



QAD Enterprise Applications

**User Guide**  
**Introduction to QAD**  
**Enterprise Applications**

78-0825A  
QAD Enterprise Applications 2010  
March 2010

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# Introduction

QAD Enterprise Applications is a complete integrated suite of software solutions and is available in two editions: Standard Edition and Enterprise Edition. Both editions use the .NET UI Interface, and while screen layout and navigation are common to most applications in the two editions, there are some differences in the way some Standard and Enterprise Edition programs behave.

This chapter describes the basic interface elements of QAD Enterprise Applications, and includes the following sections:

**Overview 2**

Briefly introduces the two Editions and the concepts of component and non-component based programs.

**QAD User Interfaces 3**

Introduces the QAD user interfaces, which include the QAD .NET User Interface and the Character User Interface.

**Program Types 3**

Describes the various types of programs in QAD Enterprise Applications.

**Data Types 7**

Describes the control, transaction, and static data types in QAD Enterprise Applications.

**Interface Elements 8**

Introduces the menus, frames, fields and other interface elements in QAD Enterprise Applications.

**User Interface Management Programs 10**

Introduces user interface management programs.

**Security Considerations 10**

Introduces login and role-based access security settings.

# Overview

QAD Enterprise Applications uses leading-edge user interface (UI) technology through the QAD .NET UI, which provides a rich client framework and gives users state-of-the-art user interface features, such as ad hoc management of windows, tree view menus and drag-and-drop capabilities. Within the QAD .NET UI, Enterprise Applications transaction programs, lookups, and browses are available with powerful new .NET capabilities.

The .NET browses integrate with Microsoft Office productivity applications, with the ability to export data to Microsoft Excel and to use Excel as a means of entering data, such as financial forecasts, back into the application.

The product is available in two Editions:

- Standard Edition is the core QAD solutions suite. It includes Standard Financials, as well as a number of other key functional areas, such as Distribution (sales and purchasing elements), Manufacturing (including Kanban), Supply Chain, and Service and Support, among others.
- Enterprise Edition offers all of the core capabilities provided with Standard Edition. The key difference is the addition of Enterprise Financials—a new set of financial modules that provide a complete solution for global manufacturing companies. Another major difference is Internationalization—a series of enhancements to base functionality made to align QAD applications with the differing needs of international customers. In addition, Enterprise Edition offers enhancements and new features in a number of other areas.

The applications available in Standard Edition are written in traditional procedural-written client-server Progress 4GL code. The .NET UI for these applications is rendered, and does not contain application code on the .NET client side. All Enterprise Edition applications are also Progress 4GL-based, with the exception of QAD Enterprise Financials.

QAD Enterprise Financials is an event-driven, component-based application, for which the underlying business logic is written in Progress 4GL, while the .NET UI application code is developed in .NET Visual Studio and written in C#. Enterprise Financials is said to be *component-based* because each area of the application is written as a single business component which you maintain separately from other business components. For example, the functions to create, modify, or delete daybooks are each separate business components.

This programmatic difference means a slightly different look and feel to Financials screens, browses, and functions.

## Component and Non-Component Based Programs

This guide refers to these different types of functionality as follows:

- *Non-component based programs* use traditional procedural-written Progress-based technology. All Standard and Enterprise Edition programs are non-component based, except QAD Enterprise Financials.
- *Component-based programs* use business component-based technology. QAD Enterprise Financials is component-based, has additional features and utilities, and is navigated differently from non-component based programs.

Component-based and non-component based programs are described in more detail in “Component and Non-Component Based Programs” on page 48.

## QAD User Interfaces

The QAD user interfaces include the QAD .NET User Interface (QAD .NET UI) and the Character User Interface (character UI, or CHUI).

### QAD .NET UI

The QAD .NET UI provides a common framework for multiple QAD applications. This framework, based on Microsoft .NET technology, has excellent performance and provides best-practice usability and deployment features, as well as extensive ways for users to adapt the UI to their preferred work style. Because the UI is based on Microsoft .NET technology, it incorporates familiar UI metaphors, reducing the need for users to learn how to navigate QAD applications. This guide discusses using QAD .NET UI features such as programs, browses, and process maps. The administration and configuration of the QAD .NET UI are described in *Administration Guide: QAD .NET User Interface*.

The QAD .NET UI is the primary interface to QAD Enterprise Applications.

### QAD Character UI

The character user interface framework is based on Progress technology, and navigation and data entry are by keyboard only. You can run many Standard Edition applications in either the .NET or the character interface. For a description of using the character UI, see “Introduction to the QAD Character UI” on page 154.

## Program Types

The programs in Enterprise Applications include the following types:

- Maintenance programs
- Inquiry and report programs
- Browse programs
- Transaction programs
- Utility programs

These program types apply to both component-based and non-component based programs. This section summarizes the characteristics and functions of each type of program.

### Maintenance Programs

Operational maintenance programs are used to create basic codes such as items, sites, and locations. They are also used to record transactions that initialize business activity in a module, such as sales orders. When you enter data in a maintenance program such as Item Master Maintenance (1.4.1), an entry (called a record) is made in the item master table controlled by the program. *Financials* maintenance programs deal with financial accounting and reporting. *Operational* maintenance programs deal with other types of activities that take place in QAD applications, such as sales orders, purchasing, inventory transactions, and manufacturing activity.

**Fig. 1.1**  
Item Master Maintenance

Item Master Maintenance

Go To Actions Copy Print Preview Attach

Item Number: 20001 Description: FG20001 Prod Line: 1000

Item Planning Price

Item Item Data Inventory Item Shipping Data

Item

Item Number: 20001 Description: FG20001

Unit of Measure: EA

Item Data

Prod Line: 1000 Added: 6/2/2003 Design Group: Promo Group:

Item Type: Status: AC Group: Drawing: Revision: Drawing Loc: Size: Price Break Category:

Item Inventory Data

ABC Class: Lot/Serial Control: Site: 2005 Location: 100 Location Type: Auto Lot Numbers: Lot Group: Article Number:

Average Interval: 90 Cycle Count Interval: 120 Shelf Life: Allocate Single Lot: Key Item: PO Receipt Status: W/O Receipt Status: Active: Active: Memo Order Type:

Back Next

## Inquiry and Report Programs

Inquiries and reports retrieve and display operational database records. Inquiries are primarily used to answer specific questions. Reports usually provide more detail and are printed for a range of data records. You select data by entering a specific range of criteria, such as item number or date.

Typically, inquiries are viewed online and reports are sent to a printer or file. However, you can also print inquiries and view reports. In addition, other output options, such as e-mail, are available.

Fig. 1.2  
Item Master Inquiry

Item Master Inquiry

Item Master Inquiry - 2/1/2010...

Item Master Inquiry02/01/10

Item Number: 20001  
Site: 2005

UM: EA  
FG20001

Output: PAGE

Prod Line: 1000  
Added: 06/02/03

Item Type:  
Status: AC

Drawing:  
Item Rev:

Design Group:  
Promo Group:

Group:  
Price Break Category:

Size:

ABC Class:  
Lot/Serial Control:  
Site: 2005  
Location: 100

Item Inventory Data  
Average Interval: 90  
Cycle Count Interval: 120  
Shelf Life:

Location Type:  
Auto Lot Numbers: No  
Lot Group:

Allocate Single Lot: No  
Key Item: No  
PO Receipt Status:  
WO Receipt Status:

Active: No  
Active: No

Article Number:

Memo Order Type:

Corp Comm Code:  
Ship Weight: 0.00  
Freight Class:

Item Shipping Data  
Net Weight: 0.00  
Volume: 0.00

Mstr Sched: Yes  
Plan Orders: Yes  
Time Fence: 0  
MRP Required: Yes  
Order Policy: POQ  
Order Qty: 0  
Batch Qty: 1.0  
Order Period: 7  
Safety Stock: 0  
Safety Time: 0  
Reorder Point: 0  
Item Rev:  
Issue Policy: Yes

Buyer/Planner:  
Supplier:  
PO Site: 2005  
Purchase/Manufacture: M  
Configuration Type:  
Inspect: No  
Ins LT: 0  
Mfg LT: 0  
ATP Enforcement: NONE  
Family ATP: No  
ATP Horizon: 0  
Run Seq 1:  
2:

Phantom: No  
Minimum Order: 0  
Maximum Order: 0  
Order Multiple: 0  
Op Based Yield: No  
Yield Percent: 100.00%  
Run Time: 0.000  
Setup Time: 0.000  
EMT Type: NON-EMT  
Auto EMT Processing: No  
Network Code:  
Routing Code:  
BOM/Formula:

Browse Programs

Browises are inquiry programs with advanced features such as filtering, sorting, and printing information. They can be used as *drill-down* browises within programs. Based on whether you choose to display substitute programs on the menus, browises can also replace many of the simple inquiries throughout the menus. How you access them depends on your user interface.

*Lookup browises* are one form of online help. When attached to individual fields, these simplified browises display the records in the associated master tables. You can then select a value and have the system insert it into the field.

There are both component-based and non-component based browises, which are described in “Introduction to Browises” on page 70.

Fig. 1.3  
Item Master Lookup

Item Master Inquiry

Item Master Inquiry - 2/1/2010...

Go To

Actions

Copy

Print

Preview

Attach

Item Number: 20001

Output: PAGE

Item Number: 20001

FG20001

Item Master

Actions

Print

Search (1)

Item Number

starts at

20001

Records per page: 100

10

20

50

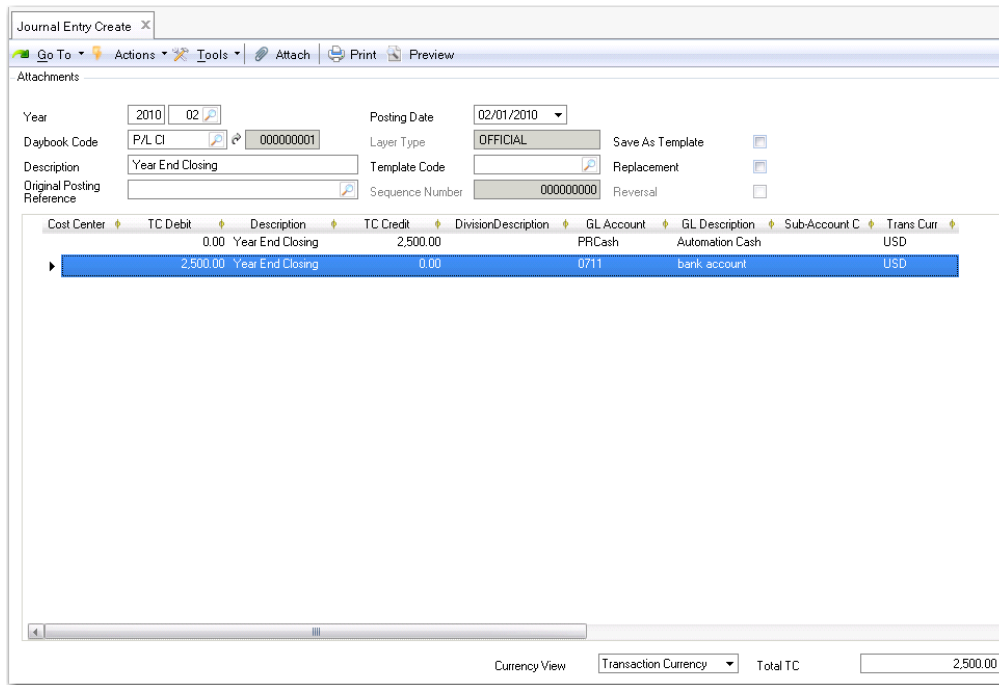
100

| Item Number | Description | Description 2 | Unit of Measure | Product Line |
|-------------|-------------|---------------|-----------------|--------------|
| 20001       | FG20001     |               | EA              | 1000         |
| 20002       | FG20002     |               | EA              | 1000         |
| 20003       | FG20003     |               | EA              | 1000         |
| 20004       | FG20004     |               | EA              | 1000         |
| 20005       | FG20005     |               | EA              | 1000         |
| 20100       | SA20100     |               | EA              | 1000         |
| 20101       | CA20101     |               | EA              | 1000         |

## Transaction Programs

Transactions express the core business activities of a company. They control and record activities related to business documents such as sales orders and invoices. An example of a transaction is receipt of a shipment for a purchase order using Purchase Order Receipts (5.13.1). Financials transactions programs include Customer and Supplier Invoice, and Journal Entry.

### Journal Entry Create



| Cost Center | TC Debit | Description      | TC Credit | Division/Description | GL Account | GL Description | Sub-Account C | Trans Curr |
|-------------|----------|------------------|-----------|----------------------|------------|----------------|---------------|------------|
|             | 2,500.00 | Year End Closing | 0.00      |                      | 0711       | bank account   |               | USD        |

Currency View: Transaction Currency Total TC 2,500.00

## Utility Programs

Utility programs enable you to manage and perform calculations in internal databases. In Purchasing, Closed PO Delete/Archive (5.23) is a database management utility, and in MRP, Net Change Materials Plan (23.1) causes the system to run net change MRP calculations. Both are utilities.

Often utilities are designed to be used only once. For example, many utilities perform one-time data conversions following system upgrades.

**Fig. 1.4**  
Closed PO Delete/Archive

## Data Types

A QAD database contains three types of data:

- Control data
- Transaction data
- Static data

### Control Data

When you implement a module, you enter data that the system uses later to control how the system interacts with users and with the database. This data is stored in control tables.

Control tables enable you to adapt the system to your environment. The data and settings in these tables determine how certain programs are displayed, the numbers assigned to transactions, the GL accounts for particular transactions, and so on. When you can manage a typical manufacturing function in more than one way, control settings let you establish a preference.

### Transaction Data

Most data in the database is transaction data. Every day, sales orders come in, purchase orders go out, and work orders make demands on and create material for inventory. These events result in transactions, which are stored in transaction tables. In contrast to control programs, transaction tables are constantly updated by users of the system.

### Static Data

Static data contains information about the basic building blocks and relationships of a company—the ways it does business, and the entities it does business with. Static data is used to create transaction records. However, static data is changed infrequently. Examples of static data are records for customers, suppliers, items, inventory sites and locations, and GL accounts.

### Interface Elements

While the QAD .NET UI and character UI vary in appearance and navigation techniques, they have some elements in common:

- The primary interface displays in the form of a hierarchical menu.
- You select a menu item, which displays a set of fields, which are grouped in frames (or tabs for component-based programs).

### Menus

Regardless of the type of interface your system uses, access to application features is controlled by a hierarchical menu system. Selecting a menu item either launches an application or drills down to a lower-level submenu.

The interfaces provide multiple access points to application programs. For example, you can launch a program by entering its Progress name or menu number on a command line in the character UI and in the search box in the QAD .NET UI. The QAD .NET UI offers point-and-click program launch as well as other interface-dependent methods of executing applications.

### Fields

A field is a piece of data that is stored as an individual unit in the database. The system expects you to enter a certain kind of data in the field. For example, a field labeled Item Number would store only codes for inventory items.

Usually, you can enter or change data in a field, but sometimes the field displays system-generated data. If the system administrator has secured a field—that is, restricted user access—and you do not have access, you can see the field value but cannot update it.

The system supports different types of fields:

- A logical field requires a simple Yes or No response. In the QAD .NET UI, logical fields display as check boxes. Logical fields are like switches—you can turn them either on or off.
- Character fields accept alphanumeric data.
- Date fields accept valid dates only.
- Integer and decimal fields require numeric input.

## Codes

Data entry in individual programs is simplified by codes. Each code usually represents a record with several pieces of data. For example, an item code is defined with the item weight, status, revision, ABC class, and so on. Once the code is set up, you enter the code and the system automatically retrieves all the information in the data record during processing.

In daily processing, codes are entered on transactions to simplify data entry and on inquiries and reports to access data records. During implementation, codes are entered in control programs as default values for transactions. Codes can also be associated with other codes when setting up static data.

## Frames

Fields in non-component based programs are grouped together in frames. You normally complete a number of different frames in order to create an object. For example, in order to create a purchase order, you must complete header information, line information, and trailer information, each of which type is contained in its own frame. Frames can contain sub-frames for additional required information, such as defining tax parameters for a purchase order. When a program requires more than one frame, you must complete the first frame to get to the second, and so on.

Most standard maintenance programs in the QAD .NET UI display as HTML pages using the same sequence of frames that display in the character interface. A few maintenance programs display the traditional character interface in a terminal-emulation window.

**Fig. 1.5**  
Purchase Order Maintenance, Tax Info Frame

The screenshot shows the 'Purchase Order Maintenance' window with the 'Tax Info' sub-frame open. The main window displays purchase order details for 'Purchase Order: 0119A' and 'Supplier: SCSUP001'. The 'Tax Info' sub-frame contains the following fields:

- Tax Usage: [Empty field]
- Tax Environment: USA-NJ
- Tax Class: [Empty field]
- Taxable: ☒
- Tax In: ☐

The main window also shows other details such as 'Order Date: 1/19/2010', 'Due Date: 1/19/2010', 'Buyer: 10000000', 'Bill To: 10000000', 'Site: 10000', 'Daybook Set: APDBSet', 'Credit Terms: 2/40PROX', 'Currency: USD', and 'Fixed Price: ☒'. The 'Tax Info' sub-frame is a modal dialog box that appears over the main content.

## User Interface Management Programs

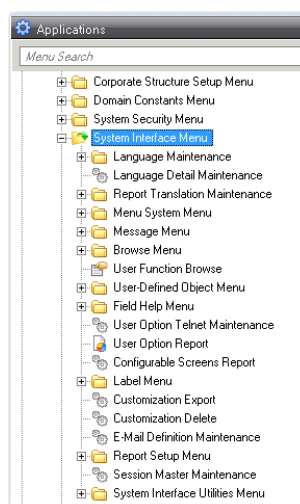
Several user interface management programs are intended primarily to let system administrators modify various aspects of the user interface. Most of these programs are provided on the System Interface menu (36.4). The System Interface menu contains programs that control menus, screen labels, messages, multi-language installations, and help. You can set up user function keys, define your e-mail system, and specify login scripts.

System interface functions also include programs for creating browses and associating them with fields and programs, and managing stored browse data. In addition, you can also define alternate programs to execute when menu items are selected and specify programs to be run from other programs.

For customization purposes, you can set up user-defined fields for both non-component and component-based programs.

Many of these functions are described in *User Guide: System Administration*. Browse maintenance is described in this guide, and customization procedures are described in *Administration Guide: .NET User Interface* (Configurable Screens) and *User Guide: QAD Financials* (Design Mode).

**Fig. 1.6**  
System Interface Menu



## Security Considerations

The system supports role-based access control. A role is a permission list of application resources to which a user can have access. If an application resource is listed in a role permission list, then a user who is a member of the role has access to that resource. Otherwise, the resources do not display on the menu. This means that the appearance of the UI varies depending on the specific permissions that you have been assigned. System security also determines which workspaces are available after you log in. If you have access to multiple workspaces, one is defined as the default and is used during the initial login.

The login process can also be affected by security settings defined by the system administrator in Security Control (36.3.24). For example, if single sign-on is enabled, you are not prompted for a password during application login except when you first access the system or when you change your password.

See *User Guide: QAD Security and Controls* for a description of the different types of security you can apply to QAD menus and functions.



# QAD .NET User Interface Overview

This section includes the following topics:

***Introduction to the QAD .NET UI 14***

Introduces the QAD .NET User Interface (UI).

***Main Window 15***

Describes the main .NET UI window.

***Main Menu Bar 15***

Explains the features of the main window in the QAD .NET UI.

***Accessing Application and Interface Help 23***

Explains the features of the main menu bar.

***QAD Assistance Panel 25***

Explains how to use QAD Assist to search the documentation.

***QAD Guide Me 26***

Describes the QAD Guide Me feature.

***Applications Area 27***

Describes the features of the area where applications (programs) are displayed in the QAD .NET UI.

***Favorites Area 31***

Describes how to use the Favorites feature in the QAD .NET UI.

***Status Bar 33***

Describes the status bar in the QAD .NET UI.

***Navigating the User Interface 34***

Describes how to navigate the .NET UI.

***Additional Interface Features 41***

Describes additional interface features and utilities

***QAD .NET UI and Terminal Keyboard Shortcuts 44***

Lists the keyboard shortcuts you can use with the QAD .NET UI.

## Introduction to the QAD .NET UI

The QAD .NET User Interface (UI) provides a common framework for multiple QAD applications. This framework, based on Microsoft .NET technology, has excellent performance and provides best-practice usability and deployment features, as well as extensive ways for users to adapt the UI to their preferred work style. Because the UI is based on Microsoft .NET technology, it incorporates familiar UI metaphors, reducing the need for users to learn how to navigate QAD applications.

### Starting the .NET UI

To launch the client, select the QAD Applications icon or menu item under Programs on the Start menu.

#### Login Window

When you start the application, the Login window is displayed.

**Fig. 2.1**  
Login Window



Complete the following fields:

*User.* Enter your user ID.

*Password.* Enter your password.

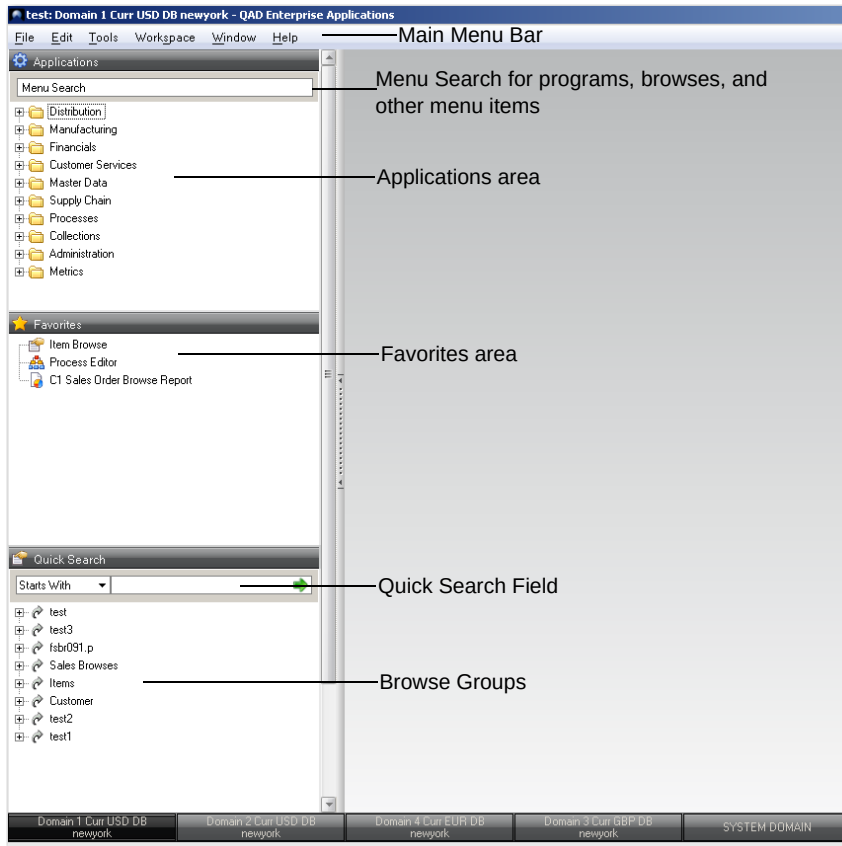
*Log on to.* Choose the system environment you want to log in to from the pull-down list.

After you complete the login screen, the QAD .NET UI main window displays.

When security has been defined in Menu Security Maintenance (36.3.10), you can see only the menu items to which you have access. However, access to menu items can also be controlled by the menu extension configuration file. For more information, see *Administration Guide: QAD .NET User Interface*.

## Main Window

**Fig. 2.2**  
Main Window

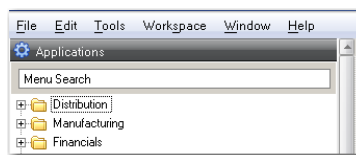


The elements of the main window include:

- “Main Menu Bar” on page 15
- “Applications Area” on page 27
- “Favorites Area” on page 31
- “Applications” on page 32
- “Quick Search Panel” on page 88
- “Status Bar” on page 33

## Main Menu Bar

**Fig. 2.3**  
Main Menu Bar

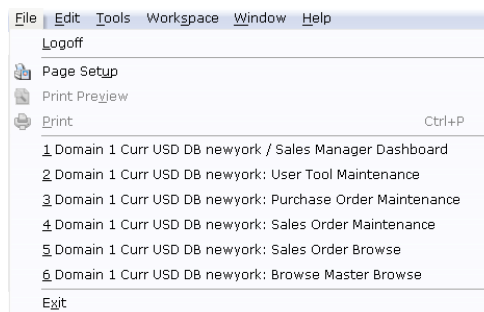


The main menu bar includes the following menus:

- “File Menu” on page 16
- “Edit Menu” on page 17
- “Tools Menu” on page 17
- “Workspace Menu” on page 21
- “Window Menu” on page 22
- “Help Menu” on page 22

## File Menu

**Fig. 2.4**  
File Menu



The File menu commands include:

**Logoff/Login.** Log off from all applications running in the QAD .NET UI. After you log off, this command changes to Login. This lets you log in as another user without closing the QAD .NET UI. To close the QAD .NET UI, use Exit, not Logoff.

**Page Setup.** Define page settings for print output, such as margins and orientation. The Page Setup options apply only to browses. For example, if you set the page to Landscape, this setting has no effect if you print a maintenance program screen, but it does take effect if you print a browse screen.

**Print Preview.** Generate a preview of browse data for the active screen so that you can verify that it is correct and make adjustments before printing.

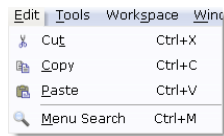
**Print.** Open the print dialog so that you can print the data for a browse or the screen for other programs. You can also click the Print icon in browses.

**Program History.** The section below Print displays the last six programs that you have opened. You can choose to open one of these programs directly from this pull-down menu.

**Exit.** Close the QAD .NET UI and log off any open applications.

## Edit Menu

**Fig. 2.5**  
Edit Menu



The Edit menu commands include:

*Cut.* Place selected text on the clipboard and remove it from the current location.

Keyboard shortcut: Ctrl+X.

*Copy.* Place selected text on the clipboard and leave it where it is currently located.

Keyboard shortcut: Ctrl+C.

*Paste.* Place the contents of the clipboard in the current cursor location.

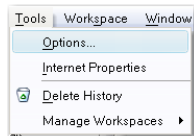
Keyboard shortcut: Ctrl+V.

*Menu Search.* Go to the menu search field in the Applications area so you can search for a program to execute. Using the keyboard shortcut (Ctrl+M) from anywhere in the application is a quick way to begin searching for a menu item.

Keyboard shortcut: Ctrl+M.

## Tools Menu

**Fig. 2.6**  
Tools Menu



The Tools menu commands include:

*Options.* View administrative information and set personal options for browses and other application settings. For more information, see “Options Menu” on page 19.

Settings the user cannot configure are viewable from Help|View Configuration.

*Internet Properties.* Update the same settings that display when you select Internet Options from the Tools menu in Internet Explorer. See the help provided with Internet Explorer for details about these options.

*Delete History.* Delete the following data:

Temporary files: Internet Explorer cache and IE cookies, and cached resources created for the current configuration.

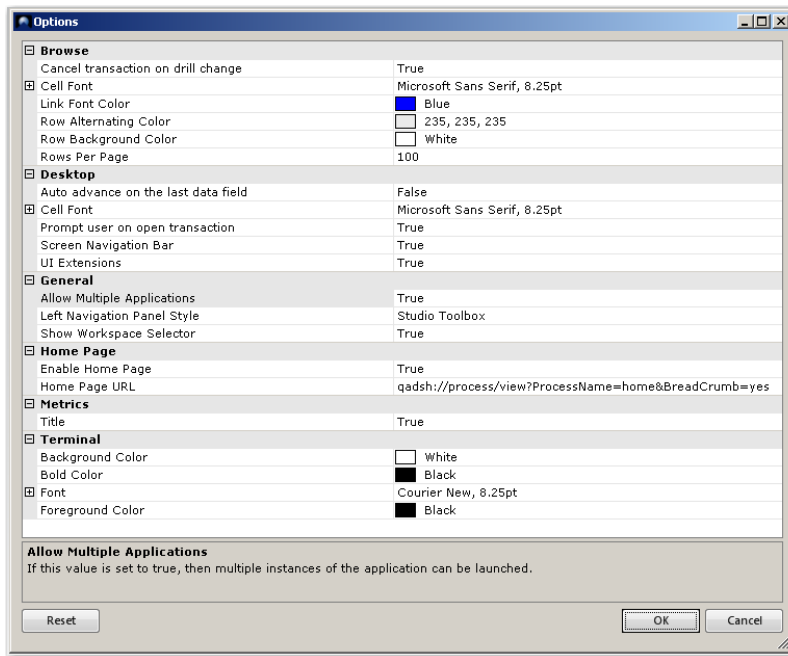
Session information: the graphical state stored by the GUI persistence manager. Also deletes user input, such as last configuration, last workspace, most recently used menu items, and credentials.

User preferences: preferences set in Tools|Options



## Options Menu

**Fig. 2.8**  
Options Menu



Use the Options menu (Tools|Options) to view and modify configuration options.

To view configurations that you cannot directly modify from the QAD .NET UI, select Help|View Configuration.

## Field Descriptions

### Browse

**Cancel transaction on drill change.** Specify the default action when the drill item changes (True or False). If set to True, changing the drill item on a parent screen changes the related item on the child maintenance screen. On the maintenance screen, you can then use the up and down arrows on the keyboard to select new drill items as listed in the browse. If set to False, changing the drill item on the parent screen does not change the related item on the child maintenance screen. Default is True. If you change this setting, you must restart the QAD .NET UI for the change to take effect.

**Cell Font.** Specify the font name, style, and size to use for cell data values. This field displays a standard Windows font dialog where you can select a font, font style such as bold or italic, and font size. Alternatively, you can click the plus icon next to the Cell Font attribute to expand the values associated with it and specify them one at a time.

Specifying the underline font attribute has no effect. This attribute is used by the system to indicate a link that can be clicked to drill down in a cell.

**Link Font Color.** Choose the color to use for hot-linked data values. You can choose system colors, Web colors, or custom colors from a color palette.

*Row Alternating Color.* Specify the background color for every other row in the browse display.

*Row Background Color.* Specify the background color for data rows in browses.

*Rows Per Page.* Specify the number of data rows to retrieve for each page of data in the browse. The default is 100.

## Desktop

*Auto advance on next data field.* Specify whether to go to the next frame after leaving the last field in the current frame.

*Cell Font.* Specify the font name, style, and size to use for cell data values. This field displays a standard Windows font dialog where you can select a font, font style such as bold or italic, and font size.

*Prompt user on open transaction.* When you close a program that has a transaction running, you can have the QAD .NET UI prompt you to double-check whether you want to close the program.

*Screen Navigation Bar.* To help you navigate complex screens, the QAD .NET UI includes a navigation tool for selected programs. This option specifies whether to include the screen navigation bar when displaying selected programs.

*Text Report Font.* Specify the font in which reports are displayed when output to text.

*UI Extensions.* Specify whether to include additional UI extensions such as enhanced button labels.

## General

*Allow Multiple Applications.* Specify whether you can launch multiple instances of the QAD .NET UI.

*Left Navigation Panel Style.* Specify the appearance of the left navigation panel, which includes the Applications Pane, Favorites Pane, and Role Menu Pane. The selections from the pull-down menu include Explorer Bar, Listbar, Toolbox, Outlook Navigation Pane, and Studio Toolbox. Note that with the Listbar style, you cannot drag-and-drop menu items from the Applications area to the Favorites pane.

*Show Workspace Selector.* Specify whether to display the workspace selector toolbar along the bottom of the screen. With the workspace selector toolbar, you can quickly change workspaces.

## Home Page

*Enable Home Page.* Specify whether the home page displays in the Home Page tab when you log in.

*Home Page URL.* Specify the location of the home page. The URL can be an `http://` URL or a `qadsh://` URL.

## Metrics

**Title.** This option controls whether or not metric title and date information are stored in the images saved to process maps.

## Terminal

**Background Color.** Choose the color to use for the screen background.

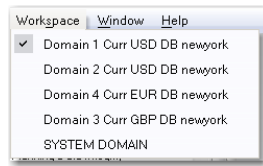
**Bold Color.** Choose the color to use for any text in the application that has the bold attribute.

**Font.** Specify the font name and style to use for text strings on the character UI. This field displays the standard Windows font dialog described for Cell Font. For optimal viewing, you should select a non-proportional font, such as Courier New (the default). The font size attribute has no effect on display. The character screens are automatically resized to fit the available space.

**Foreground Color.** Choose the color to use for text strings on the character UI.

## Workspace Menu

**Fig. 2.9**  
Workspace Menu



When you have access to more than one workspace, the Workspace menu lets you choose the one you want to work in. The values that display on the menu are configured in Tools|Manage Workspaces.

A workspace typically represents a domain. However, other QAD applications can have their own workspace types. When you first log in, you must choose a workspace. When you exit the QAD .NET UI, the active workspace is saved and displays when you log in again.

You can change your active workspace by selecting one from the list on the Workspace menu. You can also change your workspace from the Workspace Selector along the bottom of the QAD .NET UI window if the Tools|Options Show Workspace Selector option is True.

When you change workspaces, any programs you have running in the current workspace remain open. You can return to the workspace later to complete any open transactions.

The first time you access a workspace, the system must build the appropriate menu hierarchy for that workspace. This may take a few moments, but only occurs during the initial selection. On subsequent logins, menus are refreshed based on any changes made in the system. This also may cause a brief delay.

The Workspace menu displays only when the logged-in user has access to more than one workspace.

## Workspace Activation

With the QAD .NET UI, the active workspace when a user logs in is the workspace that was active during the previous session. However, in QAD Enterprise Applications - Standard Edition, if there was not a previous session or if the last activated workspace is not valid for the new session, then the QAD .NET UI activates the primary workspace (the default domain) for the user as specified in User Maintenance (36.3.1).

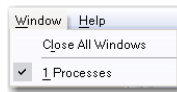
If a primary workspace has not been defined for the user, the QAD .NET UI activates the first workspace listed in the Workspaces pull-down menu. By default, the workspaces are listed in alphabetical order, but you can change the order using Tools|Manage Workspaces.

Information about the last active workspace and the ordering of workspaces is set on the client, and the information about the primary (default) workspace is set on the server. Consequently, if a user switches computers, or logs into a different system, the active workspace will depend on the client settings of the new computer or the server setting of the new system.

**Note** You can configure the workspace information displayed in the status bar. See *Administration Guide: QAD .NET User Interface* for details.

## Window Menu

**Fig. 2.10**  
Window Menu



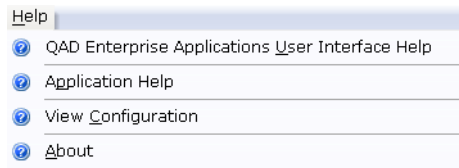
The Window menu displays a list of all programs currently open in the active workspace.

- Choose Close All Windows to close all open windows in a workspace.
- Change the active window by selecting one from the list.

The currently active window displays with a check mark next to its name in the list.

## Help Menu

**Fig. 2.11**  
Help Menu



Use the Help menu to display Application and Program Help, and to view installation and application configuration details.

The Help menu commands include:

*QAD Enterprise Applications User Interface Help.* This option displays the Contents page for the .NET User Interface Help system in the QAD Assist Panel.

**Application Help.** This option is available when your cursor is placed within a non-component based field or screen. When you then select Application Help, field or procedure help is displayed for the field or screen.

**View Configuration.** Opens a window that displays various configuration settings that cannot be directly changed by a user of the QAD .NET UI. These settings must be changed by a system administrator.

**About.** Display information about the version of QAD .NET UI that is running, the time the QAD .NET UI was started, and the total amount of physical memory the QAD .NET UI is using. (If N/A is displayed, the operating system is not giving the QAD .NET UI permission to access system information.)

View log information by clicking on View Log; the log file opens in the text editor associated with files ending in the .log extension on your system. The log file is named QAD.Applications.log.

On Windows systems (including XP, Vista and Windows 7), the default location of the log file is:

%appdata%

which is a Windows system environment variable that resolves to the path for the Application Data folder of the current user.

For example, on Windows XP, %APPDATA% resolves to:

C:\Documents and Settings\{username}\Application Data.

## Using Application Help

Application help is available in a number of options:

- Context-sensitive field help for non-component based programs is available by pressing F1 when in a non-component based field. This also provides a link to the procedure help for the program.
- Context-sensitive field help for component-based programs is available by enabling the QAD Guide Me feature, which provides mouse-over descriptions of the current field. See “QAD Guide Me” on page 26.
- Context-sensitive program help is available by pressing F1 in a component-based screen, which launches the QAD Assistance Panel. See “QAD Assistance Panel” on page 25.

## Accessing Application and Interface Help

You access context-sensitive help for application programs and fields by pressing F1 within the program or field, and also through the Help Menu option.

**Fig. 2.12**  
Help Menu

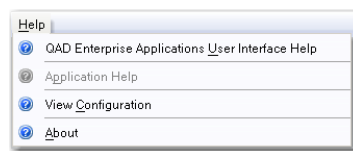
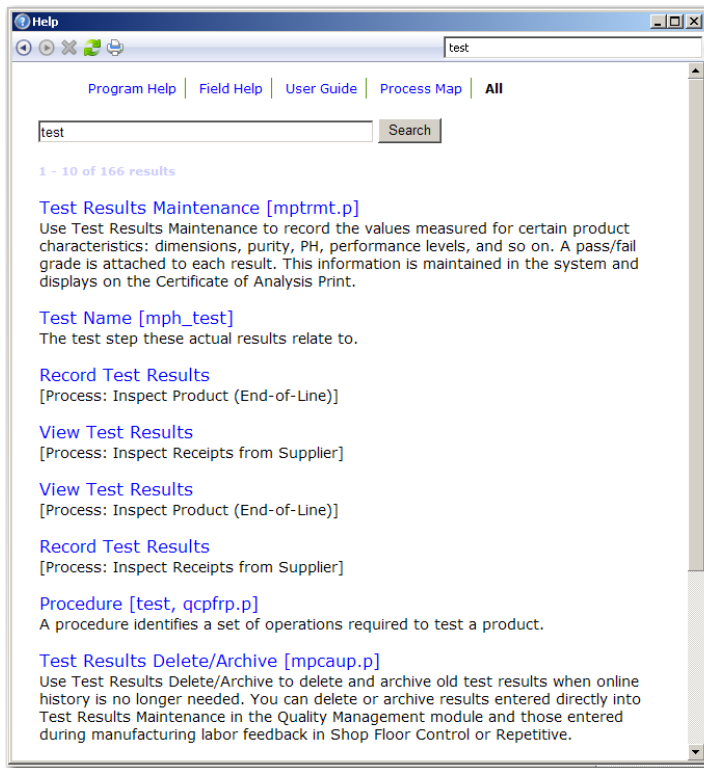




**Fig. 2.14**  
Application Help Menu



## QAD Assistance Panel

The QAD Assistance Panel provides online Help for the .NET UI and for Enterprise Edition applications. Assistance replaces the previous .NET UI and application online help files, and is a searchable HTML interface that is displayed by pressing the F1 key. The panel can also be accessed by selecting the option in the Help menu.

Character UI users can still access the online help available for fields and procedures.

The Panel features links to program help, field help, user guides, and process maps. You can display results for the search entry in any on these formats or in all of them.

### Single Terms and Phrases

You can search for single terms (such as 'test'), phrases (such as 'test system') or complex terms using operators (such as 'test AND system'). The panel stores default fields, which you define during deployment, which do not need to be specified when searching. The following operators are supported by the panel:

AND, +, OR, NOT, -

**Note** You can also use the symbol ! instead of the NOT operator.

Operators must be typed in all capitals.

## Wild Cards

The panel also supports the use of wild cards. Use a question mark (?) to replace a single character (for example, 'te?t') and an asterisk (\*) to replace multiple characters.

**Note** You cannot use these wild cards as the first character in a search term.

The tilde symbol (~) lets you perform fuzzy searches, which return results similar to the term you entered. You can specify the similarity to the searched term using a numerical option between 0 and 1 (for example, 'test~0.8'). The closer the value to 1, the greater the similarity. The default value is 0.5.

You can also use numerals to specify words within a specified distance from each other. For example, if you enter 'test system~10', the panel returns all instances of 'test' and 'system' appearing within 10 words of each other in a document.

The boost symbol '^' allows you to specify the relevance between two terms in a search. For example, if you enter:

```
test^4 system
```

the panel applies four times more relevance to documents containing 'test' than to those containing 'system', although it returns results for both. The boost symbol can also be applied to groups of terms (for example, 'test system^4 application deployment').

## Running the Panel from the Command Line

You can use the following QADSH commands to display the Assistance Panel from the command line:

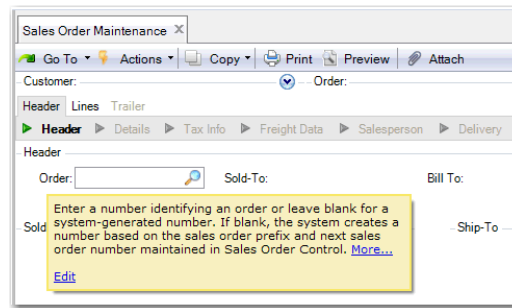
```
qadsh: //help/search
displays the default Search page in Assistance Panel
qadsh: //help/home
displays the panel Home page
qadsh: //help/search?q=sosomt.p
displays panel Help for the program sosomt.p
```

## QAD Guide Me

The QAD Guide Me feature provides immediate mouse-over descriptions of fields in both component and non-component programs. The feature is disabled by default.

**Note** Field help for non-component based programs is also displayed by pressing the F1 key when the cursor is positioned in the field.

**Fig. 2.15**  
QAD Guide Me



Click the More... link to display an extended description of the field, and the Edit link to edit this description in Field Help Maintenance.

**Note** The Edit option is only visible for users who have access to Field Help Maintenance.

## Enabling QAD Guide Me

The QAD Guide Me feature is enabled in the following ways:

- By setting the Guide Me parameter in the `client-session.xml` file to True
- By setting the option to True in the local `QAD.Client.exe.config` file or on the command line
- By adding a parameter to the shortcut path for QAD Applications on your desktop

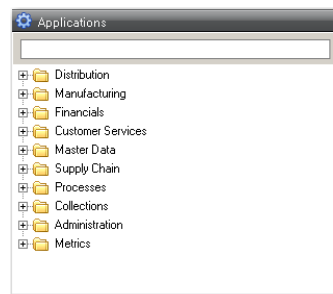
You can disable the feature by changing the above settings to false or by disabling the Guide Me plugin in the `client-bootstrap.xml` file.

These options are described in *Administration Guide: QAD .NET User Interface*.

## Applications Area

The Applications area displays the menu items for the QAD applications running in the QAD .NET UI.

**Fig. 2.16**  
Applications Area



When the system is installed, the default menu organization is automatically loaded.

**Note** Menu substitution is not supported in the QAD .NET UI; only items on the menus are included.

## Menu Search

You can use the menu search field to quickly find menu items by menu item label (alias), program name, and menu number (key).

Search results display directly in the application menu area.

You can use Search for multiple purposes:

- Find programs based on one or more menu label keywords, program name, or menu number. For example, enter sales to display all menu labels that include the word sales.
- Execute a specific program based on full menu label, program name, or menu number. For example, enter Item Master Maintenance, pptmt.p, or 1.4.1 and then press Enter to display Item Master Maintenance.
- Execute a specific program based on a shortcut defined in the Name field of Menu System Maintenance.

**Example** Menu is the shortcut for Menu System Maintenance; enter menu and press Enter to display this screen.

Search supports an auto-completion feature. You can type a minimal number of characters and press Enter to expand the phrase you entered with the first match. When only a single match exists, the program is executed.

Even though menus are listed by menu description, search by menu number (or key) and program name is supported to accommodate users who are familiar with other user interfaces.

Search locates all items that contain the search string, not just those that start with it. This is true of numeric as well as alphabetic input. Matches beginning with the search string display at the top of the results; matches that contain it display lower down.

**Example** Typing Customer finds Customer Maintenance before Controlled Customer Maintenance. Typing 1.1 finds 1.1.1 before 2.1.1 or 3.1.1.

Search results display directly in the application menu area.

The system displays results as you type, so you can select what you are looking for as soon as it is uniquely identified.

**Note** When a program has been added to more than one menu, each occurrence displays in the search results. This is likely to occur if you have added programs to Favorites. A tool tip displays the full path to the menu.

After using Search, you can right-click an item in the search results to display options.

In addition to the options that you have when you right-click a menu in non-search mode, you can choose Find in Menu in search mode. Choosing this option displays the currently selected menu item in location in the menu hierarchy.

You should be aware of these additional considerations when using Search:

- If you enter sales order, the search finds only menu labels containing that exact string.

- A shortcut—specified in the Name field of Menu System Maintenance—is always found first during a search. For example, Add is defined as the shortcut for Item Master Maintenance. If you enter add in Search, Item Master Maintenance displays first and executes if you press Enter.

## Menu Item Options

To access the options available for each menu item in the Applications Pane, right-click on the item. The options can include the following:

**Add To Favorites.** Adds the menu item as one of your favorites. Menu items identified as favorites are displayed in the Favorites Pane. For more information, see “Favorites Area” on page 31.

**Collapse Menus.** Returns the Applications area display to list only the top-level folders.

**Design.** Gives you access to the Configurable Screens feature. This option is only available for selected programs and only available to administrative users with access to the configurable screen feature.

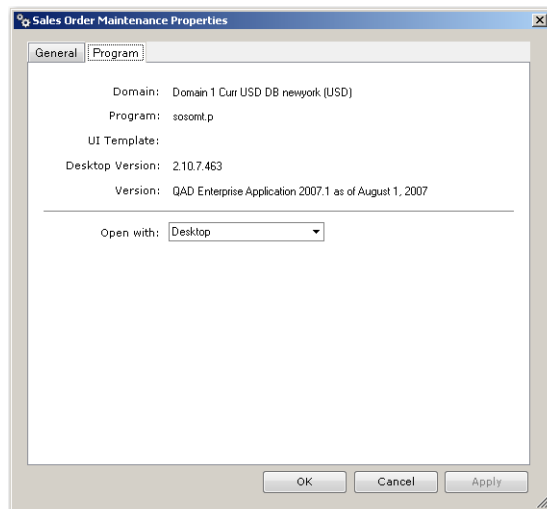
**Note** Configurable screens are described in more detail in *Administration Guide: QAD .NET User Interface*.

**Properties.** Displays details about the menu item in a pop-up window. For more information, see “Properties Window” on page 29.

## Properties Window

You can view the properties of a menu item by right-clicking on it and choosing Properties from the pull-down menu.

**Fig. 2.17**  
Properties Window



The Properties window includes two tabs, General and Program.

## General Tab

The General tab displays the following information about the program:

*URL.* The QAD Shell URL for the program.

*Key.* The program number. For example, 7.1.1 is the program number for Sales Order Maintenance.

*Aliases.* The program number and name. For example, for Sales Order Maintenance, 7.1.1 is the program number and `sosomt.p` is the program name.

*Menu.* The menu item folder location.

## Program Tab

The Program tab displays the following information about the program:

*Domain.* The current working domain and domain currency. If the specific program updates data that applies to all domains, All Domains displays next to the working domain currency. This is determined by settings in Program Information Maintenance (36.3.21.1).

*Program.* The program name. For example, `sosomt.p` is the program name for Sales Order Maintenance.

*UI Template.* If the user executing the program has been assigned a configurable screens version of the program, the name of the assigned UI template displays.

*Desktop Version.* Version details for Desktop.

*Version.* Product system version details.

*Open with.* Options can include one or more of the following:

- *Desktop.* Specify that the screen displays based on XML data using .NET technology.
- *Desktop (Web Browser).* Specify that the screen displays based on an HTML screen generated from the QAD Desktop application.
- *.NET User Interface.* Specify that the screen display is driven by a client-side plug-in, where the display is based on XML data using .NET technology.
- *Browse Viewer.* Specify that the screen displays in an interactive grid or chart format (browses only).
- *Terminal.* Specify that the screen displays as a character-based terminal screen.

**Note** Custom browses saved as favorites only display in Browse Viewer mode. If the mode is changed to Terminal, the custom browse will display in Browser View mode, not Terminal.

Initially, each program's display mode is determined by settings in Program Information Maintenance (36.3.21.1). Each user can change this setting on a program-by-program basis using the Properties option. These choices are retained from session to session.

## Favorites Area

The Favorites area is a custom menu you can create using menu options or drag-and-drop techniques.

**Fig. 2.18**  
Favorites Area



### Adding Favorites

You can add favorites in the following ways:

- Right-click a menu folder or menu item in the Applications area and choose the Add to Favorites option. The menu appears at the bottom of the list in the Favorites area.
- Select the menu folder or item you want and drag it from the Applications area to the Favorites area.
- Drag-and-drop URLs from Internet Explorer or Mozilla Firefox to the Favorites area, where the link will be saved as a favorite.
- Drag-and-drop an item from the file system (for example, from Windows Explorer) to the Favorites area, where a link to the item will be saved as a favorite. You can drag-and-drop programs (executables) as well.

You can add a menu more than once.

**Note** When the Left Navigation Panel Style option in Tools|Options is set to Listbar, you can not drag-and-drop menu items from the Applications area to the Favorites pane.

Because favorites are stored on the server, when you log on to the system from a different computer than your usual client computer, you will still see your favorites. Additionally, having your favorites on the server makes them immune to any disk problems that might occur on your client computer.

**Warning** If several users share the same user ID, Favorites storage files can be corrupted.

### Organizing Favorites

You can organize your favorites on your client screen into folders and subfolders, rename menu items and folders, rearrange the order of folders and items, and remove menu items you no longer want.

To organize menus into a hierarchy, right-click in the menu space and choose Create New Folder. You can then drag the folder to any position and drag menu items or other folders into it.

To rename or remove a menu item, right-click the item and choose the option you want. You can also display properties and go into design mode for enabled programs.

To change the icon of a menu item, right-click the item and choose Change Icon. Browse to a graphics file and select it.

To collapse the display of all open folders, right-click any item and choose Collapse Menus.

When you right-click a folder, you can also create a new subfolder within the currently selected folder.

You can launch a group of menu items organized under a folder together. Right-click on the folder and select Menu Collection. The folder icon changes to a collection icon. Click on the icon to launch all the functions at the same time.

**Note** If you copy a browse collection to favorites and then modify the collection without using Browse Collection Maintenance, you can no longer edit that updated browse collection using Browse Collection Maintenance. Favorites are stored locally and collections are stored on the server.

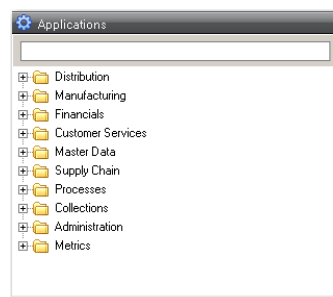
## Setting Auto Start

You can automatically start any favorite menu item when you log in to the QAD .NET UI. For any menu item saved under Favorites, right click the item and select Auto Start. With Auto Start selected, the menu item starts automatically when you next log in. Favorite menu items that start automatically are displayed in bold. With the exception of process maps, you can have more than one menu item start automatically. To disable this feature, right-click the item and deselect Auto Start.

Only one process map should have Auto Start selected. Having multiple process maps with Auto Start selected will launch the Process tab but the display will be blank. If you have multiple process maps in only one folder under Favorites, you can select Auto Start for multiple process maps in that folder, but only the first process map with Auto Start selected in that folder will open. If in that folder you include a sub-folder with one or more process maps set to Auto Start, the Process tab display will be blank.

## Applications

**Fig. 2.19**  
Applications Area



The programs you choose to run from the menu display in the applications area of the QAD .NET UI. You can open multiple programs and organize them in different ways.

You can have multiple instances of an HTML program or browse open. For example, you can have multiple instances of Sales Order Browse or Sales Order Maintenance open. However, you can have only a single instance of a character screen, process map, or help window.

## Tab Views

You can click a tab to activate it or click the “x” on the tab to close it.

You can use the keyboard to navigate through open programs. Ctrl+Tab displays a list of open programs you can select from, with focus on the next window. Ctrl+Shift+Tab displays the same list with focus on the previous window.

Click Close All to close all the tabs or click Close Others to close all the tabs except the currently active tab.

## Horizontal and Vertical Layout

You can create additional tab groups in either horizontal or vertical layout. Right-click any tab to display the tab options.

Click New Horizontal Tab Group to split the screen horizontally and move this program to the new area.

Click New Vertical Tab Group to split the screen vertically and move this program to the new vertical area.

You can only create groups of one type. After you have created the first vertical group, the option to create a horizontal group is not available; the same is true after you create a horizontal group. However, you can create as many of one type of group as you want. When multiple groups exist, other options to move to the next or previous tab group display when you right-click a tab. Use these options to move programs from one screen area to another. You can also simply drag programs where you want them.

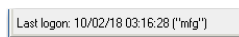
You can create multiple horizontal views of a browse by dragging the border indicator located above the horizontal scroll bar on the upper right side of the browse view. Similarly, you can create multiple vertical views of the same browse by dragging the border indicator located on the left of the vertical scroll bar. Creating multiple horizontal and vertical views of a browse is useful when working with a large browse that is difficult to view in a single pane.

## Move Tab to New Window

You can have a tab detach from the Applications area and display in a new window. Right-click the tab and choose Move Tab to New Window or enter Ctrl+F11. To move a tab in a separate window back to a tab in the application area, enter Ctrl+F11.

