PeopleSoft®

PeopleTools 8.42 Development Tools Mobile Agent PeopleBook

November 2002

PeopleTools 8.42
Development Tools
Mobile Agent PeopleBook
SKU TOOLS842MOB-B 1102

PeopleBooks Contributors: Teams from PeopleSoft Product Documentation and Development.

Contents

About This PeopleBook

PeopleBooks provide you with the information that you need to implement and use PeopleSoft applications.

This preface discusses:

- PeopleSoft application prerequisites.
- PeopleSoft application fundamentals.
- Related documentation.
- Typographical elements and visual cues.
- Comments and suggestions.
- Common elements in PeopleBooks.

Note. PeopleBooks document only page elements that require additional explanation. If a page element is not documented with the process or task in which it is used, then either it requires no additional explanation or it is documented with common elements for the section, chapter, PeopleBook, or product line. Elements that are common to all PeopleSoft applications are defined in this preface.

PeopleSoft Application Prerequisites

To benefit fully from the information that is covered in these books, you should have a basic understanding of how to use PeopleSoft applications.

See *Using PeopleSoft Applications.*

You might also want to complete at least one PeopleSoft introductory training course.

You should be familiar with navigating the system and adding, updating, and deleting information by using PeopleSoft windows, menus, and pages. You should also be comfortable using the World Wide Web and the Microsoft Windows or Windows NT graphical user interface.

These books do not review navigation and other basics. They present the information that you need to use the system and implement your PeopleSoft applications most effectively.

PeopleSoft Application Fundamentals

Each application PeopleBook provides implementation and processing information for your PeopleSoft database. However, additional, essential information describing the setup and design of your system appears in a companion volume of documentation called the application fundamentals PeopleBook. Each PeopleSoft product line has its own version of this documentation.

The application fundamentals PeopleBook consists of important topics that apply to many or all PeopleSoft applications across a product line. Whether you are implementing a single application, some combination of applications within the product line, or the entire product line, you should be familiar with the contents of this central PeopleBook. It is the starting point for fundamentals, such as setting up control tables and administering security.

Related Documentation

This section discusses how to:

- Obtain documentation updates.
- Order printed documentation.

Obtaining Documentation Updates

You can find updates and additional documentation for this release, as well as previous releases, on the PeopleSoft Customer Connection Website. Through the Documentation section of PeopleSoft Customer Connection, you can download files to add to your PeopleBook Library. You'll find a variety of useful and timely materials, including updates to the full PeopleSoft documentation that is delivered on your PeopleBooks CD-ROM.

Important! Before you upgrade, you must check PeopleSoft Customer Connection for updates to the upgrade instructions. PeopleSoft continually posts updates as the upgrade process is refined.

See Also

PeopleSoft Customer Connection Website, http://www.peoplesoft.com/corp/en/login.asp

Ordering Printed Documentation

You can order printed, bound volumes of the complete PeopleSoft documentation that is delivered on your PeopleBooks CD-ROM. PeopleSoft makes printed documentation available for each major release shortly after the software is shipped. Customers and partners can order printed PeopleSoft documentation by using any of these methods:

- Web
- Telephone
- Email

Web

From the Documentation section of the PeopleSoft Customer Connection Website, access the PeopleSoft Press Website under the Ordering PeopleBooks topic. The PeopleSoft Press Website is a joint venture between PeopleSoft and Consolidated Publications Incorporated (CPI), the book print vendor. Use a credit card, money order, cashier's check, or purchase order to place your order.

Telephone

Contact CPI at 800 888 3559.

Email

Send email to CPI at psoftpress@cc.larwood.com.

See Also

PeopleSoft Customer Connection Website, http://www.peoplesoft.com/corp/en/login.asp

Typographical Conventions and Visual Cues

This section discusses:

- Typographical conventions.
- Visual cues.

Typographical Conventions

The following table contains the typographical conventions that are used in PeopleBooks:

Typographical Convention or Visual Cue	Description
Bold	Indicates PeopleCode function names, method names, language constructs, and PeopleCode reserved words that must be included literally in the function call.
Italics	Indicates field values, emphasis, and PeopleSoft or other book-length publication titles. In PeopleCode syntax, italic items are placeholders for arguments that your program must supply. We also use italics when we refer to words as words or letters as letters, as in the following: Enter the number 0, not the letter *O*.
KEY+KEY	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For ALT+W, hold down the ALT key while you press W.
`Monospace font`	Indicates a PeopleCode program or other code example.
(quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meanings.

Typographical Convention or Visual Cue	Description
. . . (ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe (|).
[ ] (square brackets)	Indicate optional items in PeopleCode syntax.
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object. Ampersands also precede all PeopleCode variables.
(ISO)	Information that applies to a specific country, to the U.S. federal government, or to the education and government market, is preceded by a three-letter code in parentheses. The code for the U.S. federal government is USF; the code for education and government is E&G, and the country codes from the International Standards Organization are used for specific countries. Here is an example: (GER) If you're administering German employees, German law requires you to indicate special nationality and citizenship information for German workers using nationality codes established by the German DEUEV Directive.
Cross-references	PeopleBooks provide cross-references either below the heading See Also or on a separate line preceded by the word *See.* Cross-references lead to other documentation that is pertinent to the immediately preceding documentation.

Visual Cues

PeopleBooks contain the following visual cues.

Notes

Notes indicate information that you should pay particular attention to as you work with the PeopleSoft system.

Note. Example of a note.

A note that is preceded by *Important!* is crucial and includes information that concerns what you must do for the system to function properly.

Important! Example of an important note.

Warnings

Warnings indicate crucial configuration considerations. Pay close attention to warning messages.

Warning! Example of a warning.

Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like to see changed about PeopleBooks and other PeopleSoft reference and training materials. Please send your suggestions to:

PeopleSoft Product Documentation Manager PeopleSoft, Inc. 4460 Hacienda Drive Pleasanton, CA 94588

Or send email comments to doc@peoplesoft.com.

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions.

Common Elements in These PeopleBooks

As of Date — The last date for which a report or process includes data.

Business Unit — An ID that represents a high-level organization of business information. You can use a business unit to define regional or departmental units within a larger organization.

Description — Enter up to 30 characters of text.

Effective Date — The date on which a table row becomes effective; the date that an action begins. For example, to close out a ledger on June 30, the effective date for the ledger closing would be July 1. This date also determines when you can view and change the information. Pages or panels and batch processes that use the information use the current row.

Once, Always, and **Don't Run** — Select Once to run the request the next time the batch process runs. After the batch process runs, the process frequency is automatically set to Don't Run.

Select Always to run the request every time the batch process runs.

Select Don't Run to ignore the request when the batch process runs.

Report Manager	Click to access the Report List page, where you can view report content, check the status of a report, and see content detail messages (which show you a description of the report and the distribution list).
Process Monitor	Click to access the Process List page, where you can view the status of submitted process requests.
Run	Click to access the Process Scheduler request page, where you can specify the location where a process or job runs and the process output format.
Request ID	An ID that represents a set of selection criteria for a report or process.
User ID	An ID that represents the person who generates a transaction.
SetID	An ID that represents a set of control table information, or TableSets. TableSets enable you to share control table information and processing options among business units. The goal is to minimize redundant data and system maintenance tasks. When you assign a setID to a record group in a business unit, you indicate that all of the tables in the record group are shared between that business unit and any other business unit that also assigns that setID to that record group. For example, you can define a group of common job codes that are shared between several business units. Each business unit that shares the job codes is assigned the same setID for that record group.
Short Description	Enter up to 15 characters of text.

See Also

Using PeopleSoft Applications

PeopleSoft Process Scheduler

PeopleTools Mobile Agent Preface

This preface describes the PeopleTools Mobile Agent PeopleBook.

PeopleTools Mobile Agent

This PeopleBook covers PeopleTools Mobile Agent, which extends PeopleSoft Application Designer to enable the creation of applications to run in the PeopleTools Mobile Agent runtime environment on disconnected mobile devices.

The PeopleTools Mobile Agent is a product that is licensed separately from the PeopleTools product, and only those customers who have a license for PeopleTools Mobile Agent may install and use this product. Use of the Mobile Agent functionality described herein is subject to the licensing conditions for the PeopleTools Mobile Agent product. Please refer to the applicable contract to determine restrictions regarding this product.

About These PeopleBooks

The "About These PeopleBooks" preface contains general product line information, such as related documentation, common page elements, and typographical conventions. This preface also contains a glossary with useful terms that are used in PeopleBooks.

See *About These PeopleBooks*

CHAPTER 1

Understanding PeopleTools Mobile Agent

This chapter discusses:

- Disconnected applications.
- PeopleTools Mobile Agent.
- Data synchronization.
- Mobile application definition and configuration.

Disconnected Applications

PeopleTools Mobile Agent extends the functionality of PeopleSoft Internet Architecture (PIA) to disconnected mobile devices, enabling users to work with PeopleSoft applications on laptop computers or personal digital assistants (PDAs) while they are disconnected from the internet or local network. PeopleTools Mobile Agent uses standard internet tools and protocols—web browsers, HTTP, and Extensible Markup Language (XML)—to access a mobile database containing application definitions and data. Changes that users make while disconnected are distributed across the network when they reconnect.

Disconnected applications enable users to use applications when and where required and to download refreshed data and upload new or updated data when connected. PeopleTools extends support for these disconnected applications with an internet architecture.

The PeopleTools Mobile Agent extensions to PeopleTools add a disconnected mobile capability to the internet technology base in PIA. They leverage the server-centric PIA runtime architecture by integrating flexible data distribution and a high-performance data synchronization capability. This integration enables the same business objects to be used for connected and disconnected applications, providing common data edits and processing logic.

PeopleTools Mobile Agent

This section discusses:

- PeopleTools Mobile Agent.
- Mobile Page Processor.
- Mobile Object Manager.

PeopleTools Mobile Agent

PeopleTools Mobile Agent, new with PeopleTools 8.4, provides a mobile, device-resident runtime component for PeopleSoft applications. This small footprint component supports metadata-driven applications that operate without requiring a live network connection.

The PeopleSoft approach using metadata to define and drive application behavior is also used for disconnected applications. Distribution of application metadata that is applicable for the user and class of device is handled in the same way as application business data using a common synchronization protocol and mechanism.

The device-resident PeopleTools Mobile Agent runtime component supports a common user experience for interacting with business objects that originate from multiple PeopleSoft enterprise applications. All device-resident applications appear in a common menu.

Disconnected PeopleSoft applications are designed to:

- Provide a similar look and feel between connected and disconnected counterparts.
- Optimize the user interface for a class of mobile device (laptop or PDA).

Mobile Page Processor

Mobile Page Processor provides the user interface for mobile applications. It dynamically generates the user interface based on application metadata and the current session state. Application configuration for business process-specific requirements is completed by tailoring metadata and synchronizing changed metadata to the device. Mobile Page Processor then dynamically provides the newly configured version of the application.

Mobile Page Processor works with a web browser to render the mobile application's user interface for supported mobile device platforms. In this context, it acts like a lightweight, device-resident web server. Mobile Page Processor relies on Mobile Object Manager for access to and storage of device-resident metadata and business object information. In addition, Mobile Page Processor provides the user interface for data synchronization requests and relies on Mobile Object Manager to perform the requests.

Mobile Object Manager

Mobile Object Manager manages data distribution, persistence, and synchronization as an essential component of PeopleTools Mobile Agent. It communicates with the Synchronization Server (Sync Server) through the Synchronization Gateway (Sync Gateway) using SyncAPI-formatted (XML) messages over HTTP.

Metadata Distribution

Mobile application metadata is distributed based on personalization and security permissions. Only the metadata for mobile pages that a user is authorized to use is downloaded to the device. Mobile Object Manager stores metadata in a database for later use. The metadata defines object structure and relationships with the mobile application user interface.

Business Data Distribution

Mobile Object Manager makes requests to Sync Server for applicable business data to display on mobile pages. Sync Server performs relevance filtering using rules that are contained in component interface definitions. Mobile Object Manager provides a unique operation that simplifies retrieving a complete set of referenced objects to the mobile device. It follows references to related objects and makes subsequent requests to Sync Server to get copies of related objects. Application developers specify data distribution rules as required for the application. For example, in the Customer Relationship Management (CRM) sales domain, an opportunity is related to a company, and a company can be related to many locations. A relevance rule identifying the proper opportunity objects for a user also produces the related company and site objects for those opportunities.

Object Persistence

Mobile Object Manager oversees the storage of application objects on the mobile device. It maintains a queue of new, deleted, and changed data to optimize performance of synchronization operations. Mobile Object Manager uses a small, embedded database for physical storage of device-resident data.

Data Synchronization

Mobile Page Processor provides the user interface for selecting the type of synchronization, while Mobile Object Manager performs the synchronization. Synchronization types include:

- Pushing new, deleted, or changed objects to the server.
- Two-way business data synchronization.
- Complete, device-side data refreshing (including business data and metadata).

A synchronization request starts the appropriate type of synchronization session. Synchronization sessions communicate using HTTPS and can accommodate wired or wireless network communications.

Data Synchronization

This section discusses:

- Data synchronization.
- Sync Server.
- Sync Gateway.

Data Synchronization

Mobile users access synchronization options in the Synchronization group within the applications menu. Users can post their transactions to the server, initiate a two-way synchronization, request an application metadata update, view the results of their last synchronization session, or update data distribution preferences by selecting the appropriate link from the menu. The browser displays progress and results as the synchronization session proceeds.

Data synchronization supports disconnected devices using internet standard protocols. PeopleTools provides several important functions through its data synchronization mechanism.

Metadata Distribution

A data synchronization session distributes metadata for the appropriate mobile applications to a user device.

Business Data Distribution

Disconnected applications provide instant access to business information. For example, the value of a mobile Sales Force Automation application is providing quick access to contact, company, opportunity, and product information. The challenge with data distribution is putting the correct subset of enterprise information on a mobile device. Too much information doesn't fit on memory-constrained devices, and too little information results in lost productivity.

Business Data Synchronization

Disconnected applications support the creation and update of business information for people in the field.

Sync Server

The Sync Server is a specialized application server that is optimized for concurrent, multi-user synchronization processing. It leverages metadata defining PeopleSoft Component Interfaces and extends them for use on mobile devices. It provides a device-independent synchronization mechanism using the SyncAPI protocol with device-resident Mobile Object Manager. Multiple Sync Servers providing different object types can participate in fulfilling requests during a synchronization session. Synchronization requests and messages are routed to and from the appropriate Sync Server by the Sync Gateway.

Business Object Definition With Component Interface

Component interfaces define objects and their properties for replication. Any PeopleSoft component interface can be distributed as part of a mobile application by exposing it through a synchronizable component interface. The primary requirement for a synchronizable component interface is that it must expose an immutable synchronization ID with a version indicator property.

SyncAPI Synchronization Protocol

SyncAPI specifies the application-level protocol for data that is passed between the mobile device and the application server. It uses a set of verbs to specify actions and serialized object data on which to act. SyncAPI is modeled after two emerging internet standards: SyncML and SOAP.

Data Distribution and Filtering

A good mobile application makes relevant information available without distributing the entire enterprise database to a mobile device. The most efficient forms of data distribution communicate net changed objects only. In PeopleTools, definitions and rules for determining the data subset that is specific to the user and class of device (for example, laptop or PDA) are part of the component interface definition. During a synchronization session, data for a refreshed object is communicated to the device only if it has been updated since the last synchronization.

Sync Gateway

The web server-based Sync Gateway provides an internet access point for synchronization requests. Data synchronization using internet communication provides more options and adds flexibility. Mobile device-to-Sync Gateway communication is handled with XML-formatted messages over HTTP. Secure Sockets Layer (SSL) can be used to protect information with encryption as it passes over the internet. In addition, messages contain security credentials to authenticate requests from mobile users. The Sync Gateway provides a routing and forwarding function. Based on object type, it forwards synchronization requests to the appropriate application server-based Sync Server.

See Also

PeopleCode Reference, “Mobile Classes”

PeopleCode Reference, “SyncServer Class”

Mobile Application Definition and Configuration

This section discusses:

- Mobile applications.
- The process for Developing with PeopleTools Mobile Agent.
- Component Interface Designer.
- Mobile Page Designer.

Mobile Applications

Mobile applications are defined using PeopleSoft Application Designer. Disconnected applications leverage the base of metadata from their connected counterparts. Developers use Component Interface Designer and Mobile Page Designer to:

- Define additional metadata that is specific to disconnected applications and mobile devices.
- Configure mobile applications for specific business process needs during implementation.
- Maintain applications.

Changes to application metadata are distributed to mobile devices when an Update Applications type of synchronization is requested.

Process for Developing With PeopleTools Mobile Agent

The main steps to create mobile pages for display on a laptop or PDA are:

1. Create synchronizable component interfaces.
2. Create mobile pages based on synchronizable component interfaces.
3. Register and apply security to the mobile pages and underlying component interfaces.
4. Test and verify the mobile pages.

See Also

PeopleCode Reference, “Mobile Classes”

Component Interface Designer

A component interface is a PeopleTools object created in PeopleSoft Application Designer that exposes a component for synchronous access from an external application. PeopleTools 8.4 extends component interfaces to support data distribution and synchronization. Use Component Interface Designer to define additional metadata that is specific to disconnected applications and synchronization-specific data requirements for synchronizable component interfaces.

Required Properties

Each record that is exposed on a synchronizable component interface requires an immutable identifier (Sync ID) and version identifier (Sync DateTimeStamp). An immutable sync ID or key is required for each object because changes to traditional key values might result in orphaned objects during synchronization. The version identifier is used for data validation and conflict detection.

Object Relationship Definition

Object relationships are specified in the form of component interface properties holding key values for a related object’s component interface. Explicit relationship definition supports the automatic distribution of related objects during synchronization.

Data Distribution Filters

Object instance filtering for a specific user and class of device is specified in the component interface OnSelect event. Developers specify the rules that are generally applicable for the type of object, considering the memory constraints of various devices. They complete the final configuration of data filtering rules during implementation.

Conflict Resolution Rules

The Sync Server supports both declarative and programmatic conflict resolution rules. Declarative rules are specified as part of the component interface definition and optional programmatic rules in PeopleCode. Declarative rules should work in most cases. Current declarative rules are server-resident object wins, device-resident object wins, or server and device object property merge. An example of conflict resolution that is implemented in PeopleCode is making a determination based on the updating user’s role or position in organizational hierarchy.

Mobile Page Designer

Developers define mobile application user interfaces using Mobile Page Designer in PeopleSoft Application Designer. Mobile application component interfaces and mobile pages are closely linked; all mobile pages are defined in terms of the component interface properties that they expose.

PeopleTools uses inheritance to simplify user-interface metadata for various mobile device types. A set of default metadata values is specified that applies to all types of mobile devices. These defaults are inherited for device type-specific metadata, unless they are overridden.

CHAPTER 2

Using Synchronizable Component Interfaces

This chapter provides an overview of synchronizable component interfaces and discusses how to:

- Use the synchronization ID and synchronization datetime stamp.
- Mobilize applications.
- Define a synchronizable component interface.
- Use reference properties.
- Use attachments.

See Also

PeopleSoft Component Interfaces

Understanding Synchronizable Component Interfaces

The basis for defining a PeopleSoft mobile page is a synchronizable component interface. You can use existing component interfaces or build new ones. However, for a mobile application to access data through a component interface, the component interface must be synchronizable.

This chapter assumes that you are familiar with developing, validating, and testing component interfaces using PeopleSoft Application Designer.

This section discusses:

- Data synchronization.
- Synchronization conflict resolution.

Data Synchronization

Data synchronization initially copies selected application metadata and instance data from the server to the mobile device while the mobile device is connected to the network. This initial synchronization is also called a bootstrap synchronization. While disconnected, the data might change on the server, on the mobile device, or on another user's mobile device that subsequently updates the server data through synchronization.

The goal of subsequent synchronization between the server and the mobile device is to:

- Determine whether data has changed on the server, the mobile device, or both the server and the mobile device.
- Determine whether there is a conflict with changed data, as determined by the version datetime stamp and original property values of the object.

- Determine how to resolve a conflict based on standard conflict resolution algorithms combined with OnConflict PeopleCode event handlers.
- Update changed data on the server and the mobile device after resolving any conflicts.

Synchronization Conflict Resolution

A mobile device can be attached to the network for update and data synchronization. If data has changed on only the server or only the mobile device, as determined through out-of-date detection, the Synchronization Server (Sync Server) updates the other. In this case, no conflict resolution is required. However, if data has changed on both the server and the mobile device, a conflict occurs. The developer assigns a conflict resolution rule to each component interface that determines how to resolve the conflict.

A synchronization ID (Sync ID) and a version identifier uniquely identify each record for synchronization. In PeopleTools 8.4, the version identifier is a synchronization datetime stamp (Sync DateTimeStamp), which is a field of the datetime type. Subsequent PeopleTools releases might use other version identifier schemes. This document refers to the version identifier as Sync DateTimeStamp to remind you that it should be a datetime field.

The Sync Server performs conflict detection by comparing the last Sync DateTimeStamp of the original row of data stored on the mobile device—sent from the mobile device as part of the Synchronization API (SyncAPI) request—to the current datetime stamp of the specific row of data on the server. If the datetime stamps match, there is no conflict and the update proceeds. A conflict occurs if the server datetime stamp is more recent, representing a change on the server that is not reflected on the mobile device. If a conflict is detected, the original property values from the last synchronization, transmitted from the mobile device to the Sync Server as part of all update commands, are used to detect property-level conflicts. The original values are compared to the current server values to determine which individual property changed. The Sync Server does not attempt to determine which change was made first, because it is not possible to accurately determine the date and time that the update was made on the mobile device. It is considered a conflict that must be resolved.

Many synchronization conflicts can be handled by selecting from a short list of standard conflict resolution algorithms provided as standard components of the Sync Server. Select the standard resolutions in the Properties dialog box of the component interface. PeopleTools also provides new PeopleCode events to use to invoke a custom procedure in response to a conflict.

Note. Applying the conflict resolution algorithms might result in business rule violations. The application developer must provide resolutions that are compatible with the operative business rules. Manage unresolvable conflicts using OnConflict PeopleCode events.

Server Wins

The Sync Server assumes that values on the server take precedence, and the mobile device values are discarded. No update takes place. Although a conflict is detected, the server values are maintained and a message is returned to the mobile device alerting the user that the change was not accepted.

This setting does not cause unresolvable conflicts. The server always wins, no matter what is on the mobile device. If the mobile device object has been deleted, the server object remains and a message is sent to the mobile device. If the server object has been deleted, a message is sent to the mobile device to notify the user of the deletion.

Device Wins

The Sync Server assumes that all values on the mobile device take precedence. Where a conflict is detected between server and device values (because the values have changed on both the server and on the device), field values from the mobile device replace the values on the server. Field values that have changed on the server but do not result in a conflict are updated to the mobile device.

Fields that are not exposed through properties, but have changed on the server, are retained. No message is issued to the device.

This setting does not cause unresolvable conflicts. If the server object has been deleted, the mobile device object is copied onto the server. However, business rule validations might fail, because the mobile device might not contain all of the fields that are needed to save the row.

Field Level Merge The server and mobile device values are combined where property-level conflicts have not occurred. You can develop PeopleCode to further manage how the data is merged into a combined result.

This setting might cause unresolvable conflicts if both the mobile device and the server update the same property, or when either the mobile device or the server object has been deleted.

Resolve and manage unresolvable conflicts using OnConflict PeopleCode events.

Custom No automatic conflict resolution is attempted. The application developer determines conflict resolution using OnConflict PeopleCode events.

See Also

PeopleCode Reference, “SyncServer Class”

Using the Synchronization ID and DateTime Stamp

This section provides an overview of the synchronization ID and date and time stamp and discusses how to:

- Create the SYNCID field.
- Create the SYNCDTTM field.
- Add SYNCID and SYNCDTTM fields to component records.
- Initialize SYNCID.

Understanding the Synchronization ID and DateTime Stamp

Every row of data (record) exposed on a component interface to be synchronized must include two fields:

- A synchronization ID, commonly named SYNCID.
- A synchronization datetime stamp, commonly named SYNCDTTM.

If a derived (calculated) value will be displayed on the mobile page, its originating records must include SYNCID and SYNCDTTM and must be exposed on the component interface. However, a work (derived) record should not have SYNCID and SYNCDTTM, because the value of the work record changes with changes to its originating data.

Note. Application designer allows reference and data collection properties to be marked as derived in the component interface definition. Derived references are not supported; a derived flag on a reference is ignored.

If you include the SYNCID and SYNCDTTM fields in a subrecord, define the fields in both the subrecord and the parent record.

The developer can define the actual names for the synchronization ID and synchronization datetime stamp, but use the names consistently. This document uses SYNCID for the synchronization ID and SYNCDTTM for the synchronization datetime stamp. SYNCDTTM is sometimes named SYNCTIMESTAMP.

The synchronization datetime stamp must be dedicated to the synchronization function. If another datetime stamp (such as LASTUPDTTM) already exists in the selected record, do not use it as the Sync DateTimeStamp. Create another specifically for synchronization.

After adding SYNCID and SYNCDTTM, the Build or Alter tables process creates database triggers to:

- Assign a synchronization ID and initial synchronization datetime stamp when new rows are inserted into the table.
- Update the synchronization datetime stamp when rows are modified.

The synchronization datetime stamp cannot be updated by any method other than the database trigger. An insert trigger assigns sync IDs, except in the case of existing rows in an altered table. For an existing table, you must initialize the sync IDs using the Set Sync ID utility.

For a new table, sync IDs are automatically assigned as the table is populated with data, and cannot otherwise be changed or updated.

Sync IDs are unique to each table, except for effective-dated tables. In an effective-dated table, all instances of a specific row share the same sync ID. If you select only in-effect rows, you get unique sync IDs within that table.

Note. Each record being mobilized must include at least one key field (not SYNCID or SYNCDTTM) for the trigger to use when building or altering the table.

