

Oracle® Receivables

Guide to Integrating Oracle Receivables with
Vertex Quantum

Release 11*i*

Part No. A80834-03

May 2003

Oracle® Receivables, Guide to Integrating Oracle Receivables with Vertex Quantum, Release 11i

Part No. A80834-03

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Send Us Your Comments

Oracle Receivables Guide to Integrating Oracle Receivables with Vertex Quantum, Release 11i Part No. A80834-03

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this user guide. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
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Preface

Welcome to Release 11*i* of the *Oracle Receivables Guide to Integrating Oracle Receivables with Vertex Quantum* implementation guide.

This manual provides you with all the information you need to integrate Oracle Receivables and Oracle Order Management with Vertex Quantum. It is organized for easy access to the following information:

- License and support for Vertex Quantum
- Implementation procedures
- Day to day operations
- Reconciliation, support, and audit procedures
- Technical reference material
- Commonly asked questions

This preface explains how this guide is organized and introduces other sources of information that can help you.

Audience for this Guide

This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- Oracle Receivables.

If you have never used Oracle Receivables, we suggest you attend one or more of the Oracle training classes available through Oracle University.

- Vertex Quantum
- The Oracle Applications graphical user interface.

To learn more about the Oracle Applications graphical user interface, read the *Oracle Applications User Guide*.

See Other Information Sources for more information about Oracle Applications product information.

How To Use This Guide

This guide is the primary source of information about integrating Vertex Quantum with Oracle Receivables and Oracle Order Management. It contains overviews as well as task and reference information. This manual includes the following chapters:

- Chapter 1 describes the additional license requirements that you must complete before implementing or using Vertex Quantum. Additionally, this chapter documents which components of Vertex Quantum are distributed within the E*Business suite and the support available.
- Chapter 2 describes the installation and implementation steps required to integrate Vertex Quantum with Oracle Receivables and Oracle Order Management.
- Chapter 3 describes the normal operation of Oracle Receivables and Oracle Order Management when the Vertex products are implemented.
- Chapter 4 provides an overview of the various accounting and business processes required for the Vertex integration.
- Chapter 5 describes the internal communication parameters between Oracle and Vertex, the Oracle tax view functions that support this communication, and how to extend the integration using user descriptive flexfields, Oracle Receivables fields, and the PL/SQL functions. Additionally, this chapter includes some commonly asked questions about using Vertex Quantum with Oracle Receivables.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle Corporation is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

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JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle Corporation does not own or control. Oracle Corporation neither evaluates nor makes any representations regarding the accessibility of these Web sites.

Assumptions

This guide assumes that you will consult with qualified tax professionals when setting up your system. The examples in this guide are for illustrative purposes only; your specific implementation may be different. This guide also assumes you are familiar with Oracle Receivables. If you have never used Oracle Receivables, we suggest you attend one or more of the Oracle Receivables training classes available through Oracle Education. For more information about Oracle Receivables and Oracle training, refer to the Other Information Sources section below.

This guide also assumes that you are familiar with the Oracle Applications graphical user interface. To learn more about the Oracle Applications graphical user interface, read the *Oracle Applications User Guide*.

Other Information Sources

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

If this user guide refers you to other Oracle Applications documentation, use only the Release 11*i* versions of those guides unless we specify otherwise.

Online Documentation

All Oracle Applications documentation is available online (HTML or PDF).

- **Online Help** - The new features section in the HTML help describes new features in 11*i*. This information is updated for each new release of Oracle Receivables. The new features section also includes information about any features that were not yet available when this guide was printed. For example, if your administrator has installed software from a mini-packs an upgrade, this document describes the new features. Online help patches are available on MetaLink.
- **11*i* Features Matrix** - This document lists new features available by patch and identifies any associated new documentation. The new features matrix document is available on MetaLink.
- **Release Documents** - Refer to the readme file for your patch or the “About” document for your product, available on MetaLink, to learn about new documentation or documentation patches that you can download.

Related User Guides

Oracle Receivables shares business and setup information with other Oracle Applications products. Therefore, you may want to refer to other user guides when you set up and use Oracle Receivables.

You can read the guides online by choosing Library from the expandable menu on your HTML help window, by reading from the Oracle Applications Document Library CD included in your media pack, or by using a Web browser with a URL that your system administrator provides.

If you require printed guides, you can purchase them from the Oracle store at <http://oraclestore.oracle.com>.

User Guides Related to All Products

Oracle Applications User Guide

This guide explains how to navigate the system, enter data, and query information, and introduces other basic features of the GUI available with this release of Oracle Receivables (and any other Oracle Applications product).

You can also access this user guide online by choosing “Getting Started and Using Oracle Applications” from the Oracle Applications help system.

User Guides Related to This Product

Oracle Receivables Tax Manual

This manual provides everything you need to know about calculating tax within Oracle Receivables, Oracle Order Management, Oracle Sales, and Oracle iStore. It includes information about implementation procedures, setup forms and windows, the Oracle Receivables tax calculation process, tax reports and listings, and tax-specific open interfaces.

Oracle General Ledger User Guide

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

Oracle Order Management User Guide

This guide provides information about how to enter sales orders and returns, copy existing sales orders, schedule orders, release orders, create price lists and discounts for orders, run processes, and create reports.

Oracle Inventory User Guide

This manual explains how to define your items, units of measure classes, units of measure, and unit of measure conversions for use in measuring amounts for your units of production items, as well as other information about setting up and using Oracle Inventory.

Using Oracle HRMS - The Fundamentals

This manual explains how to enter your employees, so you can enter expense reports for them. It also explains how to set up organizations and site locations.

Oracle Financials Country-Specific User Guides

Use these manuals to meet statutory requirements and common business practices in your country or region. They also describe additional features added to Oracle Receivables to meet those requirements. Look for a user guide that is appropriate to your country; for example, see the *Oracle Financials for the Czech Republic User Guide* for more information about using this software in the Czech Republic.

Multiple Reporting Currencies in Oracle Applications

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

Multiple Organizations in Oracle Applications

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

Oracle Receivables User Guide

This user guide explains how to create and maintain transactions, enter and apply receipts, and enter customer information in Oracle Receivables. It also describes the Oracle Receivables open interfaces, such as AutoLockbox which lets you create and apply receipts and AutoInvoice which you can use to import and validate transactions from other systems.

Oracle Applications Flexfields Guide

This guide provides flexfields planning, setup, and reference information for the Oracle Receivables implementation team as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This guide also provides information on creating custom reports on flexfields data.

Installation and System Administration

Oracle Applications Concepts

This guide provides an introduction to the concepts, features, technology stack, architecture, and terminology for Oracle Applications Release 11*i*. It provides a useful first book to read before an installation of Oracle Applications. This guide also introduces the concepts behind, and major issues, for Applications-wide features such as Business Intelligence (BIS), languages and character sets, and self-service applications.

Installing Oracle Applications

This guide provides instructions for managing the installation of Oracle Applications products. In Release 11*i*, much of the installation process is handled using Oracle Rapid Install, which minimizes the time it takes to install Oracle Applications and the Oracle 8*i* Server technology stack by automating many of the required steps. This guide contains instructions for using Oracle Rapid Install and lists the tasks you need to perform to finish your installation. You should use this guide in conjunction with individual product user guides and implementation guides.

Upgrading Oracle Applications

Refer to this guide if you are upgrading your Oracle Applications Release 10.7 or Release 11.0 products to Release 11*i*. This guide describes the upgrade process in general and lists database upgrade and product-specific upgrade tasks. You must be at either Release 10.7 (NCA, SmartClient, or character mode) or Release 11.0 to upgrade to Release 11*i*. You cannot upgrade to Release 11*i* directly from releases prior to 10.7.

Maintaining Oracle Applications

Use this guide to help you run the various AD utilities, such as AutoUpgrade for 11*i*, AutoPatch, AD Administration, AD Controller, Relink, and others. It contains how-to steps, screenshots, and other information that you need to run the AD utilities.

Oracle Applications Product Update Notes

Use this guide as a reference if you are responsible for upgrading an installation of Oracle Applications. It provides a history of the changes to individual Oracle Applications products between Release 11.0 and Release 11*i*. It includes new

features and enhancements and changes made to database objects, profile options, and seed data for this interval.

Oracle Applications System Administrator's Guide

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

Oracle Alert User's Guide

This guide explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

Oracle eTechnical Reference Manuals

Each eTechnical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for a specific Oracle Applications product. This information helps you convert data from your existing applications, integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on MetaLink, Oracle's support web site. See the eTRM for Oracle Receivables-specific information.

Oracle Workflow Guide

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

Training and Support

Training

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

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

Support

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

Do Not Use Database Tools to Modify Oracle Applications Data

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

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

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

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

About Oracle

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Oracle products are available for mainframes, minicomputers, personal computers, network computers and personal digital assistants, allowing organizations to integrate different computers, different operating systems, different networks, and even different database management systems, into a single, unified computing and information resource.

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Redwood Shores, CA 94065
USA

Or send electronic mail to appsdoc_us@oracle.com.

License and Support for Vertex Quantum

This chapter describes how the Oracle E*Business suite communicates your responsibilities for additional licensing should you wish to use Vertex Quantum.

License

If you wish to implement or use Vertex Quantum with Oracle Applications, you must obtain a license from Vertex, Inc. You must call the Vertex Sales Department or visit the Product Inquiry section of the Vertex website to obtain a license.

Contact information:

Vertex Sales Department

(800) 355-3500

<http://www.vertexinc.com>

Product Inquiry

http://www.vertexinc.com/products40/inquiry_45.asp

Using Vertex Quantum

Integration with Vertex Quantum allows you to calculate, track, and report on complex taxes. You may want to consider using Vertex Quantum if:

- Your company has nexus or a physical presence in multiple states.
- Your company has multiple warehouses or warehouses located in jurisdictions that include origin-based tax.

Additionally, the benefits of using Vertex Quantum include:

- Vertex, Inc. provides leadership and expertise in state and local tax research.
- The Quantum Calculation Engine provides the ability to calculate complex, state, local, and district taxes based on ship-to, ship-from, and order acceptance locations.
- Quantum Database provides:
 - US Address Validation Services
 - Monthly updates to the Sales Tax Rate database
- Quantum Tax Decision Maker provides:
 - Flexible tax exemption and exemption processing
 - Central control by Tax Departments
 - Eliminates IT Overheads
- Quantum Returns provides:
 - Windows GUI Application
 - Support for over 400 laser printed tax returns
 - Eliminates manual preparation of tax returns, allowing more time for tax planning

Note: You do not have to implement or use Vertex Quantum in order to run the Oracle E*Business suite.

Support

All support for Vertex Quantum is provided by Vertex, Inc. Technical support for Vertex Quantum is available at (800) 281-1900, Monday to Friday, 8 AM - 8 PM EST.

Support for the integration of Vertex Quantum within Oracle Receivables is provided by Oracle Corporation under its normal support agreements.

The integration has been certified by Oracle for US State and local tax compliance within Oracle Receivables, Oracle Order Management, Oracle Order Capture, Oracle iStore, and Customer Relationship products.

For additional information, see [Support Procedures](#) on page 4-12.

Implementing the Vertex Quantum Integration

This chapter describes the installation and implementation steps required to integrate Vertex Quantum with Oracle Receivables, Oracle Order Management, and Oracle Order Capture.

Implementing the Vertex Quantum Integration

Oracle Receivables provides a Tax Vendor Extension to integrate external tax calculation programs with Oracle Applications. This Extension lets you provide for complex tax calculations while retaining the full power of Receivables to create and store all other tax data.

The Tax Extension is called whenever a tax rate is calculated by the Receivables Tax Engine. When implemented, the Tax Extension will return a tax rate or amount from the vendor program. Receivables will use this information to create the appropriate tax line(s) and related accounting information.

Note: If your Receivables installation uses multiple organizations (multi-org), the profile option Tax: Use Tax Vendor lets your system administrator control which users can call an installed third party application for tax calculations. The default value is Yes, which indicates that a user can call a third party application to calculate tax.

See also: Overview of Receivables Profile Options, *Oracle Receivables User Guide*

Scope

This implementation guide is for the integration of the tax vendor extension with Oracle Receivables Release 11i. The tax vendor extensions were implemented using Vertex Quantum.

Attention: The Vertex Quantum integration is only supported for U.S. state and local taxes. Do not implement this integration for Canada or any other country. For more information on international taxation handling, including Canadian taxes, please refer to the *Oracle Receivables Tax Manual*.

Related Documents

This integration guide is intended as a supplement to the *Oracle Receivables Tax Manual*.

When Implementing Vertex Quantum within Oracle Receivables, you should first review the Implementing U.S. Sales Tax topical essay. Only after completing all of the steps described in that essay should you execute the additional steps required for Vertex Integration.

See also: Implementing U.S. Sales Tax, *Oracle Receivables Tax Manual*

Sales Tax Rate Interface

Both Oracle Order Management and Receivables provide an interface to load tax rates, postal code ranges, and location names from data files supplied by external vendors, which is used by the Receivables Customers windows to validate addresses and create compiled sales tax data whenever an address is updated or created.

Receivables provides the sample Vertex SQL*Loader control file, arvertex.ctl. This file will load state, county, city, postal code ranges, GeoCodes, and jurisdiction code from the Vertex SEQMAST.dat data file into the Oracle AR_TAX_INTERFACE table. Once loaded, the GeoCode will be automatically used by the Vertex views.

See also: Sales Tax Rate Interface, *Oracle Receivables Tax Manual*

Tax Database Views and Functions

Receivables provides database views to control which database columns are passed into the Tax Engine to calculate tax for your transaction lines. The database views call PL/SQL functions to provide a consistent and flexible access to vendor-specific data.

Generic Tax Extension

The Tax Extension is called whenever a tax rate is calculated by the Receivables Tax Engine. Tax rates are calculated in the following windows, concurrent programs, and reports:

- Adjustments windows
- AutoInvoice
- Copy Transactions window
- Credit Transactions window
- Quote windows (CRM applications that use Oracle Order Capture to perform tax quotations)
- Sales Orders window (Oracle Order Management)
- Transactions window

The Tax Extension can be implemented to generate single or multiple tax lines for every invoice line. Receivables will store each tax line in the RA_CUSTOMER_TRX_LINES table.

Integration with Oracle Order Management

Vertex Quantum is fully integrated with Oracle Order Management. At the time of order entry, the tax amount for an order or line is calculated by calling the Receivables Tax Engine. Consequently, if you have installed a Tax Vendor, it will be called to calculate tax on the order in the same way as on the invoice.

Note: Tax on an order is for information only and is recalculated at the time of invoice creation which is needed because tax rates change over time and there could be a significant difference in the rates between the order date and the invoice date.

Integration with Oracle Order Capture

Vertex Quantum is fully integrated with Oracle Order Capture. At the time of quote entry, the tax amount for the quotation is calculated by calling the Receivable Tax Engine. Consequently, if you have installed a Tax Vendor, it is be called to calculate tax on quotes in the same way as on invoices and sales orders.

Note: Tax on an order, quote, or an online order is for information only and is recalculated at the time of invoice creation, which is needed because tax rates change over time and there could be a significant difference in the rates between the order date and the invoice date.