## Status Bar

**Fig. 2.20**  
Status Bar Login Information



After you log in, the status bar briefly displays the date and time of your previous log-in, along with your user name and user ID. The date is in the format YY/MM/DD: for example, August 30, 2007 is 07/08/30.

You can resize the menu area and application area by using the vertical resize bar and dragging it to the right or left. You can also resize the Application menu area and the Favorites area by dragging the horizontal resize bar up or down.

The ID of the currently logged-in user displays in the bottom right corner of the screen.

**Note** You can configure the workspace information displayed in the status bar. See *Administration Guide: QAD .NET User Interface* for details on Domain/Workspaces Configuration.

## Navigating the User Interface

You can choose to run most non-component based programs in either .NET mode or in terminal mode, by selecting from the Open With drop-down menu in Program Properties. Terminal mode emulates the character UI within the .NET UI, and you navigate the program in the same way as in character. The character UI is described in “Introduction to the QAD Character UI” on page 154.

**Fig. 2.21**  
Purchase Order Maintenance in Terminal Mode

Purchase Order Maintenance x

Purchase Order:  Supplier:  Ship-To:

Supplier  Ship To

|             |              |                 |             |
|-------------|--------------|-----------------|-------------|
| Order Date: | Price Tbl:   | Confirming: No  | Imp/Exp: No |
| Due Date:   | Disc Tbl:    | Currency:       | Language:   |
| Buyer:      | Ln Disc:     | Taxable: No     |             |
| Bill To:    | Site:        | Fixed Price: No | Consign: No |
| Sales/Job:  | Daybook Set: | Credit Terms:   |             |
| Contract:   | Project:     | Entered By:     |             |
| Contact:    |              | Requested By:   |             |
| Remarks:    |              | Comments: No    |             |

F1=Go 2=Help 3=Ins 4=End 7=Recall 8=Clear 9=Prev 10=Next

Because of their different underlying technologies, you navigate component and non-component based screens in the .NET UI in different ways.

- You use traditional mouse-clicks, tabs, and keyboard tabbing to navigate the component-based screen.
- The non-component based screen is a rendering of the character UI for the .NET UI, and uses similar tabbing and keyboard navigation.

These navigation methods are described in the following sections

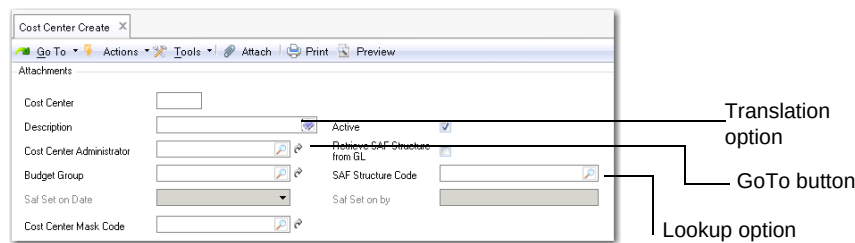
## Using Component-Based Screens

Component-based screens have a number of additional navigation features.

### Entering Data in Fields

Use the tab key and mouse cursor to navigate through business component forms and to enter data.

**Fig. 2.22**  
Screen Options



A lookup option is available on fields that feature magnifying glass icons. You can also access this option by pressing Alt+L. Lookup screens can be customized in the same way as the browse overviews.

Many actions, such as Save and Create, also have keyboard shortcuts; for example, Control+S for Save and Control+N for Create (New). The shortcuts are listed in the Actions menu.

The translation option is available for description fields and lets you store translations of your description text in active system languages. “Messaging and Workflow Inbox” on page 41 discusses this option in more detail.

You can click the Go To button to access the related activity that created the value displayed in a field. Go To options are also available on the Go To menu. Which activity displays depends on whether the source field is empty or contains a value.

**Example** In Figure 2.22, you click the Go To button next to the Budget Group field when the field is empty. The Budget Group Create screen displays so you can create a new budget group for this cost center.

If you click Go To when a value already exists in the field, the Budget Group View screen displays. If you want to modify the budget group, you can switch from View to Modify in the Actions menu of the Budget Group screen.

**Note** The system security determines if you have modify rights.

In some amount fields, you can use the F3 key to automate data entry. When your cursor is in a transaction amount field, pressing F3 automatically fills in the balancing side of the transaction. This can be very useful in functions such as journal entry.

### Using Information Grids

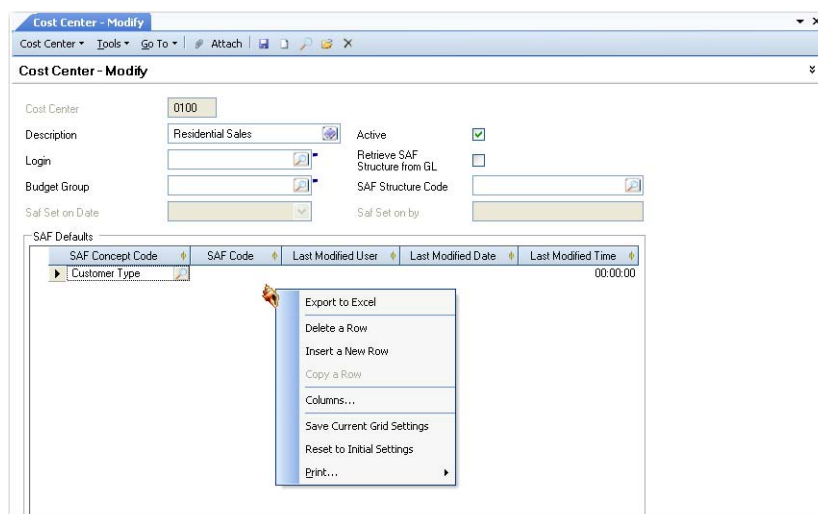
A number of screens feature information grids. These grids have many of the same features as browses; for example, you can change the column order and width. See “Status Bar” on page 33 for details.

Some grids are more complex than others, letting you add child rows with additional data related to a parent row.

System and user settings affect whether grid changes are temporary or remembered by the system. These settings are described in *User Guide: QAD System Administration*. Allow User Customization must be enabled and either Automatic Save of Last Used Grid Settings or Allow Save of Grid Settings must be enabled for the system to save changes. If the save is allowed rather than automatic, you can pick that command from the context menu.

To see the commands available in the grid, right-click to display a context menu.

**Fig. 2.23**  
Grid Context Menu



### Grid Context Menu Commands

- **Export to Excel.** This command is enabled only when the grid includes data. All browses and grids can be exported to Excel. See “Exporting Data to Excel for Reporting” on page 117.
- **Delete a Row.** To delete a row, right-click in the row and select Delete a Row from the context menu or press the Delete key on the keyboard. The system prompts for confirmation before deleting the row.
- **Insert a New Row.** Right-click and choose Insert a New Row from the context menu or press the Insert key. This either opens a new row for updating the required data fields or displays a new screen for data input (see Figure 2.24 on page 37).
- **Insert a Child Row.** This command is available only in a grid that supports subordinate rows with data related to a parent row.
- **Copy a Row.** Right-click in the source row you want to copy and choose Copy a Row. A new row is created with the copied data. You must modify the key fields before you save the record.
- **Columns.** Right-click on the grid header and choose Columns to display a dialog for changing which columns display in the grid and other grid details. The same option is available for browses and is described in “Column Options” on page 82.

- **Save Current Grid Settings.** This option is available when Allow Save of Grid Settings is enabled system wide and automatic saving is not. Choose the option to preserve the changes you have made to the grid.
- **Reset to Initial Settings.** Choose this option to clear any changes you have made to the browse and reset it to its initial defaults defined at system installation.
- **Print.** Choose this option to send the data in the grid to the default Windows printer. You can also use the print commands on the .NET UI File menu to print data.

For example, in Cost Center Create, choosing Insert a New Row opens a row directly in the grid. Figure 2.24 illustrates the same command in the Business Relation Create screen, which opens a form for entering the data in the row. In this example, right-clicking the grid and choosing Insert a New Row displays the Address Information screen.

**Fig. 2.24**  
Address Information

Complete the information in this screen, and click OK. The new address row is now inserted into the grid in the Business Relation Create form.

## Grid Sorting

You can sort the information in a grid using multiple sort levels. To use this facility, click on the first sort column on the grid. For subsequent sort levels, hold down the Shift key and click on the required column headings. The example in Figure 2.25 is sorted by Order, then by Receiver, and then by Reference. The triangle symbol to the right of the column name indicates that the column is used in the grid sort.

**Fig. 2.25**  
Grid Sorting

| Selected                            | Domain  | Order    | Order Ln | Receiver | Reference | Supplier Invoice Internal Reference | Quantity | Unit Price |
|-------------------------------------|---------|----------|----------|----------|-----------|-------------------------------------|----------|------------|
| <input checked="" type="checkbox"/> | Domain1 | D1P25    | 1        | rcv25    | pk25      |                                     | 10       | 8          |
| <input checked="" type="checkbox"/> | Domain1 | D1P25    | 1        | rcv25    | pk25      |                                     | 60       | 5          |
| <input checked="" type="checkbox"/> | Domain1 | D1P25    | 1        | rcv25    | pk25      |                                     | -10      | 5          |
| <input checked="" type="checkbox"/> | Domain1 | D1P3     | 1        | D1R2     | Test1     |                                     | 100      | 6.86       |
| <input checked="" type="checkbox"/> | Domain1 | D1P32    | 1        | D1R11    | D1R11     |                                     | 4        | 10         |
| <input checked="" type="checkbox"/> | Domain1 | D1P37    | 1        | D1R15    | D1R15     |                                     | 9        | 10         |
| <input checked="" type="checkbox"/> | Domain1 | test3401 | 1        | D1R7     | D1R7      |                                     | 50       | 10         |
| <input checked="" type="checkbox"/> | Domain1 | test3401 | 1        | D1R8     | D1R8      |                                     | -10      | 10         |
| <input checked="" type="checkbox"/> | Domain1 | test3401 | 1        | D1R9     | D1R9      |                                     | -20      | 10         |

## Grid Filtering

Each column header also features a drop-down filter option. Click the icon to display the available filters.

**Fig. 2.26**  
Grid Filtering

| Format Name | Description      | Module              | Payment Type | Payment I    |
|-------------|------------------|---------------------|--------------|--------------|
| (All)       | ABX AP Check     | Accounts Payable    | Both         | Check        |
| (Custom)    | ABX AR Check     | Accounts Receivable | Both         | Check        |
| (Blanks)    | ano              | Accounts Receivable | Both         | Check        |
| (NonBlanks) | ABX AP Check     | Accounts Payable    | Both         | Check        |
|             | ABX AR Check     | Accounts Payable    | Both         | Check        |
|             | ano              | Accounts Payable    | Both         | Draft        |
|             | AP Check         | Accounts Payable    | Both         | Electronic T |
|             | AP Elec Transfer | Accounts Payable    | Both         | Promissory T |
|             | AP PromNote      | Accounts Payable    | Both         | Summary St   |
|             | AP Summary St    | Accounts Payable    | Both         | Transfer     |
|             | AP Transfer      | Accounts Payable    | Both         |              |

## Expand Button

Screens that display complex details often include a button for expanding or contracting the level of detail displayed. Figure 2.27 illustrates the button in Receiver Matching Create. Currently the Pending Invoice Filter is closed.

**Fig. 2.27**  
Expand Button

The screenshot shows the 'Receiver Matching Create' window. It includes a menu bar with 'Go To', 'Actions', 'Tools', 'Attach', 'Print', and 'Preview'. Below the menu is a section titled 'Attachments'. The main area is divided into 'Matching Data' and 'Search for Pending Invoices'. The 'Matching Data' section contains fields for Date (03/04/2009), Year/Pd (2009), Invoice (0), Reference (00000000), Registration Number (0000000000), Invoice Status Code, Daybook (QADCREC), Invoice Type, Supplier Code, and Status (Finished). The 'Search for Pending Invoices' section is currently collapsed, and an 'Expand button' is visible on the right side of the collapsed area.

Clicking the button expands the contracted frame, as shown in Figure 2.28. Other screen areas are hidden and shown using the contract button.

**Fig. 2.28**  
Contract Button

Contract button —

## Saving Records

When you have entered all the data necessary for the screen, click Save or Save and Create.

**Note** Save and Create is available only when you are creating a new record from selected screens; when available, it lets you save the current record and then clears all fields so you can create another record.

The system validates the data before saving to the database, and prompts you if you have entered invalid data or have not completed essential fields. The prompt outlines the severity of the problem and provides instructions for resolving it. A red exclamation mark on the screen indicates which fields are affected (see Figure 2.29).

**Note** On fields that have a Lookup button, if you press Alt+L when your cursor is in the field, the system launches a lookup, which validates the value you entered.

**Fig. 2.29**  
Error Prompt when Saving Data

The screenshot shows the 'Cost Center Create' window. The 'Cost Center' field has a red error icon. The 'SAF Defaults' table is empty. The status bar at the bottom displays the following message:

| Type | Message Number | Severity | Field       | Message                    |
|------|----------------|----------|-------------|----------------------------|
| E    |                | Normal   | Cost Center | You must enter this field. |

Click Detail to view details about code that was running when the error occurred, and click Return to access the form again without closing the error prompt. When you have corrected the issues, you can click Close to close the Error Messages screen. However, you can also click Save again without closing the Error Messages screen. In both cases, the data is validated again. The status bar indicates when a record is saved successfully.

If a validation is successful, the data is saved to the database, the screen is cleared, and you can begin creating another record using Save and Create. If you clicked Save after successfully saving, the screen goes to View mode so that you can verify the data. You can select Modify from the Action menu if you want to make additional changes. Depending on your user configuration option, the successfully saved window can be closed automatically.

**Fig. 2.30**  
Record Saved Message

Cost Center CCT4 has been saved successfully.

Most actions, such as Save and Create, also have keyboard shortcuts; for example, Control+S for Save and Control+N for Create (New). These shortcuts are listed in the Actions menu.

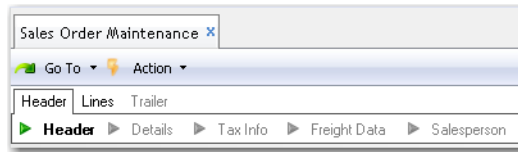
## Using Non-Component Based Screens

Because non-component based screens are a rendering of the character UI, you can navigate these screens using the same keyboard commands, which are described in “Character User Interface” on page 153. You can also use mouse clicks to select fields and enter data.

## Screen Navigation Bar

To help you navigate complex screens, the QAD .NET UI includes a navigation tool for selected programs.

**Fig. 2.31**  
Screen Navigation Bar



If the program opens in .NET UI mode, a navigation bar is displayed along the top of the screen indicating where you are as you proceed through the program screens. For example, the screen for Purchase Order Maintenance includes a navigation bar indicating the parts of a purchase order: Header, Tax Info, Lines, and Trailer.

The Screen Navigation Bar option in the Desktop section of the Options menu (choose Tools|Options) specifies whether your QAD .NET UI client displays the navigation tool.

### Entering Data on Screens

Many fields display a small magnifying glass icon. This indicates that a lookup is associated with the field. Click the icon or use the Alt+L keyboard shortcut to display the lookup. The lookup lists valid values for the field.

A drop-down list is displayed when only a few values apply to a field.

Logical fields represent Yes and No choices. These display as check boxes on HTML screens. A clear check box indicates a No value; a selected box indicates a Yes value.

## Additional Interface Features

The following section describes the Inbox and Messaging features, and how to use the Translation and Calendar features.

### Messaging and Workflow Inbox

The QAD .NET UI includes a messaging capability so that you can send messages and workflow information to other users of the system. When using programs, browses, inquiries, and process maps, you have an Inbox on the left side of the application area for sending and receiving messages. You can also send program or browse workflow messages, which include links to programs or browses, by choosing Actions|Workflow when using a program or browse.

Workflow is described in more detail in “Workflow” on page 53.

#### To Send a Message

- 1 Open the Inbox by moving the cursor to the Inbox located in the upper right corner of the QAD .NET UI.  
(Alternatively, click the Inbox icon located in the lower right corner of the QAD .NET UI.)
- 2 Click the Compose Message icon.

- 3 In the To field, enter the user IDs or names of the users to whom you want to send the message.
- 4 In the Subject field, enter text indicating the subject of the message.
- 5 In the content area, enter or paste message content.
- 6 Click Send to send the message (or click Cancel to cancel it).

### To Check Messages

- 1 Open the Inbox by moving the cursor to the Inbox located in the upper right corner of the QAD .NET UI.  
A list of currently received messages is displayed in the Inbox, displaying the sender and subject of each message.
- 2 To refresh the list of received messages, click the Check Mail icon.
- 3 To view message details, click the Show Details icon; to hide message details, click the Hide Details icon.
- 4 To delete a message, click on it to select it, and then click the Delete icon.
- 5 To view a message, double-click on the title of the message. The message includes New, Reply, Reply All, Forward, and Delete buttons.

### To Control Inbox Display

The Inbox, accessible from the left-hand side of the QAD .NET UI, displays messages. You can have the Inbox display whenever a program is open, or have it open only when you move the cursor over the Inbox icon. Click on the pin-shaped icon in the upper-right corner of the Inbox to specify whether the Inbox is always open.

You can choose to hide or auto-hide the Inbox, and also whether the Inbox panel should be docked in the top-right corner of the screen, or floating in any position on the screen. Right-click the Inbox panel label to display these options.

**Fig. 2.32**  
Inbox Right-Click Options

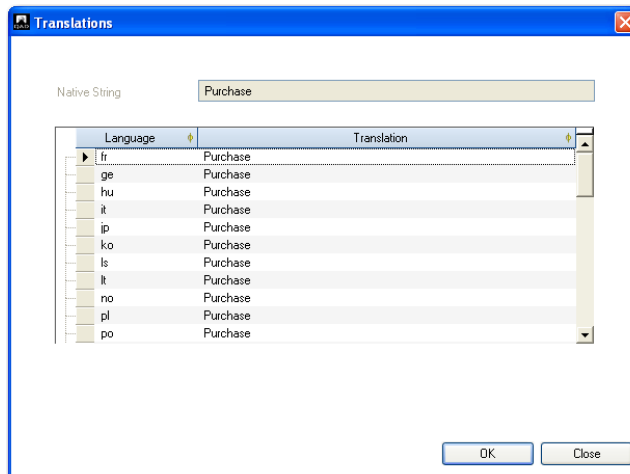


### Using the Translation Option

The Description fields for most component-based records support a translation option. The initial description is essentially language neutral. However, clicking the Translation button to the right of the Description field copies that description into a record for each available language.

**Note** One of these languages is the language of the current domain. While most descriptions are likely to be entered in that language initially, the description is linked to a language only by setting up the translations.

**Fig. 2.33**  
Translating Account Description



If you choose to use this feature, you must develop your own policies to ensure that the translation of descriptions is completed for the languages that need to be supported in your organization.

Some financial data is also displayed and accessed in other operational functions. These functions do not support multiple language-dependent descriptions. When only one description exists, it is always used in the operational functions.

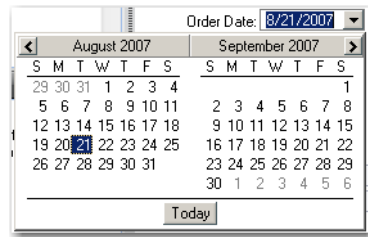
However, when multiple translations of the descriptions exist, the system attempts to use the most appropriate one. To determine which language should be used, the system:

- Uses the value of System Language specified in System Maintain (36.24.3.1) for records that apply to the entire database. See *User Guide: QAD System Administration* for details.
- Uses the value of domain language for records that apply to a specific domain.

**Note** Unless you are using a Unicode database, some restrictions exist on which languages can be used in a single database. See the appropriate installation guide for information on the Unicode database deployment.

## Screen Calendars

When you click the pull-down icon next to a date field, a calendar tool is displayed. You can also use the Alt+L keyboard shortcut for this option.

**Fig. 2.34**  
Calendar

Use the calendar to choose and insert a date into the active field. You can use the keyboard or your mouse to navigate this calendar.

Using the keyboard, use the Tab key to move the cursor through the calendar. Tabbing begins with the arrows at the top of the calendar.

With an arrow button selected, press the spacebar to display previous and next months and years as shown in the figure. Press the spacebar when a date is selected to enter that date in the date field.

Using the mouse, click the arrows for the next and previous months or years; then click the day in the displayed month to insert it into the active field.

You can select a date on the calendars without using the mouse. To do so, launch the calendar, then use the arrows to get to the date you want. Use Enter to choose the selected date. Use Enter again to submit the frame.

## QAD .NET UI and Terminal Keyboard Shortcuts

The following table summarizes keyboard shortcuts in QAD .NET UI.

| Action                         | Keystroke          | UI Mode  | Description                                                                                                                             |
|--------------------------------|--------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Help                           | F2                 | Terminal | Display help for current cursor focus.                                                                                                  |
| Display user-selected programs | Ctrl+P             | Terminal | Displays a list of user-selected programs                                                                                               |
| Next frame                     | F1<br>or<br>Ctrl+X | Terminal | Submit current data in current frame and move to the next frame. Equivalent to Next button click, Go, Enter or Tab in the Character UI. |
| Exit frame                     | F4<br>or<br>Ctrl+E | Terminal | Exit current frame (Back button click) and move back to previous frame. Equivalent to End in the Character UI.                          |
| Delete record                  | F5<br>or<br>Ctrl+D | Terminal | Execute the Delete Record command when valid. (Delete button click.) In a text field, delete a single character.                        |
| Recall                         | F7<br>I<br>Ctrl+R  | Terminal | Recalls the last saved value in a field.                                                                                                |
| Clear Date                     | Shift+?            | Terminal | Clears the value date in date fields.                                                                                                   |
| Next field                     | Enter<br>or<br>Tab | Terminal | Move forward to next field within a frame or to next row within a selection list.                                                       |
| Previous field                 | Ctrl+U             | Terminal | Move back to previous field within a frame or to previous row within a selection list.                                                  |

| Action                                        | Keystroke                      | UI Mode             | Description                                                                                                                                                         |
|-----------------------------------------------|--------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Previous record                               | up arrow<br>or<br>F9           | Terminal            | In a field where next/previous processing is enabled, display the previous record. Equivalent to using the up arrow key in the Character UI.                        |
| Next record                                   | F10<br>or<br>Ctrl+J            | Terminal            | In a field where next/previous processing is enabled, display the next record. Equivalent to using the down arrow key in the Character UI.                          |
| Insert mode toggle                            | F3<br>or<br>Ctrl+T             | Terminal            | Toggles insertion mode.                                                                                                                                             |
| Clear field                                   | F8                             | Terminal            | Clear the value in a field.                                                                                                                                         |
| Clear date field                              | Shift+?<br>or<br>F8            | Terminal            | Clear the value in a date field.                                                                                                                                    |
| Field information                             | Ctrl+F                         | Terminal            | Displays information about the current program context, including the field name.                                                                                   |
| Navigate down hierarchy                       | down arrow                     | .NET User Interface | In Product Structure Maintenance (.NET User Interface mode), navigate downwards in the product structure hierarchy.                                                 |
| Navigate up hierarchy                         | up arrow                       | .NET User Interface | In Product Structure Maintenance (.NET User Interface mode), navigate upwards in the product structure hierarchy.                                                   |
| Open hierarchy item                           | right arrow                    | .NET User Interface | In Product Structure Maintenance (.NET User Interface mode), open an item in the product structure hierarchy.                                                       |
| Close hierarchy item                          | left arrow                     | .NET User Interface | In Product Structure Maintenance (.NET User Interface mode), close an item in the product structure hierarchy                                                       |
| Browse search panel focus                     | Ctrl+S                         | Browse Viewer       | In a browse, place cursor focus on the search panel.                                                                                                                |
| Refresh browse with current search conditions | Enter                          | Browse Viewer       | In the browse search panel, refresh the query based on the current search conditions in the browse search panel.                                                    |
| Set browse search date                        | up arrow<br>and<br>down arrow  | Browse Viewer       | In the browse search field, when the field is a date, use the up arrow or down arrow keys to enter the current date and then move up or down from the current date. |
| First set of browse records                   | Alt+up arrow                   | Browse Viewer       | Display first set of records in a browse.                                                                                                                           |
| Previous set of browse records                | Alt+left arrow                 | Browse Viewer       | Display previous set of records in a browse.                                                                                                                        |
| Next set of browse records                    | Alt+right arrow                | Browse Viewer       | Display next set of records in a browse.                                                                                                                            |
| Last set of browse records                    | Alt+down arrow                 | Browse Viewer       | Display last set of records in a browse.                                                                                                                            |
| Previous browse record                        | up arrow<br>or<br>right arrow  | Browse Viewer       | Select the row previous (above) the current row in a browse.                                                                                                        |
| Next browse record                            | down arrow<br>or<br>left arrow | Browse Viewer       | Select the row after (below) the current row in a browse.                                                                                                           |

| Action                           | Keystroke                          | UI Mode             | Description                                                                                                                                                                                                |
|----------------------------------|------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Next field in browse toolbar     | Tab                                | Browse Viewer       | Move focus to next field or button in browse toolbar.                                                                                                                                                      |
| Previous field in browse toolbar | Shift+Tab                          | Browse Viewer       | Move focus to previous field or button in browse toolbar.                                                                                                                                                  |
| Rotate 3D browse chart           | Alt+<br>move mouse                 | Browse Viewer       | Rotate 3D browse chart.                                                                                                                                                                                    |
| Zoom 3D browse chart             | Alt+<br>move mouse<br>scroll wheel | Browse Viewer       | Zoom 3D browse chart.                                                                                                                                                                                      |
| Exit browse                      | Ctrl+F4<br><i>or</i><br>Ctrl+Enter | Browse Viewer       | Close the browse. Cursor must be in browse record display area for this shortcut to take effect.<br><br>Note that if the cursor is in the Search panel of a browse, Ctrl+Enter opens and closes the panel. |
| Browse Menu bar                  | Esc+M                              | Terminal            | Accesses the browse menu bar. Use the mouse instead in Windows character clients.                                                                                                                          |
| Browse options                   | F7                                 | Terminal            | Opens the browse options window.                                                                                                                                                                           |
| Browse Options Toggle            | Esc+F                              | Terminal            | Toggles the Browse Options on and off. Use the mouse instead in Windows character clients.                                                                                                                 |
| New browse                       | Ctrl+N                             | .NET User Interface | Create new browse in Browse Maintenance.                                                                                                                                                                   |
| Open browse                      | Ctrl+O                             | .NET User Interface | Open browse in Browse Maintenance.                                                                                                                                                                         |
| Save browse                      | Ctrl+S                             | .NET User Interface | Save browse in Browse Maintenance.                                                                                                                                                                         |
| Delete browse                    | Ctrl+D                             | .NET User Interface | Delete browse in Browse Maintenance.                                                                                                                                                                       |
| Add tables                       | Ctrl+T                             | .NET User Interface | Add tables in Browse Maintenance.                                                                                                                                                                          |
| Run browse                       | Ctrl+R                             | .NET User Interface | Run browse in Browse Maintenance.                                                                                                                                                                          |
| Import browse                    | Ctrl+I                             | .NET User Interface | Import browse in Browse Maintenance.                                                                                                                                                                       |
| Export browse                    | Ctrl+E                             | .NET User Interface | Export browse in Browse Maintenance.                                                                                                                                                                       |
| Delete multiple browses          | Shift+Delete                       | .NET User Interface | Delete multiple browses in Browse Maintenance.                                                                                                                                                             |
| Run dynamic inquiry              | Ctrl+R                             | .NET User Interface | Run a dynamic inquiry. Dynamic inquiries display in a dynamic, hierarchical (bucketed) format that makes them more convenient to use.                                                                      |
| Export dynamic inquiry to Excel  | Ctrl+E                             | .NET User Interface | Export a dynamic inquiry to Excel.                                                                                                                                                                         |
| View dynamic inquiry as PDF      | Ctrl+Shift+P                       | .NET User Interface | View a dynamic inquiry in the PDF format.                                                                                                                                                                  |
| Exit program                     | Ctrl+C                             | Terminal            | Close currently running program.                                                                                                                                                                           |
| Exit application                 | Alt+F4                             | N/A                 | Close the QAD .NET UI.                                                                                                                                                                                     |

# Programs in QAD .NET UI

The QAD .NET UI lets you use programs using advanced features of .NET technology. This section describes using programs in the QAD .NET UI.

This section includes the following topics:

***Using Programs in the QAD .NET UI* 48**

Describes the features of programs in the QAD .NET UI.

***Component and Non-Component Based Programs* 48**

Explains component and non-component based programs.

***Using Reports and Inquiries* 59**

Describes how to use reports and inquiries in the QAD .NET UI.

***Custom Program Interfaces* 60**

Describes additional navigation features in specific programs

***Other Program Utilities* 64**

Describes additional program utilities.

## Using Programs in the QAD .NET UI

This section describes program types and program menu features in the QAD .NET UI.

Use the program menu bar to run and maintain QAD programs. Most of the menu options are the same for both component-based programs and non-component programs.

Some options, however, are only available for one type. Some individual menus can also have different options depending on the program being used.

**Fig. 3.1**  
Non-Component Based Program Menu Bar

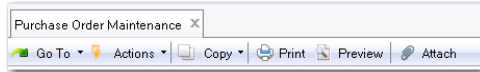
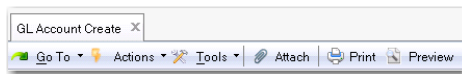


**Fig. 3.2**  
Component-Based Program Menu Bar



## Component and Non-Component Based Programs

QAD Enterprise Applications contains two types of programs:

- *Component-based programs* use a business component-based technology that offers additional features not available in standard functions. Most Financials programs (such as GL Account Create), some administration programs (such as Entity Create), and some security programs (such as Role Create) are component-based programs.

**Fig. 3.3**  
Component-Based Program

 A screenshot of the 'GL Account - Create' form. The form has a title bar 'GL Account Create' and a menu bar with 'GL Account', 'Tools', 'Go To', 'Attach', and other icons. The main content area is divided into two columns of fields. The left column includes 'Account', 'Description', 'GL Type' (set to 'Standard Account'), 'Active' (checked), 'Balance/P&L' (set to 'Balance Sheet Account'), 'Auto/Manual' (set to 'Manual'), 'Intercompany Account' (unchecked), 'Fixed Intercompany' (unchecked), and 'Quantity' (unchecked). The right column includes 'Referenced' (unchecked), 'In Posting' (unchecked), 'System Type' (set to 'Asset'), 'Budget Group' (set to 'Asset'), 'Budget Enabled' (checked), 'Category' (set to 'Asset'), 'Debit/Credit' (set to 'Debit'), 'Default Intercompany' (empty), and 'GL Account Unit of Measure' (empty). At the bottom, there is a tabbed interface with tabs for 'Posting', 'Currency', 'Analysis', 'Report Link', 'Banking', 'Cash', and 'Defaults'.

- *Non-component based programs* use traditional procedural-written Progress-based technology. The majority of Manufacturing programs (such as Work Order Maintenance) and Supply Chain programs (such as Warehouse Maintenance) are non-component based.

Financials programs that are non-component based (such as Sales Order Maintenance) are described in the Financials documentation as *operational* programs, to distinguish them from the component-based *financial* programs.

**Fig. 3.4**  
Non-Component Based Program

The screenshot shows the 'Work Order Maintenance' window. At the top, there's a title bar and a menu bar with 'Go To', 'Actions', 'Copy', 'Print', and 'Preview'. Below the menu bar, the window displays the following information:

- Work Order: 2457
- ID: 88960285
- Item Number: 0001A
- Type:
- Site: 10000

Below this information, there are several input fields and dropdown menus:

- Qty Ordered: 45
- Order Date: 1/29/2010
- Qty Completed: 0.0
- Release Date: 1/29/2010
- Qty Reject: 0.0
- Due Date: 1/29/2010
- Status: F
- Site: 10000
- Sales/Job:
- Routing Code:
- Supplier:
- BOM/Formula:
- Yield: 100.00%

At the bottom, there is a 'Remarks' text area, a 'Comments' checkbox, and a 'Post variances at SFC' checkbox. The window also has 'Delete', 'Back', and 'Next' buttons at the bottom right.

**Note** Many non-component based programs can be run in both the .NET UI and in the Character UI. Component-based functions, however, are available in the .NET UI only.

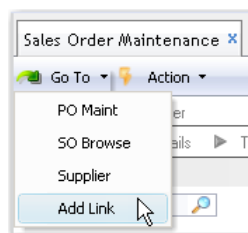
Both component-based and non-component based programs work within the QAD .NET UI and use the same menu system for navigation and the standard menu bar available through the QAD .NET UI for all programs.

QAD Enterprise Applications – Enterprise Edition uses component and non-component based functions (programs). QAD Enterprise Applications – Standard Edition uses only non-component based functions (programs).

## Go To Menu

The Go To menu for non-component based programs such as Purchase Order Maintenance displays the Add Link option. Use Add Link to create links to other programs using User Tool Maintenance (36.20.4). The links you add display on the Program Links drop-down.

**Fig. 3.5**  
Add Link Selection



They also display when you right-click a program screen. See “Creating Custom Links” on page 67.

### Go To for Component-Based Programs

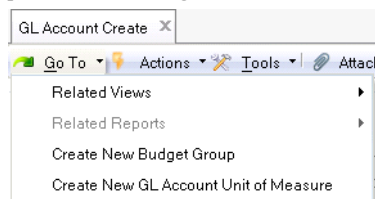
Go To also displays links for component-based programs but in a different way. It displays commonly used views and reports that apply to the record you are currently working with.

Go To behaves differently depending on whether the current field has data in it:

- If the field has a value, Go To invokes the View activity.
- If the field is blank, Go To invokes the Create activity.

**Fig. 3.6**

Go To Menu for Component-Based Programs



All of the related views take the record you are currently using as the base for the information. So if you are viewing a particular customer’s record, you can simply click the Go To to see the customer’s balance and open invoices.

**Note** Go Tos are enabled only when:

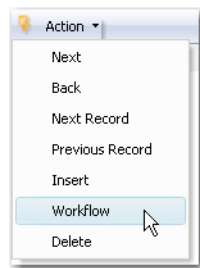
- The corresponding function is an activity, not a standard program.
- The user has security permission to the linked activity.

### Actions Menu

The Actions menu displays the active commands that apply to your current program context. For non-component based programs, these commands include navigation commands such as Next, Back, Next Record, and Previous Record. These commands let you navigate to the next or previous frame, or display the next or previous record for the current field. You can also use the up and down arrows on your keyboard to display next and previous records in key fields or when the field has been defined to support next/previous processing.

**Fig. 3.7**

Action Pull-Down Menu



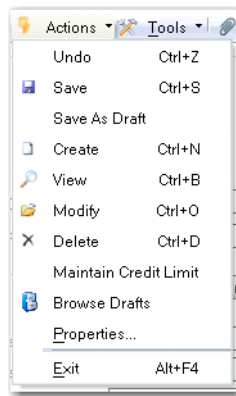
Action menu commands can also include the following:

- Commands that display in the Progress status bar in a character session can be found in the Actions menu on HTML screens. This includes Delete, Page Up, Page Down, and Pivot. These commands are only available when the program frame supports them. For example, Page Up and Page Down typically display in selection lists where the up/down keys cannot be used.
- The Delete, Insert, Page Up, and Page Down keys on your keyboard operate as shortcuts to the Actions menu. However, shortcuts do not exist for special operations such as Pivot.
- Pivot is used in a number of selection lists that support sorting by different columns, such as the call lookup in Call Maintenance (11.1.1.1). It is also used to display the next set of data in programs such as Line Utilization Maintenance (33.15.9) and Simulation Line Utilization Maintenance (33.17.19).

### Actions Menu for Component-Based Programs

The Actions menu functions in a similar way for component-based screens, with some additional features.

**Fig. 3.8**  
Actions Menu for Component-Based Screens



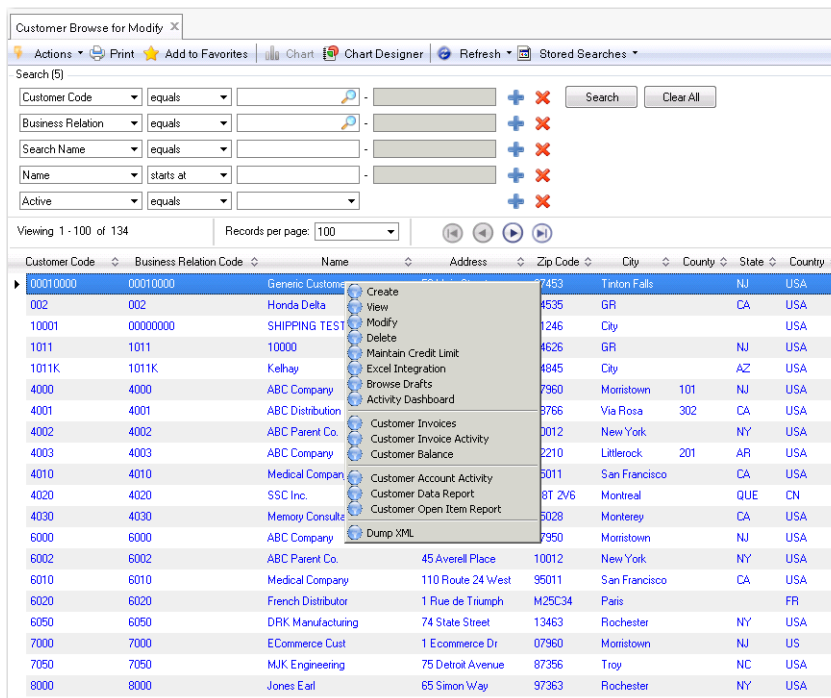
General activities are available on this menu or as buttons on the activity screen. These include Undo, Save, Save and Create, Save as Draft, and Properties.

#### Record-Specific Activities

Record-specific activities are also available on this menu. For example, for the Customer Create program, the Actions menu includes Create, View, Modify, Delete, and Maintain Credit Limit. You can choose record-specific activities in multiple ways:

- By selecting from this menu
- By selecting from the main application menu
- By right-clicking on a record within a browse and selecting from the context menu, as shown in Figure 3.9

**Fig. 3.9**  
Right-Click Menu for Customer Browse



Create, view, modify, and delete are standard activities available for most types of records.

**Note** You can see only the activities to which you have access based on the set of roles associated with your user ID. Role-based access control is explained in *User Guide: QAD Security and Controls*.

### General Activities

The general activities correspond to the command buttons on the screen:

- Undo discards any changes without saving them. This is the same as the Cancel button.
- Save updates the database with your current changes. All validations associated with the type of record are executed before the save is completed. Any errors or warnings are displayed on the screen so that you can correct them before continuing with the save.
- Save and Create saves changes to the current record and then clears all data from the maintenance screen so you can create a new record. This command is available only when you are creating a new record; it is not available for all functions.

The Properties action is available for all records and displays technical information about the current record, such as who last updated it, as well as details about the current build number. This information can be useful for troubleshooting problems and may be requested by technical support.

You can use the Dump XML button to create a file containing the XML data for the current component. This can be useful as a starting point for loading data with the XML daemon. See *User Guide: QAD System Administration* for details on the XML daemon.

**Fig. 3.10**  
Object Properties

### Field Descriptions

*Business Component Shortname.* Displays the internal Business Component code name for the object.

*Internal Object Identification.* Displays the unique numeric identifier for the object.

*Last Updated By.* Displays the login ID of the user who last modified the object.

*Last Updated On.* Displays the date and time when the object was last updated.

*Business Component Version.* Displays the version of the business component.

*UI Component Version.* Displays the UI component version.

*Dump Location.* Specify a directory where you want the XML description of this component to be located. This field applies only when you click Dump XML.

### Save as Draft

When enabled, this option lets you save component-based records in draft mode. You can access them at a later stage (for example, following approval) in order to complete them. See “Saving and Browsing Drafts” on page 65.

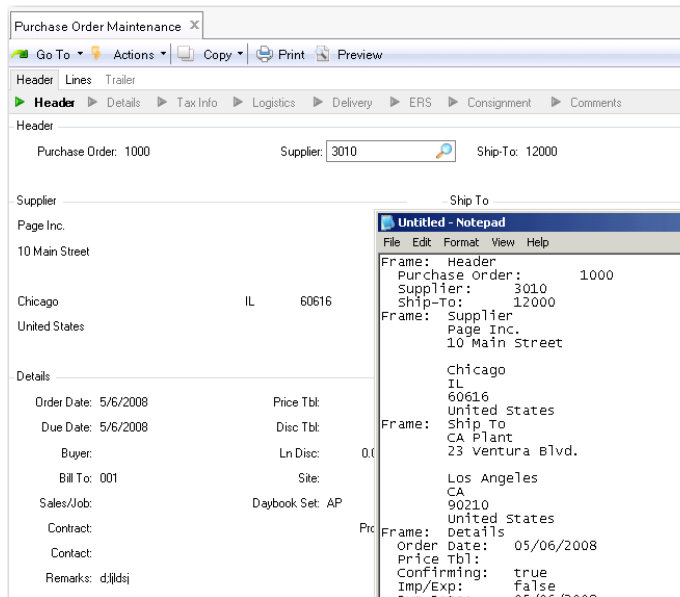
### Workflow

Workflow is available for both types of program and is visible as an Actions menu option for non-component based programs and as a Tools menu option for component-based programs. When you click Workflow in a non-component based program, the system creates an e-mail message for another system user, with the current screen as an attached link. This e-mail is then posted to the user’s Inbox. Workflow for component-based programs is described in “Workflow” on page 56.

## Copy

The Copy menu is only available for non-component based programs and lets you to copy the text of the current screen to the clipboard, or copy an image of the current screen to the clipboard.

**Fig. 3.11**  
Actions\Copy



## Print

The Print menu is common to both types of program and prints the current screen to the default printer.

## Print Preview

The Print Preview menu is also common to both types of program and gives a preview of what will print for the current screen.

## Attach

The Attach menu is available for both program types. You can also use Attachment Maintenance to create attachments for specific fields in non-component based programs. This function is described in *Administration Guide: QAD .NET User Interface*.

Attach lets you attach any type of document—such as a Microsoft Word file, graphics file, or PDF—to a record within the application. This integration ensures that all required documentation is immediately accessible when needed. You can attach and view any type of file if the corresponding viewing software is available on the client.

A copy of the attached document is stored in the system database, which means that the document will always be available and consistent with the application data. This storage facility ensures that the feature is very secure. However, the storage facility is not suitable for very large objects of over

a gigabyte. If your system contains a large number of records with attachments, you must consider the effect of these objects on the available database space. In other application modules, you can link documents to objects by means of a URL or a Universal Naming Convention (UNC).

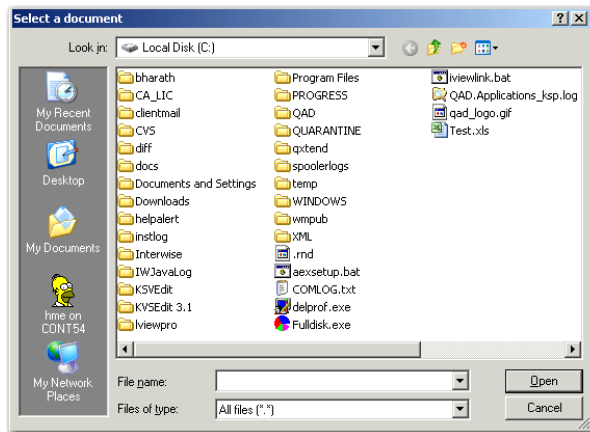
**Example** Use the Attach option to associate a summary of a customer's business activities with a customer record or attach a PDF of an invoice to a supplier invoice record.

If you have set up the Scan daemon, you can poll a directory for documents to attach to new records and have the system send work objects to the Inboxes of designated users. For example, the Scan daemon can create a new supplier invoice record, attach a scanned PDF to it, and send a link to the Inboxes of all members of the AP clerk role. When a user clicks on the link, the Supplier Invoice Create screen opens with the scanned document automatically attached.

See *User Guide: QAD System Administration* for more details about the Scan daemon.

To create a new attachment manually, choose the Attach menu option to display a dialog for selecting the file to attach.

**Fig. 3.12**  
Document Attach

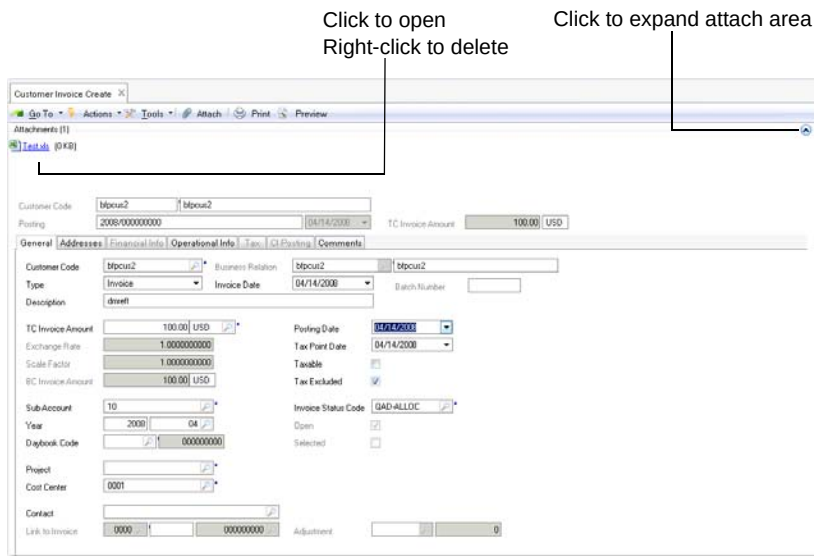


When you click Attach, a standard Windows Open dialog displays so you can select the document you want to attach. The number of attached documents displays in the menu. To see the attachments, click the chevron in the top bar on the screen. Each linked document displays in this view and can be removed if necessary.

Figure 3.13 illustrates one document attached to a customer invoice.

- Click the document name to open it.  
**Note** You must have an application associated with the document type to open it for view.
- Right-click the attachment to open, delete, or copy it. Deleting the attachment does not affect the original file on the operating system.
- Click the chevron to expand or collapse the attachment area.

**Fig. 3.13**  
Attached Document



## Tools

The Tools menu is only available for component-based programs and has two options: Design Mode and Workflow.

### Design Mode

Design mode lets you modify the screen layout and add user-defined fields to a screen. It also lets you remove fields from the screen, to create new tabs in a tab folder, and to create different views for grids. Design mode is enabled only if you are a member of a role with access to updating the design at a specific level. The levels of access are:

- You can make changes just for yourself that are seen only when you execute the screen.
- You can make changes that can be shared with other users that are members of your default role.
- You can make changes that can be used by all users in the system.

This feature can be used to streamline data entry and reduce training costs by customizing the UI for your particular business needs. However, only knowledgeable designers that understand the function they are modifying should be allowed to make significant screen changes.

For more information on design mode, see *User Guide: QAD Financials*.

### Workflow

This option is the equivalent of the non-component based Workflow, which is available in the Actions menu for non-component based programs.

Workflow lets you forward final or draft work items to one or more individuals—identified by a role—in the organization for completion or validation. You activate workflow using System and User Settings. Details about enabling workflow and the setup required for the Inbox to display are included in *User Guide: QAD System Administration*.

Workflow can be used for most records created with component-based functions. The ad-hoc workflow sends a link to the current record to another user's Inbox and optionally notifies them by e-mail. The recipient can double-click to open the item and complete the assigned task. If the Return to Sender option is included in the workflow, the record is returned to the originator's Inbox when the recipient saves it.

**Note** Return to Sender does not apply when the View activity is selected.

When workflow is initiated, the system routes the record to all users with the specified role. As soon as one user opens the object, it is removed from the Inbox of the remaining users. The system refreshes the Inbox by default every 5 minutes.

**Note** If you want to direct workflow to an individual, create a role that includes just that user. The role does not need to have any permissions assigned and can be used just to direct the workflow.

The following are examples of processes for which workflow can be used:

- Approve supplier invoices.
- Release invoices for payment.
- Notify stakeholders of changes to accounts, GL data, and customer or supplier data.
- Escalate overdue customer invoices.
- Approve transient journal entries.
- Create supplier invoices based on scanned documents. See “Attach” on page 54.

You can optionally use e-mail notification to inform users who do not regularly log in to the QAD application that they have activities to be performed. These users can then access the necessary function to perform the required activity. Any instructions included in the workflow are also included in the e-mail.

#### Example of Inbox

Workflow items display as a list in the inbox by component name and activity. The key fields that identify the component are displayed in parentheses. In Figure 3.14, a single item displays in the Inbox. The customer record ID is included in the parentheses.

**Fig. 3.14**  
Inbox



To refresh the display, right-click the inbox and choose Refresh.

### Configuring Workflow

When you select Workflow from the menu, the work flow for the component displays. You can specify the recipient's role and link an activity—such as approve, comment, complete. Then add instructions and indicate whether the system should route the record back to you when the recipient's activity is complete. You can also specify that the recipient be notified by e-mail about required activities.

**Fig. 3.15**  
Workflow Object Create

The screenshot shows the 'Supplier Invoice Modify' dialog box. It contains the following fields and controls:

- Workflow Name:** A drop-down menu with 'dmkSI20' selected. To its right are 'Load' and 'Store' buttons.
- Role:** A drop-down menu with 'AP Clerk' selected.
- Required Activity:** A drop-down menu with 'Modify' selected.
- Return to Sender:** A checkbox that is currently unchecked.
- Instructions:** A text area containing the text 'Please check the tax amount and total amounts'.
- Send E-mail Notification:** A checkbox that is currently checked.
- At the bottom right are 'OK' and 'Close' buttons.

### Field Descriptions

**Workflow Name.** Select an existing workflow from the drop-down list or enter a code (maximum 140 characters) to define a new workflow name. If you select an existing workflow, click Load to display its details. After configuring a new workflow, click Save to save it for reuse.

The workflow name is optional. You can also create a one-off, ad-hoc workflow, and leave this field blank.

**Role.** Select the role to receive the work item. The list contains only roles with permission to execute activities related to the type of record you are updating. For example, if you access the workflow from Customer Invoice Create, the list of roles includes only those with permission to activities related to customer invoices.

The linked record is sent to all members of this role.

**Required Activity.** Select the activity that the recipient of the work item should perform. The list contains all activities that can be performed on the record you are currently updating.

**Note** If you select the view activity, you cannot request Return to Sender. The Return to Sender option is initiated when the recipient saves the record; this is not possible in view mode.

**Return to Sender.** Select this field if you want the work object routed back to yourself when the recipient has completed the assigned activity. When this field is selected, the record is sent back to you when the recipient saves their changes.

**Instructions.** Enter any comments or instructions (maximum 200 characters) for the recipient of the record. These can be viewed by the recipient by selecting Workflow from the linked record. Instructions are also included in the e-mail, if that option is enabled.

**E-mail Notification.** Select this field if you want the members of the recipient roles to receive an e-mail notification regarding a pending action item. To use this option, each user must have a valid e-mail address defined in User Maintenance (36.3.1) and you must have configured the e-mail server appropriately. Setting up e-mail is described in *User Guide: QAD System Administration*.

## Using Reports and Inquiries

Reports and inquiries in QAD .NET UI are displayed in the same way as maintenance programs. Some programs update both the database and produce report output. These programs display in the same way as other reports. Sales Order Print (7.1.3) is an example of a program that generates output and updates the Print Sales Order field in the sales order record.

You use and navigate report programs like maintenance programs with a few exceptions.

Component-based reports are described in *User Guide: QAD Financials*.

### Generating Report Output

In programs that generate report output, you choose an output device. In general, you can use any device previously defined in Printer Setup Maintenance (36.13.2). However, if you want to display the report output on your terminal, you must select a device that has Scroll Output set to Yes in Printer Setup Maintenance. Typically, you can use the Page option, which is a system default that has Scroll Output set to Yes. Or you can define another printer with this setting. You can also use the Email option in Desktop or Desktop (Web Browser) reports and inquiries.

**Important** System administrators should set a page limit on the Output to Page option for reports and inquiries. If you output a report or inquiry of more than 1000 pages to Page, the retrieval of the data puts a burden on client resources and can cause system instability. For this reason, you should use browse filters carefully when generating a browse. When generating a Product Line Inquiry and outputting to Page, for example, you should refine the inquiry results as much as possible. A default Product Line Inquiry generated without filtering produces a report well in excess of the 1000-page limit.

You can set up a text printer, which is essentially a version of the “page” printer output setting. The text printer renders a non-formatted report that can be saved to your local client computer as a text file or PDF file, or can be printed on a standard printer. To set up report output to a text printer, use Printer Setup Maintenance (36.13.2), setting the Initialize Ctrl field to text.

Output to terminal is not supported in Desktop or Desktop (Web Browser) screens.

### Cancelling HTML Reports

In other interfaces, you can use the Ctrl+C key combination to stop a report that is currently processing.

In QAD .NET UI, this key combination has no effect. Instead, a Cancel button displays. Click the Cancel button to stop the report. You can also use the close button in the program title bar to stop the report execution.

### Enhanced Report Format

You can enhance the appearance of selected reports. See *Administration Guide: QAD .NET User Interface* for details on enhancing reports.

## Custom Program Interfaces

The interfaces for a number of programs are customized for usability. This section describes the Fixed Assets and Product Structure Maintenance functions.