See Also

PeopleSoft Application Designer, “Creating Field Definitions”

PeopleSoft Application Designer, “Creating Record Definitions”

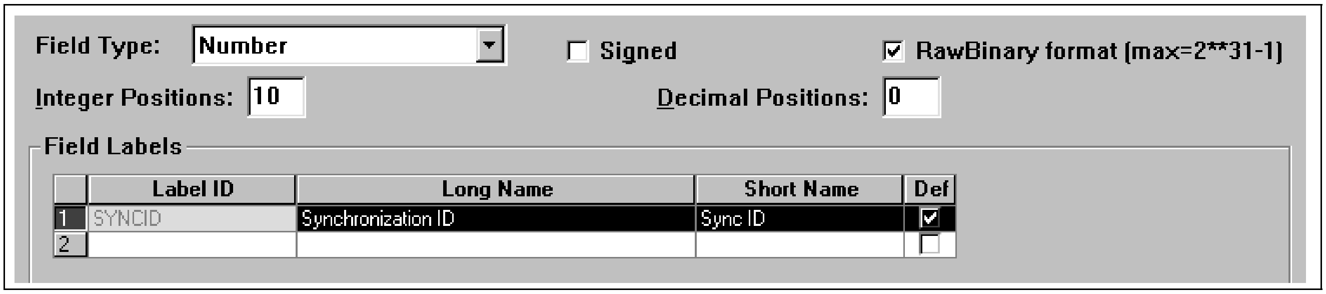
PeopleSoft Application Designer, “Creating Page Definitions”

PeopleSoft Application Designer, “Building SQL Tables and Views”

PeopleSoft Application Designer, “Working With Projects,” Setting System IDs

Creating the SYNCID Field

If the SYNCID field does not yet exist, create it using these parameters.



SYNCID field definition

Field Type Select *Number.*

Integer Positions Enter *10.*

Decimal Positions Enter *0.*

Signed Clear this check box.

Raw Binary Format (max=231-1)** (Optional) Select this check box.

Label ID Enter SYNCID.

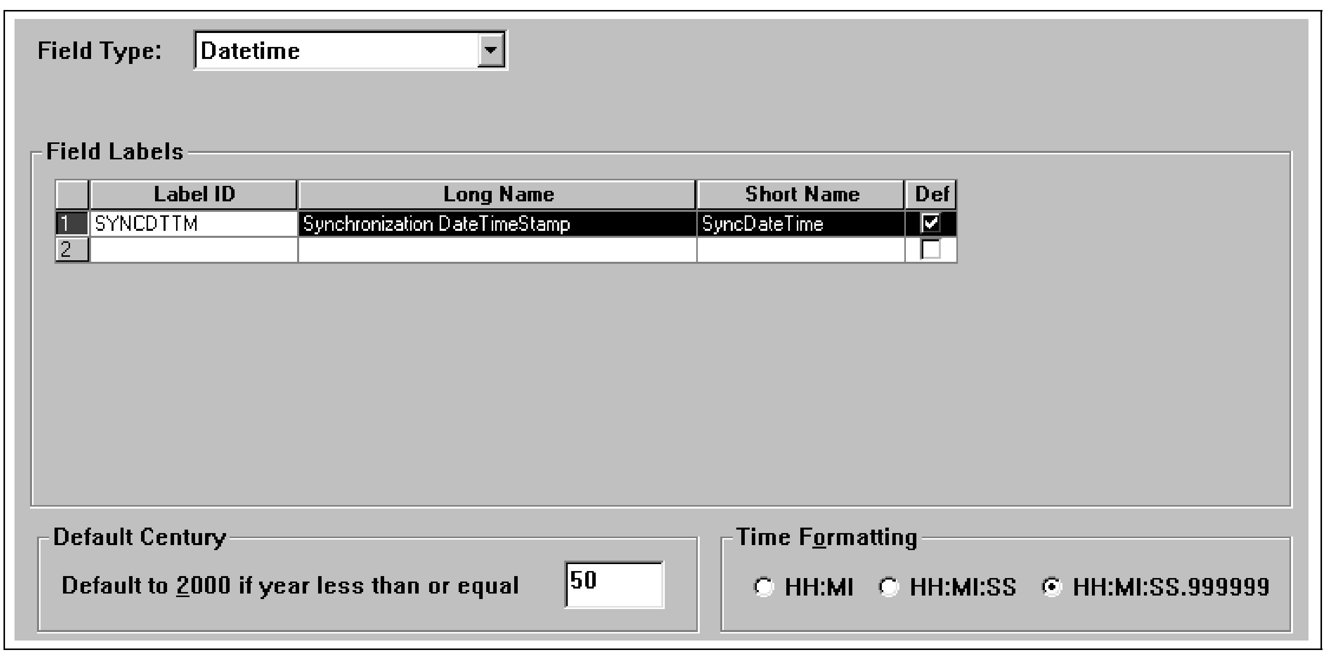
Long Name Enter Synchronization ID.

Short Name Enter Sync ID.

Def (default) Select this check box.

Creating the SYNCDTTM Field

If the SYNCDTTM field does not yet exist, create it using these parameters.

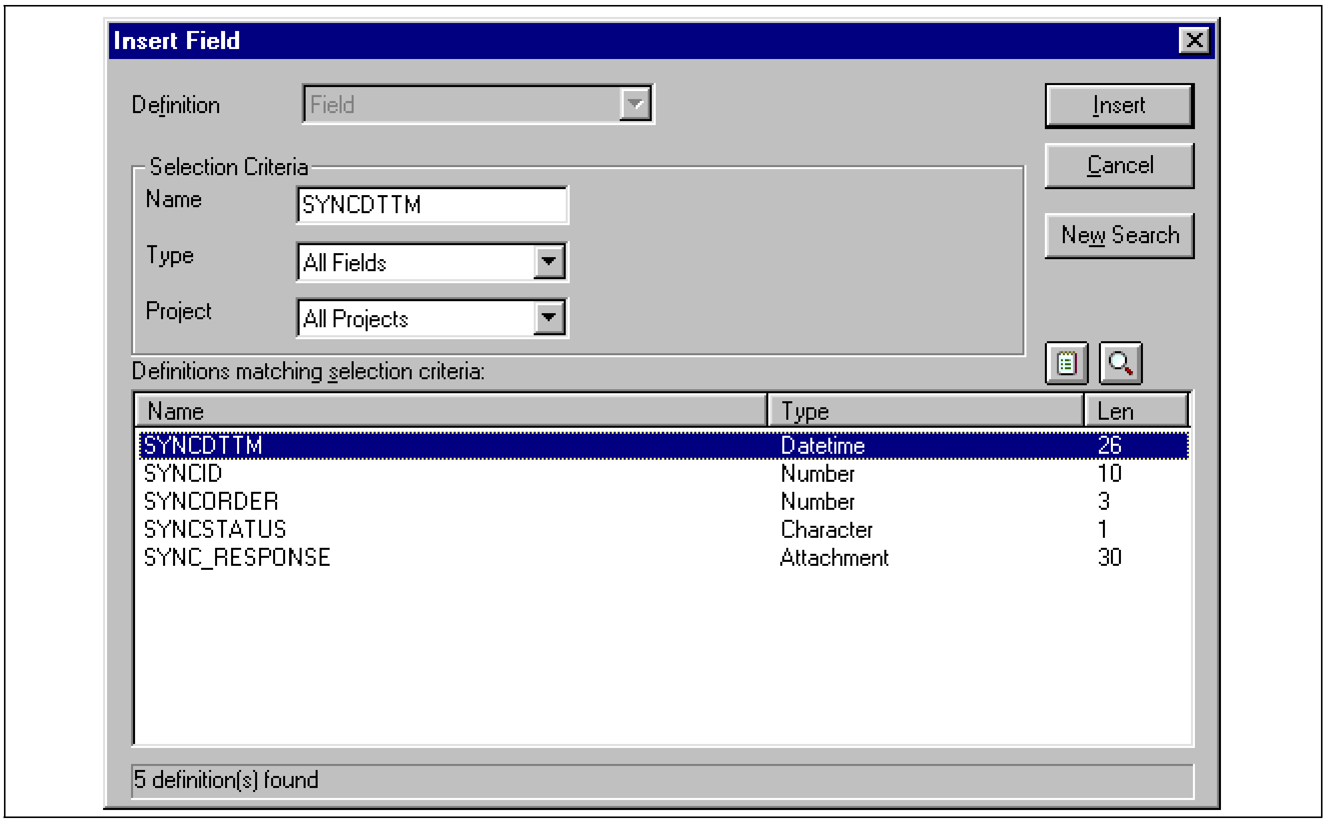


SYNCDTTM field definition

Field Type	Select Datetime.
Label ID	(Optional) Enter *SYNCDTTM.*
Long Name	Enter Synchronization DateTimeStamp.
Short Name	Enter SyncDateTime.
Def (default)	Select this check box.
Default Century	Enter *50.*
Time Formatting	Select HH:MM:SS:999999.

Adding SYNCID and SYNCDTTM Fields to Component Records

This section discusses how to add SYNCID and SYNCDTTM fields to component records and how to build and index the record tables before creating the synchronizable component interface.



Insert Field dialog box

To add SYNCID and SYNCDTTM to component records:

1. Open PeopleSoft Application Designer.
2. Open the selected component.
3. Insert the fields SYNCID and SYNCDTTM for each record that will be exposed in the component interface.

   Add SYNCID and SYNCDTTM at the end of the list of record fields.
4. For each record:

a. Open the Record Properties dialog box.

b. On the Use tab, set the Record-level Auto-Update System ID Field to *SYNCID.*

If you do not set Record-level Auto-Update, you receive an error message when initializing Sync ID.

Note. Subrecords exist only in relation to their parent records. If you include SYNCID and SYNCDTTM fields in a subrecord, those fields automatically appear as if they belong to the parent record. However, the SetSyncID function does not set SYNCID in subrecords. Set the Record-level Auto Update fields in both the parent record and subrecord to SYNCID and SYNCDTTM. SetSyncID recognizes the subrecord SYNCID field as the parent's, and sets it if necessary.

---

c. Set the Timestamp Field to *SYNCDTTM.*

5. If SYNCID is not a key of the record, add SYNCID to the properties index.

   The new index should not be unique.

   If you do not add a custom index for SYNCID, you cannot save the record.

6. Build or alter the project tables to add the new fields.

   • If you added SYNCID and SYNCDTTM to an existing component, select Build, Project, and specify Alter Tables and Create Views.

     Create Trigger is selected by default.

   • If you created a new component that includes SYNCID and SYNCDTTM, select Build, Project, and specify Build Tables, Create Views, and Create Trigger.

     If you do not specify Create Trigger, SYNCID and SYNCDTTM are not updated during synchronization.

   • If the record type is SQL View, open the SQL Editor and manually add SYNCID and SYNCDTTM.

     Because the record is only a view of a table, not a table itself, the Build or Alter process does not update the view. Note also that views may not include data altered on the device until the next synchronization.

Note. Select Create Trigger for every new component that will be associated with or referenced by a synchronizable component interface and mobile page.

You can now create a synchronizable component interface based on this component.

See Also

PeopleSoft Application Designer, "Building SQL Tables and Views"

Initializing the Synchronization ID

If you included a synchronization ID in a new component, the Build process initializes the value for the synchronization ID when building the associated table.

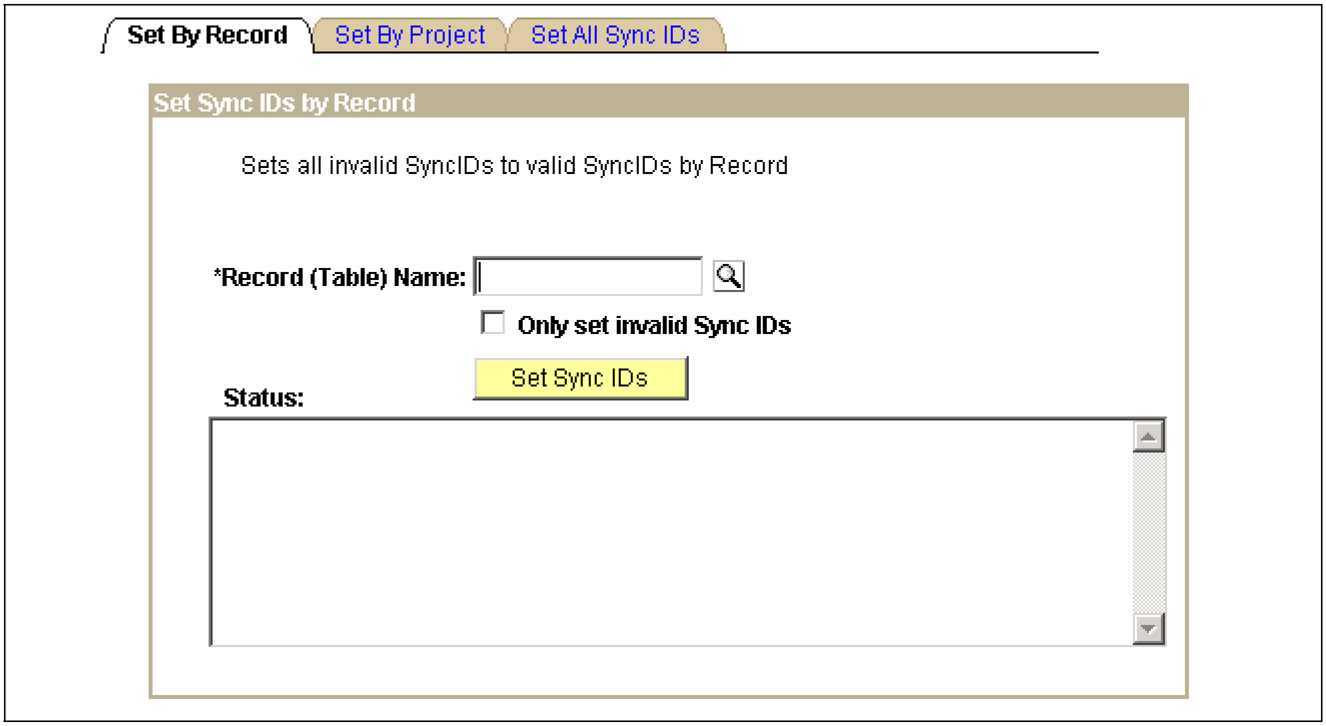
If you added a synchronization ID to an existing component, the synchronization ID value is zero, and the synchronization ID therefore does not update properly. Initialize the synchronization ID to a value greater than zero with Set Sync IDs.

You can set Sync IDs

• From the PeopleTools, Utilities, Administration page.

or

- From PeopleSoft Application Designer.



Set Sync IDs, Set By Record page

To initialize the synchronization ID:

1. Sign on to PeopleSoft 8.
2. Select PeopleTools, Utilities, Administration, Set Sync IDs.
3. Select:
   - Set By Record to set the Sync IDs for a selected record.
   - Set By Project to set the Sync IDs for a selected project.
   - Set All Sync IDs to set all invalid Sync IDs to valid Sync IDs.
4. Select Only set invalid Sync IDs to search for and set invalid Sync IDs rather than all Sync IDs in the selected scope.
5. Click Set Sync IDs.

   This initializes all synchronization IDs encountered in the specified record, project, or in the entire database to a value greater than zero.

Note. If you choose to run Set Sync IDs for all synchronization IDs (with Only set invalid Sync IDs unselected), delete the application server cache after running Set Sync IDs.

To initialize synchronization IDs from PeopleSoft Application Designer:

1. Open a record.
2. Select

Build, Set System IDs for Current Definition to set sync IDs for only the current record,

or

Build, Set System IDs for Project to set sync IDs for the entire project.

See Also

PeopleSoft Application Designer, “Working With Projects,” Setting System IDs

Mobilizing Applications

Making an application available on mobile devices is known as mobilizing an application.

Note. While synchronizable component interfaces are the requisite building block of mobile applications, the base component interface and underlying components must be thoroughly tested and working properly before defining the mobile component interface. Using a nonfunctional component as the basis for a mobile component interface results in a nonfunctional component interface and failure of the associated mobile pages.

If you are mobilizing an existing working application, begin by opening an existing component interface. Using the instructions provided in this chapter, build the synchronizable component interface by:

1. Opening a component interface.
2. Running Validate for Consistency to identify record definitions requiring modification.
3. Adding synchronization ID and synchronization datetime stamp fields to the required records, creating an index for each table based on the synchronization ID, and building or altering the tables (which includes building the required database triggers).

Note. Every property exposed in the component interface is synchronized with the mobile device during synchronization, even if the property is not displayed on a mobile page. Synchronizing properties that are not displayed might cause performance issues and should be avoided. When mobilizing an existing application, consider creating new component interfaces specifically for use with PeopleTools Mobile Agent.

If you are developing a new application for use with PeopleTools Mobile Agent, include Sync ID and Sync DateTimeStamp fields in the records of the application’s components before creating the associated component interfaces.

See Also

PeopleSoft Component Interfaces, “Developing the Component Interface”

PeopleCode Developer’s Guide, “Understanding Mobile Pages and Classes”

Defining a Synchronizable Component Interface

You can base your mobile page on an existing component and component interface or create a new component interface. In either case, each record to be exposed in the synchronizable component interface must include synchronization ID and datetime stamp fields.

This section discusses how to:

- Create a synchronizable component interface.
- Add component interfaces to permission lists.

Creating a Synchronizable Component Interface

To create a synchronizable component interface:

1. Create a new component interface for the selected component.

   Accept the default properties from the associated component, or select properties after creating the component interface.

2. Add properties to, or delete properties from, the component interface.

   Drag properties from the associated component.

3. Open the component interface Properties dialog box.
4. Select the Synchronization tab.
5. Select Synchronizable.
6. Select a conflict resolution method:
   - Server Wins
   - Device Wins
   - Field Level Merge
   - Custom
7. Save the component interface.
8. Select Tools, Validate for Consistency from the PeopleSoft Application Designer menu to validate the current component interface.

   Validation checks for the presence of a Sync ID and Sync DateTimeStamp for each record exposed in the component interface. A list of errors and warnings appears in the Validate window. If an error indicates that a record requires Sync ID or Sync DateTimeStamp, double-click the message to open and edit the property.

   Testing for validation before the component interface is defined as synchronizable does not locate missing synchronization IDs and synchronization datetime stamps on associated records.

9. Select Tools, Test Component Interface from the PeopleSoft Application Designer menu to test the current component interface.

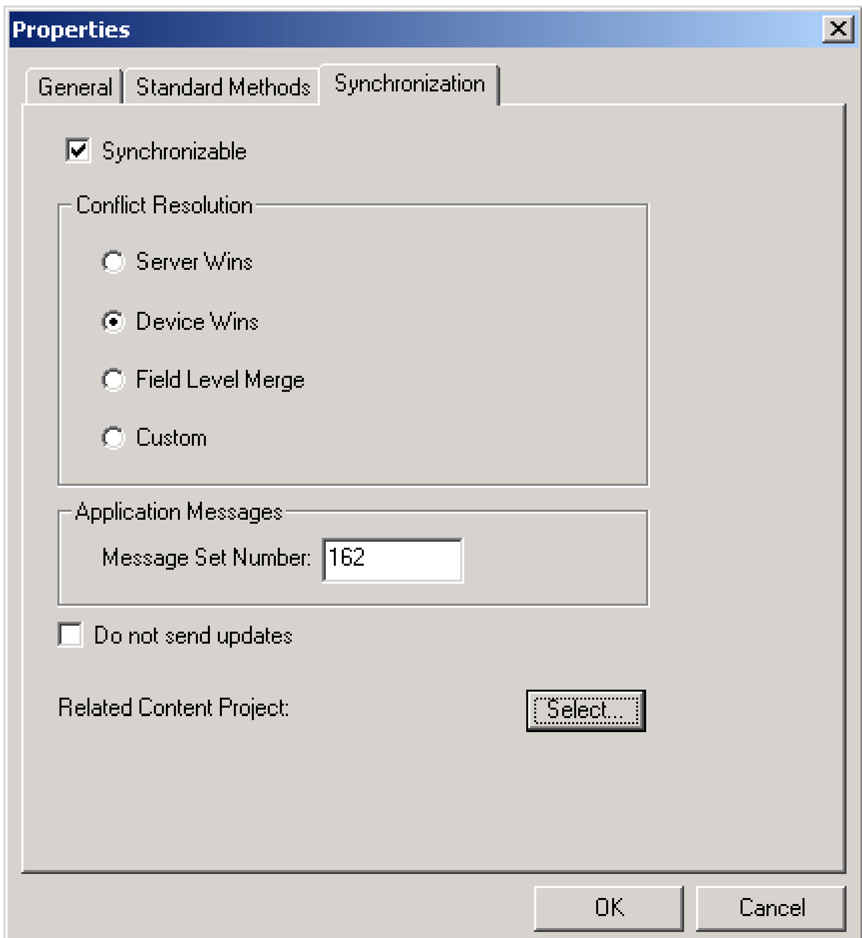
The Component Interface Tester appears, enabling you to perform search tests on the component interface and its associated records using existing data. Synchronization uses the get method, so it is important to test get. If you receive a Not authorized error message, you do not have permission for this component interface. You must grant permission.

10. Save the component interface.

Note. Every property exposed in the component interface is synchronized with the mobile device during synchronization, even if the property is not displayed on a mobile page. Synchronizing properties that are not displayed might cause performance issues and should be avoided.

Specifying Messages

Application developers can write PeopleCode to issue a message to the mobile device. Specify the message set number to be synchronized on the component interface designer dialog box, Synchronization tab.



Component Interface Properties, Message Set Number

Adding Component Interfaces to Permission Lists

Include every component interface associated with a mobile page in the appropriate permission lists for mobile users.

The mobile personalization component interface, MOBILE_PREFS_CI, handles the specification of date format, time zone, currency code, and daylight savings time parameters. The user sets mobile preferences using the My Personalizations link in the Mobile Portal menu.

Add permissions to MOBILE_PREFS_CI through the PTPT1000 (PeopleSoft user) permissions list. The administrator then adds this permissions list to the role of the mobile users.

Note. Every component interface referenced by a mobile page must be included in the appropriate permission list, even if the component interface is not the basis for the mobile page. Without permission to all referenced component interfaces, data is not available during synchronization and the synchronization fails.

To add a component interface to a permission list:

1. Sign in to PeopleSoft in your browser.
2. Select PeopleTools, Security, Permissions & Roles, Permission Lists.
3. On the Find an Existing Values page, search for and select the appropriate permission list.

   If the appropriate permission list does not yet exist, select Add a New Value and create a permission list for mobile applications.
4. Scroll right to display the Component Interfaces tab.
5. Add the component interface.
6. Click Save.

Using Reference Properties

Each component interface is isolated and unaware of the other component interfaces in the system. To access and update information from other component interfaces, references establish relationships between component interfaces.

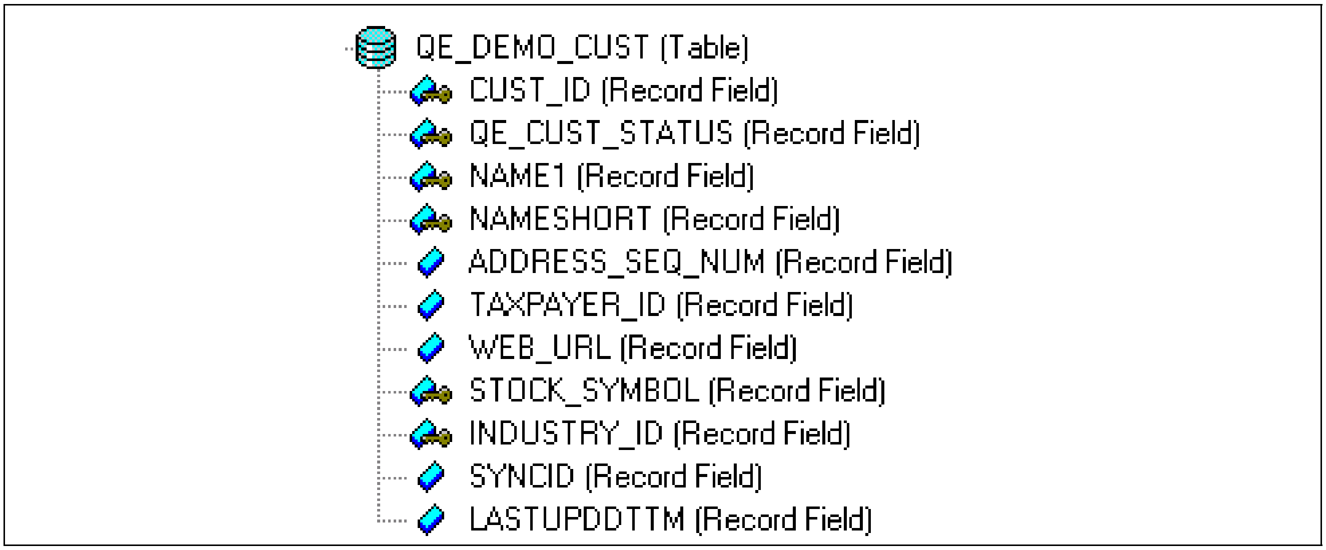
This section provides an overview of references and discusses how to create a reference property.

