PA_SELECTIVE_FLEX_SEG.

PA: Streamline Process Sleep Interval

Indicates the number of seconds that the Streamline process sleeps before it checks the status of its child process.

You can choose any numeric value over 30 to set this profile. If you do not set this profile value, or use a value that is less than 30, a default value of 60 seconds is used. Oracle Projects predefines a value of 60 seconds for this profile upon installation.

This profile option is visible to the System Administrator and updatable at the application level.

The internal name for this profile option is PA_STRMLN_SLEEP_INTERVAL.

PA: Summarize Expense Report Lines

Indicates whether expense report lines in an expense report are summarized by code combination ID when you transfer expense reports to Oracle Payables.

Available values are listed below:

- **Yes**
  - Summarize expense report lines in an expense report by code combination ID when transferring expense report to Oracle Payables.

- **No**
  - Each detail expense report cost distribution line becomes an invoice distribution in Oracle Payables.

- **(No value)**
  - Equivalent to No
This profile option is visible to the System Administrator and updatable at the application level.

The internal name for this profile option is PA_SUMMARIZE_EXPENSE_REPORT_LINES.

**PA: Tab to Budget Matrix Comments Fields**

Indicates how users navigate to the overflow (Change Reason / Comments / Descriptive Flexfield) region of the budget matrix window.

- **Yes**
  - User can tab to the overflow region.

- **No**
  - User cannot tab to the overflow region. User may navigate to the overflow region by clicking on any of the fields there.

- **(No value)**
  - Equivalent to No

This profile option is visible to the System Administrator and updatable at the site, application, responsibility, and user levels.

The internal name for this profile option is PA_BUDGET_MATRIX_TAB_ALLOWED.

**PA: Tasks to Display for Expenditure Entry**

Indicates which tasks to display in the Task Number list of values when entering pre–approved expenditures in Oracle Projects, supplier invoices in Oracle Payables, and requisitions and purchase orders in Oracle Purchasing.

- **All Tasks**
  - Displays the entire WBS of the selected project

- **Chargeable Tasks**
  - Displays only the chargeable tasks of the selected project

- **Lowest Tasks**
  - Displays only the lowest tasks of the selected project

This profile option is visible to the user and System Administrator and updatable at the site, application, responsibility, and user levels.

The internal name for this profile option is PA_TASKS_DISPLAYED.
**Shared Profile Options**

This section lists profile options that Oracle Projects shares with other Oracle Applications.

**Account Generator: Purge Runtime Data**

Setting this profile option to Yes ensures that the Oracle Workflow data used to generate accounting flexfield code combinations using the Account Generator is purged after the Account Generator has completed.

This profile option should always be set to Yes unless you are debugging the Account Generator. It is recommended to set it to No temporarily at the User level. Running the Account Generator with this profile option set to No fills up the workflow tables and slows performance.

Users can see and update this profile option.

This profile option is visible and updatable at all levels.

**Tax: Allow Ad Hoc Tax Changes**

Choose whether to update rates and amounts assigned to tax codes in the Transactions window in Oracle Receivables, if you defined tax codes in the Tax Codes and Rates window and set Ad–hoc to Yes.

The value for this option may be set by the system administrator at the site, application, responsibility, and user levels, but cannot be updated by the user.

The internal name for this profile option is AR_ALLOW_TAX_UPDATE.

**Tax: Allow Override of Customer Exemptions**

Use this profile option to prevent unapproved exemptions from being entered into Receivables. You can use this profile option to control whether you allow sales tax systems to automatically create unapproved sales tax exemptions during invoice entry. This modification only relates to invoice entry, as AutoInvoice previously allowed you to enter unapproved exemptions when this profile option was set. This profile’s default setting is set to Yes at the application level for Oracle Projects.

The value for this option may be set by the system administrator at the site, application, responsibility, and user levels, but cannot be updated by the user.
The internal name for this profile option is AR_ALLOW_TRX_LINE_EXEMPTIONS.

**Tax: Allow Override of Tax Code**

Choose whether to override a system–derived tax code during order or invoice entry. If you override a system–derived tax code, Oracle Receivables will use the rate and amount assigned to the new tax code to determine the tax for the transaction.

You must set this option to *Yes* to import invoices from Oracle Projects into Oracle Receivables using AutoInvoice. Oracle Receivables automatically sets this option to *No* for the site level and changes it to *Yes* for Oracle Projects at the application level upon the installation of Oracle Projects.

The value for this option may be set by the system administrator at the site, application, responsibility, and user levels, but cannot be updated by the user.

The internal name for this profile option is AR_ALLOW_TAX_CODE_OVERRIDE.

**AR: Transaction Flexfield QuickPick Attribute**

Determines the Invoice Transaction Flexfield attribute to display in transaction lists of values throughout Oracle Receivables. This further identifies the invoice based on project information and is displayed under the Reference column in the lists of values.

You can set this profile to display any project information Oracle Projects passes to Oracle Receivables. For example, if you want to select invoices by project number in Oracle Receivables, leave this profile option set to the predefined default value of INTERFACE_HEADER_ATTRIBUTE1.

The segments that you can use from your Invoice Transaction Flexfield are as follows:

<table>
<thead>
<tr>
<th>SEGMENT</th>
<th>COLUMN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Number</td>
<td>INTERFACE_HEADER_ATTRIBUTE1</td>
</tr>
<tr>
<td>Draft Invoice Number</td>
<td>INTERFACE_HEADER_ATTRIBUTE2</td>
</tr>
<tr>
<td>Agreement Number</td>
<td>INTERFACE_HEADER_ATTRIBUTE3</td>
</tr>
</tbody>
</table>

Table B – 1 (Page 1 of 2) Invoice Transaction Flexfield Segments
The value for this option may be set by the system administrator at the site, application, responsibility, and user levels, but cannot be updated by the user.

The internal name for this profile option is AR_PA_CODE.

**AR: Use Invoice Accounting For Credit Memos**

Choose whether you want to assign your credit memo to the same accounts assigned to the invoice you are crediting.

Oracle Receivables predetermines this value as Yes at the site level. You must change this value to No for Oracle Projects invoices at the application level for Oracle Projects. AutoInvoice will reject Oracle Projects credit memos and write-offs if this profile option is not set to No.

Oracle Projects invoices must use the accounting transactions as determined by AutoAccounting in Oracle Projects to correctly debit and credit the unbilled receivables, unearned revenue, and write-off accounts for credit memos and write-offs.

The value for this option may be set by the system administrator at the site, application, responsibility, and user levels, but it cannot be updated by the user.

The internal name for this profile option is AR_USE_INV_ACCT_FOR_CM_FLAG.

**GL: Set of Books Name**

Use this profile option to specify your set of books.

The value for this profile option may be set by the system administrator at the site, application or responsibility level, but it cannot be viewed or updated by the user.

The internal name for this profile option is GL_SET_OF_BKS_NAME.
**HR: Security Profile**

Use this profile option to point your responsibility to a specific business group.

**MO: Operating Unit**

Use this profile option to control which operating unit a particular responsibility corresponds to only if you have implemented multiple organization support. See: *Multiple Organizations in Oracle Applications Release 10.7*.

The value for this option may be set by the system administrator at the site and responsibility levels, and can be updated by the user.

The internal name for this profile option is ORG_ID.

**Obsolete Profile Options**

Previous releases of Oracle Projects used the following profile options, which are now obsolete:

<table>
<thead>
<tr>
<th>Profile Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PA: Enable Employee Accumulation</strong></td>
<td>This profile option is no longer needed with the new accumulation model.</td>
</tr>
<tr>
<td><strong>PA: Process Responsibility Type</strong></td>
<td>We now use the Standard Request Submission request groups for security.</td>
</tr>
<tr>
<td><strong>PA: Project Amount Column 1–4</strong></td>
<td>This profile option is obsolete with the configurable columns in Project Status Inquiry.</td>
</tr>
<tr>
<td><strong>PA: Task Amount Column 1–4</strong></td>
<td>This profile option is obsolete with the configurable columns in Project Status Inquiry.</td>
</tr>
<tr>
<td><strong>PA: Task Level</strong></td>
<td>This profile option is obsolete with the configurable columns in Project Status Inquiry.</td>
</tr>
</tbody>
</table>

**See Also**

Profile Options: page 16 – 211
Personal Profile Values Window  *Oracle Applications User’s Guide*

Overview of Setting User Profiles  *Oracle Applications System Administrator’s Guide*

Common User Profile Options  *Oracle Applications User’s Guide*
This appendix describes which Oracle Projects transactions and features are controlled by function security.
Function Security in Oracle Projects

Use function security to control user access to Oracle Projects functions. By default, access to Oracle Projects functionality is NOT restricted; you must ask your system administrator to customize your responsibilities to restrict access. Your system administrator customizes each responsibility at your site by including or excluding registered functions and menus of functions for a responsibility in the Responsibilities window.

For example, your system administrator creates a Budget Entry Clerk responsibility that allows entry and submission of budgets in the Budget Lines window, but does not allow the clerk to baseline a budget. When the clerk signs on, selects the Budget Entry Clerk responsibility, and enters and submits a budget, the Baseline button is hidden.