### Using Fixed Assets Programs

Some programs in the Fixed Assets module include additional navigation buttons that are used to modify information or access additional screens with a program. For example, Fixed Asset Maintenance (32.3) includes multiple navigation buttons in the QAD .NET UI:

- The currently active button is indicated by the darker frame around it.
- You can use the Tab key to move forward between the buttons and Shift+Tab to move backward.
- Press the spacebar to execute the function associated with the active button.
- Pressing Enter is the same as clicking Next. This typically has no effect when the buttons are active.
- The End button and the Back link execute the same function; similarly, the two Delete buttons execute the same function.

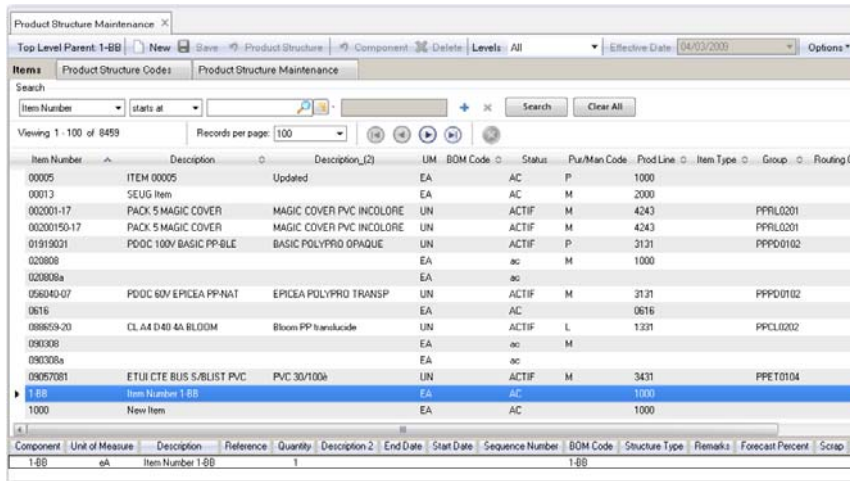
**Fig. 3.16**  
Fixed Asset Maintenance (32.2)



## Using Product Structure Maintenance

Product Structure Maintenance includes a graphical tool for creating, viewing, and editing the structure of bills of materials when you use the program in the .NET User Interface mode. This tool is only available with the QAD .NET UI.

**Fig. 3.17**  
Product Structure Maintenance

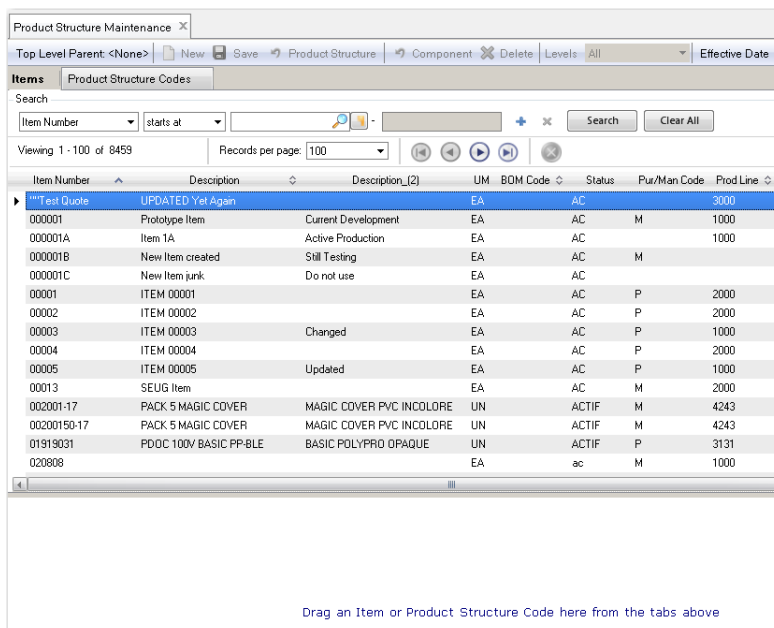


To access the tool, the program must be set to open in QAD .NET UI mode. To do so, in the Applications pane, right-click Product Structure Maintenance in the program listing and select Properties. Set the Open with field to .NET User Interface and click OK.

To create a product structure:

## 1 Open Product Structure Maintenance.

**Fig. 3.18**  
Opening Product Structure Maintenance



Note the blank workspace in the lower part of the display, located below the browses for Items and Product Structure Codes.

- 2 Drag a component (an item or product structure code) from a browse to the workspace.
- 3 The component is now added to the product structure. The interface displays relevant fields along the top, including Component, Description, Unit of Measure, Quantity, Reference, Start Date, and End Date. Note that you can edit the Quantity, Reference, Start Date, and End Date fields, while the other fields are read-only.
- 4 To undo a component added to the product structure, right-click the component, and select Undo Add.
- 5 To undo changes to the product structure, click the Undo Product Structure Changes icon. Clicking this icon reverses the changes you have made to the selected component and all components under the selected component in the product structure hierarchy.
- 6 To undo changes to a component, click the Undo Component Changes icon. Clicking this icon reverses changes you have made to the selected component only.
- 7 Drag additional components to the workspace and directly position them within the product structure. Alternatively, double-click an item or product structure code.
- 8 New or modified components in the product structure are colored yellow. These components have been added to the product structure as displayed in the workspace but have not yet been saved to the database.
- 9 The system displays an error message if:

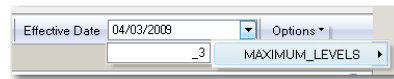
- You attempt to create a cyclical structure. For example, the system will not allow you to add an item that is a parent of itself.
- You add duplicate components to the same parent and then save the structure.
- You try to have two same components with overlapping valid periods and then save the structure.

You can alter the column views using the Show and Hide Column options, which you access by right-clicking on a column header. This lets you hide data that is not immediately relevant to maintenance, such as local variables or pre-processor commands.

### Effective Date and Maximum Levels

The Effective Date and Maximum Levels filters let you improve performance by limiting the number of records retrieved from a product structure browse.

**Fig. 3.19**  
Effective Date and Maximum Levels



When you specify an effective date, the browse returns only those records that are valid for that date (the effective date occurs between the products' start and end dates). The default is the current date, and this filter is only available when you are in New mode.

The Maximum Levels filter returns a specified number of levels for the root product structure. When set to blank, the server returns all levels, and the maximum level is 25.

**Note** By using these filters, you may create duplicate or cyclical structures, which are only validated when the structure is saved. This may cause the system to display a large number of error messages when saving.

### Saving a Product Structure

To save a product structure to the database, select the top-level component, right-click, and select Save (or click the Save icon).

If there are issues with components when the system attempts to save the product structure, the components that need attention are displayed in red.

Once a product structure has been saved, you can delete a component in the structure as follows:

- 1 Select the component.
- 2 Left-click to select Delete from the pull-down menu.

**Note** If a component has not yet been saved to the database, the option displayed is Undo Add instead of Delete. Rather than delete a component from the product structure, it is preferable to change the end date of a component so that the component is effectively obsolete.

## Other Program Utilities

This section describes a number of other .NET UI Interface program utilities and features.

### Recording Program Actions

The Program Export File function is a test utility in the QAD .NET UI and is available in the Actions menu for all non-component based programs. This function lets you record your actions as you complete an application process and save the recorded actions to an .XML or .XLS file that you store locally. You then execute the saved .XML or .XLS file in the Execute Document Import function to reproduce the recorded process on screen. Saved files can be exported for testing to another QAD .NET UI environment, or imported into the current environment.

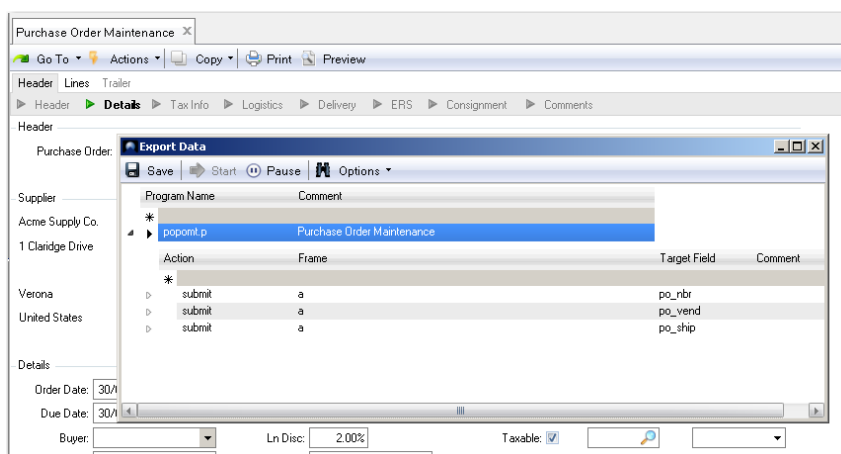
For example, if an error is occurring in the Purchase Order Maintenance flow, select Export File before creating a purchase order. As you process the purchase order, the system records each mouse and keyboard action you take, and also the values you select in each stage of the process. The saved file lists each program, field, and value selected.

Execute Document Import lets you replay the process, loop the recorded file, and step through or pause each action or selection in the process.

To Record Program Actions

- 1 Launch a program.
- 2 Choose Actions|Export Data. An Export Data screen is displayed (minimized) on the screen while the system is recording your user actions. Each user action is immediately listed in the Actions grid of this screen, and you can pause, name, and save the recording in this dialog.

**Fig. 3.20**  
Export Data



The Options menu in the Export Data dialog lets you define the data being recorded. Select Record Changes Only to record changed values only, or Record All to record all of your actions, including the values you select during navigation.

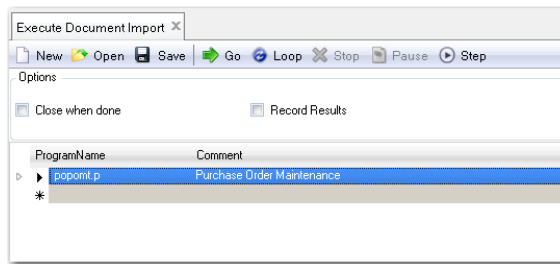
- 3 Enter a variety of actions for the program. These actions are now recorded. The Export Data dialog lists the actions, frames, and fields being recorded.

- 4 When you have completed the actions you want to record, choose Save in the Export Data dialog, and save the file to a location. You can save as an .xml file or an .xls file.

#### To Run Saved Program Actions

- 1 To run the saved recording, choose Execute Document Import in the Applications Pane, under Administration.

**Fig. 3.21**  
Execute Document Import



- 2 From the External Import menu, browse to the file you have saved (the .xml or .xls file).
- 3 Open the file and click Go. You can also Loop the recording or Step through the actions.  
A .log file that reports the results of the actions is created when the recording is run. This file has the same prefix as the recording file but is appended with .log.

## Saving and Browsing Drafts

The Save as Draft and Browse Drafts options are available for component-based programs only and must be enabled in Change System Settings. These settings are described in *User Guide: QAD System Administration*.

When Save as Draft is enabled, you can save selected records without completing all the validations required to ensure that the record is complete. You can then finish adding data to the record at a later time by using the Browse Drafts option to find the incomplete record.

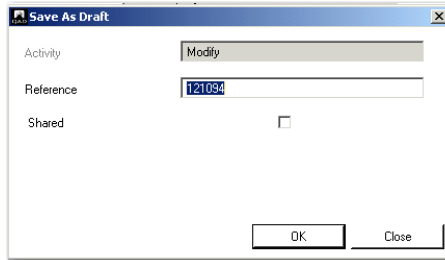
Only the following subset of components provides the ability to save unfinished records as drafts to be completed and approved later:

- Banking Entry
- Business Relation
- Petty Cash
- Customer
- Customer Invoice
- Finance Charge
- Journal Entry
- Supplier Invoice
- Supplier

## Save as Draft

Selecting Save as Draft displays the following dialog.

**Fig. 3.22**  
Save as Draft



The 'Save As Draft' dialog box contains the following fields and controls:

- Activity:** A text field containing the word 'Modify'.
- Reference:** A text field containing the number '121094'.
- Shared:** A checkbox that is currently unchecked.
- Buttons:** 'OK' and 'Close' buttons at the bottom right.

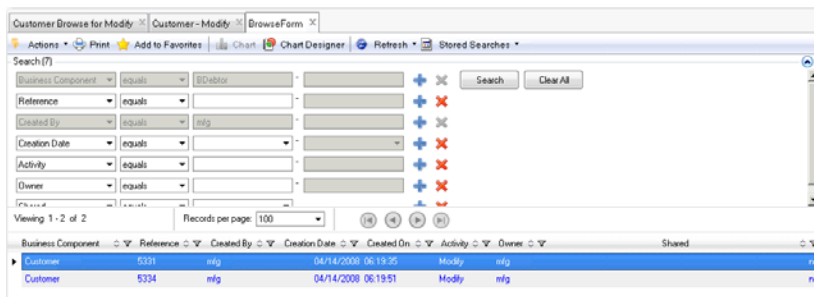
The Activity field has a value based on the activity you invoked the Save options from. You can specify reference text to identify the draft record. The system supplies a default number, but you should give the draft a name that will help you or others recognize it easily.

When Shared is selected, other users can update the record; otherwise, only you can complete the record and change its draft status.

## Browse Drafts

Selecting Customer Browse Drafts opens the Draft Customer Search screen. Use this screen to select, open, and finalize draft instances that you or other users have created. Drafts created by other users are available only if they selected the Shared field when saving the draft.

**Fig. 3.23**  
Draft Customer Search



The 'Draft Customer Search' screen displays a search interface with the following components:

- Search Criteria:** Fields for Business Component, Reference, Created By, Creation Date, Activity, and Owner, each with a dropdown menu and a search button.
- Search Results:** A table showing draft records with columns for Business Component, Reference, Created By, Creation Date, Activity, Owner, and Shared.

| Business Component | Reference | Created By | Creation Date       | Activity | Owner | Shared |
|--------------------|-----------|------------|---------------------|----------|-------|--------|
| Customer           | 5331      | mfg        | 04/14/2008 06:19:35 | Modify   | mfg   | no     |
| Customer           | 5334      | mfg        | 04/14/2008 06:19:51 | Modify   | mfg   | no     |

## Extended Program Button Labels

For improved usability of selected program screens, the Back button is labeled End Lines when you get to the Line Number field. When you are on the format field, the Back button is now Trailer (or End if there is no trailer section). The Next button is labeled Lines. Programs that include these buttons include the following:

- Requisition Maintenance (5.2.3, rqrqmt.p)
- Purchase Order Maintenance (5.7, popomt.p)
- Blanket Order Maintenance (5.3.1, poblmt.p)
- Sales Quote Maintenance (7.12.1, sqqomt.p)

- Sales Order Maintenance (7.1.1, sosomt.p)
- Pending Invoice Maintenance (7.13.1, soivmt.p)
- Material Order Maintenance (11.11.1, fseomt.p)

## Creating Custom Links

The QAD .NET UI lets you customize the interface by adding links on a program screen that let you access other programs.

To add links on a program screen to another program, complete the following steps:

- 1 Open the program you want to update.
- 2 Choose Go To|Add Link at the top of the program screen. The User Tool Maintenance screen displays in a separate browser window.  
Specify your user ID if you want the program links to display only when you execute the parent program. Alternatively, leave the field blank to create a generic record of settings. This generic record is automatically associated with every user in the system who does not have a user-specific record.
- 3 Enter the name of the program where you want the link to display. Leave Program blank to add the link to all programs that do not already have a user-specific record.
- 4 Click Next to continue.
- 5 In the Exec field, enter the name of the program you want to execute when you click a link.
- 6 In the Label field, specify a text string to appear in the link area. If you leave this field blank, the standard menu description from Menu System Maintenance (36.4.4) is used.
- 7 Leave the Image field blank. Images do not apply in the QAD .NET UI.
- 8 For the changes to take effect, close the program you are updating and then reopen it.

## Sending Program Links by E-mail

You can send QAD .NET UI program links in an e-mail using the Email feature:

- 1 Open a program. For example, open Sales Order Maintenance (7.1.1).
- 2 From the Actions pull-down menu, choose Email.  
Alternatively, right-click in the program screen and choose Email from the pop-up menu.
- 3 A pop-up Information window informs you that a URL to the program will be copied to the clipboard. Click OK.
- 4 Your default email client program launches, opening a new e-mail for you to compose. By default, the subject of the e-mail is the name of the QAD .NET UI program.
- 5 In the body of the e-mail message, paste the URL to the program from the clipboard (for instance, enter Ctrl+V). Note that if a record was selected when you created the link, the program opens with that record selected when the recipient clicks on the link.

**Note** Your default e-mail client is defined in the browser Tools|Internet Options|Programs setting. You can also set the e-mail program from the QAD .NET UI using Tools|Internet Options.

## Entering Transaction Comments

Programs such as Sales Order Maintenance, Purchase Order Maintenance, and Work Order Maintenance include the option to enter comments. Comments have a limit of 15 lines. You can cut, copy, and paste ASCII text. In general, any rich text formatting is removed from copied text when the text is pasted.

**Note** When you are in the comments field, pressing Enter places a carriage return in the entered text. If you are not in a comments field, pressing Enter submits the current data and advances you to the next frame (or screen), which is the equivalent of clicking the Next button on the screen.

**Note** You use CTRL + Enter to place a carriage return in the Comments tab of component-based programs such as Customer Create

# Browses in QAD .NET UI

The QAD .NET UI lets you use browses using advanced features of .NET technology. This section describes using browses in the QAD .NET UI.

This section covers the following topics:

***Introduction to Browses 70***

Introduces browses in the QAD .NET UI.

***Using Browse Menu Options 72***

Describes how to use browses in the QAD .NET UI.

***Working with Browse Results 78***

Describes how to manage and maintain browse results.

***Browse Maintenance 89***

Describes the Browse Maintenance program, which includes a new graphical tool for creating, editing, duplicating, and deleting browses.

***Using Browse Chart Designer 103***

Describes how to use the chart designer feature to generate graphical representations of browse data.

***Creating Browse Operational Metrics 106***

Describes Operational Metrics, which let you create visible metrics from browse data.

***Creating Excel Output from Browses 115***

Describes how to export browse data to Excel.

***Accessing Links in Browses 121***

Describes how to setup browse data columns links.

***Browse URL Maintenance 122***

Describes how to create URL links that users can activate from QAD .NET browses using Browse URL Maintenance.

***Browse Link Maintenance 128***

Describes how to define browse program links using Browse Link Maintenance.

## Introduction to Browsers

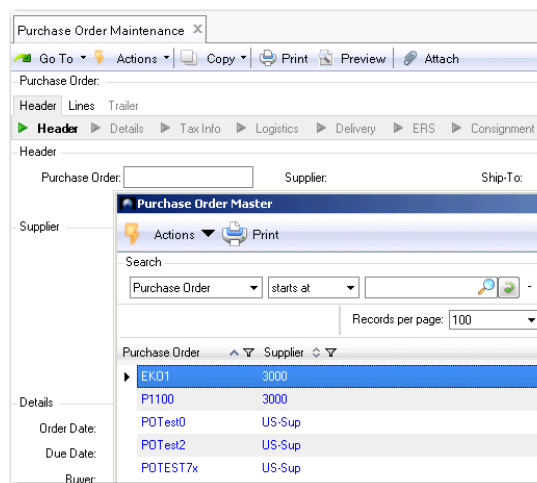
Browsers display selected data in the form of a table. Column headings are field labels; rows are field values. The field values in a browse come from any table in the QAD Enterprise Applications schema. A browse includes selected values from one table or several joined tables.

### Non-Component Based Browsers

There are two types of non-component based browse:

- *Look-Up Browsers.* A look-up browse returns the value you select to the active field in the calling program. By default, it returns the field value of the first column. Look-up browsers can display and sort up to seven columns of fields. Look-up browsers cannot filter, graph, or print data. For example, when you select the lookup for purchase orders in Purchase Order maintenance, you launch a lookup browse of Purchase Order Master.

**Fig. 4.1**  
Purchase Order Lookup Browse



- *Power Browsers.* A power browse can filter, graph, and print data. Any column can be sorted, and the first ten columns can be filtered. Power browsers are available as menu options in the Applications area, for example, Sales Order Browse (7.1.2), Purchase Order Browse (5.8). When attached to a field, power browsers are called drill-downs. Drill-downs return a selected value to the active field of a calling program.

**Fig. 4.2**  
Example of Sales Order Browse

| Sales Order | Sold-To  | Status | Line | Item Number | Unit of Measure | Quantity Ordered | Quantity Open |
|-------------|----------|--------|------|-------------|-----------------|------------------|---------------|
| BHM3        | 4000     |        | 1    | 1-BB        | EA              | 1.0              |               |
| BHM4        | 4000     |        | 1    |             |                 | 0.0              |               |
| SBA1        | 4000     |        | 1    | 1-BB        | EA              | 1.0              |               |
| SD106       | 00010000 |        | 1    | 1-BB        | EA              | 1.0              |               |
| SD106       | 00010000 |        | 2    | 1-BB        | EA              | 0.0              |               |
| SD108       | 00010000 |        | 1    | 1-BB        | EA              | 1.0              |               |
| SD142       | 00010000 |        | 1    | 1-BB        | EA              | 0.0              |               |
| SD144       | 00010000 |        | 1    | 10074-a     | EA              | 10.0             |               |

The New and Edit menu bar options are only available for non-component based browses. See “Navigating in Browsets” on page 78.

### Component-Based Browsets

Component-based browses are launched when you view, modify, or delete a record created with a component-based activity. For example, Supplier Invoice View (28.1.1.3), Supplier Invoice Modify (28.1.1.2), and Supplier Invoice Delete (28.1.1.9) all launch browses, in which you select the record on which you want to perform the activity.

**Fig. 4.3**  
Supplier Invoice Browse for Modify

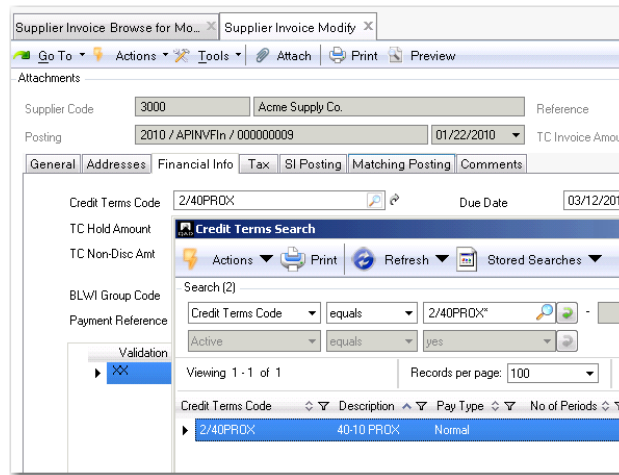
| Supplier | Business Relation Code | Inv Date   | Reference    | Due Date   | TC Balance | Curr | TC Invoice Amount |
|----------|------------------------|------------|--------------|------------|------------|------|-------------------|
| US-Sup   | US-BR                  | 01/22/2010 | Test P0test0 | 04/25/2010 | -198.00    | USD  |                   |
| 3000     | 3000                   | 01/22/2010 | test2        | 03/12/2010 | -20.00     | USD  |                   |
| 3000     | 3000                   | 01/25/2010 | Workflow     | 03/12/2010 | -200.00    | USD  |                   |
| 3000     | 3000                   | 01/28/2010 | test 1       | 03/12/2010 | -290.00    | USD  |                   |

Summaries: Sum = -708.00

Other component activities for which you want to select a record also launch browses. For example, there are also browses for Supplier Invoice Allocate (28.1.1.7), Supplier Invoice Approve (28.1.1.4), and Supplier Invoice Reverse (28.1.1.11).

You also launch browses from lookup fields in component-based screens.

**Fig. 4.4**  
Supplier Invoice, Credit Terms Lookup



The Stored Searches browse option is only available for component-based browses. See “Stored Searches” on page 75.

## Using Browse Menu Options

Any browse defined using standard QAD functions can be viewed from the QAD .NET UI, including custom browses developed to meet your specific business requirements.

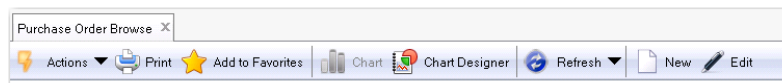
Browses and lookups in the QAD .NET UI have a consistent appearance and features. The only significant difference is that browses can be added to the menus and invoked from a menu, while lookups must be associated with a field and displayed from a program.

**Note** Because lookups are not invoked from a menu, you cannot save search criteria in lookups or add the saved searches to your Favorites.

### Browse Menu Bar

Use the options on the Browse menu bar to manage your browses.

**Fig. 4.5**  
Browse Menu Bar



### Actions

The Actions menu contains export and reporting options, and for non-component browses, additional workflow and e-mail options.

## Export to CSV

This option exports the contents of the current browse to a comma-separated-value (.CSV) file, which you can open in supporting spreadsheet applications. The export includes only the columns that are marked as visible, which lets you exclude columns from the export by hiding those columns on the browse grid.

The left-to-right position of the visible columns in the browse grid determine the order of the data fields in the exported CSV file. The sort order of the rows in the browse determine the order in which the exported CSV lines are written to the file.

When you create groups in a browse, the groups are maintained in the exported file, and columns within groups are also sorted according to the original browse. The group-by column is positioned at the beginning of each line of exported data.

## Exporting Browses to Excel

Click the Excel icon to generate an Excel worksheet with the browse data. For details, see “Creating Excel Output from Browses” on page 115.

## Exporting Browses to PDF

Click on the PDF icon to generate a PDF file with the browse data.

**Important** When you output a report or browse to PDF, you should not attempt to create a PDF of more than 1000 pages, as this seriously affects application performance. Use a third-party PDF generation utility to create large PDF files.

System administrators should also set a page limit on the Output to Page option for reports. If you output a report of more than 1000 pages to Page, the retrieval of the data puts a burden on client resources and can cause system instability.

## Workflow

Click to send the current browse as an e-mail attachment to a current system user. When the user double-clicks on the link in the e-mail message, the browse is displayed.

**Note** See “Workflow” on page 56.

## Email

Click to send this browse as a program link in an e-mail using the Email feature.

See “Sending Program Links by E-mail” on page 67.

## Report

Click to generate a report of the current browse results:

**Fig. 4.6**  
Browse Report

| Purchase Order | Purchase Order Line | Site  | Supplier | Item Number | Quantity Open | Unit of Measure | Due Date  | Sales/Job |
|----------------|---------------------|-------|----------|-------------|---------------|-----------------|-----------|-----------|
| EKO1           | 1                   | 10000 | 3000     | 1-bb        | 0.00          | EA              | 1/26/2010 |           |
| EKO1           | 2                   | 10000 | 3000     | Memo        | 0.00          | ea              | 1/26/2010 |           |
| P1100          | 1                   | 10000 | 3000     | 1-BB        | 0.00          | EA              | 1/22/2010 |           |
| POTest0        | 1                   | 10000 | US-Sup   | TaxItem1    | 0.00          | EA              | 1/22/2010 |           |
| POTest2        | 1                   | 10000 | US-Sup   | TaxItem2    | 0.00          | EA              | 1/22/2010 |           |
| POTEST7x       | 1                   | 10000 | US-Sup   | TaxItem1    | 0.00          | EA              | 1/22/2010 |           |

## Print

Click the Print icon to print the browse data. The standard Windows print dialog displays so that you can select a remote or local printer or print to file. You can also use the Print and Print Preview commands on the menu to print the browse data.

**Note** Make sure that the printer is online before trying to print to it. No error displays when you attempt to print to an offline printer.

When you print a browse, all columns in the browse will be printed and scaled to fit the paper size of your printer. Depending on what data you want to print, you might want to hide some columns from the browse before you print it. For information on hiding columns, see “Column Options” on page 82.

## Add to Favorites

Save browse search criteria for reuse in a file and then retrieve them later, or create customized browse searches and add them to the Favorites menu area.

When you save a browse as a favorite, the QAD .NET UI will save any sort column settings. When you launch the browse from the favorites menu, the QAD .NET UI will apply the sort conditions, as well as all of the other saved state that you might have set, including summaries, charts, and search conditions.

## Chart

When you have converted the browse results to a chart using Chart Designer, click to toggle the chart and grid views of the browse results.

## Chart Designer

For further information, see “Using Browse Chart Designer” on page 103.

## Refresh

You can have a displayed browse automatically refresh the data at a specified rate.

- 1 To start the automatic refresh, choose Refresh|Start.
- 2 To stop the automatic refresh, choose Refresh|Stop.
- 3 To change the refresh rate, choose Refresh|Rate, right-click, and edit the value. (The default value is 30 seconds.)

## New and Edit

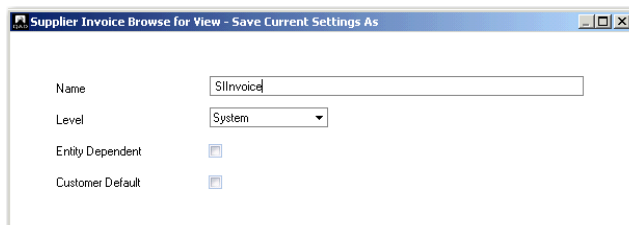
Selected browses include New and Edit buttons. The New button is a link to the program you use to create an item in the browse. The Edit button is a link to the program you use to modify an item in the browse. The New and Edit buttons provide browse program links. When you click on a browse program link Edit button, data from the currently selected row in the browse will be passed to the linked program. For example, in Sales Order Browse, click Create to open Sales Order Maintenance to enter a new sales order. Click Edit to open Sales Order Maintenance to modify the order for the currently selected row in Sales Order Browse. The browse program link buttons are maintained using the Browse Link Maintenance program and can be browsed using Browse Link Browse.

## Stored Searches

Stored searches are available for component-based browses only.

Use this option to save your current lookup settings under a name. The stored search is then listed for selection when you launch this browse and can be reused. The settings you save apply to this browse only and are not listed in browses for other types of records.

**Fig. 4.7**  
Stored Searches



|                  |                          |
|------------------|--------------------------|
| Name             | SIInvoice                |
| Level            | System                   |
| Entity Dependent | <input type="checkbox"/> |
| Customer Default | <input type="checkbox"/> |

## Field Descriptions

**Name.** Enter a code (maximum of 80 characters) to identify the saved search settings. The name must be unique to that browse.

**Level.** Choose an option to determine which users can access the stored search. The options available in the Level drop-down list depend on your role permissions.

User <Current User ID>: Only you can access the stored search. It is not available in the stored search list of other users. This setting is the default.

Role <Current Role>: Only users who have the same role as your default role can access the stored search. It is not available in the stored search lists of users who do not have this role.

System: The stored search is available to all users in the system.

**Note** This option is available only to users who have a role assigned that lets them define a stored search on the system level.

*Entity-Dependent.* Select the field if you do not want the stored search to be available across entities.

*Customer Default.* The stored search settings become the initial settings for this browse for all users. They replace the factory default initial settings.

The availability of these choices depends on the access you have been given in Role Permissions Maintain to the stored search activities. See *User Guide: QAD Security and Controls* for details.

The system saves all the field, filter operator, and row and column information you configure in the Lookup Settings dialog.

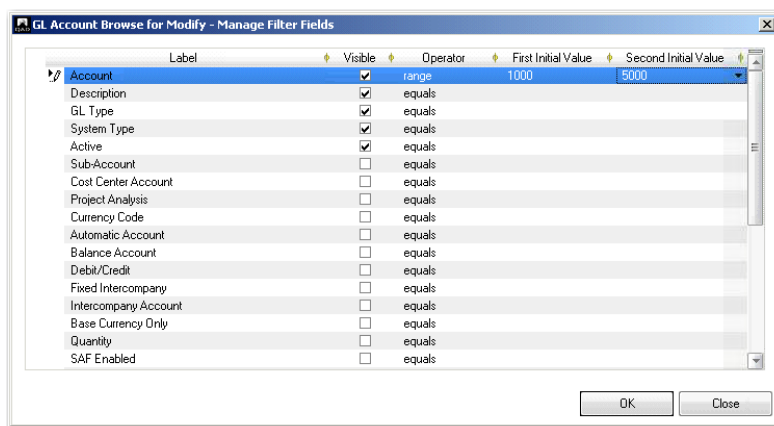
### Manage Filter Fields

This option displays all the search fields possible for this type of record. You can use the Manage Filter Fields tab to:

- Specify whether a filter field should appear on the Selection Criteria tab (Visible column).
- Specify in which order the filter fields should appear.
- Specify what operator to use when finding data to view.
- Define a persistent initial value or range of values for the filter field. The values for search criteria entered in the actual Search Panel are not saved with the stored search. However, the initial values entered in Manage Filter Fields are saved.

**Example** You can refine the default search for GL accounts to retrieve only accounts with codes that are within a number range of 1000 to 5000.

**Fig. 4.8**  
Manage Filter Fields

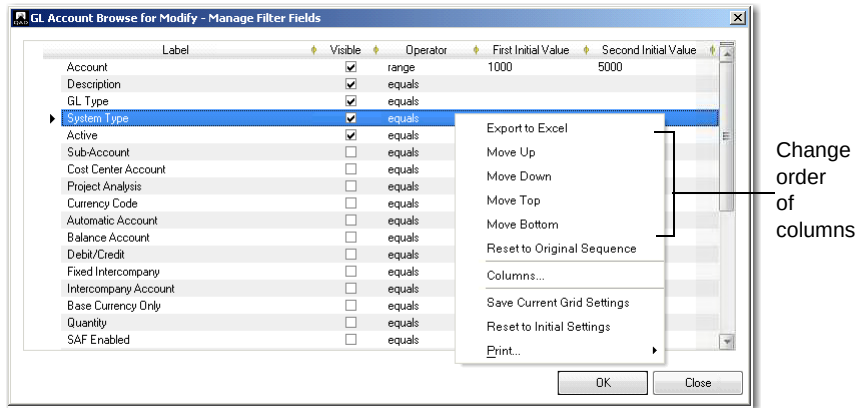


The browse is then populated with these conditions, and you click Search to conduct the search.

## Ordering Fields

You can also change the order in which fields display in the filter criteria by right-clicking the field and using one of the Move commands (Figure 4.9). If you right-click in a logical field such as the Visible column, you can clear or select all of the Visible fields at one time.

**Fig. 4.9**  
Rearranging Search Fields



## Field Descriptions

**Label.** This read-only field displays the field label, which is also the column heading of the browse.

**Visible.** Select this field to include the field in the browse search criteria. This field does not affect the columns displayed in the browse; use the right-click Columns menu for that. It affects only which fields you can use for finding records.

**Operator.** Select an operator to apply to this field.

**First Initial Value.** Enter a value for this selection criterion or select a value from the drop-down list. The list displays certain variables that are interpreted by the system, such as \$Today, which represents today's date.

These variables let you save stored search criteria that work correctly regardless of the date.

**Second Initial Value.** This field is editable only when the range operator is specified. Enter the ending value in a range for selecting records.

## Saving Non-Component Based Browse Searches

You can save a browse search by adding it to your favorites:

- 1 Click the Save button.
- 2 The browse is saved to your Favorites area and named based on the name of the browse.

If it is the first instance you have saved, the browse name in the Favorites area is the name of the browse. If you save the same browse again, the name in the Favorites area is the browse name with a (2) at the end. If you save again, the name includes a (3) at the end, and so on.

Once you have saved the browse to the Favorites pane, you can rename the browse and organize it as you can other items saved in the Favorites pane.

## Working with Browse Results

Browse features include the following:

- The default sort order for the multiple columns in a browse can be set using Browse Maintenance. In Browse Maintenance, the value of the Sort Order field for each column specifies the order in which the columns are sorted relative to each other, and the Sort field specifies whether a column is sorted in ascending order, descending order, or unspecified order.
- Use the navigation buttons in the top left to move through the records. The buttons from left to right move to the first set, previous set, next set, last set. See “Navigating in Browsers” on page 78 for details.

Use the Records per page drop-down to determine how many records display at one time in the browse. The default value can be set using the Rows Per Page setting in Tools|Options.

**Note** The Max Browse Records field in User Options Maintenance does not apply to browses in the QAD .NET UI.

Use caution in displaying all records, especially when the number of records is large. Attempting to display a large number of records at once can adversely affect performance. Instead, use the Search conditions to focus on the specific records you want to review.

Drag columns by their headings to rearrange the display.

**Note** As a shortcut, instead of clicking Edit, you can double-click on the row that includes the item.

## Navigating in Browsers

You can use the navigation buttons to move through browse records.

| Icon                                                                                | Keyboard            | Action                  |
|-------------------------------------------------------------------------------------|---------------------|-------------------------|
|  | Alt+Up Arrow Key    | First set of records    |
|  | Alt+Left Arrow Key  | Previous set of records |
|  | Alt+Right Arrow Key | Next set of records     |
|  | Alt+Down Arrow Key  | Last set of records     |

You can also use Tab and Shift+Tab to move through the buttons and fields in the browse toolbar. In this case, pressing Enter is the same as a right-mouse click. When you are in the browse search panel, press Enter to execute the search with the current conditions. After you have selected a row, you can use the up arrow or right arrow keys to move the row selection up one row; the down arrow and left arrow keys move the row selection down one row.

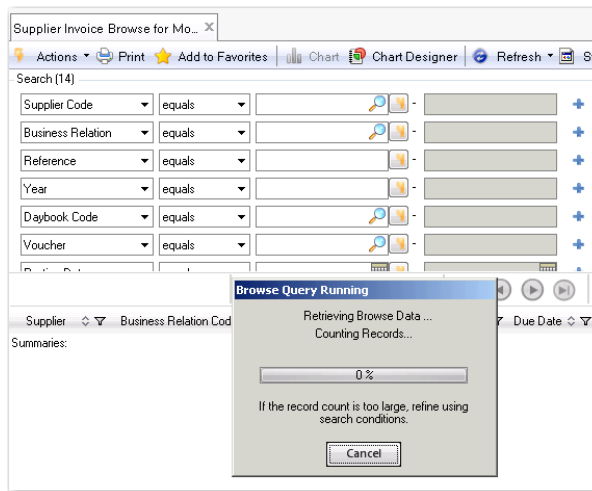
**Note** You may notice slower performance during paging when a large number of records is displayed. Paging performance may worsen as you get to the bottom of the list. To reduce this problem, click a relevant column to reverse the sort and page through those records at the top of the list.

## Using Browses and Search

The Search options in component activities let you filter your search results in a number of ways, and save customized search settings for reuse.

The top pane of the browse provides tools for managing the data you are viewing. You can retrieve stored searches, filter search results, and update browse settings. The bottom pane of the browse displays the retrieved records. Browses that return large numbers of records display a progress indicator while the records are being retrieved.

**Fig. 4.10**  
Browse Progress Indicator



The existing records are displayed on scrollable pages and you can set the number of records per page. When many records exist, choosing to display all of them may take some time.

**Fig. 4.11**  
Typical Browse

Select a stored search or display Manage Filter Fields.

Receiver Matching Browse for... X

Actions Print Add to Favorites Chart Chart Designer Refresh Stored Searches

Search (12)

Supplier Code equals [ ] + X Search Clear All

Business Relation equals [ ] + X

Invoice Year equals [ 2008 ] + X

Invoice Daybook equals [ ] + X

Invoice Voucher equals [ ] + X

Invoice Status Code equals [ ] + X

Viewing 1 - 50 of 144 Records per page 50

Click to display next page of records.

| Supplier | Business Relation Code | Invoice Year | Invoice Daybook | Invoice Voucher | Invoice Status Code | Matching Date |    |
|----------|------------------------|--------------|-----------------|-----------------|---------------------|---------------|----|
| CKC-Sup1 | CKC-111                | 2008         | SupInvDC        | 00000015        | Rahul-AfterRM       | 04/04/2008    | Fi |
| ATPSUP01 | ATPSUP01               | 2008         | QADAPInv        | 00000007        | Rahul-AfterRM       | 04/03/2008    | Fi |
| ano-sup1 | ano3535                | 2008         | SupInvDC        | 000000151       | Rahul-AfterRM       | 04/03/2008    | Fi |
| ATPSUP01 | ATPSUP01               | 2008         | QADAPInv        | 000000000       | AfterRM1            | 04/03/2008    | In |
| Jie-Sup  | BE                     | 2008         | QADAPInv        | 000000044       | ParAfterRM          | 01/27/2008    | Fi |
| ATPSUP01 | ATPSUP01               | 2008         | QADAPInv        | 000000070       | inhap               | 04/03/2008    | Fi |
| ano-sup1 | ano3535                | 2008         | SupInvDC        | 000000115       | Rahul-AfterRM       | 02/27/2008    | Fi |
| B51-Sup  | 1011K                  | 2008         | SI              | 000000034       | Rahul-AfterRM       | 03/21/2008    | Fi |
| lnsup    | lnsup                  | 2008         | QADAPInv        | 000000107       | ParAfterRM          | 02/26/2008    | Fi |
| EKRM     | EKBR1                  | 2008         | SupInvDC        | 000000118       | EKARM               | 02/29/2008    | Fi |
| Sr-Sup   | Sr-SupBR               | 2008         | QADAPInv        | 000000113       | Sr-AfterMatching    | 03/02/2008    | C  |
| US-Sup   | US-BR                  | 2008         | GWL-APSI        | 000000084       | Rahul-AfterRM       | 03/03/2008    | Fi |
| US-Sup   | US-BR                  | 2008         | GWL-APSI        | 000000071       | Rahul-AfterRM       | 02/21/2008    | Fi |
| US-Sup   | US-BR                  | 2008         | GWL-APSI        | 000000072       | Rahul-AfterRM       | 02/22/2008    | Fi |
| US-Sup   | US-BR                  | 2008         | GWL-APSI        | 000000078       | Rahul-AfterRM       | 02/25/2008    | Fi |
| US-Sup   | US-BR                  | 2008         | GWL-APSI        | 000000068       | Rahul-AfterRM       | 02/21/2008    | Fi |
| US-Sup   | US-BR                  | 2008         | GWL-APSI        | 000000070       | Rahul-AfterRM       | 02/21/2008    | Fi |
| ano-sup1 | ano3535                | 2008         | SupInvDC        | 000000101       | ROInitialAfter      | 02/21/2008    | Fi |
| inh-sup  | inh-sup                | 2008         | QADAPInv        | 000000086       | inhap               | 02/22/2008    | Fi |
| US-Sup   | US-BR                  | 2008         | GWL-APSI        | 000000082       | Rahul-AfterRM       | 02/28/2008    | Fi |
| Sr-Sup   | Sr-SupBR               | 2008         | QADAPInv        | 000000078       | Sr-AfterMatching    | 02/21/2008    | C  |
| lnsup    | lnsup                  | 2008         | SI              | 000000015       | ln-al-matching      | 03/03/2008    | C  |

## Search Criteria

The Search Criteria area displays the fields for filtering your search. If stored search criteria exist, you can select one by name from the drop-down list at the top of the search criteria. This sets up the filter criteria to produce preconfigured results.

Otherwise, the search fields display with a default configuration. You can refine the search using combinations of filters and wild cards (\*). Click the + and X buttons to add and remove search filters.

Initially, one search condition displays. Choose the field that you want to search from the drop-down list.

**1** Choose a search operator from the drop-down list. The search operators include the following:

- equals
- not equals
- contains
- range
- starts at (the default)
- greater than
- less than

- is null
- is not null

**2** Enter a value in the search box or select a value from the associated lookup.

For character fields, the asterisk (\*) matches any number of characters when the search operator is equals or contains.

You can enter a comma-separated list of values in the search field for browses. When the search conditions include the equals or not equals operators and the search is against values of the string data type, the search query will perform a logical OR on the results.

When configuring a browse, you can enter variables in search values. For example, when browsing for sales order bills, you can select SessionID, UserID, Entity ID, or Domain from the Search Variable Tip drop-down list. Different components display different search variables in the drop-down list. The Search Variable Tip button toggles this option.

You can also use database fields of the same type as filters. For example, you can filter a browse to retrieve records for which Sold-To equals Ship-to, Date Due is greater than Date Shipped, or Quantity Ordered is greater than Quantity Shipped. The Search Variable Tip button also toggles this option.

**Fig. 4.12**  
Search Variable Tip Button



**Note** When searching according to a range of values, be aware that the string comparison method used by the .NET environment can produce a different sort order than the Progress database sort order in certain situations. For instance, .NET treats the dash (-) character as greater than the zero (0) character but the Progress database does not.

**3** Click Search.

**4** To refine your search further, click the plus (+) icon to add another search row. You can add as many rows as needed, each with different search values and operators. If you choose the range search operator, the second search box is enabled for the ending value of the range. When you specify several criteria, note the following:

- Multiple criteria for the same field are treated as a logical OR condition.
- Multiple criteria for different fields are treated as a logical AND condition. The not equals and not null criteria are always treated as a logical AND condition, even with other criteria on the same field.

**5** To remove a search criteria row, click on the delete (x) icon.

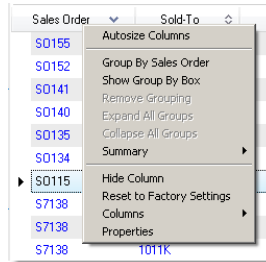
You can use the Manage Filter Fields option (see “Manage Filter Fields” on page 76) to display more fields or other fields on component-based browses. Adding and removing Filter Fields with + and X or using the Manage Filter fields menu option provides the same result. However, with the Manage Filter fields option, you can also give the fields persistent initial values if you save the changes in the Stored Search menu.

Using Manage Filter Fields, you can also change the order of the filter fields by right-clicking and choosing Move Up, Move Top, Move Down, or Move Bottom. You can also select a field and move it by pressing the Alt key and then pressing the Arrow Up or Arrow Down key.

## Column Options

Right-click a column heading to display a list of options.

**Fig. 4.13**  
Browse Column Options



With the column options, you can:

- Use Autosize Columns to resize browse columns based on the size of the displayed data. By default, the browse displays with columns already autosized. If you turn this option off and manually adjust column sizes, your settings for each browse are retained between sessions. If a cell's data exceeds the column width, three dots (...) are displayed on the right.

**Note** When you are viewing all records in a browse (Records to show set to All) and Autosize Columns is on, the autosized column widths are based on the first 500 records for performance reasons.

- Use the Group By functions to create and manage custom views of the browse data. Group By functions are available only when all records are being viewed.
- Use Summary to get a summary of the data in the browse column. If the data in the column is numerical, you can get a summary based on the following:

*Count.* Displays the number of items in an x-axis group. (This is the only summary option available for non-numerical data.)

*Sum.* Displays the sum of the values in the column.

*Average.* Displays the average of the values in the column.

*Minimum.* Displays the minimum of the values in the column.

*Maximum.* Displays the maximum of the values in the column.

The summaries are displayed below the column in a Summaries area.

- Use Hide Column to remove a column from display.
- Use Reset to Factory Settings to return to the default column display settings. The search conditions, autosizing, page sizing, and chart definition are all reset.
- Use Columns to display a list of all columns defined for the browse and toggle the show/hide settings. You can use this to restore a column that was previously hidden. This option displays the Column Maintenance screen, in which you select the columns to be displayed and the position in which they appear on the screen. The position numbers range from left to right on the screen, and you assign new numbers to columns according to where you want them to appear.
- Use Properties to display technical information about the data in the column. This includes the name of the current program and the database table and field where the data for the column is stored.

## Using Browse Column Filter

You can filter the results in a column using the browse column filter. Each column includes a filter so that you can refine the browse to display the data of interest.

In a browse column header, click the funnel icon.

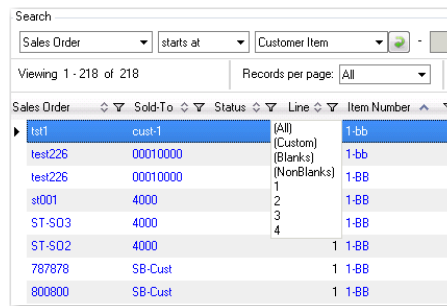
A pull-down list displays the items displayed for the column along with options for (All), (Custom), (Blanks), and (NonBlanks).

- To filter the column to display all data, choose (All). This is the default.
- To filter the column according to some custom criteria, choose (Custom).
- To filter the column to include only blank items, choose (Blanks).
- To filter the column to display everything except blank items, choose (NonBlanks).
- To filter the column for a particular item, select the item from the list.

## Defining a Custom Browse Column Filter

- 1 In a browse column header, click the funnel icon.
- 2 To filter the column according to some custom criteria, choose (Custom).

**Fig. 4.14**  
Browse Column Custom Filter



The Enter filter criteria pop-up menu displays.

By default, the menu includes an initial criteria. You can add additional criteria by clicking the Add a condition button.

- 3 In the left-hand Operand column, select an operation. You can select the following:
  - Equals
  - Does not equal
  - Less than
  - Less than or equal to
  - Greater than
  - Greater than or equal to
  - Like
  - Matches regular expression
  - Starts with

- Contains
- Ends with
- Does not start with
- Does not contain
- Does not end with
- Does not match
- Not like

- 4 In the right-hand Operand column, choose the item to which you want to apply the operation.
- 5 Click OK.

## Summarizing Results

The Summary right-click option lets you display summary information, depending on the column header in which you have clicked.

**Note** You must be able to view all the records on the screen page to enable the Summary option. If there are more records than can be displayed, set the Records per Page field to All.

**Example** By right-clicking the BC Amount column in the results grid for Supplier Invoice Browse, you can display the following summary information:

*Sum.* Displays a total sum of the invoice amounts

*Count.* Displays the number of invoice records

*Average.* Displays the average of the invoice amounts.

*Minimum.* Displays the lowest invoice amount.

*Maximum.* Displays the maximum invoice amount.

**Note** You only see meaningful results if the operator you choose applies to the data type. For example, applying the average operator to a date column does not produce a meaningful result. Minimum and maximum are useful with dates, and summary and average with numeric fields.

**Fig. 4.15**  
Results Columns Option

| Role Name           | BC Balance | Type    | Sub-Acct | SC Balance |
|---------------------|------------|---------|----------|------------|
|                     | -100.00    | Invoice | 10       | -100.00    |
|                     | -200.00    | Invoice | 10       | -200.00    |
|                     | -210.00    | Invoice | 10       | -210.00    |
|                     | -100.00    | Invoice | 10       | -100.00    |
|                     | -200.00    | Invoice | 10       | -200.00    |
|                     | -125.00    | Invoice | 10       | -125.00    |
|                     | -4,995.00  | Invoice | 10       | -4,995.00  |
|                     | -600.00    | Invoice | 10       | -600.00    |
|                     | -100.00    | Invoice | 10       | -100.00    |
|                     | -220.00    | Invoice | 10       | -220.00    |
|                     | -400.00    | Invoice | 10       | -400.00    |
|                     | -100.00    | Invoice | 10       | -100.00    |
|                     | -100.00    | Invoice | 10       | -100.00    |
|                     | -200.00    | Invoice | 10       | -200.00    |
|                     | -110.00    | Invoice | 10       | -110.00    |
|                     | -500.00    | Invoice | 10       | -500.00    |
|                     | -1,000.00  | Invoice | 10       | -1,000.00  |
| Sum = -9,260.00     |            |         |          |            |
| Count = 17          |            |         |          |            |
| Average = -544.71   |            |         |          |            |
| Minimum = -4,995.00 |            |         |          |            |
| Maximum = -100.00   |            |         |          |            |

Summary is also available within Financials grids. For example, if you select the Tax tab on a supplier invoice, and right-click Columns while on a column header, you have the option to select a Summary type for the column.

**Fig. 4.16**  
Summary Option, Financials Grid

|                         |                     |                                     |        |                 |            |          |
|-------------------------|---------------------|-------------------------------------|--------|-----------------|------------|----------|
| 06/24/2008              | TC Tax Amount (DR)  | TC Tax Amount (CR)                  | Recalc | Non-Rev Tax Amt | Upd Allow  | Retained |
| 0.00                    | 0.00                | 0.00                                |        | 0.00            |            |          |
| 0.00                    | 0.00                | 0.00                                |        | 0.00            |            |          |
| Supplier Invoice Modify |                     |                                     |        |                 |            |          |
|                         | Label               | Visible                             | Width  | Summary Type    | Max Length |          |
|                         | Tax Class           | <input checked="" type="checkbox"/> | 119    | Sum             | 3          |          |
|                         | Tax Usage           | <input checked="" type="checkbox"/> | 119    | None            | 8          |          |
|                         | Tax Environment     | <input checked="" type="checkbox"/> | 119    | None            | 16         |          |
|                         | Tax Type            | <input checked="" type="checkbox"/> | 100    | None            | 16         |          |
|                         | Tax Code            | <input checked="" type="checkbox"/> | 119    | None            | 20         |          |
|                         | Domain              | <input checked="" type="checkbox"/> | 119    | None            | 8          |          |
|                         | TC Base Amount (DR) | <input checked="" type="checkbox"/> | 139    | None            | 0          |          |
|                         | TC Base Amount (CR) | <input checked="" type="checkbox"/> | 139    | None            | 0          |          |
|                         | TC Tax Amount (DR)  | <input checked="" type="checkbox"/> | 132    | None            | 0          |          |
|                         | TC Tax Amount (CR)  | <input checked="" type="checkbox"/> | 132    | None            | 0          |          |
|                         | Recalc              | <input checked="" type="checkbox"/> | 63     | None            | 0          |          |
| Save Close              |                     |                                     |        |                 |            |          |

You can then display a summary for the individual column.

**Grouping Results**

Use the right-click Group option to group data by column type. The grid now displays a summary of the column data, with the different elements sorted into groups.

Each group in the list can be expanded—to view the details of individual elements—using the plus sign next to the group.

You can also add other columns to the grid to create a group hierarchy.