Preparing Receivables

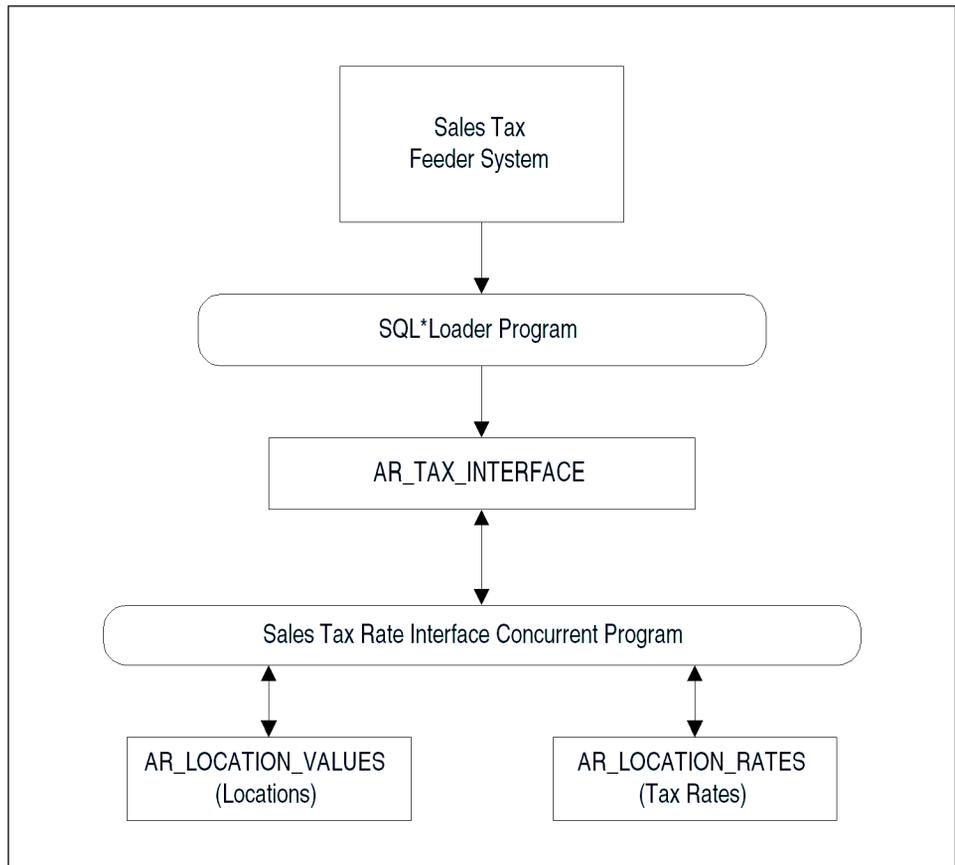
The tax extension is a PL/SQL procedure that is called by the Oracle Tax Engine every time a tax rate is calculated within Receivables or Oracle Order Management.

Load External Tax Information

Receivables provides a sample Vertex SQL*Loader control file, \$AR_TOP/bin/arvertex.ctl, to load new locations and tax rates from the SEQMAST data file supplied by Vertex. These programs let you load multiple tax rates for the same location, which may cover different date ranges and postal codes. The following diagram shows how your Tax Vendor's data is imported into Receivables tax tables.

Note: Receivables provides six possible Sales Tax Location Flexfield structures. The sample Vertex SQL*Loader file arvertex.ctl only supports the structure State.County.City.

The following illustration shows the Sales Tax Rate Interface:

Figure 2–1 Sales Tax Rate Interface

Receivables provides database views to pass tax information to the Tax Engine. You can use these views to control which database columns are passed into the Tax Engine for every transaction line that you tax. The following views were defined:

- TAX_LINES_INVOICE_IMPORT_V_V
Used by the Receivables AutoInvoice program.
- TAX_LINES_RMA_IMPORT_V_V
Used by the Receivables AutoInvoice program.
- TAX_LINES_RECURRENCE_IMPORT_V_V
Used by the Receivables AutoInvoice program.

Used by the Receivables Recurring Invoice program (Copy Transactions window).

- **TAX_LINES_CREATE_V_V**

Used by the Receivables Transactions Workbench.

- **TAX_LINES_DELETE_V_V**

Used by the Receivables Transactions Workbench.

- **TAX_ADJUSTMENTS_V_V**

Used by the Receivables Transactions Workbench.

- **TAX_LINES_CREATE_CM_V_V**

Used by the Receivables Transactions Workbench.

For additional information, please refer to the *Oracle Receivables eTRM* and the *Oracle Order Management eTRM available on MetaLink*.

Although these views are no longer supported, the functions associated with these views are available for customization:

- **OE_TAX_LINES_SUMMARY_V_V**

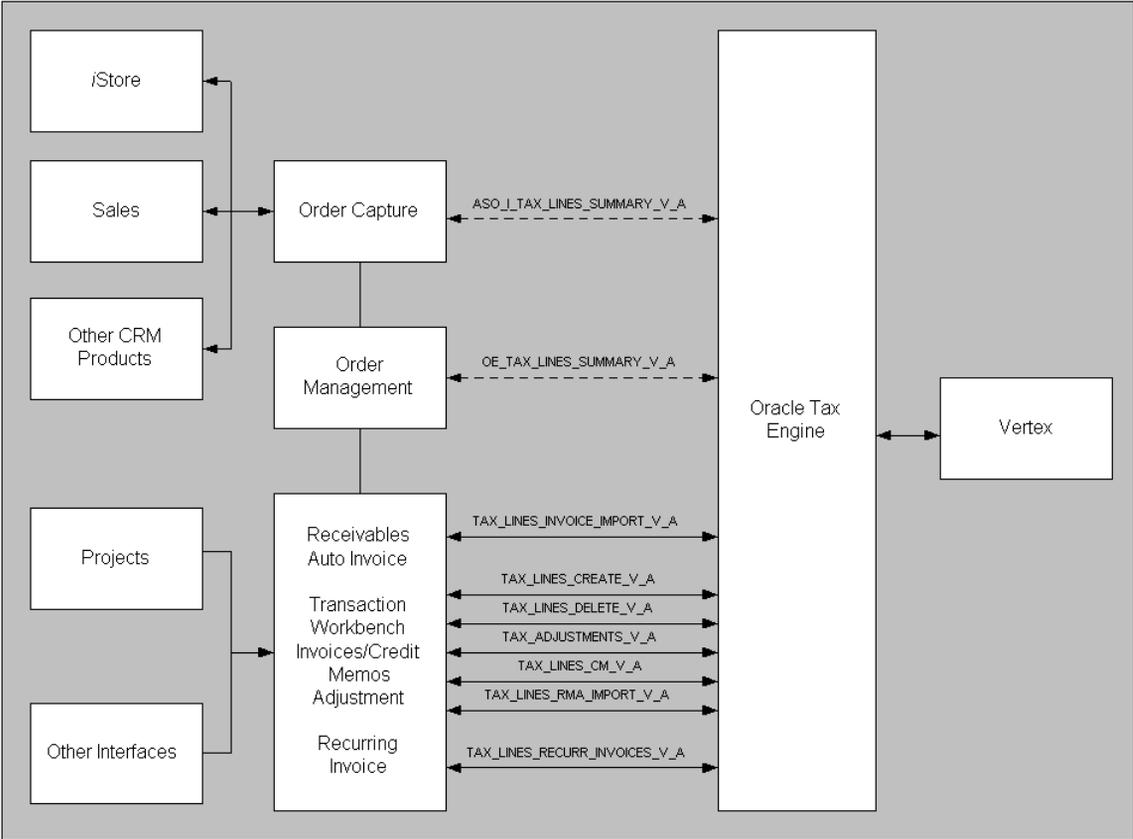
Used by the Order Management Sales Orders window.

- **ASO_I_TAX_LINES_SUMMARY_V**

Used by Oracle Order Capture

The following illustration shows how to use the Tax Engine to calculate tax:

Figure 2-2 Using the Tax Engine to Calculate Tax



Receivables Tax Engine

The Tax Engine uses the information passed by the database views to calculate tax, regardless of whether an external Tax Vendor is installed. Both the Tax Extension and the AR Tax Module are components of the Tax Engine and are called every time the Tax Engine is requested to calculate tax.

If an external tax vendor is installed, the Tax Engine will use the tax rate or amount returned by the Tax Extension to override the rate or amount calculated by the AR Tax Module. The following table highlights key columns used by your tax vendor.

Table 2-1 Columns used by your tax vendor.

View Column Name	Description
TRX_NUMBER	Transaction Number
TRX_DATE	Transaction Date
BILL_TO_CUSTOMER_NAME	Bill-to customer name
SHIP_FROM_ADDRESS_CODE	Jurisdiction code for Ship From Address
SHIP_TO_ADDRESS_CODE	Jurisdiction code for Ship-To Address
PART_NUMBER	Inventory Part Number

Tax Jurisdictions

Within the United States, a tax rate is calculated from Ship To, Ship From, and Point of Order Acceptance. To implement the Tax Extension using each of these addresses, you will need to store the latter three values in descriptive flexfields at the appropriate level: Invoice Line or Header, or Order Line or Header.

If you use AutoInvoice to import orders from Oracle Order Management, AutoInvoice will populate the item line Transaction Flexfield with packing slip information, which is used to source the Ship From site use and address for each order.

See also: Integrating Oracle Order Management with Oracle Receivables, *Oracle Financials Open Interfaces Manual*

The jurisdiction codes are loaded by the Sales Tax Rate Interface into attribute 1 of the table `ar_location_rates`. To load vendor jurisdiction codes into the other view columns, you must modify the views to join `ar_location_rates` with your appropriate customized table.

If you require postal code data to nine characters (zip+4) to segregate customer addresses by jurisdiction code, you must manually update the address data provided by your Tax Vendor.

You can use the Tax Location and Rates window to update the postal code data to comply with your jurisdiction code requirements.

This table shows an example of multiple jurisdiction codes within a standard five digit postal code designation:

Table 2-2 Jurisdiction codes

location_segment_id	from_postal_code	to_postal_code	jurisdiction_code
43 (San Francisco)	94110	94116	code 1
43 (San Francisco)	94117	94117	code 2
43 (San Francisco)	94118	94118-3999	code 3
43 (San Francisco)	94118-4000	94118-9999	code 4

See also [Storing Tax Information in Oracle Receivables](#) on page 5-18.

Installing the Vertex Quantum Integration

Starting with Oracle Release 11.5.9 and later releases, the latest Oracle-certified version of Vertex Quantum Sales and Use Tax software is available prepackaged with Oracle E Business Suite Release 11i. See the setup checklist for prepackaged Vertex Quantum Sales and Use Tax Integration steps on page 2-14 for installation if a prepackaged version is used.

The tax vendor also provides an alternative mechanism to install their software. See the setup checklist for Non Prepackaged Vertex Quantum integration on page 2-21 for installation without prepackaged Vertex software.

The prepackaged version of Vertex Quantum is a convenient installation method with a simplified Vertex database server-side software. The Vertex software resides on the Oracle installation CD as a single zip file. A one-step automated process facilitates Vertex installation without user intervention, which replaces the multi-step interactive process previously required. The non prepackaged installation method requires these steps from the checklist, which are eliminated if prepackaged installation is used:

- Provide Grants to the APPS Schema
- Recreate Synonyms
- Create Index on Vertex Audit File

Perform the prerequisites steps before using the setup checklist for any installation method.

Character Mode Upgrade

If you are upgrading from Oracle Applications Release 10 character mode applications, integrating with the Vertex Quantum Sales and Use Tax using the solution from Design Migration Services, please contact your Oracle account manager for consulting assistance.

Prerequisites

- To execute a license agreement and acquire associated software, contact the Vertex sales department at (800) 355-3500, or visit the product inquiry area of the Vertex website at http://www.vertexinc.com/products40/inquiry_45.asp.
- Quantum, TDM, Returns, and implementation training from Vertex, Inc.
- Implement U.S. Sales Tax by performing all of the steps described in the Implementing U.S. Sales Tax essay in the *Oracle Receivables Tax Manual*.
- Upload the Vertex SEQMAST data file into Oracle Receivables Address Validation tables. You need to upload this file before loading any customer addresses. This two-step process is described in [Monthly Procedures](#) on page 4-7.

- Validate customer addresses. All Ship-to and Bill-to Customer Addresses within the U.S. must be validated by Oracle Receivables by setting the Address Validation field in the System Options window to 'Error.'
- Oracle SQL*Plus access to the APPS schema
- Permission to relink Oracle executables
- Test database

Setup Checklist for PrePackaged Vertex Quantum Integration

The Vertex database server-side software, residing on the Oracle CD, is manually installed after the Oracle E Business suite Release 11i (11.5.9 or later) is successfully installed. To find the version of the latest prepackaged Vertex software, review the About document included with your software. The prepackaged installation process will automatically upgrade the existing database server-side Vertex software, if any. The main components of the prepackaged Vertex software are:

- An installation driver script
- A zipped Vertex software file consisting of database server-side objects necessary for installing Vertex Quantum.

Note: You must perform all prerequisites in this chapter before installing Vertex software.

Where appropriate, Oracle may certify a more recent version of Vertex software than the version included with the Oracle CD. Users can download the prepackaged Vertex software via Oracle MetaLink. Contact your Oracle support representative for more information.

Complete the following steps in the order shown to implement the prepackaged version of Tax Vendor Extension:

1. Run the Installation Driver Script
2. Set Profile Options
3. Set Up Lookup Code ARTAXVDR: Location Qualifier
4. Set Up Lookup Code Tax Exemption Reason
5. Set Up Vendor-Specific Tax Codes
6. Set Up System Options
7. Set Up Jurisdiction Codes and other optional fields (optional)
8. Install Client-Side Vertex Software
9. Load Tax Rates Data from Vertex
10. Verify Tax Vendor Implementation

Step 1 Run the Installation Driver Script

The installation driver script (UNIX Shell script for UNIX-based systems) unzips the Vertex software file, installs the database server-side software, and integrates Vertex software with

Oracle E Business Suite. After a successful installation of Release 11.5.9 mini-pack, run the driver script at the command prompt as follows:

```
cd $AR_TOP/bin
artxptnr.sh <parameter1> <parameter2> <parameter3> <parameter4> <parameter5>
<parameter6> <parameter7> <parameter8>
```

This table displays parameters passed to the driver script:

Table 2–3 Parameters passed to the driver script

Parameter	Parameter Name	Required
parameter1	Partner Name	Yes
parameter2	System User (Database)	Yes
parameter3	System User Password	Yes
parameter4	Apps User Password	Yes
parameter5	Vertex Schema Name	Yes
parameter6	Vertex Schema Password	Yes
parameter7	Tablespace Name for Vertex Schema	Yes
parameter8	Temporary Tablespace Name for Vertex Schema	Yes

The parameters in this table are required and must be passed in the order listed. An example driver script run command based on this table is:

```
$AR_TOP/bin/artxptnr.sh vertex system manager apps vertex vertex USER_DATA TEMP
```

Other relevant information for the driver script is:

- Location of the driver script: \$AR_TOP/bin
- Location of the execution log file: \$APPLTMP
- Name of the execution log file: artxptnr.log

Step 2 Set Up Profile Options

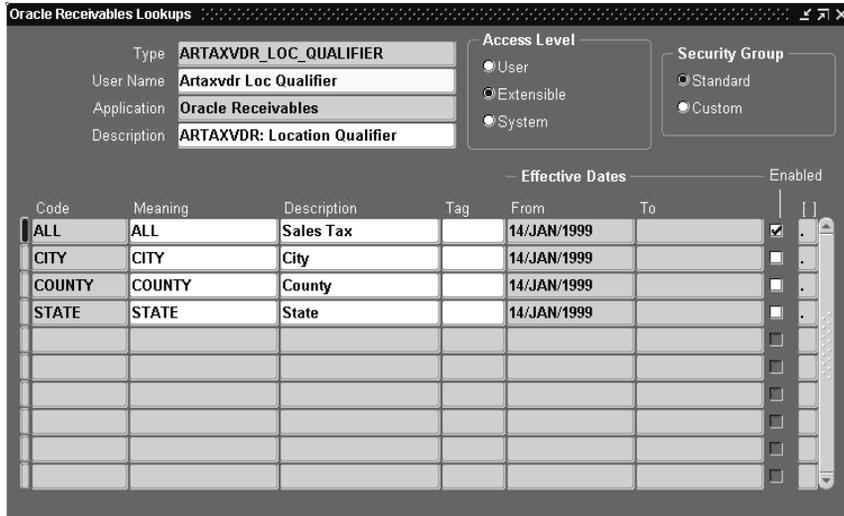
You should set profile options at the responsibility level. This table displays the profile options that are used by the tax vendor extension:

Table 2–4 Profile Options and Default Values

Profile Name	Default Value	Description
Tax Vertex: Case Sensitive	No	Indicates if tax calculation queries to the Vertex Tax Decision Maker (TDM) are case sensitive. Set this profile option to "Yes" to improve system performance.
Tax Vertex: Use Secondary Taxes	Use Secondary Tax	Indicates if secondary taxes are returned to Oracle. You should accept the default value.