Understanding References

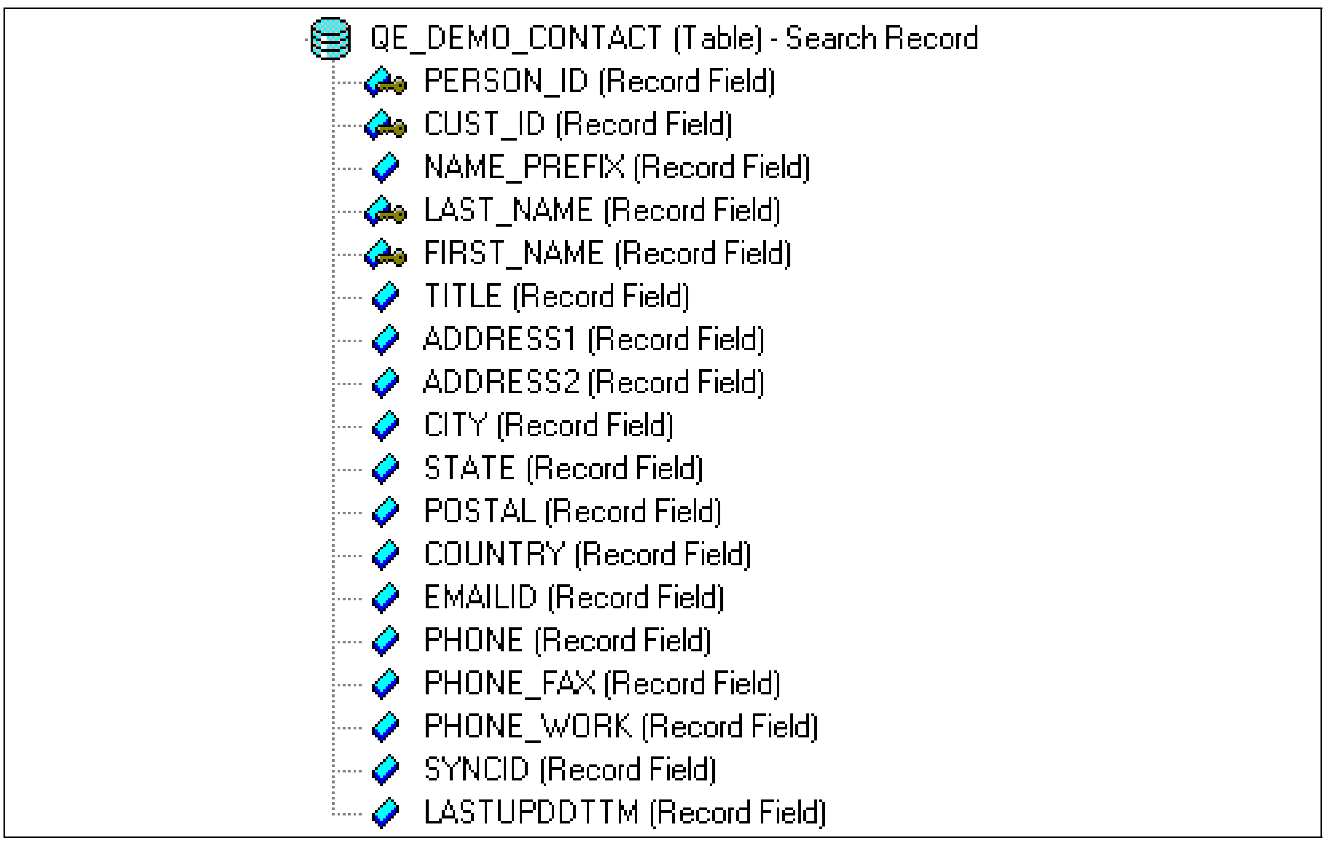
A component interface reference property is equivalent to a database table foreign key (or multiple keys), which links one table to another. A reference property defines the relationship between two or more tables (objects), allowing a component interface to access data from another component interface.

As components represent business objects, component interfaces represent the exposed properties (fields) of those business objects. Each component interface may contain one or more foreign keys to the database tables exposed by another component interface, but that relationship is not formalized and available for use unless explicitly linked using a reference property.

Create a reference property in one component interface to access data exposed in another component interface. For example, the Customer object and the component interface exposing its properties include properties such as the customer’s name, address, and telephone numbers. Another object, Contact, includes data associated with all contacts in the system. The link between a specific customer and its associated contacts is owned by the Contact record, not the Customer record.



Structure of CUSTOMER component



Structure of CONTACT component

Therefore, to access contact data, the Customer component interface needs a reference property referring to the Contact component interface. To update contact data from the Customer component interface, the reference must include a valid reference path and reference backpointer back to the customer ID.

Note. Application designer allows reference and data collection properties to be marked as derived in the component interface definition. Derived references are not supported; a derived flag on a reference is ignored.

Creating a Reference Property

A reference property always points to another component interface. A database relationship must exist between the current component interface and the component interface being referenced. Define the mapping of the relationship while creating a reference property.

To create a reference property:

1. Open the selected component interface.
2. Select the fields that form the foreign key to the related component.
3. Right-click a selected field, and select Create Reference.

   The Create Reference dialog box appears.
4. Specify the following information:

   Name — An identifying name for the reference, which becomes a property that can be used in PeopleCode. Appears in the component interface.

   Related Component Interface — The component interface referenced from the current component interface. Only synchronizable component interfaces appear in the list of available values.

   Related Key Mapping — Maps the property from the related component interface to the selected component interface property.

   Valid Reference Path — Supports dynamic enumeration of the objects that can be selected as the value of the reference property being defined. This effectively filters these values so that you can select only objects that support the defined reference.

   Because references use the concept of a *walkpath* to go from level 0 of one component interface to level 0 of another component interface, and then “walk” down to the lower levels of the component interface, only the level 0 references are displayed in the Valid Reference Path drop-down list of a reference definition

   Reference Backpointer — Select a backpointer to the originating component interface.
5. Click OK.

Using Attachments

PeopleTools Mobile Agent supports attachments, which require setting up reference properties on synchronizable component interfaces.

See *PeopleCode Reference*, “SyncServer Class,” Using Attachment Events.

See Also

PeopleCode Reference, “Mobile Classes”

CHAPTER 3

Using Mobile Pages

This chapter provides overviews of mobile pages and time zones and date formats and describes how to:

- Build mobile pages.
- Define content appearance and characteristics.
- Define the mobile page layout.
- Display a reference.
- Display a prompt.
- Display a dynamic enumeration.
- Display a time picker or date picker.
- Register mobile pages.
- Maintain security on mobile pages.

Understanding Mobile Pages

Mobile pages are PeopleSoft Internet Architecture (PIA) pages that display information on mobile devices, such as laptops and Personal Digital Assistants (PDAs). Mobile pages are developed from synchronizable component interfaces to support disconnected users through data synchronization.

See Also

PeopleCode Developer's Guide, "Understanding Mobile Pages and Classes"

Understanding Time Zones and Date Formats

From the perspective of the server, each database stores time and datetime data according to the base time of the database. When rendered on a PIA page, the time or datetime data is either displayed in the database's base time or converted to a user time or specified time, as defined in the record definition.

PeopleTools Mobile Agent displays time and datetime data on the device similarly but must account for the possibility that the data on the mobile device originates from multiple databases, and those databases might have different base times. For this reason, time and datetime data is stored on the mobile device according to a base time selected for the device. Time and datetime data that is sent to the mobile device during synchronization is converted to the base time for the device. The server knows the base time for the device, so it performs the conversion for time and datetime data that is both sent to and received from the mobile device.

The exception is if the time or datetime data has a time zone attached in the record definition. In this case, the server converts from the base time of the database to the specified time zone for time and datetime data that is both sent to and received from the mobile device. With this architecture, the mobile device handles both user time or datetime data and specified time or datetime data. No time zone conversions take place on the mobile device.

For display purposes, the time appears as it is stored on the device. If it is specified time or datetime data, the time zone field should be included by the developer on the mobile page. If a time or datetime field does not include a specified time zone, the developer can control the display of the device time zone in the Mobile Page Designer.

The only time zone conversion that may occur on the device is for datetime fields (but not time fields) that do not have a specified time zone, and daylight savings time applies to the device time zone. All time and datetime data is stored in the device's base time. If datetime data falls within the daylight savings time date range, the value and time zone are displayed appropriately. If the field is time only, no conversion is done. If the base time zone for a device is changed, the user must perform an Update Applications synchronization.

Building a Mobile Page

To build a mobile page, one or more synchronizable component interfaces must already exist. You can also build mobile pages that include other mobile pages.

This section lists common elements and describes how to:

1. Create a mobile page.
2. Define the appearance of a mobile page.
3. Build mobile pages that include other mobile pages
4. Define content appearance and characteristics.

Common Elements Used in This Section

Override Laptop Properties — Appears only on the PDA tab. Select to specify PDA properties that are different from the laptop properties.

Suppress on this Device — If selected, this content does not appear on the specified device (laptop or PDA), and the remaining options are not available.

Text — Specify the label text for this content.

Insert Line Feed — You can split a control label into multiple lines by positioning the cursor in the Text field where you want the split to occur and clicking Insert

Line Feed. A thick, vertical bar character appears in the Text field at the split location, and the label is split into multiple lines.

In the Mobile Page Content Properties dialog box, inserting a line feed into label text has the side effect of changing the label type from Record Field Table (RFT) short or long names to text.

Display Only Select to make the content read-only. If the component interface property or reference is read-only, then the content or reference must also be read-only. If the component interface property or reference is not read-only, you can set the content appearance on the mobile page as display-only.

In the Mobile Page Reference Properties dialog box, if the selected content is specified as display-only, the detail view is also display-only.

In the Mobile Page Collection Properties dialog box, setting a collection reference property to display only sets all fields to display only, except pushbuttons.

Creating a Mobile Page

Use the Select source Component Interface dialog box to begin defining a mobile page.

To create a mobile page:

1. From the PeopleSoft Application Designer menu, select File, New.

   The New Definition dialog box appears.

2. From the New Definition dialog box, select Mobile Page.

   The Select source Component Interface dialog box appears.

   Only synchronizable component interfaces appear in the list of definitions matching selection criteria. If a specific component interface does not appear on the list, the component interface might not be defined as synchronizable.

3. Specify the component interface on which you are basing the mobile page.

   PeopleSoft Application Designer imports all properties of the selected component interface. Retain the default mobile page content, or delete the content that is not required. You can add content by dragging properties from the component interface. Click the View Component Interface toolbar button to open the associated component interface.

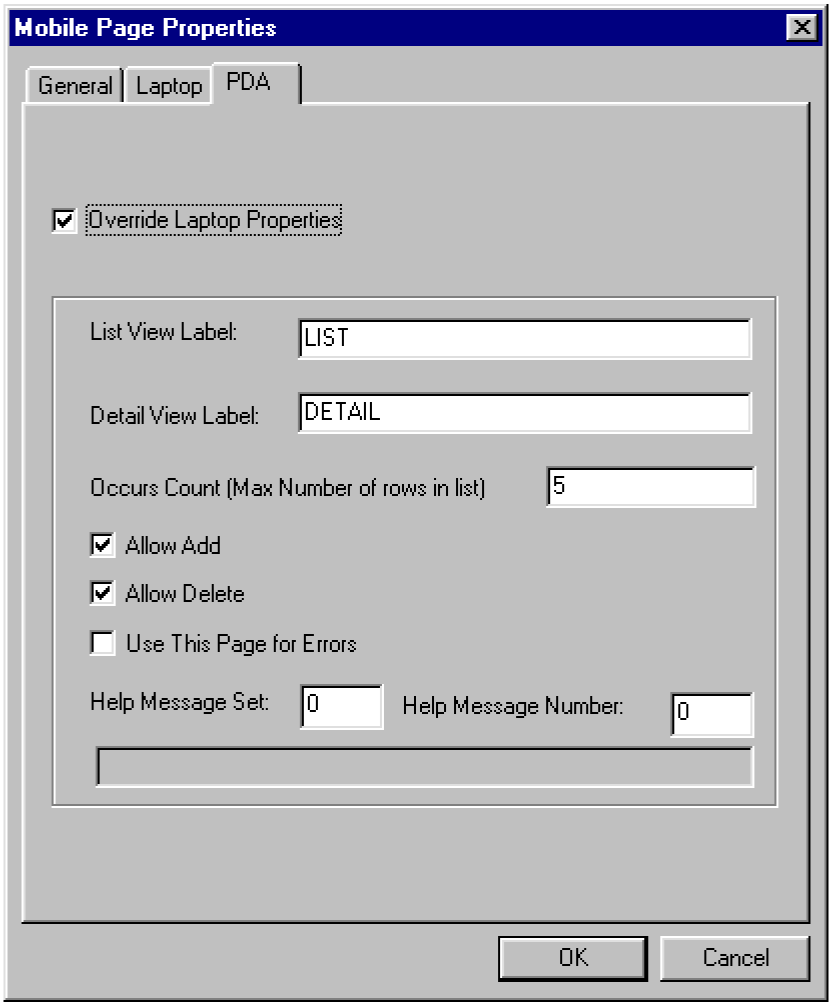
4. Save the new mobile page with a unique name.

Note. PeopleSoft Application Designer does not update a mobile page when the underlying component interface changes, but does display a warning message when you edit the mobile page if the underlying component interface has changed. If you change the component interface underlying a mobile page by adding properties after creating the mobile page, add the properties to the mobile page by dragging from the component interface to the mobile page in PeopleSoft Application Designer.

Note. Deleting a component interface also deletes all mobile pages based on the deleted component interface.

Defining the Appearance of a Mobile Page

Use the Mobile Page Properties dialog box to define the appearance of the selected mobile page.



Mobile Page Properties dialog box

To define the appearance of a mobile page:

1. Open the mobile page in PeopleSoft Application Designer.
2. Open the Mobile Page Properties dialog box.

   The General tab in the Mobile Page Properties dialog box identifies the component interface on which the mobile page is based.

   You can specify:

   - A description of the mobile page.
   - Comments describing the mobile page.
   - The owner ID.
3. To specify properties for the mobile page as it appears on a laptop computer, select the Laptop tab.

   You can specify:

- The list view label.
- The detail view label.
- The occurs count (the maximum number of rows displayed in the list view).

  Specify a number greater than zero, or no information appears.
- Whether the user can add or delete data.
- Whether the page will be used for error correction.
- The help message set and number to associate with this page.

Note. Help on mobile devices displays the message explanation rather than the message text. This allows display of help messages up to 32Kb long. The browser on the laptop and the PDA wrap long help message explanations appropriately.

---

4. To specify properties for the mobile page as it appears on a PDA, select the PDA tab.

   You can accept the laptop properties as the properties for display on a PDA or override the laptop properties. If you override laptop properties, you can specify the same settings as for the laptop properties.
5. Click OK.

Building Mobile Pages That Include Other Mobile Pages

A mobile page displays data that is exposed on a component interface. The mobile page can display references and contained collections on the same page (inline), on a tab, or on another linked mobile page. These references must be defined in the component interface on which the main mobile page is based, and their appearance must be defined on another mobile page. We sometimes refer to these as mini-pages, because of the small amount of information displayed. The mini-page defines the display appearance of each referenced element.

A mini-page might display only one content element on each page. For example, a reference can be displayed inline on the main mobile page or on a separate tab (if Display Inline on Same Page is not selected). In either case, you must define a mobile page (mini-page) to control the content and reference properties for the reference, even though the mini-page is displayed in another mobile page.

In addition, each content element with Details Icon or Hyperlink selected must have a Detail Mobile Page Object defined, which formats the appearance of associated information. Create a mini-page for each such content element.

Defining Content Appearance and Characteristics

Use the Mobile Page Content Properties, Mobile Page Reference Properties, and Mobile Page Collection Properties dialog boxes to define the appearance and characteristics of content within the selected mobile page.

Content refers to the component interface properties (fields and references) that you select to display on a mobile page. If the content is a reference, special considerations apply, as described in this section.

To open the Mobile Page Content Properties dialog box, the Mobile Page Reference Properties dialog box, or the Mobile Page Collection Properties dialog box, select a content element, right-click, and select Content Properties.

- If you selected a reference property, the Mobile Page Reference Properties dialog box appears.
- If you selected any other content property, the Mobile Page Content Properties dialog box appears.
- If you selected a collection, the Mobile Page Collection Properties dialog box appears.

Each dialog box includes a tab for each supported mobile device. Specify display properties for the selected content for each device. To specify display options for PDAs that are different from the display options for laptops, select Override Laptop Properties on the PDA tab.

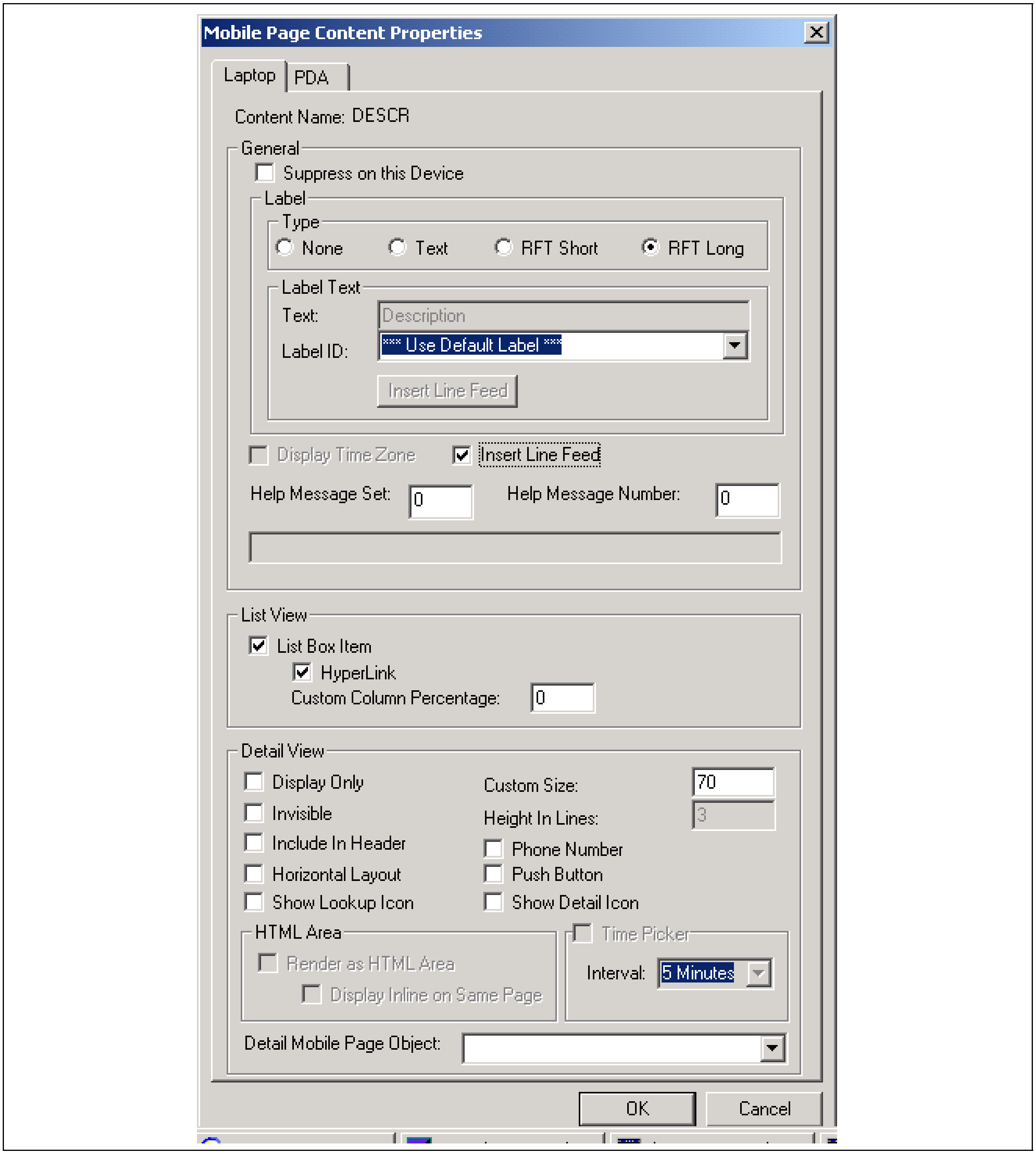
This section discusses how to set mobile page:

- Content properties
- Reference properties
- Collection properties

Note. PeopleTools 8.40 does not support references in list views.

Setting Mobile Page Content Properties

Access the Mobile Page Content Properties dialog box.



Mobile Page Content Properties dialog box

RFT Short — Works like a label on a PIA page. Displays the RFT short name for the field from the associated record definition. Displays the label to the left of the value in detail view and as a column header in list view.

RFT Long — Displays the RFT long name for the field from the associated record definition.

Label ID

Select a label ID from the drop-down list box, or accept the default label ID.

By default, Label ID displays the long XLAT value on laptops, and the short XLAT value on PDAs.

Display Time Zone

Select to display the time zone for time and datetime fields displayed on the page. If Time Zone is a display-only field, it cannot be changed from the mobile page.

Insert Line Feed

Select Insert Line Feed to add a blank line between labels.

Help Message Setand**Help Message Number**

Specify the help message set and number associated with this content for context-sensitive help. This applies only to fields, not references. The help for references comes from the mobile page to which you point.

List Box Item

Select to make the field a list box item. It displays the content in a:

- Top-level list view.
- Plural reference list view.
- Prompt list view.

Content is linked to enable navigation from a child to a parent object.

Hyperlink

If List Box Item is selected, select Hyperlink to enable returning to the parent object from a prompt list view.

If Hyperlink is not selected, the detail button does not appear in the list view.

Show Detail Icon

Select to display the detail button next to the field. When the user clicks the detail button, the specified detail view appears.

Custom Column Percentage

Specify the percentage of the layout width that this property occupies when it appears in a list view. This field is available only if List Box Item is selected.

Display Only

Select Display Only to make this content non-editable.

Custom Size

Specify the number of characters that this content will occupy in a text field when it appears in a detail view. If not specified, the size is:

Determined by the field length for a text field.

40 characters for a long text field on a laptop or 20 characters for a long text field on a PDA.

Invisible

Exclude a property displayed in list view from displaying in detail view by selecting Invisible.

If all fields on a tab are invisible, the tab is hidden. To hide a tab with a reference, hide the reference. To hide a tab with an HTML area, hide the long text field that is rendered as an HTML area.

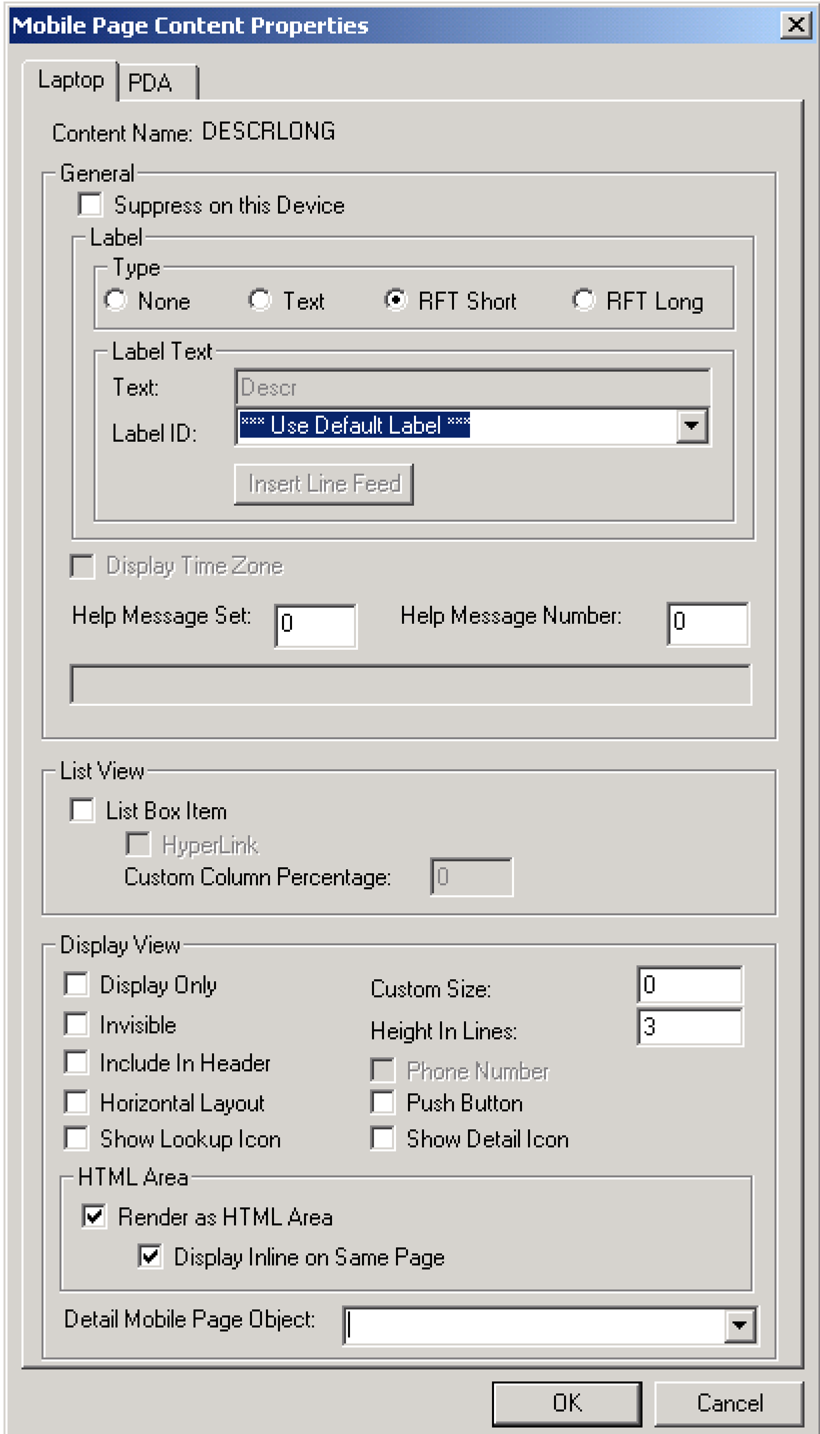
Height in Lines

Enter the number of lines that appear in a long edit box before scrolling. The default value is *3.*

Include in Header	Select to include this field in the header area of list and detail views. Content identified as Hyperlink and Include in Header enables you to drill down to the parent object.
Phone Number	PeopleTools Mobile Agent supports Pocket PC Phone Edition. To enable dialing a phone number, specify that the content of a text box is a telephone number by selecting Phone Number for the display view. A phone icon will appear on the mobile device, enabling the user to dial that number.
Horizontal Layout	Select to lay out the content horizontally from the previous content.
Push Button	Select Push Button to make this field display as a pushbutton that will activate M_OnChange PeopleCode when clicked. If Display Only is also selected • The pushbutton is disabled on a laptop. • The pushbutton is not displayed on a PDA.
Show Lookup Icon	Select to display the lookup button next to the field; also select a detail mobile page object. When the user clicks the lookup button, the specified detail mobile page object list view appears for selecting a new value.
Show Detail Icon	Select to display the detail button next to the field. When the user clicks the detail button, the specified detail mobile object view appears.
Render as HTML Area	Select Render as HTML Area to specify that a long text field can contain HTML such as an HTML tree.
Display Inline on Same Page	Select Display Inline on Same Page to display an HTML area on the same page. If not selected, the HTML area will display on a detail page.
Detail Mobile Page Object	Select the name of the mobile page to appear when a user clicks the details button. If the selected reference content is display-only, the value appears as a link and the detail view is display-only.