Figure 4.17 illustrates a GL BC Balances browse in which the GL Description, GL Account, and System Type columns have been selected to form a hierarchy.

**Fig. 4.17**  
Group Hierarchy

| GL Description                                  | GL Account | System Type |
|-------------------------------------------------|------------|-------------|
| * Description:1000 (1 item)                     |            |             |
| Description:1001 no sub-acct (1 item)           |            |             |
| GL Account:1001 (1 item)                        |            |             |
| * Sys Type: (1 item)                            |            |             |
| * Description:1044 Draft Accepted (1 item)      |            |             |
| * Description:1044 Draft Allocated (1 item)     |            |             |
| * Description:1044 Draft For Collectio (1 item) |            |             |
| * Description:Accounts Payable (1 item)         |            |             |
| * Description:Accounts Payable DM (1 item)      |            |             |
| * Description:Accounts Payable SPP (1 item)     |            |             |
| * Description:Accounts Payables Acct (1 item)   |            |             |
| * Description:Accounts Receivable (2 items)     |            |             |
| * Description:Accounts Receivable Acct (1 item) |            |             |
| * Description:Accounts Receivable EUR (1 item)  |            |             |

The browse data is now grouped by GL Description, GL Account, and then by System Type. Ungroup the data by dragging the column headers back into the result list.

**Note** The group options that you have configured are saved automatically in your last used settings, and can be reused when you open this browse again. You can also save these options as a stored search.

The column header menu also has a Properties option, which shows the internal field name that, in most cases, also matches the database field name.

## Results Grid Options

The results grids for both component and non-component based browses have right-click options.

- For non-component based browses, blue underlined text indicates values where you can drill-down for additional details. Right-click any value to display a list of associated links: either a more detailed browse, a related program, or an external Web page. See “Accessing Links in Browses” on page 121 for details about the kinds of links available in browse data fields.

**Fig. 4.18**  
Browse Results Drill-Down

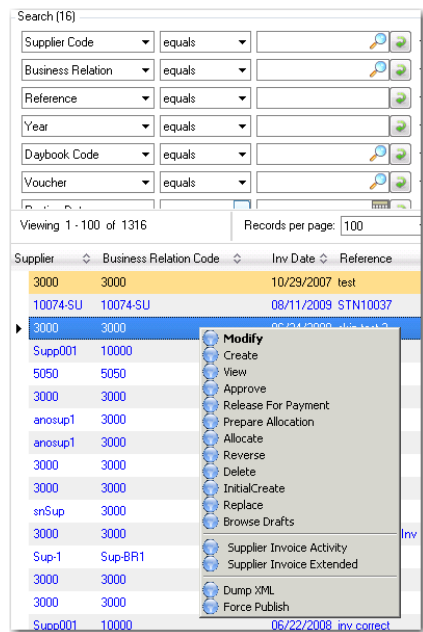
| Purchase Order | Purchase Order Line | Site    | Supplier | Item Number | Quantity |
|----------------|---------------------|---------|----------|-------------|----------|
| 0119A          | 1                   | 10000   | SCSUP001 | HNPItemInv  |          |
| 01407          | 1                   | 10000   | ICSUP01  | 1-BB        |          |
| 0209-YMG       | 1                   | 10000   | 5000     | 1-BB        |          |
| 060709         | 1                   | icsite1 | ICSUP01  | ic-item-01  |          |
| 07014D         | 1                   | 10000   | 5000     | 1-BB        |          |
| 0704-2Li       | 1                   | icsite1 | ICSUP01  | ic-item-01  |          |

| Supplier | Sort Name      | Telephone    | City   | State | Postal Code |
|----------|----------------|--------------|--------|-------|-------------|
| 5000     | Acme Supply Co | 201 852-3582 | Verona | NJ    | 07044       |

For component-based browses, there are additional drill-down and configuration options for individual records, but not individual fields. For example, when you right-click a grid line in the Supplier Invoice Browse for Modify browse, you can select a supplier invoice activity to apply to this record.

**Fig. 4.19**  
Component-Based Browse Right-Click



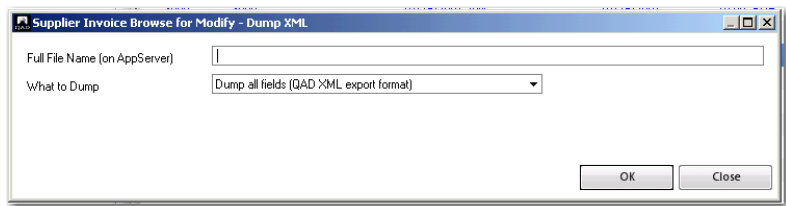
There are two additional component-based options: Dump XML and Force Publish

### Dump XML

The right-click Dump XML option on results grids lets you export selected lines to an XML file for analysis.

Specify a filename and location in the Dump Location field. The XML file is stored on the server on which the appserver is running. The option lets you specify which fields to include in the dump file, and is described in more detail in *User Guide: QAD System Administration*.

**Fig. 4.20**  
Dump XML



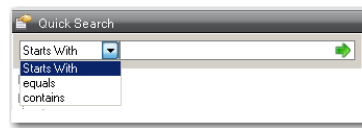
## Force Publish

The Force Publish option is used with event publishing and the Event daemon. When you have configured event publishing, which enables changes to master data to be published and synchronized with other external systems, the Event daemon only processes events when a change has taken place. This option lets you publish events at any stage, and is described in more detail in *User Guide: QAD System Administration*.

## Quick Search Panel

The Quick Search filter on browses lets you search for a value across all of the fields in the browse.

**Fig. 4.21**  
Quick Search Filter



Use the \*Search For option from the Search pull-down list to retrieve all the results that contain the search value in any of the columns. This option is useful as a quick search, and also when you have details for a record which cannot be searched using any of the existing filters. You can use this filter for all browses.

For example, if you are browsing customer records and use Search For to retrieve the value 1234, the results display all records for which 1234 is found in any of the record columns (for example, customer code, postal code, or site code).

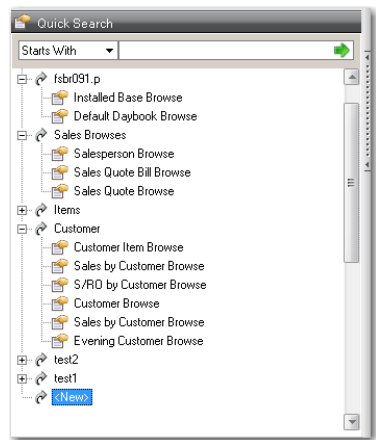
You can use the Contains, Starts With, or Equals operators with the Search For filter.

You can also create groups of browses for quick search purposes.

By default, the browse groups area of the panel is empty. Create a new browse group by right-clicking on the panel and selecting New to create a new browse folder.

You can add individual browses or browse collections by selecting the folder and dragging and dropping browses from the Applications panel.

**Fig. 4.22**  
Quick Search Panel



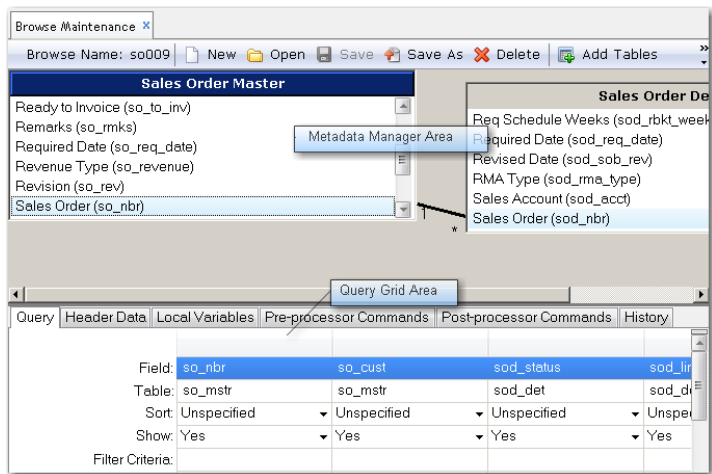
Enter a search term in the Quick Search field and press Enter to search the browses contained in the folder for the term.

This option searches integers and text strings only and does not retrieve dates.

## Browse Maintenance

Browse data is defined with Browse Maintenance (36.20.13) and View Maintenance (36.20.18). The Browse Maintenance (36.20.13) program includes a new graphical tool for creating, editing, duplicating, and deleting browses. This tool is only available with the QAD .NET UI.

**Fig. 4.23**  
Browse Maintenance (.NET UI mode)



In the Desktop (Web Browser) and Terminal (Character UI) modes, to define a browse, you must create both a view and a browse using View Maintenance and Browse Maintenance. With Browse Maintenance in the .NET User Interface mode, you do not need to create a view using View Maintenance. Rather, you can simply use Browse Maintenance to specify the components of a browse. The system automatically stores the browse definition.

**Note** Although all browses created by Browse Maintenance (.NET User Interface) can be maintained in the Character UI, some legacy browses defined using the Character UI might not be maintainable by Browse Maintenance (.NET User Interface). In the Character UI, you create a browse by entering data in two maintenance programs, View Maintenance and Browse Maintenance. You have to enter the join data in View Maintenance's Join Phrase field, where join data is a clause of the form *<from table>. <from field> = <to table>. <to field>.* However, more than just join data can be entered in View Maintenance's Join Phrase field. For example, you can include field filters of the form *<field name> <operator> <value>.* Browse Maintenance (.NET User Interface) only supports maintaining join data.

**Note** There is no limit to the number of tables you can include using the .NET UI Browse Maintenance, but including more than 30 tables in a browse definition can cause the .NET UI Browse Engine to halt. The Browse Engine was originally designed with a four-table limit to avoid Progress performance issues. The Character UI Browse Engine and Desktop Browse Engine have a four-table limit.

## Starting Browse Maintenance

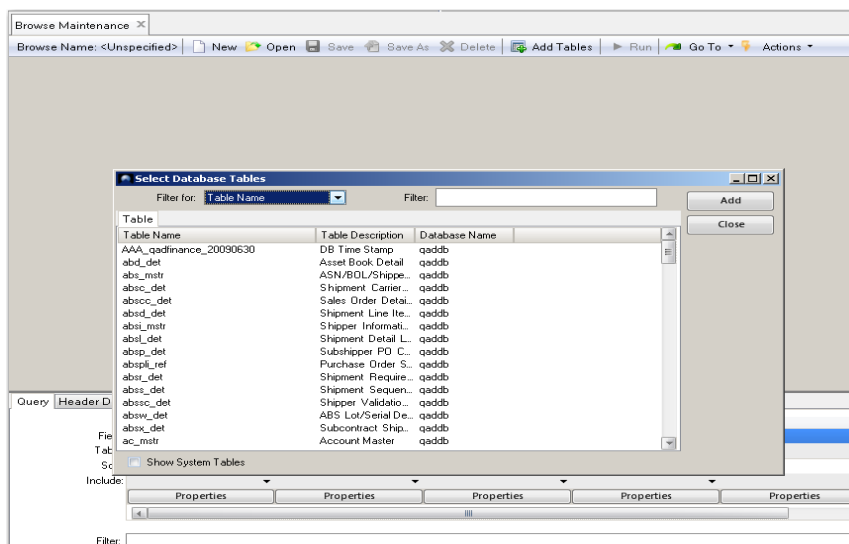
To start Browse Maintenance:

- 1 The Browse Maintenance program must first be set to open in .NET User Interface mode. In the Application pane, right-click on Browse Maintenance and select Properties.
- 2 Set the Open With field to .NET User Interface and click OK. The Browse Maintenance screen includes a toolbar, a metadata manager area, and a query grid area. The toolbar provides options for creating new browses, opening existing browses, saving browses, and deleting browses.

## Creating a New Browse

To create a new browse, click the New icon or enter Ctrl+N. The system automatically displays the Select Database Tables screen.

**Fig. 4.24**  
Browse Maintenance





```

<Table name="hwm_det" database="qaddb" restricted="*"></Table>
<Table name="lcap_hist" database="qaddb" restricted="*"></Table>
<Table name="lpm_mstr" database="qaddb" restricted="*"></Table>
<Table name="lpmd_det" database="qaddb" restricted="*"></Table>
<Table name="lua_det" database="qaddb" restricted="*"></Table>
<Table name="lvr_det" database="qaddb" restricted="*"></Table>
<Table name="pin_mstr" database="qaddb" restricted="*"></Table>
<Table name="pex_mstr" database="qaddb" restricted="*"></Table>
<Table name="so_mstr" database="qaddb" restricted="pjt,jjp"></Table>
</DotNetBrowseMaintenanceRestrictedTables>

```

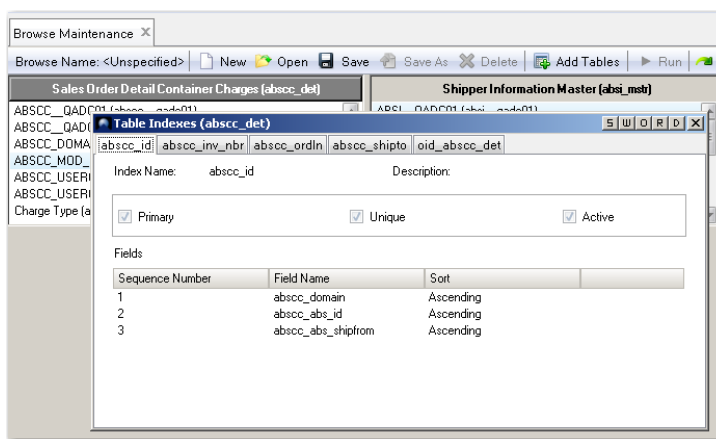
You can also restrict user groups by specifying the user group name in place of the user logins. When you restrict a user group, all users within that group are restricted.

Note that an asterisk (\*) indicates no users have access, and the table is completely restricted.

## Viewing Table Indexes

When defining a browse, it may be useful for performance purposes to view the indexes defined for the browse tables you are using. To view the index for a table, right-click the table window or header and select the Table Indexes context menu.

**Table 4.1**  
Browse Table Indexes



Each table index is displayed in a separate tab with the index name as the tab caption. The primary index is displayed as the first tab. Each tab displays the index attributes and the table fields that make up the index. For each field the sequence, field name, and sort type is listed.

**Index Name.** The name of the index as defined in the database schema.

**Description.** The index description as defined in the database schema (this is often blank).

**Primary.** Whether the index is the primary index for the table. There can only be one primary index defined for a table.

**Unique.** Whether the index is unique. A unique index does not allow duplicate values.

**Active.** Whether the index is currently active.

- Fields.* The list of fields making up the index.
- Sequence Number.* The order in which the field appears in the index
- Field Name.* The name of the field
- Sort.* The sort type: ascending or descending

You now use the Query tab to add fields to the browse.

Using the Query Tab

To add a field from a table to the browse, drag-and-drop a field from the table to a column in the Query section. Note that you can view and modify the properties by clicking the Properties button at the bottom of the column.

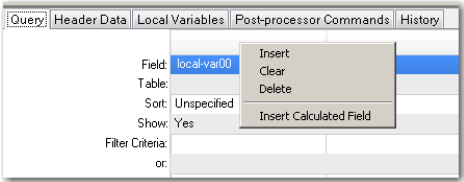
Field Descriptions

- Field.* The field name from the database schema. The default value is retrieved from the dragged field object.
  - Table.* The table name from the database schema.
  - Sort.* Specifies whether the column is a column used to sort the Browse results. The combo box lists the options: Ascending, Descending, and Unspecified.
  - Show.* Specifies whether the column is displayed (returned) in the results when the browse is executed against the data source.
  - Filter Criteria.* Enter up to nine filters that are processed using a logical or operation for the filter in each row. The format of the filter criteria is: *<operator> <value>*, where *<operator>* is =, <>, <, >, <=, matches, or begins and where *<value>* is a valid string for the entered operator. Although there are nine rows per column for filter criteria, the total length of the filter generated from this data is limited to 256 characters.
  - Properties.* Each column includes a Properties button, which opens a Properties screen for entering additional field information.
- You can filter the fields displayed using the Select Fields screen.

Inserting New Columns in the Query Grid

To insert new blank columns into the grid, right-click the column header to display the column options.

Fig. 4.26  
Query Grid Right-Click Options



*Insert.* Select to insert a new blank column.

*Clear.* Select to clear the contents of the selected column.

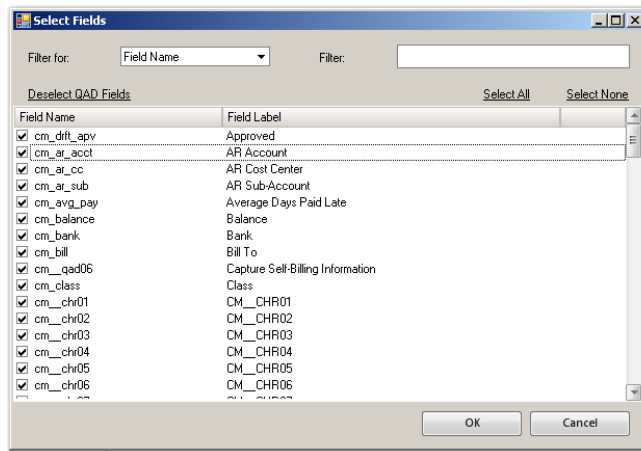
*Delete.* Select to delete the selected column

*Insert Calculated Field.* Select to display the Field Properties screen, in which you define a calculated field that is then inserted into a new column.

## Displaying Fields in the Field List

The table areas display all the fields defined in the schema for that table. To display only the fields you require, right-click on the table area and choose Select Fields.

**Fig. 4.27**  
Select Fields



## Field Descriptions

*Filter For.* Use this filter to filter by field name or field label.

*Filter.* Use this field to enter a string by which to filter the columns. For example, to view AR columns, filter by field labels, and then enter AR in the Filter field.

*Field List.* This area displays the list of fields available for display in the Table Control.

*Deselect QAD Field.* Click this field to automatically deselect/select the QAD system fields; that is, fields containing a double underscore (\_\_).

*Select All.* Click to automatically select all the currently displayed fields.

If the field list is filtered by the Filter textbox, only the displayed fields are checked.

*Select None.* Click to automatically deselect all the currently displayed fields.

**Note** If the field list is filtered by the Filter textbox, only the displayed fields are unchecked.

The Select Fields dialog has the following constraints:

- A field used in a table join may not be unchecked and is displayed as grayed-out text in the dialog field list.
- A minimum of one field must be checked in the dialog field list before you can click OK to exit the screen.

When a subset of fields for a table have been selected (any number of fields less than all of the fields available for the table), only the selected fields are displayed in the table control area. Note the filter icon displayed in the upper right corner of the Table Control to indicate to the user that a filtered list of fields is being displayed.

**Note** Fields that have been added to a screen using Configurable Screens are displayed for that table in Browse Maintenance.

## Field Properties

Use the Field Properties screen to view and modify field properties.

**Fig. 4.28**  
Field Properties

**Field.** This field displays the database schema field name.

**Table.** This field displays the database schema table name to which the Field belongs.

**Default Label.** This field displays the default label from the database schema.

**Table Description.** This field the default table description from the database schema.

**Label Term (Optional).** This field specifies the key or label term from the label master table which is used to retrieve the field label displayed in the column in the browse results.

The following algorithm is applied to the label term entered when saving the browse definition:

- If the label term does not exist in the label master table, the system creates a new label master record using the string entered (the string is set to all uppercase and spaces are replaced with underscores).
- The new label master record's value is the entered label term. For example, if you enter the new term Red Book, the label master table would be queried and the term would not be found. A new label master record would be created with the key RED\_BOOK and the value Red Book.

This field contains an associated lookup that allows the user to select an existing label term from the label master table.

**Note** When creating a browse, you cannot use the following characters in a label term: asterisk (\*), ampersand (&), question mark (?), colon (:), semi-colon (;), dollar sign (\$), hash mark (#), at sign (@), plus sign (+), equals sign (=), less-than sign (<), greater-than sign (>), or period (.).

**Field Label.** This field displays the value for the label term retrieved from the label master table.

**Sort Order (Optional).** This field specifies the sort order for the column as an integer from 1 to 8. For a given browse, the value of the sort order for each column specifies the order in which the columns are sorted relative to each other. By default, this field is set to Unspecified and read-only until the Sort field on the query grid is set to Ascending. As you specify the Sort field, the Sort Order is automatically set to reflect the order in which you specify the Sort field for various columns, but you can then change the Sort Order as needed.

**Expression.** This field is required when Field is a local variable (that is, has the name *local-varNN*, where each *N* is an integer from 0 to 9). When Field is a local variable, the Expression is the Progress 4GL syntax that defines the local variable. The string entered must be valid Progress syntax. You can enter an expression of up to 512 characters.

**Data Type.** This drop-down list specifies the Progress data type for the local variable. This field is required when the Field is a local variable (that is, has the name *local-varNN*, where each *N* is an integer from 0 to 9). Valid data types are character, date, integer, decimal, logical, and recid. If the Field is a table field, this value should not be changed.

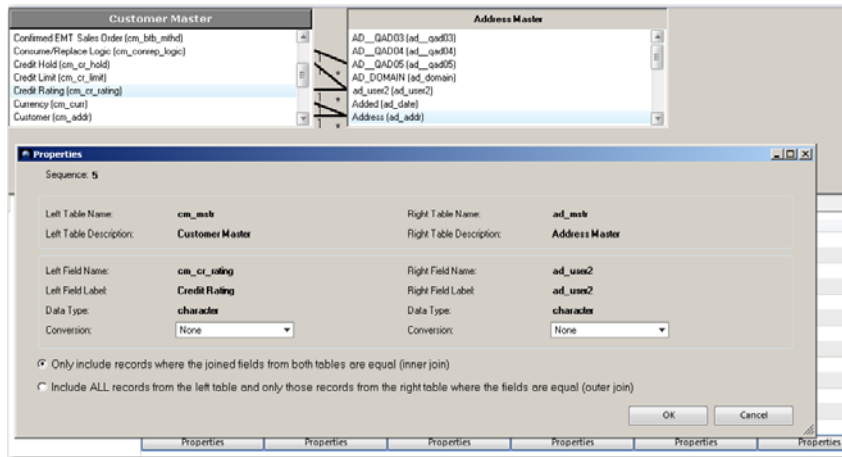
**Format.** Specifies the display format for the local variable. This field is required when the Field is a local variable (that is, has the name *local-varNN*, where each *N* is an integer from 0 to 9). These are Progress database formats, such as NN/NN/NN for dates or x(N) for characters. If the Data Type is logical, a label term such as Yes/No or True/False should be entered. Note that this setting only applies to the display of browses in the Character UI; it does not apply to browses displayed in the QAD .NET UI.

**Max Length. (Optional).** Specifies the maximum display length for the field. Note that this setting only applies to the display of browses in the Character UI; it does not apply to browses displayed in the QAD .NET UI.

## Creating Table Joins

To define join properties between two tables, drag-and-drop a field from one table to a field in the other table. The screen displays a line indicating the join. Right-click the line to display the Join Properties screen.

**Fig. 4.29**  
Join Properties



This screen displays the table name and description, field name and label, and character type for the left and right join elements.

### Using Join Types

An inner join returns the records selected for the first table combined with related records selected from the second table. If a record does not exist in the second table, no records are returned. Only related records selected from both sides of the relationship display in the view.

An outer join returns the records found by an inner join. However, in addition, for each value in the first table, it returns unknown values from the second table when no related record is found. As a result, all matching records from the first table are preserved for unmatched records in the second table.

The default join type is inner. Using the outer join can give you more flexibility in displaying information.

**Example** An inner join between customers and sales orders displays only customers with sales orders. An outer join includes all customers, even those who do not have orders.

The fields in a join must be of the same datatype, and the Conversion drop-down list lets you convert the left or right datatype to ensure that they match. When you attempt to create a join of fields of differing datatypes, the system warns you of the difference, and automatically displays the Join Properties screen to let you convert one of the datatypes.

The other options on this screen are:

*Only include records where the joined fields from both tables are equal (inner join).* If a record from the left table does not have a related record in the table on the right, no row is returned.

*Include all records from the left table and only those records from the right table where the fields are equal (outer join).* If a record from the left table does not have a related record in the table on the right, return the data from the left table and null for the data for the table on the right.

Click OK to save any changes or Cancel to exit without saving changes.

## Header Data Tab

Use the Header Data tab to complete the browse information:

**Browse Name.** Enter the name of the browse. The name entered must have the format xxNNN, where each x is an alphabet character and each N is an integer from 0 to 9. The convention is that the two letters indicate the module name. Once the browse has been saved, the name is read-only and cannot be changed.

**Description Term.** Enter the label term for the label master records whose value is used in the description for the browse. The format is an upper case alphanumeric string with no spaces. You can specify the label term in the following ways:

Leave the field blank. If you do not enter a Description Term, this field defaults to the value you entered for the Browse Name and a label master record will be created with the browse name as the label term and default description text when you save the browse. For example, if you enter xx007 as the Browse Name and leave Description Term blank, the Description Term field is assigned the value XX007, which creates the label master record XX007 when you save the browse.

Use the lookup to select an existing label term from the Label Master window, which displays labels as listed in Label Master Browse for your language.

Enter a value in the Description Term field that does not yet exist as a label term. The system will create a new label master record for your language when you save the browse.

When a new label term is created, either because you left the Description Term field blank or because you entered a value that did not yet exist as a label term, you must then enter a description for it using Label Master Maintenance (36.4.17.1). You must enter the description in the Long Label field. You must do this for each language you support in your system environment using Label Master Maintenance (36.4.17.1), selecting the appropriate Language field for the label term and entering the appropriate description in the Long Label field. If you do not do this, Browse Master Browse (and Browse Maintenance's Open Browse window, which is driven by Browse Master Browse) will not list the new browses in the other language environments because Browse Master Browse does not show browses that do not have a label master record for a given user's language.

**Description.** Displays the description text associated with the label term entered in the Description Term field. If you leave the Description Term field blank or enter a label term that does not yet exist, you must use Label Master Maintenance (36.4.17.1) to enter the description.

**User IDs/Groups. (Optional).** Specifies a user or group ID to limit access to the view automatically created for this browse. Only those users authorized can use the generated view to create browses (this is only applicable when using the Terminal mode/Character UI maintenance programs). To allow access to all users, leave this field blank.

**Join To Domain.** Specifies whether the tables are joined to the global domain automatically when the join phrase is generated. When checked, the QAD .NET UI will automatically generate a join to the global domain variable for all tables in the browse of the form `<table name>.<table domain field> = global_domain`. If unchecked, none of the tables in the browse definition will include joins to the global domain variable to limit the records returned to the current domain. The user can still limit the results to the current domain by entering filter criteria on the query grid using the global domain variable. This field should be checked unless you want to see records from across domains.

*Value-Returned Column (Optional).* Specifies the column from the query grid whose value you want returned when the user double-clicks a row in the browse or lookup.

Right-click the Header Data tab to include the Local Variables, Pre-processor Commands, Post-processor Commands, and History tabs.

The Pre-Processor Commands and Post-processor Commands tabs are available only for backwards compatibility with browses defined using the Character UI. These tabs provide a way to enter Progress 4GL code that can run either before (pre-processor) or after (post-processor) the browse runs. You do not need to use these tabs when creating a new browse using the QAD .NET UI.

The History tab displays revision history for this browse.

Click Save to save the browse. When you save a browse from Browse Maintenance, the system does not save the browse source code .p files. The system only generates the .p files automatically when you save a browse from Browse Maintenance in Terminal mode. However, you can generate the .p files using the Browse Generation Utility (36.25.70), which allows you to generate the .p files by entering the browse name. The system writes the files to the working directory of the Connection Manager scripts, which is the same as for reports. In a default installation, this directory is where the /com directory is located.

## Browse Limitations

Progress has a limit in the size of the data that can be stored in an index. In versions prior to 10.1B, the limit is around 200 characters (the sum of all the data contained in the fields of an index of a record). This limit has been increased to around 2000 characters in version 10.1B and beyond. Within Browse Link functionality, you are restricted to the 200 character limit unless you have upgraded your version of Progress. This limits the number of parameters that can be defined in a browse link, usually to four or less, although a fifth parameter is possible if the names of all of the involved fields are small.

**Important** When creating a browse, you should be aware of the impact of the browse on performance. A browse on a database table that has a great many records may take a long time to save and hours to run. System resources are also strained when you select fields as search criteria that have not been properly indexed. You should therefore consult the data dictionary before defining a browse, to check the number of records being retrieved by a browse. You should also check that the selected fields have been indexed.

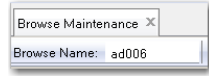
## Modifying a Browse

To modify an existing browse:

- 1 Launch Browse Maintenance (36.20.13).
- 2 Click the Open icon or enter Ctrl+O.  
The Open Browse window is displayed.
- 3 From the Open Browse window, double-click on the browse you want to modify.

If you know the name of the browse you want to open, you can click the Browse Name or <Unspecified> menu labels, enter the browse name, and then press Tab or Enter to display the browse.

**Fig. 4.30**  
Browse Open Shortcut



You can also use the Up and Down arrow keys to scroll through browse names. For example, to retrieve a browse whose name begins with 'ad', enter these letters in the Browse Name field, and press the down arrow key to scroll through the browse names that begin with those letters. The system prompts you if you enter an incorrect browse name, but does not attempt to load a browse whose name does not conform with the xxNNN name format.

You can add fields and table joins to existing browses, and edit current field properties.

In the query grid area, you can view and modify the following values: Query, Header Data, Local Variables, Pre-processor Commands, Post-processor Commands, and History.

**Important** Only a user specified in the UserID/Groups field can access a browse in Browse Maintenance (.NET UI mode). If you have not been specified in UserID/Groups, you can run the browse but cannot open the browse in Browse Maintenance.

## Deleting a Browse

Use Browse Master Browse (36.20.14) to view all the browses in your system.

To delete a browse:

- 1 Click the Delete icon.
- 2 The system prompts you to confirm. Once you delete the browse, you cannot undo the delete.
- 3 Click OK to delete the browse.

## Browse Maintenance Menu Options

The GoTo and Actions menus on the Browse Maintenance menu bar provide additional maintenance functions.

### GoTo

Use the GoTo menu to select the following related maintenance activities:

- Browse Link Maintenance
- Browse URL Maintenance
- Drill Down/Lookup Maintenance

When you select one of the activities, the current browse is opened in the new maintenance menu.

## Actions

The Actions menu has the following options:

- Import
- Export
- Delete Multiple Browses

### Import

To import a browse, open Browse Maintenance and choose Actions|Import (shortcut: Ctrl+I). Use the Input File field to specify the location and filename of the browse data you want to import. The browses you have selected are listed in the Available pane.

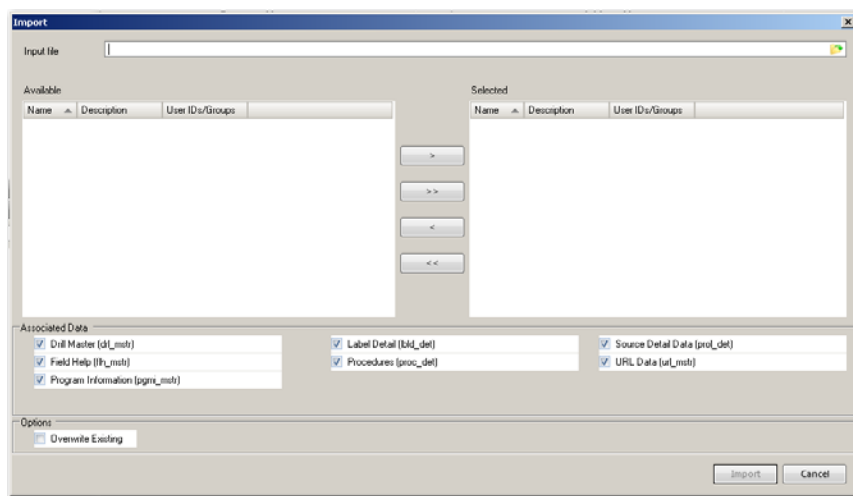
From the Available pane, select a browse by clicking on it and then click right angle bracket (>) button to move the browse to the Selected pane. Note that you can select multiple browses by using the Ctrl key and can place all the browses in the Selected area using the double angle bracket (>>) button.

Importing includes the browse and view data for the browse, but you can specify whether to include associated browse data in the Associated Data pane, which includes check boxes for including the Drill Master, Field Help, Program Information, Label Detail, Procedures, Source Detail Data, and URL Data.

If you are importing a browse that has the same name as an existing browse, specify whether you want the system to replace the existing browse with the one you are importing by choosing the Overwrite Existing check box in the Options pane. Finally, click the Import button.

Click the Name, Description, or User IDs/Groups column headings to sort by that column.

**Fig. 4.31**  
Browse Import



### Export

To export a browse, open Browse Maintenance and choose Actions|Export (shortcut: Ctrl+E). An Export menu displays, listing the browses and their associated data.

Use the Output File field to specify the location and filename of the browse data you want to export.

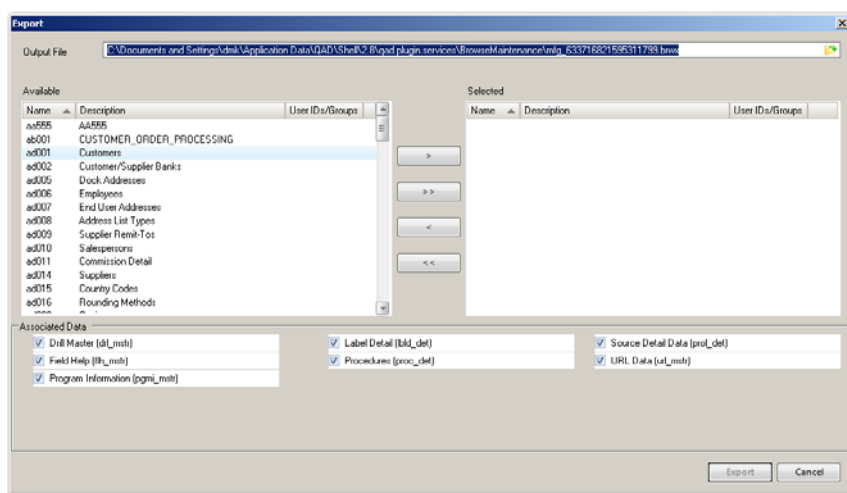
By default, the location is C:\Documents and Settings\username\Application Data\QAD\Shell\version\qad.plugin.services\ BrowseMaintenance, and the filename is your user ID followed by a numerical string and then the .brwx extension.

From the Available pane, select a browse by clicking on it and then click right angle bracket (>) button to move the browse to the Selected pane. Note that you can select multiple browses by using the Ctrl key and can place all the browses in the Selected area using the double angle bracket (>>) button.

Exporting includes the browse and view data for the browse, but you can specify whether to include associated browse data in the Associated Data pane, which includes check boxes for including the Drill Master, Field Help, Program Information, Label Detail, Procedures, Source Detail Data, and URL Data. Finally, click the Export button.

Click the Name, Description, or User IDs/Groups column headings to sort by that column.

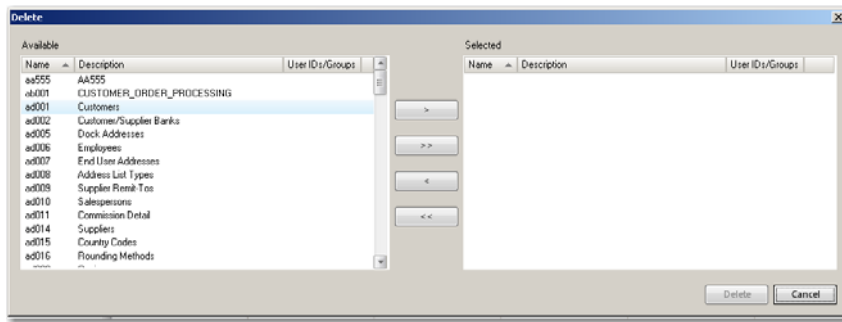
**Fig. 4.32**  
Browse Export



### Delete Multiple Browses

To delete one or more browses, open Browse Maintenance and choose Actions|Delete Multiple Browses (shortcut: Shift+Delete). A Delete menu displays, listing the browses and their associated data. From the Available pane, select a browse by clicking on it and then click right angle bracket (>) button to move the browse to the Selected pane. Note that you can select multiple browses by using the Ctrl key and can place all the browses in the Selected area using the double angle bracket (>>) button. Finally, click the Delete button. Deleting will remove the browse and view data along with the associated data.

**Fig. 4.33**  
Multiple Browse Delete



Browses are stored in an XML-based file format with the .brwx file extension.

## Security

The ability to export, import, and delete browses should be limited to authorized users. The `client-session.xml` file (located in `TomcatInstallDir/webapps/qadhome/configurations/ SysEnv/`) now includes a setting for authorizing access to the import, export, and delete features. A new `<DotNetBrowseMaintenanceUtilities>` element includes a `<Utility>` element whose attributes specify authorization. The format is as follows:

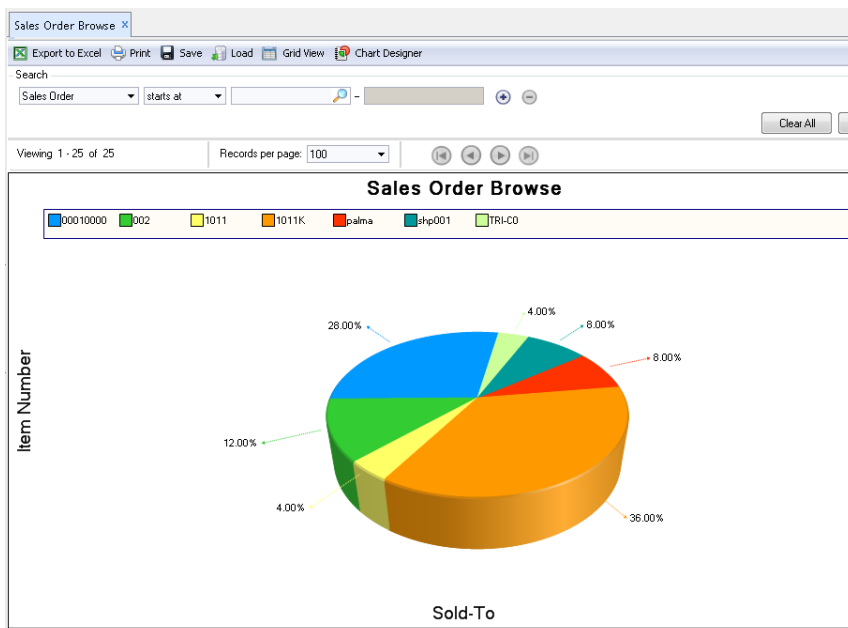
```
<DotNetBrowseMaintenanceUtilities>
    <Utility name=name enabled=boolean authorization=users></Utility>
</DotNetBrowseMaintenanceUtilities>
```

Where *name* can be "Import", "Export", or "MultipleDelete", *enabled* can be "true" or "false", and *users* can be "\*" for all users or some list of user IDs.

## Using Browse Chart Designer

With the browse chart designer feature, you can quickly generate graphical representations of browse data. You can toggle between the standard browse display (called the grid view) and the new chart view. Using the chart view editor, you can select data in a browse and have it displayed as a pie chart or bar graph, for example.

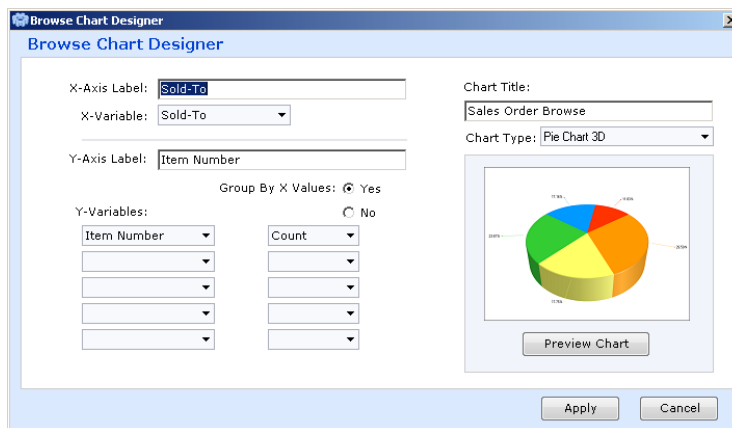
**Fig. 4.34**  
Example of a Browse Chart



To create charts from browses:

- 1 Start a browse and click on the Chart Designer icon.
- 2 Design a chart using the Browse Chart Designer.

**Fig. 4.35**  
Browse Chart Designer



The Browse Chart Designer lets you choose settings that define a chart:

*X-Axis Label.* Enter the label for the chart's x-axis data.

*X Variable.* Select the variable for the x-axis data from a pull-down menu listing the available columns in the browse.

*Y-Axis Label.* Enter the label for the chart's y-axis data.

**Y-Variables.** Select the variables for the y-axis data from a pull-down menu listing the available columns in the browse. You can select up to five variables, depending on the type of chart you would like to use. For example, for a stacked bar chart you can select two or more variables.

**Group By X Values.** Select Yes if you want to display all the common x-axis data together in groups. Select No if you want to display the x-axis data individually. The x-axis data can be grouped in the following ways:

- Count displays the number of items in an x-axis group.
- Sum displays the sum of the values in an x-axis group.
- Average displays the average value in an x-axis group.
- Minimum displays the minimum value in an x-axis group.
- Maximum displays the maximum value in an x-axis group.

**Chart Title.** Enter a title for the chart.

**Chart Type.** Select from among the following types of charts:

- Column Chart
- Column Chart 3D
- Bar Chart
- Bar Chart 3D
- Pie Chart
- Pie Chart 3D
- Stacked Column Chart
- Stacked Column Chart 3D
- Stacked Bar Chart
- Stacked Bar Chart 3D

**Preview.** Click the Preview Chart button to view the chart before you save it.

### 3 Click Apply to view the chart.

**Note** Rendering charts with many elements can be CPU-intensive. To prevent users from attempting to render large charts that could degrade their computer's performance, the system checks the number of elements in a chart before rendering the chart and provides a warning if the number of elements might degrade performance.

In a chart without grouping, the number of elements in a chart is the number of records in the browse display. In a chart with grouping, the number of elements is the number of groups of records. The default value for the maximum number of elements allowed before a warning is displayed is 100 by default. An administrator can change this default setting by editing the <ChartElementsForChartWarning> setting in the Client Session Configuration file.

For stacked bar and column charts, the data values must be all positive or all negative

For stacked 3D bar and column charts, you must have at least one row and one numeric column, and the data values must be all positive or all negative.

You can toggle between the chart view and the grid view of the browse by clicking on the Show Grid View or the Show Chart View icons. If you are in chart view, the Show Grid View icon is displayed, and if you are in grid view, the Show Chart View icon is displayed.

While in chart view, you can do the following:

- *Rotate and Zoom 3D Charts.* You can rotate 3D charts by pressing the Alt key and moving the mouse. Similarly, you can zoom 3D charts by pressing the Alt key and moving the mouse's scroll wheel.
- *Search Charts.* The QAD .NET UI's browse search capabilities apply to the chart view as well as the grid view. By using the search capabilities you can interactively change the chart view of the browse.
- *Hide Titles and Legends.* Chart titles and legends are shown by default. You can hide (or show) titles by right-clicking and selecting Hide Titles (or Show Titles). Similarly, you can hide (or show) the legend by right-clicking and selecting Hide Legend (or Show Legend).
- *Launch Chart in New Window.* To launch a chart in a new window, right-click on the chart and select Launch in New Window.
- *Copy Chart to Clipboard.* You can copy the chart to the clipboard so you can paste it in other applications. To copy the chart to the clipboard, right-click in the chart area and select Copy to Clipboard.
- *Edit Chart Design.* To return to the chart editor, click the Edit Chart Design icon.
- *Interactive Charting.* For any item in the chart that has a drill-down, you can have a split-screen view of both the chart and the drill-down browse, which can also be displayed as a chart. When you click on an item in the first chart, the drill-down chart will automatically change to reflect the changed data for the drill-down. Clicking on an item in the chart also selects the associated row in the browse. Conversely, clicking on a row in a browse also selects the associated item in the chart.

## Creating Browse Operational Metrics

The Browse Operational Metrics option lets you create a visible metric from browse data. Operational metrics provide you with a live snapshot of production data, which lets you monitor in real-time how the system is being used. You can use operational metrics to visually track any type of browse data, including data from customized browses created in Browse Maintenance.

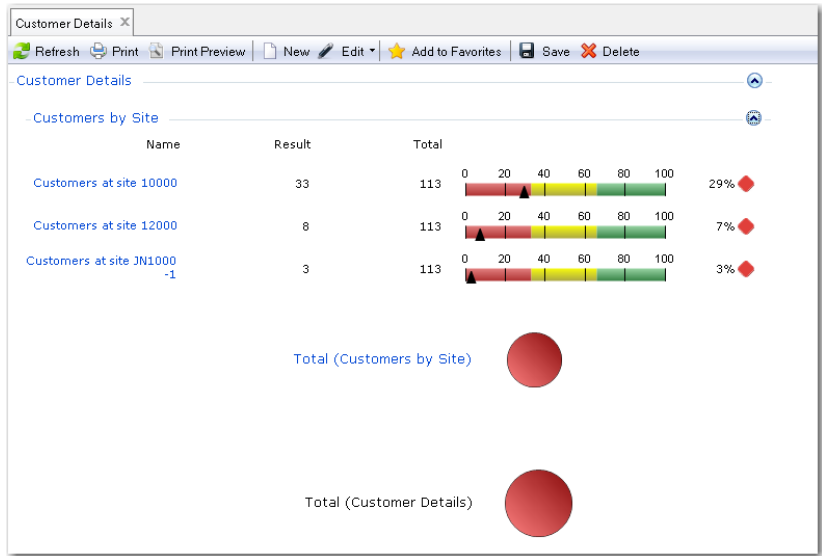
You create operational metrics using the following components:

- **Metric collection.** This is the container for the metric data. Name the collection for the area for which you want to display data (for example, Inventory, Sales, Purchasing, Accounts Receivable). You add one or more metric groups to the metric collection.
- **Metric group.** Metric groups contain the metrics that display the data. For example, the metric group Customers by Site can contain separate metrics for each site you want to view. The metric group can contain any number of metrics. You select a parent browse (in this case, Customer) when you create the metric group.
- **Metric.** The metric consists of the parent browse filtered for specific data. For example, the metric Customers at Site 10000 is based on the Customer browse results filtered for Site equalled to 10000. When you set the metric result to display by percentage of the total, the

metric indicates the number of items for which the status is not Active, this number as a percentage of the total, and the total number of items. See “Creating an Operational Metric” on page 110.

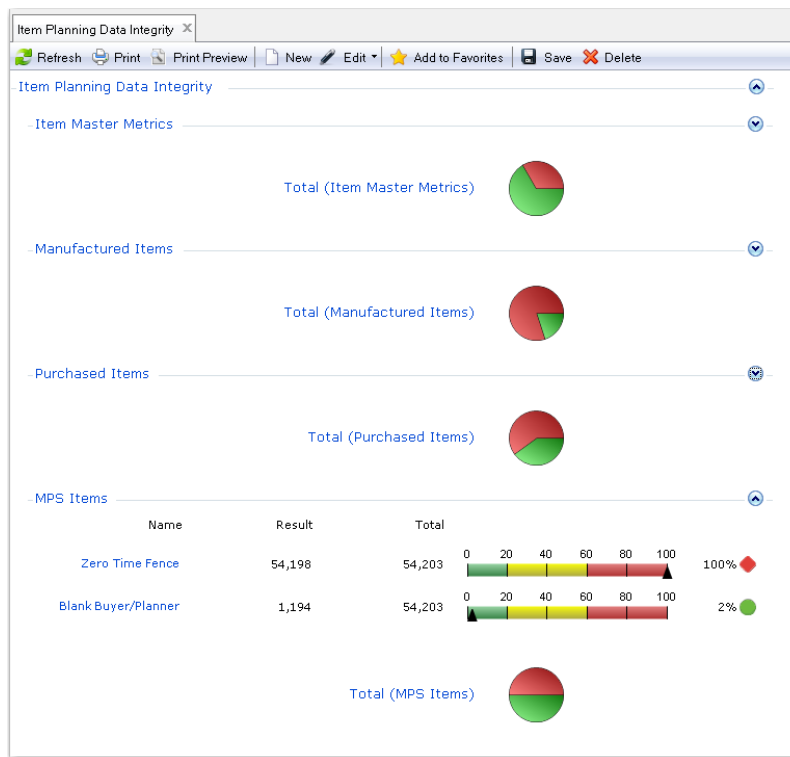
You can design a metric collection to contain a single metric group with a number of related metrics. For the example described above, you create a metric collection that contains a metric group based on the parent browse Customer. You then create metrics for each site you want to view.

**Fig. 4.36**  
Customers by Site Operational Metric



A metric collection can also contain multiple metric groups. For example, a metric collection to display item planning statistics can contain metric groups for Item Master, Manufactured Items, Purchased Items, and MPS Items.

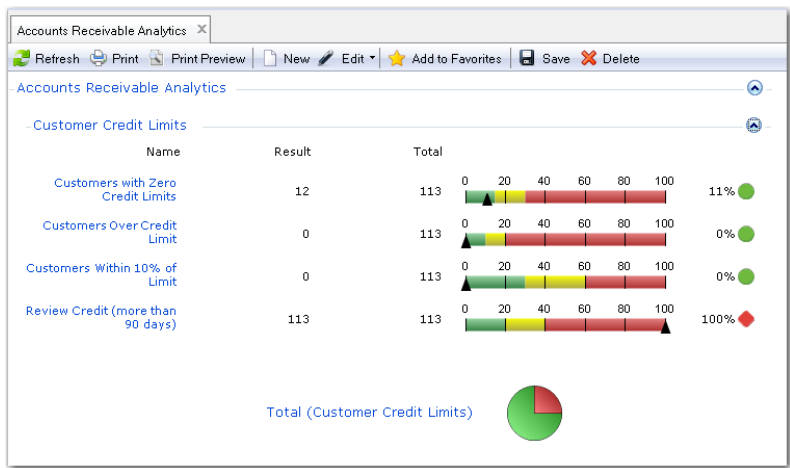
**Fig. 4.37**  
Operational Metrics



In the above example, note that one of the metrics used is Blank Buyer/Planner. This metric indicates the number of items for which no buyer or planner was specified. You can use operational metrics to monitor incomplete records in browses. Metrics are hyperlinked to the original filtered browse, and you can drill down to the actual records to complete or correct them.

You set the thresholds for the colored slider when you create the metric. Thresholds are most useful for setting limits on data beyond which you need to take corrective action (for example, item inventory levels or customer credit limits). The following operational metric displays different views of customer credit limits:

**Fig. 4.38**  
Accounts Receivable Operational Metric



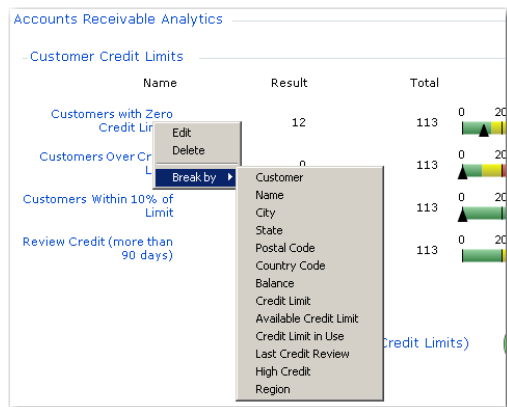
In this case, the color thresholds on the slider are set to acceptable limits for customer credit, and the slider counter indicates immediately when the limit is exceeded.

There are three metric colors: green, red, and yellow and you customize the order in which they appear on the slider, and the limits of each. The Total pie chart indicates the percentage of results for the whole metric group that appear in each color band. In the above example, 75% of results appear in the green band, and 25% in the red.

### Viewing Metrics by Field

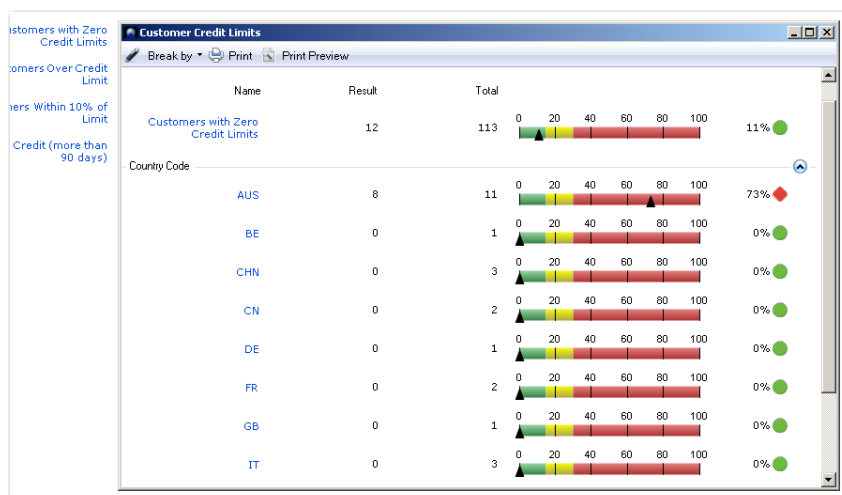
Each metric is linked to the original filtered browse. When you right-click the metric name and select Break By, you can select another browse field by which to view the data:

**Fig. 4.39**  
Operational Metric Break-By Feature



In this example, you can choose to view the browse filtered for Country Code:

**Fig. 4.40**  
Metric Break By Country Code



### Licensing for Operational Metrics

Operational Metrics is provided through Active Maintenance, and you require the Active Maintenance license key in order to use this function. The license key is available on the QAD Support Web site at the following URL:

[https://support.qad.com/license\\_keys/activemaintenance](https://support.qad.com/license_keys/activemaintenance)

Click the Term License Key Request link to receive the Active Maintenance license. The Support Web site requires your Support login information.