The following examples are common results that you can produce by using function security:

- Window or menu does not appear in the Navigator window
- Button is hidden
- Field is not updatable

Use function security to control any of the following Oracle Projects functions:

<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreements</td>
<td></td>
</tr>
<tr>
<td>Agreement Templates</td>
<td>Define agreement and funding templates</td>
</tr>
<tr>
<td>Agreement Types</td>
<td></td>
</tr>
<tr>
<td>Applications Data</td>
<td></td>
</tr>
<tr>
<td>Warehouse</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>Define dimensions</td>
</tr>
<tr>
<td>Billing</td>
<td></td>
</tr>
<tr>
<td>Billing Cycles Maintenance</td>
<td>Maintain billing cycles</td>
</tr>
<tr>
<td>Invoice: Approve</td>
<td>Approve an invoice via the Invoice Review window</td>
</tr>
<tr>
<td>Invoice: AR Invoice</td>
<td>Drill down to Accounts Receivable to view an invoice</td>
</tr>
</tbody>
</table>

Table B – 2 (Page 1 of 9) Function Security in Oracle Projects
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice: Cancel</td>
<td>Cancel an invoice via the Invoice Review window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Bill Hold: Indefinite</td>
<td>Place an indefinite bill hold via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Bill Hold: One Time</td>
<td>Place a one–time bill hold via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Bill Hold: Release</td>
<td>Release a bill hold via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Billable Reclass</td>
<td>Perform billable reclassifications via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Edit Comment</td>
<td>Edit expenditure item comments via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Non-Billable Reclass</td>
<td>Perform non–billable reclassifications via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Recalculate Burden Cost</td>
<td>Mark expenditure items for burden cost recalculation via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Recalculate Cost</td>
<td>Mark expenditure items for cost recalculation via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Recalculate Cost and Revenue</td>
<td>Mark expenditure items for cost and revenue recalculation via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Recalculate Revenue</td>
<td>Mark expenditure items for revenue recalculation via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Split</td>
<td>Perform splits via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Expense Adjustments: Transfer</td>
<td>Perform transfers via the Special menu in the Invoice Line Details window</td>
</tr>
<tr>
<td>Invoice: Maintain Taxable Flag</td>
<td>Update the taxable flag on the invoice review window</td>
</tr>
<tr>
<td>Invoice: Regenerate</td>
<td>Regenerate an invoice via the Invoice Review window</td>
</tr>
</tbody>
</table>

Table B – 2 (Page 2 of 9) Function Security in Oracle Projects
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice: Release</td>
<td>Release an invoice via the Invoice Review window</td>
</tr>
<tr>
<td>Invoice: Write–Off</td>
<td>Perform an invoice write–off via the Invoice Review window</td>
</tr>
<tr>
<td>Budgets</td>
<td>Enter budgets</td>
</tr>
<tr>
<td>Budgets: Cost Budgets: Baseline</td>
<td>Baseline a cost budget</td>
</tr>
<tr>
<td>Budgets: Cost Budgets: Create Revised Original</td>
<td>Create a revised original cost budget</td>
</tr>
<tr>
<td>Budgets: Cost Budgets: Submit</td>
<td>Submit a cost budget</td>
</tr>
<tr>
<td>Budgets: Line Source: Burdened Cost Extn</td>
<td>Update burdened cost amounts that were calculated by a budget calculation extension.</td>
</tr>
<tr>
<td>Budgets: Line Source: Copy Actual</td>
<td>Update or delete budget lines copied from actuals</td>
</tr>
<tr>
<td>Budgets: Line Source: Copy Version</td>
<td>Update or delete budget lines copied from budget versions</td>
</tr>
<tr>
<td>Budgets: Line Source: Raw Cost Extn</td>
<td>Update raw cost amounts that were calculated by a budget calculation extension.</td>
</tr>
<tr>
<td>Budgets: Line Source: Revenue Extn</td>
<td>Update revenue amounts that were calculated by a revenue extension.</td>
</tr>
<tr>
<td>Budgets: Revenue Budgets: Baseline</td>
<td>Baseline a revenue budget</td>
</tr>
<tr>
<td>Budgets: Revenue Budgets: Create Revised Original</td>
<td>Create a revised original revenue budget</td>
</tr>
<tr>
<td>Budgets: Revenue Budgets: Submit</td>
<td>Submit a revenue budget</td>
</tr>
<tr>
<td>Capital Projects</td>
<td>Manage capital projects asset capitalization</td>
</tr>
<tr>
<td>Capital Projects: Generate Asset Lines</td>
<td>Submit the Generate Asset Lines process via the Capital Projects window</td>
</tr>
<tr>
<td>Capital Projects: Reverse</td>
<td>Reverse capitalization of an asset via the Capital Projects window</td>
</tr>
<tr>
<td>Capital Projects: Split Asset Line</td>
<td>Split an asset line via the Asset Lines window</td>
</tr>
</tbody>
</table>

<p>| Table B – 2 (Page 3 of 9) Function Security in Oracle Projects |</p>
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customers</strong></td>
<td></td>
</tr>
<tr>
<td>Customers: Address</td>
<td>Enter and update customer contact address</td>
</tr>
<tr>
<td>Contacts</td>
<td></td>
</tr>
<tr>
<td>Customers: Contacts</td>
<td>Enter and update customer contacts</td>
</tr>
<tr>
<td>Customers: Telephones</td>
<td>Enter and update customer telephone numbers</td>
</tr>
<tr>
<td><strong>Events</strong></td>
<td></td>
</tr>
<tr>
<td>Invoice Events Maintenance</td>
<td>Enter and update invoice events</td>
</tr>
<tr>
<td>Revenue Events Maintenance</td>
<td>Enter and update revenue events</td>
</tr>
<tr>
<td><strong>Expenditure Inquiry</strong></td>
<td>Query and adjust expenditures</td>
</tr>
<tr>
<td>Expenditure Inquiry Across Projects</td>
<td>Perform cross-project queries in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Run Project Streamline</td>
<td>Access the Run Project Streamline window available in the Expenditure Inquiry window</td>
</tr>
<tr>
<td><strong>Expenditure Inquiry Adjustments</strong></td>
<td></td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Bill Hold: Indefinite</td>
<td>Place an indefinite bill hold via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Bill Hold: One Time</td>
<td>Place a one-time bill hold via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Bill Hold: Release</td>
<td>Release a bill hold via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Billable Reclass</td>
<td>Perform billable reclassifications via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Capitalizable Reclass</td>
<td>Perform a capitalizable reclass via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Edit Comment</td>
<td>Edit expenditure item comments via the Special menu in the Expenditure Inquiry window</td>
</tr>
</tbody>
</table>

Table B – 2 (Page 4 of 9) Function Security in Oracle Projects
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure Inquiry: Adjustments: Non–Billable Reclass</td>
<td>Perform non–billable reclassifications via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Non–Capitalizable Reclass</td>
<td>Perform a non–capitalizable reclass via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Recalculate Burden Cost</td>
<td>Mark expenditure items for burden cost recalculation via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Recalculate Cost</td>
<td>Mark expenditure items for cost recalculation via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Recalculate Cost and Revenue</td>
<td>Mark expenditure items for cost and revenue recalculation via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Recalculate Revenue</td>
<td>Mark expenditure items for revenue recalculation via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Split</td>
<td>Perform splits via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry: Adjustments: Transfer</td>
<td>Perform transfers via the Special menu in the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry Option</td>
<td></td>
</tr>
<tr>
<td>Expenditure Inquiry Option: Cost Distribution Lines</td>
<td>View an expenditure item’s cost distribution lines via the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Expenditure Inquiry Option: Revenue Distribution Lines</td>
<td>View an expenditure item’s revenue distribution lines via the Expenditure Inquiry window</td>
</tr>
<tr>
<td>Online Expenditure Review</td>
<td></td>
</tr>
<tr>
<td>Online Expenditure Review: Approve</td>
<td>Approve an expense report or timecard via the Online Expenditure Review window</td>
</tr>
<tr>
<td>Online Expenditure Review: Forward</td>
<td>Forward an expense report or timecard via the Online Expenditure Review window</td>
</tr>
<tr>
<td>Online Expenditure Review: Reject</td>
<td>Reject an expense report or timecard via the Online Expenditure Review window</td>
</tr>
</tbody>
</table>

Table B – 2  (Page 5 of 9) Function Security in Oracle Projects
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA Periods</td>
<td>Define PA Periods</td>
</tr>
<tr>
<td>PA Periods: Copy</td>
<td>Copy PA Periods from a GL calendar</td>
</tr>
<tr>
<td>PA Periods: Set Reporting Period</td>
<td>Set the reporting period</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry</td>
<td>Enter and release pre-approved expenditures</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Burden Transactions</td>
<td>Enter or view burden transactions via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Expense Reports</td>
<td>Enter or view expense reports via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Expense Reports</td>
<td>Enter or view expense reports via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Inventory Transactions</td>
<td>Enter or view inventory transactions via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Miscellaneous Txns</td>
<td>Enter or view miscellaneous transactions via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Negative Transactions</td>
<td>Enter unmatched negative transactions via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Timecards</td>
<td>Enter or view timecards via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Usage Logs</td>
<td>Enter or view usage logs via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Enter Work in Process</td>
<td>Enter or view work in progress via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Release</td>
<td>Release expenditure batches via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Reverse Batch</td>
<td>Reverse Expenditure Batches via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td>Pre–Approved Expenditure Entry: Rework</td>
<td>Rework expenditure batches via the Pre–Approved Expenditure Entry window</td>
</tr>
</tbody>
</table>