Step 3 Set Up Lookup Code ARTAXVDR: Location Qualifier

The lookup code ARTAXVDR: Location Qualifier determines whether tax lines should be created separately for State, County, and City, or if the tax rates and amounts should be summed up into one tax line. Use the Oracle Receivables Lookups window to define this lookup code.



Required Setup: Enable ALL and disable STATE, COUNTY, and CITY to get a consolidated, single tax line.

Step 4 Set Up Lookup Code Tax Exemption Reason

When storing tax exemptions in Oracle Receivables, use the Receivables Lookups window to set up the Tax Exemption Reason lookup code. These reason codes are used by the tax vendor to determine the exemption reason and are restricted in the number of characters that are used by the vendors.

Attention: Vertex is restricted to one alphanumeric character; define these exemption reasons so that the first character of the Exemption Reason QuickCode Name is unique.

Step 5 Set Up Vendor–Specific Tax Codes

When using the tax vendor extensions, you must define a location–based tax code for each organization that uses Vertex integration. Only location–based taxes are calculated by the tax vendor extensions. Depending on your setup for the lookup.code ARTAXVDR: Location Qualifier, you may need to define some additional tax codes (see below). When this lookup code is set up to return STATE, COUNTY, and CITY, the tax vendor extension creates tax lines with separate tax codes set for the state, county, and city tax.

For each organization that uses Vertex integration, create three extra tax codes: STATE, COUNTY, and CITY. These tax codes should be of *Sales Tax* type. The tax rates associated with these tax codes are not used, but are updated by the tax vendor extension.

This integration generates one tax line per invoice. The State, County, and City tax amounts and tax rates are held in the global descriptive flexfield for the tax line, which lets Oracle provide a more detailed level of tax reporting and reconciliation without requiring three tax lines per invoice line and multiple tax codes.

Oracle Receivables uses the tax account identified in the Tax Locations and Rates window to control the tax liability posting so that each state may have its own state tax liability account.

Step 6 Set Up System Options

The default tax views do not work properly with the tax vendor extensions. These views should be replaced with the vendor tax views provided. These views were installed under a different name (see below).

1. Navigate to the System Options window.
2. Choose the Tax tabbed region.
3. Enter Vertex in the Tax Vendor Views field for each organization that will use Vertex integration so that the views use the data source derived from the Vertex views.
4. Enter the State.County.City in the Location Flexfield Structure field, which is required for valid location addresses for Vertex integration.
5. Choose the Tax Defaults and Rules tab.
6. Check the Calculate Tax on Credit Memo during AutoInvoice check box.

The screenshot shows the 'System Options (Vision Operations)' window with the 'Tax Defaults and Rules' tab selected. The 'Tax Method' is set to 'Sales Tax'. The 'Location Flexfield Structure' is 'State.County.City'. The 'Postal Code Range' is '00000 - 99999.9999'. The 'Address Validation' is 'Error' and the 'Compound Taxes' checkbox is checked. The 'Invoice Printing' is 'Itemize And Sum'. The 'Tax Registration Number' is '98-7895444'. The 'Tax Vendor Views' is 'Vertex'. The 'Sales Tax Geo Override' is empty. The 'Inclusive Tax Used' checkbox is unchecked. The 'Rounding Options' section includes: 'Calculation Level' set to 'Line', 'Rounding Rule' set to 'Nearest', 'Reporting Currency' set to 'USD', 'Precision' set to '2', and 'Min Accountable Unit' is empty. The 'Allw Override' checkbox is unchecked.

Step 7 Set Up Jurisdiction Codes and other optional fields (optional)

You can implement descriptive flexfields and use standard fields available in Oracle Receivables windows to extend the basic functionality of this integration. Specifically, Warehouse GeoCode, Salesperson GeoCode, and Customer Addresses GeoCode can be used to support tax calculations using both ship-from and ship-to addresses. The Predefined Exempt Rates descriptive flexfield lets you enter an exemption percentage and the User Defined Receivables Activity Information descriptive flexfield lets you set up a flag to indicate whether you want to post adjustment information to the Vertex audit table. For more information, see [Storing Tax Information in Oracle Receivables](#) on page 5-18.

Step 8 Install Client-Side Vertex Software

Install all necessary client-side Vertex applications, including Quantum Utilities, Tax Decision Maker (TDM), and Quantum Returns.

Step 9 Load Tax Rates Data from Vertex

Load the tax rates data from Vertex that are needed for the integrated solution. These tax rates are loaded in Vertex schema using Vertex utilities. Contact Vertex for additional details about this step.

Step 10 Verify Tax Vendor Implementation

Perform the steps below for an organization to verify that the tax vendor is successfully implemented.

Note: After each step, confirm that the vendor's tax reports reconcile to Oracle Receivables.

1. Run the Tax: Set up verification report

This report is available with Oracle Release 11.5.9 or later. Run the verification report with these parameters:

- Tax Partner Name: Vertex
- Tax Partner Schema Name <Vertex>

Review the report output to verify completeness of the Vertex integration set up.

2. Create Customer Addresses.

Customer addresses are validated against existing locations.

3. Create a sales order.

The tax vendor extensions are integrated with Order Management to allow tax estimations to be calculated.

4. Import a sales order using AutoInvoice.

Tax is calculated using the vendor tax extensions on invoices imported from Oracle Order Management or other feeder systems.

5. Maintain Imported Invoices using the Transaction Workbench.

Any modifications to imported invoices are reconciled with your vendor's tax reports.

6. Credit this invoice.

When you create credit memos, tax amounts will reconcile to your vendor's tax reports.

7. Adjust the invoice.

Tax adjustments will reconcile with your vendor's tax reports. Only approved adjustments of type 'Tax' are reflected in your vendor's tax reports. This lets you control which write-offs have recoverable sales tax from the state, county, and city.

8. Copy (Recur) this invoice.

Tax is calculated using the vendor tax extensions on recurred invoices.

9. Create an invoice in the Transaction Workbench.
Tax is calculated using the vendor tax extensions on manual invoices created from within Oracle Receivables.
10. Create an exempt order.
Oracle Receivable exemptions can be used to calculate tax with the vendor tax extensions.

Setup Checklist for Non PrePackaged Vertex Quantum Integration

Complete these steps in the order shown to implement the Tax Vendor Extension

1. Install Database Server-Side Vertex Software
2. Provide Grants to the APPS Schema
3. Remove the C Tax Vendor (optional)
4. Recreate Synonyms
5. Set Profile Options
6. Setup Lookup Code ARTAXVDR: Location Qualifier
7. Setup Lookup Code Tax Exemption Reason
8. Setup Vendor-Specific Tax Codes
9. Setup System Options
10. Create Index on Vertex Audit File
11. Setup Jurisdiction Codes and Other Optional Fields (optional)
12. Install Client-Side Vertex Software
13. Load Tax Rates Data from Vertex
14. Verify Tax Vendor Implementation

Step 1 Install Database Server-Side Vertex Software

Install the latest Oracle-certified version of Vertex's Quantum Sales and Use Tax software, which includes installing the Vertex PL/SQL packages, tables, data, and any other necessary database objects. These database objects should all be created in a separate vendor schema.

Note: You must apply the cumulative Oracle tax patch that is intended to work with the Vertex version that is being installed. Contact your Oracle support representative for more information.

Step 2 Provide Grants to the APPS Schema

Once the vendors are installed, certain grants must be given to the APPS schema so that these vendor packages can be executed:

```
CONNECT <Vertex schema>/<Vertex password>
GRANT ALL ON QSU TO <APPS Schema>
WITH GRANT OPTION;
GRANT ALL ON GEO TO <APPS Schema>
WITH GRANT OPTION;
GRANT ALL ON REGPRERETURNSTBL TO <APPS Schema>
WITH GRANT OPTION;
```

Step 3 Remove the C Tax Vendor (optional)

This step is required if you are upgrading from DMS integration. To use the PL/SQL version of the tax vendor extensions, the C tax vendor extension must be taken out of all Oracle executables. This integration will make obsolete the integration from DMS.

The \$FND_TOP/usrxit/devenv files VNDARSL and VNDARPL should include vendor-specific object files which must be removed. The following objects are defined for Vertex in VNDARPL and VNDARSL. You should remove any references to these objects.

```
$(AR_TOP)/lib/arvertex.o
$(VERTEX_TOP)lib/libvst.a
$(VERTEX_TOP)/lib/libloc.a
$(Vertex_TOP)/lib/libport.a
```

Relink aiap, AutoInvoice, recurring invoices, OE Transaction Manager, and the reports executables by issuing the following commands:

```
adrelink force=y ranlib=y "fin aiap"
adrelink force=y ranlib=y "fin ar25run"
adrelink force=y ranlib=y "ar RAXTRX"
adrelink force=y ranlib=y "ar ARXREC"
adrelink force=y ranlib=y "ar ARTXMT"
adrelink force=y ranlib=y "oe OEORPC"
adrelink force=y ranlib=y "oe OESREL"
adrelink force=y ranlib=y "oe OEBSHC"
adrelink force=y ranlib=y "oe OECCMC"
adrelink force=y ranlib=y "oe OEIIRA"
```

```

adrelink force=y ranlib=y "oe OEKCII"
adrelink force=y ranlib=y "oe OEBOE"
adrelink force=y ranlib=y "oe OEPREL"
adrelink force=y ranlib=y "oe OERLDI"
adrelink force=y ranlib=y "oe OERLRI"
adrelink force=y ranlib=y "oe OERPRS"
adrelink force=y ranlib=y "oe OESHIM"
adrelink force=y ranlib=y "oe OEVINV"
adrelink force=y ranlib=y "oe OEWREL"
adrelink force=y ranlib=y "oe OEZMAI"
adrelink force=y ranlib=y "oe WSHARI"
adrelink force=y ranlib=y "oe WSHIAR"
adrelink force=y ranlib=y "oe WSHREL"

```

Step 4 Recreate Synonyms

Once the packages are installed, you must recreate certain synonyms to point to the correct vendor packages.

```

CONNECT <APPS_Schema>/<APPS_Password>
DROP SYNONYM ARP_TAX_VERTEX_QSU;
DROP SYNONYM ARP_TAX_VERTEX_GEO;
DROP SYNONYM ARP_TAX_VERTEX_AUDIT;
CREATE SYNONYM ARP_TAX_VERTEX_QSU FOR <Vertex Schema>.QSU;
CREATE SYNONYM ARP_TAX_VERTEX_GEO FOR <Vertex Schema>.GEO;
CREATE SYNONYM ARP_TAX_VERTEX_AUDIT FOR <VERTEX Schema>.REGPRERETURNSTBL;

```

Step 5 Setup Profile Options

Set profile options at the responsibility level. This table displays the profile options that are used for the tax vendor extension.

Table 2-5 Profile Options and Default Values

Profile Name	Default Value	Description
Tax: Use Tax Vendor	Null	Use this option to indicate whether the vendor tax engine should be used. The default value indicates that the tax vendor is not used. Set this option to "Yes" if you are using Vertex. This profile option is not required if you are using Release 11.5.9 or later. The profile option is replaced by step 6 in this section: in the Oracle Receivables System Options window, choose the Tax tab, and enter "Vertex" in the Tax Vendor Views field.
Tax: Use PL/SQL Vendor	Null	Indicates which tax vendors are used. Set this option to "Vertex". This profile option is not required is you are using Release 11.5.9 or later. The profile option is replaced by step 6 in this section: in the Oracle Receivables System Options window, choose the Tax tab, and enter "Vertex" in the Tax Vendor Views field.
Tax Vertex: Case Sensitive	No	Indicates whether tax calculation queries to the Vertex Tax Decision Maker (TDM) are case sensitive. Set this profile option to "Yes" to improve system performance.
Tax Vertex: Use Secondary Taxes	Use Secondary Tax	Indicates whether secondary taxes are returned to Oracle. You should accept the default value.
Tax: Calculate Tax on Credit Memos	No	Set this option to "Yes" to post credit memo transactions to the Vertex audit file. This profile option is not available if you are using Release 11.5.7 or later. In the Oracle Receivables System Options window, choose the Tax Defaults and Rules tab, and check the Calculate Tax on Credit Memo during AutoInvoice check box.

Step 6 to Step 9

For details on these steps, refer to Step 3 to Step 6 in Setup Checklist for PrePackaged Vertex Quantum Integration on page 2-14. These steps include:

- Setup Lookup Codes ARTAXVDR: Location Qualifier

- Setup Lookup Code Tax Exemption Reason
- Setup Vendor-Specific Tax Codes
- Setup System Options

Step 10 Create Index on Vertex Audit Table

During the rollback phase of AutoInvoice, the program deletes invalid transaction from Oracle Receivables interface tables. You need to create an index for the TRANSUSERAREA column in the REGPRERETURNSTBL Vertex table so that Vertex can identify the invoices to delete.

To create this index:

1. Login to SQLPLUS in the Vertex Schema.
2. Enter the following SQL command:

```
CREATE INDEX <INDEX_NAME> ON  
REGPRERETURNSTBL (TRANSUSERAREA);  
where <INDEX_NAME> is unique within the Vertex schema.
```

Attention: Do not insert data into TRANSUSERAREA. This column is used by Oracle Receivables.

Step 11 to Step 14

For details of these steps, refer to step 7 to 10 in the Setup Checklist for Prepackaged Vertex Quantum Integration. These steps include:

- Setup Jurisdiction Codes and Other Optional Fields (optional)
- Install Client-Side Vertex Software
- Load Tax Rates Data from Vertex
- Verity Tax Vendor Implementation

3

Tutorial

This chapter describes the normal operation of Oracle Receivables and Oracle Order Management when the Vertex products are implemented. Use this tutorial to learn how your daily transactions are reflected in the Vertex Sales Tax Register.

Tutorial

This section describes the Demonstration Script for a standard implementation.

Create Customer Addresses

When creating a new address for a customer, the state, county, city, and zip code are validated against existing locations. These locations are imported into Oracle Receivables using the Vertex SEQMAST file and the Receivables Sales Tax Rate Interface. In this way, each customer site is guaranteed to have an address that is associated with a valid jurisdiction code.