Using an HTML Area

You can create an HTML area on a mobile page, which can include an HTML tree.



Mobile Page Content Properties: HTML Area

To create an HTML area:

1. Add a long text field to the component interface underlying a mobile page.
2. On the Mobile Page Content Properties dialog box for the long text field, select Render as HTML Area.
3. Optionally select Display Inline on Page.

4. In the OnInit PeopleCode for the selected field, include the HTML to be displayed.

   To reference an image in the HTML area, use %IMAGE code.

Include an HTML tree in an HTML area in the same manner as for PIA pages.

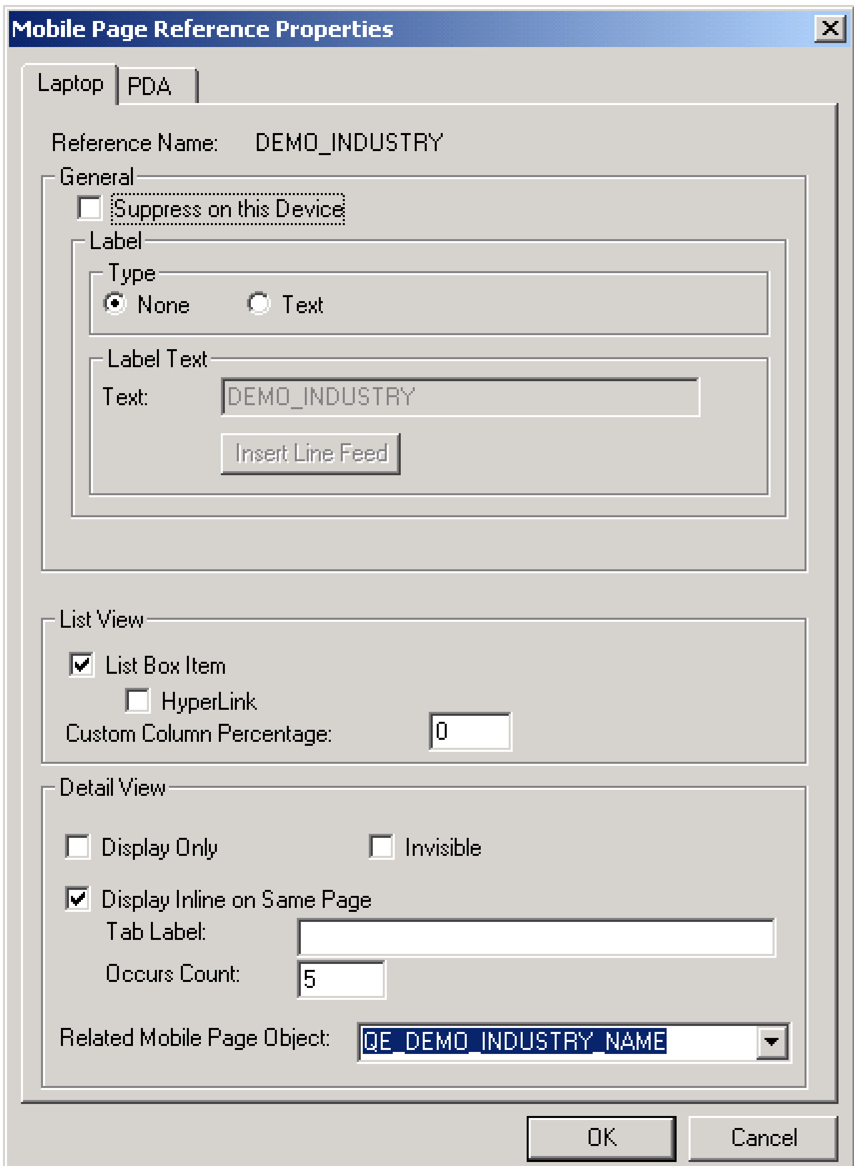
Specify a project containing HTML and images for display in the HTML area on the Mobile Page Properties Related Content Project field.

See Also

PeopleCode Reference, "Mobile Classes"

Setting Mobile Page Reference Properties

Access the Mobile Page Reference Properties dialog box.



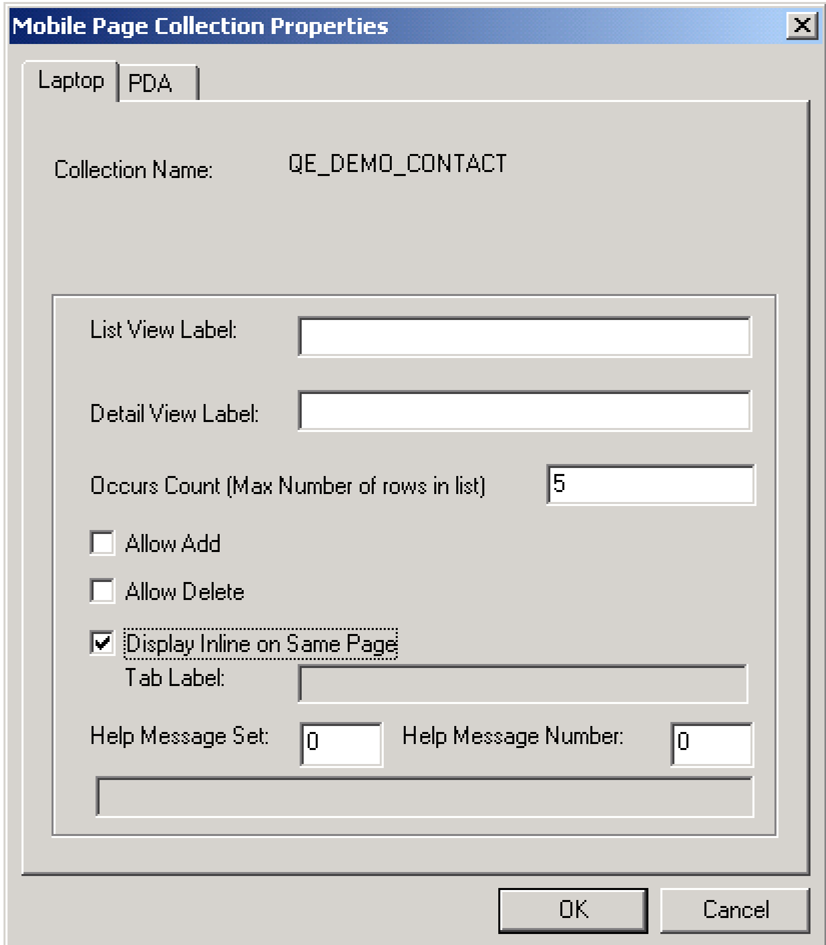
Mobile Page Reference Properties dialog box

List Box Item	Select to make the field a list-box item. It displays the content in a top-level list view.
Hyperlink	If List Box Item is selected, select Hyperlink to enable you to drill down to a detail view from the list view.
Display Inline on Same Page	Display the reference inline on this mobile page instead of on a related page (or tab). If this option is not selected, reference information appears on a separate tab. The page displays a detail view.
Related Mobile Page Object	Specify the name of the mobile page that formats the appearance of the related information, either inline or on a separate tab. The specified mobile page must already exist. The reference component interface determines which pages are available for selection.

Note. Multiple plural references can be on any tab. Plural references are rendered in the order they are defined. If a plural reference is specified to be on a tab, then any plural references that follow immediately and are specified to be inline on the same page, will be rendered on the same tab.

Setting Mobile Page Collection Properties

Access the Mobile Page Collection Properties dialog box.



Mobile Page Collection Properties dialog box

A mobile page collection includes all of the detail rows displayed for a specified content element. Their appearance is controlled like that of the mobile page.

Tab Label If the properties will be displayed on a separate page (Display Inline on Same Page is not selected), you can specify a Tab Label different from the List View label.

Defining the Mobile Page Layout

Define the layout of each mobile page using parameters in the Mobile Page Content Properties dialog box for list view and detail view. This section describes some important considerations when defining the mobile page layout.

This section discusses how to:

- Define the list view layout.
- Define the detail view layout.

Defining the List View Layout

Specify horizontal space for list columns as a percentage. The developer can specify this percentage, or it can be calculated automatically. Specify percentages for list view allocation as laptop properties, which can be overridden for other devices (only PDAs in PeopleTools 8.40).

If the percentage is calculated automatically, it is based on each field's size as a percentage of the total of all fields. For example, if there are four fields with widths of 128, 32, 20, and 20 characters, the total width is 200; the percentage for each field is 64, 16, 10, and 10 percent, respectively.

The percentage width definition applies across multiple devices. For example, using the preceding percentages, on a laptop page width of 500 pixels, the column widths are 320, 80, 50, and 50. On a PDA page width of 200 pixels, the column widths are 128, 32, 20, and 20 pixels.

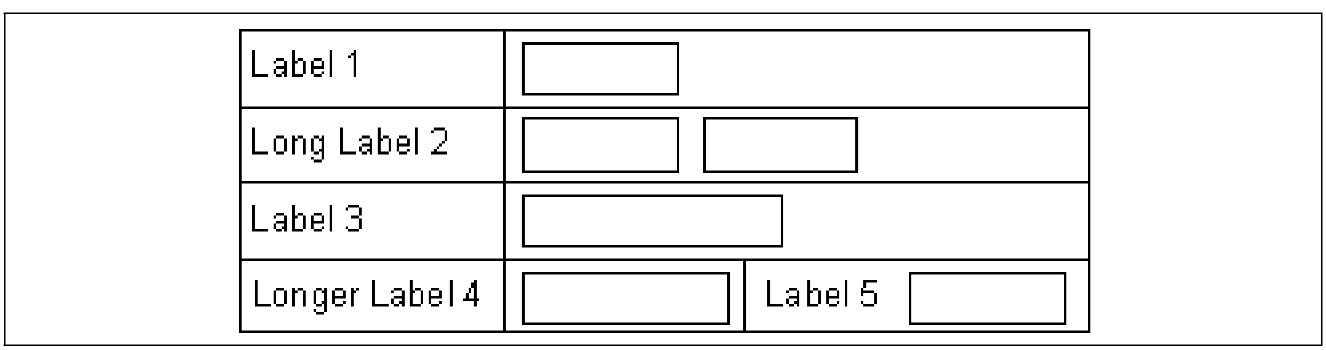
Specify percentages for fields for which you want to control the width, and use the default value for the remaining fields. The field with a specified percentage width occupies the specified space, and the remaining field width percentages are calculated based on their percentages of the total remaining. For example, the application developer specifies a 60 percent column width for the first field, leaving 40 percent to be allocated automatically to the remaining fields. The remaining fields have widths of 32, 20, and 20, for a total of 72, representing 44, 28, and 28 percent of the balance of 40 percent of the device space. The final space allocation is 60 percent for the field defined by the developer and 18, 11, and 11 percent for the automatically calculated fields.

If the displayed content is a reference, the specified percentage defines the space allocated to all of the elements of the list view for the referenced mobile page. The percentages defined on the referenced mobile page determine how much of the space is used for each column. For example, a reference is given 32 percent of the space and the referenced mobile page has three elements that receive 50, 25, and 25 percent in their list view. These elements receive 16, 8, and 8 percent (or 32 percent) of the total allocated for this mobile page.

If the data to be displayed is larger than the allocated column width, the data wraps to the next line. The browser wraps both labels and values when possible. The browser does not break words, so if a single word exceeds the requested column width, the browser resizes the column to fit the word.

Defining the Detail View Layout

Fields on detail view pages are ordered based on the sequence in which the fields and references appear in the Mobile Page Designer. Fields marked with the property Horizontal Layout are placed to the right of the preceding displayed property. A standard amount of space is displayed between the end of one field and the start of the next label or field. All labels displayed in the leftmost position are left-aligned; the label column expands to the width of the longest label.



Sample label layout

The space allocated to each field is based on the field length, but it can be overridden by the Custom Size property. For example, a field defined with a length of 50 (but that usually only has 10–20 characters of data in it) might be defined with a custom size of 20 so that another field can be placed next to it without excess blank space in the field. The values are not truncated, but can be scrolled, just as in PIA pages.

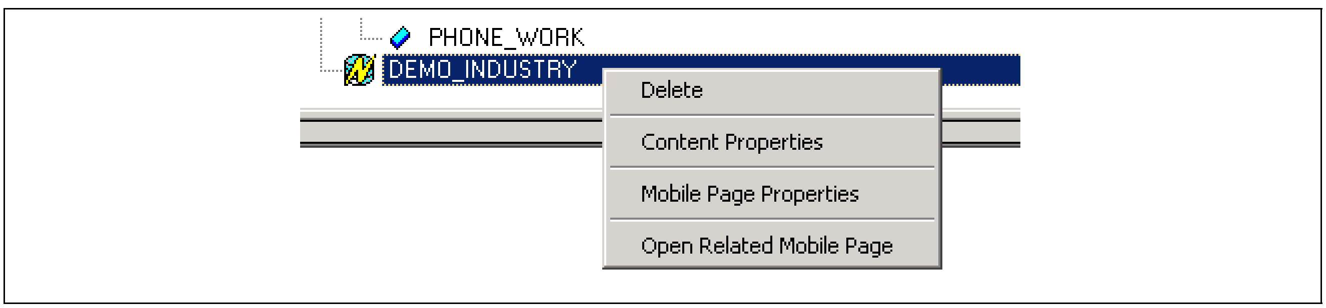
Displaying a Reference

You can display a reference on a mobile page. This display is sometimes called a mini-page.

This section presents a step-by-step example of how to display the item ID and description on an Installed Product page in PeopleSoft CRM FieldService:

1. Create a component interface.
2. Create a mobile page.
3. Define content properties.
4. Create another component interface.
5. Specify reference relationships.
6. Create another mobile page.
7. Specify reference properties.

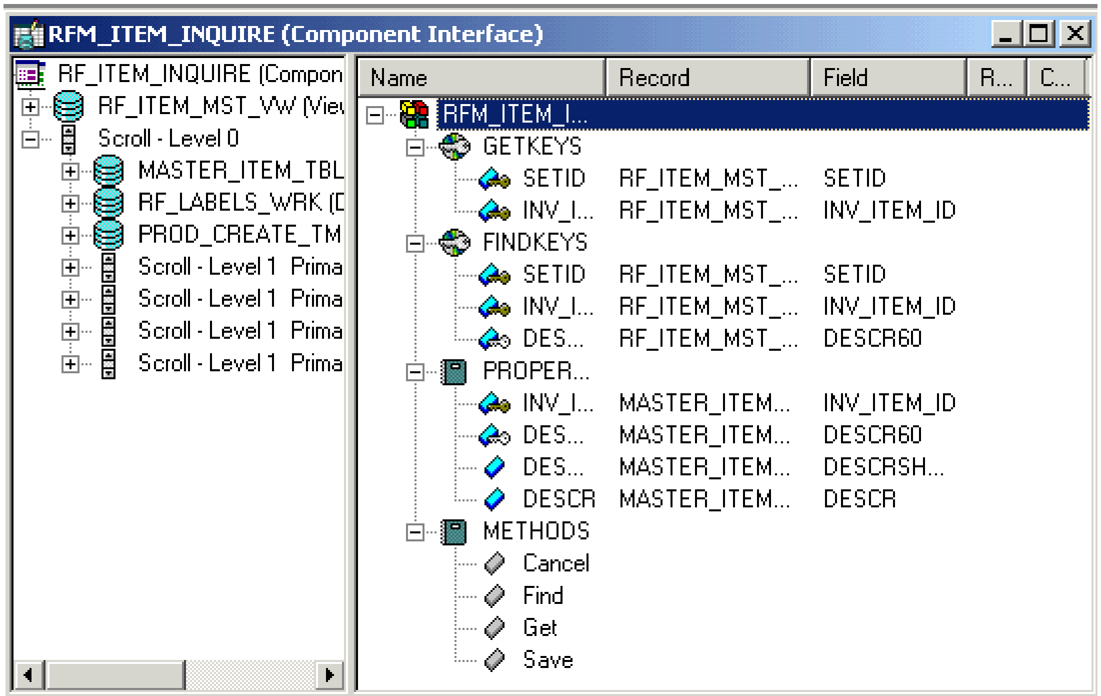
Hint: While developing mobile pages in Mobile Page Designer, you can right-click on a reference property and select Open Related Mobile Page.



Open Related Mobile Page

Creating a Component Interface

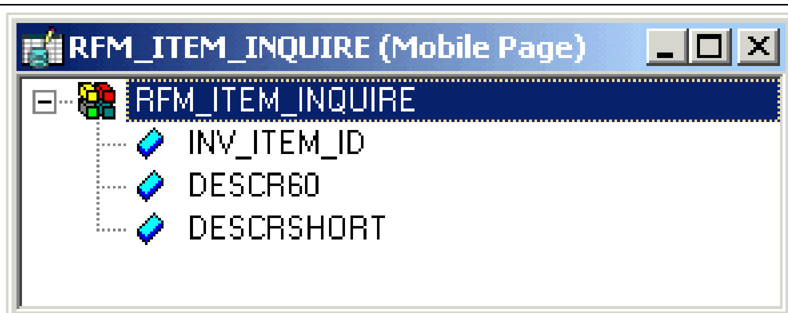
Create a component interface, RFM_ITEM_INQUIRE, on the Item Inquiry component.



RFM_ITEM_INQUIRE component interface

Creating a mobile page.

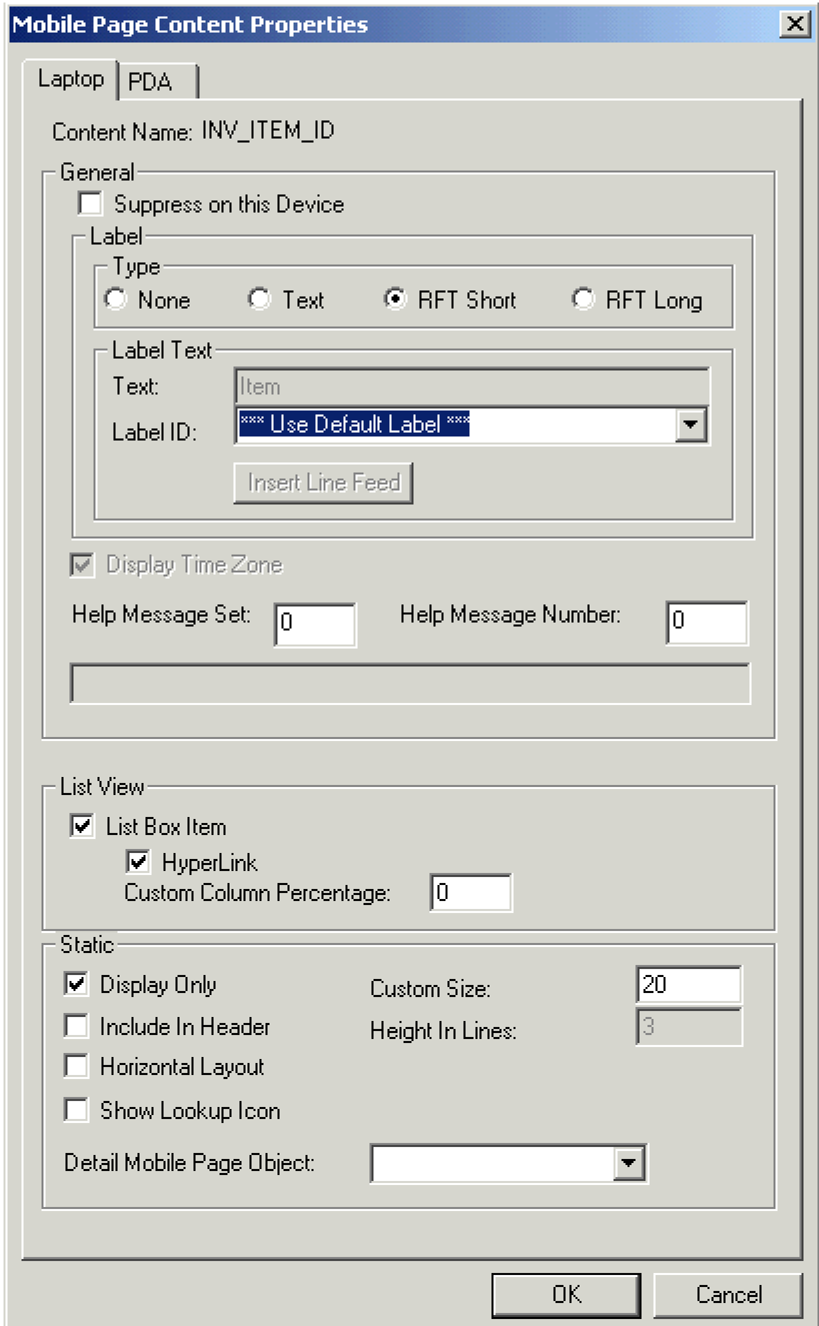
Create a mobile page on the Item Inquiry component interface.



RFM_ITEM_INQUIRE mobile page

Defining content properties

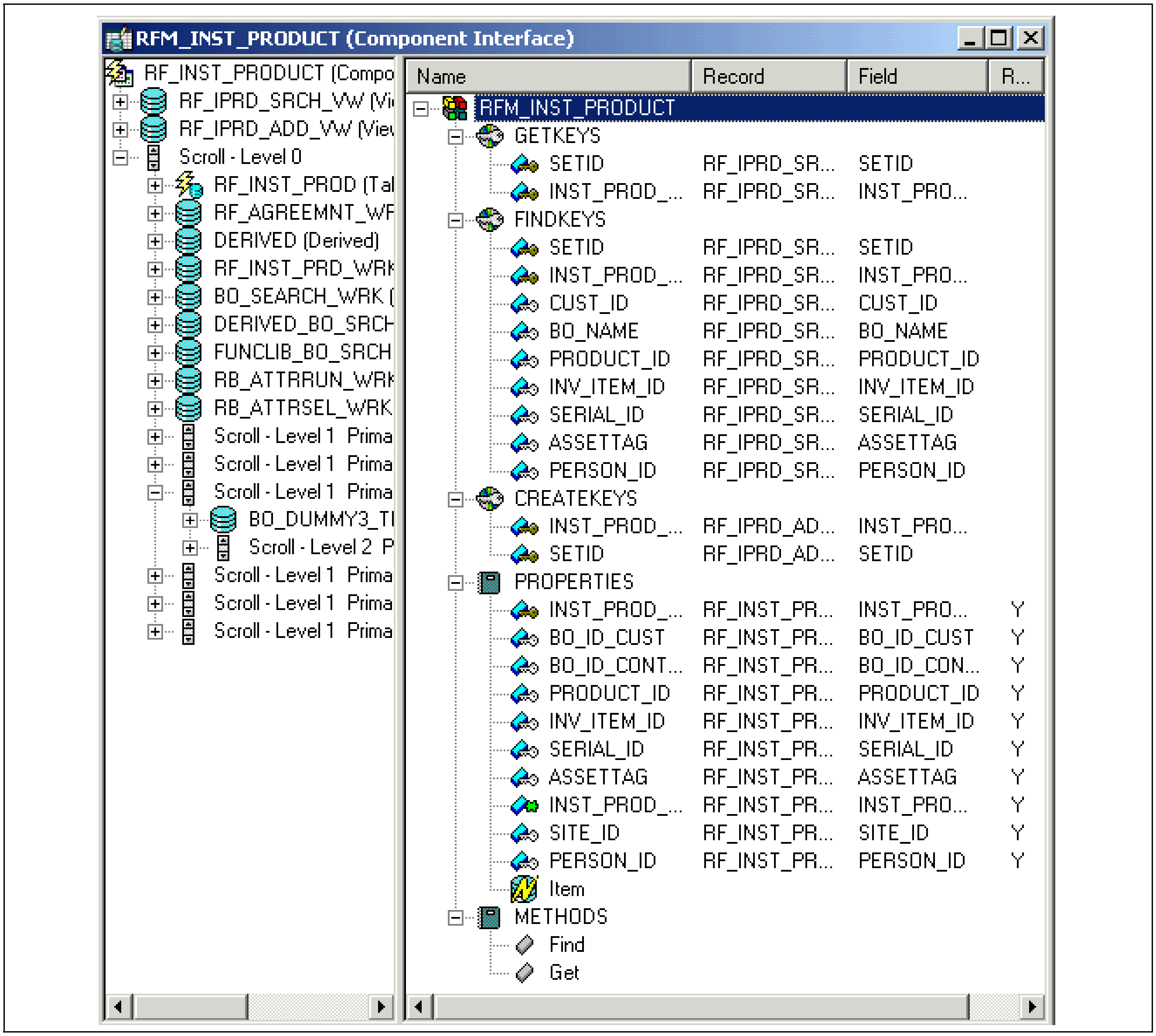
Specify Display Only in the Mobile Page Content Properties dialog box. Select Display Only for the content item INV_ITEM_ID.



INV_ITEM_ID Mobile Page Content Properties dialog box

Creating another component interface.

Create a component interface on the Installed Product component, including a reference to Item from the Item Inquiry component interface.



RFM_INST_PRODUCT component interface

Specifying reference relationships.