Table B – 2  (Page 6 of 9) Function Security in Oracle Projects
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre–Approved Expenditure Entry: Submit</td>
<td>Submit expenditure batches via the Pre–Approved Expenditure Entry window</td>
</tr>
<tr>
<td><strong>Projects</strong></td>
<td>Enter and maintain projects</td>
</tr>
<tr>
<td>Mass Update Batches</td>
<td>Update project and task attributes in batches</td>
</tr>
<tr>
<td>Project Statuses</td>
<td>Define project statuses</td>
</tr>
<tr>
<td><strong>Project Options</strong></td>
<td></td>
</tr>
<tr>
<td>Projects: Options: Asset Assignments</td>
<td>View and select the asset assignments option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Assets</td>
<td>View and select the assets option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Billing Assignments</td>
<td>View and select the billing assignments option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Billing Setup</td>
<td>View and select the billing setup option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Burden Schedule Overrides</td>
<td>View and select the burden schedule overrides option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Classifications</td>
<td>View and select the classifications option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Copy a project</td>
<td>Copy a project to another project.</td>
</tr>
<tr>
<td>Projects: Options: Costing Burden Schedules</td>
<td>View and select the costing burden schedules option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Credit Receivers</td>
<td>View and select the credit receivers option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Customers and Contacts</td>
<td>View and select the customers and contacts option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Employee Bill Rate Overrides</td>
<td>View and select the employee bill rate overrides option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Job Assignment Overrides</td>
<td>View and select the job assignment overrides option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Job Bill Rate Overrides</td>
<td>View and select the job bill rate overrides option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Job Billing Title Overrides</td>
<td>View and select the job billing title overrides option from the Project Options window</td>
</tr>
</tbody>
</table>

Table B – 2 (Page 7 of 9) Function Security in Oracle Projects
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects: Options: Key Members</td>
<td>View and select the key members option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Labor Multipliers</td>
<td>View and select the labor multipliers option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Non–Labor Bill Rate Overrides</td>
<td>View and select the non–labor bill rate overrides option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Organization Overrides</td>
<td>View and select the organization overrides option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Resource List Assignments</td>
<td>View and select the resource list assignments option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Standard Billing Schedules</td>
<td>View and select the standard billing schedules option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Task Detail</td>
<td>View and select the task detail option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Tasks</td>
<td>View and select the tasks option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Options: Transaction Controls</td>
<td>View and select the transaction controls option from the Project Options window</td>
</tr>
<tr>
<td>Projects: Org Update: Override Standard Checks</td>
<td>Override default checks for changing project or task owning organization. Unlike other functions, this function is by default not assigned to a responsibility.</td>
</tr>
<tr>
<td>Projects: Status: Approved Statuses</td>
<td>Change a project’s status to one that maps to the Approved system status</td>
</tr>
<tr>
<td>Projects: Status: Change Project Status</td>
<td>Change a project’s status</td>
</tr>
<tr>
<td>Projects: Status: Closed Statuses</td>
<td>Change a project’s status to one that maps to the Closed system status</td>
</tr>
<tr>
<td>Projects: Status: Pending Close Statuses</td>
<td>Change a project’s status to one that maps to the Pending Close system status</td>
</tr>
<tr>
<td>Projects: Status: Submitted Statuses</td>
<td>Change a project’s status to one that maps to the Submitted system status</td>
</tr>
<tr>
<td>Projects: Status: Unapproved Status</td>
<td>Change a project’s status to one that maps to the Unapproved system status</td>
</tr>
</tbody>
</table>

Table B – 2 (Page 8 of 9) Function Security in Oracle Projects
<table>
<thead>
<tr>
<th>User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Time and Expense (PTE)</td>
<td></td>
</tr>
<tr>
<td>PTE Multi–Org Control</td>
<td>Populate the PTE Employee Multi–Org table (PA_PTE_MORG_EMP_TAB) using the Personal Time and Expense Multi–Org Control window.</td>
</tr>
<tr>
<td>Review Revenue</td>
<td>Review information about project revenue</td>
</tr>
<tr>
<td>Revenue: Regenerate</td>
<td>Regenerate draft revenue</td>
</tr>
<tr>
<td>Revenue: Release</td>
<td>Release revenue</td>
</tr>
<tr>
<td>Revenue: Unrelease</td>
<td>Unrelease revenue</td>
</tr>
<tr>
<td>Transaction Import</td>
<td></td>
</tr>
<tr>
<td>Transaction Import: Pending Transactions</td>
<td>Review pending transactions for import</td>
</tr>
<tr>
<td>Transaction Import: Rejected Transactions</td>
<td>Enter or review transactions to be imported</td>
</tr>
<tr>
<td>Transaction Import: Review Transactions</td>
<td>Review transactions rejected by the Transaction Import process</td>
</tr>
</tbody>
</table>

Table B – 2 (Page 9 of 9) Function Security in Oracle Projects

In addition to the Oracle Projects functions shown above, the following Activity Management Gateway functions can be controlled using function security:

**Attention:** Oracle Projects Activity Management Gateway is not included in, but is additional to, the Oracle Projects product. You cannot use any of the features described in this section unless you have purchased and are a licensed user of Oracle Projects Activity Management Gateway.

<table>
<thead>
<tr>
<th>Activity Management Gateway User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add Budget Line</td>
<td>Add a budget line</td>
</tr>
<tr>
<td>Add Resource List</td>
<td>Add a resource list</td>
</tr>
<tr>
<td>Add Task</td>
<td>Add a task</td>
</tr>
<tr>
<td>Baseline Budget</td>
<td>Baseline budgets</td>
</tr>
</tbody>
</table>

Table B – 3 (Page 1 of 2) Activity Management Gateway Function Security
### Table B – 3 (Page 2 of 2) Activity Management Gateway Function Security

<table>
<thead>
<tr>
<th>Activity Management Gateway User Function Name</th>
<th>Restriction(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Draft Budget</td>
<td>Create a draft budget</td>
</tr>
<tr>
<td>Create Project</td>
<td>Create a project</td>
</tr>
<tr>
<td>Create Resource</td>
<td>Create resources</td>
</tr>
<tr>
<td>Delete Budget Line</td>
<td>Delete a budget line</td>
</tr>
<tr>
<td>Delete Draft Budget</td>
<td>Delete a draft budget</td>
</tr>
<tr>
<td>Delete Resource</td>
<td>Delete a resource</td>
</tr>
<tr>
<td>Delete Resource List</td>
<td>Delete a resource list</td>
</tr>
<tr>
<td>Delete Task</td>
<td>Delete a task</td>
</tr>
<tr>
<td>Modify Top Task</td>
<td>Modify a top task</td>
</tr>
<tr>
<td>Source Products</td>
<td>Define Activity Management Gateway source products</td>
</tr>
<tr>
<td>Update Budget</td>
<td>Update a budget</td>
</tr>
<tr>
<td>Update Budget Line</td>
<td>Update a budget line</td>
</tr>
<tr>
<td>Update Earned Value</td>
<td>Update earned value</td>
</tr>
<tr>
<td>Update Project</td>
<td>Update a project</td>
</tr>
<tr>
<td>Update Resource</td>
<td>Update a resource</td>
</tr>
<tr>
<td>Update Resource List</td>
<td>Update a resource list</td>
</tr>
<tr>
<td>Update Task</td>
<td>Update a task</td>
</tr>
</tbody>
</table>

### See Also

How project security and function security work together: page 15 – 3

Overview of Function Security  *(Oracle Applications System Administrator’s Guide)*

Implementing Function Security  *(Oracle Applications System Administrator's Guide)*

Defining a New Menu Structure  *(Oracle Applications System Administrator's Guide)*
This appendix lists the names of the descriptive flexfields you can customize in Oracle Projects.

Refer to this appendix to locate the form or window that contains the descriptive flexfield you want to customize to meet your unique business needs.
Descriptive Flexfields in Oracle Projects

Descriptive flexfields are fields that you can customize for your business. You can customize the following descriptive flexfields in Oracle Projects:

<table>
<thead>
<tr>
<th>DESRIPTIVE FLEXFIELD</th>
<th>WINDOW(S) CONTAINING DESRIPTIVE FLEXFIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement Types</td>
<td>Agreement Types</td>
</tr>
<tr>
<td>Agreements</td>
<td>Agreements</td>
</tr>
<tr>
<td>Billing Assignments</td>
<td>Projects</td>
</tr>
<tr>
<td></td>
<td>Project Types</td>
</tr>
<tr>
<td>Billing Cycles</td>
<td>Billing Cycles</td>
</tr>
<tr>
<td>Billing Extensions</td>
<td>Billing Extensions</td>
</tr>
<tr>
<td>Budget Entry Methods</td>
<td>Budget Entry Methods</td>
</tr>
<tr>
<td>Budget Lines</td>
<td>Budgets</td>
</tr>
<tr>
<td>Budget Types</td>
<td>Budget Types</td>
</tr>
<tr>
<td>Budget Versions</td>
<td>Budgets</td>
</tr>
<tr>
<td>Burden Cost Codes</td>
<td>Burden Cost Codes</td>
</tr>
<tr>
<td>Class Categories</td>
<td>Class Categories and Codes</td>
</tr>
<tr>
<td>Class Codes</td>
<td>Class Categories and Codes</td>
</tr>
<tr>
<td>Compensation Rule Sets</td>
<td>Compensation Rules</td>
</tr>
<tr>
<td>Compensation Details</td>
<td>Employee Cost Rates</td>
</tr>
<tr>
<td>Draft Invoices</td>
<td>Invoice Review</td>
</tr>
<tr>
<td>Employee Cost Rates</td>
<td>Employee Cost Rates</td>
</tr>
<tr>
<td>Event Types</td>
<td>Event Types</td>
</tr>
<tr>
<td>Events</td>
<td>Events</td>
</tr>
<tr>
<td>Expenditure Categories</td>
<td>Expenditure Categories</td>
</tr>
<tr>
<td>Expenditure Items</td>
<td>Pre-Approved Expenditure Entry</td>
</tr>
<tr>
<td></td>
<td>Expenditure Inquiry</td>
</tr>
<tr>
<td></td>
<td>Review Online Time and Expense</td>
</tr>
</tbody>
</table>