The screenshot shows the 'Customers - Standard' form with the 'Addresses' tab selected. The 'Customer Addresses - Oracle Apps, 1107' window is open, displaying a list of addresses. The selected address is '100 Oracle Apps St.' with a Postal Code of '64801'. A pop-up window titled 'City' is displayed, showing a list of cities and their parent jurisdictions for the zip code 64801. The list includes AIRPORT DRIVE, CLIFF VILLAGE, DENNIS ACRES, DUQUESNE, GATEWAY DRIVE, and IRON GATES, all with parent jurisdictions in Jasper, MO.

City	Parent	From Postal Code	To Postal Code
AIRPORT DRIVE	JASPER,MO	64801	64801-9999
CLIFF VILLAGE	NEWTON,MO	64801	64801-9999
DENNIS ACRES	NEWTON,MO	64801	64801-9999
DUQUESNE	JASPER,MO	64801	64801-9999
GATEWAY DRIVE	NEWTON,MO	64801	64801-9999
IRON GATES	JASPER,MO	64801	64801-9999

When entering the address, the zip code can be used to automatically populate the state, county, and city. In cases where multiple jurisdiction codes are available for a particular zip code, a pop up list will appear as shown below.

For example, the zip code 64801 is defined in several jurisdictions in the state of Missouri. The poplist helps you select the correct jurisdiction code for your addresses.

Create a customer with an address in Cliff Village (Newton County), MO 64801. Assign Bill To and Ship To business purposes to this address.

Create a Sales Order

Sales orders can be created in Oracle Order Management and the tax amount will be calculated automatically. The sales order includes the customer (which defines the ship-to address) and the salesperson can be assigned the point-of-order acceptance. Also, if the order is a shipped order, the warehouse from which the order is shipped will define the ship-from address.

Create a sales order for the customer that you created in the previous step. Enter the order header information in the Main Tab and Others Tab of the Sales Order Pad window.

The screenshot shows the Oracle Sales Order Pad window with the following data:

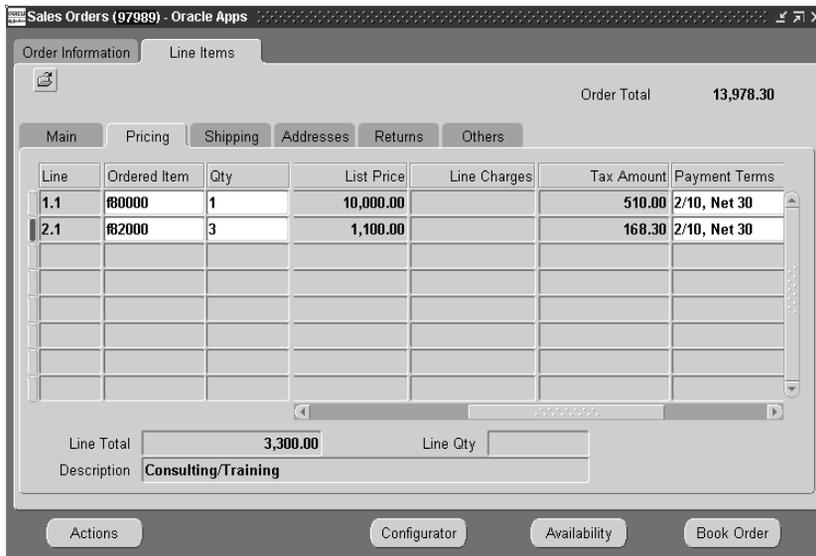
Order Information		Line Items	
Main Others			
Customer	Oracle Apps	Order Number	97989
Customer Number	1107	Order Type	Standard
Customer PO		Date Ordered	14/NOV/2000
Customer Contact		Price List	Corporate
Ship To	Ship-To	Salesperson	Lewis, Mr. Barry
	100 Oracle Apps St.	Status	Entered
	CLIFF VILLAGE, 64801, US	Currency	USD
Bill To	Bill-To	Subtotal	13,300.00
	100 Oracle Apps St.	Tax	678.30
	CLIFF VILLAGE, 64801, US	Charges	0.00
		Total	13,978.30

Buttons at the bottom: Actions, Configurator, Availability, Book Order

Tax Calculation on Sales Orders

The tax calculated on a sales order is an estimation since many factors, including the ship-to address, can change. Also, since there is no accounting for the tax amounts at this time, the vendor will calculate the tax, but will not update its audit files.

Create two sales order lines, both of which use the tax code for the Location Based tax type. The first sales order line has a quantity of 1 and a list price of \$10,000.00. The second sales order line has a quantity of 3 and a list price of \$1,100.00. When you save the order, the first line will have estimated tax of \$510.00 and the second line will have estimated tax of \$168.30. After saving the order, book the order by clicking on the Book Order button.



Import Sales Orders Using AutoInvoice

Orders created in Oracle Order Management or documents created in other feeder systems can be imported into Oracle Receivables using AutoInvoice. Tax will be calculated using the vendor tax extension. AutoInvoice will generate the accounting and sales credits, creating a fully validated invoice in Oracle Receivables.

Run AutoInvoice for the order created in the previous steps. To find the invoice in the Receivables Transactions window, reference the order number.

The screenshot displays the Oracle Receivables Transactions window for a specific invoice. The window title is "Transactions (Vision Operations: USD) - Oracle Apps, 10002829". The main data fields are as follows:

- Number:** 10002829
- Date:** 14/NOV/2000
- Complete:**
- Reference:** (empty)
- Currency:** USD
- Transaction:** .9798
- Source:** Order
- Class:** Invoice
- Type:** Invoice
- GL Date:** 14/NOV/2000

Below the main data fields, there are several tabs: Main, More, Remit To, Sales, Paying Customer, Notes, Commitment, and Credit. The "Main" tab is active, showing the following details:

- Ship To:**
 - Name: Oracle Apps
 - Number: 1107
 - Location: Ship-To
 - Address: 100 Oracle Apps St.
 - Address: CLIFF VILLAGE, MO 64801 United States
 - Contact: (empty)
- Bill To:**
 - Name: Oracle Apps
 - Number: 1107
 - Location: Bill-To
 - Address: 100 Oracle Apps St.
 - Address: CLIFF VILLAGE, MO 64801 United States
 - Contact: (empty)
- Terms:** 30 Net
- Due Date:** 14/DEC/2000
- Commitment:** (empty)
- Salesperson:** Lewis, Mr. Barry

At the bottom of the window, there are several buttons for navigation and actions: Tag, Distributions, Sales Credits, Balances, Incomplete, Freight, Credit Instalments, and Line Items.

Invoice Lines from an Imported Order

The order lines are imported by AutoInvoice and invoice lines are created. The top section of the window shows the totals for the transaction, lines, tax, and freight.

To view the invoice lines for the imported invoice created in the previous steps, select the Line Items button from the Transactions window.

The screenshot shows the Oracle Apps interface for viewing invoice lines. At the top, a summary table provides totals for Transaction, Lines, Tax, and Freight. Below this is a main window with tabs for Main, Sales Order, Tax Exemption, Rules, and More. The main window contains a table with columns for Num, Item, Description, UOM, Quantity, Unit Price, Amount, and Tax Code. Two lines are visible: Line 1 for Consulting/Training and Line 2 for Sentinel Multimedia. At the bottom, there are buttons for Distributions, Sales Credits, Freight, and Tax.

Transaction		Lines	Tax	Freight
Total	13,978.30	13,300.00	678.30	0.00

Num	Item	Description	UOM	Quantity	Unit Price	Amount	Tax Code
1	82000	Consulting/Trainin	Each	3	1100	3,300.00	Location
2	80000	Sentinel Multimed	Each	1	10000	10,000.00	Location

Accounting for the Imported Order

The accounting entries are created for the imported order, including the accounting for the tax lines calculated by the tax vendor extension.

To view the accounting entries for the imported invoice created in the previous steps, select the Distributions button from the Transactions window or the Lines window.

Accounting (Vision Operations: USD) - Oracle Apps, 10002829

Accounts For All Lines

Transaction Line

Detail Line Number	Class	GL Account	GL Date	%	Amount []
	Receivable	01-000-1210-0000-000	14/NOV/2000	100.0000	13,978.30
	Rounding Di	01-000-1110-0000-120	14/NOV/2000	100.0000	0.00
1	Revenue	01-000-6410-0000-000	14/NOV/2000	100.0000	3,300.00
1 1	Tax	01-000-2520-0000-000	14/NOV/2000	100.0000	168.30
2	Revenue	01-000-6410-0000-000	14/NOV/2000	100.0000	10,000.00
2 1	Tax	01-000-2520-0000-000	14/NOV/2000	100.0000	510.00
Total					

GL Posted Date Comments

Description **Operations-Balance Sheet-Accounts Receivable-No Sub Account-No Product**

Tax Account

Description

Line Amount Accounting Rule

Balances

The Balances window shows the balance due for the Line, Tax, Freight, and Bank Charges. The balance can be modified by applying payments, credit memos, adjustments, or early payment discounts. The tax balance will reconcile with your vendor's tax reports.

To view the balances for the imported invoice created in the previous steps, select the Balances button from the Transactions window.

	Line	Tax	Freight	Charges	Total
Original	13,300.00	678.30	0.00		13,978.30
Receipts	0.00	0.00	0.00	0.00	0.00
Credits	0.00	0.00	0.00		0.00
Adjustments	0.00	0.00	0.00	0.00	0.00
Discount	0.00	0.00	0.00		0.00
Balance	13,300.00	678.30	0.00	0.00	13,978.30

Vertex Tax Reports (After AutoInvoice)

The vendor tax reports will reconcile with the balances in Oracle Receivables. The following illustration of the report shows the result of importing the order with AutoInvoice.

Run the vendor tax report for the imported invoice created in the previous steps. The tax amounts for each line are the same as the tax amounts shown on the Transaction Lines window for the imported invoice.

Figure 3-1 Sales Tax Register Detail Report (after AutoInvoice)

RELEASE: 2.0 02/08/2000		SALES TAX REGISTER - DETAIL (PRE)				TRANS PERIOD:	PAGE 1
RUN DATE 12/01/2000						INVOICE PERIOD:	START - END
COMPANY-CD: ALL	DIVISION-CD: ALL	TYPE: ALL	SUBTYPE: ALL	TAX-TYPE: ALL	STATE: ALL	START - END	
STATE	COUNTY	CITY	DISTRICT	TOTAL TAX			
-----MISSOURI-----							
CITY: CLIFF VILLAGE	COUNTY: NEWTON	GEOCODE: 26-145-3755 STR:		T 26-145-3755 F	26-145-3755 A	26-145-3755	
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N		TYPE: SALE	SUBTYPE: P	
EXEMPT CERTIFICATE #:							
INV: 10002829	DATE: 11/14/2000	LINE: 00001	PROD-CD: F82000	USER: 12114			
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS			
GROSS SALES-----	3,300.00	3,300.00	3,300.00	3,300.00			
ZERO RATE AMT-----	.00	.00	.00	.00			
TAXABLE AMT-----	3,300.00	3,300.00	.00	.00			
TAX AMT-----	139.42	28.88	.00	.00			168.30
CITY: CLIFF VILLAGE	COUNTY: NEWTON	GEOCODE: 26-145-3755 STR:		T 26-145-3755 F	26-145-3755 A	26-145-3755	
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N		TYPE: SALE	SUBTYPE: P	
EXEMPT CERTIFICATE #:							
INV: 10002829	DATE: 11/14/2000	LINE: 00001	PROD-CD: F80000	USER: 12114			
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS			
GROSS SALES-----	10,000.00	10,000.00	10,000.00	10,000.00			
ZERO RATE AMT-----	.00	.00	.00	.00			
TAXABLE AMT-----	10,000.00	10,000.00	.00	.00			
TAX AMT-----	422.50	87.50	.00	.00			510.00
-----CITY TOTALS-----: CLIFF VILLAGE							
GROSS SALES-----	13,300.00	13,300.00	13,300.00	13,300.00			
ZERO RATE AMT-----	.00	.00	.00	.00			
TAXABLE AMT-----	13,300.00	13,300.00	.00	.00			
TAX AMT-----	561.92	116.38	.00	.00			678.30
-----COUNTY TOTALS-----: NEWTON							
GROSS SALES-----	13,300.00	13,300.00	13,300.00	13,300.00			
ZERO RATE AMT-----	.00	.00	.00	.00			
TAXABLE AMT-----	13,300.00	13,300.00	.00	.00			
TAX AMT-----	561.92	116.38	.00	.00			678.30
-----STATE TOTALS-----: MISSOURI							
GROSS SALES-----	13,300.00	13,300.00	13,300.00	13,300.00			
ZERO RATE AMT-----	.00	.00	.00	.00			
TAXABLE AMT-----	13,300.00	13,300.00	.00	.00			
TAX AMT-----	561.92	116.38	.00	.00			678.30
-----TAX-SUMMARY-----							
SALES TAX	561.92	116.38	.00	.00			678.30
USE TAX	.00	.00	.00	.00			.00
RENTAL TAX	.00	.00	.00	.00			.00
OVERRIDE TAX	.00	.00	.00	.00			.00
SERVICE TAX	.00	.00	.00	.00			.00
CONSUMER USE TAX	.00	.00	.00	.00			.00
TAX TOTALS	561.92	116.38	.00	.00			678.30
*** BREAKDOWN BY TRANSACTION SUBTYPE ***							
TAXABLE	13,300.00	NON-TAXABLE	.00	TAX			678.30
P - PROPERTY							

Inserting New Lines

Invoices imported using AutoInvoice can be maintained using the Transaction Workbench. Modifying attributes such as the transaction date or customer will force the invoice lines to recalculate the tax using the tax vendor extension. Additionally, invoice lines can be deleted, updated, or inserted.

Incomplete the imported invoice created in the previous steps by clicking on the Incomplete button. Add a third invoice line with a quantity of 1, a unit price of \$2,000.00 and a tax code for the Location Based tax type. When you save the invoice, the tax for the third line will be \$102.00 and the total tax for the invoice will be \$780.30.

Transaction		Lines	Tax	Freight
Total	16,080.30	15,300.00	780.30	0.00

Num	Item	Description	UOM	Quantity	Unit Price	Amount	Tax Cod
1	82000	Consulting/Trainin	Each	3	1100	3,300.00	Locatio
2	80000	Sentinal Multimed	Each	1	10000	10,000.00	Locatio
3	81000	One Year Maintenz	Each	1	2000	2,000.00	Locatio

Update Invoice Lines

On the invoice from the previous steps, change the quantity of the third invoice line from 1 to 3. When you save the invoice, the tax for the third line will be \$306.00 and the total tax for the invoice will be \$984.30. Complete the invoice by clicking on the Complete button. The original tax amount for this invoice line will be deducted from the vendor's audit files and the new tax amount will be inserted.

Any modifications to the tax amounts will always be maintained across the vendor's audit files.

The screenshot shows the 'Lines' window in Oracle App's. At the top, there are summary fields for Transaction, Lines, Tax, and Freight. Below these are tabs for Main, Sales Order, Tax Exemption, Rules, and More. The main area contains a table with columns: Num, Item, Description, UOM, Quantity, Unit Price, Amount, and Tax Cod. At the bottom, there are buttons for Distributions, Sales Credits, Freight, and Tax.