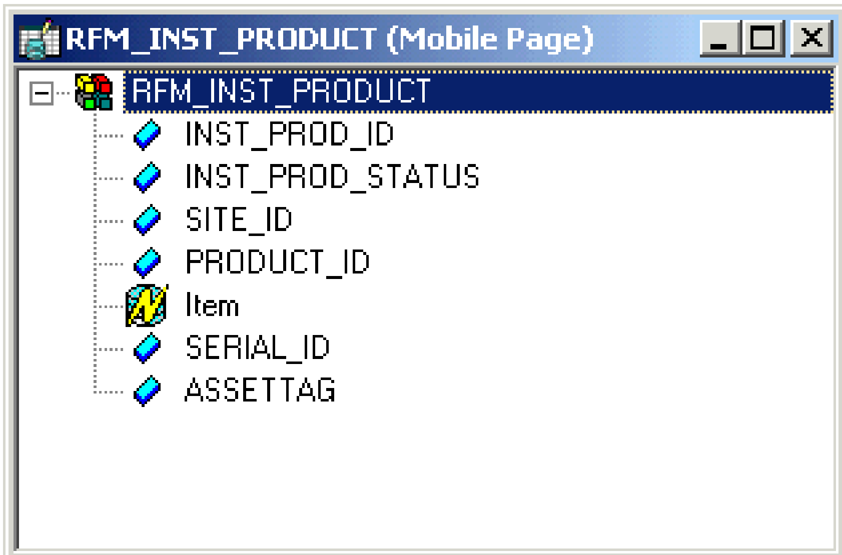
In the Edit Reference dialog box for the reference Item from the Installed Product component interface, specify reference relationships:

Name	Enter *Item*
Related Component Interface	Select RFM_ITEM_INQUIRE
CI Property (component interface property)	Select INV_ITEM_ID
Related CI Property	Select INV_ITEM_ID

Valid Reference Path	Select RFM_INST_PRODUCT
Reference Backpointer	None

Creating another mobile page.

Create an Installed Product mobile page, RFM_INST_PRODUCT, with a reference to Item from the RFM_ITEM_INQUIRE mobile page.

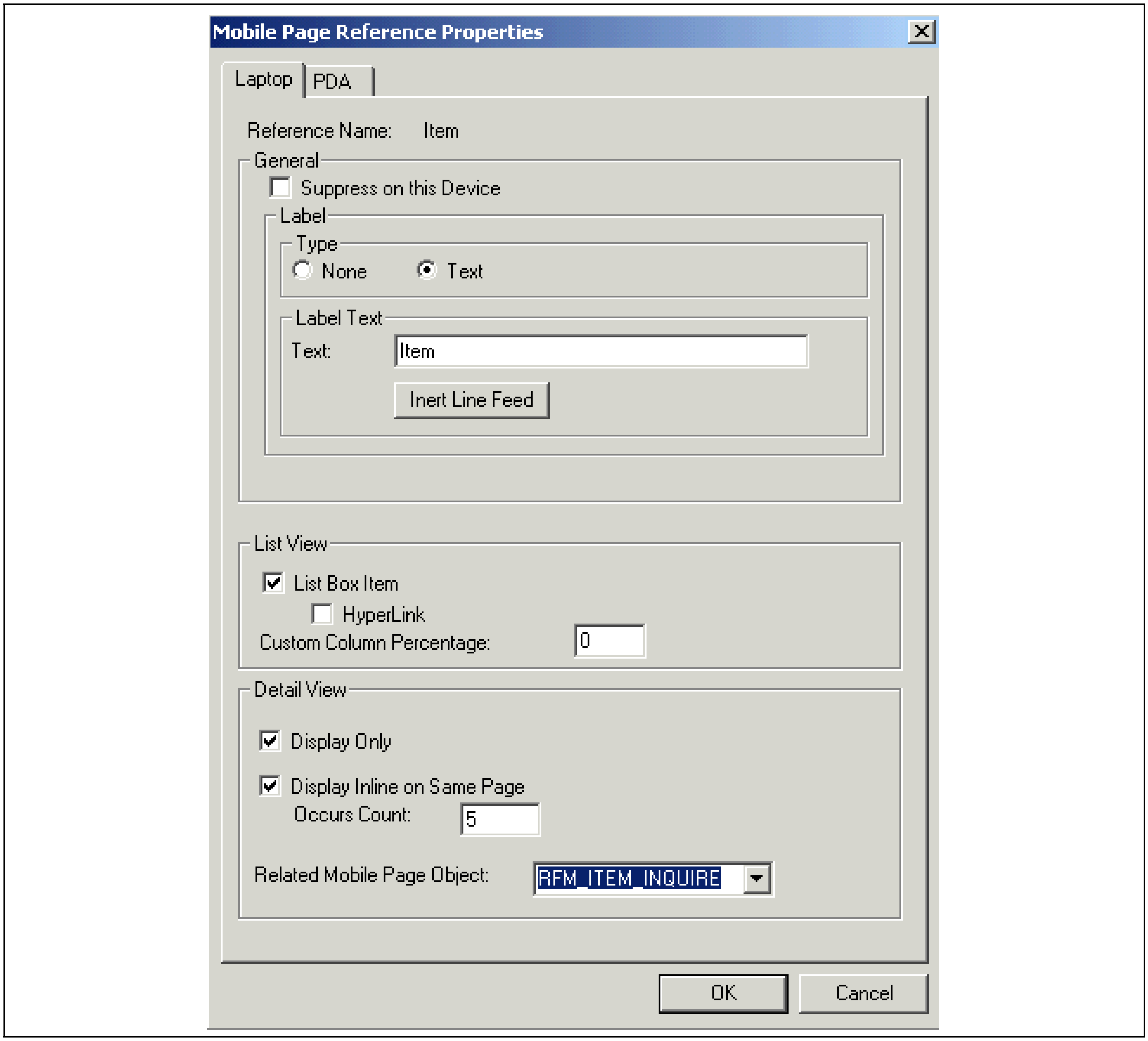


RFM_INST_PRODUCT Mobile Page

Specifying reference properties

In the Mobile Page Reference Properties dialog box for the reference Item:

Label Text	Enter *Item.*
List Box Item, Display Only, and**Display Inline on Same Page**	Select these check boxes.
Occurs Count	Enter *5.*
Related Mobile Object	Select RFM_ITEM_INQUIRE.



Item Mobile Page Reference Properties dialog box

Displaying a Prompt

You can display a prompt to enable the user to select from a list.

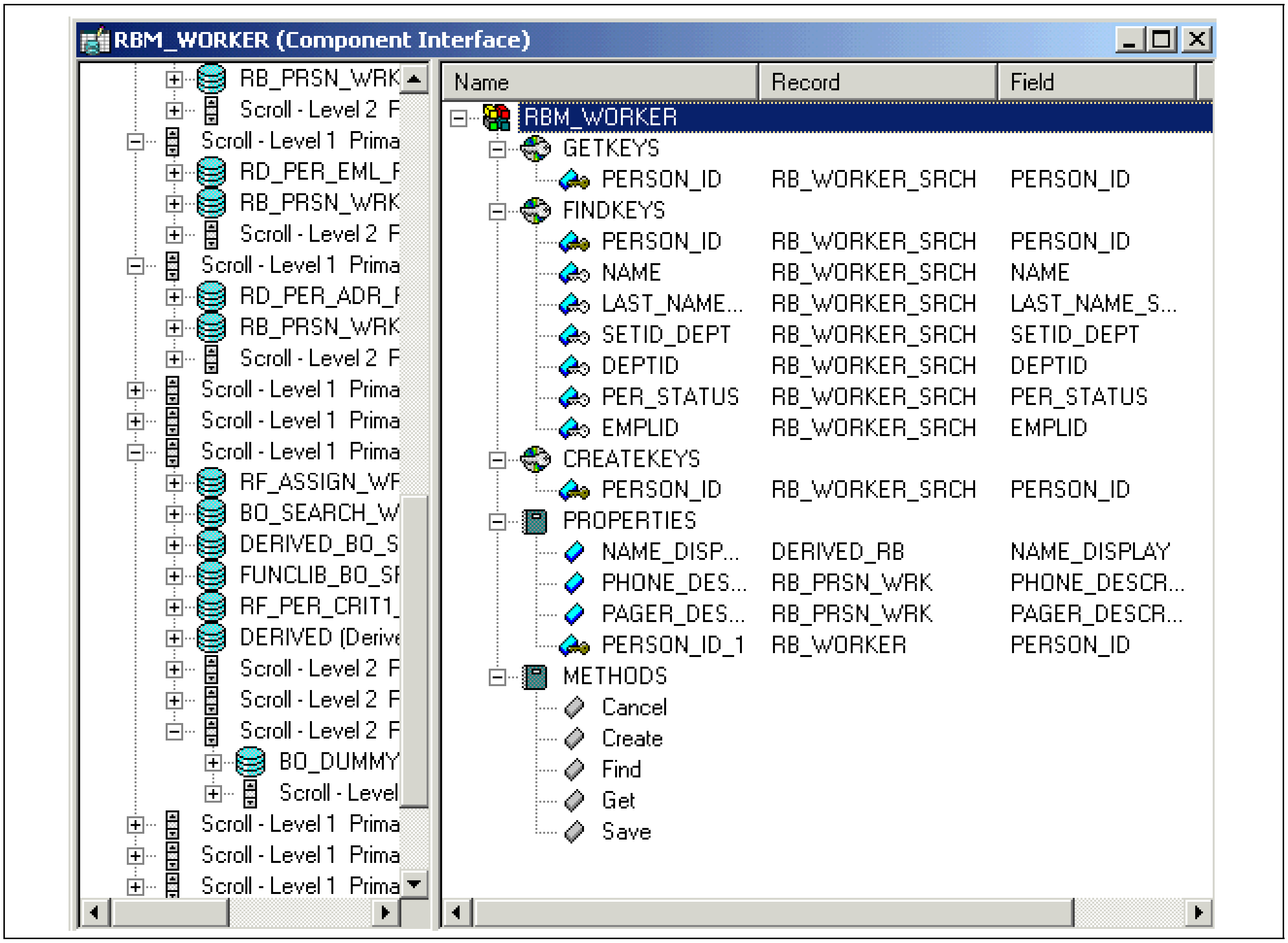
This section presents a step-by-step example of how to offer a prompt list so that users entering their time in PeopleSoft CRM FieldService can select their names from a list of employees (workers), or to search for or display detail for an employee:

1. Create a component interface.
2. Create two mobile pages.
3. Specify content appearance properties.

4. Create a reference.
5. Specify reference relationships.
6. Specify reference appearance properties.

Creating a component interface.

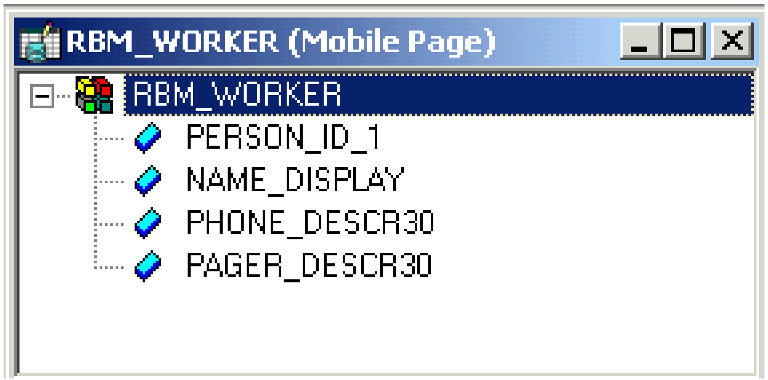
Create a Worker component interface, RBM_WORKER.



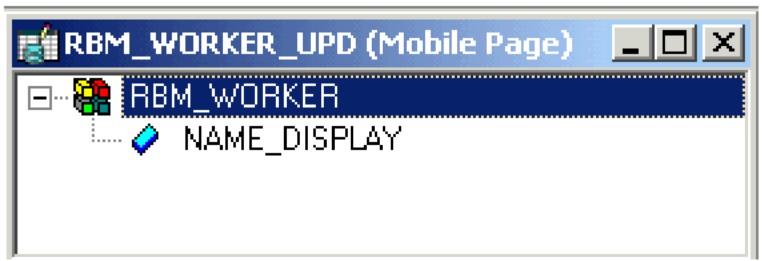
RBM_WORKER component interface

Creating two mobile pages

Create two mobile pages on the Worker component interface:



RBM_WORKER mobile page



RBM_WORKER_UPD mobile page

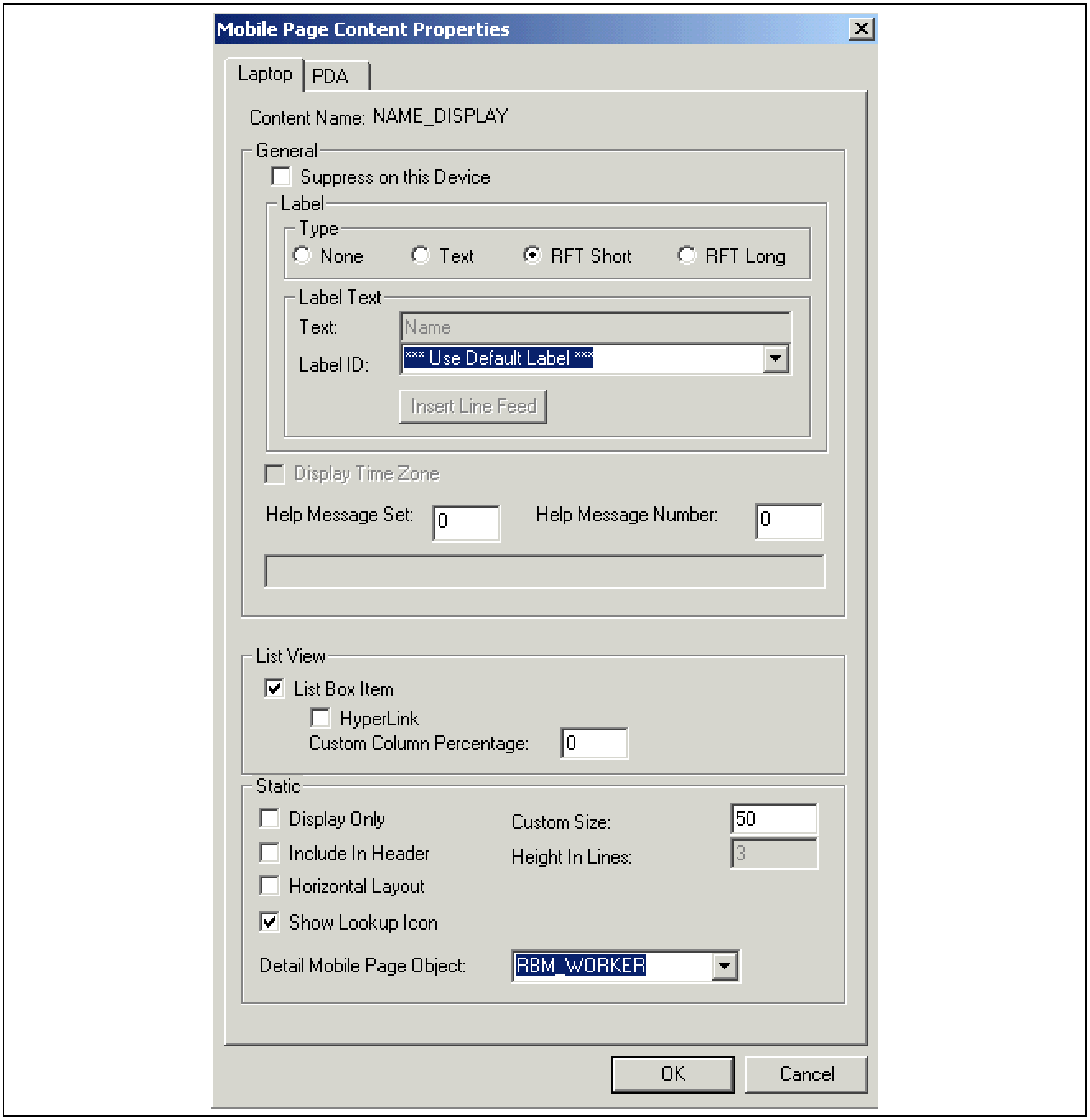
- RBM_WORKER for display only.
- RBM_WORKER_UPD for update.

Specifying content appearance properties.

On the update mobile page, RBM_WORKER_UPD, set the prompt button properties for the NAME_DISPLAY content element.

In the Mobile Page Content Properties dialog box:

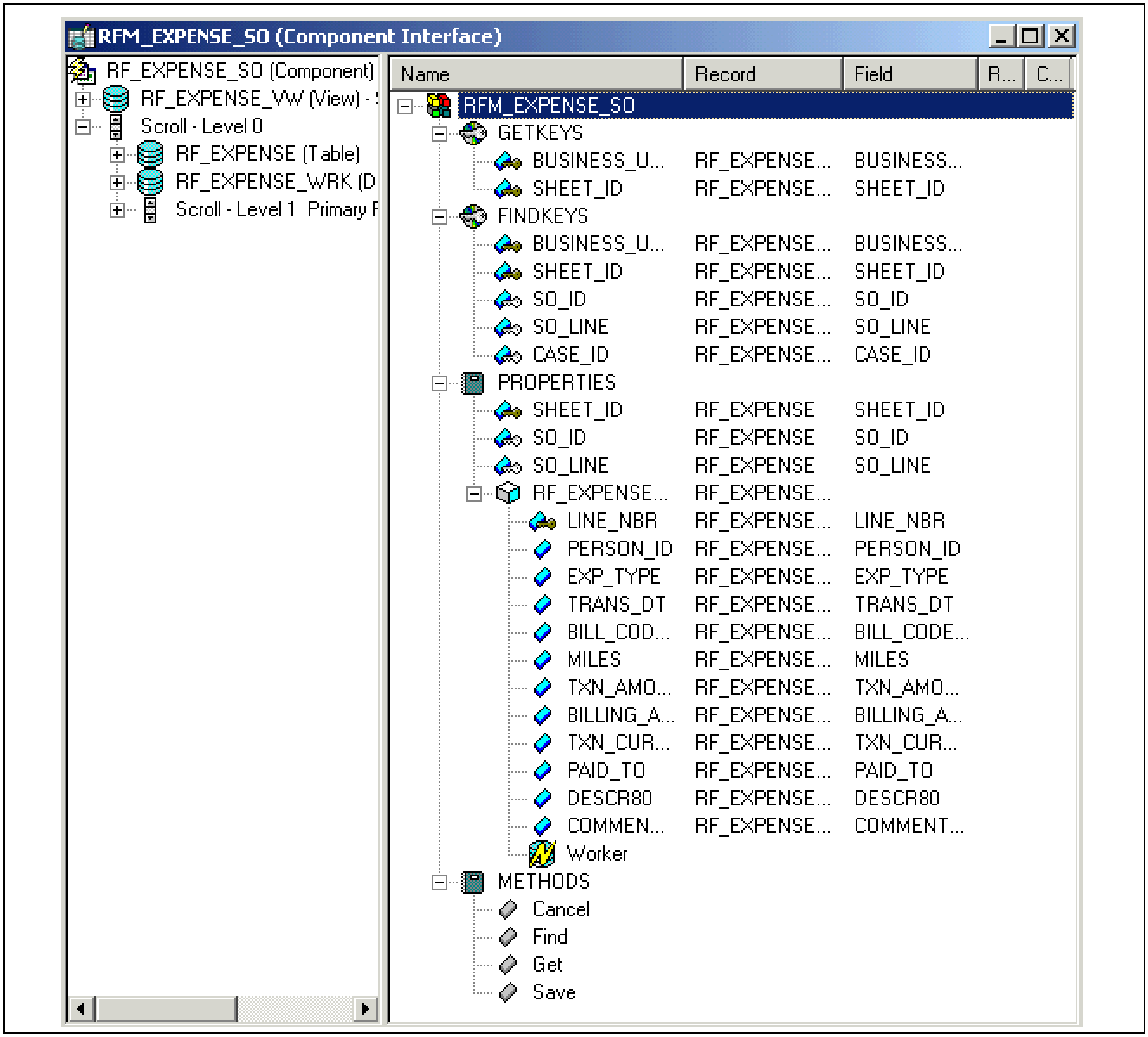
List Box Itemand**Show Lookup Icon**	Select these check boxes.
Detail Mobile Page Object	Select RBM_WORKER.



NAME_DISPLAY Mobile Page Content Properties dialog box

Creating a reference.

To associate RBM_WORKER and RBM_WORKER_UPD with the expense, create a WORKER reference on RFM_EXPENSE_SO.



RFM_EXPENSE_SO component interface

Specify reference relationships.

To set properties for the Worker reference on the mobile page, in the Edit Reference dialog box, specify reference relationships:

Name	Enter Worker
Related Component Interface	Select RBM_WORKER
CI Property	Select PERSON_ID
Related CI Property	Select PERSON_ID
From Component Interface	Select RFM_EXPENSE_SO

Specifying reference appearance properties.

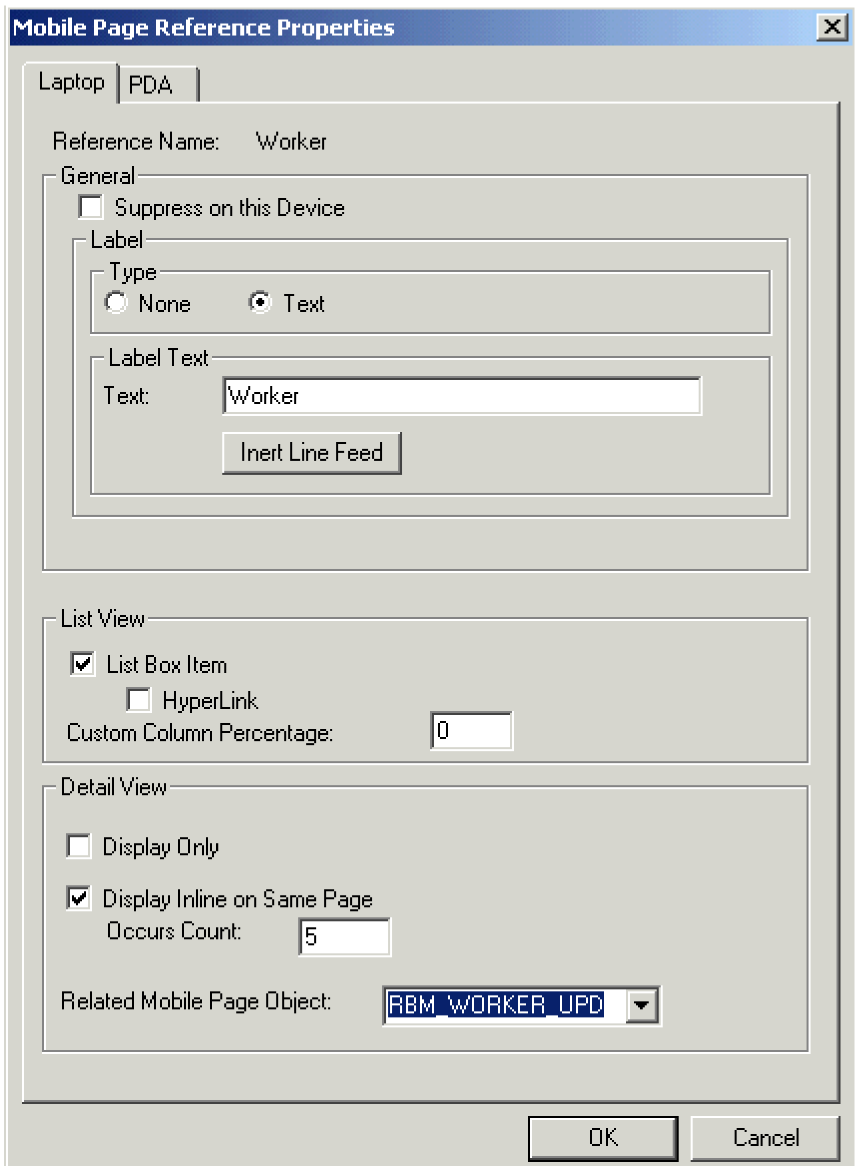
To set the appearance properties of the Worker reference on the RFM_EXPENSE_SO mobile page, in the Mobile Page Reference Properties dialog box:

Label Text Enter Worker.

List Box Item and **Display Inline on Same Page** Select these check boxes.

Occurs Count Enter *5*.

Related Mobile Page Object Select RBM_WORKER_UPD.



Worker Mobile Page Reference Properties dialog box

Partial Prompting

In PeopleSoft Internet Architecture, if a default value appears in the edit box, clicking the prompt button returns all rows. Or, you can enter a partial value in a prompt edit box, and the list view returns:

- Only rows containing the entered value if there is a partial but not an exact match.
- Only the row matching the entered value if there is an exact match.

In disconnected applications running under PeopleTools Mobile Agent, if a default value appears in the edit box, clicking the prompt button returns all rows. However, if you enter a partial value in a prompt edit box, the list view returns:

- Only rows containing the entered value if there is a partial but not an exact match.
- All rows if the entered value exactly matches a listed value.

PeopleTools Mobile Agent 8.42 does not support partial prompts on fields using dynamic enumeration.

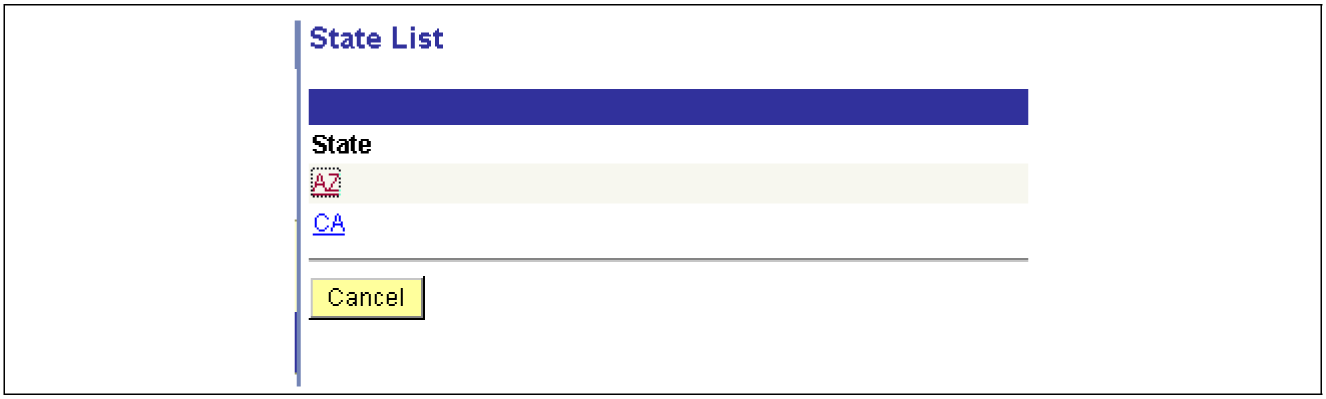
Using Dynamic Enumerations

Mobile Agent dynamic enumerations enable the value displayed in one field to be dependent on the value in a related (referenced) field. This is the mobile version of display control/related field for PIA pages.