Table B – 4 (Page 1 of 2) Descriptive Flexfields in Oracle Projects
<table>
<thead>
<tr>
<th>DESCRIPTIVE FLEXFIELD</th>
<th>WINDOW(S) CONTAINING DESCRIPTIVE FLEXFIELD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure Types</td>
<td>Expenditure Types</td>
</tr>
<tr>
<td>Expenditures</td>
<td>Pre–Approved Expenditure Entry</td>
</tr>
<tr>
<td></td>
<td>Expenditure Inquiry</td>
</tr>
<tr>
<td></td>
<td>Review Online Time and Expense</td>
</tr>
<tr>
<td>Funding History</td>
<td>Funding Inquiry</td>
</tr>
<tr>
<td>Indirect Cost Codes</td>
<td>Burden Cost Codes</td>
</tr>
<tr>
<td>Lookup Sets</td>
<td>Lookup Sets</td>
</tr>
<tr>
<td>Mass Update Batches</td>
<td>Mass Update Batches</td>
</tr>
<tr>
<td>Non–Labor Resources</td>
<td>Non–Labor Resources</td>
</tr>
<tr>
<td>Non–Labor Resource Organizations</td>
<td>Non–Labor Resources</td>
</tr>
<tr>
<td>Project Assets</td>
<td>Projects</td>
</tr>
<tr>
<td></td>
<td>Capital Projects</td>
</tr>
<tr>
<td>Project Classifications</td>
<td>Project Classifications</td>
</tr>
<tr>
<td>Project Funding</td>
<td>Agreements</td>
</tr>
<tr>
<td></td>
<td>Project Funding Inquiry</td>
</tr>
<tr>
<td>Project Role Types</td>
<td>Project Role Types</td>
</tr>
<tr>
<td>Project Statuses</td>
<td>Project Statuses</td>
</tr>
<tr>
<td>Project Types</td>
<td>Project Types</td>
</tr>
<tr>
<td>Projects</td>
<td>Projects, Summary</td>
</tr>
<tr>
<td>Resources</td>
<td>Resources</td>
</tr>
<tr>
<td>Standard Bill Rate Schedules</td>
<td>Bill Rate Schedules</td>
</tr>
<tr>
<td>Tasks</td>
<td>Tasks</td>
</tr>
<tr>
<td>Transaction Sources</td>
<td>Transaction Sources</td>
</tr>
</tbody>
</table>

Table B – 4 (Page 2 of 2) Descriptive Flexfields in Oracle Projects
See Also

Descriptive Flexfields: page 16 – 216

Defining Descriptive Flexfields (Oracle Applications Descriptive Flexfields Guide)

Planning Your Descriptive Flexfield (Oracle Applications Descriptive Flexfields Guide)
Attachments

This appendix provides a description of the use of attachments in Oracle Projects.
Attachments in Oracle Projects

As of Oracle Applications Production 16, Oracle Projects supports attachments for the following entities. You can access attachments for these entities in the windows listed.

The table below shows each window that supports attachments and the mode in which the attachments feature can be used.

*Note:* If you copy a project from an existing project that has an attachment, the attachment is copied to the new project. If you copy an existing capital project, attachments to assets associated with the existing project will be copied to the new project.

<table>
<thead>
<tr>
<th>Entity / Possible Uses for Attachments</th>
<th>Window</th>
<th>Mode(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects: Attach project scope/definition document or project management plan</td>
<td>Projects</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>Project Status</td>
<td>Query</td>
</tr>
<tr>
<td></td>
<td>Capital Projects Workbench</td>
<td>Query</td>
</tr>
<tr>
<td>Tasks: Attach task scope/definition document or task management plan</td>
<td>Projects &gt; Tasks</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>Project Status &gt; Task Status</td>
<td>Query</td>
</tr>
<tr>
<td>Budget Versions: Attach document used for budget preparation</td>
<td>Budgets (Draft Budget)</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>Budget Version History</td>
<td>Query</td>
</tr>
<tr>
<td>Expenditures: Attach images of timesheets and expense report receipts</td>
<td>Pre–Approved Expenditure Entry &gt; Expenditures</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>Project Expenditure Inquiry / Cross–Project Expenditure Inquiry &gt; Expenditure Items</td>
<td>Query</td>
</tr>
<tr>
<td></td>
<td>Invoice Review &gt; Expenditure Item Detail</td>
<td>Query</td>
</tr>
<tr>
<td></td>
<td>Capital Projects Workbench &gt; Expenditure Item Detail</td>
<td>Query</td>
</tr>
<tr>
<td></td>
<td>Project Status &gt; Expenditure Item Detail</td>
<td>Query</td>
</tr>
<tr>
<td>Project Assets: Attach description of the asset to be constructed</td>
<td>Projects &gt; Assets</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>Capital Projects Workbench &gt; Assets</td>
<td>Update</td>
</tr>
<tr>
<td>Agreements: Attach image of customer agreement or document with additional terms</td>
<td>Agreement</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>Agreement Templates</td>
<td>Update</td>
</tr>
</tbody>
</table>
### Entity / Possible Uses for Attachments

<table>
<thead>
<tr>
<th>Entity / Description</th>
<th>Window</th>
<th>Mode(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Funding:</strong> Attach document on approval or description of project funding</td>
<td>Fund Projects</td>
<td>Update</td>
</tr>
<tr>
<td></td>
<td>Funding History</td>
<td>Query</td>
</tr>
<tr>
<td><strong>Draft Invoice:</strong> Attach copy of invoice or supporting document sent to customer</td>
<td>Draft Invoices</td>
<td>Update</td>
</tr>
</tbody>
</table>

**See Also**

*About Attachments Oracle Applications User's Guide*
Glossary

**Account Generator**  A feature that uses Oracle Workflow to provide various Oracle Applications with the ability to construct Accounting Flexfield combinations automatically using custom construction criteria. You define a group of steps that determine how to fill in your Accounting Flexfield segments. You can define additional processes and/or modify the default process(es), depending on the application. See also activity, function, item type, lookup type, node, process, protection level, result type, transition, Workflow Engine.

**accrue through date**  The date through which you want to accrue revenue for a project. Oracle Projects picks up expenditure items having an expenditure item date on or before this date, and events having a completion date on or before this date, when accruing revenue. An exception to this rule are projects that use cost–to–cost revenue accrual; in this case, the accrue through date used is the PA Date of the expenditure item’s cost distribution lines.

**accumulation**  An obsolete term. See also summarization.

**activity**  An Oracle Workflow unit of work performed during a business process. See also activity attribute, function activity.

**activity attribute**  A parameter for an Oracle Workflow function activity that controls how the function activity operates. You define an activity attribute by displaying the activity’s Attributes properties page in the Activities window of Oracle Workflow Builder. You assign a value to an activity attribute by displaying the activity node’s Attribute Values properties page in the Process window.

**ad hoc**  Concerned with or formed for a particular purpose. For example, ad hoc tax codes or an ad hoc database query.

**advance**  An amount of money prepaid in anticipation of receipt of goods, services, obligations or expenditures.

In Oracle Payables, an advance is a prepayment paid to an employee. You can apply an advance to an employee expense report during expense report entry, once you fully pay the advance.
**agreement** A contract with a customer that serves as the basis for work authorization. An agreement may represent a legally binding contract, such as a purchase order, or a verbal authorization. An agreement sets the terms of payment for invoices generated against the agreement, and affects whether there are limits to the amount of revenue you can accrue or bill against the agreement. An agreement can fund the work of one or more projects.

**agreement type** An implementation–defined classification of agreements. Typical agreement types include purchase order and service agreement.

**approved date** The date on which an invoice is approved.

**asset** An object of value owned by a corporation or business. Assets are entered Oracle Projects as non–labor resources. See non–labor resource.

**attribute** See activity attribute, item type attribute

**AutoAccounting** A feature used by Oracle Projects to automatically determine the account coding for an accounting transaction based on the project, task, employee, and expenditure information.

**AutoAccounting function** A group of related AutoAccounting transactions. There is at least one AutoAccounting function for each Oracle Projects process that uses AutoAccounting. AutoAccounting functions are predefined by Oracle Projects.

**AutoAccounting Lookup Set** An implementation–defined list of intermediate values and corresponding Accounting Flexfield segment values. AutoAccounting lookup sets are used to translate intermediate values such as organization names into account codes.

**AutoAccounting parameter** A variable that is passed into AutoAccounting. AutoAccounting parameters are used by AutoAccounting to determine account codings. Example AutoAccounting parameters available for an expenditure item are the expenditure type and project organization. AutoAccounting parameters are predefined by Oracle Projects.

**AutoAccounting Rule** An implementation–defined formula for deriving Accounting Flexfield segment values. AutoAccounting rules may use a combination of AutoAccounting parameters, AutoAccounting lookup sets, SQL statements, and constants to determine segment values.

**AutoAccounting Transaction** A repository of the account coding rules needed to create one accounting transaction. For each accounting transaction created by Oracle Projects, the necessary AutoAccounting rules are held in a corresponding AutoAccounting Transaction. AutoAccounting transactions are predefined by Oracle Projects.

**AutoInvoice** A program that imports invoices, credit memos, and on account credits from other systems to Oracle Receivables.