Transaction	Lines	Tax	Freight
20,284.30	19,300.00	984.30	0.00

Num	Item	Description	UOM	Quantity	Unit Price	Amount	Tax Cod
1	#2000	Consulting/Trainin	Each	3	1100	3,300.00	Locatio
2	#0000	Sentinal Multimed	Each	1	10000	10,000.00	Locatio
3	#1000	One Year Mainten:	Each	3	2000	6,000.00	Locatio

Credit the Invoice

Manual credit memos can be applied to an invoice through Oracle Receivables. The tax amounts for this credit memo will always reconcile to your vendor's tax reports.

Create a manual credit memo for the invoice created in the previous steps. Credit 10% or -\$1,930.00 of the line and 10% or -\$98.43 of the tax. Complete the credit memo by clicking on the Complete button.

Credit Transactions (Vision Operations: USD) - Oracle Apps, 10002831

Credited Transaction
 Number: 10002829 Source: Order

Credit Memo
 Batch: None Batch Name:
 Source: Order Date: 14/NOV/2000 Complete
 Number: 10002831 Reference: Trans: ORDE
 Reason: Type: Credit Memo
 GL Date: 14/NOV/2000 Rules Method:
 Currency: USD Split Term Method: []

Transaction Amounts **More**

Credit Memo			Credited Transaction	
Line	%	Amount	Original	Balance Due
	10.0000	<1,930.00>	19,300.00	17,370.00
Tax	10.0000	<98.43>	984.30	885.87
Freight				0.00
Total	10.0000 %	<2,028.43>	20,284.30	18,255.87

Incomplete Credit Balance Credit Lines

Adjust the Invoice

As with manual credit memos, manual adjustments can be applied to your invoice and the tax amounts will also reconcile to your vendor's tax reports. Only approved adjustments of type 'Tax' will be applied to the vendor's tax reports. This gives you greater control over which adjustments should reduce the sales tax liability. If you have adjustments of type 'Tax' that you do not want to post to Vertex, see [Storing Tax Information in Oracle Receivables](#) on page 5-18.

Create an adjustment to the invoice created in the previous steps by adjusting -\$100.00 of the tax.

Adjustments (Vision Operations) - Oracle Apps, 10002829, 1

Installation

	Line	Tax	Freight	Charges	Total
Original	19,300.00	984.30	0.00		20,284.30
Balance	17,370.00	785.87	0.00	0.00	18,155.87

Adjustments Pending Adjustments

Adjustments

Main Account, IDs Comments

Number	Activity Name	Type	Includes Tax		GL Date	Adjustment Date
			Amount	<input type="checkbox"/>		
3871	Write off--	Tax	<100.00>	<input type="checkbox"/>	14/NOV/2000	14/NOV/2000
				<input type="checkbox"/>		
				<input type="checkbox"/>		
				<input type="checkbox"/>		
				<input type="checkbox"/>		

Copy (Recur) an Invoice

When you copy (recur) transactions, tax will be calculated using the tax vendor extension on all copied invoices.

In the Copy Transactions window, create a single copy of the invoice created in the previous steps.

Copy Transactions (Vision Operations)

Model Transaction

Source: **Order** Trans Number: **10002829**
 Currency: **USD** Reference:
 Bill To: **Oracle Apps** Number: **1107**
 Terms: **30 Net** Type: **Invoice**
 Date: **14/NOV/2000** Transaction Amount: **20,284.30**
 Due Date: **14/DEC/2000** Transaction: GL Date: **14/NOV/2000**

Schedule

Rule: **Single Copy** Number Of Times: **1**
 Number Of Days: First Transaction Date: **15/NOV/2000**
 First GL Date: **15/NOV/2000** Request ID: **707181**

New Transactions

Transaction Number	Document Number	Trans Date	GL Date	Due Date	Amount
10002832		15/NOV/2000	15/NOV/2000	15/DEC/2000	20,284.30

Viewing the Copied Invoice

The copied invoice will have the exact same invoice lines as the original invoice. The tax amounts will automatically be recalculated by the tax vendor extension which may give different results if the tax rates have changed over time.

To view the invoice in the Receivables Transactions window, reference the invoice number in the Copy Transactions window.

Transactions (Vision Operations: USD) - Oracle Apps, 10002832

Number: 10002832 Date: 15/NOV/2000 Complete

Reference: Currency: USD Transaction: .9798

Source: Order Class: Invoice

Type: Invoice GL Date: 15/NOV/2000

Main More Remit To, Sales Paying Customer Notes Commitment Credit

Ship To		Bill To	
Name	Oracle Apps	Name	Oracle Apps
Number	1107	Number	1107
Location	Ship-To	Location	Bill-To
Address	100 Oracle Apps St.	Address	100 Oracle Apps St.
	CLIFF VILLAGE, MO 64801 United States		CLIFF VILLAGE, MO 64801 United States
Contact		Contact	

Terms: 30 Net Commitment: Salesperson: Lewis, Mr. Barry

Due Date: 15/DEC/2000

Tag Distributions Sales Credits Balances

Incomplete Freight Credit Installments Line Items

Lines (Vision Operations: USD) - Oracle Apps, 10002832

	Transaction	Lines	Tax	Freight
Total	20,284.30	19,300.00	984.30	0.00

Num	Item	Description	UOM	Quantity	Unit Price	Amount	Tax Code
1	#2000	Consulting/Trainin	Each	3	1100	3,300.00	Location
2	#80000	Sentinal Multimed	Each	1	10000	10,000.00	Location
3	#1000	One Year Maintena	Each	3	2000	6,000.00	Location

Buttons: Distributions, Sales Credits, Freight, Tax

Creating Manual Invoices

You can also create invoices manually in Oracle Receivables using the Transactions window. The tax amounts will be calculated by the tax vendor extension and will reconcile to your vendor's tax reports.

Create a manual invoice for the customer you created in the previous steps. Enter the invoice information in the Main Tab located in the Transactions window.

The screenshot shows the Oracle Transactions window titled "Transactions (Vision Operations: USD) - Oracle Apps, DEMO-INV". The window contains the following fields and tabs:

- Number:** DEMO-INV
- Date:** 14/NOV/2000
- Reference:** (empty)
- Currency:** USD
- Source:** Manual
- Class:** Invoice
- Type:** Invoice
- GL Date:** 14/NOV/2000
- Complete:**
- Transaction:**

Navigation tabs include: Main, More, Remit To, Sales, Paying Customer, Notes, Commitment, Credit.

The **Main** tab is active, showing two columns: **Ship To** and **Bill To**.

Field	Ship To	Bill To
Name	Oracle Apps	Oracle Apps
Number	1107	1107
Location	Ship-To	Bill-To
Address	100 Oracle Apps St.	100 Oracle Apps St.
	CLIFF VILLAGE, MO 64801 United States	CLIFF VILLAGE, MO 64801 United States
Contact		

Additional fields at the bottom of the Main tab:

- Terms:** 2/10, Net 30
- Due Date:** 14/DEC/2000
- Commitment:** (empty)
- Salesperson:** Lewis, Mr. Barry

Navigation buttons at the bottom:

- Tag, Distributions, Sales Credits, Balances
- Complete, Freight, Credit Installments, Line Items

Invoice Lines on Manual Invoices

The figure below shows the invoice lines for this manually created invoice. As with invoices imported through AutoInvoice, tax amounts will always be recalculated when you update, delete, or insert invoice lines and the tax amounts will reconcile with your vendor’s tax reports.

Create two invoice lines, both of which use the tax code for the Location Based tax type. The first invoice line has a quantity of 1 and a unit price of \$10,000.00. The second invoice line has a quantity of 6 and a unit price of \$1,100.00. When you save the invoice, the first line will have estimated tax of \$510.00 and the second line will have estimated tax of \$336.60.

Transaction		Lines	Tax	Freight
Total	17,446.60	16,600.00	846.60	0.00

Num	Item	Description	UOM	Quantity	Unit Price	Amount	Tax Cod
1	#81000	One Year Mainten:	Each	1	10000	10,000.00	Location
2	#82000	Consulting/Trainin:	Each	6	1100	6,600.00	Location

Apply Exemptions to Invoice Lines

Vertex's TDM will always be used to determine if an invoice line should be exempt. Optionally, an Order Management clerk or a Receivables clerk may want to mark a particular invoice line 'exempt.' Tax exemptions defined in Oracle Receivables can be applied to an invoice line and the tax vendor extension will override the TDM and exempt the invoice line.

In the Tax Exemption Tab of the Lines window, change the Tax Handling for the second invoice line to "Exempt", enter an exempt certificate number, and enter an exempt reason. When you save the invoice, the first line will have estimated tax of \$510.00 and the second line will have estimated tax of \$336.60.

Lines (Vision Operations: USD) - Oracle Apps, DEMO-INV

Total	Transaction	Lines	Tax	Freight
	17,110.00	16,600.00	510.00	0.00

Main Sales Order **Tax Exemption** Rules More

Num	Item	Description	Tax Handling	Certificate	Reason
1	#1000	One Year Mainten:	Standard		
2	#2000	Consulting/Trainin:	Exempt	100% Exempt	Education

Distributions Sales Credits Freight Tax

Vendor Tax Reports (Complete)

The following vendor tax report shows the result of all transactions entered in this section.

Run the vendor tax report for all of the transactions created in the previous steps.

Figure 3–2 Vertex Sales Tax Register, page 1

STATE	COUNTY	CITY	DISTRICT	TOTAL TAX
-----MISSOURI-----				
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755				
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N	TYPE: SALE SUBTYPE: P
EXEMPT CERTIFICATE #:				
INV: 10002829	DATE: 11/14/2000	LINE: 00001	PROD-CD: F82000	USER: 12114
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS
GROSS SALES-----	3,300.00	3,300.00	3,300.00	3,300.00
ZERO RATE AMT-----	.00	.00	.00	.00
TAXABLE AMT-----	3,300.00	3,300.00	.00	.00
TAX AMT-----	139.42	28.88	.00	.00
				168.30
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755				
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N	TYPE: SALE SUBTYPE: P
EXEMPT CERTIFICATE #:				
INV: 10002829	DATE: 11/14/2000	LINE: 00001	PROD-CD: F80000	USER: 12114
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS
GROSS SALES-----	10,000.00	10,000.00	10,000.00	10,000.00
ZERO RATE AMT-----	.00	.00	.00	.00
TAXABLE AMT-----	10,000.00	10,000.00	.00	.00
TAX AMT-----	422.50	87.50	.00	.00
				510.00
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755				
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N	TYPE: SALE SUBTYPE: P
EXEMPT CERTIFICATE #:				
INV: 10002829	DATE: 11/14/2000	LINE: 00001	PROD-CD: F81000	USER: 12114
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS
GROSS SALES-----	2,000.00	2,000.00	2,000.00	2,000.00
ZERO RATE AMT-----	.00	.00	.00	.00
TAXABLE AMT-----	2,000.00	2,000.00	.00	.00
TAX AMT-----	84.50	17.50	.00	.00
				102.00
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755				
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: X	TYPE: SALE SUBTYPE: P
EXEMPT CERTIFICATE #:				
INV: 10002829	DATE: 11/14/2000	LINE: 00001	PROD-CD: F81000	USER: 12114
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS
GROSS SALES-----	-2,000.00	-2,000.00	-2,000.00	-2,000.00
ZERO RATE AMT-----	.00	.00	-2,000.00	-2,000.00
TAXABLE AMT-----	-2,000.00	-2,000.00	.00	.00
TAX AMT-----	-84.50	-17.50	.00	.00
				-102.00
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755				
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N	TYPE: SALE SUBTYPE: P
EXEMPT CERTIFICATE #:				
INV: 10002829	DATE: 11/14/2000	LINE: 00001	PROD-CD: F81000	USER: 12114
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS
GROSS SALES-----	6,000.00	6,000.00	6,000.00	6,000.00
ZERO RATE AMT-----	.00	.00	6,000.00	6,000.00
TAXABLE AMT-----	6,000.00	6,000.00	.00	.00
TAX AMT-----	253.50	52.50	.00	.00
				306.00

Figure 3-3 Vertex Sales Tax Register, page 2

CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755									
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: X TYPE: SALE SUBTYPE: P						
EXEMPT CERTIFICATE #:									
INV: 10002831	DATE: 11/14/2000	LINE: 00001	PROD-CD: F82000	USER: 12115			.000000 ZS		
TAX RATE/TYPE-----	.042250 S		.008750 S	.000000 ZS			.000000 ZS		
GROSS SALES-----	-330.00		-330.00	-330.00			-330.00		
ZERO RATE AMT-----	.00		.00	-330.00			-330.00		
TAXABLE AMT-----	-330.00		-330.00	.00			.00		
TAX AMT-----	-13.94		-2.89	.00			-16.83		
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755									
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: X TYPE: SALE SUBTYPE: P						
EXEMPT CERTIFICATE #:									
INV: 10002831	DATE: 11/14/2000	LINE: 00001	PROD-CD: F80000	USER: 12115			.000000 ZS		
TAX RATE/TYPE-----	.042250 S		.008750 S	.000000 ZS			.000000 ZS		
GROSS SALES-----	-1,000.00		-1,000.00	-1,000.00			-1,000.00		
ZERO RATE AMT-----	.00		.00	-1,000.00			-1,000.00		
TAXABLE AMT-----	-1,000.00		-1,000.00	.00			.00		
TAX AMT-----	-42.25		-8.75	.00			-51.00		
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755									
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: X TYPE: SALE SUBTYPE: P						
EXEMPT CERTIFICATE #:									
INV: 10002831	DATE: 11/14/2000	LINE: 00001	PROD-CD: F81000	USER: 12115			.000000 ZS		
TAX RATE/TYPE-----	.042250 S		.008750 S	.000000 ZS			.000000 ZS		
GROSS SALES-----	-600.00		-600.00	-600.00			-600.00		
ZERO RATE AMT-----	.00		.00	-600.00			-600.00		
TAXABLE AMT-----	-600.00		-600.00	.00			.00		
TAX AMT-----	-25.35		-5.25	.00			-30.60		
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755									
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: X TYPE: SALE SUBTYPE: P						
EXEMPT CERTIFICATE #:									
INV: 3871	DATE: 11/14/2000	LINE: 00001	PROD-CD:	USER: 1702			.000000 ZS		
TAX RATE/TYPE-----	.042250 S		.008750 S	.000000 ZS			.000000 ZS		
TAXABLE AMT-----	.00		.00	.00			.00		
TAX AMT-----	-14.17		-2.93	.00			-17.10		
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755									
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: X TYPE: SALE SUBTYPE: P						
EXEMPT CERTIFICATE #:									
INV: 3871	DATE: 11/14/2000	LINE: 00001	PROD-CD:	USER: 1702			.000000 ZS		
TAX RATE/TYPE-----	.042250 S		.008750 S	.000000 ZS			.000000 ZS		
TAXABLE AMT-----	.00		.00	.00			.00		
TAX AMT-----	-42.92		-8.89	.00			-51.81		
CITY: CLIFF VILLAGE COUNTY: NEWTON GEOCODE: 26-145-3755 STR: T 26-145-3755 F 26-145-3755 A 26-145-3755									
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: X TYPE: SALE SUBTYPE: P						
EXEMPT CERTIFICATE #:									
INV: 10002832	DATE: 11/15/2000	LINE: 00001	PROD-CD: F82000	USER: 12207			.000000 ZS		
TAX RATE/TYPE-----	.042250 S		.008750 S	.000000 ZS			.000000 ZS		
GROSS SALES-----	3,300.00		3,300.00	3,300.00			3,300.00		
ZERO RATE AMT-----	.00		.00	3,300.00			3,300.00		
TAXABLE AMT-----	3,300.00		3,300.00	.00			.00		
TAX AMT-----	139.42		28.88	.00			168.30		