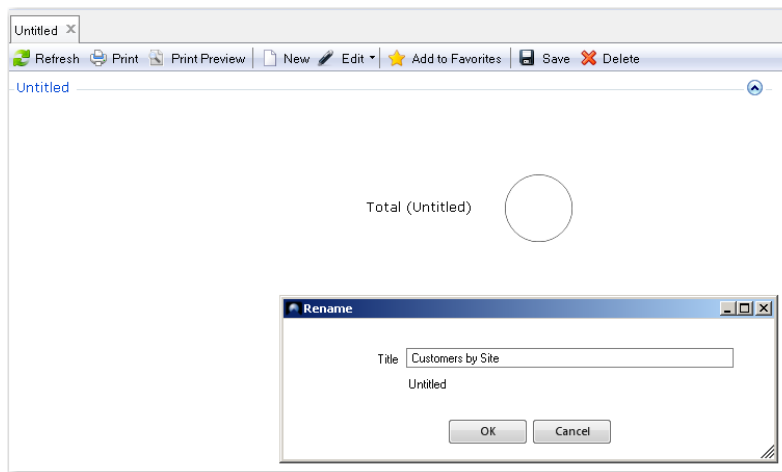
### Creating an Operational Metric

Use the following steps to create an operational metric collection for Customers by Site.

- 1 Select Create Metric Collection from the Administration menu to create the initial metric collection.

The system prompts you to name the collection:

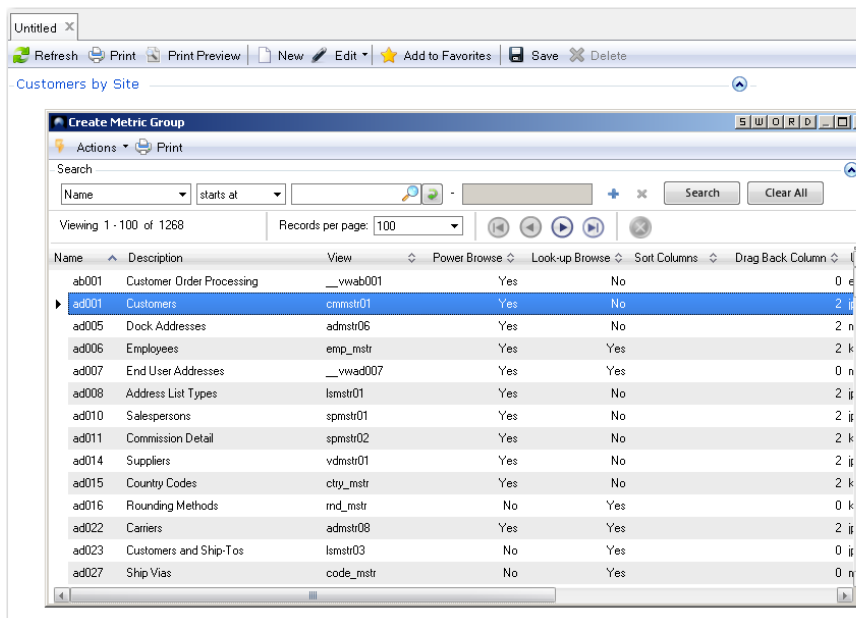
**Fig. 4.41**  
Create Metric Collection



- 2 Right-click the collection title, or select Edit>Create Metric Group to create a metric group for the collection.

You are prompted to select the parent browse for the group. Double-click the name of the browse to select it.

**Fig. 4.42**  
Edit, Create Metric Group



- 3 Enter a name for the metric group (for example, Customers by Site) and click OK. The system prompts you to create the first metric.

**Fig. 4.43**  
Create Metric

The 'Create Metric' dialog box is shown. It has a title field with 'Customers at site 10000'. Below it is an 'Untitled' label. The 'Type' dropdown is set to 'Count', the 'Browse' dropdown is set to 'Customer', and the 'Percent' dropdown is set to 'Percent'. To the right of these is a percentage bar with a slider at 3 and a value of 100.0. Below the dropdowns is a search bar with 'Site equals 10000'. At the bottom are 'OK' and 'Cancel' buttons.

**Title.** Enter a title for the metric (for example, Customers at site 10000).

**Type.** The default type is Count. When you select the Count type, the browse filter drop-down is unavailable.

Type options depend on the type of browse. For browses that produce numerical values as results, you can also choose Sum, Average, Maximum, or Minimum as the Type option. When you select a type other than Count, you can then select the value to which you apply the type. For example, if the parent browse is Salespersons, you can choose to select Average as the type, and Commission as the value. This metric displays the average commission of Salespersons, and does not display this value as a percentage of the total.

**Percent/Range.** Select Percent to display the metric as a percentage of the browse total.

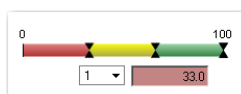
Select Range to display the metric as a range of figures. This option lets you increase the granularity of the results. For example, when a metric displays results in low figures, it may be more useful to set the metric to display results within a range 1 to 20, rather than the default percentage range of 1 to 100.

**Search.** Select the browse filter, operator, and value to define the metric. For example, this metric is based on the number of customers in Customer browse whose site code equals 10000. You therefore select the site code filter to equal 10000. You can set multiple filters for the metric, as you do on a normal browse.

Click Search to find out how many sites meet the criteria (in this case, the number is 33). This information is displayed as a percentage of the total (when you have selected the Percent display option).

- 4 Use the slider controls on the percentage bar to set the color code for thresholds.

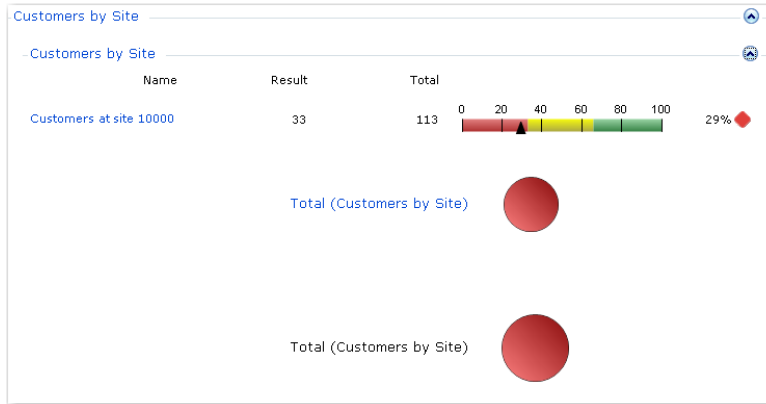
**Fig. 4.44**  
Percentage Bar



The percentage bar is a visual indicator in up to three colors. There are four sets of slider controls, and you can create up to five separate sections on the slider. In this example, the red section indicates 0% to 33%. Drag the slider controls along the bar to set a percentage range for the yellow section (for example, 33% to 66%), and again for the green section (66% to 100%). You can also manually set a percentage range up to four decimal places by entering the number in the colored number field.

Click OK to view the main screen.

**Fig. 4.45**  
Metric Group with Totals



The main screen now indicates the total of customers (113), the metric result (33), and the percentage of the total (29%).

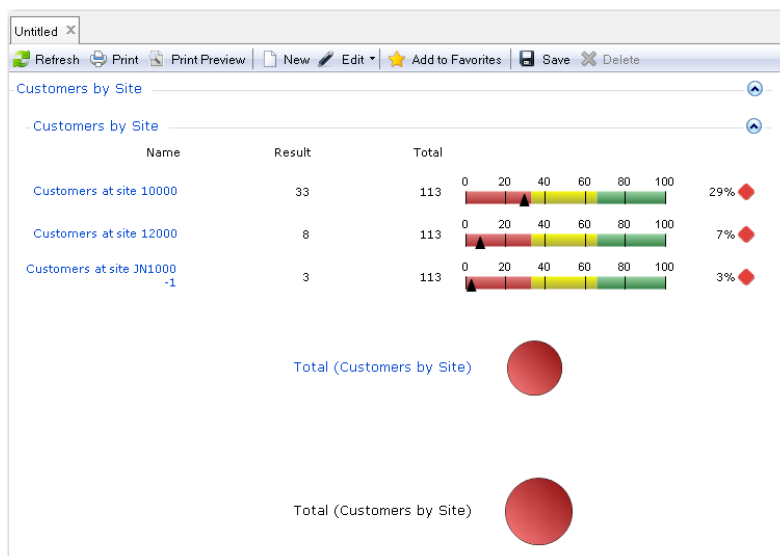
Click the linked metric name to view the metric data in browse form.

**Fig. 4.46**  
View Metric Data

| Customer | Sort Name          | Telephone    | City          | State | Postal Code | Region | Country       | Bill To | Ty  |
|----------|--------------------|--------------|---------------|-------|-------------|--------|---------------|---------|-----|
| 4010     | Medical Company    | 805 214-4534 | San Francisco | CA    | 95011       |        | United States |         |     |
| 4030     | Memory Consultancy | 408 633-2875 | Monterey      | CA    | 95028       |        | United States |         |     |
| C120     | C120               |              | City          | OK    | 34623       |        | United States |         | RE  |
| C121     | C121               |              | City          | MD    | 32352       |        | United States |         | RE  |
| C122     | C122               |              | City          | VT    | 34628       |        | United States |         | WT  |
| C123     | C123               |              | City          | NJ    | 08807       |        | United States |         | WT  |
| C124     | C124               |              | City          | OK    | 35234       |        | United States |         | DIS |
| C125     | C125               |              | City          | NJ    | 07074       |        | United States |         | DIS |

- 5 Add additional operational metrics to this group by right-clicking the metric group name and selecting Create Metric.

**Fig. 4.47**  
Operational Metric Group



You can edit metric details by right-clicking the metric name on the main screen and selecting Edit.

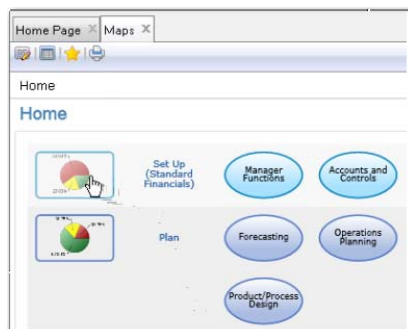
- Click on the Save button to save the operational metric to the Metrics folder, New to save the metric for the first time, and Replace to replace an existing metric.

The metric is now available in the Metrics folder. You can add operational metrics to Favorites. To refresh the metric information, re-run the individual browses from within their metrics.

### Operational Metrics and Process Maps

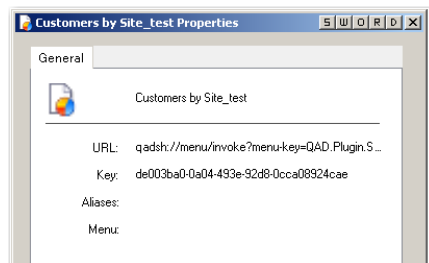
Operational metrics are accessible from the menu bar, and can be embedded into the process map for the related data area. The embedded metric is hyperlinked, and lets you run the metric from within the process map.

**Fig. 4.48**  
Operational Metric within Process Map



For this, you require the metric URL and Key, which you can view by right-clicking the metric name in the Metrics folder and selecting Properties.

**Fig. 4.49**  
Operational Metric Properties

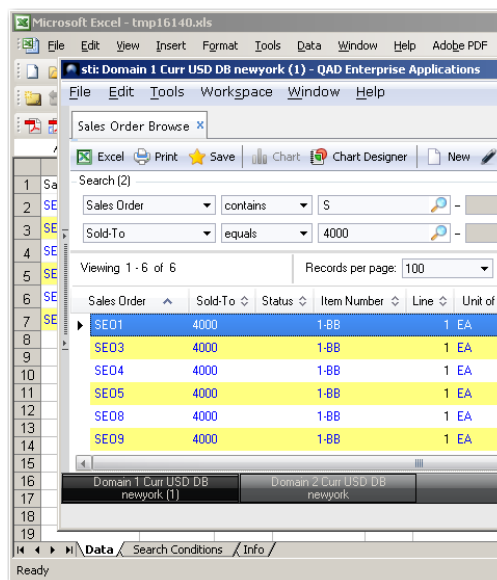


## Creating Excel Output from Browsets

All browse data can be exported to Excel. Component-based browsets can also be exported to Excel, edited, and re-imported as Enterprise Financials data. See “Integrating with Microsoft Excel” on page 116.

- 1 Click the Export to Excel button.
- 2 The export creates three worksheets in an Excel workbook, which is opened for display.

**Fig. 4.50**  
Example of Export to Excel



**Data.** This page contains the actual data columns and headings from the printed browse.

**Search Conditions.** This page displays any search conditions used to filter the printed data. The conditions listed are field name, operator, value, and, for a range operation, the ending value.

**Info.** This page lists details about the report generation including the ID of the user generating the report, the date the report was generated, the name of the browse, and the browse program.

**Note** If you have grouped data in the browse, the grouping is preserved in Excel as a collapsible outline.

After exporting to Excel, you can use the Excel chart features to create visual displays of your data, such as a pie chart showing quantity on hand of various inventory items.

## Integrating with Microsoft Excel

Excel integration is a utility for component-based programs that lets you export data into Excel spreadsheets, create new data within Excel, and import it to the system database, where it is validated before being saved. Export to Excel for reporting is available in all browses and grids. The more advanced bi-directional Excel integration is supported in only a subset of components.

With advanced Excel integration, you can:

- Export all records for remote maintenance. You then modify the data and reimport the saved results into the system database.
- Create a blank template that consists of column headings for all of the fields in a business component and export this template for remote maintenance. You can then create the data in the spreadsheet or load data from another application into the template for importing to the system database.

Advanced integration with Excel is available as a menu activity for the following business components:

- Alternate COA Group
- Alternate COA Structure
- Business Relation
- COA Cross Reference
- Cost Center
- Cost Center Mask
- Country
- County
- Credit Terms
- Customer
- Customer Bank Number
- Daybook
- Employee
- End User
- Exchange Rate
- GL Account
- Journal Entry
- Journal Entry Repair
- Mirroring Daybook
- Mirroring GL Account
- Payment Formats
- Project

- Project Mask
- Reporting Daybook
- SAF Code
- SAF Concept
- SAF Structure
- State
- Sub-Account
- Sub-Account Mask
- Supplier
- Supplier Bank Number

**Note** You can also use Excel integration when maintaining budgets. However, the budget integration is maintained in real time and is referred to as a hotlink. See *User Guide: QAD Financials* for details on budgets.

The integration requires that you have one of the following versions of Microsoft Office installed:

- Microsoft Office 2003 International
- Microsoft Office 2003 with a MUI (Multilingual User Interface) Pack
- Microsoft Office XP International
- Microsoft Office XP with a MUI Pack
- Microsoft Office 2007

## Exporting Data to Excel for Reporting

To export data directly into an Excel spreadsheet:

- 1 Choose Export to Excel from the Actions menu of a full or filtered browse search.  
The browse results grid is displayed in a new Excel window. The formatting of the original grid is preserved in the new spreadsheet; for example, the font type and size and the order of headings are the same as those in the original results screen.

**Note** The Export to Excel option from a browse search only lets you create spreadsheets. You cannot re-import the data from these spreadsheets into the database.

## Advanced Excel Integration

This activity has multiple steps:

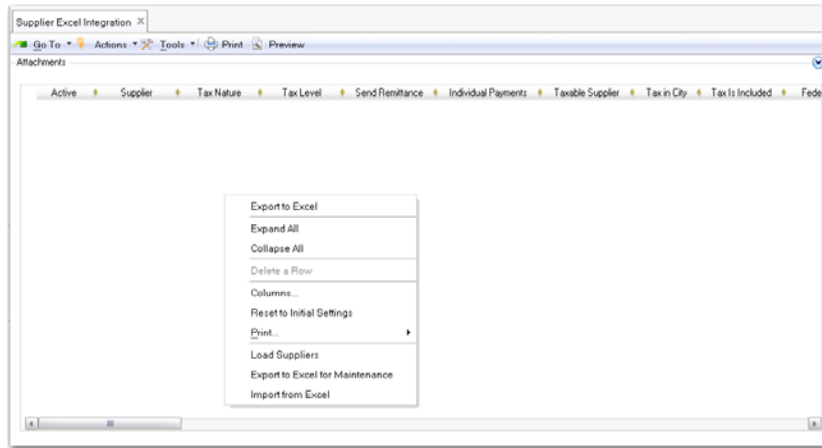
- Choose the Excel Integration activity from the menu.
- Load data into the grid using the Load option (right-click the empty grid to select Load). The Load option lets you retrieve all database records for a supported business component.
- Export the data to a spreadsheet, open the data in Excel, and modify it (right-click the grid again to select Export to Excel).
- After saving your changes, you return to the QAD application and import the modified data (right-click the empty grid to select Import from Excel, and click Save to create or update the data in the system database).

## Detailed Steps

To export data for maintenance:

- 1 Choose the Excel Integration activity for one of the supported record types, such as supplier. The system displays a blank grid containing the data fields for this business component as column headings.
- 2 Right-click on the blank grid and choose Load Suppliers.

**Fig. 4.51**  
Supplier Excel Integration



The system retrieves all supplier records from the database and loads them into the grid. The order of columns in the grid is determined by the sequence of the fields in the original data model, and this is the order in which they appear in the spreadsheet.

You can also make modifications directly on screen before exporting to Excel, once the business component data is loaded. Your modifications are validated when you click Save.

**Important** You should not customize the display by hiding columns before export. When you hide a column, the corresponding field is not exported to the spreadsheet. If the field is mandatory for this business component, the system attempts to validate it before saving to the database, and will generate validation errors. You can, however, move and resize columns.

## Export Data to Excel for Modification

To export the data:

- 1 Right-click in the grid and choose Export to Excel for Maintenance.
- 2 At the prompt, enter the name of the spreadsheet in which to save the data.
- 3 Open the spreadsheet in Excel and make your modifications.

**Note** You do not have to exit the QAD application before working in Excel. For minor maintenance, it is more convenient to run the applications simultaneously, and to switch back to your QAD application to import the saved data.

If you want to modify only a subset of the records that were loaded from the database into the grid, you can delete the redundant rows from the grid before exporting to Excel. Only the records that remain are then updated in the following steps. Excel integration does not delete records from the database.

The spreadsheet has the following features:

- The first row of every spreadsheet contains the column header labels for the business component fields. You can edit these headers for maintenance purposes within Excel. When you import your saved data into the system, your edits are discarded.
- The second row contains technical field names for the business component fields, as illustrated in Figure 4.52. The names correspond directly to the database fields, and must not be edited. Any change you make to a logical identifier generates an error during validation.
- The other rows contain your business component data.
- The spreadsheet contains business component ID columns, which identify the business component instances in the databases. You cannot edit these IDs, and you should leave these columns blank for any new rows you create. Each spreadsheet can contain a number of ID columns. For example, when you export Business Relation data to a spreadsheet, there are ID columns for business relation, address, default SAF, contact, and tax number.

**Important** All rows are imported into the system, which allows you to hide unnecessary rows while working with large spreadsheets. You should avoid hiding columns, however, as hidden columns are not imported. You can create extra columns for maintenance purposes, which are also not imported. You can, however, move and resize columns in the Excel sheet.

**Fig. 4.52**  
Exported Excel Spreadsheet

| Record ID | Active | Supplier |
|-----------|--------|----------|
| 14514     | TRUE   | 10074-SU |
| 14515     | TRUE   | 3000     |
| 14516     | TRUE   | 3010     |
| 14517     | TRUE   | 5000     |
| 14518     | TRUE   | 5010     |
| 14519     | TRUE   | 5020     |
| 14520     | TRUE   | 5030     |

- Avoid using the Sort option in Excel.

Most business components contain sublevel information. For example, the business relation can contain separate address rows for head office, delivery, invoice, reminder and remittance, and can also contain contact details.

When you export to Excel, the main business component data and its sublevel data are grouped together in a hierarchy, with each main business component row followed by sublevel rows. If you sort the data in Excel, the sublevel rows are rearranged throughout the spreadsheet, and the hierarchical relationship is lost. This creates a conflict and prevents you from importing the saved data.

- Ensure that your column widths are set to Autofit before saving. If the column width is too narrow and the data is not readable, the data does not import correctly.

- The spreadsheet you create has the Shared attribute, which allows other network users to modify the data.

Be aware of mandatory fields while you are modifying data. For example, you must specify a bank number, currency, and banking profile when you create a GL bank account. If you do not enter valid information for these fields while creating a new GL bank account in the spreadsheet, an error occurs after import when you try to save the data.

### Import Modified Data from Excel

When you have completed the modifications:

- 1 Save the changes to your Excel spreadsheet.
- 2 Switch back to your QAD application.
- 3 Right-click in the business component data grid and choose Import from Excel.
- 4 When prompted, select your spreadsheet and click OK.
- 5 Click Save to validate the data and save to the database.

If the system returns validation errors, you can resolve them on screen at this stage, and save again to validate. The system only saves multiple records to the database if there are no errors. The system treats the entire Excel spreadsheet as a single transaction, and does not make partial updates for rows without errors.

### Creating a Template to Export to Excel

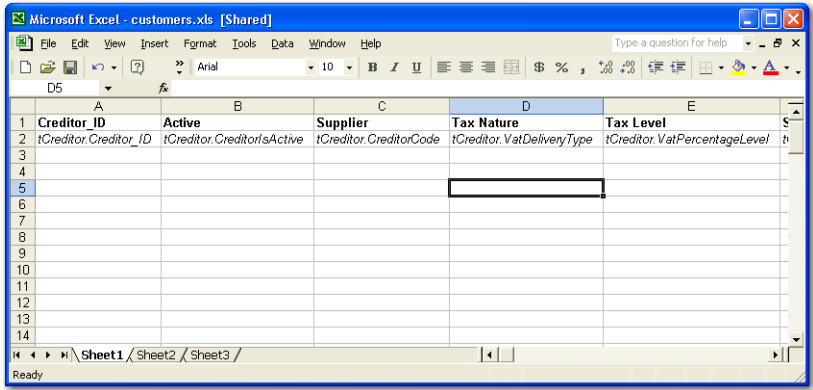
This option creates a blank spreadsheet for maintenance that contains the relevant fields as column headings. You use the template to add your own data and import it, which creates new records in the system.

This is similar to the previous activity, but you do not load existing system data. It is recommended to load one existing record from the database that can be used as an example of how to fill the fields. To do this, load all records and then delete all except one from the grid.

- 1 Choose the Excel Integration activity for a supported business component such as customer. The system displays the blank grid consisting of the data fields as column headings.
- 2 Right-click on the blank grid and choose Export to Excel for Maintenance.
- 3 Open your spreadsheet in Excel and make your modifications.

**Important** You must leave the first column with the <component name>\_ID field blank. The system supplies the IDs when you import the data.

**Fig. 4.53**  
Blank Spreadsheet Exported for Maintenance

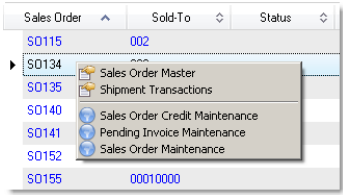


- 4 Save your spreadsheet and import the data into the application, as described in Import Modified Data from Excel on page 120.

## Accessing Links in Browses

Browse data columns can contain multiple types of links, which display in colored text in individual browse cells. You set link attributes using the Cell Font and Link Font Color settings in Tools|Options. You access the link by right-clicking in the cell to display the linked choices.

**Fig. 4.54**  
Example of Browse Links



Browses can contain links to other browses. These links are defined in Drill Down/Lookup Maintenance (36.20.1).

Browses also can contain uniform resource locator (URL) links defined in Browse URL Maintenance (36.20.10.11).

Two different kinds of URL links can be defined:

### Links to External Web Sites.

For example, a supplier Web site associated with a supplier ID or to an intranet resource, such as a document containing the design specifications for an item.

Right-click to display the list of links; select one to launch a new browser window and display the intranet or Internet resource to which that URL refers.

For example, the supplier ID field in the Supplier Browse is associated with a URL link to that supplier's company Web site. When you right-click the supplier ID underlined in blue text, you can choose the URL to launch. This automatically launches a Web browser to display the supplier's Web site.

### Links to Other Menu-Level Programs

These links let you use browses as a means of navigating directly to maintenance programs while passing specific data values to them. Right-clicking and selecting one of these links opens the program from within the browse and fills in any fields that are part of the link. The program launches in a split-screen subtab below the browse. You can use the up and down arrows on the keyboard to select new drill items as listed in the browse if the Cancel transaction on drill change option in Tools|Options is True (the default).

When you close the browse, the program in the split-screen subtab also closes. For example, the supplier ID field in the Supplier Browse is associated with a link to Supplier Maintenance. Right-clicking this supplier ID, underlined in blue text, displays available links. Selecting Supplier Maintenance automatically launches Supplier Maintenance with the currently selected supplier ID filled in so you can make any required updates.

While in Supplier Maintenance, you can use the down arrow to choose the next supplier ID (or use the up arrow to choose the previous one) as listed in the browse without having to go to the browse itself to select the next supplier ID.

More than one browse, URL, or program link can be associated with a browse field. Right-click in a cell or column containing links to display a list of all the links associated with that cell or column.

## Browse URL Maintenance

Use Browse URL Maintenance (36.20.10.11) to create URL links that users can activate from QAD .NET browses. For more information, see “Accessing Links in Browses” on page 121.

When a browse cell contains a URL link, double-clicking it launches a new browser window and displays the intranet or Internet resource associated with the URL. You can use these URLs in two ways:

- Create links to external Web sites that users can activate from QAD .NET browses, such as a supplier Web site associated with a supplier ID.
- Create links to other programs and pass specific data values to the programs. This lets you use browses as a means of navigating directly to maintenance programs.

You can access links to other programs only from drill-down browses, not lookups. Drill-down browses are typically available directly from the menus, but can also be associated with program fields in Drill Down/Lookup Maintenance (36.20.1).

**Note** When using Browse URL Maintenance, and Drill Down/Lookup Maintenance, you need to identify the field name associated with a field. What you see on the screen is the field label and not the field name. To find out the field name for a program field, place the cursor in the field and enter Ctrl+F. To find out the field name of a browse column, place the cursor in the column heading, right-click, and choose Properties.

## Defining Links from Browses to Programs

Use Browse URL Maintenance (36.20.10.11) to create links to other programs. In Browse URL Maintenance, you can use the QAD Shell URL (qadsh: \\) as the URL or use the run-HTML string URL.

### run\_HTML String URL

This section describes how to use the run\_html string URL to create a link to other programs from a browse.

For example, you can set up links in an item browse to directly access Item Master Maintenance (1.4.1), passing the current item number to the maintenance program, and executing the Next command any number of times. When a user clicks the link, Item Master Maintenance displays in a detached window. Multiple columns of data in a browse can contain links so that you can access maintenance programs for any data related to a record. However, data for only one field can be passed to each program.

To support this kind of URL link, use the run\_html setting to indicate that you want to build a URL for programs. The string must include the beginning and ending indicators required for other strings in URLs:

- Enter #b# to indicate the beginning of the string.
- Enter #e# to indicate the end of the string.

Then specify values that determine:

- The name of the program to be executed when a user clicks the link
- The field in the designated program to which you want to supply a value. You can specify up to five fields.
- The value to be passed to the specified field
- The number of times the Next command should be executed in order to reach the field

To make it easy to build the URL, leave the URL and URL Script fields blank and click Next to display a pop-up that prompts you for the values required to build the URL. In this case, the system builds the URL including the run\_html setting using the values you supply.

| Field Name   | Value                           |
|--------------|---------------------------------|
| Browse       | sobr009.p                       |
| User ID      | *                               |
| Field Name   | sod_part                        |
| Value        | *                               |
| URL          | Leave Blank                     |
| Description  | Link to Item Master Maintenance |
| Program Name | ppptmt                          |
| Field        | pt_part                         |
| Value        | sod_part                        |
| Index        | 2                               |

The URL that the system builds based on these input values looks like the following example:

#b#run\_html#e#?id=ppptmt.p&f1=pt\_part&v1=#b#sod\_part#e#&x=2

When the user clicks item 01053 in the sobr009.p browse, Item Master Maintenance displays with 01053 entered in the Item Number field and the active cursor focus is in the Name field below it.

## Defining URLs from Browsers to Web Pages

Use Browse URL Maintenance (36.20.10.11) to create links to external URLs with information that is related to items in the browse, as in the following example.

You want to establish a URL link in the Purchase Order Browse from supplier ID GS10100 to the corresponding supplier's company Web site, located at <http://www.generalsupplies.com>. To do this, enter the values in listed here in Browse URL Maintenance:

| Field Name  | Value                                                                       |
|-------------|-----------------------------------------------------------------------------|
| Browse      | pobr006.p                                                                   |
| User ID     | *                                                                           |
| Field Name  | po_vend                                                                     |
| Value       | gs_10100                                                                    |
| URL         | <a href="http://www.generalsupplies.com">http://www.generalsupplies.com</a> |
| Description | General Supplies Web Site                                                   |
| Primary     | Yes                                                                         |

**Fig. 4.55**  
Browse URL Maintenance

The screenshot shows the 'Browse URL Maintenance' window. It contains the following fields and values:

- Browse:** pobr006
- User ID:** \*
- Field Name:** po\_vend
- Value:** gs\_10100
- Description:** General Supplies Web Site
- Primary:** ☒
- URL:** <http://www.generalsupplies.com>
- Update Detail:** ☒
- URL Script:** (empty field)
- Determine:** ☐

URLs can contain special strings that are automatically replaced by field values in the browse. Selecting a link containing this type of string automatically replaces that string with the corresponding field value in the row.

Follow these steps to define this type of special string in a URL:

- 1 Enter #b# to indicate the beginning of the string.
- 2 After the #b#, enter a field name associated with the specified browse.
- 3 Enter #e# to indicate the end of the string.

- 4 The Web site for one of your primary suppliers contains a catalog of items. Entering an item's identifier at this Web site accesses the catalog entry for that item, containing information such as item cost, quantity available, and ship weight. To create links from the supplier item numbers to their corresponding catalog entries at the supplier's Web site, create the following URL: `http://www.generalsupplies.com/catalog/#b#vp_vend_part#e#`  
**Note** You must include `http://` in the URL. For example, you must use `http://www.generalsupplies.com/` and not just `www.generalsupplies.com`.
- 5 Next, associate the URL with the Supplier Item column in the Supplier Item Browse.
- 6 After you establish this link, selecting a supplier item number in the Supplier Item Browse automatically inserts the selected field value. For example, selecting supplier item 10-1005 creates this URL: `http://www.generalsupplies.com/10-1005`.
- 7 The system then launches a Web browser to display the relevant catalog information for that item located at that URL address.

### Browse URL Link to E-mail

You can also define a URL link that will launch e-mail from within a browse. This feature is useful, for example, when you are viewing purchase orders or sales orders and need to get e-mail confirmation or update on order details.

In the following example, you configure an e-mail link for fields in Purchase Order Browse. The e-mail link automatically creates an e-mail with the message header:

Changes requested to Purchase Order *order number* Line *line number*

where the order number and line number are retrieved from the purchase order you select in the browse results screen.

The e-mail body contains the message:

We request you to change PO *order number*, Line: *line number*, Due Date: *PO due date*

You must create a .JSP file that contains the message header and body, and also contains the code that retrieves values for each of the fields in the message from the browse. The .JSP file also invokes the mail client configured for this client instance. The .JSP file is stored on the Tomcat appserver directory, and is called by the URL link when the link is activated.

Use the following steps:

- 1 Navigate to the QAD UI desktop Tomcat directory; for example, `/TomcatInstallDir/webapps/<application>/`.
- 2 Create a .JSP file called `mail.jsp` in this directory.

This file invokes the e-mail client and retrieves values for the following purchase order fields:

Purchase Order (`pod_nbr`); Line Number (`pod_line`); Due Date (`pod_due_date`)

You also specify these fields in the URL you define in Browse URL Maintenance for the browse.

Use the following sample code for the file:

```
<html>
<head> <title>Changes requested to Purchase Order</title> </head>
<body>
```

```
<a href="mailto:<%=request.getParameter("mailto")%>?subject=Changes requested to
Purchase Order <%=request.getParameter("podnbr")%> Line <%=
request.getParameter("podline")%>&body=We request you to change P0: <%=
request.getParameter("podnbr")%>, Line: <%=request.getParameter("podline")%>, Due Date:
<%=request.getParameter("poddue date")%>.">Send a mail.</a>
<br>
</body>
</html>
```

You now define the URL link in Browse URL Maintenance.

- 3 In Browse URL Maintenance, select Purchase Order Browse as the browse for which you want to create the e-mail link.
- 4 Specify pod\_nbr as the field for which you want to add a link.

**Fig. 4.56**  
Browse URL Maintenance, Email Link

The screenshot shows the 'Browse URL Maintenance' window with the following details:

- Browser: pobr006
- Purchase Order Browse
- User ID: \*
- Field Name: pod\_nbr
- Value: \*
- Description: Mail To
- Primary: ☐
- URL: `http://server.com:8080/webapps/qadhome/mail.jsp?mailto=#b#po_contact#e#pod_nbr=#b#pod_nbr#e#&podline=#b#pod_line#e#&pod_due_date=#b#pod_due_date#e#.`
- Update Detail: ☒
- URL Script:
- Determine: ☐

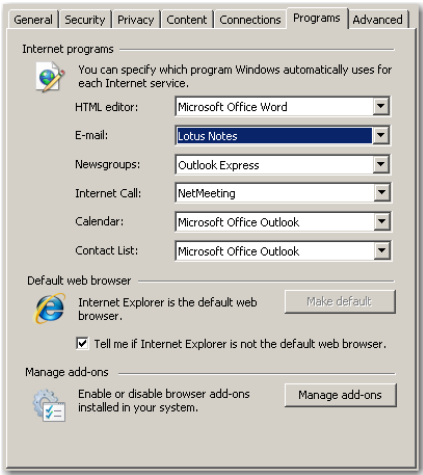
- 5 Enter the following URL:  
`http://<your server>:<port number>/webapps/<application>/mail.jsp?mailto=PurchasingOffice@qad.com&pod_nbr=#b#pod_nbr#e#&podline=#b#pod_line#e#&pod_due_date=#b#pod_due_date#e#.`

where <your server>:<port number>/webapps/<application> is the name and port number of your server, and <application> is the home directory of your application. In the section `mailto=PurchasingOffice@qad.com` is the e-mail address to which the e-mail is to be sent, and `mailto` is the parameter used in the JSP file.

Note that every browse field begins with #b# and ends with #e#.

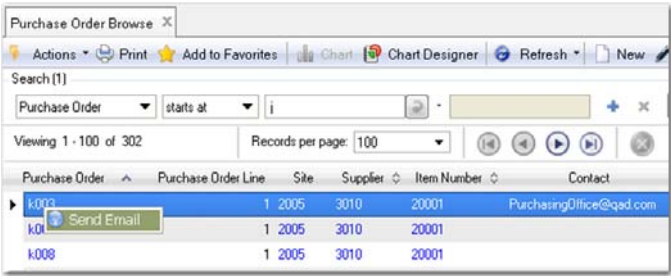
- 6 Ensure that your client PC is configured to invoke the correct e-mail client  
 In your Web browser, open Internet Options|Programs, and select the e-mail program of choice.

**Fig. 4.57**  
Internet Options, Email Configuration



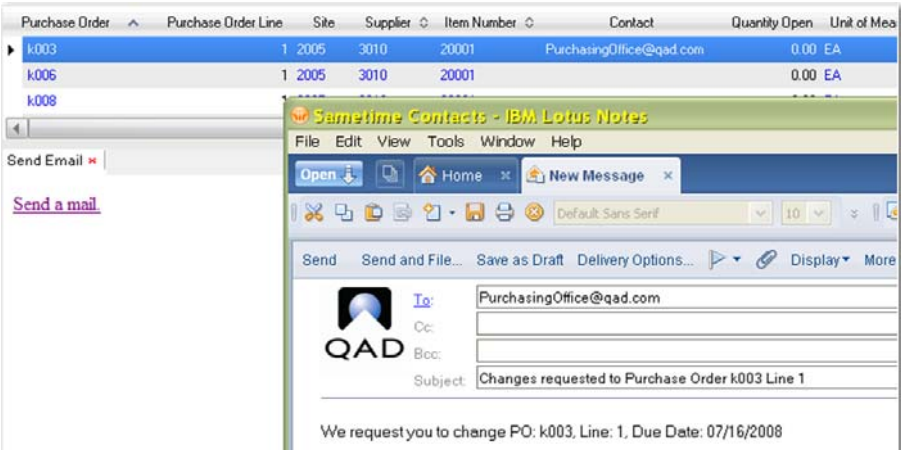
- 7 In QAD Enterprise Applications, Select Purchase Order Browse.
- 8 Right-click on the Purchase Order column.
- 9 Click Send Email.

**Fig. 4.58**  
Purchase Order Browse, Send Email option



- 10 Click the Send a Mail link on the screen.

**Fig. 4.59**  
Purchase Order Browse, Email Link



## Browse Link Maintenance

Selected browses display New and Edit buttons at the top of the browse display in the QAD .NET UI.

- The New button is a link to the maintenance program you use to create an item in the browse.
- The Edit button is a link to the program you use to modify an item in the browse.

The New and Edit buttons provide browse program links. When you click on a browse program link Edit button, data from the currently selected row in the browse will be passed to the linked program.

For example, in Sales Order Browse, click Create to open Sales Order Maintenance to enter a new sales order. Click Edit to open Sales Order Maintenance to modify the order for the currently selected row in Sales Order Browse.

The browse program link buttons are defined and maintained using the Browse Link Maintenance program and can be browsed using Browse Link Browse (36.20.22). The columns list the browse, the description for the button, whether to launch is the primary action, and the URL to execute. The URL to Execute field specifies the program to run, and also any fields that should be populated based on the current row in the browse.

To define browse program links, open Browse Link Maintenance (36.20.21).

**Fig. 4.60**  
Browse Link Maintenance

', and 'URL to execute: #b#run\_html#e#7id=sosom.pl'."/>

### Field Descriptions

**Browse.** Specify the browse to which you want to add a browse program link button.

**URL.** Specify a URL (optional).

**Description.** Specify the description for the link.

**Primary.** Set the checkbox to indicate the browse program link is the primary action.

**URL to Execute.** Specify the URL to execute, which is the program to be run when the link is clicked. When defining the URL to execute, use the following format:

- Enter #b# to indicate the beginning of the string.
- After the #b#, enter run\_html.

- c Enter #e#.
- d Enter ?id=*program\_name*. For example, ?id=sosomt.p specifies to launch Sales Order Maintenance.

**Example** The following URL to Execute launches Sales Order Maintenance:  
#b#run\_html#e#?id=sosomt.p.

Click Next to display the HTTP Parameters screen for the URL you have defined.

**Fig. 4.61**  
Browse Link Maintenance, HTTP Parameters

| HTTP Parameters        |           |
|------------------------|-----------|
| Program Name: sosomt.p | Index:    |
| Field[1]:              | Value[1]: |
| Field[2]:              | Value[2]: |
| Field[3]:              | Value[3]: |
| Field[4]:              | Value[4]: |
| Field[5]:              | Value[5]: |

**Program Name.** This field displays the program you have defined to be executed by the link. Click the lookup to select a different program, if required.

**Index.** The index value is the number of Go commands (or submits) that a program will execute when launched using this link.

The index field is used to store the number of times the program will execute an Enter action (similar to pressing the Next button). This has the effect of processing the active fields that were enabled for input and then executing any program logic that occurs until the next prompt for data is encountered.

In simple maintenance programs, this is set to 1 to simply enter the key field values and access the fields that can be maintained in the linked record.

For more complex maintenance programs, there may be multiple sets of input prompts to be processed to access the frame of maintainable data.

For example, the first prompt for data in addkmt.p requires a value for the field Shipto. The program link record provides the value of ad\_ref from the browse and executes the first Enter action. The next prompt for data in the maintenance program requires a value for the field ad\_addr and the browse link provides the value of ad\_addr from the browse and executes a second Enter action. This advances the maintenance program to its frame of maintainable data for the user. Each time the program asks for data to be entered, the browse link logic offers up the fields it has and if there is a match between the field names it has data for and the fields the program is looking for, the field value is provided and an Enter action is executed (if there are any left to execute).

**Field.** Enter the name of the variables that the target program is using to prompt for data. To find this information, execute the program, advance the cursor to the desired fields, and press Ctrl-F. The value fields (Value[1], Value[2], and so on) are the variables names from the browse providing the data and must be contained within #b# and #e#. The browse link logic uses these tags to parse out the value of the field from its record buffer.

**Example**

Field[1]: shipto; Value[1] : #b#ad\_ref#e#

Field[2]: ad\_addr; Value[1] : #b#ad\_addr#e#



# Process Maps in QAD .NET UI

This chapter includes the following sections:

***Process Maps Overview 132***

Processes, or process maps, are graphical models of workflows that link to programs, browses, and other process maps using advanced features of .NET technology.

***Using the Process Viewer 132***

Describes how to use the Process Viewer, which renders process maps in either Silverlight or SVG.

***Editing Process Maps from the Process Viewer 132***

Describes how to edit a process map from the Process Viewer.

***Using the Process Editor 133***

With the Process Editor, you can build graphical models of workflows that link to programs and browses using advanced features of .NET technology.

***Administering the Process Editor 145***

Describes how to set the administrative settings for the Process Editor.

## Process Maps Overview

Processes, or process maps, are graphical models of workflows that link to programs, browses, and other process maps using advanced features of .NET technology. This section describes viewing process maps in the QAD .NET UI.

## Using the Process Viewer

The Process Viewer displays process maps, which are graphical representations for workflows. Process maps in the .NET UI are rendered using MS Silverlight, which is a programmable web browser plug-in compatible with .NET applications.

They can also be viewed using SVG. The scalable vector graphics (SVG) format is an XML technology for defining vector-based two-dimensional graphics for the Web.

Whether the Process Editor uses Silverlight or SVG depends on the value you set in Context Parameters. See “Setting Context Parameters” on page 145.

As a system administrator, you can customize these maps using the Process Editor. As a user, you can also perform some customizations to the process maps from the Process Viewer.

To open the Process Viewer, click on any process map. For example, in the Administration pane, click on the Industry Process Model process map in the Processes folder.

Use the process map to identify the workflow you need to follow as you use the system. Process map nodes can link to programs, browses, documents, or other process maps. Double-click on a node to access a linked item.

Process map nodes can include tool tips that pop up when you move your cursor across a node.

On the upper-right, a zoom option is available that allows you to scale the process map between 25% and 200%.

On the upper-left, the following options are available:

- **Edit Process.** Click this button to access menus for customizing the process map. For more information, see “Editing Process Maps from the Process Viewer” on page 132.
- **Add To Favorites.** Click this button to add the process map to your Favorites pane.
- **Print.** Click this button to print the process map.

## Editing Process Maps from the Process Viewer

To edit a process map from the Process Viewer:

- 1 Click on the Edit Process icon in the upper-left corner of the screen.
- 2 Along the left side of the screen, a set of menus is displayed:
  - **Title.** Enter a new title for the process map.
  - **Grid Properties.** For more information, see “Grid Properties Menu” on page 137.
  - **Style Properties.** For more information, see “Style Properties Menu” on page 138.
  - **Process Properties.** For more information, see “Process Properties Menu” on page 139.

- Connector Properties. For more information, see “Connector Properties Menu” on page 140.
- Node Properties. For more information, see “Node Properties Menu” on page 141.
- Row and Column Properties. For more information, see “Row / Column Properties Menu” on page 145.

3 Click Save to save the modified process map or click Close to exit edit mode.

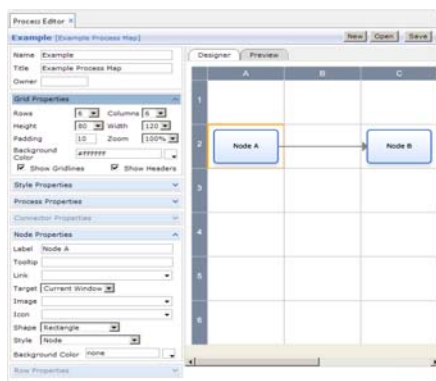
## Using the Process Editor

With the Process Editor, you can build graphical models of workflows that link to programs and browses using advanced features of .NET technology. These processes, or process maps, are clickable image maps that have associated URLs. The URLs can point to various resources such as images, video, audio, and documents, as well as programs. Any application that can be viewed in a browser can be associated with one of the locations on a process map.

**Note** The QAD .NET UI only displays Administration programs such as the Process Editor for users who have security privileges or who are members of a defined administration group.

To open the Process Editor, choose Administration|Process Editor.

**Fig. 5.1**  
Process Editor



The Process Editor has the following areas:

- On the top, options for creating a new process, opening a process, and saving a process.
- Tabbed views for developing the process map (Designer) and previewing the process map (Preview).
- On the right, a grid displays the process being created or maintained.
- On the left, various property editors let you modify aspects of a process. Use a different property editor for process information, process properties, nodes, connectors, styles, and the process grid.

Some editors become active only when the appropriate object is selected. For example, the Node Properties editor is available only when a node is selected.

Before you begin creating processes, you can update default properties, or use those supplied with the system. You can:

- Define the appropriate size for the drawing grid.

- Set up styles you want to use.
- Set up any variables needed for URLs.

To begin creating a process:

- 1 Click in the grid to add a node with the default rectangular shape.
- 2 Use Node Properties to modify the node and assign other values.
- 3 To add a connector, select the first node by clicking. Hold down Shift and click the second node. A connector is added pointing from the first to the second node.
- 4 Use the Connector Properties to modify the connector and assign other values.

To delete a node or connector:

- 1 Click the node or connector to select it.
- 2 Press the Delete key on your keyboard or right-click the node and choose Delete from the context menu.

## Creating a Process

Processes are built with two basic components:

- *Nodes* are represented by various shapes and typically indicate a step within the process.
- *Connectors* are lines with arrows that indicate the direction of execution for the steps (nodes) within the process.

To create a new process:

- 1 Click New at the top of the Process Editor. The grid is cleared so you can begin defining a new process.
- 2 Assign the process a name and optional description and owner; then click Save. Process names can contain letters, numbers, underscores, and hyphens; spaces are not allowed.
- 3 Add nodes and connectors as needed.

## Opening a Process

You can modify an existing process by opening it in the Process Editor:

- 1 Click Open on the Process Editor Menu Bar.
- 2 To reorder processes, click a column heading to sort by that column. Click the same column heading for a reverse sort. The arrow next to the primary sort column name indicates the direction of the sort (ascending or descending).
- 3 Click the name of the process you want to edit. The process displays in the grid and the Open screen is closed.
- 4 If you leave the index open for a period of time, click Refresh to regenerate the index based on your latest changes.

## Previewing a Process

Previewing a process lets you see the process the way users would see it in a browser. You can also test links to ensure they work correctly. If you are using variables defined with Process Properties, the variables are fully expanded during preview.

To preview a process:

- 1 Create a new process or open a process to preview.
- 2 Click the Preview tab in the Process Editor.
- 3 The process displays in the tab window. All of the URLs that are part of the process are active. You can click them to test the related actions. In addition, images not viewable in the editor display in preview mode.

Use the Language drop-down list to select a language in which to preview the map. This option allows you to edit processes in the language in which they will be saved.

The preview slide button lets you view the map at up to 200% of original size, and you can select the Auto-Resize field to ensure that the map resizes to the screen width and height when you click to preview it.

The system uses either SVG or Silverlight rendering to preview the map. When using the Process Editor for the first time, you may be prompted to download and run the Silverlight utility from the Microsoft site. If using Windows Vista, you may be prompted for your Vista administrator login and password.

## Saving a Process

Click Save at the top of the Process Editor to save your updates. the system displays a confirmation prompt.

If this is a new process, you must specify a name in Process Properties before you can save your changes.

## Deleting a Process

To delete a process:

- 1 Click Open at the top of the Process Editor.
- 2 Click the check box next to the name of the process you want to delete. Click multiple check boxes to delete multiple processes. You can sort columns to facilitate selection.
- 3 Click Delete All Checked.
- 4 You are prompted to confirm the deletion. Click OK to continue.
- 5 The process file or files are removed from the operating system.

## Associating URLs with Processes

One of the powerful features of the Process Editor is its ability to associate URLs with nodes and connectors. These URLs can point to many different types of files. You can configure them to open in a new window, or replace the content in an existing window.

You can use URLs to:

- Execute audio files.
- Display movies.
- Open documents in portable document format (PDF).
- Display images.
- Open Microsoft Word documents
- Open catalogs, training material, and help files.

In addition to these external resources, processes typically link to other processes and programs. For instance, you can create nested processes that together build a more complex model.

When you specify a URL, you can enter the full path relative to your computing network. However, if you do this, you may not be able to use the processes if your network setup changes. You will also have problems executing them from other systems if you want to deploy them to multiple sites.

To execute a program from a process requires knowing the application program interface (API) for calling the program.

To simplify the use of URLs and ensure that they are portable, you can use a set of variables when defining URLs. Values for these variables are defined in a file named `process-config.xml`. This file is located in:

`TomcatInstallDir/webapps/qadui/WEB-INF/conf/process-config.xml`

These values can be updated if needed using the Process Admin menu. All of the processes that use the variables are then updated automatically.

**Note** In addition to variable values, `process-config.xml` contains default values for other process properties. These can also be modified if necessary.

Several variables are supplied with the Process Editor. These variables have a global scope since they apply to all processes. They cannot be modified in the Process Editor.

You can also create your own variables. The scope of user variables is local. They apply only to the current process. See “Process Properties Menu” on page 139.

## Process Editor Menu Bar

The Process Editor menu bar includes the following:

*New.* Clears the grid so you can begin creating a new process map.

*Open.* Opens a window from which you can choose an existing process map. Select a map by clicking the hyperlinked name.

When you have modified a process map, and saved your changes, use the Refresh button in the Open screen to refresh the

**Save.** Saves the process map currently in development

**Process Label Maintenance.** Use this option to define the text for the label keys in all the available languages. See “Process Label Maintenance” on page 150.

## Process Information Menu

Use Process Information to assign a name, title, and owner to a process.

**Name.** Assign the process a name. The process name is the physical file name on the operating system. You can use alphanumeric characters, hyphens, and underscores in the name; you cannot use spaces. You must assign a name before you can preview or save a process.

**Title.** Assign a title to the process map. You can use any characters in the title. Assigning a title to the process map is recommended.

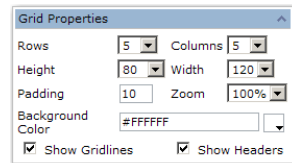
**Owner.** Assign the process an owner. This is the person responsible for updating and maintaining the process. Owner is optional.

**Note** Owner information is maintained within the process file. It does not indicate operating system file permissions, which are managed on the Web server.

## Grid Properties Menu

Use the Grid Properties menu to customize the grid.

**Fig. 5.2**  
Grid Properties



**Rows.** The number of rows in the grid. A warning displays if your change would cause nodes or connectors to be deleted.

**Columns.** The number of columns in the grid. A warning displays if your change would cause nodes or connectors to be deleted.

**Note** You can specify from 1 to 12 rows and columns in the grid. The default is 6. If you specify a larger number, you may need to reduce the size of the cells in the grid or reduce the zoom percentage so that you can see the entire process definition as you work with it.

**Note** If you are displaying header rows, you can also add and remove columns and rows directly within the grid. When your cursor hovers over the header row, a plus (+) and minus (-) sign appear. Click the plus to add a row or column; click the minus to remove it.

**Show Gridlines.** Specify whether to show the lines of the grid.

**Height.** The height in pixels of each grid cell.

**Width.** The width in pixels of each grid cell.

**Padding.** The distance in pixels from the edge of a cell to the node in a cell. The padding defines the space around a node within a cell.

**Zoom.** The scaled view of the grid expressed as a percentage.

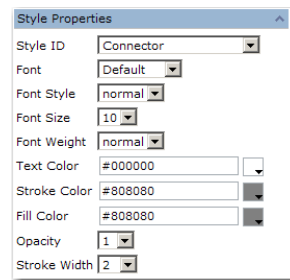
**Background Color.** The background color of the grid. Use the color selector adjacent to the field to click on a color.

**Show Headers.** Specify whether to show the row (1, 2, 3, ...) and column (A, B, C, ...) headers. These are the rows with numbers and letters that can be used to identify grid blocks.

## Style Properties Menu

Use Style Properties to modify attributes of system-defined styles. Associate styles with nodes in Node Properties and with connectors in Connector Properties. Style attributes are immediately visible when applied to a node or connector in the grid.

**Fig. 5.3**  
Style Properties



**Style ID.** The predefined styles include the following:

- Connector is the default style associated with a connector.
- Link Node is the default style associated with a link node.
- Mouse Over Node changes the style of a node when the mouse is pointing to it.
- Node is the default style associated with a standard node.
- Plan is the default style for plan nodes in QAD-supplied process maps.
- Source is the default style for source nodes in QAD-supplied process maps.
- Make is the default style for make modes in QAD-supplied process maps.
- Warehouse Mgmt is the default style for warehouse management nodes in QAD-supplied process maps.
- Financial & Acct Mgmt is the default style for financial and account management nodes in QAD-supplied process maps.
- Human Resource Mgmt is the default style for human resource management nodes in QAD-supplied process maps.
- Setup is the default style for setup modes in QAD-supplied process maps.
- Style 1, Style 2, Style 3, and Style 4 are predefined styles you can further customize.
- Text Node is the default style for a text node.
- Disabled lets you disable a node in a process map without deleting it.