For example, you can make the valid prompts for a State field dependent on the value in the referenced Country field, such that only valid USA states appear if USA is selected in the country field, or only valid Mexican states if MX is selected in the Country field.

Note. Consider using PeopleCode Mobile Edition to accomplish the effect of dynamic enumerations.

Company Detail View



State List

Creating a Dynamic Enumeration

This section illustrates the steps required to create a dynamic enumeration of valid State values based on the value in the Country field by:

1. Creating records.
2. Creating PIA pages.
3. Creating components, component interfaces, and references.
4. Creating mobile pages.

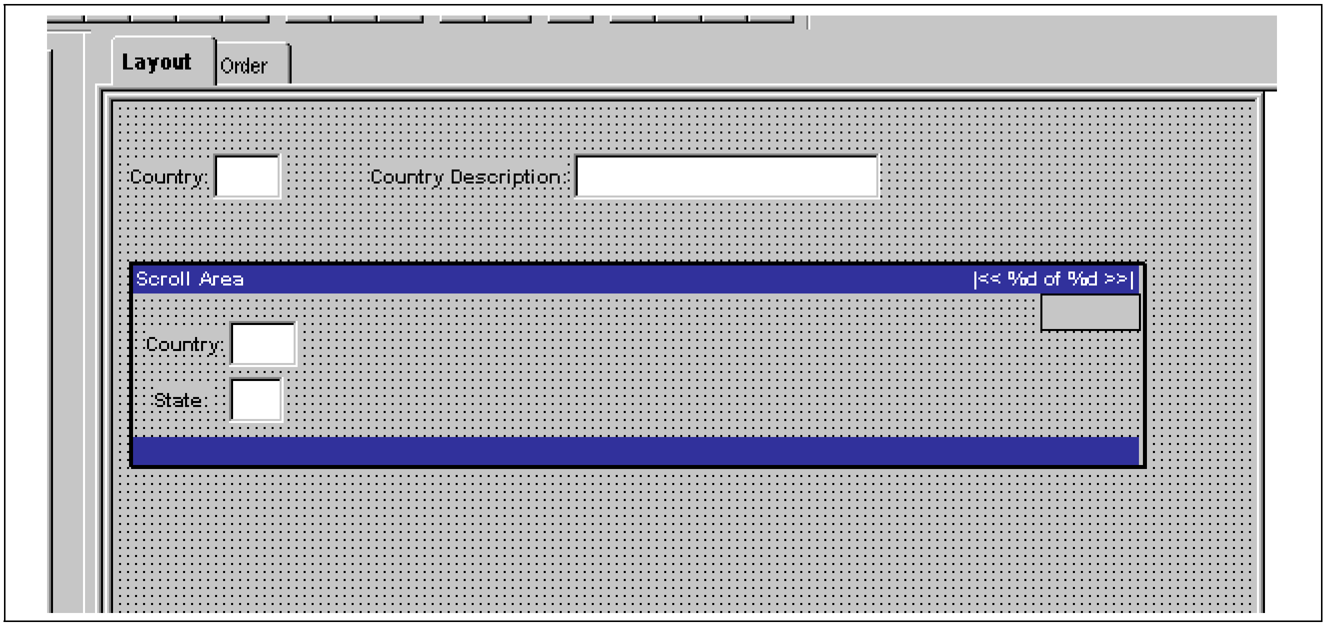
Creating the Records

Create three records:

1. One for country, with a search key on the country field and an alternate search key on the description field.
2. A child record for state, with search keys on the country and state fields.
3. A grandchild record for company, with search keys on country, state, and company fields.

Creating the Pages

Build one page for each record.



Country page.

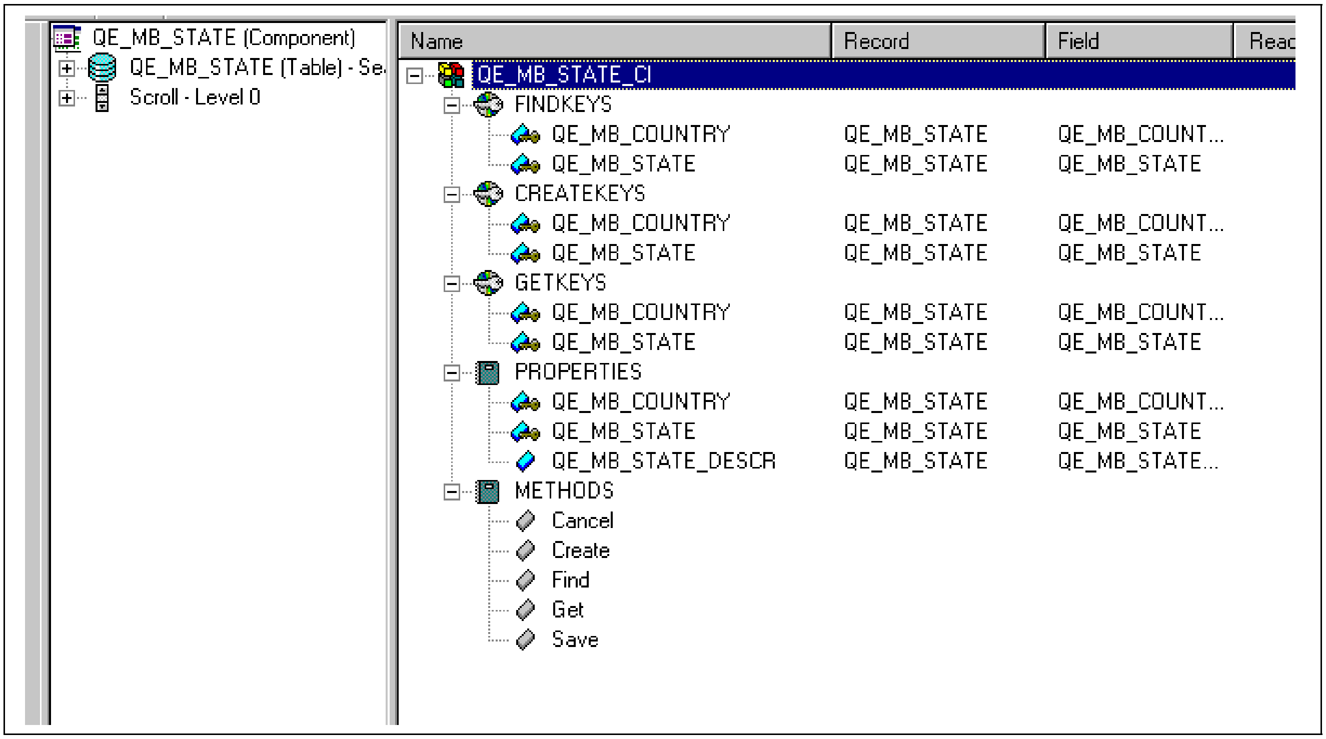
1. On the Country page, Country and Description fields appear in Level 0, and Country and State fields in Level 1; these fields provides the basis for the subsequent mobile page references.
2. On the State page, Country, State, and State Description all appear in Level 0.
3. On the Company page, Company, Country, Country Description, State, and State Description all appear in Level 0.

Note. Dynamic enumerations process in the order of the fields (properties) on the page. Properties used in a dynamic enumeration must come before the property with the dynamic enumeration.

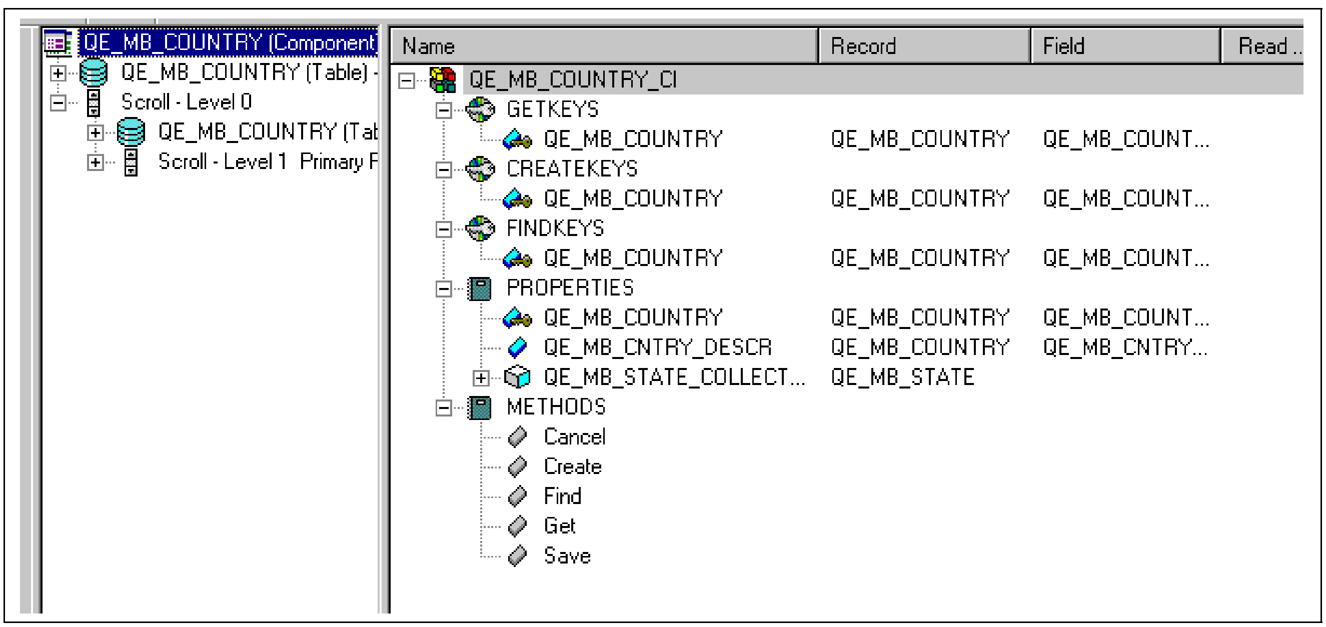
Creating the components, component interfaces, and references

Create a component for each page.

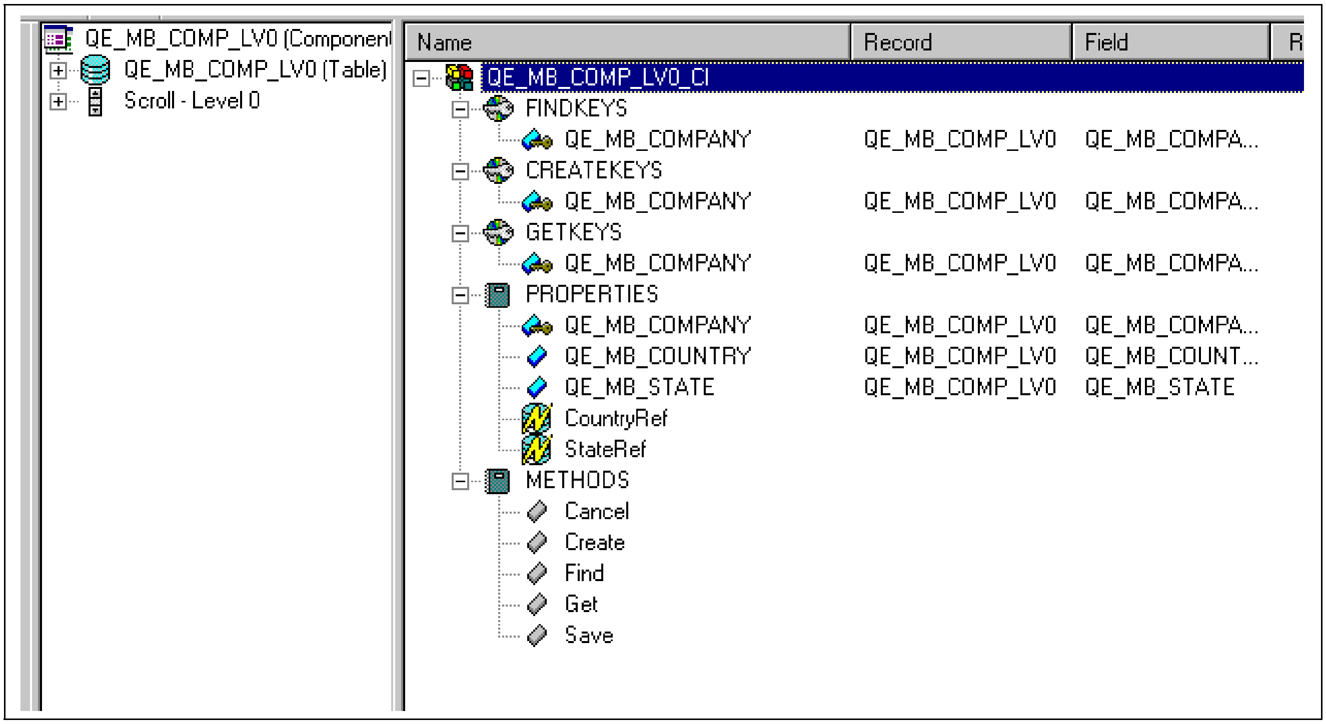
Create a component interface (CI) for each component:



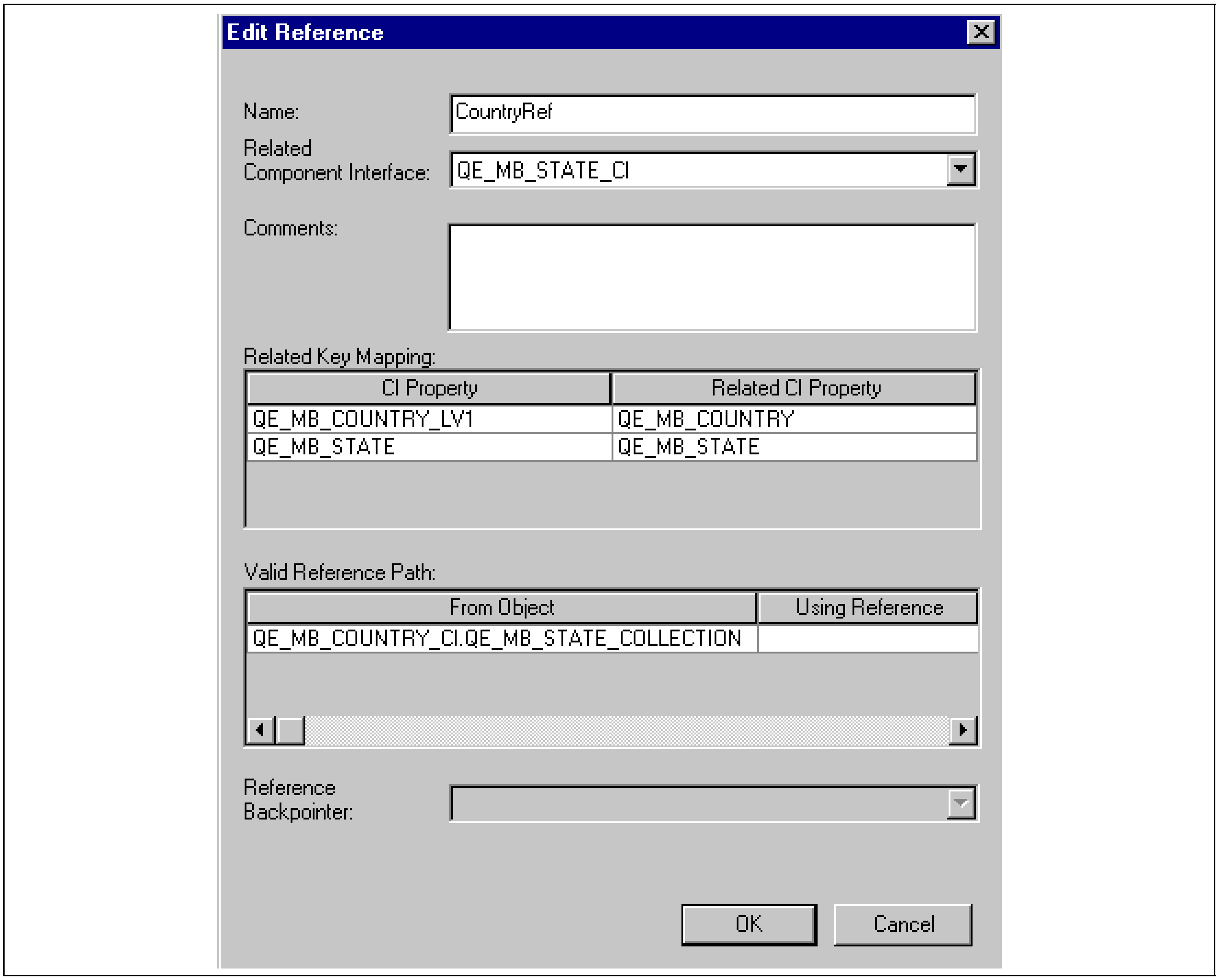
State Component Interface



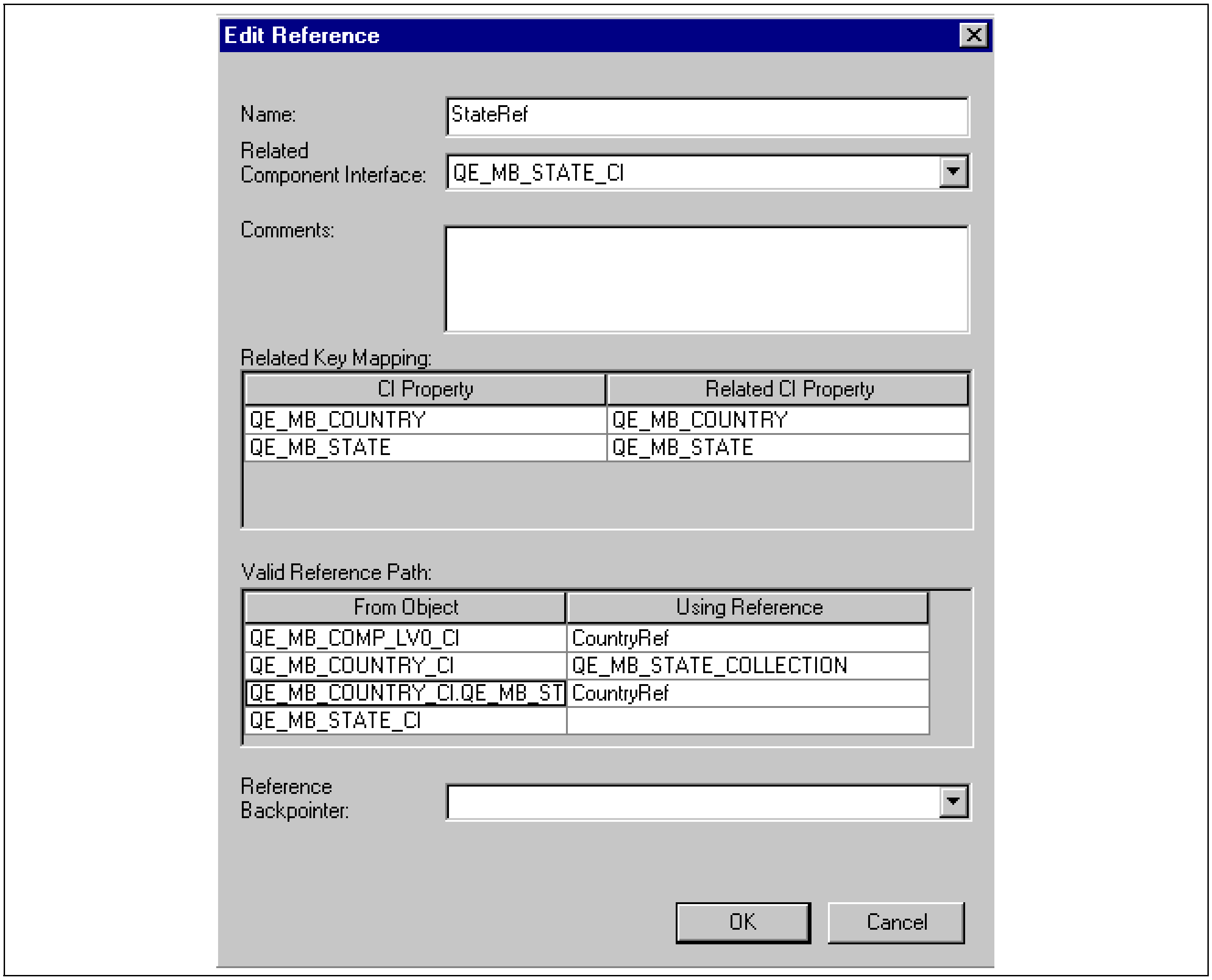
Country component interface



Company Component Interface



Country Edit Reference Dialog Box



State Edit Reference Properties Dialog Box

1. The State component interface remains simple, with all properties on Level 0.
2. The Country component interface includes properties on both Level 0 and Level 1:
   a. Drag the Country property from the component's Level 1 into the component interface's State collection.

      Because it is now a duplicate property, rename this property.
   b. Create a reference in the State collection of the Country component interface, relating the reference to the State component interface, and mapping the Level 1 Country property to the Country property in the State CI, and the Level 1 State property to the State property in the State CI.

      The Valid Reference Path should be in the form <current_ci>.<referenced_ci>, which identifies the originating CI.

      Note. To include both properties in the Related Key Mapping, select both properties in the CI workspace, then right-click and select Create Reference. This is the only way to include both properties.

      ---
3. The Company component interface keeps all properties at Level 0, and includes two references.

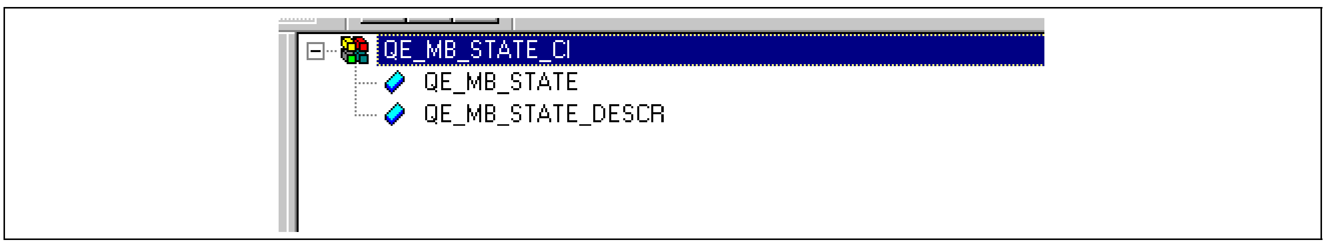
a. Create a singular reference on the Country property, relating it to the Country property in the Country component interface.

b. Create another reference on both Country and State, relating them to their counterparts in the State component interface. The Valid Reference path should "walk" from the Country reference on the Company CI to the State reference on the Country CI, then to the Country reference in the State collection of the Country CI, then to the State CI.

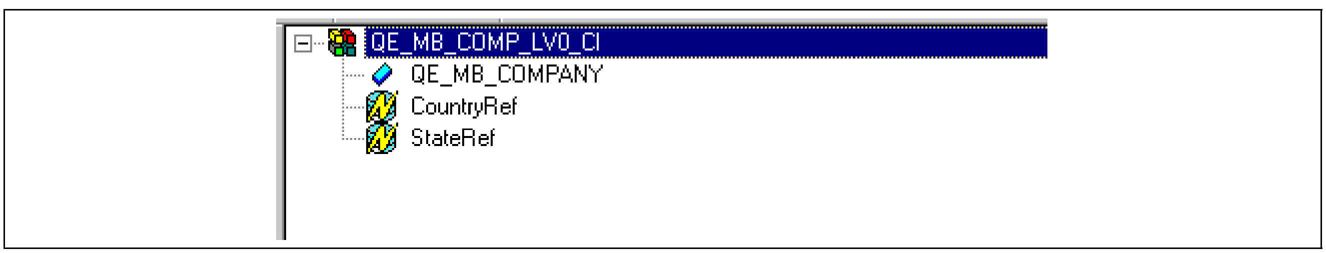
Creating the Mobile Pages

Finally, create the mobile pages:

Country Mobile Page



State Mobile Page



Company Mobile Page

1. The Country mobile page includes Country, Country Description, and the Country reference to the State property.

2. The State mobile page includes only the State and State Description records.

3. The Company mobile page displays the Company name, and Country and State fields with prompt buttons using the references. The Country reference points to the Country mobile page, and the State reference points to the State mobile page.

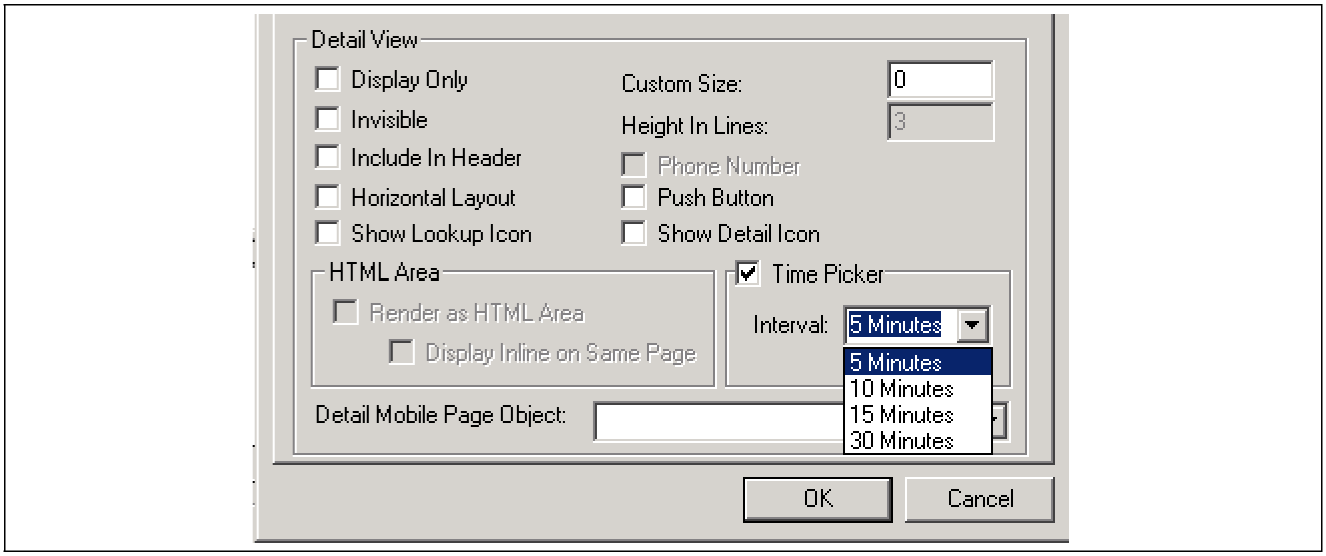
Note. When you create the Company mobile page, you can delete Country and State properties imported from the component interface because the references replace them.