Figure 3-4 Vertex Sales Tax Register, page 3

CITY: CLIFF VILLAGE		COUNTY: NEWTON	GEOCODE: 26-145-3755	STR:	T 26-145-3755 F 26-145-3755 A 26-145-3755
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N TYPE: SALE SUBTYPE: P		
EXEMPT CERTIFICATE #:					
INV: 10002832	DATE: 11/15/2000	LINE: 00001	PROD-CD: F80000	USER: 12207	
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS	
GROSS SALES-----	10,000.00	10,000.00	10,000.00	10,000.00	
ZERO RATE AMT-----	.00	.00	10,000.00	10,000.00	
TAXABLE AMT-----	10,000.00	10,000.00	.00	.00	
TAX AMT-----	422.50	87.50	.00	.00	510.00
CITY: CLIFF VILLAGE		COUNTY: NEWTON	GEOCODE: 26-145-3755	STR:	T 26-145-3755 F 26-145-3755 A 26-145-3755
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N TYPE: SALE SUBTYPE: P		
EXEMPT CERTIFICATE #:					
INV: 10002832	DATE: 11/15/2000	LINE: 00001	PROD-CD: F81000	USER: 12207	
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS	
GROSS SALES-----	6,000.00	6,000.00	6,000.00	6,000.00	
ZERO RATE AMT-----	.00	.00	6,000.00	6,000.00	
TAXABLE AMT-----	6,000.00	6,000.00	.00	.00	
TAX AMT-----	253.50	52.50	.00	.00	306.00
CITY: CLIFF VILLAGE		COUNTY: NEWTON	GEOCODE: 26-145-3755	STR:	T 26-145-3755 F 26-145-3755 A 26-145-3755
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N TYPE: SALE SUBTYPE: P		
EXEMPT CERTIFICATE #:					
INV: DEMO-INV	DATE: 11/14/2000	LINE: 00001	PROD-CD: F81000	USER: 12113	
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS	
GROSS SALES-----	10,000.00	10,000.00	10,000.00	10,000.00	
ZERO RATE AMT-----	.00	.00	10,000.00	10,000.00	
TAXABLE AMT-----	10,000.00	10,000.00	.00	.00	
TAX AMT-----	422.50	87.50	.00	.00	510.00
CITY: CLIFF VILLAGE		COUNTY: NEWTON	GEOCODE: 26-145-3755	STR:	T 26-145-3755 F 26-145-3755 A 26-145-3755
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N TYPE: SALE SUBTYPE: P		
EXEMPT CERTIFICATE #:					
INV: DEMO-INV	DATE: 11/14/2000	LINE: 00001	PROD-CD: F82000	USER: 12113	
TAX RATE/TYPE-----	.042250 S	.008750 S	.000000 ZS	.000000 ZS	
GROSS SALES-----	6,600.00	6,600.00	6,600.00	6,600.00	
ZERO RATE AMT-----	.00	.00	6,600.00	6,600.00	
TAXABLE AMT-----	6,600.00	6,600.00	.00	.00	
TAX AMT-----	278.85	57.75	.00	.00	336.60
CITY: CLIFF VILLAGE		COUNTY: NEWTON	GEOCODE: 26-145-3755	STR:	T 26-145-3755 F 26-145-3755 A 26-145-3755
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: X TYPE: SALE SUBTYPE: P		
EXEMPT CERTIFICATE #:					
INV: DEMO-INV	DATE: 11/14/2000	LINE: 00001	PROD-CD: F82000	USER: 12113	
TAX RATE/TYPE-----	.042250 ES	.008750 ES	.000000 ES	.000000 ES	
GROSS SALES-----	6,600.00	6,600.00	6,600.00	6,600.00	
ZERO RATE AMT-----	.00	.00	6,600.00	6,600.00	
TAXABLE AMT-----	6,600.00	6,600.00	.00	.00	
TAX AMT-----	-278.85	-57.75	.00	.00	-336.60
CITY: CLIFF VILLAGE		COUNTY: NEWTON	GEOCODE: 26-145-3755	STR:	T 26-145-3755 F 26-145-3755 A 26-145-3755
COMPANY-CD: 01	DIVISION-CD: 01	CUST-CD: 1107	TRANS-CD: N TYPE: SALE SUBTYPE: P		
EXEMPT CERTIFICATE #:					
INV: DEMO-INV	DATE: 11/14/2000	LINE: 00001	PROD-CD: F82000	USER: 12113	
TAX RATE/TYPE-----	.042250 ES	.008750 ES	.000000 ES	.000000 ES	
GROSS SALES-----	6,600.00	6,600.00	6,600.00	6,600.00	
EXEMPT AMT/CD-----	6,600.00 E	6,600.00 E	6,600.00 E	6,600.00 E	
TAXABLE AMT-----	.00	.00	.00	.00	
TAX AMT-----	.00	.00	.00	.00	.00

Figure 3-5 Vertex Sales Tax Register, page 4

CITY TOTALS----	CLIFF VILLAGE				
GROSS SALES-----	53,270.00	53,270.00	53,270.00	53,270.00	
EXEMPT AMT-----	6,600.00	6,600.00	6,600.00	6,600.00	
ZERO RATE AMT-----	.00	.00	46,670.00	46,670.00	
TAXABLE AMT-----	46,670.00	46,670.00	.00	.00	
TAX AMT-----	1,888.95	391.22	.00	.00	2,280.17
COUNTY TOTALS----					
NEWTON					
GROSS SALES-----	53,270.00	53,270.00	53,270.00	53,270.00	
EXEMPT AMT-----	6,600.00	6,600.00	6,600.00	6,600.00	
ZERO RATE AMT-----	.00	.00	46,670.00	46,670.00	
TAXABLE AMT-----	46,670.00	46,670.00	.00	.00	
TAX AMT-----	1,888.95	391.22	.00	.00	2,280.17
STATE TOTALS----					
MISSOURI					
GROSS SALES-----	53,270.00	53,270.00	53,270.00	53,270.00	
EXEMPT AMT-----	6,600.00	6,600.00	6,600.00	6,600.00	
ZERO RATE AMT-----	.00	.00	46,670.00	46,670.00	
TAXABLE AMT-----	46,670.00	46,670.00	.00	.00	
TAX AMT-----	1,888.95	391.22	.00	.00	2,280.17

-----TAX-SUMMARY-----					
SALES TAX	1,888.95	391.22	.00	.00	2,280.17
USE TAX	.00	.00	.00	.00	.00
RENTAL TAX	.00	.00	.00	.00	.00
VERRIDE TAX	.00	.00	.00	.00	.00
SERVICE TAX	.00	.00	.00	.00	.00
CONSUMER USE TAX	.00	.00	.00	.00	.00
TAX TOTALS	1,888.95	391.22	.00	.00	2,280.17

*** BREAKDOWN BY TRANSACTION SUBTYPE ***					
	TAXABLE	NON-TAXABLE	TAX		
P - PROPERTY	46,670.00	.00	2,280.17		

The bold numbers in parenthesis correspond to the operations in this chapter and the information below. (The numbers do not appear in the actual report; they are provided for your reference only.)

- AutoInvoice and Importing Invoices: Inserts lines 1 and 2
- Inserting New Lines: Inserts line 3
- Updating Lines: Backs out of original tax amount with Line 4; inserts line 5
- Manual Credit Memos: Inserts lines 6, 7, and 8
- Manual Adjustments: Inserts line 9, 10, and 11
- Copy (Recur) an Invoice: Inserts lines 12, 13, and 14
- Creating Manual Invoices: Inserts line 15 and 16
- Updating a line with an exemption backs out the original tax amount with line 17; inserted line 18 has a 100% exemption applied to it

Note: Oracle Receivables and Vertex view the interaction between exemptions and taxable amounts in slightly different ways. Oracle Receivables deducts the tax rate to give the correct tax amount, whereas Vertex deducts the taxable amount to derive the correct tax amount. Therefore, the total taxable amount may differ between Oracle Receivables and the vendor's tax reports.

Business Processes

This chapter provides an overview of the various accounting and business processes required for the Vertex integration. The following sections are included:

- Accounting for State and Local Taxes
- Working with Vertex Tax Decision Maker (TDM)
- Using Vertex GeoCodes
- Monthly Procedures
- Reconciliation and Audit Procedures
- Support Procedures

Accounting for State and Local Taxes

Oracle Receivables will use the Tax Accounts defined in the Tax Locations and Rates window for each tax amount that you record on the customer invoice. Using Oracle Receivables, you can set up different liability accounts for each ship-to state of the invoice. Using different ship-to states lets you reconcile total tax amounts for each state to the Oracle and Vertex reports. This reconciliation can be used during audit to ensure that any given state has the total tax recorded correctly.

We recommend that you create liability accounts for each state. After you create these accounts and assign them to each state using the Tax Locations and Rates window (based on your tax AutoAccounting setup), those accounts will be used automatically during invoice entry.

Origin and Destination-Based Taxes

Transactions that are subject to Origin and Destination-based tax will have the entire portion of tax recorded in the account noted on the Ship-to State. This does not impact reconciliation because Origin-based taxes are typically levied on District or other local taxes for intra-state transactions (transactions where the ship-from and ship-to states are the same).

Working with Vertex Tax Decision Maker

The Vertex Tax Decision Maker (TDM) lets you control the taxability of transactions. By using Vertex TDM with Oracle Receivables, you can control taxability at state, county, city, and district levels based on Item, Bill-to Customer, or Ship-to Jurisdiction. Once set up, the TDM will automatically apply these rules to all sales orders and invoices.

The Tax Decision Maker will use the Company, Division, Customer, Address & Part Number, and Category fields for controlling taxability. The integration provides this information to TDM as illustrated in this table:

Table 4–1 Vertex Tax Decision Maker Values

TDM Field	Oracle Value
Company Code	Constant 01
Division Code	Constant 01
Customer Code	Bill-to customer number of the invoice or order
Customer Class	(not used)
Address	The GeoCode associated with the Ship-to Address (State, County, City, Zip)
Product Code	Segment1 of the Oracle Inventory Item Key Flexfield

When implementing Oracle Receivables, you can choose to record all of your taxability rules and customer/product exemptions using Vertex, Oracle, or a combination of both. If an Oracle exemption is found and applied to the tax calculation, the Vertex programs will still be called and the Vertex Tax Register will include the exempt tax line for complete audit and reconciliation.

You must enter product rate exceptions into Vertex TDM. Product rate exceptions stored in Oracle are not used when integrating with Vertex Quantum.

Attention: Do not insert data into the Vertex table (column) REGPRERETURNSTBL (TRANSUSERAREA). This column is used by Oracle Receivables.

For more information on using and changing the standard Oracle values, see [Tax View Functions](#) on page 5-7.

Integration with Oracle Exemption Handling

Define Tax Exemptions

Exemption Certificates created within Oracle Receivables using the Tax Exemptions window can be used to control Vertex Quantum and TDM. If you enable Customer Exemptions in the Oracle Receivables System Options window, then any Primary Exemption Certificate that is applicable to a given Bill-to Customer and Ship-to State will be automatically used on Vertex Quantum tax calculations.

Using Oracle you can migrate from Oracle Tax Exemptions to the Tax Decision Maker, allowing a flexible transition from legacy tax controls to the Vertex Quantum Tax Decision Maker.

Order and Invoice level Overrides

You can use the transaction level Tax Handling fields of Oracle Order Management and Oracle Receivables to provide transaction-level control of Exemptions. These fields allow the Order Management or Invoice Entry clerks to override the TDM module, letting you identify a transaction as exempt, and documented with the Reason and Certificate Number fields. The Oracle Receivables profile option Tax: Allow Override of Customer Exemptions lets you secure access to this feature.

Working with Vertex GeoCodes and GeoCoder

GeoCodes

GeoCodes are used by Vertex to identify a taxing jurisdiction. The GeoCode supplements or replaces the address fields (State, County, City, ZIP) with a 9 digit numeric code. This code is an internal code that is understood by the Vertex Quantum Integration.

A GeoCode is typically needed when the state, zip, and city fields of an address do not uniquely identify the exact taxing jurisdiction. For example, the same city and zip can be found in multiple counties.

Using GeoCodes with Oracle Applications

The Oracle Receivables Customer Workbench and Oracle Sales & Marketing Contacts Workbench will automatically populate the County field of an address given the other field values.

Alternatively, all three fields (state, county, city) are automatically populated when you enter a single zip code. If multiple candidates exist, then only those applicable location values are shown in the list of values. As a result, you rarely need to research an address and manually identify the county or GeoCodes before the customer can be invoiced.

The association of an address to a GeoCode is an automatic process, but can be manually overridden. For more information, see [Storing Tax Information in Oracle Receivables](#) on page 5-18.

GeoCoder

The Vertex GeoCoder is a PL/SQL program unit or API that will convert address information into GeoCodes. The Vertex Quantum integration will call the GeoCoder API's at calculation time if needed. The PL/SQL function SHIP_TO_ADDRESS_CODE will attempt to return the GeoCode for every tax calculation. If this function fails to return a GeoCode, then the GeoCoder API is called automatically.

Vertex Quantum will raise a Vertex error message if after both attempts for a GeoCode is not found for a given tax calculation.

The GeoCoder is only called for the Ship-to Address; if no GeoCode is found for the SHIP_FROM and POA addresses, then the Ship-to GeoCode will be used for these values.

Monthly Procedures

Database Storage Requirements

The Oracle Receivables tables AR_LOCATION_VALUES and AR_LOCATION_RATES should be sized to allow a full upload of the Vertex SEQMAST data file; a full upload requires approximately 75MB of free space. An additional 100MB of free space is required in the Vertex schema to allow the Vertex tables to be initialized.

Each audited tax calculation requires approximately 800 bytes of database storage within the Vertex Schema. Normally, each Oracle Receivables transaction line will need one audited tax calculation; however, manual changes to the invoice lines will require an additional 1600 bytes for each change.

For more information, please refer to the *Vertex Quantum Installation Manual* and *Preparing to Load Sales Tax Rates in the Oracle Receivables Tax Manual*.

Address Validation Data - Vertex SEQMAST file

Each month Vertex will send an updated version of the SEQMAST data file. You need to upload the SEQMAST file into both Vertex Quantum and Oracle Receivables. This will ensure that Oracle Receivables has the latest information for address validation and GeoCode assignments.

As part of your standard monthly procedures, you can use the SQL*Loader script `$AR_TOP/bin/arvertexctl` to load the SEQMAST data file into the Oracle Receivables Tax Interface tables. Then, run the Sales Tax Rate Interface program to transfer this data into Oracle Receivables. Repeat both of these steps each month as the Vertex data file is updated. These procedures will ensure that you have up to date address validation data available.

Use the following Unix script to execute the SQL*Loader program:

```
mv SEQMAST SEQMAST.dat
sqlload apps/apps control=$AR_TOP/bin/arvertexctl \
data="SEQMAST" discard="vertex.dis" skip=1 rows=4096
```

Next, run the Oracle Receivables concurrent program Sales Tax Rate Interface using the parameters in this table:

Table 4–2 Sales Tax Rate Interface Parameters

Parameter	Value
Review or Upload	Load Changed Data Only in Tax Interface Table
Print Format	Print Warnings in Detail
State	<null>

Sales Tax Reporting and Reconciliation Processes

Before completing your tax returns using the Vertex Quantum reports, you should reconcile the total tax amounts held in Oracle Receivables, Oracle General Ledger, and Vertex Quantum.