**Font.** Use the pull-down menu to choose from a variety of fonts. When you select the default option, the system selects the most appropriate font for the language in which you are working.

**Font Style.** Use the pull-down menu to choose a normal or italic font style.

**Font Size.** Use the pull-down menu to choose the font size.

**Font Weight.** Use the pull-down menu to choose bold, bolder, lighter, or normal.

**Text Color.** The text color of the node. Use the color selector adjacent to the field to click on a color.

**Stroke Color.** The stroke color, which is the color of the node border line. Use the color selector adjacent to the field to click on a color.

**Fill Color.** The fill color, which is the background color inside the node. Use the color selector adjacent to the field to click on a color.

**Opacity.** The opacity of the fill color. Use the pull-down menu to select from .1 (nearly transparent) to 1 (opaque).

**Stroke Width.** The width in pixels of the border line of the node (or the connector between two nodes, if the style applies to connectors).

## Adding or Modifying Styles

A system administrator can add additional styles or modify the default attributes of the system-defined styles.

Styles and their attributes are defined in the `TomcatInstallDir/webapps/qadui/WEB-INF/conf/process-config.xml` file. Any changes you make to this file are reflected in the Style Properties editor.

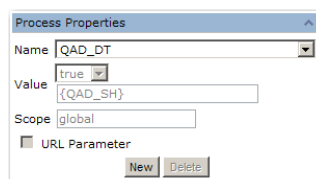
However, if you modify styles, be aware that the style attributes are embedded in the XML used to define a process. If you change a style that has already been used, existing processes are not affected.

To change the style in an existing process, you must open it and change the style attributes in the Style Properties editor.

## Process Properties Menu

The Process Properties menu displays variables for use with individual processes. You can create your own local variables for use with individual processes. You can see the value of global variables, but you cannot modify them with this editor.

**Fig. 5.4**  
Process Properties



*Name.* The name of a variable.

*Value.* The value of the variable. For example, the value for the QAD\_SHELL global variable is `qadsh://menu/invoke?menuitem-key=`, which invokes the QAD Shell URL.

*Scope.* The scope of the variable, which can be either global or local.

*URL Parameter.* This check box indicates if the variable is added automatically to every URL in the process.

*New.* Click this button to create a new local variable. For more information, see “Creating Process Properties Local Variable” on page 179.

*Delete.* Click this button to delete a local variable. You cannot delete QAD-reserved variables, which are global.

### Creating a Process Properties Local Variable

Use Process Properties to create your own variables for use with individual processes. These variables have local scope. You can see the value of global variables, but you cannot modify them with this editor.

To create a local variable, follow these steps:

- 1 Click New. You are prompted to specify the name of the new variable.
- 2 Enter a name and click OK. The new variable is added to the drop-down list in the Process Properties.
- 3 Choose the new variable from the list. Scope automatically defaults to local and cannot be changed.
- 4 Enter a value for the variable.
- 5 Click the URL Parameter check box if you want the new variable to be added automatically to every URL in this process.

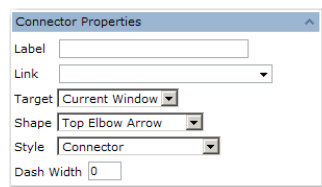
You can use the Delete button to delete a local variable. You cannot delete QAD-reserved variables (global scope).

See “Process Properties Menu” on page 139

### Connector Properties Menu

Use Connector Properties to modify attributes of connectors.

**Fig. 5.5**  
Connector Properties



**Label.** A text string that specifies a label for the connector. The label uses the font attributes associated with the style. While you can specify a long label, you typically want to constrain the label to the size of its connector.

**Link.** A URL associated with the connector. When a user clicks on the connector, the URL is launched in a new or current window, based on the value of Target. You can use variables with URLs so that your processes are not confined to one computing environment.

**Target.** The target window to use when the URL specified in the Link field is activated. Choose the following from the pull-down menu:

- New Window. The URL opens in a new window. The process window remains open.
- Current Window. The URL replaces the contents of the current window.

**Shape.** The shape of the connector. Choose one of the following shapes from the pull-down menu:

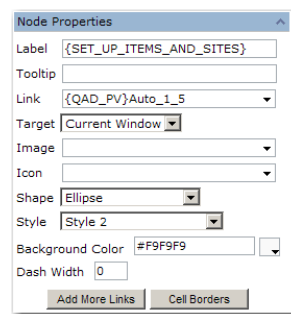
Straight Line  
 Straight Arrow  
 Top Elbow Line  
 Top Elbow Arrow  
 Bottom Elbow Line  
 Bottom Elbow Arrow

**Style.** The style of the connector. The style determines the color, line width, and font attributes of the connector's label. The available styles are defined in the Style Properties menu. For more information, see "Style Properties Menu" on page 138.

## Node Properties Menu

Use Node Properties to modify aspects of a node.

**Fig. 5.6**  
Node Properties



**Label.** A text string that specifies a label for the node. The label uses the font attributes associated with the style. While you can specify a long label, you typically want to constrain the label to the size of its associated node. To specify line breaks, you can include the <br> tag in the text. Use the up and down arrow keys to select from the existing label definitions.

**Tooltip.** A text string that specifies a tool tip for the node. To specify line breaks, you can include the <br> tag in the text. You can have up to four lines. The title for the tool tip is the node label, as specified in the Label field.

*Link.* Enter a URL or select from the pull-down menu options, which include the following:

Choose File. Use this option to browse to and select a file, such as an MS Word document.

MFG/PRO Menu Lookup. Use this option to select a program.

Process List Lookup. Use this option to select a process map.

*Target.* The target window to use when the URL is executed. Choose the following from the pull-down menu:

New Window. The URL is opened in a new window. The process window remains open.

Current Window. The URL replaces the contents of the current window. You must use this setting whenever the destination URL is a program.

*Image.* The full path or URL for an image to be associated with this node. This image is used instead of any shape specified in the Shape field. This image displays in the Process Editor only when you specify a literal path. If you use the QAD\_DT\_IMG variable, you must click Preview to expand the variable and view the graphic. The system sizes the image to fit into the cell height and width. Ensure that the image is correctly proportioned for the cell size or it may be distorted.

*Icon.* The full path or URL for an image of an icon to be associated with this node. The icon displays in the lower right corner of the node when viewed in the Process Viewer. To view the icon included in the node while using the Process Editor, click the Preview button.

*Shape.* The shape of the node. Choose the following shapes from the pull-down menu:

Rectangle. (If your grid height and width are the same, the Rectangle setting displays as a square.)

Ellipse. (If your grid height and width are the same, the Ellipse setting displays as a circle.)

Diamond

Report

Manual Operation

Manual Input

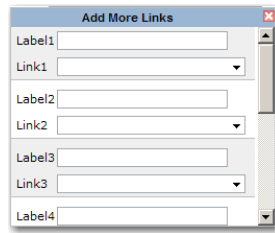
*Style.* Choose a style from the pull-down menu. The style determines font attributes, color, line width, and filter. Style attributes are immediately visible in the grid area. The available styles are defined in the Style Properties menu. For more information, see “Style Properties Menu” on page 138.

*Background Color.* The background color of the node. Use the color selector adjacent to the field to click on a color.

*Dash Width.* The length in pixels of dashed lines and the spaces between dashed lines for the node border (or the connector between two nodes, if the style applies to connectors). If set to zero (0) or left blank, the line is a solid line. You can enter two values separated by a space to specify the length in pixels of each dash and the space in pixels separating each dash. For example, 2 5 specifies that each dash has a length of two pixels and that the space between each dash is five pixels.

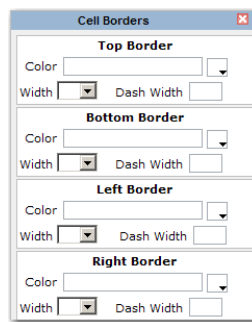
*Add More Links.* You can add up to eight URLs as links on a process map node. Enter text in the Label field for the label text of the link. Enter the URL in the Link field.

**Fig. 5.7**  
Add More Links



*Cell Borders.* You can specify the color, width, and dash width of the top, bottom, left, and right borders of the cell in which the node is located.

**Fig. 5.8**  
Cell Borders



### Adding an Operational Metric to a Process Map

Operational metrics are visual representations of browse data, and can be imported into process maps as node images.

When you generated and save a metric, the saved metric is stored in the `{QAD_HOMESERVER}configurations/<environment_name>/storage/metrics_images /` directory and can be imported into a process map as a .PNG file. The metric can only be used in a process map when it has been generated and saved.

To access these files, you must:

- Identify their storage folder as a Process Properties variable
- Identify the name of the metric graphic file URL as a process map node link. This ensures that the metric image is linked to the original operational metric, and lets you drill down from within the process map.
- Identify the name of the metric graphic file as a process map node image.

Use the following steps to import metrics as map images:

- 1 Set the metrics storage folder in the `QAD_METRICS_IMAGE` variable on the Process Properties screen.

The Metric Groups variable has the syntax

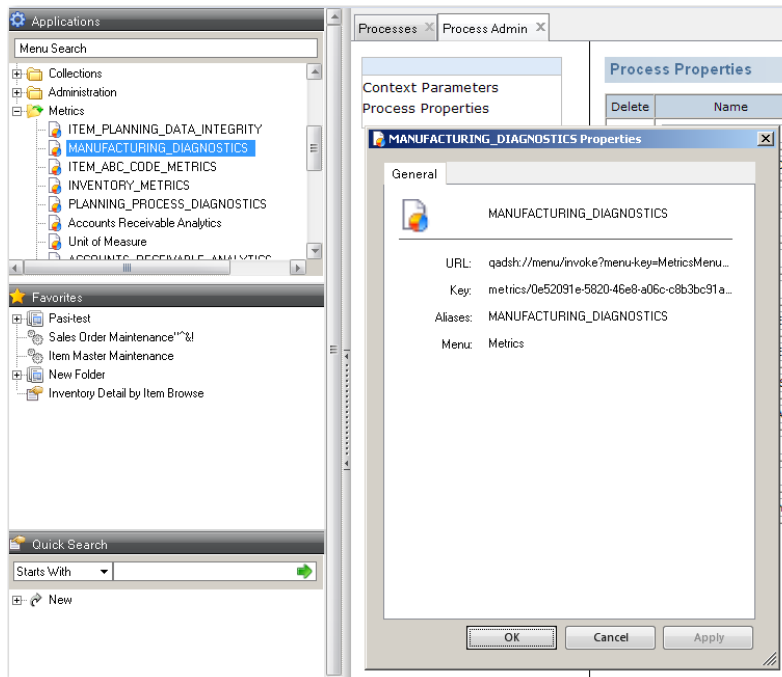
`{QAD_HOMESERVER}GetMetricImage.jsp?config=<environment>&key=`

where `<environment>` is the name of the environment to which you log in.

See “Process Properties Menu” on page 139 for details.

- 2 Click Apply to apply the change, and Refresh to refresh the configuration.
- 3 In the Metrics folder of the Applications area, select the metric you want to import into the process map.
- 4 Right-click the metric name to view its properties.

**Fig. 5.9**  
Operational Metric Image Properties



The properties dialog identifies the metric URL and the metric image name.

The metric URL consists of a QAD Shell command followed by the name of the metric image, for example:

```
qadsh://menu/invoke?menu-key=MetricsMenu&menuitem-key=a23618a2-e86b-4360-80ee-67668e6b2baa
```

The identifying keys for metrics are typically long random strings; for example:

```
a23618a2-e86b-4360-80ee-67668e6b2baa
```

- 5 Run Process Editor, and open an existing process map or create a new one.
- 6 Select a Node Cell.
- 7 In the Node Properties, Link field, enter the metric URL. For example,  
qadsh://menu/invoke?menu-key=MetricsMenu&menuitem-key=0e52091e-5820-46e8-a06c-c8b3bc91a152
- 8 In the Node Properties, Image field, enter the identifying key for the metric.  
You must include the metric variable prefix, and must also add the extension .png to the metric key.  
For example, to include the Manufacturing Diagnostics metric displayed in Figure 5.9, enter the following in the Image field:

{QAD\_METRICS\_IMAGES} 0e52091e-5820-46e8-a06c-c8b3bc91a152.png

Click Preview to view the metric image in the map. The metric image is now displayed in the process map cell, and you can click the metric image to display the operational metric.

## Row / Column Properties Menu

Use the Row Properties or Column Properties menu to specify the background color of a row or column.

To access the menu, select a row or column by clicking on the row header or column header.

*Background Color.* The background color of the row or column. Use the color selector adjacent to the field to click on a color. The most recently selected color takes precedence in a cell whose row and column have different colors.

## Administering the Process Editor

You can configure the Process Editor's context parameters and process properties using Process Admin. To access Process Admin, select Administration|Process Admin.

Click Refresh to update the view of context parameters and process properties.

### Setting Context Parameters

The Process Admin's Context Parameters page displays variables needed by the Process Editor.

**Fig. 5.10**  
Process Administration

| Context Parameters      |                                                                         |
|-------------------------|-------------------------------------------------------------------------|
| Menu Lookup Result Size | 100                                                                     |
| Menu Lookup Timeout     | 30                                                                      |
| Menu Lookup URL         | http://col148.qad.com:8240/merlot/cgi-bin/cgiip/WService=test_merlot_WS |
| Properties Directory    | WEB-INF/pronav/properties                                               |
| SVG Directory           | WEB-INF/pronav/svg                                                      |
| URL Lookup              | MenuLookup.jsp                                                          |
| XML Directory           | WEB-INF/pronav/xml/eB2.1                                                |
| SVG XSL Path            | WEB-INF/pronav/xsl/process.xsl                                          |
| Silverlight XSL Path    | WEB-INF/pronav/xsl/process_sl.xsl                                       |
| Use Silverlight Viewer? | no                                                                      |

- 1 Choose Process Admin|Context Parameters and edit the Context Parameters page. For more information, see "Context Parameters Screen" on page 146.
- 2 The page displays with defaults for all context parameters. Some of these are derived from values specified during the build process. Typically, most of these parameters do not need to be changed.
- 3 Click Save when you are done making any changes.

## Refresh

When you modify a Process Map context parameter, click Save to save the change, and then Refresh to update the process map function configuration. The screen now displays a refresh status, and indicates when the refresh is complete.

**Note** Deleting the browser history also has the effect of refreshing the configuration. You can use Tools, Delete History to delete the Internet Explorer history cache.

## Context Parameters Screen

Use the Process Admin's Context Parameters page to set administration parameters.

*Menu Lookup Result Size.* Enter a value that determines the number of records returned when a user displays the Program Lookup associated with the URL field in Node Properties and Connector Properties. The default is 100.

*Menu Lookup Timeout.* Enter the number of minutes the system should retain menu information in memory. When a user uses the Program Lookup, the system connects to the active database using the URL specified in Menu Lookup URL and reads the menu information from the database. This information is held in memory for the number of minutes specified in this parameter.

*Menu Lookup URL.* Enter the full URL the system should use to connect to a database when it reads menu records to display in the Program Lookup. The URL should look like the following example:

```
http://crsu04.qad.com:4949/cgi-bin/qad_wspd_cgi_31c_dt91.ksh/WService=
testdt91web/com/qad/nav/xmenu.p?Action=MenuLookup
```

It is built using the following elements:

- Relative path to the executables directory on the Web server
- WebSpeed executable name
- WebSpeed broker name
- API for reading the database menus

*SVG Directory.* Specifies the directory path where the SVG files created with the Process Editor are stored. The path is relative to the *QADDesktopBase/webapps* directory.

*URL Lookup.* Specifies the file to use for generating the listing of programs associated with the URL field in Connector and Node Properties. By default, this is *MenuLookup.jsp*.

*XML Directory.* Specifies the path to the directory where the XML files created with the Process Editor are stored. A file created with the Process Editor is initially saved in XML format and then converted to SVG using a stylesheet built with the Extensible Stylesheet Language (XSL). The path is relative to the *QADDesktopBase/webapps* directory. Process maps for each supported language are stored in the *QADDesktopBase/webapps/WEB-INF/pronav/xml* directory.

*SVG XSL Path.* Specifies the path to the XSL file used to convert process files from XML to SVG format, typically *WEB-INF/pronav/xsl/process.xsl*. The path is relative to the *QADDesktopBase/webapps* directory. This file was installed during installation.

**Silverlight XSL Path.** Specifies the path to the XSL file used to convert process files from XML to SVG format, typically `WEB-INF/pronav/xsl/process_sl.xsl`. The path is relative to the `QADDesktopBase/webapps` directory. This file was installed during installation.

**Use Silverlight Viewer.** Use this option to set the default process map viewer. By default, this is set to Yes

## Process Properties Screen

The Process Admin's Process Properties page displays variables that let you set up URL links in the Process Editor without using hard-coded values. This ensures that your processes can be used in multiple environments, if necessary.

**Fig. 5.11**  
Process Properties

| Process Properties       |                   |                                                     |        |                          |
|--------------------------|-------------------|-----------------------------------------------------|--------|--------------------------|
| Delete                   | Name              | Value                                               | Scope  | URL Parameter            |
| <input type="checkbox"/> | QAD_CONTENT       | {QAD_DT_DOC_ROOT}/content/                          | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_CONTENT_IMG   | /content/                                           | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_DT            | {QAD_SH}                                            | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_DT_DOC_ROOT   | /portEE                                             | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_DT_IMG        | {QAD_DT_DOC_ROOT}/images/                           | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_HOMESERVER    | http://col48.qad.com:8888/qadportee/                | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_IMG           | {QAD_DT_DOC_ROOT}/images/                           | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_IMG_DOCUMENT  | {QAD_IMG}document.gif                               | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_IMG_MENUITEM  | {QAD_IMG}table.gif                                  | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_IMG_PROCESS   | {QAD_IMG}process.gif                                | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_METRICS_IMAGE | {QAD_HOMESERVER}GetMetricImage.jsp?config=test&key= | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_PV            | ProcessViewer.jsp?ProcessName=                      | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_SH            | qadsh://menu/invoke?menuitem-alias=                 | global | <input type="checkbox"/> |
| <input type="checkbox"/> | QAD_SH_MENU_KEY   | qadsh://menu/invoke?menuitem-key=                   | global | <input type="checkbox"/> |

Apply New

## Setting Process Properties

The Process Admin's Process Properties page displays variables that let you set up URL links in the Process Editor without using hard-coded values. This ensures that your processes can be used in multiple environments, if necessary.

- 1 Choose Process Admin|Process Properties.
- 2 Edit the Process Properties page. For more information, see the "Process Properties Screen" on page 147
- 3 The process properties variables also display in the Process Properties Menu, but cannot be changed there. The default values can only be changed using Process Admin|Process Properties. The only variable you may need to change is QAD\_DT\_DOC\_ROOT. The values of other properties are determined by QAD.
- 4 After making any changes, click Apply to save the new values.

- 5 Click New to insert a new row for defining a variable. When you create variables with the Process Properties editor, you can create local variables only. You can define new global variables using Process Admin|Process Properties, and delete existing variables.

**Warning** If you delete any of the QAD-supplied variables, the sample processes no longer work properly.

These variables display in the Process Properties Menu, but cannot be changed there. The default values can only be changed using Process Admin | Process Properties. The only variable you may need to change is QAD\_DT\_DOC\_ROOT.

**QAD\_DT.** This variable sets up the API between a process and Desktop. Use this variable in URLs to reference a program to be run in QAD Desktop. This variable sets up the API between the process and QAD Desktop, represented by the following command:

`QAD_DT_DOC_ROOT/run.html?id=`

Follow the variable with a valid program name such as `sosomt.p` or menu number such as 7.1.1 to be executed when a user clicks the associated link.

**QAD\_DT\_DOC\_ROOT.** This directory is unique to each installation. It specifies the root directory where Desktop is installed on the Web server and has a form similar to the following:

`http://crsu04.qad.com:8080/desktop`

You can append other directories to this variable to locate specific resource files.

**QAD\_DT\_IMG.** This variable points to the images directory below the Desktop installation directory defined in QAD\_DT\_DOC\_ROOT.

**QAD\_HOMESERVER.** This variable points to the root directory for the application home server. This value is also visible in the View Configuration menu.

**QAD\_IMG.** This variable points to the images directory below the Desktop installation directory defined in QAD\_DT\_DOC\_ROOT.

**QAD\_IMG\_DOCUMENT.** This variable points to the image file used as the icon in a node when in the Process Editor you select the Choose Document option from the Link pull-down in Node Properties. The image file is located in the directory set by the QAD\_IMG variable.

**QAD\_IMG\_MENUITEM.** This variable points to the image file used as the icon in a node when in the Process Editor you select the Menu Lookup option from the Link pull-down in Node Properties. The image file is located in the directory set by the QAD\_IMG variable.

**QAD\_CONTENT.** This variable points to the path for the content directory for additional images and other media files, to which you can link process maps through the Link option in Node Properties.

`{QAD_DT_DOC_ROOT}/content/directory` is located on the home server.

**QAD\_CONTENT\_IMG .** This variable points to the image file when you link an image in the Content directory to a process map node. The image file is located in the directory set by the QAD\_CONTENT variable.

**QAD\_IMG\_PROCESS.** This variable points to the image file used as the icon in a node when in the Process Editor you select the Process List Lookup option from the Link pull-down in Node Properties. The image file is located in the directory set by the QAD\_IMG variable.

**QAD\_METRICS\_IMAGE.** This variable uses a JSP page to retrieve operational metrics images from the home server. For example,

```
{QAD_HOMESERVER}GetMetricImage.jsp?config=test&key=
```

Enter the environment name (for example, `test`). The key element of the variable is used to import operational metric images into process maps. See “Creating Browse Operational Metrics” on page 106.

**QAD\_PV.** This variable opens the Process Viewer

```
(ProcessViewer.jsp?ProcessName=).
```

Follow the variable with the name of a process created with the Process Editor.

**QAD\_PE.** Use this variable to open the Process Editor

```
(ProcessEditor.jsp?Action=load&ProcessName=)
```

**QAD\_SH.** This variable is the QAD Shell URL for invoking a menu item based on the program name (`qadsh://menu/invoke?menuitem-alias=`). For example, for Sales Order Maintenance, you would use `sosomt.p` as the program name.

**QAD\_SH\_MENU\_KEY.** This variable is the QAD Shell URL for invoking a menu item based on the program key (`qadsh://menu/invoke?menuitem-key=`). For example, for Sales Order Maintenance, you would use `7.1.1` as the program key.

## Managing Process Map Files

The Process Editor looks for processes by default in a directory on the Web server. This directory name and location can be modified during installation, if needed.

**Note** SVG files created with the Process Editor can be modified using other applications and text editors. However, this is not recommended.

When you deploy process files for use, you can move them to another directory relative to the installation directory. This is recommended if you have many processes.

## Multiple Language Support for Process Maps

In a process map, each node has a label that specifies the text that is displayed on the node. In previous releases of the QAD .NET UI, the label was simply a text string that was displayed on the node. From the Process Editor, you entered the text in the Node Properties panel’s Label field. If you then wanted to create versions of the process map in multiple languages, you had to maintain a version of the process map for each language.

The QAD .NET UI provides a way to maintain the node labels for multiple languages separately from the graphical data for process maps. Each label can have a key that identifies the label and then have associated text that can be displayed on a node. You can use a new Administration program, Process Label Maintenance, to create and maintain the label keys and text. Additionally, the Process Editor includes some changes in the Label field to support the use of label keys.

You can now either just enter text in the Label field in your language as before or you can use the new approach where you define a label key and its associated text and assign the label key to the node from the Label field.

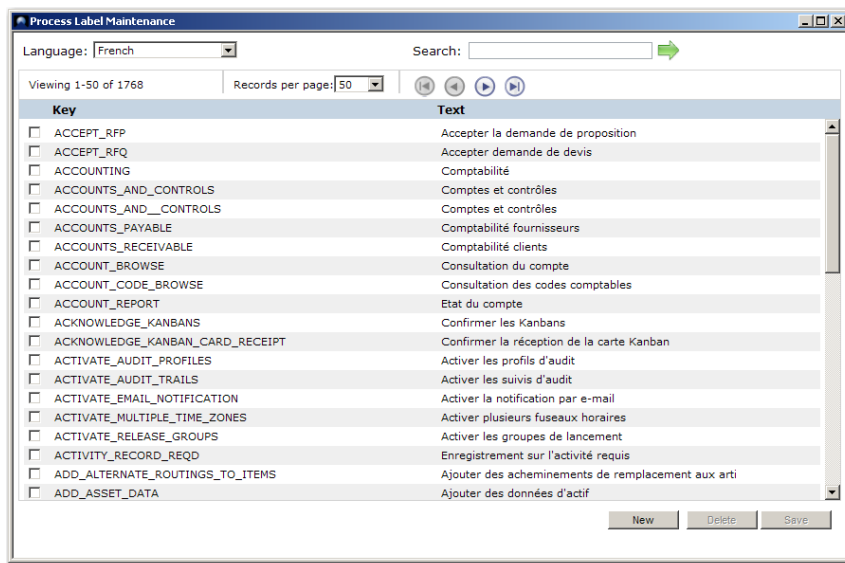
With the new approach, you can reuse existing label keys on multiple nodes and can have the associated text translated once for each language. If you are developing a process map that you do not need to translate, then you do not have to use the new approach where you create label keys; you can simply enter the text in the Label field. However, if you are developing a process map that you will need to translate into other languages, you must use the new approach where you create label keys for the node text.

Creating new process maps can be an iterative process where you might not be completely sure about the node text you want on the nodes until you have created all the nodes for the map. Therefore, you might just enter the text you want in the Label fields at first, and then when you are done, create the label keys for each node using Process Label Maintenance. After creating the label keys, you then replace the text in the Label field with the label key associated with the text you want to use. To create label keys and their associated text, you must use the new Process Label Maintenance program.

## Process Label Maintenance

Administrative users can use the Process Label Maintenance program to create and maintain each label key and its associated text for all the available languages.

**Fig. 5.12**  
Process Label Maintenance



From the Language pull-down, select a language; the text for each label is displayed in the selected language. You can search on any label key from the Search field. From the Records per page field, specify the number of records displayed on a page, and use the First Page, Prev Page, Next Page, and Last Page icons to view each page.

You can edit the label text simply by placing the cursor in the text area and modifying the existing text. Fields with modified text display a yellow exclamation mark (!) next to them to show they have been modified. If you want to save the modifications, click the Save button in the lower right corner of the screen.

To add a new label key and text, click the New button in the lower right corner of the screen. In the Process Label Maintenance pop-up window, enter the label key in the Key field and the label text in the Text field. The label key format should be in uppercase with no spaces (for example, ADD\_ASSETS). Finally, click Save to add the new label key and text. Note that if the label key you enter is the same as an existing label key, the existing key will be replaced by the new one.

To delete a label key, select the check box next to the label key and then click the Delete button in the lower right corner of the screen. Do not delete a label key unless you are sure you will no longer need it.

A button to access the Process Label Maintenance program is also available from the Process Viewer. The button is located in the upper left corner, next to the button for accessing the Process Editor from the Process Viewer.



# Character User Interface

This chapter describes the appearance and use of programs from the character user interface.

***Introduction to the QAD Character UI    154***

Introduces the features of the character-based user interface.

***Starting in Character Mode    154***

Describes how to access the system using the character user interface.

***Program Interface Elements    154***

Describes program features in the character user interface.

***Using Browsers in Character UI    158***

Describes how to use browsers in the character user interface.

***Output Devices    163***

Describes how you can send the output from reports, inquiries, and browsers to a number of devices.

***Character-Mode Keyboard Commands    164***

Lists the keyboard shortcuts for the character user interface.

## Introduction to the QAD Character UI

Unlike the QAD .NET user interface, the character user interface depends completely on input from the keyboard. Because it is not a graphical user interface, all navigation is based on:

- A command-prompt interface to execute programs
- Combinations of keystrokes to issue commands within programs
- Navigation without use of a mouse through the UNIX character interface.

Component-based functions are accessible only through the QAD .NET UI. You cannot access any of these functions from the Character UI.

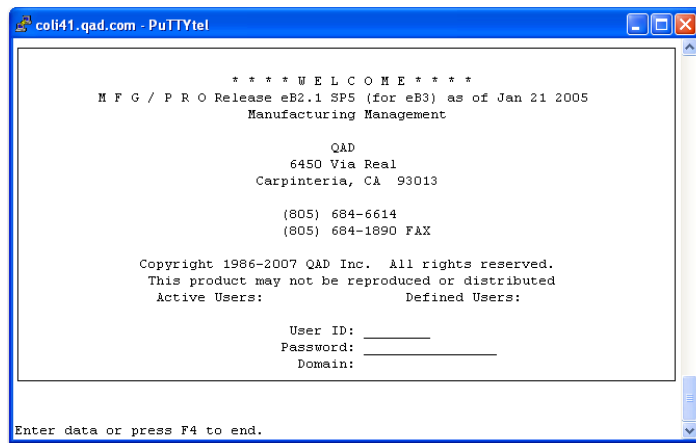
## Starting in Character Mode

To start a character session, follow the procedures provided by your system administrator.

The first screen you see after launching the system lets you log in to the system. Enter the login ID assigned by your system administrator and your password. If you have been given access to more than one domain in the system, enter its name in the Domain field. If you have access to only one domain, this domain displays in read-only mode.

You must be a valid user to log in. Your password can be blank only if the password in your user record is blank.

**Fig. 6.1**  
Character Login Screen



## Program Interface Elements

This program includes the following:

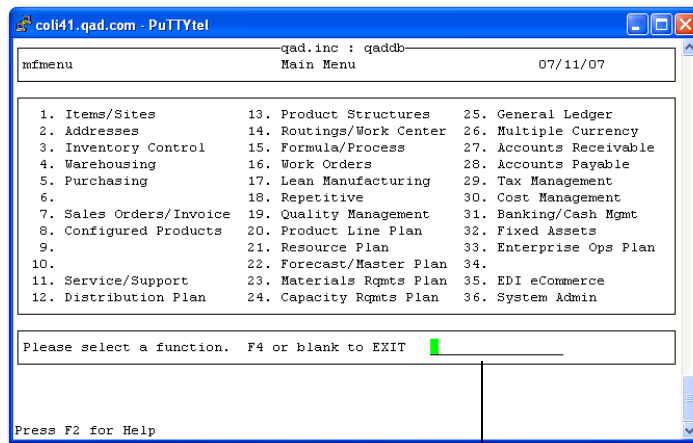
- “Menu System” on page 155
- “Menu Substitutions” on page 155
- “Program Screen Elements” on page 156

## Menu System

MFG/PRO has locations for 36 modules on the character-based Main Menu. In turn, each module has one or more menus attached to it. Menus are lists of programs you use to look up or input data.

The menus that you will see depend on the security access that has been granted to your role. Only menus with programs that you have access to display.

**Fig. 6.2**  
Main Menu in Character Mode



Enter a menu number or Progress program name and press Enter.

When you enter a menu number on the command line, the system either executes a program or displays a lower-level menu. You can keep drilling down through the menus until you reach the appropriate level. Alternatively, you can access a program directly by entering its Progress name—such as `ppptmt.p` for Item Master Maintenance—or number at the command prompt.

**Note** You can only run Progress programs that are on the menu this way.

To run a program from the current submenu, enter just its number on that menu; for example, 1. If it is on a different submenu, you must enter its full menu number preceded by a period.

**Example** If the current menu displayed is System Admin (36), you can enter 24.1 to access Database Control (36.24.1). However, you must enter .1.4.1 to run Item Master Maintenance (1.1.4) because it is on a different submenu.

You can also use the arrow keys to move around the menu, then press Enter to execute the highlighted selection.

## Menu Substitutions

Menu substitution lets you toggle between displaying browses and inquiries on the menu. You can also use it to switch between customized and noncustomized versions of a program. The system administrator can use Menu Substitution Maintenance (36.4.4.7) to specify which programs are substituted for others when you select this option.

By default menu substitution is disabled. It can be enabled for individual users in User Maintenance (36.3.1).

## Program Screen Elements

The following is an example of a program in character mode.

**Fig. 6.3**

Program in Character Mode

The screenshot shows a character-mode interface for the '7.1.1 Sales Order Maintenance' program. The title bar at the top displays 'sosomt.p 99', '7.1.1 Sales Order Maintenance', and the date '06/25/07'. Below the title bar, the program window contains a form with two columns for 'Sold-To' and 'Bill-To' information, both pointing to 'ABC Company' at '150 JFK Parkway, Morristown, NJ 07960, X United States of'. The data frame below contains a grid of order details including dates (Order Date: 06/25/07, Due Date: 06/26/07), pricing (Line Pricing: Yes, Manual: Yes), confirmed status (Confirmed: Yes), currency, language, taxable status (Taxable: No), fixed price (Fixed Price: Yes), credit terms (Credit Terms: Org Inv: Credit Terms Interest %: 0.00, Reprice: No), and remarks. The progress status bar at the bottom lists function key shortcuts: F1=Go, 2=Hlp, 3=Ins, 4=End, 6=Mnu, 7=Rcl, 8=Ctr, 9=Prev, 10=Next, 11=Buf.

Elements of the character user interface are explained in the following sections:

- “Title Bar” on page 156
- “Program Window” on page 157
- “Progress Status Bar” on page 157
- “User Menu” on page 157

### Title Bar

The title bar identifies the program currently running. What displays in the title bar depends on the Header Display Mode setting in Security Control (36.3.24). Based on that setting, you may see any of the following elements:

- The title bar includes—from left to right—the program name, the version of the program, the menu number and title, and the current date.
  - The Progress program name, such as `sosomt.p`
  - The program version, such as `99`
  - The menu number and title, such as `7.1.1 Sales Order Maintenance`
  - The current date
- The title bar is the same as previous except that the login ID of the current user replaces the current date.
- The title bar includes—from left to right—the short name and currency of the current working domain, the menu number and title, and the current date.
- The title bar is the same as previous except that the login ID of the current user replaces the current date.

Some regulatory environments may require the name associated with the ID of the logged-in user to be available from any program. In the character interface, you can use the Ctrl+F key combination to review this information and other context details.

Header Display Mode also affects what you see in the menu titles, which is either:

- The name associated with the current domain followed by the current database name defined in Database Connection Maintenance (36.6.1).
- Only the current database name.

## Program Window

The program window displays the frames and fields of the current program.

### Getting Help

Two help tools that are accessible from any program window:

- Lookup browses
- Online help

In the character user interface, access help by pressing F2 successively. Up to three help windows display:

- The first time you press F2, a lookup browse displays if one is attached. If not, field help displays first.  
Use lookup browses to view records available to specified fields. You then choose a record to enter in the field.  
If you enter a value and press Enter, the list in the bottom of the browse frame scrolls to the first record that matches that value. Use the arrow keys to scroll through the list, then select the record by pressing Enter.
- Press F2 again to display field help. It describes a specific field and how it is used in the program. Most updateable fields have field help. Display-only fields do not.
- Press F2 again to display procedure help. It describes the program and how it is used in the module. Procedure help is not generally provided for reports, inquiries, browses, or control programs.

Press F4 successively to exit all levels of help and return to the program window.

## Progress Status Bar

The status bar shows the basic commands needed to navigate through the specific program currently displayed in the program window. See “Character-Mode Keyboard Commands” on page 164 for a complete list.

## User Menu

The User Menu saves time by letting you access a set of predefined programs directly, without entering menu numbers or program names at the command prompt. This way, you can execute a program without having to remember its menu number or Progress name.

Although the menu bar is available only with browses, you can access a User Menu from any program or menu by pressing F6. This listing includes programs specified in User Function Maintenance (36.4.10).

User Function Maintenance lets you assign programs to individual users or to all users. Use the following steps to navigate through the User Menu:

- Press F6 to open a pop-up window listing the programs assigned specifically to your user ID. If no programs are assigned, the list includes programs assigned to the blank user ID (all users).
- Press F4. If you have both user-specific and blank-ID programs assigned, the list updates to display programs assigned to all users. Otherwise, the pop-up window closes.
- Press Tab to move the cursor between the menu number and the program label. The system sorts lexically; for example, 28.13 is listed before 3.18. When you move the cursor to the program label column, the system re-sorts the list alphabetically.
- To run a program from the user menu, use the up and down arrows to select the program. Then press Enter.

## Using Browsers in Character UI

Browsers display selected data in the form of a table. Browsers in the character UI are similar to those in the .NET UI, but have a simpler set of features. Two types of browsers are available:

- *Look-up browsers* return the value you select to the active field in the calling program.
- *Drill-down browsers* display, filter, or print data.

The field values in the browse can come from a table or a view. A view is a table that has selected values from one table or several joined tables.

**Fig. 6.4**  
Character Browse

The screenshot shows a character browser window titled "Sales Order Browse (1-)" with a menu bar (User, Menu, Edit, Options, Help) and a date/time stamp (07/12/07). The main display area shows a table of sales order data. The table has the following columns: Order, Sold-To, Status, Line Item Number, UM, Qty Ordered, and Quan. The data is as follows:

| Order    | Sold-To  | Status | Line Item Number | UM | Qty Ordered | Quan |
|----------|----------|--------|------------------|----|-------------|------|
| 10006    | 010907   |        | 1 1-bb           | EA | 1.0         |      |
| 801      | 10000    |        | 1 20005          | EA | 10.0        |      |
| 803      | 10000    |        | 1 20005          | EA | 1,000.0     |      |
| 803      | 10000    |        | 2 20005          | EA | 1.0         |      |
| CA100001 | Sold01   |        | 1                |    | 1.0         |      |
| CA100007 | SSM1001  |        | 1 CP300          | EA | 1.0         |      |
| CA100007 | SSM1001  |        | 2 cp300          | EA | 1.0         |      |
| CA100007 | SSM1001  |        | 3 CP300          |    | 1.0         |      |
| dm105    | 00010000 |        | 2 02-0005        | EA | 25.0        |      |
| dm106    | 00010000 |        | 1 0110           | CS | 20.0        |      |

Below the table, it says "Filter = On". At the bottom of the window, there is a legend: "F1=Go 2=Help 4=End ESC-m=Menu 6=UserMenu 7=Opts ESC-f=Toggle."

Browsers display several records at a time. To scroll through the records, use the Up and Down arrows.

## Configuring Lookups for Multiple Return Values

The majority of field lookups in character mode return one value to the calling field. However, a number of fields return values to several screen fields. For example, when you select a sales order in Sales Order Maintenance, the system returns the sold-to, bill-to, and ship-to address codes for the sales order (when they have been defined).

This mechanism is controlled by the `lookupreturnfields.xml` file, which is stored in the `/tomcat/webapps/<appname>/net/lookups/` folder. Use the following XML element to configure the option:

```
<program>
<program name="<program.p>" screenid="f:<first field>" lookupfield="receiver">
  <returnvalue screenfield="rcvr_line" fieldinlookup="prh_hist.prh_line"/>
</program>
```

`<program name>` is the menu-level program name.

`<screenid>` is a combination (separated by a colon) of the frame name and the first enabled field on that frame.

`<lookupfield>` is the name of the field that the lookup is attached to. Use CTRL+F to view the name of the field.

`<fieldinlookup>` can be determined by running the lookup, right-clicking on the column of the data you are interested in returning, and selecting Properties.

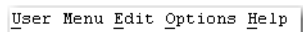
If more than one additional return value is needed, add another `<returnvalue>` element with the appropriate attributes.

Once you have added your data into the XML document, save it, close the QAD .NET UI, and then restart the application.

## Menu Bar

In character mode, browses have a menu bar that you can use to perform various tasks.

**Fig. 6.5**  
Browse Menu Bar



```
User Menu Edit Options Help
```

To access the menu bar, press Esc-M while a browse is running. You can then select a menu item with one of the following methods:

- Use the left and right arrows to move across to the menu you want. Then use the up and down arrows to highlight an item on the menu. Press Enter to select the item.
- Press the underlined letter for the menu you want to select. The cursor moves to that menu and displays the menu items. Use one of these methods to select an item:
  - Use the up and down arrows to highlight the item you want and press Enter.
  - Press the underlined letter for the item you want.

**Note** You can use the mouse from Windows character clients.

The following sections describe the items available on each menu in browses.

## User Menu

The User Menu in the browse menu bar differs from the User Menu accessed by pressing F6. The User Menu in the browse menu bar provides access to:

- User Menu Items
- Print Options
- Run Program
- Exit

**Note** You can only run programs that are defined in the menu system.

### User Menu Items

User Menu items are user defined; you can use them to jump to other programs. When you exit the second program, the system returns you to the program that was running when you accessed the User Menu.

Programs displayed on the User Menu are defined in User Function Maintenance (36.4.10). This list is always the same, regardless of which program you are running.

**Fig. 6.6**  
User Menu in Character Mode

Defined in User Function Maintenance

Standard menu options

| User Menu Edit Options Help |             |                       |             |
|-----------------------------|-------------|-----------------------|-------------|
| Sales Order Maintenance     |             | les Order Browse (1-) |             |
| Pending Invoice Maintenance |             | 06/25/07              |             |
| Print CTRL-P                |             |                       |             |
| Run Program... CTRL-R       |             |                       |             |
| Exit ESC-X                  |             |                       |             |
| ine                         | Item Number | UM                    | Qty Ordered |
| 1                           | 20005       | EA                    | 10.0        |
| 1                           | 20005       | EA                    | 1,000.0     |
| 803                         | 10000       |                       |             |
| CA100001                    | Sold01      |                       |             |
| matca-2                     | 4000        |                       |             |
| matso-1                     | matcust     |                       |             |
| matso-65                    | 1000mt      |                       |             |
| matso-66                    | 1000mt      |                       |             |
| matso-8                     | matcust     |                       |             |
| matso-9                     | matcust     |                       |             |
| 2                           | 20005       | EA                    | 1.0         |
| 1                           |             |                       | 1.0         |
| 1                           | mat-1       |                       | 1.0         |
| 1                           | mat-1       | EA                    | 10.0        |
| 1                           | tt-500      | EA                    | 100.0       |
| 1                           | tt-500      | EA                    | 10.0        |
| 1                           | mat-1       | EA                    | 17.0        |
| 1                           | mat-1       | ea                    | 10.0        |

Filter = On

### Print

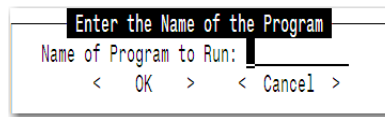
Use this command to display the Printer Options dialog box. You can use this dialog to specify the print destination; for example, a server printer or your terminal. You can also indicate that the output should be placed in a file.

After you select an output device, the Browse Print Configuration window lets you specify the fields to be output. When you select fields, the system displays the number of characters in each line of the output.

### Run Program

Run Progress programs with this option. You can run any menu-level program without having to exit the current program.

**Fig. 6.7**  
Run Program Dialog Box



- 1 Press Esc-M to access the drop-down User Menu and select Run Program (or use the keyboard shortcut Ctrl+R).
- 2 In the pop-up window, enter one of the following:
  - The Progress program name, such as pptmt. You do not have to enter the file extension of .p.
  - A menu number. To run a program from the same submenu as the current program, enter just its number on that menu; for example, enter 1. If it is on a different submenu, you must enter its full menu number preceded by a period; for example, enter .1.4.1 to run Item Master Maintenance.
- 3 Press Go.

When you exit the second program, the system returns to the program that was running when you accessed the User Menu.

## Exit

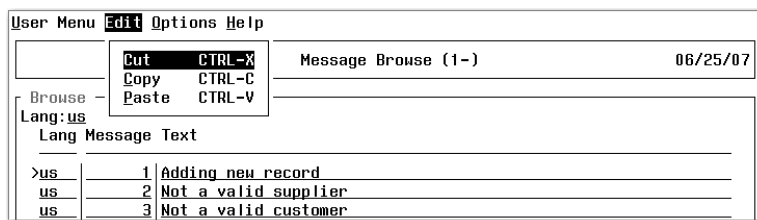
You can exit the current program through the User Menu. You can also exit programs by either of the following methods:

- Press F4.
- Press Ctrl+E.

## Edit Menu

Use this drop-down menu to cut, copy, and paste text.

**Fig. 6.8**  
Edit Drop-Down Menu



Cutting text deletes it from its current location and copies it to the clipboard. Copying is similar, but it leaves the original text in place. In both cases, you can paste the text to another location, such as a field.

- 1 Choose the text to cut or copy.
- 2 Display the Edit menu. This menu choice is available only when text is selected.
- 3 Choose Cut or Copy.

- 4 Position the cursor in the new location.
- 5 Display the Edit menu and choose Paste.

## Options Menu

To turn an option on or off, access the menu, scroll to the option, and press Enter, or type the underlined letter.

**Fig. 6.9**  
Options Menu in Character Mode



### Browse Options

Use this option to set up filter criteria for browses. The filter criteria limit the viewable records according to your specifications. For example, you can filter out product numbers or statuses that you do not want to view.

### Toggle Filter

Use the toggle filter setting to turn on and off the filter criteria set up in the browse filter options.

## Help Menu

Use this menu to access help on fields, as well as display drill downs and lookup browses on selected fields.

### Field Help

The fastest way to get help for the current field is by pressing F2 twice (press F2 once and, if available, a lookup browse displays), but you can also bring it up with the Help menu. With the cursor in the field, drop down the Help menu and choose Field Help.

### Procedure Help

Procedure help is not included for browses. Choosing this option displays an error message.

### Drill-Down

Drill-downs are browses accessed by choosing Drill-Down on the menu. You use drill downs to view records associated with specified fields and programs.

With the cursor in the field, drop down the Help menu and choose Drill-Down.

### Lookup Browse

This is the same browse that displays the first time you press F2, if it is attached to the field.

About...

This option gives you technical information about the system.

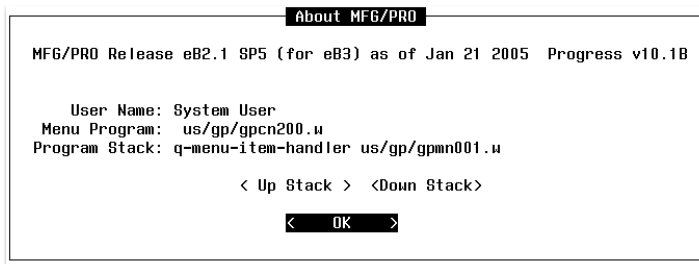
You can use the Program Stack field to display the names of the programs used to call the current program.

Press Tab to move between the command buttons, then press Enter to move up or down the program stack.

- Select Up Stack to move toward the main menu.
- Select Down Stack to move toward the current program.

When you reach either the top or the bottom of the stack, the appropriate command button is disabled.

**Fig. 6.10**  
Character About Screen



## Output Devices

You can send the output from reports, inquiries, and browses to a number of devices, including the following:

- Your terminal
- A server printer
- An e-mail message

However, the character user interface does not offer as many options as the QAD .NET UI.

- You can send output to Terminal or page, but not to Window. If you select Window, the system displays an error message.
- The Winprint option is designed only for Windows clients. If you select this option, the system displays an error message.

Otherwise, the output options are the same in both interfaces. If you select a printer as the output device, be sure to use one that has been defined with a Destination Type of Default in Printer Setup Maintenance (36.13.2).

Just as in the QAD .NET UI, you cannot use e-mail unless it has been set up properly.

## Character-Mode Keyboard Commands

The following tables list the navigation, help, and edit keyboard commands used throughout the character user interface. When you are using a program, the Progress status bar at the bottom of the screen summarizes the specific keys used in that program.

Some commands require two keys to be pressed at the same time; other key strokes are sequential. This table uses a plus sign (+) to indicate keys pressed at the same time and a hyphen (–) to show keys pressed in sequence.

| Navigation Commands | Keyboard Entry    | Control Key Entry | Description                                                                                         |
|---------------------|-------------------|-------------------|-----------------------------------------------------------------------------------------------------|
| Go                  | F1                | Ctrl+X            | Moves to next frame.                                                                                |
| End                 | F4                | Ctrl+E            | Exits a frame, program, or menu.                                                                    |
| User Menu           | F6                | Ctrl+P            | Displays list of user-selected programs.                                                            |
| Previous            | F9 or up arrow    | Ctrl+K            | Retrieves previous record in a key data field and scrolls up in lookup browses.                     |
| Next                | F10 or down arrow | Ctrl+J            | Retrieves next record in a key data field and scrolls down in lookup browses.                       |
| Enter               | Enter             |                   | Moves to next field within a frame.                                                                 |
| Tab                 | Tab               |                   | Moves to next field within a frame.                                                                 |
| Back Tab            |                   | Ctrl+U            | Moves back one field within a frame.                                                                |
| Menu Bar (Browse)   | Esc-M             |                   | Accesses the menu bar. This is not available from Windows character clients. Use the mouse instead. |

| Help Commands         | Keyboard Entry | Control Key Entry | Description                                                                                                       |
|-----------------------|----------------|-------------------|-------------------------------------------------------------------------------------------------------------------|
| Field Help            | F2             |                   | Opens help on current field.                                                                                      |
| Procedure Help        | F2             |                   | Opens help on current program.                                                                                    |
| Lookup Browse         | F2             |                   | Displays choice of records.                                                                                       |
| Browse Options        | F7             |                   | Opens the browse options window.                                                                                  |
| Browse Options Toggle | Esc-F          |                   | Turns the browse options on and off. This is not available from Windows character clients. Use the mouse instead. |
| Field Name            | Ctrl+F         | Ctrl+F            | Displays a screen of information about the current program context, including the field name.                     |

| Edit Commands | Keyboard Entry | Control Key Entry | Description                                                                                   |
|---------------|----------------|-------------------|-----------------------------------------------------------------------------------------------|
| Insert        | F3             | Ctrl+T            | Enables text insertion.                                                                       |
| Delete Record | F5             | Ctrl+D            | Deletes an open record.                                                                       |
| Recall        | F7             | Ctrl+R            | Recalls last saved value in a field.                                                          |
| Cut           | F8             |                   | Clears a field.                                                                               |
| Copy          | F11            | Ctrl+B            | Copies a field.                                                                               |
| Paste         | F11            | Ctrl+B            | Inserts value that you copied.                                                                |
| Multiple Copy | F12            | Ctrl+A            | Copies values from one or more fields and pastes them into the same fields of another record. |
| Clear Date    | Shift+?        |                   | Clears the value in date fields.                                                              |

## Stored Values for Fields

F12 or Ctrl+A stores values for any number of fields. Values are pasted back when you press F12 or Ctrl+A again. The field values are stored separately for each field and for each user, and the values are saved between logon sessions.

**Example** Using Sales Order Maintenance, enter a value in Channel and press F12 while the cursor is still in the field to store the value. Then enter a value in Credit Terms and press F12 to store that entry. Finish entering the sales order. The next time you enter a sales order, press F12 in the empty Channel field and the stored value is entered. Press F12 on the Credit Terms to input the stored credit terms.

To store field values in a maintenance program, you must select Go or Enter through the frame containing the field values you stored. If you exit the frame using End, the field values you stored are not saved. This is only true in maintenance and other update programs. Values stored using F12 in reports and inquiries are saved even if you do not select Go or Enter to complete the frame.

## Windows Character Client Interface

Because of performance issues, you may not want to run resource-intensive processes such as Material Requirements Planning (MRP) from the .NET UI. In an environment that does not include UNIX character clients, you can run these processes through the Windows character client interface.

Navigation in this interface is almost identical to what is described in this chapter, with some exceptions:

- Optionally, you can use the mouse to access fields directly instead of pressing Tab to move from field to field.
- In browses, you cannot use the Esc key normally required for some keyboard shortcuts:
  - Use the mouse to access the menu bar instead of pressing Esc-M.
  - Pull down the Options menu to access Browse Filter, rather than pressing Esc-F.
  - Pull down the User Menu to access Exit, rather than pressing Esc-X.



# Master Glossary

## A

**ABC Analysis.** Classification of a group of items into their ABC class.

**ABC Class.** An inventory classification and ranking system based on the annual dollar usage of the inventory. Three classes are used: A, B, and C. Class A items have the highest annual usage and receive the most attention. Class B items have lower annual usage and are controlled using reorder point. Class C items have the lowest annual usage. Inventory value is determined by annual usage, unit cost, lead time, space available for storage, and quality.

**Abnormal Sales.** When unusual, unanticipated sales demands are discounted from normal sales demand. Example, sales related to a natural disaster. Often called an “outlier” in statistics. See Modifying Forecast Results.

**Absorbed Tax.** A sales tax not passed on to the customer.

**Abstract Class.** A class with no instances. Abstract classes organize a class hierarchy or define methods and variables for subclasses. Also called virtual class.

**Accelerated Depreciation.** Depreciation methods that provide greater depreciation expense in the earlier years of an asset’s economic life. Examples include declining-balance and sum-of-the-years’-digits methods.

**Accelerator Keys.** Keystroke equivalents to mouse actions. For example, you can delete a record in the .NET UI by choosing Delete from the Actions menu or by pressing Ctrl+Shift+D.

**Accessory.** An additional, non-required component of a configured end product. For example, a CD player is an accessory for a car. Options and accessories can be organized in feature groups. See also Option and Feature Group.

**Account.** One component of an account number defined in GL setup functions. Other components of an account number are sub-account, cost center, and project. Accounts track company-wide assets, liabilities, equities, expenses, and revenues.