**automatic event** An event with an event type classification of Automatic. Billing extensions create automatic events to account for the revenue and invoice amounts calculated by the billing extensions.
AutoSkip  A feature specific to flexfields where Oracle Applications automatically moves your cursor to the next segment as soon as you enter a valid value into a current flexfield segment. You can turn this feature on or off with the user profile option Flexfields:AutoSkip.

baseline budget  The authorized budget for a project or task which is used for performance reporting and revenue calculation.

batch source  A source you define in Oracle Receivables to identify where your invoicing activity originates. The batch source also controls invoice defaults and invoice numbering. Also known as transaction batch sources.

bill rate  A rate per unit at which an item accrues revenue and/or is invoiced for time and material projects. Employees, jobs, expenditure types, and non-labor resources can have bill rates.

bill rate schedule  A set of standard bill rates that maintains the rates and percentage markups over cost that you charge clients for your labor and non–labor expenditures.

bill site  The customer address to which project invoices are sent.

bill through date  The date through which you want to invoice a project. Oracle Projects picks up revenue distributed expenditure items having an expenditure item date on or before this date, and events having a completion date on or before this date, when generating an invoice.

billing  The functions of revenue accrual and invoicing.

billing cycle  The billing period for a project. Examples of billing cycles you can define are: a set number of days, the same day each week or month, or the project completion date. You can optionally use a client extension to define a billing cycle.

billing title  See Employee Billing Title, Job Billing Title.

Borrowed and Lent revenue  A revenue entry that is created to record when an employee works on a project that is managed by a different organization than the expenditure organization. This revenue entry is created to separately track project organization revenue versus employee organization revenue.

budget  See also budget line, resource.

budget line  Estimated cost, revenue, labor hours, or other quantity for a project or task categorized by a resource.

burden cost code  An implementation–defined classification of overhead costs. A burden cost code represents the type of burden cost you want to apply to raw cost. For example, you can define a burden cost code of G&A to burden specific types of raw costs with General and Administrative overhead costs.

burden costs  Burden costs are legitimate costs of doing business that support raw costs and cannot be directly attributed to work performed. Examples of burden costs are fringe benefits, office space, and general and administrative costs.
burden multiplier  A numeric multiplier associated with an organization for burden schedule codes for projects or tasks. This multiplier is applied to raw cost to calculate burden cost amounts. For example, you can assign a multiplier of 95% to the burden cost code of Overhead.

burden schedule  An implementation–defined set of burden multipliers that is maintained for use across projects. Also referred to as a standard burden schedule. You may define one or more schedules for different purposes of costing, revenue accrual, and invoicing. Oracle Projects applies the burden multipliers to the raw cost amount of an expenditure item to derive an amount; this amount may be the total cost, revenue amount, or bill amount. You can override burden schedules by entering negotiated rates at the project and task level. See also Firm Schedule, Provisional Schedule, Burden Schedule Revision, Burden Schedule Overrides.

burden schedule override  A schedule of negotiated burden multipliers for projects and tasks that overrides the schedule you defined during implementation.

burden schedule revision  A revision of a set of burden multipliers. A schedule can be made of many revisions.

burden structure  A burden structure determines how cost bases are grouped and what types of burden costs are applied to the cost bases. A burden structure defines relationships between cost bases and burden cost codes and between cost bases and expenditure types.

burdened cost  The cost of an expenditure item, including raw cost and burden costs.

business group  The highest level of organization and the largest grouping of employees across which a company can report. A business group can correspond to an entire company, or to a specific division within the company. Each installation of Oracle Projects uses one business group with one hierarchy.

capital project  A project in which you build one or more depreciable fixed assets.

chargeable project  For each expenditure, a project to which the expenditure can be charged or transferred.

class category  An implementation–defined category for classifying projects. For example, if you want to know the market sector to which a project belongs, you can define a class category with a name such as Market Sector. Each class category has a set of values (class codes) that can be chosen for a project. See class code.

class code  An implementation–defined value within a class category that can be used to classify a project. See class category.

comment alias  A user–defined name for a frequently used line of comment text, which can be used to facilitate online entry of timecards and expense reports.

compensation rule  An implementation–defined name for an employee compensation method. Also known as pay type. Typical compensation rules include Hourly and Exempt.

complete matching  A condition where the invoice quantity matches the quantity originally ordered, and you approve the entire quantity. See also matching, partial matching.
contact A customer representative who is involved with a project. For example, a contact can be a billing contact, the customer representative who receives project invoices.

contact type An implementation–defined classification of project contacts according to their role in the project. Typical contact types are Billing and Shipping.

context field prompt A question or prompt to which a user enters a response, called a context field value. When Oracle Applications displays a descriptive flexfield pop–up window, it displays your context field prompt after it displays any global segments you have defined. Each descriptive flexfield can have up to one context prompt.

context field value A response to your context field prompt. Your response is composed of a series of characters and a description. The response and description together provide a unique value for your context prompt, such as 1500, Journal Batch ID, or 2000, Budget Formula Batch ID. The context field value determines which additional descriptive flexfield segments appear.

context response See context field value.

context segment value A response to your context–sensitive segment. The response is composed of a series of characters and a description. The response and description together provide a unique value for your context–sensitive segment, such as Redwood Shores, Oracle Corporation Headquarters, or Minneapolis, Merrill Aviation’s Hub.

context–sensitive segment A descriptive flexfield segment that appears in a second pop–up window when you enter a response to your context field prompt. For each context response, you can define multiple context segments, and you control the sequence of the context segments in the second pop–up window. Each context–sensitive segment typically prompts you for one item of information related to your context response.

contract project A project for which you can generate revenue and invoices. Typical contract project types include Time and Materials and Fixed Price. Formerly known as a direct project.

cost base A cost base refers to the grouping of raw costs to which burden costs are applied. Examples of cost bases are Labor and Materials.

cost budget The estimated cost amounts at completion of a project. Cost budget amounts can be summary or detail, and can be burdened or unburdened.

cost burden schedule A burden schedule used for costing to derive the total cost amount. You assign the cost burden schedule to a project type that is burdened; this default cost burden schedule defaults to projects that use the project type; and then from the project to the tasks below the project. You may override the cost burden schedule for a project or a task if you have defined the project type option to allow overrides of the cost burden schedule.

cost distribution The act of calculating the cost and determining the cost accounting for an expenditure item.
**cost rate**  The monetary cost per unit of an employee, expenditure type, or resource.

**Cost-to-Cost**  A revenue accrual method that calculates project revenue as budgeted revenue multiplied by the ratio of actual cost to budgeted cost. Also known as **percentage of completion method** or **percentage spent method**.

**credit memo**  A document that partially or fully reverses an original invoice.

**credit receiver**  A person receiving credit for project or task revenue. One project or task may have many credit receivers for one or many credit types.

**credit type**  An implementation-defined classification of the credit received by a person for revenue a project earns. Typical credit types include Quota Credit and Marketing Credit.

**Cross-Project responsibility**  A responsibility that permits users to view and update any project.

**cross-project user**  A user who is logged into Oracle Projects using a Cross-Project responsibility.

**current budget**  The most recently baselined budget version of the budget.

**deferred revenue**  An event type classification that generates an invoice for the amount of the event, and has no immediate effect on revenue. The invoice amount is accounted for in an unearned revenue account that will be offset as the project accrues revenue.

**descriptive flexfield**  A field that your organization can extend to capture extra information not otherwise tracked by Oracle Applications. A descriptive flexfield appears in your window as a single character, unnamed field. Your organization can customize this field to capture additional information unique to your business.

**direct project**  An obsolete term. See **contract project**.

**distribution line**  A line corresponding to an accounting transaction for an expenditure item on an invoice, or a liability on a payment.

**distribution rule**  See **revenue distribution rule**.

**draft budget**  A preliminary budget which may be changed without affecting revenue accrual on a project.

**draft invoice**  A potential project invoice that is created, adjusted, and stored in Oracle Projects. Draft invoices require approval before they are officially accounted for in other Oracle Applications.

**draft revenue**  A project revenue transaction that is created, adjusted, and stored in Oracle Projects. You can adjust draft revenue before you transfer it to other Oracle Applications.

**drilldown**  A software feature that allows you to view the details of an item in the current window via a window in a different application.
**dynamic insertion** A feature specific to key flexfields that allows you to enter and define new combinations of segment values directly into a flexfield pop-up window. The new combination must satisfy any cross-validation rules, before your flexfield accepts the new combination. Your organization can decide if a key flexfield supports dynamic insertion. If a flexfield does not support dynamic insertion, you can only enter new combinations of segment values using a combinations form (a form specifically used for creating and maintaining code combinations).

**employee billing title** An employee title, which differs from a job billing title, that may appear on an invoice. Each employee can have a unique employee billing title.

**employee organization** The organization to which an employee is assigned.

**event** A summary level transaction assigned to a project or top task that records work completed and generates revenue and/or billing activity, but is not directly related to any expenditure items. For example, unlike labor costs or other billable expenses, a bonus your business receives for completing a project ahead of schedule is not attributable to any expenditure item, and would be entered as an event.

**event type** An implementation-defined classification of events that determines the revenue and invoice effect of an event. Typical event types include Milestones, Scheduled Payments, and Write-Offs.

**expenditure** A group of expenditure items incurred by an employee or an organization for an expenditure period. Typical expenditures include Timecards and Expense Reports.

**expenditure (week) ending date** The last day of an expenditure week period. All expenditure items associated with an expenditure must be on or before the expenditure ending date, and must fall within the expenditure week identified by the expenditure week ending date.

**expenditure category** An implementation-defined grouping of expenditure types by type of cost. For example, an expenditure category with a name such as Labor refers to the cost of labor.