Oracle Receivables will post all tax amounts to the Vertex Quantum Tax Ledger so that Quantum reports can be used to assist the state and local tax filing process. Using Oracle, the Vertex Tax Ledger is posted online as the transactions are entered. This allows Oracle and Vertex to provide tax reports without a lengthy period end close procedure and long running posting program. This online posting of tax, using Vertex, is a key benefit of the Oracle/Vertex product integration.

Since Oracle performs this posting of tax amounts automatically and for all transactions that you enter, you should ensure that the steps in the Reconciliation Checklist below have been completed before you close your period and report your state and local taxes.

Reconciliation Checklist

- ❑ All transactions must be completed and posted to the General Ledger. You should verify that no incomplete, manually entered transactions exist for your reporting period. Incomplete invoices will appear as Tax Liabilities in Vertex without an appropriate receivable in Oracle.

All incomplete transactions must be either completed or deleted from Oracle Receivables before the period is closed.

Suggestion: Run the Oracle Receivables Incomplete Invoice report to see all incomplete invoices, debit memos, and credit memos that exist for your reporting period.

- ❑ Reconcile Oracle Receivables total tax amounts by state to Oracle General Ledger. The Total Tax amounts by State reported by the Oracle Receivables US Sales Tax Report should reconcile to each state tax liability account held in Oracle General Ledger. If this reconciliation step fails, refer to Reconciling US Sales Tax in the *Oracle Receivables Tax Manual*.
- ❑ Reconcile Oracle total tax amounts by state to Vertex Quantum. After you run the Vertex reports, you should be able to reconcile the tax amounts by state to

both Oracle Receivables and Oracle General Ledger. If this reconciliation step fails, verify that you have no incomplete transactions in Oracle Receivables.

Audit Process

Each taxable transaction line within Oracle Receivables will be recorded in the Vertex Quantum Reports as a single Vertex report line.

If a Receivables transaction line is updated, the integration will post two audit records to the Vertex Quantum Register to record the update. The first will reverse out the original value for tax, the second record will then post the updated values. This is described in [Update Invoice Lines](#) on page 3-11 and in sections 4 and 5 of [Vendor Tax Reports \(Complete\)](#) on page 3-20.

During your audit, a given line in the vertex register report may need to be grouped with the other lines within the same report before it can be reconciled to Oracle Receivables.

This process allows for a rapid period close, as long running posting programs do not have to be completed before the AR period is closed.

Attention: The Vertex Quantum reports and Oracle Receivables use different terms when referring to the tax calculation date and the accounting date for transactions.

The table below summarizes these terminology differences:

Table 4–3 Terminology Differences

Value	Oracle Receivables	Vertex Quantum
Accounting Date	GL Date	Transaction Date
Tax Calculation Date	Transaction Date	Invoice Date

Support Procedures

If you have a support request concerning tax calculations, Oracle Receivables will document all the input and output parameters to the tax calculation. You can then use this information to document your support request.

Vertex error messages are prefixed with 'APP-11526: Vertex.' These messages can be received when creating invoices or sales orders. If you receive an error message and are unsure why the error occurred, follow these procedures to document the parameters to the Vertex tax calculation, then refer to the Vertex Quantum documentation and support procedures.

If you are using Oracle Receivables AutoInvoice or the Copy Transactions program, run either program with the Message Level field in the Receivables System Options window set to 3. You can then use the complete log file to help document your support request.

If you are using the Oracle Receivables Transaction Workbench, please follow the steps below to document your support question.

Step 1 Set Profile Option Tax: Debug File Directory

Set the profile option Tax: Debug File Directory to a server side directory where a file that contains log messages will be created. You can set this profile option only at the Site level.

Note: This directory must be set as the value of one of the Oracle initialization parameters, "UTL_FILE_DIR". To see the current value of UTL_FILE_DIR, issue the following SQL statement in the apps schema:

```
select value from v$parameter where name = 'utl_file_dir';
```

If this parameter does not contain a value, modify the initialization parameter file init<db_name>.ora to add the parameter and a value for it (where <db_name> is the name of your database).

Step 2 Set Profile Option Tax: Debug Flag

Set the profile option Tax: Debug Flag to Yes to create a file with debugging information. This log file can be created by any module that uses the Tax Engine (for example, Oracle Receivables or Order Management). You can set this profile option only at the User level.

A log file called <USERNAME>.log will be created in the directory specified by the profile option Tax: Debug File Directory (where <USERNAME> is your login username).

5

Technical Reference

This chapter describes the internal communication parameters between Oracle and Vertex, the Oracle tax view functions that support this communication, and how to extend the integration using user descriptive flexfields and the PL/SQL functions. This chapter also includes some commonly asked questions about using Vertex Quantum with Oracle Receivables.

Available Parameters

The structure `ARP_TAX.TAX_INFO_REC` is the communications area for the integration with Vertex Quantum. This structure passes information that is selected from the database views. The tax extension then calculates the tax and passes back all of the necessary output parameters through the same structure.

For more information about PL/SQL stored procedures and customizing Oracle Applications, contact your system administrator.

Attention: The parameters in `ARP_TAX.TAX_INFO_REC` are subject to change in subsequent releases of Oracle Applications. If you customize Oracle Applications to integrate your own PL/SQL tax calculations, you should review and test your custom code after each upgrade.

This table shows the members of the database structure `ARP_TAX.TAX_INFO_REC`:

Table 5–1 *Members of the database structure ARP_TAX.TAX_INFO_REC*

Member	Data Type	Parameter Type	Null Allowed	Related View Column
<code>amount_includes_tax_flag</code>	<code>varchar2</code>	<code>input</code>	no	<code>AMOUNT_INCLUDES_TAX_FLAG</code>
<code>audit_flag</code>	<code>varchar2</code>	<code>input</code>	no	<code>AUDIT_FLAG</code>
<code>bill_to_customer_name</code>	<code>varchar2</code>	<code>input</code>	yes	<code>BILL_TO_CUSTOMER_NAME</code>
<code>bill_to_customer_number</code>	<code>number</code>	<code>input</code>	yes	<code>BILL_TO_CUSTOMER_NUMBER</code>
<code>bill_to_cust_id</code>	<code>number</code>	<code>input</code>	no	<code>BILL_TO_CUSTOMER_ID</code>
<code>bill_to_location_id</code>	<code>number</code>	<code>input</code>	yes	<code>BILL_TO_LOCATION_CCID</code>
<code>bill_to_postal_code</code>	<code>varchar</code>	<code>input</code>	yes	<code>BILL_TO_POSTAL_CODE</code>
<code>bill_to_site_use_id</code>	<code>number</code>	<code>input</code>	yes	<code>BILL_TO_SITE_USE_ID</code>
<code>calculate_tax</code>	<code>varchar2</code>	<code>input</code>	yes	<code>TAXABLE_FLAG</code>
<code>company_code</code>	<code>varchar2</code>	<code>input</code>	yes	<code>COMPANY_CODE</code>

Table 5–1 Members of the database structure ARP_TAX.TAX_INFO_REC

Member	Data Type	Parameter Type	Null Allowed	Related View Column
credit_memo_flag	boolean	input	no	(True if credit memo)
customer_trx_charge_line_id	number	input	yes	CUSTOMER_TRX_CHARGE_LINE_ID
customer_trx_id	number	input	yes	TRX_HEADER_ID
customer_trx_line_id	number	input	yes	TRX_LINE_ID
default_ussgl_transaction_code	varchar2	input	yes	USSGL_TRANSACTION_CODE
division_code	varchar2	input	yes	DIVISION_CODE
extended_amount	number	input	yes	EXTENDED_AMOUNT
fob_point	varchar2	input	yes	FOB_CODE
gl_date	date	input	yes	GL_DATE
inventory_item_id	number	input	yes	INVENTORY_ITEM_ID
invoicing_rule_id	number	input	yes	INVOICING_RULE_ID
item_exception_rate_id	number	input/output	yes	TAX_EXCEPTION_ID
link_to_cust_trx_line_id	number	input	yes	TRX_LINK_TO_CUST_TRX_LINE_ID
memo_line_id	number	input	yes	MEMO_LINE_ID
minimum_accountable_unit	number	input/output	yes	MINIMUM_ACCOUNTABLE_UNIT
part_no	varchar2	input	yes	PART_NUMBER
payment_terms_discount_percent	varchar2	input	yes	PAYMENT_TERMS_DISCOUNT_PERCENT
payment_term_id	number	input	yes	PAYMENT_TERM_ID
poa_code	varchar2	input	yes	POA_ADDRESS_CODE
poa_id	number	input	yes	POA_ID
poo_code	varchar2	input	yes	POO_ADDRESS_CODE
poo_id	number	input	yes	POO_ID
precision	number	input/output	yes	PRECISION

Table 5–1 Members of the database structure ARP_TAX.TAX_INFO_REC

Member	Data Type	Parameter Type	Null Allowed	Related View Column
previous_customer_trx_id	number	input	yes	PREVIOUS_TRX_HEADER_ID
previous_customer_trx_line_id	number	input	yes	PREVIOUS_TRX_LINE_ID
previous_trx_number	number	input	yes	PREVIOUS_TRX_NUMBER
qualifier	varchar2	input	no	LOCATION_QUALIFIER
ship_from_code	varchar2	input	yes	SHIP_FROM_ADDRESS_CODE
ship_from_warehouse_id	number	input	yes	SHIP_FROM_WAREHOUSE_ID
ship_to_code	varchar2	input	yes	SHIP_TO_ADDRESS_CODE
ship_to_customer_name	varchar2	input	yes	SHIP_TO_CUSTOMER_NAME
ship_to_customer_number	number	input	yes	SHIP_TO_CUSTOMER_NUMBER
ship_to_cust_id	number	input	yes	SHIP_TO_CUSTOMER_ID
ship_to_location_id	number	input	yes	SHIP_TO_LOCATION_CCID
ship_to_postal_code	varchar2	input	yes	SHIP_TO_POSTAL_CODE
ship_to_site_use_id	number	input	yes	SHIP_TO_SITE_USE_ID
status	number	output	yes	(Default return code)
taxable_amount	number	output	no	TAXABLE_AMOUNT
taxable_basis	varchar2	input	yes	TAXABLE_BASIS
taxed_quantity	number	input	yes	TAXED_QUANTITY
tax_amount	number	input/output	yes	TAX_AMOUNT
tax_calculation_plsql_block	varchar2	input	yes	TAX_CALCULATION_PLSQL_BLOCK

Table 5-1 Members of the database structure ARP_TAX.TAX_INFO_REC

Member	Data Type	Parameter Type	Null Allowed	Related View Column
tax_code	varchar2	input/output	yes	TAX_CODE
tax_control	varchar2	input/output	yes	TAX_EXEMPT_FLAG
tax_exemption_id	number	input/output	yes	VAT_TAX_ID
tax_header_level_flag	varchar2	input	yes	TAX_HEADER_LEVEL_FLAG
tax_line_number	number	input	yes	TAX_LINE_NUMBER
tax_rate	number	input/output	yes	TAX_RATE
tax_rounding_rule	varchar2	input	yes	TAX_ROUNDING_RULE
tax_vendor_return_code	varchar2	output	no	(Return code from tax vendor)
trx_currency_code	varchar2	input	yes	CURRENCY_CODE
trx_date	date	input	yes	TRX_DATE
trx_exchange_rate	number	input	yes	EXCHANGE_RATE
trx_line_type	varchar2	input	yes	TRX_LINE_TYPE
trx_number	number	input	yes	TRX_NUMBER
trx_type_id	number	input	yes	TRX_TYPE_ID
userf1-10	varchar2	input	yes	ATTRIBUTE1-10
usern1-10	number	input	yes	NUMERIC_ATTRIBUTE1-10
vat_tax_id	number	input/output	yes	VAT_TAX_ID
vdrcrtrl_exempt	varchar2	input	yes	VENDOR_CONTROL_EXEMPTIONS
xmpt_cert_no	varchar2	input/output	yes	TAX_EXEMPT_NUMBER
xmpt_percent	number	input/output	yes	TAX_EXEMPT_PERCENT
xmpt_reason	varchar2	input/output	yes	TAX_EXEMPT_REASON

Note: The taxable_amount output parameter is required and must be set by the PL/SQL program before returning control to the tax module. Additionally, the program must also set either the tax_amount or the tax_rate parameter. For more information, refer to the example below.

Tax View Functions

The views that will be used by the tax vendors will return some extra information that were passed a NULL in the Oracle views. These values will be passed to the views through PL/SQL functions from the package ARP_TAX_VIEW_VERTEX.

Additionally, the package will define the procedure GET_EXEMPTIONS, which will return information about exemptions. This procedure is not called by the views, but rather by the interface package.

Attention: Any modifications to the tax view functions are considered customizations and must be reapplied after applying any tax-only or Oracle Receivables patches.

Attention: Do not insert data into the Vertex table (column) REGPRERETURNSTBL (TRANSUSERAREA). This column is used by Oracle Receivables.

This table shows the functions that will be defined for Vertex (ARP_TAX_VIEW_VERTEX package).

Table 5–2 Vertex Functions

Function Name	Column Name	Default Value
COMPANY_CODE	COMPANY_CODE	01
CUSTOMER_CLASS	NA	Null
DIVISION_CODE	DIVISION_CODE	01
PRODUCT_CODE	PART_NUMBER	SEGMENT1 of MTL_SYSTEM_ITEMS
POA_ADDRESS_CODE	POA_ADDRESS_CODE	1) Salesperson GeoCode 2) Ship-From GeoCode 3) Ship-To GeoCode
SHIP_FROM_ADDRESS_CODE	SHIP_FROM_ADDRESS_CODE	1) Warehouse address GeoCode 2) Ship-to GeoCode

Table 5–2 Vertex Functions

Function Name	Column Name	Default Value
SHIP_TO_ADDRESS_CODE	SHIP_TO_ADDRESS_CODE	1) Ship-To Address GeoCode 2) ATTRIBUTE1 of AR_LOCATION_RATES
ATTRIBUTE1	TRX_LINE_TYPE	SALE
NUMERIC_ATTRIBUTE1	USE_SECONDARY	Profile: TAXVDR_SECTAXS

The PL/SQL functions are included in the Oracle Receivables file \$AR_TOP/admin/sql/ARTXVWVB.pls on your installation CD and in \$AR_TOP/patch/115/sql/ARTXVWVB.pls in any maintenance patchsets that you apply.

The functions will be defined as follows; if the returned value has a combined meaning (for example, if the first character means something and the rest of the string means something else), this will be described; if the value is derived from a descriptive flexfield defined on a table, this will also be defined; if the value is derived from a field in a base table, this will also be defined.

FUNCTION COMPANY_CODE (

```
p_view_name      IN VARCHAR2,
p_header_id      IN NUMBER,
p_line_id        IN NUMBER) RETURN
VARCHAR2;
```

The table below describes the above function, which returns the company code.

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line

This value is used to control the tax reporting level and identifies exemptions defined in Vertex TDM. Returns '01' for Vertex.

The PL/SQL global variable ARP_STANDARD.SYSPARM.SET_OF_BOOKS_ID and ARP_STANDARD.SYSPARM.ORG_ID can be referenced from within these functions for set of books and organization information.