**Account Aging.** Methods of tracking overdue accounts in accounts receivable, based on the dates the charges were incurred.

**Account Currency.** The currency used by a GL account.

**Accounting Layer.** Layers provide different ways of segregating transactions within a single GL account. Layers are assigned by associating daybooks with a layer. See Official Layer, Management Layer, and Transient Layer.

**Accounting Period.** Economic cycle for which financial records are maintained; for example, a calendar year or a fiscal year.

**Accounts Payable (AP).** Liabilities resulting from purchasing transactions.

**Accounts Payable Variance.** The difference between invoice price and purchase order cost. Calculated when the supplier invoice matched with receivers in accounts payable.

**Accounts Receivable (AR).** Financial claims resulting from sales transactions.

**Accruals.** Accounting method whereby revenue and expenses are recorded in the period in which they are incurred, even though they may not have been paid or received.

**Accrued Revenue.** In accrual-basis accounting, revenue is recorded in the period in which it is earned, regardless of whether cash is received in that period. Accrued revenue is a billing option for service contracts that are billed at the end of the service duration.

**Accumulated Expense Account.** A GL account used to track the amount of depreciation that has accumulated and been posted since the start of the depreciation calculation.

**Accumulator.** A method of authorizing production for kanban items based on either the total quantity represented by the associated cards or specified time parameters.

**Acquisition Cost.** The amount required to purchase a fixed asset.

**Action Message.** A system message usually created during MRP calculations to call attention to a current or potential problem and suggest corrective action.

**Actions Menu.** A pop-up menu that displays when you use a right-mouse click. The choices on the menu vary depending on where you click; only actions valid in the current context display.

**Active Schedule.** The supplier schedule currently in force. Only one schedule per order line item can be active at a time.

**Adjusting Entries.** Special accounting entries that must be made when you close the books at the end of a GL period. Adjusting entries are necessary to update your accounts for items that are not recorded in daily transactions.

**Advanced Planning and Scheduling (APS).** A type of planning and scheduling system that considers:

- Static item and resource data such as shop calendars, product structures, and routings
- Sources of supply and demand
- Multiple material and capacity constraints
- A set of predefined business objectives

Based on this data, the APS system determines the production schedule that best meets both the established resource constraints and the business objectives of the enterprise. See also Finite Capacity Scheduling (FCS) and Optimized Schedule.

**Advance Ship Notice (ASN).** An electronic document derived from a shipper document and sent by a supplier to a customer when a shipment leaves the supplier site, informing the customer that the shipment is on the way. ASN formats are defined for various international standards; for example, an 856 Transaction Set per ANSI ASC X12. An ASN takes the place of an invoice in some supplier-customer arrangements. See Electronic Data Interchange (EDI).

**AETC.** Authorized Excess Transportation Code

A shipping term consisting of a combination of reason code, responsibility code, and authorization code. The reason code usually indicates who is responsible— customer or supplier—for excess freight on a shipment.

**Age Date.** The maximum aging days really leads into an age date. And the age date is calculated for the materials based on the ship date plus transportation days plus the maximum aging days. They give you an end date for the material to be aged to.

Note that the aging date in customer consignment is an estimated date. You know what date you shipped it, you're not quite sure what day the customer has received the goods. You estimate that date based on the transportation days so it is not a hard and fast number of days but it allows you to have visibility in the general terms of how long the materials is going to be at your customers facility. Additionally, you can use aging date as a tool for managing that inventory as it approaches what you consider to be a critical point.

**AIAG.** Automotive Industry Action Group. A nonprofit trade association of North American vehicle manufacturers and suppliers.

**AICPA.** American Institute of Certified Public Accountants. Organization that establishes standards of financial accounting and reporting for the private sector.

**Algorithm.** A step-by-step problem-solving procedure.

**Allocation.** The act of reserving inventory for a specific purpose. Does not name specific inventory, and no physical movement of inventory takes place.

**Alpha Factor.** A smoothing factor used in forecast methods 03 and 04. Alpha closer to zero applies increasingly equal weight to all sales history. Alpha closer to one increasingly favors recent sales history.

**Alternate Routing.** A routing used instead of the primary routing. Results in an identical item.

**American Institute of Certified Public Accountants (AICPA).** Organization that establishes standards of financial accounting and reporting for the private sector.

**Amortization.** Some capital expenditures, primarily non-tangibles, can be amortized rather than depreciated. This method generally uses a straight-line method over a specific time period. Items that could be eligible for amortization include trademarks, certain start-up expenses, software, and other intangible assets.

**Analysis Code.** A code used to group customers or items for the purpose of pricing. Use Analysis Code Maintenance 1.8.1 to create analysis codes for groupings based on similar characteristics, such as region, salesperson, or item number. You can link codes together to form sets. Note: Analysis Codes that are used in sales order pricing differ from those created with GL Report Writer. For the GL Report Writer, analysis codes identify user-defined reporting hierarchies for grouping and linking GL elements of any of five segment types: entity, account, cost center, sub-account, and project.

**ANSI.** American National Standards Institute. The United States organization responsible for approving National Standards and the parent organization of ASC X12. This group is the recognized coordinator and clearinghouse for information in the U.S. and, in some cases, Canadian national business standards. It also serves as the North American representative to the International Organization of Standardization (ISO).

**Apache Software Foundation.** A membership-based, not-for-profit corporation that exists to provide organizational, legal, and financial support for the Apache open-source software projects.

**Applet.** A small application program that can be sent along with a Web page to a user. Applets written in Java are served from a Web site but executed on the client computer.

**Application.** A program addressing a specific business function.

**Application Program Interface (API).** A set of routines, protocols, and tools for building software applications. An API makes it easier to develop a program by providing all the building blocks. API also connects applications, usually for the purpose of sharing data.

**Applied Payments.** Payments made toward specific invoices, memos, or finance charges.

**Apportioning Method.** The method by which the total invoice amount from a third-party logistics supplier is allocated to individual line items on a purchase order.

**APS.** Advanced Planning and Scheduling. A type of planning and scheduling system that considers:

- Static item and resource data such as shop calendars, product structures, and routings
- Sources of supply and demand
- Multiple material and capacity constraints
- A set of predefined business objectives

Based on this data, the APS system determines the production schedule that best meets both the established resource constraints and the business objectives of the enterprise. See also Finite Capacity Scheduling (FCS) and Optimized Schedule.

**Array.** A field or variable with multiple elements, each element having the same data type.

**As-built Configuration.** Detailed information about the actual components making up a manufactured or configured item. Derived by examining the transaction history created by the work order on which the item is built. Can be used to update the installed base for service/support.

**ASCII.** American Standard Code for Information Interchange. Standard method for representing characters on computers.

**ASC X12.** American National Standards Institute Accredited Standards Committee X12. This committee develops and maintains U.S. generic standards for electronic data interchange. Generically, X12 refers to any of the standards that have been published by the ANSI ASC X12 committee as well as any of the industry-specific standards that are a subset of any ANSI X12 standard.

**ASN.** Advance Ship Notice. An electronic document derived from a shipper document and sent by a supplier to a customer when a shipment leaves the supplier site, informing the customer that the shipment is on the way. ASN formats are defined for various international standards; for example, an 856 Transaction Set per ANSI ASC X12. An ASN takes the place of an invoice in some supplier-customer arrangements. See Electronic Data Interchange (EDI).

**Assay.** A test of the physical and chemical properties of a sample.

**Assay Percent and Grade.** Assay percent and grade can be important when allocating items. Specific formulations can require a minimum assay percentage or grade. Review these values prior to allocating or picking ingredients. An assay is a test of the physical and chemical properties of a sample. Grades are created by the sub-labeling of items to identify their particular makeup and to separate one lot from other production lots of the same item. Graded products include raw materials, intermediates, or finished goods. Grades may determine the price charged for the finished product.

**Assemble to Order (ATO).** To assemble an end item from stocked assemblies according to a customer order. ATO describes one type of configured product, which must be assembled on a final assembly work order. An ATO item is contrasted with a kit, which requires no assembly. See Kit.

**Assembly.** A group of components that, when put together, make up an end item or a higher level configuration.

**Assembly Items List.** A list of items and subassemblies used in manufacturing an assembly.

**Asset Account.** A GL account used to track the acquisition cost of a fixed asset.

**Asset Suspense Account.** A GL account used to track the remaining value of a fixed asset when it is disposed of.

**ATP.** Available to Promise. The uncommitted portion of inventory or planned production, maintained in the master schedule to support customer order promising. ATP quantity is the uncommitted inventory balance in the first period and is normally calculated for each period in which a Master Production Schedule (MPS) receipt is scheduled. In the first period, ATP equals on-hand inventory less customer orders due and overdue. In any period containing MPS scheduled receipts, ATP equals MPS minus customer orders for the period and all subsequent periods before the next MPS scheduled receipt. A negative ATP reduces prior period ATP.

**Attribute.** A property, such as a variable, encapsulated in a component. Properties define a component's appearance and state.

**Audit Profile.** A record associated with a specific database table that contains information that controls the table auditing, including a detailed list of fields and field types in the table, a logical field that determines whether auditing is enabled, and a list of delete event keys associated with the table.

**AUTHNBR Unique Days.** Number of days an authorization number must remain unique, when authorization numbers are included in schedule requirement detail.

**Authorized Excess Transportation Code (AETC).** A shipping term consisting of a combination of reason code, responsibility code, and authorization code. The reason code usually indicates who is responsible—customer or supplier—for excess freight on a shipment.

**Available.** An inventory status that indicates to the system that items can be used to fill demand.

**Available (Shift) Hours.** Number of weekly shift hours available for production. The system calculates shift hours based on holidays and the shift calendar or shop calendar.

**Available Inventory.** On-hand inventory balance less allocations, backorders, and quantities held for quality problems. Often called beginning available balance.

**Available to Allocate.** Based on the calculation specified in the Sales Order Control program:

- The quantity on hand less what has already been promised to other orders
- Sales orders due to ship in the very near future
- Manufacturing orders which have been released to the shop floor

Future requirements or sources of supply are not considered by this calculation.

**Available to Promise (ATP).** The uncommitted portion of inventory or planned production, maintained in the master schedule to support customer order promising. ATP quantity is the uncommitted inventory balance in the first period and is normally calculated for each period in which a Master Production Schedule (MPS) receipt is scheduled. In the first period, ATP equals on-hand inventory less customer orders due and overdue. In any period containing MPS scheduled receipts, ATP equals MPS minus customer orders for the period and all subsequent periods before the next MPS scheduled receipt. A negative ATP reduces prior period ATP.

**Available Work.** Work on hand and ready to be performed. Differs from scheduled work that may not yet be physically on hand.

**Average Costs.** A costing method that keeps a running average of an item's costs. A simple weighted average is used to track material and labor costs, while overhead is tracked as a standard cost. Each time a receipt is processed, the average cost of the item is recalculated and inventory is revalued. Also known as normal costing.

**Average Costs Per Unit.** The total cost to produce a quantity of goods divided by the total number of units.

**Average Demand Method.** The way in which the average demand for an item over a specified period is calculated. The source of demand information, as well as the length of the period used in the calculation, can vary between methods.

**Average Weeks of Coverage.** The factor specifying an item's desired global inventory coverage level. Affects either family plans or operations plans, depending on when you calculate target inventory levels. Used by plan calculations to determine target inventory levels based on sales forecasts.

**Averaging Interval.** The time unit used in calculating averages. A larger averaging interval causes the average to be less affected by large variations.

## B

**Backflush.** (1) The automatic recording of component/raw material issues based on (a) the quantity of end items received and (b) the quantity per of the component from the end items bill of material. Can be used for both work order and repetitive production. (2) Calculates the quantity completed for the base process using Work Order Receipt Backflush (16.12). The backflush quantity for the base process is used to calculate the issue (backflush) quantities for the co-products and by-products.

**Backlog.** (1) All customer orders received but not shipped. Also known as open orders. (2) The difference between work input and output at a work center. Also known as queue.

**Backlog Plan.** Plan that includes projected number of open orders for a given product line at a given site in any month. Also records the actual number for comparison.

**Backorder.** An unfilled portion of an order or commitment. Represents an immediate (or past due) demand against an item where inventory is insufficient to satisfy demand.

**Back Scheduling.** A scheduling technique that begins with the due date for an order and works backward to determine the required start date and/or due dates for an operation.

**Balance.** (1) Equality between the totals of the credit and debit sides of an account. (2) The difference between the totals of the credit and debit sides of an account.

**Balance Sheet.** An itemized statement that lists the total assets and the total liabilities of an entity to portray its net worth, or shareholder's equity, at a given moment of time. The amounts shown on a balance sheet are generally the historic cost of items and not their current values.

**Bank Statement.** Statement reporting all transactions in the accounts held by the account holder.

**Bar Code.** A series of alternating bars and spaces printed or stamped on parts, containers, labels, or other media representing encoded information that can be read electronically.

**BASDA.** Business and Accounting Software Developers Association. Recognized within the software development industry and various standards organizations as the authority on the introduction of the euro and its effects on accounting software packages.

**Base Currency (BC).** The currency in which all entities within a domain conduct business. Exchange rates must exist between the base currency and any foreign currencies specified on transactions. BC is specified in Domain/Account Control and used for recording all transactions.

**Base Currency Account.** An account denominated in the functional base currency of the domain.

**Base Increase/Decrease.** A constant multiplier applied to monthly forecast quantities.

**Base Percent.** The portion of an item or trailer charge amount that is taxable.

**Base Process.** A process resulting in the production of co-products and by-products. Has an item master number and a BOM or formula code specifying the co-products and by-products. Components can be linked to it, but these are not required.

**Base Value.** The item price or cost.

**Basis.** Value used for calculating depreciation as the depreciation base. The depreciable basis is the fixed-asset acquisition cost minus any salvage value.

**Batch.** (1) A standard run or lot size, determined by container size, convention, line rates, and/or standard run length. (2) In Fixed Assets, a group of similar fixed assets added together into the system. Fixed-asset batches have no relation or similarity to batches used in other financial modules. (3) A group of transactions processed together.

**Batch Number/ID.** Manufacturing: A number used for tracing groups of work orders through a batch-oriented process. Technical: An ID for tracking a group of transactions processed together. Consignment Inventory: Every time that the customer says they've used something and we give that batch of information an audit ID or a batch ID. That allows you to do some research and reconciliation in the event there are any questions between you and your customer as to how much they've used, how much they're getting billed for, etc.

**Batch Processing.** A computer technique where transactions are accumulated and processed together.

**Batch Work Order.** A streamlined work order that does not yet have a bill or routing. Operations Plan Explosion generates work orders to satisfy end-item plan demands. For items defined as co-products, the explosion creates batch work orders (Status B) for the base process. When you change the work order status from B to F, the system generates firm planned work orders for the co-products and by-products associated with the base process. See Firm Planned Work Order.

**BC.** Base Currency. The currency in which all entities within a domain conduct business. Exchange rates must exist between the base currency and any foreign currencies specified on transactions. BC is specified in Domain/Account Control and used for recording all transactions.

**Before Image File.** The mechanism used for storing changes made to data in the database. It is primarily used to restore the internal integrity of the database if processing errors occur.

**Beginning Available Balance.** Available inventory.

**Belgisch-Luxemburgs Wisselinstituut (BLWI).** A public institution responsible for collecting and processing information relating to the balance of payments of the Belgium-Luxembourg Economic Union. BLWI codes apply to certain transactions between Belgian and Luxembourgian companies.

**Best Fit Method.** Of the possible system-defined forecast methods (01-06), the best fit method calculates forecast using the other system-defined methods and chooses results with the least mean absolute deviation.

**Best Pricing.** SO/SQ/RMA Issues Pricing Menu 1.10.1 is used to establish price lists that follow the best pricing model.

**BI.** Business Intelligence. The process of gathering and analyzing corporate data to aid in decision-making and strategic planning. You typically use BI tools in the areas of customer profiling and support, market research, product profitability, statistical analysis, and inventory and distribution analysis.

**Billable.** Charges incurred that are to be invoiced.

**Bill In Arrears.** To bill a customer for a service after it is performed.

**Bill of Labor.** A list of key resources needed to manufacture one unit of a specified product. Shows the timing and duration of each resource relative to the due date of the product. Used with a master production schedule to determine the total load on each resource by time period. Also known as bill of resources or product load profile.

**Bill of Lading (BOL).** Detailed breakdown of a shipment; for example, products shipped, total weight of product, and containers used for packing. Typically, this is a third-party carrier's contract and receipt for goods transported between two points and deliverable to a specified individual.

**Bill of Material (BOM).** A listing of all subassemblies, components, and raw materials of a parent assembly. Shows the quantity of each required to make one parent assembly. Also called a product structure or formula. Used with a master production schedule to determine items for which purchase requisitions and production orders must be released.

**Bill of Resources.** A list of key resources needed to manufacture one unit of a specified product. Shows the timing and duration of each resource relative to the due date of the product. Used with a master production schedule to determine the total load on each resource by time period. Also known as bill of labor or product load profile.

**Blanket Purchase Order.** A long-term commitment to a supplier for products, against which short-term releases are generated to satisfy requirements. When needed, a release is made against the blanket order, resulting in a purchase order.

**Blending.** The process of physically mixing two or more lots of material to produce a homogeneous lot.

**Blow-Through.** A product structure coding and structuring technique used primarily for phantom (non-stocked) subassemblies. Permits MRP logic to bypass a phantom item to determine requirements for the phantom item's components. Usually retains the ability to net against occasional inventories of the phantom item. See Phantom.

**BLWI.** Belgisch-Luxemburgs Wisselinstituut. A public institution responsible for collecting and processing information relating to the balance of payments of the Belgium-Luxembourg Economic Union. BLWI codes apply to certain transactions between Belgian and Luxembourgian companies.

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**BOM Code.** A code uniquely identifying a product structure or formula.

**BOM Explosion.** Demand for components of a parent item calculated by multiplying parent item requirements by component usage quantity specified in a bill of material.

**BOM Type.** A code specifying the type of BOM and routing to be used on a preventive maintenance schedule associated with a contract.

**Book Inventory.** An accounting definition of inventory units and/or value obtained from perpetual inventory records rather than by actual count.

**Bookmark.** A saved link to a Web page that has been added to a list. Bookmarks are found on the Favorites menu in Internet Explorer.

**Book Service Date.** The service date used for calculating depreciation.

**Bottleneck.** Any facility, department, or work center delaying production. Usually a work center where work orders arrive faster than they leave.

**Browse.** An inquiry program that displays records in a tabular format. Browse types include look-up and drill-down browses. Drill-down browses can be specified on the menu or associated with a field. Look-up browses are always associated with individual fields for use in selecting entry values. See also Drill-Down Browse and Look-Up Browse.

**Browser.** An application used to view and navigate the World Wide Web and other Internet resources. Common browsers include Microsoft Internet Explorer and Netscape Navigator.

**Bucket.** A system in which information is accumulated into time periods such as weekly or monthly.

**Bucketless System.** A system where time-phased data is processed, stored, and displayed using dated records rather than defined time buckets.

**Budget Group.** A group of GL accounts within a budget.

**Buffer Maximum.** The maximum amount of material allowed in a kanban supermarket when all the cards for a loop are full.

**Burden Cost.** A variable overhead cost that varies with an item's manufacturing time. Cannot be directly related to individual products. Examples are heating, rent, and maintenance.

**Burden Rate.** A cost, usually in dollars per hour, normally added to the cost of every standard production hour to cover overhead expenses.

**Business Intelligence (BI).** The process of gathering and analyzing corporate data to aid in decision-making and strategic planning. You typically use BI tools in the areas of customer profiling and support, market research, product profitability, statistical analysis, and inventory and distribution analysis.

**Business Relation.** A general address record that can be connected to more specific instances of relationship types such as customers, suppliers, and entities.

**Business Unit.** Any supplying or manufacturing organization in a supply chain that uses Enterprise Material Transfer functionality. Also called entity. See also, Primary Business Unit (PBU) and Secondary Business Unit (SBU).

**Buyer.** The individual responsible for purchasing. Buyer duties include vendor selection, negotiation, order placement, and follow-up as well as evaluation of new materials or processes, evaluation of vendor performance, and value analyses.

**By-product.** A product that is an incidental result of a process and usually has little sales value. Recyclable products and waste products are types of by-products.

## C

**Calendar Days.** All days of the year. Calendar days include both workdays and non-workdays. Calendar days are usually used to schedule purchase order due dates.

**Call.** Any type of contact that generates a service response, ranging from a phone call from a customer. For example, a service visit or a call by a field technician.

**Call Activity Recording (CAR).** The process of recording actual time, materials, and expenses consumed in handling a call.

**Call Escalation.** The automatic forwarding of calls not resolved within a certain time.

**Call Invoice Recording (CIR).** The generation of pending invoices based on activity managed in call activity recording.

**Call Management.** Processes and tools for managing the solution of a service contact.

**Capacity.** The maximum work load for a work center, machine, and so on.

**Capacity Management.** The establishing, measuring, monitoring, and adjusting of capacity levels for the long, medium, and short range. Determines the resources required to meet production schedules. Includes resource planning, capacity requirements planning, and input/output control.

**Capacity Requirements Plan (CRP).** The determination of labor and machine resources required to accomplish the tasks of production. Used for medium-range capacity management to determine and then provide the resources required to meet detailed item schedules established by MRP.

**Capped Tax.** A tax having a maximum amount. For example, tax is assessed only on the first \$700.00 of the transaction amount.

**CAR.** Call Activity Recording. The recording of actual time, materials, and expenses consumed in handling a call.

**Carrier.** A business entity responsible for the transportation of goods.

**Carrying Cost.** Costs involved in storing and maintaining inventory. Includes invested capital invested, taxes, insurance, obsolescence, and spoilage. Carrying cost is usually represented as a percent of the value per unit of time, usually one year.

**Cascading Style Sheet (CSS).** A Web page derived from multiple sources with a defined order of precedence to manage conflicts among style element definitions. The cascading style sheet, level 1 (CSS1) recommendation from the W3C is implemented in the latest versions of the Netscape and Microsoft Web browsers.

**Cash Book Maintenance.** Used to reconcile all of the activities for a given bank, such as cash receipts, payments, and service charges with the goal of having the bank statement balance with the appropriate GL cash accounts.

**Category.** An item classification created by the user.

**Cellular Manufacturing.** A manufacturing process that produces families of items within a single line or cell of machines operated by machinists who work only within the line or cell.

**Certification.** A required examination, test, or other evidence of accomplishment that establishes a minimum level of competency within a substantive subject area.

**CGI.** Common Gateway Interface. A standard way for a Web server to pass a Web user's request to an application program and to receive data in response, which it then forwards to the user. CGI is part of the Web's hypertext transfer protocol (HTTP). See also HTTP (Hypertext Transfer Protocol).

**Change Management Records.** Records that track pending changes made to EMT sales orders during their life cycle. When a change is accepted or rejected, the record is deleted.

**Changeover.** The refitting of equipment to neutralize the effects of just-completed production, or to prepare for production of the next scheduled item.

**Changeover Time.** The time needed to set up or refit a work center or piece of equipment to produce a different item, independent of the quantity to be produced. Also called setup time.

**Channel.** Identifies the distribution channel through which this sales quote, order, or invoice originated.

**Character User Interface.** QAD Enterprise Applications interface that displays only keyboard characters on the screen rather than icons and forms. Compare with Graphical User Interface (GUI). Sometimes abbreviated as CUI or CHUI.

**Charge Code.** (1) In a service context, a code used to determine payment responsibility for work recorded against a call. Usually, a single charge code is defined for warranty, contract, covered, giveaway, billable, and fixed billable. Sometimes an additional charge code is defined for a particular project or service. (2) In Logistics Accounting, charge codes represent logistics charges incurred and payable to a third-party supplier when purchasing or shipping items.

**Charge Product Line.** The product line used to provide non-sales related general ledger account numbers for the cost of activity recorded against a call.

**Charge Type.** A code corresponding to a service type defined in RMA/RTS Control that enables you to modify the level of service provided for individual line items on an RMA.

**Chart of Accounts (COA).** List of all account names and numbers used in an entity's General Ledger. The chart of accounts consists of balance sheet accounts (assets, liabilities) and income statement accounts (revenues, expenses, gains, losses).

**CHUI.** Character User Interface. QAD Enterprise Applications interface that displays only keyboard characters on the screen rather than icons and forms. Compare with Graphical User Interface (GUI).

**CIM.** Computer Integrated Manufacturing. An electronic bridge networking separate computer systems into a coherent, integrated whole.

**CIM Data Loading.** An automated process for importing data, usually from non-QAD Enterprise Applications databases. CIM load emulates entering data through the user interface (UI) and performs all UI validations.

**CIM Interface.** A program that imports transaction data from an external file or system and loads it into QAD Enterprise Applications.

**CIR.** Call Invoice Recording. The generation of pending invoices based on activity managed in call activity recording.

**Class.** In Fixed Assets, classes group fixed assets with common characteristics such as:

- GL accounts
- Depreciation books
- Service lives for calculating depreciation
- Depreciation methods

**Classification.** A descriptor used in ISB to describe or classify a set of data in QAD Enterprise Applications in ascending detail down the nodes in a hierarchical tree.

**Closed Loop MRP.** A system for production planning, control, and execution built around MRP, in which all functions are included in the system and all provide feedback to keep the resulting production plan valid. The plan is then executed using MRP, shop floor control, and purchasing. See Manufacturing Resource Planning (MRP II).

**Closed Work Order.** A work order for which products have been received into inventory and there are no outstanding component requirements or labor time tickets.

**Closing Rate Method.** A method used to translate financial statements. The closing rate method translates all assets and liabilities with the closing exchange rate effective at the time of reporting. This approach is based on the view that a foreign subsidiary is a unit separate from the domestic parent company.

**CN.** Credit Note. A document that records a credit (decrease) in a customer's balance, usually due to errors or other types of adjustments.

**CODA.** Distributed file system that makes files available to a collection of client computers as part of their directory tree. Used for the electronic exchange of bank statements.

**Code.** A unique combination of letters and/or numbers identifying a specific record.

**COGS.** Cost of Goods Sold. Material cost of items sold. Usually does not include labor.

**Collection.** Grouping of payment selections (supplier or employee) or an automatic collection (customer).

**Column Group.** A set of user-defined columns that identify the data, period, and calculations used when the column group is added to a report in the GL Report Writer.

**Column Type.** An attribute of a column in a group. Values for column types are:

- Actual. Actual posted amounts are included in the column.
- Budget. Budgeted amounts are included in the column. (A budget code is specified to indicate the budget for extraction.)
- Calculation. The column is a function of columns.

**Comma-Separated Values (CSV).** Sometimes referred to as flat files, CSV files organize values as a series of ASCII text lines where each column value is separated by a comma from the next column's value and each row starts a new line. Data in CSV files can be conveyed as input to other table-oriented applications such as Microsoft Excel.

**Common Business Practice.** A common practice or procedure followed by the business community.

**Common Gateway Interface (CGI).** A standard way for a Web server to pass a Web user's request to an application program and to receive data in response, which it then forwards to the user. CGI is part of the Web's hypertext transfer protocol (HTTP). See also HTTP (Hypertext Transfer Protocol).

**Component.** (1) Raw material, part or subassembly that goes into a higher level assembly, compound, or other item. Manufacturing plants use component information to determine how much of each material is required to assemble an item. (2) In Fixed Assets, a component is part of a fixed asset if the asset contains more than one item. For example, a computer is a fixed asset that contains three components: the mouse, keyboard, and CPU.

**Composite Lead Time.** The longest possible length of time it takes to have an item/product available if you start today with no components in stock or production. For any item planned through MRP, lead time is found by reviewing the lead time for each bill of material path below the item, and taking the largest time.

**Compound Interest.** Interest on accumulated unpaid interest and on the original principal.

**Computer Integrated Manufacturing (CIM).** An electronic bridge networking separate computer systems into a coherent, integrated whole.

**Concurrent Session.** An individual QAD Enterprise Applications session that was launched against an QAD Enterprise Applications database at the customer site and uses QAD Enterprise Applications application software. Contrast with Named User or Location.

**Configured Messaging.** The process in which a system message is tied to a program name and a user-determined error severity level.

**Configured Product.** A product in which different end-item combinations can be made from a relatively small number of assembly options.

**Confirm Date.** The date the customer confirmed the sales quote.

**Connection Domain.** A domain associated with a connected database, not the current working database.

**Consignment.** Describes the process of a supplier placing material at a customer location without receiving payment until after the goods are used or sold.

**Consolidated Entity.** A separate entity that consolidates the financial results of a company and its subsidiaries. The only accounting activities that occur in this entity are parent consolidation entries, subsidiary consolidation entries, and consolidation adjustments. Entries made in the consolidated entity are not pushed back to the operating entities.

**Consolidation.** The addition of the accounting records for two or more business units, subject to rules dictated by accounting practice and legislation. Translation is necessary when the business units are in different base currencies.

**Consolidation Domain.** Refers to the domain where consolidation takes place. This can be a domain set up specifically for this purpose only, but this does not have to be the case. You can use a domain that represents an active business operation in the database.

**Consolidation Entry.** An unposted GL entry created in the consolidated entity. The consolidation entry imports the financial period activity of the subsidiary and parent entities to the consolidated entity and translates the data according to either the closing rate method or temporal rate method.

**Consolidation Set.** A way of identifying the group of subsidiary entities with GL transactions that need to be reported by a parent entity. The system uses attributes of the consolidation set to manage the GL consolidation process.

**Construction in Process Account.** A GL account used to track the purchase cost of a fixed asset.

**Consume Forecast.** Determines whether the quantity ordered consumes available forecast.

**Consuming Destination.** The point of usage for a kanban-controlled item.

**Container.** A packing item used to hold goods and subsets of other containers such as a box, pallet, rack, or trailer.

**Container ID.** A unique number assigned by the system to a specific container for a specific shipment.

**Containerization.** A shipment method in which commodities are placed in containers, and, after initial loading, are not rehandled until unloaded at the destination.

**Contract Billing.** The process of creating a customer invoice based on an agreed-upon price for contract coverage.

**Control Account.** An account that takes the place of individual accounts after they are moved to the sub-ledger. It shows the debits and credits in summary form. The debits and credits can be found in detail in the sub-ledger. When sub-ledgers are used, each amount is posted twice: once to the sub-ledger and once to the general ledger control account. The sum of the individual account balances in the sub-ledger should be equal to the balance in the GL control account.

**Control File.** Control files are actually not “files” but database records and are used to setup and configure various functions of QAD Applications. Typically control “files” or control records are defined during the implementation process and control settings are determined by analysis of the business processes that are required at the time of application installation.

**Controlled Entry.** In kanban transaction processing, a method of specifying control criteria to prevent users from inadvertently recording the wrong cards.

**Controlled Substances.** A set of control and reporting functions for monitoring compliance with regulatory agency requirements.

**Controlling Hierarchy.** In the GL Report Writer, an analysis code used to produce a full iteration of a report definition for each node in a hierarchy.

**Control Programs.** Programs defining how processing takes place within the system. Can be as simple as maintaining the next customer number or as complex as defining product allocation rules. Should be initialized before using any module in the system.

**Control Record Structures.** In EDI eCommerce, EC subsystem-dependent exchange file definitions indicating:

- How exchange file records are identified during import or created during export.
- Which record in the exchange file and which positions in the record contain the trading partner and trading partner document IDs retrieved during import or created during export.

**Conventions.** A method for averaging depreciation in the first and last year of a fixed asset’s life. This is required because assets are not always acquired on the first day of the year or disposed of on the last day of the year. The system supports the following conventions:

- Full Period
- Half Period
- Next Period
- Full Quarter
- Half Quarter
- Full Year
- Half Year
- Modified Half Year Version 1

- Modified Half Year Version 2

**Cookie.** Information a Web site puts on your hard disk so that it can retrieve information about you at a later time. Typically, a cookie records your preferences when using a particular site.

**Co-product.** A product that is the intended result of a base process, and which typically has sales value. The primary difference between co-products and by-products is that MRP plans a base process to satisfy demand for co-products, but not for by-products.

**Copy Code.** Used with analysis codes by the GL Report Writer to copy a defined item, row group, or column group. Allows for efficient setup of new records.

**Corporate Group.** An optional code for grouping business relations for reporting.

**Corporate Performance Management (CPM).** An umbrella term for the processes, methodologies, metrics and systems used to measure and manage performance.

**Correction Invoice.** A document containing corrected information for an invoice that has already been posted.

**Correction of Accounting (COA) Operation.** A method commonly used in Central and Eastern Europe in which balancing entries are used to reverse previous debit and credit activity. Preferred in some countries because it provides a clear view of how debit and credit activity is affected by corrections.

**Cost.** The amount required to purchase a fixed asset.

**Cost Allocation.** A method for assigning costs to co-products.

When using standard costs, enter co-product allocation percentages in Co/By-Product Maintenance (15.12.1).

When using average and last costs, co-product allocation percent is determined by the allocation method selected in Average Cost Method Maintenance (15.12.5).

**Cost Center.** Optional component of an account number defined in GL setup functions. Other components of an account number are account, sub-account, and project code. Cost centers provide additional detail on GL reports and are used with budgets.

**Cost Center Budgets.** Budgets used to monitor cost and revenue during the accounting year for a cost center.

**Costed Product Structure.** An indented list of raw materials, items, and subassemblies making up a parent assembly, with required quantities and costs for each item. The cost of each item is multiplied by the quantity required to give total cost for the parent assembly.

**Cost of Goods Account.** The general ledger account used to record costs of products shipped to a customer.

**Cost of Goods Sold (COGS).** Material cost of items sold. Usually does not include labor.

**CPM.** Corporate Performance Management. An umbrella term for the processes, methodologies, metrics and systems used to measure and manage performance.

**Credit.** An entry on the right side of an account. Credits increase liabilities, equity, and revenues and decrease assets and expenses.

**Credit Note (CN).** A document that records a credit (decrease) in a customer's balance, usually due to errors or other types of adjustments.

**Credit Terms.** Payment codes designating due dates, early payment discounts, and interest for customers and suppliers.

**Criteria Template.** A group of variables used to characterize a forecast calculation.

**Critical Path.** The shortest length of time required to manufacture a product.

**Critical Ratio.** A calculation used by dispatching to set priorities. Calculated by dividing the time remaining until the due date by the time remaining to complete the work order. A ratio of 1 means the work order is on time. Less than 1 means the order is late. Greater than 1 means the order is ahead of schedule.

**Cross-sell Item.** An item sold in addition to a requested item to increase revenue or as a promotion for an item. Cross-sell items are not replacement items for the requested items.

**CRP.** Capacity Requirements Plan. The determination of labor and machine resources required to accomplish the tasks of production. Used for medium-range capacity management to determine and then provide the resources required to meet detailed item schedules established by MRP.

**Crystal Reports.** An industry-standard reporting tool that integrates with most database applications. Performs data retrieval, and provides design and formatting functions to create customized reports.

**CSS.** Cascading Style Sheet. A Web page derived from multiple sources with a defined order of precedence to manage conflicts among style element definitions. The cascading style sheet, level 1 (CSS1) recommendation from the W3C is implemented in the latest versions of the Netscape and Microsoft Web browsers.

**CSV.** Comma-Separated Values. Sometimes referred to as flat files, CSV files organize values as a series of ASCII text lines where each column value is separated by a comma from the next column's value and each row starts a new line. Data in CSV files can be conveyed as input to other table-oriented applications such as Microsoft Excel.

**CUI.** Character User Interface. QAD Enterprise Applications interface that displays only keyboard characters on the screen rather than icons and forms. Compare with Graphical User Interface (GUI).

**Cum Received.** The cumulative total received by the customer. Basically, the difference between Cum Shipped and Cum Received is the quantity of goods in transit at the time of schedule release creation. This can also cover goods which are the subject of a quality dispute or other disagreement. QAD Enterprise Applications works from the viewpoint of Cum Shipped in demand calculations so that in-transit goods are not manufactured twice.

**Cum Required.** The gross cumulative quantity on order at any point in a customer schedule.

**Cum Shipped.** The cumulative total shipped by the supplier.

**Cum Start Date.** The date a scheduled order shipment began accumulating quantities.

**Cumulative Accounting.** A method of tracking shipments and receipts in which trading partners maintain running totals of required and shipped/received quantities.

**Cumulative Lead Time.** The longest possible length of time it takes to have an item/product available if you start today with no components in stock or production. For any item planned through MRP, lead time is found by reviewing the lead time for each bill of material path below the item, and taking the largest time.

**Cumulative Manufacturing Lead Time.** The cumulative planned lead time when all purchased items are assumed to be in stock.

**Cumulative Order.** An order accumulating costs of repetitive production. Can be entered manually, or created by the system whenever repetitive feedback is entered for an item and site.

**Currency Code.** A code that identifies monetary units and forms the basis of exchange rate relationships. Each database has one base currency, but you can specify foreign currencies during sales, purchasing, service, and accounting transactions.

**Currency Conversion.** Restating a monetary amount in a different currency. Also known as currency translation.

**Currency Translation.** Restating a monetary amount in a different currency. Also known as currency conversion.

**Current Exchange Rate.** The exchange rate in effect at reporting or transaction time, which is used to convert the amount from the transaction currency to the base currency.

**Custodian.** Employees responsible for tracking the location of fixed assets.

**Customer Dock.** Identifies dock location within the customer's site for material to be delivered

**Customer Invoice.** The accounting record for an invoice that was generated in the Sales Orders/Invoices module, or was manually entered in the Accounts Receivable module. Different daybook codes should be defined to ensure that separate numbering is used for manually entered customer invoices rather than those posted from the Sales Orders/Invoices module.

**Customer Item.** Item which customer orders but using their own item number.

**Customer Job.** Customer supplied ID. Identifies customer's production process. Can contain alphanumeric values.

**Customer Order.** A request for a product or a number of products to be delivered by a specified date. Often referred to as an actual demand, as distinct from a forecast demand.

**Customer Reference.** Identifies the customer's end item. Examples:

- VIN (automotive)
- Serial Number

Also used as an ID to track sequences (must be unique).

**Customer Schedule.** A cumulative, schedule-driven sales order from a customer with multiple line items from which releases of shipments are issued.

**Customer Sequence.** Customer supplied ID. Identifies order of assemblies in their production process. Can contain alphanumeric values

**Customer Services.** A set of functions including the Project Realization Management module, used for creating and managing installation projects, and the Service/Support Management module, used to track activities related to after-market service.

**Custom Table.** Depreciation tables used as a substitute for the standard depreciation methods when calculating depreciation. Depreciation is calculated by specifying a depreciation factor for each period and year of the asset's life.

**Cycle.** (1) The interval of time during which a system or process, such as a seasonal demand or a manufacturing operation, periodically returns to similar initial conditions. (2) The interval of time when an event or set of events is completed.

**Cycle Code.** Specifies the frequency with which sales orders are released from a quote.

**Cycle Count.** A cycle count records the number of items physically counted, compares that number with the system quantity-on-hand, and (optionally) updates quantity-on-hand to equal the number counted.

**Cycle Counting.** A physical inventory technique where inventories are counted on a periodic basis rather than once a year. Can be taken when an item reaches its reorder point, when new stock is received, or on a regular basis. High-value, fast-moving stock is generally counted more frequently than low-value, slow-moving items. The most effective cycle counting systems require counting of a certain number of items each workday.

**Cycle Time.** The time interval between completions of individual items produced by a manufacturing process. Since multiple process operations run simultaneously, cycle time is typically the longest run time required by a single operation.

**Cyclical Redundancy Check (CRC).** An algorithm used by PROGRESS to verify the integrity of a source file by comparing an internally tagged number with the same number in a called file or database schema. PROGRESS generated r-code contains the CRC value of the schema against which it was compiled. Whenever the schema is modified and a new CRC value is produced, those programs containing the old CRC value must be re-compiled or PROGRESS will consider the programs invalid when executed.

## D

**Database.** A collection of logically related tables and records. Each database can have only one base currency, GL calendar, and chart of accounts. When a multiple database environment is established, distributed functionality enables planning and execution across databases.

**Database Management System (DBMS).** A collection of programs that enables you to store, modify, and extract information from a database.

**Data Definition Language (DDL).** This is a language used to describe changes to the schema to the Progress DBMS. Progress provides tools for reading and writing these command files. All schema changes are in this form.

**Data Encryption.** Conversion of data into a form that cannot be easily intercepted by unauthorized people.

**Data File.** A collection of related data records organized in a specific manner in a computer system.

**Data Folder.** A business UI component that displays the fields the user will edit or view. The fields exist in the application's primary table; that is, the table with the fields the application requires to perform its business function.

**Data Item.** The smallest element of data in a database.

**Data Record.** A collection of related data items.

**Data Record Structures.** The records comprising each electronic business document implemented in EDI eCommerce in a standards neutral format (SNF). These record definitions are used for both the exchange files and the document repository.

**Data Retrieval Code.** In GL Report Writer, either an analysis code or a basic GL item (account, sub-account, and so on) used to extract data from GL tables. Used in data rows, actual or budget columns, and in report records. A set of data retrieval codes, including one of each GL type, constitutes a query specification.

**Date-driven Segment.** A displayed value in an NRM numbering sequence that depends on the transaction effective date or the fiscal period corresponding to the effective date. The effective date is supplied by the program using NRM. The format is a compound string that allows for optional display of date components (year, month, week, day), including delimiters between components; for example, 06:15:97. Each sequence can have one date-driven segment, or none, but not more than one.

**Daybooks.** Also known as journals. Method of grouping GL transactions for satisfying legal reporting requirements or for organizing GL reporting in a manner consistent with common business practices. Multiple daybooks can exist at any time. Transactions can be grouped in daybooks by transaction type and transaction- document type. A daybook can be composed of multiple journal entries.

**Daybook Set.** Groups of daybooks used in transaction processing. Used by the system to determine the daybook to apply to the invoice at invoice print.

**Days Until Expire.** Specifies the normal length of time quoted prices are good for. After this time, a quote expires and prices must be renegotiated. See Sales Quote Control.

**DBMS.** Database Management System. A collection of programs that enables you to store, modify, and extract information from a database.

**Debit.** A record of indebtedness. Debits are entered on the left-hand side of an account, and constitute an addition to an expense or asset account or a deduction from a revenue, net worth, or liability account.

**Debit and Credit Separation.** Users can view debit and credit activity separately in the GL by running Account Balance Inquiry (25.13.17), Account Balance Detail (25.15.2), and reports generated by GL Report Writer (25.21).

**Declarant.** A company address that is responsible for reporting Intrastat transactions.

**Declining-balance Method.** An accelerated depreciation method that provides higher depreciation charges in the earlier years of asset life and lower depreciation charges in the later years. The annual depreciation is calculated by using a constant depreciation percentage rate and multiplying it by the remaining net book value each year of the asset's service life. This method does not depreciate an asset to zero.

**Declining Balance Switch to Straight Line.** A declining-balance method that switches to the straight-line method when the depreciation calculated by straight-line is greater than the depreciation calculated by the declining-balance method. This method fully depreciates the asset.

**Default.** Information used or action taken by the system if a user does not specify different information.

**Default Domain.** The domain a user typically works in. Each user is assigned a default domain that displays during log-in.

**Deferred Revenue.** In deferred accounting, collected revenue is held in a deferred account and is posted periodically. Deferred revenue is a billing option for service contracts that are billed at the beginning of the service duration.

**Delete Event Key.** Fields used to identify deleted records in the audit database. Initially, the primary index fields for each database table are defined as delete event keys. Users can add additional keys as needed.

**Delivery Schedule.** The required and agreed time or rate of delivery of goods or services purchased for a future period.

**Demand.** A need for a product or a component. Can come from a customer order, forecast, and so on.

**Demand Pattern.** Seasonal pattern of demand such as summer, fall, Christmas.

**Demand Percent.** The percent of total item demand required by each supermarket. This percentage is relevant when a source (process, supplier, or supermarket) supplies a kanban item to multiple supermarkets, and a kanban loop has been defined between each supermarket and the process.

**Demand Pull.** The triggering of material movement to a work center only when that work center is ready to begin the next job.

**Denomination.** A denomination of a currency is a way of expressing that currency, while retaining its link with the originating currency. For example, during the transition to the euro, the French franc was considered a denomination of the euro.

**Departments.** A grouping of work centers for reporting, planning, and accounting. Every work center must belong to exactly one department. CRP calculates capacity and load by department. Labor, burden, and cost of production are tracked in the general ledger by department.

**Dependent Demand.** (1) Calculated demand, not forecast, for component items and raw materials that are directly related to production of higher level assemblies or end products. (2) In operations planning, refers to end-item demands exploded from a family plan. For example, a family consists of end items A (25% of family forecast) and B (75%). If the family forecast is 100 cases, the dependent demand is 25 cases of A and 75 of B.

**Depreciable Asset.** Tangible item of value used by a business to produce income that uses depreciation to allocate its cost to periods in its service life.

**Depreciable Basis.** Value used for calculating depreciation as the depreciation base. The depreciable basis is the fixed-asset acquisition cost minus any salvage value.

**Depreciation.** The allocation of a fixed asset's cost to periods in its service life. The system supports the following depreciation methods:

- Straight Line
- Declining Balance
- Sum of the Years' Digits
- Flat Rate
- Units of Production
- Custom Table

**Depreciation Book.** Book used for tracking a fixed asset's depreciation. It can be the posting book that posts to the GL.

**Depreciation Convention.** A method for averaging depreciation in the first and last year of a fixed asset's life. This is required because assets are not always acquired on the first day of the year or disposed of on the last day of the year. The system supports the following conventions:

- Full Period
- Half Period
- Next Period
- Full Quarter
- Half Quarter

- Full Year
- Half Year
- Modified Half Year Version 1
- Modified Half Year Version 2

**Derived Cross-rates.** An exchange rate that is derived from one or two other exchange rates.

**Derived Exchange Rate.** An exchange rate derived from the established rates of two different currencies and a common third currency, such as a union currency.

**Design Mode.** An activity that lets you customize the UI by providing an interface to remove or insert UI components in the current view. Design mode can be used to control access to functionality and is typically controlled by the system administrator.

**Desktop.** An interface that lets users access QAD Enterprise Applications using a Web browser. The Desktop is designed for use over a company intranet or wide-area network.

**Destination List.** A list of application IDs registered with Q/LinQ that can be used for publishing, sending, and deleting or archiving documents. Destination lists create only one copy of a document for management and storage, minimizing disk space and performance requirements.

**Detail Allocation.** The act of reserving exact items of inventory at a specific location by specifying lot and/or serial numbers, expiration dates, sites and/or locations.

**Development Environment.** This is the environment used by developers where the program path includes files that are currently in the development directory, test directory, stage directory, or release directory, in that order.

**Device.** Any piece of hardware available to the computer, such as a disk or a printer.

**DHTML (Dynamic Hypertext Markup Language).** A combination of new HTML tags and options that support more animated and interactive Web pages. Much of dynamic HTML is specified in HTML 4.0 with Javascript and cascading style sheets. See also HTML (Hypertext Markup Language).

**Direct Delivery.** One of two possible delivery methods using Enterprise Material Transfer (EMT). The supplier delivers goods directly to the end customer, bypassing the ordering entity. The other is Transshipment.

**Direct Exchange Rate.** An exchange rate explicitly defined between two currencies.

**Direct Labor.** Labor specifically applied to a product being manufactured or utilized in the performance of a service.

**Direct Payments.** Cash, checks, and wire transfers sent by a customer.

**Disassembly.** Decomposition, separation, or processing of an item into parts, pieces, or subunits that consist of co-products and by-products. An example is the processing of meat and poultry.

**Disbursement.** Physical issuance and reporting of the movement of raw material, components, or other items from a storage room or warehouse.

**Discount at Invoice.** A practice in which tax is based on sales or purchase amount minus credit terms discounts. Discounts at invoice are calculated at order entry.

**Discount at Payment.** A practice in which tax is based on sales or purchase amount minus credit terms discounts actually taken. Discounts at payment are calculated when payments are received or generated.

**Discounted.** A document can be discounted to another party, often the bank. The beneficiary of the document transfers it to the bank and receives immediate payment of the document amount, less the charges and the discount (bank interest on the amount from the transfer date of the money till the due date of the draft). Because a draft is an unconditional payment order, it is regularly used in this context. The financial risk remains with the initial beneficiary of the draft.

**Discount Sequence.** When multiple price lists are combined (Price List Maintenance 1.10.1.1), the discount sequence controls the order of the discount amount allocation.

**Discrete.** Constituting a separate, distinct item.

**Discrete Order Quantity.** An order quantity that represents an integer number of periods of demand. See also Lot for Lot (LFL).

**Dispatcher.** The individual who assigns calls to engineers. If paging is used, can notify an engineer of an incoming call.

**Dispatch List.** (1) A listing of all manufacturing orders by priority. Contains information on priority, location, quantity, and capacity requirements of an order by operation. Usually generated daily and sorted by work center. (2) In kanban environments, a list used to move empty containers back to a supply source. See Kanban Dispatch List.

**Disposition Date.** Date of permanent removal of a depreciable asset from income producing activity. This is often referred to as the Retirement Date.

**Disposition Reason.** Reason for disposal of an asset and required input at time of disposal. Reasons include sold, stolen, destroyed, donated, and impaired.

**Distribution Items.** Typically, items that one site supplies to another site.

**Distribution Requirements Planning (DRP).** The balancing of supply and demand for items transferred between sites by calculating item requirements, creating planned orders, and managing shipment schedules and transportation.

**Distribution Resource Planning.** The extension of distribution requirements planning into the planning of the key resources contained in a distribution system: warehouse space, work force, money, trucks, freight cars.

**DNS.** Domain Name System. The way that Internet domain names are located and translated into Internet Protocol addresses. A domain name is a meaningful and easy-to-remember handle for an Internet address.

**DNS Server.** A server used by Internet access providers to map the domain names in an Internet requests or forward them to other servers in the Internet.

**Dock.** An adjunct to customer ship-to sites. Multiple docks are possible per ship-to. The dock is assigned in the customer schedule setup process.

**Document Format.** The specific printable data and form layout of a document associated with a business transaction, such as a shipment. May be dictated by locale, reason for transaction, legal requirements, or common business practice.

**Document Object Model (DOM).** A programming interface specification being developed by the W3C that lets a programmer create and modify HTML pages and XML documents as program objects, rather than data structures.

**Document Repository.** A set of tables containing all electronic business documents exchanged with trading partners using EDI eCommerce. This intermediate repository holds trading partner documents and allows them to be formatted into a state acceptable for gateway processing during import. It also allows for the consolidation of all required trading partner document data during the export process.

**Document Type.** A category identifying the type of business transaction that a printed document describes. Valid document types include shippers, invoices, credit notices, and material receivers.

**Document Type Definition (DTD).** A specification that accompanies an XML document and identifies the specific functions of the XML markup. See also Extensible Markup Language (XML).

**Domain.** A domain comprises business operations with a single currency and chart of accounts (COA), and contains one or more entities. You can have multiple domains per database and can change to another domain from within the application, provided you are an authorized user for that domain.

**Domain Name System (DNS).** The way that Internet domain names are located and translated into Internet Protocol addresses. A domain name is a meaningful and easy-to-remember handle for an Internet address.

**Downtime.** Any time when a resource scheduled for operation is not producing.

**Draft.** A bank draft is a negotiable security signed and dated by its issuer (the drawer). Similarly to a promissory note, it contains an unconditional order or instruction for the drawee to pay a fixed sum of money on the agreed due date. The debtor accepts the draft by signing it.

**Drill-down Browse.** A type of browse that is available from a menu or associated with other browse fields. You can filter, graph, and print from drill-down browses. Compare with Look-Up Browse.

**Drop Shipment.** A distribution arrangement where the seller serves as a selling agent by collecting orders without maintaining inventories. The manufacturer then ships orders directly to customers.

**DRP.** Distribution Requirements Planning. The balancing of supply and demand for items transferred between sites by calculating item requirements, creating planned orders, and managing shipment schedules and transportation.

**DTD.** Document Type Definition. A specification that accompanies an XML document and identifies the specific functions of the XML markup. See also Extensible Markup Language (XML).

**Dual Pricing.** Allows various financial documents, such as sales orders and invoices, to be expressed in two currencies. The second currency is for informational purposes only.

**Due Date.** (1) Work order: The date a product is available for issue to a shop or shipment to a customer. (2) Purchase order: The date a product is due to arrive from a vendor. (3) Sales order: The date an order is due to ship.

**Dun and Bradstreet.** A provider of business-to-business credit and business-related information for both publicly and privately held companies.

**Dun and Bradstreet Number.** A nine-digit number used as an identifier in Electronic Data Interchange (EDI) and global electronic commerce transactions. The numbers are assigned and maintained by Dun & Bradstreet. Suppliers doing business with your organization using EDI can

submit their D&B number as part of the registration and transaction processes. This number eliminates errors in electronic transactions and serves as a consistent trading partner identifier in business transactions. It is a recognized standard by global industry and trade associations.

**Dunning Letter.** A letter sent to a customer showing all open accounts receivable transactions that meet selection criteria. Severity of language in each letter sent typically increases with the length of time an AR item is unpaid.

**Dunning Level.** Code used to determine the appropriate dunning letter to issue a customer. Tracks the number of letters that have been sent to a customer and the number of times each AR item has been listed in the letters.

**Dynamic Unpeg.** The process in which peg quantities are unpegged from unconfirmed shippers and pegged to ship lines on newly created shippers for the same order line number.