Using the Time Picker and Date Picker

PeopleTools Mobile Agent supports date and time pickers on mobile devices.

Using the Time Picker

You can specify that a time field displayed in detail view includes a time picker. The field must be of type time for this option to be available.



Mobile Page Content Properties, Time Picker

On the Mobile Page Content Properties dialog box, select Time Picker, and select an interval from the drop-down box.

The time format displayed depends on the format specified in the user's personalizations.

On the mobile device, the time picker appears as a drop-down list. If the time field is not display-only and time picker is not enabled, then the field appears as a text edit box.

Time can be entered in either 12-hour or 24–hour format, regardless of the user's time format personalization. After a time value is entered, Mobile Agent reformats the entry to the user's time format (12-hour or 24-hour format). If the time field is display-only, then the time displays as a non-editable text field.

Using the Date Picker

PeopleTools Mobile Agent supports a date picker on fields of type date.

To display the date picker on detail mobile pages, the field must be of type date, and not display-only. Unlike the time picker, there is no option on the Mobile Page Content Properties dialog box for the date picker.

Registering Mobile Pages

You must register mobile pages just as you must register PIA pages.

Register mobile pages:

- From Application Designer.

  or

- In the Mobile portal.

Group mobile pages together as content references in folders in the mobile portal to provide a navigational scheme for the application's mobile pages. Create as many folders as necessary to provide access to mobile pages in a logical scheme.

Sync Server searches for mobile pages requiring synchronization based on the folders registered in the Mobile folder in the mobile portal. Even if a mobile page is otherwise synchronizable, if it is not registered in the Mobile folder in mobile portal, the mobile page is not synchronized.

Registration of mobile pages is like registration of any other content reference, with these requirements and exceptions:

- The Mobile folder comprises only one level of folders.

  These folders generally group mobile applications but also include Synchronization and Alerts.

- Register mobile pages in a child folder to the Mobile folder.

  Do not register mobile pages directly in the Mobile folder.

- Register only mobile pages in the Mobile folder's child folders.

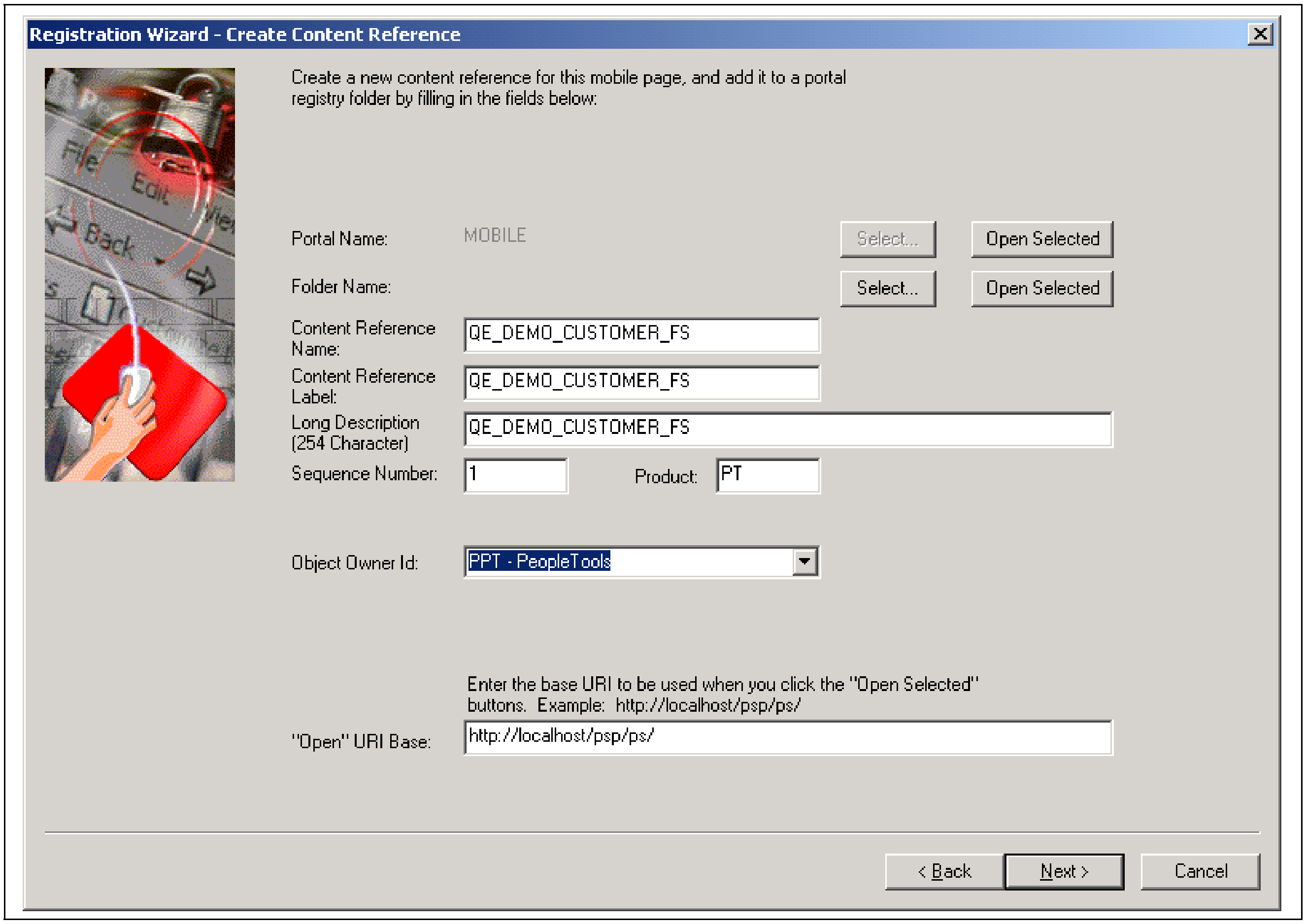
  No other objects are valid.

- If you delete a mobile page in PeopleSoft Application Designer, also delete the mobile page from its folder in the mobile portal.

Note. To be viewed and synchronized from a mobile device, a mobile page must be registered in a child folder of the Mobile folder in the mobile portal.

Registering Mobile Pages in Application Designer

In Mobile Page Designer, right-click on any property, select Register Mobile Page; or click the Register Mobile Page button.



Mobile Page Registration Wizard

See Also

PeopleSoft Application Designer, “Using Registration Wizard”

Registering Mobile Pages in the Mobile Portal

PeopleSoft delivers a Mobile portal to enable registration of mobile pages. You can administer mobile pages from the Mobile portal.

To register a mobile page in the Mobile portal:

1. Sign on to the mobile portal.

   You can change the default portal selection to Mobile portal, or edit the URL to reference the Mobile portal:

   http://localhost/psp/ps/MOBILE/QE_LOCAL/c/UTILITIES.PORTAL_DEFINITIONS.GBL

2. Select PeopleTools, Portal, Structure & Content.

   The Root Structure and Content page appears.

3. On the Root Structure & Content page, select the Mobile folder.

   The Mobile Structure and Content page appears.

4. Either select an existing folder for an application, or add a new folder for an application.

5. Add or edit content references.

   You cannot add a folder at this level.

6. Click Save.

See Also

PeopleTools Internet Technology, “Administering Portals,” Changing Default Portals

Maintaining Security

Administer security for PeopleSoft mobile pages the same way that you administer security for any other PIA page: through the Security function. Define security for each mobile page, rather than for the folder.

Note. Maintain security for both component interfaces and mobile pages. If the user does not have permission to an underlying component interface, the associated mobile page fails.

This section discusses how to:

- Add mobile pages to an existing permission list.
- Create a new permission list for mobile pages.
- Create roles for mobile users and associate permission lists to the roles.

See Also

PeopleTools Security, “Understanding PeopleSoft Security”

Adding Mobile Pages to an Existing Permission List

You can add one or more mobile pages to an existing permission list.

To add a mobile page to a permission list:

1. Select PeopleTools, Security, Permissions & Roles, Permission Lists.
2. On the Find an Existing Values page, search for and select the appropriate permission list.
3. On the Pages page, click the Mobile Page Permissions link.
4. Specify the mobile page or pages, or click the Lookup Mobile Page Name link to look up a mobile page or range of pages.
5. Click OK.
6. Click Save.

Creating a New Permission List for Mobile Pages

You can create a new permission list specifically for mobile pages and associate the permission list with appropriate roles.

To create a mobile page permission list:

1. Select PeopleTools, Security, Permissions & Roles, Permission Lists.
2. On the Add a New Value page, specify the name for a new permission list.
3. On the Pages page, click the Mobile Page Permissions link.
4. Specify the mobile page or pages, or click the Lookup Mobile Page Name link to look up a mobile page or range of pages.
5. Click OK.
6. Click Save.

Creating Roles for Mobile Users and Associating Permission Lists to the Roles

You can create one or more roles specifically for mobile users and associate permission lists that contain mobile pages to the roles.

To create a new mobile user role:

1. Select PeopleTools, Security, Permissions & Roles, Roles.
2. On the Add a New Value page, click Add.
3. On the General page, specify the name of the new role.
4. Specify a short (required) and long description.
5. On the Permission Lists page, specify the permission list or lists to associate with this role.
6. Specify other attributes of this role as required.
7. Click Save.
8. Assign this mobile user role to a user profile.

See Also

PeopleTools Security, “Working With Permission Lists”

PeopleTools Security, “Working With Roles”

CHAPTER 4

Administering PeopleTools Mobile Agent

This chapter discusses how to:

- Distribute the PeopleTools Mobile Agent installation programs.
- Personalize PeopleTools Mobile Agent.
- Synchronize behind a firewall.
- Deploy a Bootstrap Database.
- Debug PeopleTools Mobile Agent.

Distributing the PeopleTools Mobile Agent Installation Programs

The PeopleTools Mobile Agent installation programs are installed to the Web server as part of the PeopleSoft Internet Architecture (PIA) installation. Two or more installation files are available:

- setup.exe for Win32 installations.
- setup_<processor_type>.exe for PDA installations, where <processor_type> is the type of processor in the supported PDA..

Find the PeopleTools Mobile Agent installation programs in the mobile portal Web site directory of your web server:

- On a BEA WebLogic Web server this location is c:\bea\weblogic6.1\config\peoplesoft \application\portal\ps\mobile\
- On an IBM WebSphere Web server this location is c:\<WEBSPHERE_HOME> \installedApps\peoplesoft\portal\ps\mobile\

An HTML file, index.html, is available in the same location to provide a Web page for installation program distribution. You can modify this file to suit your business needs.

The installation program for PeopleTools Mobile Agent can be delivered to users in several ways:

- From a Web site using the provided HTML file.
- From an FTP site.
- As an attachment to an email.
- As a link to a Web or FTP site in an email.

- From the Web server's mobile portal directory.

Personalizing PeopleTools Mobile Agent

This section discusses how to:

- Personalize runtime settings.
- Personalize synchronization settings.
- Use the personalization component interface.

Personalizing Runtime Settings

An administrator or user personalizes the runtime operating environment with four settings, summarized in the following table.

Personalization	Definition Method	Default
Language	At installation	ENGLISH
Currency	On the My System Profile page	None
Date format	By selecting My Personalizations, International & Regional Settings	Personalization default
Local time zone	By selecting My Personalizations, International & Regional Settings	Personalization default

Set personalization separately for each database that will be synchronized to the user's device.

This section discusses how to set the:

- Language.
- Currency.
- Date format and local time zone.

Setting the Language

Set the language for the mobile device at installation. The setting is stored in the psmobile.ini file. You can change the selected language only by reinstalling PeopleTools Mobile Agent.

Note. The language preference setting on the My System Profile page does not affect the language setting for mobile devices.

Synchronization requests include the user's preferred language, as set in the psmobile.ini file. SyncServer uses this value in selecting related-language data, including Message Catalog objects, for the mobile user. SyncServer does not use the language setting from the user profile, which might be different.

Setting the Currency

To set the currency:

1. Log into PeopleSoft 8.
2. Select My System Profile, Currency Code.

   This defines the default currency code to be selected and displayed if global currencies are enabled by the installation. If not defined, there is no default currency.

To display the specified currency code as the default value for a currency control field on a mobile page, define a reference for the currency control field. PeopleSoft supplies a standard mobile page for PS_CURRENCY_CD_TBL for use as the related mobile page object.

Note. Currency Market Rates now have mobile synchronization IDs and can be used by mobile applications.

Setting the Date Format and Local Time Zone

To set the date format and local time zone:

1. Log into PeopleSoft 8.
2. Select PeopleTools, My Personalizations, International & Regional Settings.
3. Select from the Date Format and Local Time Zone drop-down list boxes.

   These settings define:

   - The base time zone for the mobile device for all times and dates not otherwise specified.
   - The preferred date format for the mobile device.

Personalizing Synchronization Settings

Personalize synchronization from each application's Synchronization menu.

Using the Personalization Component Interface

The mobile personalization component interface, MOBILE_PREFS_CI, passes the specifications of date format, time zone, currency code, and other date and time parameters set in My Personalizations and My System Profile to the mobile device. PeopleTools Mobile Agent does not require any mobile-specific personalizations. The mobile user sets preferences using the My Personalizations and My System Profile links in the portal menu.

The PeopleSoft user permission list, PTPT1000, includes MOBILE_PREFS_CI, so no additional security is required.

Synchronizing Behind a Firewall

If a firewall protects the network between the mobile device being synchronized and the SyncServerGateway, the firewall must allow passage of the following content types in HTTP messages:

- application/vnd.peoplesoft-mobile-xml
- application/vnd.peoplesoft-mobile-zlib

Alternative Deployment of Bootstrap Databases

Each PeopleTools Mobile Agent database contains identifying data specific to the mobile device on which it resides. You can transfer databases between mobile devices by stripping the device-specific data from the database. This facilitates distributing bootstrap databases to remote users lacking high-speed Internet connections, or sharing an initial database within a team.

To prepare a mobile database for distribution, from a command prompt run:

psmobile —stamp

Psmobile.exe exits immediately after clearing the device-specific data.

The –stamp option is not documented in psmobile.exe help messages.

Debugging PeopleTools Mobile Agent

You can set debug mode and trace levels by editing the psmobile.ini file. This file is normally located the in C:\WinNT directory.

Setting Debug Mode

You can initiate debug mode by including the parameter `debug=1` in the psmobile.ini file. Place this parameter just before the [SYNC]section label.

Adding the `debug` parameter provides the debug menu option on the mobile agent, including Object Browser and Update Queue.

See Also

PeopleCode Reference, “Mobile Classes,” Debugging in Mobile

Setting Trace Levels

You can initiate tracing of Mobile Agent activity by setting trace levels in psmobile.ini. Tracing should normally be disabled, but a user support analyst may ask you to enable tracing while investigating an error.

See *PeopleCode Reference*, “Mobile Classes,” Trace Settings.

CHAPTER 5

Using PeopleTools Mobile Agent

This section provides an overview of synchronization modes and discusses how to:

- View and respond to alerts.
- Optimize the personal digital assistant (PDA) user experience.
- Enable disconnected operation in Microsoft Internet Explorer.
- Use the About and home pages.

Note. This chapter includes information about using PeopleTools Mobile Agent that is not specific to an application.

Understanding Synchronization Modes

The synchronization mode that you select determines the data that is transmitted during synchronization: application metadata, business data, or both.

Four synchronization modes are available to the user.

This section discusses:

- Upload Changes
- Full Synchronization
- Update Applications
- Bootstrap Synchronization

Upload Changes

Upload Changes enables a quick update of changes from the mobile device to the server. Data received from the server is limited to error responses to update requests and server-side changes to objects that you updated. To receive updates to all data, select Full Synchronization.

Full Synchronization

Full Synchronization enables a complete reconciliation of the business data on the mobile device with the data on the server. All of your updates are uploaded to the server for processing, and errors are returned to the mobile device. After uploading changes, modified or new data on the server is downloaded to the mobile device. If data that you modified on the mobile device generates an error and the same data was modified on the server, the new data is not retrieved until you reconcile the errors. To send only your changes to the server, select Upload Changes.

Update Applications

Update Applications uploads all changes from the mobile device. If errors occur during this upload, Update Applications terminates. Resolve all errors before performing Update Applications again. If the upload is successful, Update Applications removes all data from the mobile device and retrieves the current version of the business applications. If the applications load successfully, Full Synchronization is performed to load business data onto the mobile device. Update Applications is irreversible.

Bootstrap Synchronization

Bootstrap synchronization starts automatically when you sign in to an uninitialized mobile device. Bootstrap synchronization loads business applications if the mobile device has never been initialized. If the applications successfully load, Full Synchronization is performed to load your business data onto the mobile device.

Note. Some applications allow your input into the business data downloaded to your mobile device. In this case, specify your inputs and then perform a Full Synchronization.

Viewing and Responding to Alerts

This section discusses how to:

- View and respond to synchronization errors.
- View notifications.

Viewing and Responding to Synchronization Errors

The Synchronization Server (Sync Server) writes synchronization errors, such as unresolvable conflicts, to an error log, which the user or administrator can read. A summary of synchronization results, alerts, and completed updates appears on the Mobile Device Status page. Click the Status link to view the Mobile Device Status page. Use the information in the error log to correct errors or to roll back changes so that synchronization can complete successfully. Each synchronization deletes the previous error list and creates a new error list.

From the application menu, select Alerts, Error List to view synchronization errors. Both system and application errors appear in the Synchronization Errors list.

- System errors display an ID number and an object type of *Non specific error*.

  Click the error ID link to view details about the error. Click Delete Error to remove the error from the error list.

- Application errors display an ID number, an object type of the business object on which the error occurred, and key information listing the object keys involved.

  Click the error ID link to view details about the error. The business object generating the error appears below the error message, enabling the user to re-enter data or note the update requiring attention.

  Objects generating application errors can be rolled back to the pre-synchronization state by clicking the link that is appropriate to the change requested:

  - Cancel Update
  - Undo Delete
  - Cancel Add

Note. The only way to undo an update that results in a synchronization error is to click a cancel or undo link from the Synchronization Errors list.

If an error occurs from an unresolved conflict in which the conflict resolution algorithm is *Server Wins,* the user's update is never processed. The user must undo the update from the error list, synchronize to receive the new object from the server, then reapply the changes.

Viewing Notifications

During synchronization, Sync Server delivers any user notifications to the mobile device. To view notifications select Alerts, Notifications from the application menu.

The Notifications page lists notifications received, including a time stamp, the message, and a link to view the complete notification and related object. When done viewing the notification, you can delete the notification, then save.

Optimizing the PDA User Experience

To minimize the need for horizontal scrolling on a Pocket PC PDA, set Microsoft Pocket Internet Explorer to the smallest, legible text size. From the Microsoft Pocket Internet Explorer toolbar, select View, Text Size. Then, select either Smaller or Smallest.

Enabling Disconnected Operation in Microsoft Internet Explorer

Disconnected use of PeopleTools Mobile Agent requires the browser to connect to http://localhost:8080, also known as IP address 127.0.0.1. Microsoft Internet Explorer might not recognize this connection unless the user disables the Work Offline option and prevents Microsoft Internet Explorer from dialing out for a connection.

This section discusses how to:

- Disable the Work Offline option.
- Prevent Microsoft Internet Explorer from dialing out for a connection.

Disabling the Work Offline Option

To disable Work Offline, from the Microsoft Internet Explorer File menu, cancel the Work Offline selection.

Preventing Microsoft Internet Explorer From Dialing Out for a Connection

To prevent Microsoft Internet Explorer from dialing out for a connection:

1. Select Tools, Internet Options.

2. On the Connections tab, select Never dial a connection.
3. Click OK.

Using the About Page

The About page displays information about the PeopleTools release, platform, browser, synchronization gateway and port, and the version of PeopleTools Mobile Agent, which can be useful when troubleshooting.

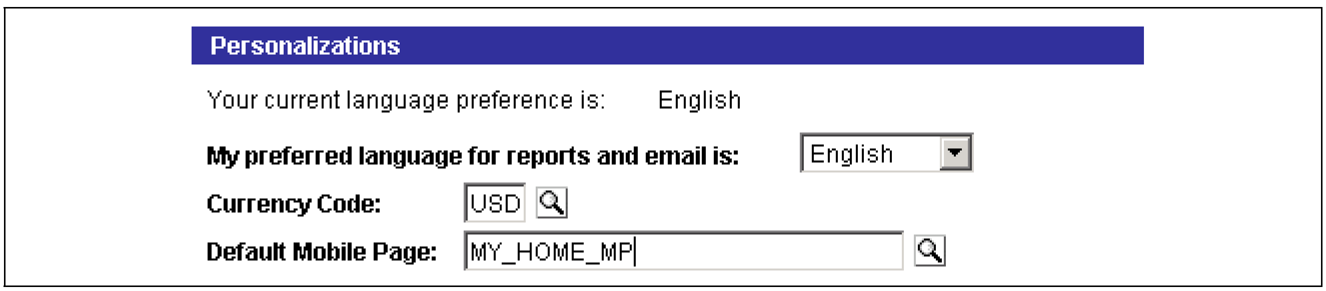
Access the About page on a laptop by pressing CTRL + J (the same combination as in PIA).

Access the About page on a PDA by clicking the About link on any Help page.

Using the Home Page

You can select a mobile home page that will display after signing on to your mobile device.

Specify a default mobile page in Personalizations on the My System Profile page.



Personalizations, My System Profile page.

The home page appears on your device after your next synchronization.

Glossary of PeopleSoft Terms

absence entitlement	This element defines rules for granting paid time off for valid absences, such as sick time, vacation, and maternity leave. An absence entitlement element defines the entitlement amount, frequency, and entitlement period.
absence take	This element defines the conditions that must be met before a payee is entitled to take paid time off.
account	You use an account code to record and summarize financial transactions as expenditures, revenues, assets, or liabilities balances. The use of this delivered PeopleSoft ChartField is typically defined when you implement PeopleSoft General Ledger.
accounting class	In PeopleSoft Enterprise Performance Management, the accounting class defines how a resource is treated for generally accepted accounting practices. The Inventory class indicates whether a resource becomes part of a balance sheet account, such as inventory or fixed assets, while the Non-inventory class indicates that the resource is treated as an expense of the period during which it occurs.
accounting date	The accounting date indicates when a transaction is recognized, as opposed to the date the transaction actually occurred. The accounting date and transaction date can be the same. The accounting date determines the period in the general ledger to which the transaction is to be posted. You can only select an accounting date that falls within an open period in the ledger to which you are posting. The accounting date for an item is normally the invoice date.
accounting entry	A set of related debits and credits. An accounting entry is made up of multiple accounting lines. In most PeopleSoft applications, accounting entries are always balanced (debits equal credits). Accounting entries are created to record accruals, payments, payment cancellations, manual closures, project activities in the general ledger, and so forth, depending on the application.
accounting split	The accounting split method indicates how expenses are allocated or divided among one or more sets of accounting ChartFields.
accumulator	You use an accumulator to store cumulative values of defined items as they are processed. You can accumulate a single value over time or multiple values over time. For example, an accumulator could consist of all voluntary deductions, or all company deductions, enabling you to accumulate amounts. It allows total flexibility for time periods and values accumulated.
action reason	The reason an employee's job or employment information is updated. The action reason is entered in two parts: a personnel action, such as a promotion, termination, or change from one pay group to anotherand a reason for that action. Action reasons are used by PeopleSoft Human Resources, PeopleSoft Benefits Administration, PeopleSoft Stock Administration, and the COBRA Administration feature of the Base Benefits business process.
activity	In PeopleSoft Enterprise Learning Management, an instance of a catalog item delivery methodit may also be called a class. The activity defines such things as meeting times and locations, instructors, reserved equipment and materials, and detailed costs that are associated with the offering, enrollment limits and deadlines, and waitlisting capacities.
allocation rule	In PeopleSoft Enterprise Incentive Management, an expression within compensation plans that enables the system to assign transactions to nodes and participants. During transaction allocation, the allocation engine traverses the compensation structure

from the current node to the root node, checking each node for plans that contain allocation rules.

alternate account — A feature in PeopleSoft General Ledger that enables you to create a statutory chart of accounts and enter statutory account transactions at the detail transaction level, as required for recording and reporting by some national governments.

application agent — An application agent is an online agent that is loaded into memory with a PeopleSoft page. It detects when a business rule has been triggered and determines the appropriate action.

asset class — An asset group used for reporting purposes. It can be used in conjunction with the asset category to refine asset classification.

attachment — In PeopleSoft Enterprise Learning Management, nonsystem-defined electronic material that supplements a learning resource, such as an equipment items user handbook or the site map of a large facility.

background process — In PeopleSoft, background processes are executed through process-specific COBOL programs and run outside the Windows environment.

benchmark job — In PeopleSoft Workforce Analytics, a benchmark job is a job code for which there is corresponding salary survey data from published, third-party sources.

branch — A tree node that rolls up to nodes above it in the hierarchy, as defined in PeopleSoft Tree Manager.

budgetary account only — An account used by the system only and not by users; this type of account does not accept transactions. You can only budget with this account. Formerly called system-maintained account.

budget check — In commitment control, the processing of source transactions against control budget ledgers, to see if they pass, fail, or pass with a warning.

budget control — In commitment control, budget control ensures that commitments and expenditures don't exceed budgets. It enables you to track transactions against corresponding budgets and terminate a document's cycle if the defined budget conditions are not met. For example, you can prevent a purchase order from being dispatched to a vendor if there are insufficient funds in the related budget to support it.

budget period — The interval of time (such as 12 months or 4 quarters) into which a period is divided for budgetary and reporting purposes. The ChartField allows maximum flexibility to define operational accounting time periods without restriction to only one calendar.

business event — In PeopleSoft Sales Incentive Management, an original business transaction or activity that may justify the creation of a PeopleSoft Enterprise Incentive Management event (a sale, for example).

catalog item — In PeopleSoft Enterprise Learning Management, a specific topic that a learner can study and have tracked. For example, Introduction to Microsoft Word. A catalog item contains general information about the topic and includes a course code, description, categorization, keywords, and delivery methods.

category — In PeopleSoft Enterprise Learning Management, a way to classify catalog items so that users can easily browse and search relevant entries in the learning catalog. Categories can be hierarchical.