FUNCTION CUSTOMER_CLASS (

```

p_view_name      IN VARCHAR2,
p_header_id      IN NUMBER,
p_line_id        IN NUMBER,
p_customer_id    IN NUMBER) RETURN
                VARCHAR2;

```

The table below describes the above function, which returns the customer class.

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line
p_customer_id	ID of customer (ship-to, bill-to, or other)

Returns the customer class code of the customer. This value is used to determine exemption eligibility. Returns NULL.

FUNCTION DIVISION_CODE (

```

p_view_name      IN VARCHAR2,
p_header_id      IN NUMBER,
p_line_id        IN NUMBER) RETURN
                VARCHAR2;

```

The table below describes the above function, which returns the division code.

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line

This value is used to control the tax reporting level and identifies exemptions defined in Vertex TDM. Returns '01' for Vertex.

The PL/SQL global variable `ARP_STANDARD.SYSPARM.SET_OF_BOOKS_ID` and `ARP_STANDARD.SYSPARM.ORG_ID` can be referenced from within these functions for set of books and organization information.

PROCEDURE GET_EXEMPTIONS (

```

p_exemption_id          IN NUMBER
p_cert_no               OUT VARCHAR2,
p_state_exempt_        OUT NUMBER,
percent
p_state_exempt_        OUT VARCHAR2;
reason
p_county_exempt_       OUT NUMBER,
percent
p_county_exempt_       OUT VARCHAR2,
reason
p_city_exempt_         OUT NUMBER,
percent
p_city_exempt_         OUT VARCHAR2,
reason
p_district_            OUT NUMBER,
exempt_percent
p_district_            OUT VARCHAR2);
exempt_reason

```

The table below describes the above function's input.

Input	Description
p_exemption_id	ID of exemption

The table below describes the above function's output.

Output	Description
p_cert_no	Certificate Number
p_<juris>_exempt_percent	Exemption percent for jurisdiction
p_<juris>_exempt_reason	Exemption reason for jurisdiction

This function is called by ARP_TAX_VERTEX (interface package) to determine the jurisdiction level exemptions.

If p_exemption_id is passed a NULL value, then no exemptions were found. Therefore, all output parameters will be passed back a NULL value.

Otherwise, p_cert_no will inherit the actual Oracle exemption certificate number and the exemption reasons for all jurisdictions will inherit the first character of the Oracle exemption reason.

The exemption percent will be derived from EXEMPT_PERCENT1, EXEMPT_PERCENT2, EXEMPT_PERCENT3, and EXEMPT_PERCENT4 for the state, county, city and district exemption percentages respectively from the Vendor Exempt Rates descriptive flexfield. If they do not exist, then the exemption percentages will be set to that of the actual Oracle exemption.

FUNCTION PRODUCT_CODE (

```
p_view_name      IN VARCHAR2,
p_header_id     IN NUMBER,
p_line_id       IN NUMBER,
p_item_id       IN NUMBER,
p_memo_line_id  IN NUMBER) RETURN
                VARCHAR2;
```

The table below describes the above function, which returns the item category.

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line
p_item_id	ID of inventory item
p_memo_line_id	ID of memo line

This function returns the part number used by the vendors to determine exemptions for this line. This function will return SEGMENT1 from the MTL_SYSTEM_ITEMS table (System Items key flexfield). If a memo line is passed instead of an inventory item, then a NULL value is passed.

FUNCTION POA_ADDRESS_CODE (

```
p_view_name      IN VARCHAR2,
p_header_id     IN NUMBER,
p_line_id       IN NUMBER,
```

```
p_salesrep_id      IN NUMBER) RETURN
                   VARCHAR2;
```

The table below describes the above function, which returns the Point-of-Order-Acceptance Jurisdiction code and In/Out City Limits flag

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line
p_salesrep_id	ID of the primary sales representative

The first character of this function will return the In/Out City Limits flag. If this value is 1, then the Point-of-Order-Acceptance is within city limits; if this value is 0, then it is outside city limits.

The rest of the string will be the value of the jurisdiction code for the Point-of-Order-Acceptance.

The In/Out City Limits will be derived from the SALES_TAX_INSIDE_CITY_LIMITS column of the RA_SALESREPS view. The jurisdiction will be derived from the SALES_TAX_GEOCODE column of the RA_SALESREPS view.

If this information is not available, then the default value of 'XXXXXXXXXX' will be returned. This will indicate to the interface package that the ship-from GeoCode should be used. If no ship-from GeoCode is found, then the ship-to GeoCode will be used in place of POA_ADDRESS_CODE.

FUNCTION SHIP_FROM_ADDRESS_CODE (

```
p_view_name      IN VARCHAR2,
p_header_id      IN NUMBER,
p_line_id        IN NUMBER,
p_warehouse_id  IN NUMBER) RETURN
                   VARCHAR2;
```

The table below describes the above function, which returns the Ship-from Jurisdiction code and In/Out City Limits flag.

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line
p_warehouse_id	ID of warehouse of the ship-from

The first character of this function will return the In/Out City Limits flag. If this value is 1, then the Ship-from is within city limits; if this value is 0, then it is outside city limits.

The rest of the string will be the value of the Jurisdiction code for the ship-from.

The In/Out City Limits will be derived from LOC_INFORMATION14 of the Location Address descriptive flexfield. The Jurisdiction code will be derived from LOC_INFORMATION13 of the Location Address descriptive flexfield.

If neither value is available, then the default value of 'XXXXXXXXXX' will be returned. This will indicate to the interface package that the ship-to address code should be used in place of the SHIP_FROM_ADDRESS_CODE.

FUNCTION SHIP_TO_ADDRESS_CODE (

```

p_view_name          IN VARCHAR2,
p_header_id         IN NUMBER,
p_line_id           IN NUMBER
p_ship_to_address_  IN NUMBER,
id
p_ship_to_location_ IN NUMBER,
id
p_trx_date          IN DATE,
p_ship_to_state     N VARCHAR2,
p_postal_code       IN VARCHAR2) RETURN
VARCHAR2;
```

The table below describes the above function, which returns the Ship-to Jurisdiction code and In/Out City Limits flag.

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line
p_ship_to_address_id	ID of Ship-to address
p_ship_to_location_id	ID of Ship-to location
p_trx_date	Transaction Date
p_ship_to_state	State of the ship-to
p_postal_code	Zip code for the ship-to

The first character of this function will return the In/Out City Limits flag. If this value is 1, then the Ship-to is within city limits; if this value is 0, then it is outside city limits. The rest of the string will be the value of the Jurisdiction code for the Ship-to.

The In/Out City Limits will be derived from the SALES_TAX_INSIDE_CITY_LIMITS column of the HZ_LOCATIONS table. The Jurisdiction code will be derived from the SALES_TAX_GEOCODE column of the HZ_LOCATIONS table.

If the In/Out City Limits flag is not found in the SALES_TAX_INSIDE_CITY_LIMITS column of the RA_ADDRESSES_ALL table, this function will default to within city limits ('1').

If the Jurisdiction code is not found in the SALES_TAX_GEOCODE column of the RA_ADDRESSES_ALL table, this function will search for the Jurisdiction code in ATTRIBUTE1 of AR_LOCATION_RATES table.

If a value is not found, then a NULL value is passed back from Vertex. This will then cause an error to occur within the tax engine.

FUNCTION TRX_LINE_TYPE (

```
p_view_name      IN VARCHAR2,
p_header_id      IN NUMBER,
p_line_id        IN NUMBER) RETURN
VARCHAR2;
```

The table below describes the above function, which returns the transaction type.

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line

This function returns the transaction type. Valid values are PURCHASE, RENTAL, SALE, or SERVICE. Returns 'SALE.'

FUNCTION USE_SECONDARY (

```
p_view_name      IN VARCHAR2,
p_header_id      IN NUMBER,
p_line_id        IN NUMBER) RETURN
NUMBER
```

The table below describes the above function, which returns Use Secondary tax flag.

Input	Description
p_view_name	Name of view calling this function
p_header_id	ID of transaction header
p_line_id	ID of transaction line

This value controls whether secondary taxes should be returned. '1' for Yes and '2' for No.
Returns the value of the profile option Tax Vertex: Secondary Taxes.

Storing Tax Information in Oracle Receivables

Many of the functions in the previous section and functionality of the interface package derive their values from descriptive flexfields or fields in Oracle Receivables windows. The following tables list each Descriptive Flexfield and Oracle Receivables field you can use to store tax information. Using any of the following Oracle Receivables fields or Descriptive Flexfields to store tax information is optional. If these columns are not used, a default value is assigned.

Predefined Descriptive Flexfields Used to Store Tax Information

The table below shows the predefined Descriptive Flexfields you can use to enter an exemption percentage and ship-from information.

Table 5–3 Predefined Oracle Descriptive Flexfields

Table Name	Column	Window	Field Name(s)	Description
RA_TAX_EXEMPTIONS (Vendor Exempt Rates descriptive flexfield)	EXEMPT_PERCENT1	Tax Exemptions	State Exempt Percent	State Exempt Percent
	EXEMPT_PERCENT2	Tax Exemptions	County Exempt Percent	County Exempt Percent
	EXEMPT_PERCENT3	Tax Exemptions	City Exempt Percent	City Exempt Percent
	EXEMPT_PERCENT4	Tax Exemptions	District Exempt Percent	District Exempt Percent
HR_LOCATIONS_V (Location Address descriptive flexfield)	LOC_INFORMATION13	Location Address	Sales Tax Override	Ship-From jurisdiction code
	LOC_INFORMATION14	Location Address	Inside City Limits	Indicates whether the ship-from address is inside the city limits of the associated jurisdiction code.

User-Defined Descriptive Flexfields Used to Store Tax Information

If you want to use any of the following Descriptive Flexfields to store tax information, you must register each flexfield as required. Refer to the *Oracle Applications Flexfields Guide* for more information.

This table shows the user-defined Oracle Descriptive Flexfields:

Table 5–4 User-Defined Oracle Descriptive Flexfields

Table Name	Descriptive Flexfield Name	Column	Description	Value Set Name
AR_ RECEIVABLES_ TRX	Receivables Activity Information	ATTRIBUTE15	Post Adjustment to Vertex Flag	AR_TAXVDR_ YES_NO

Attention: Use of user-defined Descriptive Flexfields is considered a customization. Functions supplied by Oracle may change in future releases to support these fields in core tables. Additionally, if these columns are in use by your customizations, you will need to either redefine the view functions so that they look in other attribute columns, or your customizations will need to be changed so that they reside in other locations.

Oracle Receivables Fields Used to Store Tax Information

The table below lists each field in Oracle Receivables that you can use to enter point of order acceptance (POA) and ship-to information.

Table 5–5 Mapping Oracle Columns with Vertex Tax Information

Table Name	Column	Window	Field Name(s)	Description
JTF_RS_ SALESREPS	SALES_TAX_ GEOCODE	Sales Force	Geo Override	Point of Order Acceptance GeoCode
JTF_RS_ SALESREPS	SALES_TAX_ INSIDE_CITY_ LIMITS	Sales Force	Inside City Limits	Indicates whether the POA address is inside the city limits of the associated GEOCODE.
HZ_LOCATIONS	SALES_TAX_ GEOCODE	Customer Addresses	Geo Override	Ship-to GeoCode
HZ_LOCATIONS	SALES_TAX_ INSIDE_CITY_ LIMITS	Customer Addresses	Inside City Limits	Indicates whether the ship-to address is inside the city limits of the associated GEOCODE.

Note: If you used Descriptive Flexfields in Oracle Receivables Release 10.7SC/NCA or Release 11 store tax information, the values are automatically populated into predefined Descriptive Flexfields and Receivables fields during the upgrade process. For more information, refer to *Upgrading Oracle Applications* for Release 11i.

Commonly Asked Questions

What benefits are there to the Vertex Quantum Integration?

- Oracle Receivables provides a simple solution to US Sales Tax Compliance that does not consider Origin Based Taxes, Quantity Thresholds, or Muni/District Taxes.
- The integration with Vertex Quantum allows you to calculate, account for, and report on these complex taxes. You may be required to consider these tax issues if you have multiple warehouses or you have warehouses that are located in jurisdictions that include origin-based tax.
- Vertex Inc. provides leadership and expertise in state and local tax research.
- Quantum Calculation Engine: Provides the ability to calculate complex state, local, and district taxes based on ship-to, ship-from, and order acceptance locations.
- Quantum TDM:
 - Flexible tax exemption and exception processing
 - Central control by Tax Department
 - Eliminate IT Department overheads
- Quantum Returns:
 - Windows GUI application
 - Supports over 400 laser printed tax returns
 - Eliminates manual preparation of tax returns, allowing more time for tax planning.

Who should I call to obtain the Vertex products and services?

Vertex Sales Department

(800) 355-3500

<http://www.vertexinc.com>

Product Inquiry

http://www.vertexinc.com/products40/inquiry_45.asp

When is the Tax Extension called to calculate a rate?

The Tax Extension is called whenever Receivables or Oracle Order Management calculates a sales tax rate. The following concurrent programs and windows do this:

- Adjustments windows
- AutoInvoice
- Copy Transactions window
- Credit Transactions window
- Quote windows (CRM applications that use Oracle Order Capture to perform tax quotations)
- Sales Orders window (Oracle Order Management)
- Transactions window

What Sales Tax Location Flexfield structure should I select when implementing the Tax Extension within the US?

Oracle Applications provides the following default location structures for sites within the US:

- State.County.City

The State.County.City structure provides the greatest accuracy in locating a tax jurisdiction and tax rate given a customer address. Additionally, the SQL*Loader control file arvertex.ctl supports the State.County.City location flexfield structure.

How do we make orders or invoices exempt from tax when using a Tax Vendor?

Receivables and Oracle Order Management will automatically find customer exemptions based on the bill-to customer and ship-to site. If found, the exemption certificate number and reason will be passed down to the Tax Vendor.

Do we still need to upload the Tax Vendor monthly tax locations and rates file in to Oracle Receivables?

Yes. You need to upload the locations and rates file into both Oracle Receivables and the Tax Vendor. Oracle Receivables uses this information for address validation and GeoCode assignments.

How do we distinguish between tax rates calculated by Oracle and tax rates calculated by an installed Tax Vendor?

Receivables will mark tax lines for an invoice that have been calculated by an installed Tax Vendor.

How do I implement tax on freight?

Receivables will calculate tax on freight lines if you can enter freight as a revenue line item. Additionally, you can automatically present freight lines as revenue lines during the Ship Confirm process within Oracle Order Management. If the Oracle Order Management user profile Tax: Invoice Freight as Revenue is set to Yes, the Oracle Order Management Receivables Interface program will generate a standard invoice line for the freight amount, optionally using the inventory item defined by the user profile Tax: Inventory Item for Freight. Refer to the *Oracle Receivables Tax Manual* for more information.

Does the Customer Interface program allow me to import US customer addresses without a County field when I have address validation set to 'Error' and a Sales Tax Location flexfield of 'State.County.City'?

No. When preparing to convert legacy data that only tracks state, city, and zip code, you will need to manually assign the correct county to each customer address before you import that customer into Oracle Receivables.

How do we enter item tax rate exceptions tax when using a Tax Vendor?

Item tax rate exceptions must be entered into the Tax Vendor software. Oracle Receivables and Oracle Order Management do not pass item tax rate exception information to the Tax Vendor.