**expenditure comment** Free text that can be entered for any expenditure item to explain or describe it in further detail.

**expenditure cost rate** The monetary cost per unit of a non-labor expenditure type.

**expenditure cycle** A weekly period for grouping and entering expenditures.

**expenditure group** A user-defined name used to track a group of pre-approved expenditures, such as Timecards, or Expense Reports.

**expenditure item** The smallest logical unit of expenditure you can charge to a project and task. For example, an expenditure item can be a timecard item or an expense report item.

**expenditure item date** The date on which work is performed and is charged to a project and task.

**expenditure operating unit** For an expenditure, the operating unit where the expenditure item was incurred against a project.
expenditure organization  For timecards and expense reports, the organization to which the incurring employee is assigned, unless overridden by organization overrides. For usage, supplier invoices, and purchasing commitments, the incurring organization entered on the expenditure.

expenditure type  An implementation–defined classification of cost that you assign to each expenditure item. Expenditure types are grouped into cost groups (expenditure categories) and revenue groups (revenue categories).

expenditure type class  An additional classification for expenditure types that indicates how Oracle Projects processes the expenditure types. For example, if you run the Distribute Labor Costs process, Oracle Projects will calculate the cost of all expenditure items assigned to the Straight Time expenditure type class. Formerly known as system linkage.

expense report  A document that, for purposes of reimbursement, details expenses incurred by an employee. You can set up expense report templates to match the format of your expense reports to speed data entry. You must create invoices from Payables expense reports using Invoice Import before you can pay the expense reports.

external organization  See organization.

field  A position on a window that you use to enter, view, update, or delete information. A field prompt describes each field by telling you what kind of information appears in the field, or alternatively, what kind of information you should enter in the field.

firm schedule  A burden schedule of burden multipliers that will not change over time. This is compared to provisional schedules in which actual multipliers are mapped to provisional multipliers after an audit.

first bill offset days  The number of days that elapse between a project start date and the date that the project’s first invoice is issued.

fixed date  See Schedule Fixed Date.

flexfield  An Oracle Applications field made up of segments. Each segment has an assigned name and a set of valid values. Oracle Applications uses flexfields to capture information about your organization. There are two types of flexfields: key flexfields and descriptive flexfields.

flexfield segment  One of the sections of your key flexfield, separated from the other sections by a symbol that you define (such as –,/, or \). Each segment typically represents an element of your business, such as cost center, product, or account.

form  A logical collection of fields, regions, and blocks that appear on a single screen. Oracle Applications forms look just like the paper forms you use to run your business. All you need to do to enter data is type onto the form. See window.

function  A PL/SQL stored procedure referenced by an Oracle Workflow function activity that can enforce business rules, perform automated tasks within an application, or retrieve application information. The stored procedure accepts standard arguments and returns a completion result. See also function activity.
**function activity**  An automated Oracle Workflow unit of work that is defined by a PL/SQL stored procedure. See also function.

**GL Date**  The end date of the GL Period in which costs or revenue are transferred to Oracle General Ledger. This date is determined from the open or future GL Period on or after the PA Date of a cost distribution line or revenue. For invoices, the GL Date is the date within the GL Period on which an invoice is transferred to Oracle Receivables, and is based on the invoice date.

**global segment prompt**  A non-context-sensitive descriptive flexfield segment. Each global segment typically prompts you for one item of information related to the zone or form in which you are working.

**global segment value**  A response to your global segment prompt. Your response is composed of a series of characters and a description. The response and description together provide a unique value for your global segment, such as J. Smith, Financial Analyst, or 210, Building C.

**hard limit**  An option for an agreement that prevents revenue accrual and invoice generation beyond the amount allocated to a project or task by the agreement. If you do not impose a hard limit, Oracle Projects automatically imposes a soft limit of the same dollar amount. See also soft limit.

**indirect project**  A project for which you cannot generate revenue or invoices. Generally you use indirect projects for the administration of overhead costs, such as overtime. Typical indirect project types include Bid and Proposal and Overtime.

**intermediate value**  The parameter value, constant, or SQL statement result that is determined during the first step in the execution of an AutoAccounting rule.

**invoice burden schedule**  A burden schedule used for invoicing to derive the bill amount of an expenditure item. This schedule may be different from your revenue burden schedule, if you want to invoice at a different rate at which you want to accrue.

**invoice date**  The date that appears on a customer invoice. This date is used to calculate the invoice due date, according to the customer’s payment terms.

**invoice format**  The columns, text, and layout of invoice lines on an invoice.

**Invoice Import**  An Oracle Payables process you use to import invoices from non-Oracle payables systems and to create invoices from Payables expense reports. You can also use Invoice Import to create invoices from expense reports in Oracle Projects.

When you initiate Invoice Import, Oracle Payables imports the required invoice or expense report information and automatically creates invoices with invoice distribution lines from the information. Oracle Payables also produces a report for all invoices or expense reports it could not import.

**invoice item**  A single line of a project’s draft invoice, formatted according to the project invoice formats.

**invoice set**  For each given run of invoice generation for a project, if multiple agreements exist and multiple invoices are created, Oracle Projects creates the invoices within a unique set ID. You approve, release, and cancel all invoices within an invoice set.

**invoice transaction type**  An Oracle Receivables transaction type that is assigned to invoices and credit memos that are created from Oracle Projects draft invoices.

**internal organization**  See organization.

**internal requisition**  See internal sales order, purchase requisition.
**invoice write–off**  A transaction that reduces the amount outstanding on an invoice by a given amount and credits a bad debt account.

**invoicing**  The function of preparing a client invoice. Invoice generation refers to the function of creating the invoice. Invoicing is broader in the terms of creating, adjusting, and approving an invoice.

**item type**  A term used by Oracle Workflow to refer to a grouping of all items of a particular category that share the same set of item attributes, used as a high level grouping for processes. For example, each Account Generator item type (e.g. FA Account Generator) contains a group of processes for determining how an Accounting Flexfield code combination is created. See also item type attribute

**item type attribute**  A feature of a particular Oracle Workflow item type, also known as an item attribute. An item type attribute is defined as a variable whose value can be looked up and set by the application that maintains the item. An item type attribute and its value is available to all activities in a process.

**Item Validation Organization**  The organization that contains your master list of items. You define this organization by setting the OE: Item Validation Organization profile option. See also organization.

**job**  A name for a set of duties to which an employee may be assigned. You create jobs in Oracle Projects by combining a job level and a job discipline using your job key flexfield structure. For example, you can combine the job level Staff with the job discipline Engineer to create the job Staff Engineer.

**job billing title**  A job billing title, which differs from a job title, that may appear on an invoice.

**job discipline**  A categorization of job vocation, used with Job Level to create a job title. For example, a job discipline may be Engineer, or Consultant.

**job level**  A categorization of job rank, used with Job Discipline to create a job title. For example, a job level may be Staff, or Principal.

**job title**  A unique combination of job level and job discipline that identifies a particular job.

**journal entry batch**  A method used to group journal entries according to your set of books and accounting period. When you initiate the transfer of invoice or payment information to your general ledger for posting, Oracle Projects transfers the necessary information to create journal entry batches for the information you transfer. Journal Import in Oracle General Ledger uses the information to create a journal entry batch for each set of books and accounting period.

You can name your journal entry batches the way you want for easy identification in your general ledger. Oracle Projects attaches the journal entry category, date, and time of transfer to your batch name so that each name is unique. If you choose not to enter your own batch name when you transfer posting information, Oracle Projects uses the journal entry category, date, and time of transfer.
**journal entry category**  A category used to indicate the purpose or nature of your journal entry. Oracle General Ledger associates each of your journal entry headers with a journal entry category. Journal entry categories specify what kind of transaction the journal entry represents.

**journal entry header**  A method used to group journal entries by currency and journal entry category within a journal entry batch. When you initiate the transfer of invoices or payments to your general ledger for posting, Oracle Projects transfers the necessary information to create journal entry headers for the information you transfer. Journal Import in Oracle General Ledger uses the information to create a journal entry header for each currency and journal entry category in a journal entry batch. A journal entry batch can have multiple journal entry headers.

**journal entry lines**  Each journal entry header contains one or more journal entry lines. The lines are the actual journal entries that your general ledger posts to update account balances. The number and type of lines in a journal entry header depend on the volume of transactions, frequency of transfer from Oracle Projects, and your method of summarizing journal entries from Oracle Projects.

**journal entry source**  An indicator of which feeder system your journal entries come from, such as Oracle Projects. Oracle General Ledger associates each of your journal entries with one journal entry source. This allows you to group related journal entry transactions for reporting and analysis in your general ledger.

**Journal Import**  A Oracle General Ledger program that creates journal entries from transaction data stored in the Oracle General Ledger GL_INTERFACE table. Journal entries are created and stored in GL_JE_BATCHES, GL_JE_HEADERS, and GL_JE_LINES.

**key flexfield**  An intelligent key that uniquely identifies an application entity. Each key flexfield segment has a name you assign, and a set of valid values you specify. Each value has a meaning you also specify. You use this Oracle Applications feature to build custom fields used for entering and displaying information relating to your business. The Accounting Flexfield in your Oracle General Ledger application is an example of a key flexfield used to uniquely identify a general ledger account.

**key flexfield segment**  One of up to 30 different sections of your key flexfield. You separate segments from each other by a symbol you choose (such as –, / or \). Each segment can be up to 25 characters long. Each key flexfield segment typically captures one element of your business or operations structure, such as company, division, region, or product for the Accounting Flexfield and item, version number, or color code for the Item Flexfield.