ChartField — A field that stores a chart of accounts, resources, and so on, depending on the PeopleSoft application. ChartField values represent individual account numbers, department codes, and so forth.

ChartField balancing — You can require specific ChartFields to match up (balance) on the debit and the credit side of a transaction.

ChartField combination edit — The process of editing journal lines for valid ChartField combinations based on user-defined rules.

ChartKey — One or more fields that uniquely identify each row in a table. Some tables contain only one field as the key, while others require a combination.

child — In PeopleSoft Tree Manager trees, a child is a node or detail on a tree linked to another, higher-level node (referred to as the parent). Child nodes can be rolled up into the parent. A node can be a child and a parent at the same time depending on its location within the tree.

Class ChartField — A ChartField value that identifies a unique appropriation budget key when you combine it with a fund, department ID, and program code, as well as a budget period. Formerly called *sub-classification.*

clone — In PeopleCode, to make a unique copy. In contrast, to *copy* may mean making a new reference to an object, so if the underlying object is changed, both the copy and the original change.

collection — To make a set of documents available for searching in Verity, you must first create at least one collection. A collection is set of directories and files that allow search application users to use the Verity search engine to quickly find and display source documents that match search criteria. A collection is a set of statistics and pointers to the source documents, stored in a proprietary format on a file server. Because a collection can only store information for a single location, PeopleSoft maintains a set of collections (one per language code) for each search index object.

compensation object — In PeopleSoft Enterprise Incentive Management, a node within a compensation structure. Compensation objects are the building blocks that make up a compensation structure's hierarchical representation.

compensation structure — In PeopleSoft Enterprise Incentive Management, a hierarchical relationship of compensation objects that represents the compensation-related relationship between the objects.

configuration parameter catalog — Used to configure an external system with PeopleSoft. For example, a configuration parameter catalog might set up configuration and communication parameters for an external server.

configuration plan — In PeopleSoft Enterprise Incentive Management, configuration plans hold allocation information for common variables (not incentive rules) and are attached to a node without a participant. Configuration plans are not processed by transactions.

content reference — Content references are pointers to content registered in the portal registry. These are typically either URLs or iScripts. Content references fall into three categories: target content, templates, and template pagelets.

context — In PeopleSoft Enterprise Incentive Management, a mechanism that is used to determine the scope of a processing run. PeopleSoft Enterprise Incentive Management uses three types of context: plan, period, and run-level.

corporate account — Equivalent to the Account ChartField. Distinguishes between the chart of accounts typically used to record and report financial information for management, stockholders, and the general public, as opposed to a chart of statutory (alternate) accounts required by a regulatory authority for recording and reporting financial information.

cost profile — A combination of a receipt cost method, a cost flow, and a deplete cost method. A profile is associated with a cost book and determines how items in that book are valued, as well as how the material movement of the item is valued for the book.

cost row — A cost transaction and amount for a set of ChartFields.

data acquisition	In PeopleSoft Enterprise Incentive Management, the process during which raw business transactions are acquired from external source systems and fed into the operational data store (ODS).
data elements	Data elements, at their simplest level, define a subset of data and the rules by which to group them. For Workforce Analytics, data elements are rules that tell the system what measures to retrieve about your workforce groups.
data row	Contains the entries for each field in a table. To identify each data row uniquely, PeopleSoft applications use a key consisting of one or more fields in the table.
data validation	In PeopleSoft Enterprise Incentive Management, a process of validating and cleansing the feed data to resolve conflicts and make the data processable.
DAT file	This text file, used with the Verity search engine, contains all of the information from documents that are searchable but not returned in the results list.
delivery method	In PeopleSoft Enterprise Learning Management, identifies a learning activitys delivery method type. An activity can have one or more delivery methods.
delivery method type	In PeopleSoft Enterprise Learning Management, specifies a method that your organization uses to deliver learning activities, for example, scheduled or self-paced learning.
distribution	The process of assigning values to ChartFields. A distribution is a string of ChartField values assigned to items, payments, and budget amounts.
double byte character	If youre working with Japanese or other Asian employees, you can enter the employee’s name using double-byte characters. The standard double byte character set name format in PeopleSoft applications is: [last name] space [first name].
dynamic tree	A tree that takes its detail valuesdynamic detailsdirectly from a table in the database, rather than from a range of values entered by the user.
edit table	A table in the database that has its own record definition, such as the Department table. As fields are entered into a PeopleSoft application, they can be validated against an edit table to ensure data integrity throughout the system.
effective date	A method of dating information in PeopleSoft applications. You can predate information to add historical data to your system, or postdate information in order to enter it before it actually goes into effect. By using effective dates, you don’t delete values; you enter a new value with a current effective date.
EIM job	Abbreviation for *Enterprise Incentive Management job.* In PeopleSoft Enterprise Incentive Management, a collection of job steps that corresponds to the steps in an organizations compensation-related business process. An EIM job can be stopped to allow manual changes or corrections to be applied between steps, and then resumed from where it left off, continuing with the next step. A run can also be restarted or rolled back.
EIM ledger	Abbreviation for *Enterprise Incentive Management ledger.* In PeopleSoft Enterprise Incentive Management, an object to handle incremental result gathering within the scope of a participant. The ledger captures a result set with all of the appropriate traces to the data origin and to the processing steps of which it is a result.
equipment	In PeopleSoft Enterprise Learning Management, resource items that can be assigned to a training facility, to a specific training room, or directly to an activity session. Equipment items are generally items that are used (sometimes for a fee) and returned after the activity is complete.

event
Events are predefined points either in the application processor flow or in the program flow. As each point is encountered, the event activates each component, triggering any PeopleCode program associated with that component and that event. Examples of events are FieldChange, SavePreChange, and OnRouteSubscription. In PeopleSoft Human Resources, *event* also refers to incidents that affect benefits eligibility.

event propagation process
In PeopleSoft Sales Incentive Management, a process that determines, through logic, the propagation of an original PeopleSoft Enterprise Incentive Management event and creates a derivative (duplicate) of the original event to be processed by other objects. Sales Incentive Management uses this mechanism to implement splits, roll-ups, and so on. Event propagation determines who receives the credit.

external system
In PeopleSoft, any system that is not directly compiled with PeopleTools servers.

fact
In PeopleSoft applications, facts are numeric data values from fields from a source database as well as an analytic application. A fact can be anything you want to measure your business by, for example, revenue, actual, budget data, or sales numbers. A fact is stored on a fact table.

filter
In PeopleSoft applications, a filter creates a subset of information. Filters are used in templates to limit your information from a pick list of attribute values.

generic process type
In PeopleSoft Process Scheduler, process types are identified by a generic process type. For example, the generic process type SQR includes all SQR process types, such as SQR process and SQR report.

group
Any set of records associated under a single name or variable in order to run calculations in PeopleSoft business processes. In PeopleSoft Time and Labor, for example, employees are placed in groups for time reporting purposes.

homepage
Users can personalize the homepage, or the page that first appears when they access the portal.

incentive object
In PeopleSoft Enterprise Incentive Management, the incentive-related objects that define and support the PeopleSoft Enterprise Incentive Management calculation process and results, such as plan templates, plans, results data, user interaction objects, and so on.

incentive rule
In PeopleSoft Sales Incentive Management, the commands that act on transactions and turn them into compensation. A rule is one part in the process of turning a transaction into compensation.

key
One or more fields that uniquely identify each row in a table. Some tables contain only one field as the key, while others require a combination.

learner group
In PeopleSoft Enterprise Learning Management, a group of learners within the same learning environment that share the same attributes, such as department or job code.

learning activity
See *activity.*

learning history
In PeopleSoft Enterprise Learning Management, a self-service repository for all of a learner’s completed learning activities.

learning plan
In PeopleSoft Enterprise Learning Management, a self-service repository for all of a learner’s planned and in-progress learning activities.

ledger mapping
You use ledger mapping to relate expense data from general ledger accounts to resource objects. Multiple ledger line items can be mapped to one or more resource IDs. You can also use ledger mapping to map dollar amounts (referred to as *rates*) to business units. You can map the amounts in two different ways: an actual amount that represents actual costs of the accounting period, or a budgeted amount that can be used to calculate the capacity rates as well as budgeted model results. In PeopleSoft Enterprise Warehouse, you can map general ledger accounts to the EW Ledger table.

level A section of a tree that organizes groups of nodes.

library section In PeopleSoft Enterprise Incentive Management, a section that is defined in a plan (or template) and that is available for other plans to share. Changes to a library section are reflected in all plans that use it.

linked section In PeopleSoft Enterprise Incentive Management, a section that is defined in a plan template but appears in a plan. Changes to linked sections propagate to plans using that section.

linked variable In PeopleSoft Enterprise Incentive Management, a variable that is defined and maintained in a plan template and that also appears in a plan. Changes to linked variables propagate to plans using that variable.

load The feature that initiates a process to automatically load information into a PeopleSoft applicationfor example, populating the PeopleSoft Benefits database with plan-level election information.

local functionality In PeopleSoft HRMS, the set of information that is available for a specific country. You can access this information when you click the appropriate country flag in the global window, or when you access it by a local country menu.

location Locations enable you to indicate the different types of addressesfor a company, for example, one address to receive bills, another for shipping, a third for postal deliveries, and a separate street address. Each address has a different location number. The primary locationindicated by a *1*is the address you use most often and may be different from the main address.

market template In PeopleSoft Enterprise Incentive Management, additional functionality that is specific to a given market or industry and is built on top of a product category.

material In PeopleSoft Enterprise Learning Management, a resource item that can be assigned to the sessions of an activity. Material items are generally consumed during the duration of an activity and not returned, and they may have an associated cost.

message definition An object definition specified in PeopleSoft Application Designer that contains message information for PeopleSoft Application Messaging.

meta-SQL Meta-SQL constructs expand into platform-specific SQL substrings. They are used in functions that pass SQL strings, such as in SQL objects, the SQLExec function, and PeopleSoft Application Engine programs.

metastring Metastrings are special expressions included in SQL string literals. The metastrings, prefixed with a percent (%) symbol, are included directly in the string literals. They expand at run time into an appropriate substring for the current database platform.

multibook Processes in PeopleSoft applications that can create both application entries and general ledgers denominated in more than one currency.

multicurrency The ability to process transactions in a currency other than the business unit’s base currency.

objective In PeopleSoft Enterprise Learning Management, an individual’s learning goal. An example of a learning goal is a competency gap.

override In PeopleSoft Enterprise Incentive Management, the ability to make a change to a plan that applies to only one plan context.

pagelet Each block of content on the homepage is called a pagelet. These pagelets display summary information within a small rectangular area on the page. The pagelet provide users with a snapshot of their most relevant PeopleSoft and non-PeopleSoft content.

parent node A tree node linked to lower-level nodes or details that roll up into it. A node can be a parent and a child at the same time, depending on its location within the tree.

participant In PeopleSoft Enterprise Incentive Management, participants are recipients of the incentive compensation calculation process.

participant object Each participant object may be related to one or more compensation objects.

See also *participant object.*

payout In PeopleSoft Enterprise Incentive Management, the resulting incentive plan computation that is provided to payroll.

PeopleCode PeopleCode is a proprietary language, executed by the PeopleSoft application processor. PeopleCode generates results based upon existing data or user actions. By using business interlink objects, external services are available to all PeopleSoft applications wherever PeopleCode can be executed.

PeopleCode event An action that a user takes upon an object, usually a record field, that is referenced within a PeopleSoft page.

PeopleSoft Internet Architecture The fundamental architecture on which PeopleSoft 8 applications are constructed, consisting of an RDBMS, an application server, a Web server, and a browser.

performance measurement In PeopleSoft Enterprise Incentive Management, a variable used to store data (similar to an aggregator, but without a predefined formula) within the scope of an incentive plan. Performance measures are associated with a plan calendar, territory, and participant. Performance measurements are used for quota calculation and reporting.

period context In PeopleSoft Enterprise Incentive Management, because a participant typically uses the same compensation plan for multiple periods, the period context associates a plan context with a specific calendar period and fiscal year. The period context references the associated plan context, thus forming a chain. Each plan context has a corresponding set of period contexts.

per seat cost In PeopleSoft Enterprise Learning Management, the cost per learner, based on the total activity costs divided by either minimum attendees or maximum attendees. Organizations use this cost to price PeopleSoft Enterprise Learning Management activities.

plan In PeopleSoft Sales Incentive Management, a collection of allocation rules, variables, steps, sections, and incentive rules that instruct the PeopleSoft Enterprise Incentive Management engine in how to process transactions.

plan context In PeopleSoft Enterprise Incentive Management, correlates a participant with the compensation plan and node to which the participant is assigned, enabling the PeopleSoft Enterprise Incentive Management system to find anything that is associated with the node and that is required to perform compensation processing. Each participant, node, and plan combination represents a unique plan contextif three participants are on a compensation structure, each has a different plan context. Configuration plans are identified by plan contexts and are associated with the participants that refer to them.

plan section In PeopleSoft Enterprise Incentive Management, a segment of a plan that handles a specific type of event processing.

plan template In PeopleSoft Enterprise Incentive Management, the base from which a plan is created. A plan template contains common sections and variables that are inherited by all plans that are created from the template. A template may contain steps and sections that are not visible in the plan definition.

portal registry In PeopleSoft applications, the portal registry is a tree-like structure in which content references are organized, classified, and registered. It is a central repository that

	defines both the structure and content of a portal through a hierarchical, tree-like structure of folders useful for organizing and securing content references.
private view	A user-defined view that is available only to the user who created it.
process	See *Batch Processes.*
process definition	Process definitions define each run request.
process instance	A unique number that identifies each process request. This value is automatically incremented and assigned to each requested process when the process is submitted to run.
process job	You can link process definitions into a job request and process each request serially or in parallel. You can also initiate subsequent processes based on the return code from each prior request.
process request	A single run request, such as an SQR, a COBOL program, or a Crystal report that you run through PeopleSoft Process Scheduler.
process run control	A PeopleTools variable used to retain PeopleSoft Process Scheduler values needed at runtime for all requests that reference a run control ID. Do not confuse these with application run controls, which may be defined with the same run control ID, but only contain information specific to a given application process request.
product category	In PeopleSoft Enterprise Incentive Management, indicates an application in the Enterprise Incentive Management suite of products. Each transaction in the PeopleSoft Enterprise Incentive Management system is associated with a product category.
publishing	In PeopleSoft Enterprise Incentive Management, a stage in processing that makes incentive-related results available to participants.
record definition	A logical grouping of data elements.
record field	A field within a record definition.
record group	A set of logically and functionally related control tables and views. Record groups help enable TableSet sharing, which eliminates redundant data entry. Record groups ensure that TableSet sharing is applied consistently across all related tables and views.
record input VAT flag	Abbreviation for *record input value-added tax flag.* Within PeopleSoft Purchasing, Payables, and General Ledger, this flag indicates that you are recording input VAT on the transaction. This flag, in conjunction with the record output VAT flag, is used to determine the accounting entries created for a transaction and to determine how a transaction is reported on the VAT return. For all cases within Purchasing and Payables where VAT information is tracked on a transaction, this flag is set to Yes. This flag is not used in PeopleSoft Order Management, Billing, or Receivables, where it is assumed that you are always recording only output VAT, or in PeopleSoft Expenses, where it is assumed that you are always recording only input VAT.
record output VAT flag	Abbreviation for *record output value-added tax flag.* See *record input VAT flag.*
reference data	In PeopleSoft Sales Incentive Management, system objects that represent the sales organization, such as territories, participants, products, customers, channels, and so on.
reference object	In PeopleSoft Enterprise Incentive Management, this dimension-type object further defines the business. Reference objects can have their own hierarchy (for example, product tree, customer tree, industry tree, and geography tree).
reference transaction	In commitment control, a reference transaction is a source transaction that is referenced by a higher-level (and usually later) source transaction, in order to

automatically reverse all or part of the referenced transaction's budget-checked amount. This avoids duplicate postings during the sequential entry of the transaction at different commitment levels. For example, the amount of an encumbrance transaction (such as a purchase order) will, when checked and recorded against a budget, cause the system to concurrently reference and relieve all or part of the amount of a corresponding pre-encumbrance transaction, such as a purchase requisition.

relationship object In PeopleSoft Enterprise Incentive Management, these objects further define a compensation structure to resolve transactions by establishing associations between compensation objects and business objects.

results management process In PeopleSoft Sales Incentive Management, the process during which compensation administrators may review processing results, manually change transactions, process draws, update and review payouts, process approvals, and accumulate and push payments to the EIM ledger.

role user A PeopleSoft Workflow user. A person's role user ID serves much the same purpose as a user ID does in other parts of the system. PeopleSoft Workflow uses role user IDs to determine how to route worklist items to users (through an email address, for example) and to track the roles that users play in the workflow. Role users do not need PeopleSoft user IDs.

role Describes how people fit into PeopleSoft Workflow. A role is a class of users who perform the same type of work, such as clerks or managers. Your business rules typically specify what user role needs to do an activity.

roll up In a tree, to roll up is to total sums based on the information hierarchy.

routing Connects activities in PeopleSoft Workflow. Routings specify where the information goes and what form it takesemail message, electronic form, or worklist entry.

run control A run control is a type of online page that is used to begin a process, such as the batch processing of a payroll run. Run control pages generally start a program that manipulates data.

run control ID A unique ID to associate each user with his or her own run control table entries.

run-level context In PeopleSoft Enterprise Incentive Management, associates a particular run (and batch ID) with a period context and plan context. Every plan context that participates in a run has a separate run-level context. Because a run cannot span periods, only one run-level context is associated with each plan context.

search query You use this set of objects to pass a query string and operators to the search engine. The search index returns a set of matching results with keys to the source documents.

section In PeopleSoft Enterprise Incentive Management, a collection of incentive rules that operate on transactions of a specific type. Sections enable plans to be segmented to process logical events in different sections.

security event In commitment control, security events trigger security authorization checking, such as budget entries, transfers, and adjustments; exception overrides and notifications; and inquiries.

self-service application Self-service refers to PeopleSoft applications that are accessed by end users with a browser.

session In PeopleSoft Enterprise Learning Management, a single meeting day of an activity (that is, the period of time between start and finish times within a day). The session stores the specific date, location, meeting time, and instructor. Sessions are used for scheduled training.

session template In PeopleSoft Enterprise Learning Management, enables you to set up common activity characteristics that may be reused while scheduling a PeopleSoft Enterprise

Learning Management activitycharacteristics such as days of the week, start and end times, facility and room assignments, instructors, and equipment. A session pattern template can be attached to an activity that is being scheduled. Attaching a template to an activity causes all of the default template information to populate the activity session pattern.

setup relationship
In PeopleSoft Enterprise Incentive Management, a relationship object type that associates a configuration plan with any structure node.

sibling
A tree node at the same level as another node, where both roll up into the same parent. A node can be a sibling, parent, and child all at the same time, depending on its location in the tree.

single signon
With single signon, users can, after being authenticated by a PeopleSoft application server, access a second PeopleSoft application server without entering a user ID or password.

source transaction
In commitment control, any transaction generated in a PeopleSoft or third-party application that is integrated with commitment control and which can be checked against commitment control budgets. For example, a pre-encumbrance, encumbrance, expenditure, recognized revenue, or collected revenue transaction.

SpeedChart
A user-defined shorthand key that designates several ChartKeys to be used for voucher entry. Percentages can optionally be related to each ChartKey in a SpeedChart definition.

SpeedType
A code representing a combination of ChartField values. SpeedTypes simplify the entry of ChartFields commonly used together.

SQR
See *Structured Query Report (SQR).*

statutory account
Account required by a regulatory authority for recording and reporting financial results. In PeopleSoft, this is equivalent to the Alternate Account (ALTACCT) ChartField.

step
In PeopleSoft Sales Incentive Management, a collection of sections in a plan. Each step corresponds to a step in the job run.

Structured Query Report (SQR)
A type of printed or displayed report generated from data extracted from a PeopleSoft SQL-based relational database. PeopleSoft applications provide a variety of standard SQRs that summarize table information and data. You can use these reports as is, customize them, or create your own.

Summary ChartField
You use summary ChartFields to create summary ledgers that roll up detail amounts based on specific detail values or on selected tree nodes. When detail values are summarized using tree nodes, summary ChartFields must be used in the summary ledger data record to accommodate the maximum length of a node name (20 characters).

summary ledger
An accounting feature used primarily in allocations, inquiries, and PS/nVision reporting to store combined account balances from detail ledgers. Summary ledgers increase speed and efficiency of reporting by eliminating the need to summarize detail ledger balances each time a report is requested. Instead, detail balances are summarized in a background process according to user-specified criteria and stored on summary ledgers. The summary ledgers are then accessed directly for reporting.

summary tree
A tree used to roll up accounts for each type of report in summary ledgers. Summary trees enable you to define trees on trees. In a summary tree, the detail values are really nodes on a detail tree or another summary tree (known as the *basis* tree). A summary tree structure specifies the details on which the summary trees are to be built.

table — The underlying PeopleSoft data format, in which data is stored by columns (fields) and rows (records, or instances).

TableSet sharing — Specifies control table data for each business unit so that redundancy is eliminated.

target currency — The value of the entry currency or currencies converted to a single currency for budget viewing and inquiry purposes.

template — A template is HTML code associated with a Web page. It defines the layout of the page and also where to get HTML for each part of the page. In PeopleSoft, you use templates to build a page by combining HTML from a number of sources. For a PeopleSoft portal, all templates must be registered in the portal registry, and each content reference must be assigned a template.

territory — In PeopleSoft Sales Incentive Management, hierarchical relationships of business objects, including regions, products, customers, industries, and participants.

TimeSpan — A relative period, such as year-to-date or current period, that can be used in various PeopleSoft General Ledger functions and reports when a rolling time frame, rather than a specific date, is required. TimeSpans can also be used with flexible formulas in PeopleSoft Projects.

transaction allocation — In PeopleSoft Enterprise Incentive Management, the process of identifying the owner of a transaction. When a raw transaction from a batch is allocated to a plan context, the transaction is duplicated in the PeopleSoft Enterprise Incentive Management transaction tables.

transaction loading process — In PeopleSoft Enterprise Incentive Management, the process during which transactions are loaded into Sales Incentive Management. During loading, the source currency is converted to the business unit currency while retaining the source currency code. At the completion of this stage, the transaction is in the first state.

transaction state — In PeopleSoft Enterprise Incentive Management, a value assigned by an incentive rule to a transaction. Transaction states enable sections to process only transactions that are at a specific stage in system processing. After being successfully processed, transactions may be promoted to the next transaction state and picked up by a different section for further processing.

transaction type — In PeopleSoft Enterprise Incentive Management, a way to categorize transactions to identify specific transaction types (for example, shipment, order, opportunity, and so on). Plan sections process only one type of transaction type. Transaction types can be defined based on a company's specific processes model.

Translate table — A system edit table that stores codes and translate values for the miscellaneous fields in the database that do not warrant individual edit tables of their own.

tree — The graphical hierarchy in PeopleSoft systems that displays the relationship between all accounting units (for example, corporate divisions, projects, reporting groups, account numbers) and determines roll-up hierarchies.

unclaimed transaction — In PeopleSoft Enterprise Incentive Management, a transaction that is not claimed by a node or participant after the allocation process has completed, usually due to missing or incomplete data. Unclaimed transactions may be manually assigned to the appropriate node or participant by a compensation administrator.

uniform resource locator (URL) — In PeopleSoft, the term URL refers to the entire query string. The following is an example of a URL: http://serverx/InternetClient/InternetClientServlet?ICType=Script&ICScriptProgramName=WEBLIB_BEN_401k.PAGES.FieldFormula.iScript_Home401k

universal navigation header — Every PeopleSoft portal includes the universal navigation header, intended to appear at the top of every page as long as the user is signed on to the portal. In addition to providing access to the standard navigation buttons (like Home, Favorites, and signoff) the universal navigation header can also display a welcome message for each user.

URL — See *uniform resource locator (URL).*

user interaction object — In PeopleSoft Sales Incentive Management, used to define the reporting components and reports that a participant can access in his or her context. All Sales Incentive Management user interface objects and reports are registered as user interaction objects. User interaction objects can be linked to a compensation structure node through a compensation relationship object (individually or as groups).

variable — In PeopleSoft Sales Incentive Management, the intermediate results of calculations. Variables hold the calculation results and are then inputs to other calculations. Variables can be plan variables that persist beyond the run of an engine or local variables that exist only during the processing of a section.

warehouse — A PeopleSoft data warehouse that consists of predefined ETL maps, data warehouse tools, and DataMart definitions.

worksheet — A way of presenting data through a PeopleSoft Business Analysis Modeler interface that enables users to do in-depth analysis using pivoting tables, charts, notes, and history information.

workflow — The background process that creates a list of administrative actions based on selection criteria and specifies the procedure associated with each action.

worklist — The automated to-do list that PeopleSoft Workflow creates. From the worklist, you can directly access the pages you need to perform the next action, and then return to the worklist for another item.

zero-rated VAT — Abbreviation for *zero-rated value-added tax.* A VAT transaction with a VAT code that has a tax percent of zero. Used to track taxable VAT activity where no actual VAT amount is charged.

Index