**key flexfield segment value**  A series of characters and a description that provide a unique value for this element, such as 0100, Eastern region, or V20, Version 2.0.
key member  An employee who is assigned a role on a project. A project key member can view and update project information and expenditure details for any project to which they are assigned. Typical key member types include Project Manager and Project Coordinator.

labor cost  The cost of labor expenditure items.

labor cost multiplier  A multiplier that is assigned to an indirect project task and applied to labor costs to determine the premium cost for overtime or other factors.

labor cost rate  The hourly raw cost rate for an employee. This cost rate does not include overhead or premium costs.

labor invoice burden schedule  A burden schedule used to derive invoice amounts for labor items.

labor multiplier  A multiplier that is assigned to a project or task, and is used to calculate the revenue and/or bill amount for labor items by applying the multiplier to the raw cost of the labor items.

labor revenue burden schedule  A burden schedule used to derive revenue amounts for labor items.

legal entity  An organization that represents a legal company for which you prepare fiscal or tax reports. You assign tax identifiers and other relevant information to this entity.

lookup code  The internal name of a value defined in an Oracle Workflow lookup type. See also lookup type.

lookup type  An Oracle Workflow predefined list of values. Each value in a lookup type has an internal and a display name. See also lookup code.

matching  The process of comparing purchase order, invoice, and receiving information to verify that ordering, billing, and receiving information is consistent within accepted tolerance levels. Oracle Projects uses matching to control payments to suppliers. You can use the matching feature in Oracle Projects if you have Oracle Purchasing or another purchasing system. Oracle Projects supports two–, three–, and four–way matching.

node  An instance of an activity in an Oracle Workflow process diagram as shown in the Process window of Oracle Workflow Builder. See also process.

non–labor invoice burden schedule  A burden schedule used to derive invoice amounts for non–labor items.

non–labor resource  An implementation–defined asset or pool of assets. For example, you can define a non–labor resource with a name such as PC to represent multiple personal computers your business owns.

non–labor revenue burden schedule  A burden schedule used to derive revenue amounts for non–labor items.

non–revenue sales credit  Sales credit you assign to your salespeople that is not associated with your invoice lines. This is sales credit given in excess of your revenue sales credit. See also revenue sales credit.

one time billing hold  A type of hold that places expenditure items and events on billing hold for a particular invoice; when you release that invoice, the items are billed on the next invoice.
operating unit  An organization that partitions data for subledger products (AP, AR, PA, PO, OE). It is roughly equivalent to a single pre–Multi–Org installation.

organization  Internal organizations are divisions, groups, cost centers or other organizational units in a company. External organizations can include the contractors your company employs. Organizations can be used to demonstrate ownership or management of functions such as projects and tasks, non–labor resources, and bill rate schedules. See also Item Validation Organization.

organization hierarchy  An organizational hierarchy illustrates the relationships between your organizations. A hierarchy determines which organizations are subordinate to other organizations. The topmost organization of an organization hierarchy is generally the business group.

organization structure  See organization hierarchy.

original budget  The budget amounts for a project at the first successful baselining of the project.

Overtime Calculation Program  A program that Oracle Projects provides to determine which kind of overtime to award an employee based on the employee’s compensation rule and hours worked. If your company uses this automatic overtime calculation feature, you may need to modify the program based on the overtime requirements of your business.

overtime cost  The dollar amount over straight time cost that an employee is paid for overtime hours worked. Also referred to as Premium Cost.

PA Date  The end date of the PA Period in which costs are distributed, revenue is created, or an invoice is generated. This date is determined from the open or future PA Period on or after the latest date of expenditure item dates and event completion dates included in a cost distribution line, revenue, or an invoice.

PA Period Type  The Period Type as specified in the PA implementation options for Oracle Projects to copy project accounting periods. Oracle Projects uses the periods in the PA Period Type to populate each Operating Unit’s PA periods. PA periods are mapped to GL periods which are used when generating accounting transactions. PA periods drive the project summary for Project Status Inquiry. You define your accounting periods in the Operating Unit’s Set of Books Calendar.

partial matching  A condition where the invoice quantity is less than the quantity originally ordered, in which case you are matching only part of a purchase order shipment line. See also matching, complete matching.

pay type  See compensation rule.

pop–up window  An additional window that appears on an Oracle Applications form when your cursor enters a particular field.
posting The process of updating account balances in your general ledger from journal entries. Oracle Projects uses the term posting to describe the process of transferring posting information to your general ledger. When you initiate posting in Oracle Projects, Oracle Projects transfers your invoice and payment transactions and sets the status of the payments and invoices to posted. You must use your general ledger to create journal entries and post the journal entries to update your account balances. See also Journal Import.

premium cost See overtime cost.

prepayment A payment you make to a supplier in anticipation of his provision of goods or services. A prepayment may also be an advance you pay to an employee for anticipated expenses.

In Oracle Payables, a prepayment is a type of invoice that you can apply to an outstanding invoice or employee expense report to reduce the amount of the invoice or expense report. You must approve the prepayment and fully pay the prepayment before you can apply the prepayment.

process A set of Oracle Workflow activities that need to be performed to accomplish a business goal. See also Account Generator, process activity, process definition.

process activity An Oracle Workflow process modelled as an activity so that it can be referenced by other processes; also known as a subprocess. See also process.

process cycle The planned schedule for batch processing of costs, revenue, and invoices, according to your company’s scheduling requirements. See streamline request.

process definition An Oracle Workflow process as defined in the Oracle Workflow Builder. See also process.

process responsibility type An implementation–defined name to which a group of reports and processes are assigned. This group of reports and processes is then assigned to an Oracle Projects responsibility. A process responsibility type gives a user access to Oracle Projects reports and programs appropriate to that user’s job. For example, the process responsibility type Data Entry could be a set of reports used by data entry clerks. See responsibility.

project A unit of work that can be broken down into one or more tasks. A project is the unit of work for which you specify revenue and billing methods, invoice formats, a managing organization and project manager, and bill rate schedules. You can charge costs to a project, and you can generate and maintain revenue, invoice, unbilled receivable, and unearned revenue information for a project.
Project Accounting Period  An implementation–defined period against which project performance may be measured. Also referred to as *PA Periods*. You define project accounting periods to track project accounting data on a periodic basis by assigning a start date, end date, and closing status to each period. Typically, you define project accounting periods on a weekly basis, and your general ledger periods on a monthly basis.

Project Burdening Organization Hierarchy The organization hierarchy version that Oracle Projects uses to compile burden schedules. Each business group must designate one and only one version of an organization hierarchy as its Project Burdening Organization Hierarchy. (Note: In Oracle Projects Implementation Options, each operating unit is associated with an organization hierarchy and version for project setup, invoice level processing, and project reporting. The Project Burdening Organization Hierarchy selected for the business group does not have to match the hierarchy version in the Implementation Options.).

project chargeable employees In a multiple organization installation, employees included as labor resource pool to a project. This includes all employees, as defined in Oracle Human Resources, who belong to the business group associated with the project operating unit.

project funding An allocation of revenue from an agreement to a project or task.

project operating unit The operating unit within which the project is created.

project/task organization The Organization that owns the project or task. This can be any organization in the LOV (list of values) for the project setup. The Project/Task Organization LOV contains organizations of the Project/Task Organization Type in the Organization Hierarchy and Version below the Start Organization. You specify your Start Organization and Version in the Implementation Options window.

project role The responsibility or position assigned to an employee on a project.

project role type An implementation–defined classification of the role or responsibility that an employee can have on a project. When you define project role types, you can determine whether an employee assign to a particular project role type can query labor costs.

project status An implementation–defined classification of the status of a project. Typical project statuses are Active and Closed.

project type An implementation–defined template that consists of essential project attributes such as whether a project is direct or indirect, a project’s default revenue distribution rule and bill rate schedules, and whether a project burdens costs. For example, you can define a project type with a name such as *Time and Materials* for all projects that are based on time and materials contracts.
**project type class**  An additional classification for project types that indicates how to collect and track costs, quantities, and, in some cases, revenue and billing. Oracle Projects predefines three project type classes: *Indirect*, *Contract*, or *Capital*. For example, you use an Indirect project type to collect and track project costs for overhead activities, such as administrative and overhead work, marketing, and bid and proposal preparation.

**Project/customer relationship**  An implementation-defined classification of the relationship between a project and a customer. Project/Customer Relationships help you manage projects that involve multiple clients by specifying the various relationships your customers can have with a project. Typical relationships include Primary or Non-Paying.

**Project/Task Alias**  A user-defined short name for a project or project/task combination used to facilitate online timecard and expense report entry.

**Project/Task Organization**  The Organization that owns the project or task.

**protection level**  In Oracle Workflow, a numeric value ranging from 0 to 1000 that represents who the data is protected from for modification. When workflow data is defined, it can either be set to customizable (1000), meaning anyone can modify it, or it can be assigned a protection level that is equal to the access level of the user defining the data. In the latter case, only users operating at an access level equal to or lower than the data’s protection level can modify the data. See also *Account Generator*.

**provisional schedule**  A burden schedule of estimated burden multipliers that are later audited to determine the actual rates. You apply actual rates to provisional schedules by replacing the provisional multipliers with actual multipliers. Oracle Projects processes adjustments that account for the difference between the provisional and actual calculations.

**purchase order (PO)**  A document used to buy and request delivery of goods or services from a supplier.

**purchase order distribution**  Each purchase order shipment consists of one or more purchase order distributions. A purchase order distribution consists of the Accounting Flexfield information Oracle Payables uses to create invoice distributions.

**purchase order line**  An order for a specific quantity of a particular item at a negotiated price. Each purchase order in Purchasing can consist of one or more purchase order lines.

**purchase order requisition line**  Each purchase order line is created from one or more purchase order requisition lines. Oracle Payables creates purchase order requisition lines from individual requisitions.
**purchase order shipment**  A scheduled delivery of goods or services from a purchase order line to a specified location. Each purchase order line can have one or more purchase order shipments.

Oracle Projects defines a purchase order shipment by a purchase order line location you enter in Oracle Payables. When you perform matching during invoice entry, you can match an invoice to one or more shipments.

**purchase requisition**  An internal request for goods or services. A requisition can originate from an employee or from another process, such as inventory or manufacturing. Each requisition can include many lines, generally with a distinct item on each requisition line. Each requisition line includes at least a description of the item, the unit of measure, the quantity needed, the price per item, and the Accounting Flexfield you are charging for the item. Also known as internal requisition. See also internal sales order.

**purchasing site**  A supplier site from which you order goods or services. You must enter at least one purchasing site before Purchasing will allow you to enter a purchase order.

**query**  A search for applications information that you initiate using an Oracle Applications window.

**raw costs**  Costs that are directly attributable to work performed. Examples of raw costs are salaries and travel expenses.

**region**  A collection of logically-related fields set apart from other fields by a dashed line that spans a block. Regions help to organize a block so that it is easier to understand.

**related transaction**  Additional transactions that are created for labor transactions using the Labor Transaction Extension. All related transactions are associated with a source transaction and are attached to the expenditure item ID of the source transaction. You can identify and process the related transactions by referring to the expenditure item ID of the source transaction. Using labor transaction extensions, you can create, identify, and process the related transactions along with the source transaction.

**released date**  The date on which an invoice and its associated revenue is released.

**remit to addresses**  The address to which your customers remit their payments.

**report**  An organized display of Oracle Applications information. A report can be viewed online or sent to a printer. The content of information in a report can range from a summary to a complete listing of values.

**resource**  A user-defined group of employees, organizations, jobs, suppliers, expenditure categories, revenue categories, expenditure types, or event types for purposes of defining budgets or summarizing actuals.

**responsibility**  A level of authority in an application. Each responsibility lets you access a specific set of Oracle Applications windows, menus, reports, and data to fulfill your role in an organization. Several users can share the same responsibility, and a single user can have multiple responsibilities.

**responsibility type**  See process responsibility type.
result code  In Oracle Workflow, the internal name of a result value, as defined by the result type. See also result type, result value.

result type  In Oracle Workflow, the name of the lookup type that contains an activity’s possible result values. See also result code, result value.

result value  In Oracle Workflow, the value returned by a completed activity, such as Approved. See also result code, result type.

revenue  In Oracle Projects, the amounts recognized as income or expected billing to be received for work on a project.

revenue accrual  The function of calculating and distributing revenue.

revenue authorization rule  A configurable criterion that, if enabled, must be met before a project can accrue revenue. For example, an active mandatory revenue authorization rule states that a project manager must exist on a project before that project can accrue revenue. Revenue authorization rules are associated with revenue distribution rules. See also revenue distribution rule.

revenue budget  The estimated revenue amounts at completion of a project. Revenue budget amounts can be summary or detail.

revenue burden schedule  A burden schedule used for revenue accrual to derive the revenue amount for an expenditure item. This schedule may be different from your invoice burden schedule, if you want to accrue revenue at a different rate than you want to invoice.

revenue category  An implementation–defined grouping of expenditure types by type of revenue. For example, a revenue category with a name such as Labor refers to labor revenue.

revenue credit  Credit that an employee receives for project revenue. See revenue sales credit.

revenue distribution rule  A specific combination of revenue accrual and invoicing methods that determine how Oracle Projects generates revenue and invoice amounts for a project. See revenue authorization rule.

revenue item  A single line of a project’s revenue, containing event or expenditure item revenue summarized by top task and revenue category or event.

revenue sales credit  Sales credit you assign to your salespeople that is based on your invoice lines. The total percentage of all revenue sales credit must be equal to 100% of your invoice lines amount. Also known as quota sales credits. See also non–revenue sales credit, sales credit.

revenue write–off  An event type classification that reduces revenue by the amount of the write–off. You cannot write–off an amount that exceeds the current unbilled receivables balance on a project. See also invoice write–off.
row  One occurrence of the information displayed in the fields of a block. A block may show only one row of information at a time, or it may display several rows of information at once, depending on its layout. The term “row” is synonymous with the term “record”.

sales credit  Credits that you assign to your salespeople when you enter orders, invoices, and commitments. Credits can be either quota or non–quota and can be used in determining commissions. See also non–revenue sales credit, revenue sales credit.

schedule fixed date  The date used to freeze bill rate or burden schedules for a project or task. You enter a fixed date to specify that you want to use particular rates or multipliers as of that date. You do not use schedule fixed dates if you want to use the current effective rates or multipliers for a particular schedule.

segment  A single sub–field within a flexfield. You define the structure and meaning of individual segments when customizing a flexfield.

service type  An implementation–defined classification of the type of work performed on a task.

set of books  A financial reporting entity that uses a particular chart of accounts, functional currency and accounting calendar. You must define at least one set of books for each business location.

set of books  An organization or group of organizations within Oracle Applications that shares a common Accounting Flexfield structure, calendar, and functional currency. You must define at least one set of books for each business location.

soft limit  The default option for an agreement that generates a warning when you accrue revenue or generate invoices beyond the amount allocated to a project or task by the agreement, but does not prevent you from running these processes. See also hard limit.

source transaction  For related transactions, the identifying source transaction from which the related items are created.

start organization  An organization that defines a set which includes itself and all subordinate organizations in the organization hierarchy. When you choose a start organization as a report parameter, all organizations below the start organization are included in the report.

straight time cost  The monetary amount that an employee is paid for straight time (regular) hours worked.

streamline process  See streamline request.

streamline request  A process that runs multiple Oracle Projects processes in sequence. When using streamline processing, you can reschedule your streamline requests by setting rescheduling parameters. Rescheduling parameters allow you to configure your processes to run automatically, according to a defined schedule. When you reschedule a process, the concurrent manager submits another concurrent request with a status of Pending, and with a start date according to the parameters you define.
subtask A hierarchical unit of work. Subtasks are any tasks that you create under a parent task. Child subtasks constitute the lowest level of your work breakdown structure; where Oracle Projects looks when processing task charges and for determining task revenue accrual amounts. See task.

summarization Processing a project’s cost, revenue, commitment, and budget information to be displayed in the Project, Task, and Resource Project Status windows. You must distribute costs for any expenditure items, accrue and release any revenue, create any commitments, and baseline a budget for your project before you can view summary project amounts. Formerly known as accumulation.

supplier A business or individual that provides goods or services or both in return for payment.

supplier invoice An external supplier’s invoice entered into Oracle Payables.

system linkage An obsolete term. See expenditure type class.

task A subdivision of project work. Each project can have a set of top level tasks and a hierarchy of subtasks below each top level task. See also Work Breakdown Structure, subtask.

task organization The organization that is assigned to manage the work on a task.

task service type See service type.

Time and Materials (T&M) A revenue accrual and billing method that calculates revenue and billings as the sum of the amounts from each individual expenditure item. The expenditure item amounts are calculated by applying a rate or markup to each item.

timecard A weekly submission of labor expenditure items. You can enter timecards online, or as part of a pre-approved batch.

transferred date The date on which you transfer costs, revenue, and invoices to other Oracle Applications.

transition In Oracle Workflow, the relationship that defines the completion of one activity and the activation of another activity within a process. In a process diagram, the arrow drawn between two activities represents a transition. See also activity, Workflow Engine.

Unbilled Receivables The amount of open receivables that have not yet been billed for a project. Oracle Projects calculates unbilled receivables using the following formula: (Unbilled Receivables = Revenue Accrued – Amount Invoice)

Unearned Revenue Revenue received and recorded as a liability or revenue before the revenue has been earned by providing goods or services to a customer. Oracle Projects calculates unearned revenue using the following formula: (Unearned Revenue = Amount Invoiced – Revenue Accrued)

unit of measure A unit of measure records quantities or amounts of an expenditure item. For example, if you specify the unit Miles when you define an expenditure type for personal car use, Oracle Projects calculates the cost of using a personal car by mileage.

usage See non–labor resource.

usage cost rate override The cost rate assigned to a particular non–labor resource and non–labor organization which overrides the rate assigned to its expenditure type.
usage logs  Usage logs record the utilization of company assets on projects as the asset is used.

user profile  A set of changeable options that affect the way your applications run. You can change the value of a user profile option at any time.

vendor  See supplier.

window  A box around a set of related information on your screen. Many windows can appear on your screen simultaneously and can overlap or appear adjacent to each other. Windows can also appear embedded in other windows. You can move a window to a different location on your screen.

Work Breakdown Structure (WBS)  The breakdown of project work into tasks. These tasks can be broken down further into subtasks, or hierarchical units of work.

work site  The customer site where project or task work is performed.

Workflow Engine  The Oracle Workflow component that implements a workflow process definition. The Workflow Engine manages the state of all activities, automatically executes functions, maintains a history of completed activities, and detects error conditions and starts error processes. The Workflow Engine is implemented in server PL/SQL and activated when a call to an engine API is made. See also Account Generator, activity, function, item type.

write–off  See invoice write–off, revenue write–off.

write–on  An event type classification that causes revenue to accrue and generates an invoice for the amount of the write–on.
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