## E

**EC.** Electronic Commerce. The use of computer and telecommunication technologies to conduct business.

**ECCN.** Export Control Classification Number.

**ECN.** Engineering Change Notice. A document tracking revision to a product structure, item list, or drawing authorized by an engineering department. Usually has a control number and a stated reason, such as safety or cost reduction. Must be reviewed and agreed upon by all affected departments.

**Economic Order Quantity (EOQ).** A demand rate calculation used to balance total inventory costs against order costs. The EOQ is a type of fixed order quantity that may be used to determine the optimal amount of an item to be purchased or manufactured at one time. The purpose of the calculation is to minimize the combined costs of acquiring and carrying inventory.

**EC Subsystem.** Electronic commerce subsystem. Includes the software and hardware components required for EDI eCommerce to exchange electronic business documents with trading partners. The software components of an EC subsystem commonly include data communications, document mapping and translation, and document management features such as acknowledgment, reconciliation, and archiving.

**EDI.** Electronic Data Interchange. An international protocol for electronically transmitting documents such as customer schedules, invoices, and ASNs between trading partners.

**EDI eCommerce.** The EDI component of QAD Enterprise Applications.

**EDIFACT.** Electronic Data Interchange for Administration, Commerce, and Transport. Generally used to refer to the set of international standards that were developed to enable EDI among businesses located in North America, Europe, and other geographic regions. In 1987, the EDIFACT syntax proposals were accepted by the ISO Technical Board and the number ISO 9735 was allotted. These standards are application, communications medium, and machine-independent.

**EEC.** European Economic Community.

**Effective Date.** (1) The date when a component or an operation is to be added or removed from a bill of material or assembly process. (2) Used in the explosion process to create demands for correct items. Normally, bill of material and routing systems provide for an effectivity start date

and stop date, for each relationship. Can be controlled by serial number rather than date. (3) The first date to be used by a transaction. Also known as As Of Date or GL Effective Date. (4) The date used to select tax rates and price lists for a transaction.

**Efficiency.** The relationship between planned standard time and actual time charged to a task. Calculated by dividing standard hours earned by actual direct labor hours. May be more than 100%.

**Electronic Business Document.** A business document, such as a purchase order or invoice, represented in a machine-interpretable format defined according to international, national, industry, or proprietary standards.

**Electronic Commerce (EC).** The use of computer and telecommunication technologies to conduct business.

**Electronic Data Interchange (EDI).** An international protocol for electronically transmitting documents such as customer schedules, invoices, and ASNs between trading partners.

**Electronic Signature Category.** A QAD-provided definition of a set of QAD Enterprise Applications data that can be signed as a unit in certain menu programs.

**Electronic Signature Profile.** A record that contains information that controls how electronic signatures are applied for a given signature category. It includes list of programs that create signatures, a detailed list of tables and fields included in the signed record, filters that determine whether specific records are subject to signatures, and fields that control various aspects of the signature process.

**Elimination Entries.** Adjustments made in the consolidating entity to support the concept that the parent company and its subsidiaries are viewed as a single economic entity. These adjustments eliminate any problems caused by transactions that have occurred between the two separate legal entities.

**EMT.** Enterprise Material Transfer. The automatic translation of sales orders or material orders into purchase orders and transmission to the appropriate supplier using EDI eCommerce. EMT also manages and coordinates changes so that SO (or MO) and PO information are synchronized. Multi-level EMT manages orders across multiple levels within an organization. Order changes made at the top or bottom of the hierarchy are transmitted up or down to the next level.

**EMU.** European Monetary Union. A subset of EU countries that have replaced their national currencies with a single currency, the euro. Consists of: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain. The remaining EU countries (Denmark, Greece, Sweden, and the United Kingdom) have not yet replaced their national currencies with the euro. With the exception of Greece, which does not meet the selection criteria, these countries have decided not to participate in the initial phase of the single European currency program.

**Encryption.** Conversion of data into a form that cannot be easily intercepted by unauthorized people.

**Ending Year.** The last year of historical sales data analyzed by a forecast calculation.

**End Item.** An item that is a final product in itself, for which an order or independent requirement exists. Can be a component of a different end item. Also called a parent item. In the item master table, designated by Purchase/ Manufacture codes blank, M, P, D, L, and W.

**End-item Planning.** Operations planning for end items. Typically performed in the short- to medium-term horizon (zero to six months). Used to optimize global target inventory and production levels, and to develop production schedules for supply sites and production lines. For this, operations plans are developed and maintained for every end item.

**End User.** A person who normally uses an item, requests maintenance for it, and reports problems. Each sold-to customer can have many end users.

**Engineer.** In customer service functions, an individual who provides labor required to complete a project or resolve a support call.

**Engineering Change Notice (ECN).** A document tracking revision to a product structure, item list, or drawing authorized by an engineering department. Usually has a control number and a stated reason, such as safety or cost reduction. Must be reviewed and agreed upon by all affected departments.

**Engineer Schedule.** A list indicating when an engineer is available to take calls. Includes days and hours worked, and availability on holidays. An engineer can work from a master schedule or an individual schedule.

**Enterprise Material Transfer (EMT).** The automatic translation of sales orders or material orders into purchase orders and transmission to the appropriate supplier using EDI eCommerce. EMT also manages and coordinates changes so that SO (or MO) and PO information are synchronized. Multi-level EMT manages orders across multiple levels within an organization. Order changes made at the top or bottom of the hierarchy are transmitted up or down to the next level.

**Entity.** (1) An independent unit for financial reporting purposes. An entity generates a separate balance sheet and income statement, plans budgets, and is assessed for taxes. All GL transactions are posted by entity. The primary entity is the default entity for GL transactions. There is no limit to the number of entities in a database. (2) In relation to database architecture, an entity is a single person, place, or thing about which data can be stored.

**Entity Budgets.** Budgets that are structured and defined based on the COA of an entity or a group of entities. All levels of the COA can be used—GL, sub-account, cost center, project and SAF structures—and the user can define the hierarchy.

**Entity Relationship.** A data modeling technique that creates a graphical representation of the entities, and the relationships between entities, within an information system.

**Entry Number.** Numerical part of a journal entry.

**Environment.** Identifies a set of tax types that applies to one or more ship-from/ship-to tax zone combinations or specific customer and supplier tax classes. On transactions, this code identifies the transaction or line item tax environment.

**EOQ.** Economic Order Quantity. A demand rate calculation used to balance total inventory costs against order costs. A type of fixed-order quantity used to determine the optimal amount of an item to be purchased or manufactured at one time. The purpose of the calculation is to minimize combined costs of acquiring and carrying inventory.

**EPEI.** Every-Part-Every Interval. A measure of how frequently a process can produce all the items assigned to it. For example, if a machine is able to change over and produce the required quantity of all the high-running part types dedicated to it within three days, then the production batch size for each individual part type is about three days worth of parts. Thus this machine is making every part every three days.

**ERS.** Evaluated Receipts Settlement. Method of recording a pending payment to a supplier without a supplier invoice. Liabilities to a supplier are recorded automatically, based on quantities received at the unit price established by you and the supplier in purchase order agreements.

**EU.** European Union. The economic integration of European countries under a single macroeconomic and fiscal policy.

**Euro.** The European currency that replaced all of the existing national currencies of participating member countries in the European Monetary Union at the start of 1999.

**European Monetary Union (EMU).** A subset of EU countries that have replaced their national currencies with a single currency, the euro. Consists of: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain. The remaining EU countries (Denmark, Greece, Sweden, and the United Kingdom) have not yet replaced their national currencies with the euro. With the exception of Greece, which does not meet the selection criteria, these countries have decided not to participate in the initial phase of the single European currency program.

**European Union (EU).** The economic integration of European countries under a single macroeconomic and fiscal policy.

**Euro Transparency.** Concept that the euro can be accepted in place of a EMU national currency, and any EMU national currency can be accepted in place of the euro. Applies only during the transition period while the national currency is considered a denomination of the euro.

**Evaluated Receipts Settlement (ERS).** Method of recording a pending payment to a supplier without a supplier invoice. Liabilities to a supplier are recorded automatically, based on quantities received at the unit price established by you and the supplier in purchase order agreements.

**Every-Part-Every Interval (EPEI).** A measure of how frequently a process can produce all the items assigned to it. For example, if a machine is able to change over and produce the required quantity of all the high-running part types dedicated to it within three days, then the production batch size for each individual part type is about three days worth of parts. Thus this machine is making every part every three days.

**Exception Message.** A system message usually created during MRP calculations to call attention to a current or potential problem and suggest corrective action.

**Exception Reports.** A report listing only items that deviate from the plan.

**Exchange Files.** Data files containing electronic business documents passed between the EC subsystem and EDI eCommerce. These files are comprised of the control record structures defined by the EC subsystem and the data record structures defined by eCommerce.

**Exchange Rate.** The rate at which money of one country can be exchanged for money of another country.

**Exchange Rate Gain/Loss.** The amount that the base currency value of an asset or liability, denominated in a foreign currency, has increased or decreased due to a fluctuation of exchange rates over time. There are two types of exchange rate gains and losses: unrealized and realized.

**Exchange Rate Type.** A code applied to different types of exchange rates that indicates how they are used; for example, budget, cash, or revaluation.

**Expediter.** The production control person in charge of expediting.

**Expediting.** Rushing a work or purchase order through a production system to reduce normal lead time.

**Expense.** A non-inventory item consumed during service of a call or execution of a project. Examples include meals and travel costs for an engineer or technician.

**Explode.** Demand for components of a parent item calculated by multiplying parent item requirements by component usage quantity specified in a bill of material.

**Explosion.** Demand for components of a parent item calculated by multiplying parent item requirements by component usage quantity specified in a bill of material.

**Exponential Smoothing.** A forecasting technique using a weighted moving average to give the most recent sales data more weight. Should not be used for seasonal items.

**Export.** To electronically render or disseminate information in a form other programs can use.

**Extensible Markup Language (XML).** Commonly used in creating Web pages and applications, XML is specifically designed for Web documents that allows the definition, transmission, validation, and interpretation of data between applications and organizations.

**Extensible Stylesheet Language (XSL).** A language for formatting an XML document; for example, showing how the data described in the XML document should be presented in a Web page. XSLT shows how the XML document should be reorganized into another data structure (which could then be presented by following an XSL style sheet).

**Extensible Stylesheet Language Transformation (XSLT).** A standard way to describe how to transform the structure of an XML document into an XML document with a different structure. The coding for the XSLT is also referred to as a style sheet and can be combined with an XSL style sheet or be used independently.

**External Sequence.** An NRM sequence number that is always supplied externally, typically entered by a user and validated by NRM. Never generated by the system. NRM verifies that the number belongs to the set defined by the sequence and that it has not yet been used.

**External Setup.** The elements of a setup procedure performed while a process is running.

**External Warehouse.** A customer warehouse where stock is stored.

**Extranet.** A private network designed to securely share portions of business information or operations with suppliers, partners, customers, or other businesses. An extranet can be viewed as part of a company's intranet that is extended to users outside the company.

## F

**Fab Auth Days.** Fabrication Authorization Days. The time period or authorization horizon during which the customer authorizes a supplier to fabricate items.

**Fab Qty.** Fabrication Quantity. The maximum quantity of this item that the customer authorizes you to produce in anticipation of the customer's scheduled demand.

**Fabrication Authorization.** Communication with a customer to a supplier authorizing them to fabricate items through a specified time period. Acts as the customer's agreement to pay for all items fabricated within the authorization horizon.

**Factory Defaults.** The initial settings of all browses and lookups in the application.

**Family.** A group of end items whose similarity of design and manufacture facilitates aggregate planning and evaluation of sales performance and/or cost.

**Family Hierarchy.** A record defining the nature of demand relationships for a product family. Defines end items and subfamilies, and percentage of total family sales forecast contributed by each. Also identifies marketing sites that generate sales forecasts. Resembles product structures (bills of material).

**Family Item.** A planning item used with family-level operations. Identifies groups of similar items differentiated only by size, color, packaging, or other minor characteristics. Has an item Purchase/Manufacture code of F.

**Family-Level Planning.** Operations planning for family items. Typically performed in the long- to medium-term horizon (six months to three years). Used to project long-term labor, equipment, and financial commitments, and to develop long-term material procurement plans for negotiations with strategic suppliers.

**Family Plan.** An operations plan showing a family item's sales forecasts, target inventory levels, and production demands for a planning horizon. Can be viewed from global and site levels.

**FAS.** Final Assembly Schedule. A schedule used in assemble-to-order environments. The master production schedule (MPS) schedules options, models, and accessories. The FAS schedules product assembly. Quantities on the FAS cannot exceed quantities on the MPS. In an FAS system, order entry must be fully integrated.

**FASB.** Financial Accounting Standards Board. Organization that establishes standards of financial accounting and reporting for the private sector.

**FCS.** Finite Capacity Scheduling. A scheduling technique used by advanced planning and scheduling (APS) systems that simultaneously takes into account material and capacity constraints when generating a supply schedule. This is in contrast with standard material requirements planning (MRP) scheduling techniques, which assume infinite capacity for all resources when scheduling orders.

**Feature Group.** In configured products, a way of organizing a set of related options and accessories.

**Field.** A single piece of electronic information such as a quantity or item number. One or more fields make up a record.

**Field Notification.** The alerting of end users to a product defect. SSM provides a number of related utilities for use in managing product recalls.

**Field Replaceable Unit (FRU).** A unit or component that can be replaced during a service visit. Useful to a dispatcher or service engineer in helping to determine how a service call is to be handled.

**Field Service.** The organization providing service at end-user sites, in contrast to service centers that repair products from their own facilities. Also called field operations.

**Field Tips.** Context-specific references to fields consisting of the Progress field name.

**FIFO.** First In, First Out. A method of inventory valuation that assumes inventory received first is used first. An accounting method only, and not necessarily related to actual physical movements of items or materials.

**FIFO Lane.** A lean manufacturing inventory management technique used to move items between processes when a supermarket buffer is not necessary, but continuous flow is not practical. Items are used by the consuming process on a first-in, first-out basis, and the supplying process can produce material only when authorized by the downstream process.

**File.** An organized set of data records in a computer system.

**Filter.** A method for narrowing the data to be displayed in browses. For example, you may want to display item records in product line 1500 only. A filter lets you do this by entering selection criteria.

**Filter Criteria.** A conditional clause in a synchronization profile that determines which records from a table to synchronize.

**Final Assembly Schedule (FAS).** A schedule used in assemble-to-order environments. The master production schedule (MPS) schedules options, models, and accessories. The FAS schedules product assembly. Quantities on the FAS cannot exceed quantities on the MPS. In an FAS system, order entry must be fully integrated.

**Financial Accounting Standards Board (FASB).** Organization that establishes standards of financial accounting and reporting for the private sector.

**Financial Integrity Checks.** Automatic crosschecks that verify the integrity of related data elements in your database. The most common relationship checked is between total and detail amounts, where the sum of the details should equal the total amount.

**Financial Transaction.** Any transaction posted to the general ledger that affects ending account balances.

**Finished Goods.** An item that is a final product in itself, for which an order or independent requirement exists. Can be a component of a different end item. Also called a parent item. In the item master table, designated by Purchase/ Manufacture codes blank, M, P, D, L, and W.

**Finished Products Inventories.** Items for which all manufacturing operations, including final tests, are complete. Available for shipment to customers as either end items or repair parts.

**Finite Capacity Scheduling (FCS).** A scheduling technique used by advanced planning and scheduling (APS) systems that simultaneously takes into account material and capacity constraints when generating a supply schedule. This is in contrast with standard material requirements planning (MRP) scheduling techniques, which assume infinite capacity for all resources when scheduling orders.

**Firm Days.** The number of days in a schedule firm interval. The schedule firm interval begins with the first day of a schedule release.

**Firm Planned Work Order.** A planned order frozen in quantity and time that cannot be changed by MRP. Can only be changed by the planner.

**Fixed Asset.** Tangible item of value used by a business to produce income.

**Fixed Exchange Rate.** An exchange rate that cannot be changed between the time an order is negotiated and the time its invoice is paid.

**Fixed Order Quantity (FOQ).** A demand rate lot sizing rule where a fixed quantity must be ordered. Although order quantity is predetermined, the time period is variable. For example, 250 items is the fixed order quantity, but can be ordered once a week or once a month.

**Fixed Price.** (1) In SSM, used to denote an item repaired or serviced with a preset price, regardless of costs involved. (2) In other order functions such as sales and purchases, determines whether prices are fixed or subject to update due to inflation or commodity pricing. Prices not fixed are subject to batch update based on changes in price lists.

**Fixed Value Segment.** Any printable character (except commas) used as part of an NRM sequence; for example, NY. Remains unchanged once established.

**Flat-rate Method.** Depreciation method that calculates depreciation by using a constant percentage and multiplying it by the depreciable basis over the asset's service life until the sum of the depreciation is greater than the basis amount. At this time, the final year of depreciation is adjusted so that the total of depreciation equals the basis amount.

**Flex Fence.** In flow scheduling, a percentage of the current schedule used as a tolerance to determine whether future schedule requirements are within a reasonable range of the current schedule.

**Floor Stock.** Inexpensive, easily replenished components such as screws, usually stocked on a factory floor and used as needed, without requisitions.

**Flow.** A manufacturing production methodology whose goal is to have production flow continuously all the way from raw material to the customer.

**Flow Schedule.** In lean manufacturing, a time-phased statement of item production requirements for a specific flow production line at a given site, which may be associated with existing work orders and demand orders.

**FOB.** Free on Board. Terms of a sale that identify when title passes from a seller to a buyer, and who pays shipping.

**Focused Factory.** A plant that produces a limited number of products and/or employs a limited number of processes.

**Follow-Up.** Monitoring of a work order's progress to see if operations are performed and materials are received on schedule.

**FOQ.** Fixed Order Quantity. A demand rate lot sizing rule where a fixed quantity must be ordered. Although order quantity is predetermined, the time period is variable. For example, 250 items is the fixed order quantity, but can be ordered once a week or once a month.

**Forecast.** An estimate of future demand for an item at a particular site, stated in terms of quantity per week. Enables you to purchase or manufacture necessary products in appropriate quantities in advance. Created by mathematical means using historical data.

**Forecast Consumption.** Reducing the forecast quantities by the confirmed sales order quantities.

**Forecast Horizon.** The time period covered by a forecast.

**Forecasting.** A business function that attempts to predict sales and use of products so they can be purchased or manufactured in appropriate quantities in advance.

**Forecast Interval.** The time unit for forecasts, typically weeks, months, quarters, or years.

**Forecast Method.** Statistical techniques used to calculate forecast. Identified by a two-digit number. Methods 01-06 are predefined by the system.

**Forecast Period.** The time unit for forecasts, typically weeks, months, quarters, or years.

**Forecast Year.** The year for which a forecast is calculated.

**Foreign Currency.** Any currency other than the domain base currency used by an entity in a transaction.

**Foreign Currency Account.** A GL account denominated in a foreign currency. Transaction currency amounts are held in the foreign currency specified.

**Foreign Currency Transaction.** Any transaction denominated in a currency other than the base currency.

**Format Positions.** The headings for displaying and totaling groups of related accounts on income statements and balance sheets. Also determine the order in which GL accounts appear. Associated with either an income statement or a balance sheet, but not both.

**Formula.** Expression of ingredient usage as a quantity per batch or percent of batch. Can also include processing instructions and ingredient sequencing directions.

**Forward Scheduling.** A technique for scheduling work order operations forward from an order release date to a date when more capacity is available.

**Four-wall Location.** Location within an QAD Enterprise Applications site representing the external warehouse. See External Warehouse.

**Frame.** An area of an QAD Enterprise Applications screen containing fields and surrounded by a border. Data is grouped within frames; usually fields in a frame are for similar data. Highlighted fields are filled in with a different color (lighter, darker), reverse video, or underlined, depending on the type of terminal you are using.

**Free on Board (FOB).** Identifies when title passes from the seller to the buyer and who pays shipping.

**FRU.** Field Replaceable Unit. A unit or component that can be replaced during a service visit. Useful to a dispatcher or service engineer in helping to determine how a service call is to be handled.

**Full Pegging.** Refers to the ability of a system to automatically trace requirements for a given component all the way up to its ultimate end item, customer, or contract number.

**Full-period Convention.** Depreciation convention in which a full-period depreciation is calculated for the first period of the asset's life. No depreciation is calculated for the last period of the asset's life. Depreciation is calculated as if the asset was put into and taken out of service the first day of the month.

**Full-quarter Convention.** Depreciation convention in which a full-quarter depreciation is calculated for the first quarter of the asset's life. No depreciation is calculated for the last quarter of the asset's life.

**Full-year Convention.** Depreciation convention in which a full-year depreciation is taken regardless of the period that the asset was put into service. No depreciation is calculated for the last year of the asset's life.

**Function Key.** A key located above the alphabetic keyboard to which functions can be assigned. For example, in QAD Enterprise Applications for Windows, F1 invokes field help.

## G

**GAAP.** Generally Accepted Accounting Principles. A set of U.S. guidelines and rules and procedures issued by groups within the accounting industry to standardize accounting practices. These groups include the Financial Accounting Standards Board (FASB) and the American Institute of Certified Public Accountants (AICPA). Accountants utilize GAAP's standards in recording and summarizing transactions and in the preparation of financial statements. Every country has their own version of GAAP, with standards set by a national governing body.

**Gain on Disposal Account.** A GL account used to track gains from fixed-asset disposal.

**Gateway Program.** A connecting computer link that translates between two different kinds of computer networks.

**GATT.** General Agreement on Tariffs and Trade.

**General Allocation.** The needed quantity of an item is reserved from the available inventory at a specific site. Ensures that the quantity of inventory required by the order is available. Does not reserve specific items of inventory.

**General Allocation.** The reserving of a needed quantity of an item from available inventory at a specific site. Does not reserve specific inventory items.

**Generalized Code.** A method of defining acceptable values for fields and having the system validate user entry. Codes can display in a look-up browse for selection.

**General Ledger (GL).** The collection of all the asset, liability, equity, and expense accounts. Amounts entered in books of original entry (journals/daybooks) are transferred (posted) to the correct account in the general ledger.

**General Ledger Calendar.** A calendar used for accounting activities. Every database can have only one GL calendar and at least one period must be defined. GL calendar periods are used to group GL transactions for reporting.

**General Ledger Mask.** A code that determines the allowed combinations of account, sub-account, cost center, and project. These combinations are validated during posting.

**Generally Accepted Accounting Principles (GAAP).** A set of U.S. guidelines and rules and procedures issued by groups within the accounting industry to standardize accounting practices. These groups include the Financial Accounting Standards Board (FASB) and the American Institute of Certified Public Accountants (AICPA). Accountants utilize GAAP's standards in recording and summarizing transactions and in the preparation of financial statements. Every country has their own version of GAAP, with standards set by a national governing body.

**Giro.** A service of many European banks that permits authorized direct transfer of funds among account holders as well as conventional transfers by check.

**GL.** General Ledger. The collection of all the asset, liability, equity, and expense accounts. Amounts entered in books of original entry (journals/daybooks) are transferred (posted) to the correct account in the general ledger.

**GL Code.** The code that identifies the GL account.

**Global.** Pertaining to corporate or enterprise- wide planning and data consolidation.

**Global Change.** A change made in one part of a computer system that is automatically reflected throughout the entire system.

**Global Tax Management (GTM).** A tax system that supports precise tax calculations, complex tax environments, and taxes for multiple countries in the same database. GTM eliminates the need for regional tax systems.

**GL Period.** You can perform reconciliation on open item accounts.

**GMT.** Greenwich Mean Time. The international basis for relationships among time zones. Never affected by daylight savings time adjustments.

**Grade.** The sub-labeling of items to identify their particular makeup and to separate lots from other lots of the same item.

**Graphical User Interface (GUI).** A method of presenting computer actions and options as pictures, buttons, and icons to users, rather than requiring typed commands. You interact with the computer by pointing and clicking with the mouse. Compare with Character User Interface.

**Graphics Interchange Format (GIF).** A graphics file format that is the industry standard for Web and Internet use.

**Greenwich Mean Time (GMT).** The international basis for relationships among time zones. Never affected by daylight savings time adjustments.

**Grid.** A screen design element that organizes related data fields in a format similar to a spreadsheet or table.

**Gross Margin.** Sales minus cost of goods sold.

**Gross Production Due.** Projected production demand for a family item, not netted against on-hand inventory. Family plans show gross production due, calculated as (Sales Forecast + Target Inventory) – Previous Week’s Projected QOH. For the first week, projected QOH is zero.

**Gross Requirement.** Total independent and dependent demand for a component prior to netting of on-hand inventory and scheduled receipts.

**Gross Weight.** Total weight, calculated from item weight and tare weight.

**Group.** A set of users that share common access requirements used to streamline security setup. See Security Group.

**Group Technology.** A system based on item families where common processes are grouped into manufacturing cells in a shop.

**GTM.** Global Tax Management.

**GUI.** Graphical User Interface. A method of presenting computer actions and options as pictures, buttons, and icons to users, rather than requiring typed commands. You interact with the computer by pointing and clicking with the mouse.

## H

**Half-Period Convention.** Depreciation convention in which a half-period depreciation is calculated for the first and last period of the asset life.

**Half-Quarter Convention.** Depreciation convention in which a half-quarter depreciation is calculated for the first and last quarter of the asset’s life.

**Half-Year Convention.** Depreciation convention in which a half-year depreciation is calculated for the first and last year of the asset life.

**Handle.** The internal pointer of a component. Messaging between components uses handles to find the component that is to perform a procedure.

**Hash Total.** A mathematical value derived by an algorithm that uses cross-checks to ensure that two sets of data are identical. Often used to verify the accuracy of financial data.

**Header.** The header identifies the specification by name, type, category and sub-category, system ID, and unique ID. It also identifies the business unit responsible for the specification.

**Header Application.** The main application; it maintains the master table, which holds the specifications for the application’s components. It is the application that first instantiates when an OBCM application runs.

**HIN.** Health Industry Number.

**Historic Exchange Rate.** The exchange rate in effect at the time of a transaction. This is recorded with the transaction amounts and types of currency.

**HTML (Hypertext Markup Language).** A tag-based ASCII language used to create pages on the World Wide Web. HTML uses codes surrounding a block of text to indicate how it should display. In HTML, you can also specify that a block of text, or a word, is linked to another file on the Internet.

**HTTP (Hypertext Transfer Protocol).** The set of rules for exchanging text, graphic images, sound, video, and other multimedia files on the World Wide Web.

## I

**IC.** Inventory Control. Techniques related to the maintenance of desired item quantities.

**ID.** An identification tag.

**IETF.** Internet Engineering Task Force. The body that defines standard Internet operating protocols such as TCP/IP. The IETF is supervised by the Internet Society Internet Architecture Board (IAB). IETF members are drawn from the membership of the Internet Society.

**IFRS.** International Financial Reporting Standards. A set of accounting standards defined by the International Financial Standards Board in 2004 that are now mandatory for all European companies.

**Implementation.** The integration of a system into day-to-day operations. The system implemented may be manual or computerized.

**Implementation Standard.** A set of programming guidelines that describes the correct use of general purpose programs provided for an area of functionality.

**Import.** To read a file created by another program into a database.

**Inactive inventory.** Stock designated as in excess of consumption within a defined period. Also, stocks of items that have not been used for a defined period.

**Inbound logistics charge.** A cost incurred and payable to a third-party supplier for the transportation of purchased items from an external supplier to a company location.

**Included Tax.** A tax already included in an item or trailer charge amount.

**Income statement.** A financial report showing the profit (or loss) business activities have generated in a specified time period.

**Incoterms.** Terms of trade defined by the International Chamber of Commerce and used in international contracts. Also called international commercial terms. See Terms of Trade.

**Incrementing Segment.** Part of an NRM sequence that defines a range of values, with a lower and upper bound and an initial and reset value. Each sequence must have one and only one incrementing segment.

**Indented Product Structure.** A form of multilevel product structure where the highest level assembly is shown on the left margin, and subassemblies are indented to the right. If a component is used in more than one subassembly, it is listed with each one.

**Indented Where-Used.** A listing of all parent items. Shows respective quantities required for each, continuing until the ultimate end item or level 0 item is referenced. The component item is shown closest to the left margin of the listing, with each parent indented to the right, and each respective parent indented even further to the right.

**Independent Demand.** Demand unrelated to demand for other products.

**Indirect Exchange Rate.** An exchange rate derived from the established rates of two different currencies and a common third currency, such as a union currency.

**Indirect Labor.** Work necessary to support production but unrelated to production of a specific item or product.

**Infinite Loading.** Reporting all work awaiting a work center regardless of the capacity of the work center to perform the work.

**Ingredients.** The composition of an item. An ingredient list is a source document for nutritional or product labeling information.

**In-process Inventory.** A product in production that is not yet completed. Stages include raw material released for manufacturing, through completely processed material awaiting final inspection and acceptance as a finished product.

**Input/output Control.** A technique for capacity control where actual output from a work center is compared with output planned by capacity requirements planning. Input must also correspond to plan and be adequate for a work center to meet its capacity requirements.

**Inspection.** The process of examining items or products for conformity to specifications.

**Inspection Lead Time.** The normal or average number of working days needed to inspect an item after it is received in an inspection area.

**Installed Base (ISB).** The records of all items sold to customers who may be involved in future interactions with your company. Items in the installed base may or may not be under warranty or service contracts.

**Installed Base Item.** Items actually existing in the installed base, owned by customers and used by end users. An item does not have to be an installed item to be entered in the installed base. This is useful in situations where items not sold by your company are part of an item's configuration.

**Installed Base Record.** A record consisting of an item linked to an end user. The end user is always connected to the customer who received the item currently in the user's possession.

**Installed Base Reference Number.** A method to uniquely identify non-serial number controlled items in an installed base. Not to be confused with an inventory reference number. Although both serve a similar function in providing a unique pointer to an item, one identifies items owned by end users, while the other identifies items in inventory locations.

**Installed Item.** A status for any item or component indicating whether it is eligible to become part of the installed base. Does not refer to any actual, physical item.

**Intangible Asset.** Assets that provide future economic benefit but have no physical substance. Examples include goodwill, patents, and trademarks.

**Intercompany Code.** Intercompany codes are used in transactions and default from the business relation. Allows a single account to be used in intercompany transactions, and analysis of transactions by intercompany code. Intercompany transactions span more than one entity, and the resulting transaction posts to one entity only, but contains an intercompany code within the GL transaction, as a reference to another entity

**Interface.** The method of communication between humans and machines. For example, the keyboard is an interface between the user and the computer. QAD Enterprise Applications has three user interfaces. See Character User Interface, Graphical User Interface (GUI), and Desktop.

**Internal Sequence.** An NRM sequence for numbers generated automatically by the system. Dispenses sequence numbers in ascending order at the request of another program. When a number is dispensed, each segment in the sequence is examined to determine whether its value is to be updated.

**Internal Setup.** A setup procedure performed while a process is inactive.

**International Financial Reporting Standards (IFRS).** A set of accounting standards defined by the International Financial Standards Board in 2004 that are now mandatory for all European companies.

**International Organization for Standardization.** International Organization for Standardization (ISO), founded in 1946, is a worldwide federation of national standards bodies from some 100 countries. ISO is not an abbreviation. It is a word, derived from the Greek isos, meaning equal. The name ISO is used around the world to denote the organization.

**Internet.** A system of linked computer networks—international in scope—that facilitates data communication services such as remote log-in, file transfer, electronic mail, and newsgroups. The Internet is a way of connecting existing computer networks.

**Internet Engineering Task Force (IETF).** The body that defines standard Internet operating protocols such as TCP/IP. The IETF is supervised by the Internet Society Internet Architecture Board (IAB). IETF members are drawn from the membership of the Internet Society.

**Internet Information Server (IIS).** Web server software from Microsoft Corporation that supports a common gateway interface.

**Internet Server Application Programming Interface (ISAPI).** A program-level means of communicating with the Microsoft Internet Explorer Web server.

**Interoperation Time.** The time between completion of the run time of an operation to setup of the next operation. Examples are queue, wait, and move.

**Interplant Demand.** Items to be shipped to another plant or division within a company. Although not a customer order, usually handled as independent demand for master production scheduling.

**Intersite Request.** A record sent to receiving and source sites. To the receiving site, a purchase requisition or supply record. To the source site, a sales order or demand record.

**Intranet.** A private network inside a company or organization that uses the same kinds of software found on the public Internet.

**In-transit Inventory.** Material moving between two or more locations, usually separated geographically; for example, finished goods being shipped from a plant to a distribution center.

**In-transit Lead Time.** The time a work order spends between work centers.

**Intrastat.** European Union (EU) regulations require member nations to submit reports concerning Inter-EU trade. The term Intrastat (for Inter-EU Trade Statistics Reporting) refers to the system used by customs officials to monitor this trade. QAD applications fully support Intrastat reporting requirements.

**Intrastat Declaration.** A report legally required of most European businesses by EU customs authorities listing shipments to and receipts from other EU countries. Used as the main source document for producing an EU country's trade statistics.

**Intrastat History Table.** The database table on which an Intrastat declaration is based, which contains a record for Intra-EU related inventory movements. Used to guarantee a clear audit trail from an Intrastat declaration to its underlying inventory transactions. Can be created automatically or manually.

**Inventory.** All goods or materials used in production processes, including raw materials, components, subassemblies, assemblies, and end items, as well as all supplies required by production.

**Inventory Account.** A GL account used to maintain inventory balances for receipts and issue transactions.

**Inventory Control (IC).** Techniques related to the maintenance of desired item quantities.

**Inventory Discrepancy Account.** The GL account charged for the difference between a cycle count and a book balance.

**Inventory Item.** An item kept in inventory, whose item number is found in the item master table.

**Inventory Movement Code.** A transaction classification documenting a known business reason for an inventory movement. Similar to transaction types recorded in transaction histories, but may be more specific.

**Inventory Plan.** A plan projecting how much of a product line will be in inventory each month at a given site. Records actual inventory levels for comparison.

**Inventory Status.** Inventory status determines whether inventory balances are available for allocation, considered by Material Requirements Planning (MRP), or allowed to go negative. Inventory status also restricts particular transactions at specific locations. For example, you can restrict issues from an inspection location. Item quantities received into inventory are automatically assigned an inventory status. You can assign a different inventory status to individual item quantities at a particular site or location, or item quantities in the same location, that are differentiated by the unique lot, serial numbers, and the reference numbers.

**Inventory Status Code.** A code assigned to sites, locations, and items used to manage inventory processing. Status codes determine:

- If inventory is available to be allocated to sales and manufacturing orders (see Available).
- If inventory can be considered by MRP when calculating net quantity on hand (see Nettable).
- If an inventory balance can be negative.
- If inventory is not available for particular kinds of inventory transactions.

**Inventory Transaction.** A system record associated with the movement of an inventory item and its value. A complete history of all IC transactions is maintained and can be reviewed as needed. Each transaction is identified by a transaction number and type.

**Inventory Turnover.** The number of items cycled through inventory in a year. Calculated by dividing annual cost of sales by average inventory level.

**Inventory Usage.** Value or the number of units of an inventory item consumed over a period of time.

**Inventory Valuation.** Cost value or market value of inventory. Cost value is computed using FIFO, LIFO, or standard cost basis to establish cost of goods sold.

**Inverse Rates.** A rate that is calculated as the inverse of an exchange rate. It is obtained by dividing one by the exchange rate (1/Rate).

**Invoice.** A document containing information about the purchase or sale of goods. States credit terms and cash discounts, if any.

**Invoice Schedules.** In PRM, records that determine the dates and amounts used for invoicing projects.

**Invoice Sort.** A high-level grouping of labor, expenses, or items used during customer service activities.

**Invoice Status Code.** A code indicating the status of an open item or invoice. Defines the approval and allocation statuses, and whether payment hold applies.

**ISB.** Installed Base. The records of all items sold to customers who may be involved in future interactions with your company. Items in the installed base may or may not be under warranty or service contracts.

**ISO.** International Organization for Standardization (ISO), founded in 1946, is a worldwide federation of national standards bodies from some 100 countries. ISO is not an abbreviation. It is a word, derived from the Greek isos, meaning equal. The name ISO is used around the world to denote the organization.

**ISS.** Internet Information Server. Web server software from Microsoft Corporation that supports a common gateway interface.

**Issue.** (1) Physical movement of items from an inventory location. (2) A transaction recording this activity.

**Item.** Any unique manufactured or purchased part, material, component, subassembly, or product used to track inventory, planning, manufacturing, or financial transactions. Items must have a unique identifier, unit of measure, and product line. Items also identify and track non-real things such as documentation and base processes for co-products and by-products, which have no monetary or inventory value, but are critical for operational reasons.

**Item Data.** Item data are data that are maintained for items or products that are stored in inventory and/or planned by Material Requirements Planning (MRP) or Distribution Requirements Planning (DRP). Item data are divided into four categories that roughly parallel how companies typically divide up responsibility for maintaining each category. Roughly speaking General Data are managed by Product Engineering or Research and Development. Inventory Data are managed by Inventory Control or Materials Management. Planning Data are managed by Material Planning, and Cost Data are managed by Cost Accounting.

**Item Explosion.** A method of determining what items or assemblies are used to produce a product. Results are usually listed on an indented material report.

**Item Identifier.** An alphanumeric code uniquely identifying items, products, or raw materials. Also known as item number, stock code, or product code.

**Item Implosion.** The process of determining where an item is used in a product structure. Results are usually listed on a where-used report.

**Item Number.** A unique number identifying an item.

**Item Resource Bill.** A list showing the amount of each resource required to make one unit of an item.

**Item Tax Class.** A grouping of items subject to special tax rates or exemptions.

## J

**JAR File.** Java Archive File. A file that contains the class, image, and sound components of a Java applet gathered into a single file and compressed for faster downloading to a Web browser.

**Java.** An object-oriented programming language created by Sun Microsystems. Java is a device-independent language. Programs compiled in Java can be run on any computer. Java programs can be run as free-standing applications or as applets placed on a Web page.

**Java 2 Platform, Enterprise Edition (J2EE).** A release of Java designed to support the requirements of large-scale computing systems. Features include Java servlets and Java Server Pages (JSPs), which facilitate dynamic Web-enabled data access and manipulation.

**Java Applet.** A small application program that can be sent along with a Web page to a user. Applets written in Java are served from a Web site but executed on the client computer.

**Java Archive File (JAR).** A file that contains the class, image, and sound components of a Java applet gathered into a single file and compressed for faster downloading to a Web browser.

**Java Bean.** A reusable program building block developed with a Beans Development Kit (BDK) from Sun Microsystems.

**Java Class.** In object-oriented programming, a class is a template definition of the methods and variables in a particular kind of object.

**Java Development Kit (JDK).** A software development environment from Sun Microsystems for writing applets and applications in the Java programming language.

**Java Message Service (JMS).** An API from Sun Microsystems that supports messaging between computers in a network, which allows applications to create, send, and receive messages. JMS provides a common interface to standard messaging protocols and also to special messaging services in support of Java programs.

**Java Runtime Environment (JRE).** A subset of the Java Development Kit for end users and developers who want to redistribute the Java runtime environment. The Java runtime environment consists of the Java virtual machine (JVM), the Java core classes, and supporting files.

**Java Server Page (JSP).** A technology for controlling the content or appearance of Web pages through the use of servlets, small programs that are specified in the Web page and run on the Web server to modify the page before it is sent to the user who requested it.

**Java Virtual Machine (JVM).** The part of the Java runtime environment responsible for interpreting bytecode. A JVM is included in the JRE, which replaces the default virtual machine associated with a Web browser. This lets developers deploy Java applets that depend on the latest features of the Java platform and be assured that their applets will run reliably and consistently in a browser. See also Bytecode.

**JDK.** Java Development Kit. A software development environment from Sun Microsystems for writing applets and applications in the Java programming language.

**JIT.** Just In Time. A technique designed to result in minimum inventory by delivering the right items to the right place at the right time, all the time.

**JMS.** Java Message Service. An API from Sun Microsystems that supports messaging between computers in a network, which allows applications to create, send, and receive messages. JMS provides a common interface to standard messaging protocols and also to special messaging services in support of Java programs.

**Job.** A sales order that is directly produced by the shop. A job may include one or more work orders. The sales/job number is used to group costs.

**Job Order Costing.** A costing system where costs are charged to specific sales/job numbers. This system can be used with either actual or standard costs in the manufacture of discrete items or product lots.

**Job Shop.** A functional organization where work centers and departments are organized around particular types of equipment or operations, such as drilling, forging, or assembly. Products flow through departments in batches of stock or customer orders.

**Join.** A relation between data in two or more tables expressed through fields that the tables have in common.

**Joint Order Set.** A set of work orders consisting of one work order for a base process and additional work orders for each of its coproducts and by-products. These work orders share the same work order number, but have different work order IDs.

**Journal.** Journals are used to group GL transactions, either to satisfy legal reporting requirements or to organize GL reporting in a manner consistent with common business practices. Transactions can be grouped within journals by transaction type and by transaction-document type.

**Journal Entry.** A journal entry contains transaction posting lines and can be assigned to any of the accounting layers.

**JRE.** A subset of the Java Development Kit for end users and developers who want to redistribute the Java runtime environment. The Java runtime environment consists of the Java virtual machine (JVM), the Java core classes, and supporting files.

**JSP.** Java Server Page. A technology for controlling the content or appearance of Web pages through the use of servlets, small programs that are specified in the Web page and run on the Web server to modify the page before it is sent to the user who requested it.

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**JVM.** Java Virtual Machine. The part of the Java runtime environment responsible for interpreting bytecode. A JVM is included in the JRE, which replaces the default virtual machine associated with a Web browser. This lets developers deploy Java applets that depend on the latest features of the Java platform and be assured that their applets will run reliably and consistently in a browser.

## K

**Kanban.** (1) A Japanese method of production and inventory control first developed and used at Toyota. Designed for the day-to-day on-floor control of production and inventory, it relies on a series of control triggers, typically in the form of cards. Kanban is the predecessor of Just in Time. (2) A signaling device (often a card) that gives instruction for production or conveyance of items in a pull system.

**Kanban Card.** Card printed and placed on container in a kanban-controlled production environment.

**Kanban Dispatch List.** A list used to move groups of empty kanban containers back to a supplying source for replenishment.

**Kanban Loop.** (1) A lot sizing technique in MRP where order quantity equals net requirement. (2) A pull-based work flow that controls inventory traffic between a supplying source and a consuming destination. Loops can use a single card to authorize replenishment and movement between locations or separate cards for replenishment and move authorizations

**Kanban Sizing.** The process of determining the number of Kanban cards or items per container required to manage production. Sizing is based on demand calculations performed previously.

**Key Item.** An item for which there must be sufficient quantity on hand for a work order to be released and a picklist printed.

**Key Resource.** Anything that can limit production capacity and cannot be easily increased, such as available funds, critical machines, floor space.

**Key Work Center.** A work center that is crucial to the manufacture of a product. If work does not flow through this work center, a bottleneck is created.

**Kit.** A type of configured product that represents a collection of items that are picked and shipped together but that require no assembly. Kit items are contrasted with assemble-to-order items. See Assemble to Order (ATO).

**Kitting.** The process of removing components of an assembly from a stockroom and sending them to an assembly floor as a kit of items. Can take place automatically whenever a full set of items is available, and may require an authorization.

## L

**Labor.** (1) The direct cost associated with labor. (2) The physical work performed.

**Labor Burden.** The overhead cost associated with labor. Usually stated as a percent of the direct labor amount or as a cost per direct labor hour.

**Labor Cost.** The dollar amount of added value due to labor performed during manufacturing.

**Labor Rate Variance.** The difference between the reported work center labor rate and the payroll labor rate for that employee.

**Labor Usage Variance.** The difference between actual hours reported and time expected to complete a quantity received.

**Lag Factor.** The number of kanbans in a loop that are typically in production at any one time. This value is used in inventory validation calculations to adjust the inventory quantity on hand before it is compared with the kanban inventory level.

**LDAP.** Lightweight Directory Access Protocol. A networking protocol for querying and modifying directory services running over TCP/IP. LDAP is a lightweight (smaller amount of code) version of Directory Access Protocol (DAP), which is part of X.500, a standard for directory services in a network.

**Lead Time.** The time in calendar days required to perform an activity. May include time needed for purchasing, order preparation, queuing, transportation, receiving, and inspection.

**Lead Time Offset.** Time added to a component's release date to determine its planned issue date. Planned issue dates among components can differ to allow for phased assembly of the end item.

**Leaf Nodes.** The lowest-level elements in a hierarchical navigation tree. Leaf nodes cannot be expanded or collapsed.

**Lean Manufacturing.** A philosophy of production that emphasizes minimizing the resources used, including time, in manufacturing activities. It involves identifying and eliminating non-value-added activities in design, production, and supply chain management, and results in highly flexible, automated processes. Kanbans and flow schedules are example of lean manufacturing techniques.

**Learning Path.** A set of courses, including a certification, covering a substantive subject area for a role.

**Level.** The relative position of a part or assembly in a product structure. Each part is assigned a level code.

**Level of Coverage.** The level of service provided and its limits. Determines what an item is covered for and for how long.

**Level of Service.** The amount of service provided for various situations. Typically defined as a percentage of labor, item, or expense service costs.

**Level Schedule.** A production schedule that indicates the quantity of each item a process must produce during each shift to meet the calculated Takt Time.

**LFL.** Lot for Lot. (1) A lot sizing technique in MRP where order quantity equals net requirement. (2) A pull-based work flow that controls inventory traffic between a supplying source and a consuming destination. Loops can use a single card to authorize replenishment and movement between locations or separate cards for replenishment and move authorizations

**Life.** Number of years used as a basis for depreciation calculations for fixed assets.

**LIFO.** Last In, First Out. A method of inventory valuation that assumes inventory received last is used first. An accounting method only, and not necessarily related to actual physical movements of items or materials.

**Lightweight Directory Access Protocol (LDAP).** A networking protocol for querying and modifying directory services running over TCP/IP. LDAP is a lightweight (smaller amount of code) version of Directory Access Protocol (DAP), which is part of X.500, a standard for directory services in a network.

**Limit.** A ceiling on the amount of service that can be provided under the terms and conditions of a contract. Can be set up based on total consumption, invoice sort, or work code/service category combination. Can be defined in contract types, but is only used when coverage is based on a specific contract. When a limit is exceeded, no more activity recorded in Call Activity Recording is covered. The system suggests an over-limit charge code.

**Limited-use Card.** In a kanban system, a card introduced into a loop for a short time to temporarily build inventory.

**Line Allocation.** A record defining how an item's production demands are distributed between production lines at a supply site.

**Linearity.** In flow scheduling, the relationship between planned production and actual production, viewed over time.

**Line Charge.** Additional fees imposed on a line item. This includes any type of charge at the line-item level, such as painting, polishing, setup, handling fees, or special order fees such as hazardous material handling charges.

**Line Feed.** Identifies location within customer's site for material to be delivered

**Line Item.** An item on a sales or purchase order.

**Line Utilization Percentage.** A projected consumption of available production line capacity by production due demands in an operations plan. Defined as  $\text{Line Production Due Qty} \div \text{Weekly Line Capacity}$ , where Line Capacity is  $\text{Available Shift Hours} * \text{Line Production Rate}$ .

**Link-to.** An association between an analysis code and either a GL element or another analysis code. Link-tos create multitiered hierarchies for reporting in the GL Report Writer.

**List Price Limit.** A ceiling on the price of individual items covered by a service type or contract. When a list price limit is specified and the price of an item exceeds this amount in Call Activity Recording, the price is not covered even if limits have not yet been consumed. An over-limit charge code is suggested by the system.

**Load.** The amount of scheduled work for a work center or resource. Usually measured in hours or pieces.

**Load Hours.** Setup and run times for each operation.

**Loading Method.** A method of breaking down monthly forecasts into weekly buckets when loading forecasts into the summary detail table used by MRP.

**Load Profile.** A statement of the amount of a resource required to produce one unit. Two types: product line resource bill and item resource bill. Resources can be defined for both end items and families.

**Local Variable.** A variable, created with Progress syntax, to contain the relationship or derived value from one or more fields in one or more tables. For example, a local variable can contain a total derived from the quantity and the unit price.

**Location.** (1) Areas of a site where inventory is stored, used, or shipped. Location parameters identify what can be stored and how it can be used. Every inventory transaction must have a site and location. The same locations can exist at more than one site. This is recommended for multisite processing. (2) For Fixed Assets, the accounting location and entity for the fixed asset. There is no connection between the fixed-asset location and inventory location. (3) For license registration, a location is a physical site, facility, or address where significant manufacturing, distribution or information processing activities occur.

**Location License.** An QAD Enterprise Applications license type that defines a predefined number of locations for specific applications.

**Location Type.** Code that identifies special storage requirements of an item, such as flammable, humidity controlled, outside, and so on.

**Logistics Charge.** A cost associated with the transportation of goods in and out of company locations and payable to a third-party supplier.

**Logistics Supplier.** A third-party supplier of services associated with the transportation of goods.

**Look-up Browse.** A type of browse that is only associated with individual program fields for use in selecting entry values. Look-up browses contain less detail than drill-down browses. Compare with Drill-Down Browse.

**Loop, Kanban.** (1) A lot sizing technique in MRP where order quantity equals net requirement. (2) A pull-based work flow that controls inventory traffic between a supplying source and a consuming destination. Loops can use a single card to authorize replenishment and movement between locations or separate cards for replenishment and move authorizations

**Loss on Disposal Account.** A GL account used to track losses from fixed-asset disposal.

**Lot.** A batch or part of a batch having uniform character and quality within specified limits. Or, in the case of a pharmaceutical produced by a continuous process, a specific identified amount produced in a unit of time or quantity, and in a manner that assures uniform character and quality within specified limits. See Receiving Site Lot Number and Supplier Lot Number.

**Lot/serial Number.** Indicates it can be either a lot number or a serial number.

**Lot and Serial Numbers.** If required, a lot number must be entered during issues and receipts. A lot number applies to the entire transaction quantity entered. If serial numbers are required for an item, a unique serial number must be entered for each item during issues and receipts. For example, if you receive 10, you must enter 10 serial numbers. QAD Enterprise Applications maintains complete lot and serial number traceability.

**Lot Combining.** Creating one lot of processed material from several lots of input material.

**Lot for Lot (LFL).** (1) A lot sizing technique in MRP where order quantity equals net requirement. (2) A pull-based work flow that controls inventory traffic between a supplying source and a consuming destination. Loops can use a single card to authorize replenishment and movement between locations or separate cards for replenishment and move authorizations

**Lot Number.** A unique combination of letters and/or numbers identifying a discrete group of items in an inventory location.

**Lot Reference.** Identifier for a subset of items within a lot. May reflect your production process. For example, when a lot includes too many items for one container, lot reference can identify items in each.

**Lot Sizing.** Techniques for determining lot size during MRP calculations. Most common are Lot for Lot (LFL), Period Order Quantity (POQ), Fixed Order Quantity (FOQ), and One-Time Only (OTO).

**Lot Splitting.** Creating several lots of processed material from one input lot.

**Lot Traceability.** Lot consumption and production information sufficient to trace material lots through the manufacturing and distribution process.

**Lower Level Costs.** The cost category representing a cost added at prior stages of manufacturing. Lower-level material costs are the cost of all purchased materials used in the final product and any subassemblies. Lower-level labor, burden, and subcontract are developed from the cost of making any lower-level subassemblies.

**Low-level Code.** The lowest level in a product structure (BOM) at which a particular component can appear. Net requirements for an item are not calculated until gross requirements are calculated down to that level. Normally calculated and maintained automatically by the system.

## M

**Machine Burden.** The overhead cost based on the number of hours a machine is in use—both while it is being set up and while products are being run.

**Machine Center.** A production area consisting of one or more people and/or machines. Considered as one unit for capacity requirements planning and detailed scheduling.

**Maintenance Contract.** A contract that includes a number of scheduled visits by an engineer not to fix broken equipment but to ensure that it remains in good working order.

**Maintenance Programs.** Programs used to add, modify, and delete records and codes in the QAD Enterprise Applications database.

**Major Setup.** Equipment setup and related activities required to manufacture a group of items in sequence, exclusive of the setup required for each item in the group.

**Make to Order.** To manufacture a product to customer specification with little or no stocking of raw material. Long lead-time components are sometimes planned prior to receiving an order to reduce delivery time to customers.

**Make to Stock.** To manufacture a product based on forecasts or other methods, prior to receiving a customer order. Shipped off the shelf from finished goods.

**Management Currency (MC).** Management currencies are used to provide a base currency for the consolidation entity during the consolidation process. The management currency can be different from the base currency in the source consolidation entities, but is also used in transactions created in these entities.

**Management Layer.** The management layer is a permanent layer, and is used for management accounts, such as recording auditors adjustments, adjustments between the local books and other GAAP, for example, US GAAP and IFRS. The management layer is optional, and you can define custom management layers, which behave in the same way as the system-defined layer.

**Manual Checks.** Handwritten payments transferred by bank or in person.

**Manual Price Lists.** In order for a manual price list to be considered in the pricing of a sales order, the manual price list must be entered in Sales Order Maintenance 7.1.1 in the manual field.

**Manufacturing Calendar.** A calendar used in inventory and production planning that consecutively numbers working days. Allows component and work-order scheduling to be based on actual work days available.

**Manufacturing Cycle.** The time between release of an order to a work center and either shipment to a customer or receipt into inventory.

**Manufacturing Lead Time (MLT).** Manufacturing lead time is the normal or average number of working days it takes to manufacture the item, including the time to process paperwork, issue components, inspect the finished product, and receive it into stock.

For items with Pur/Mfg code = M, the manufacturing lead time may be calculated from the item's routing/process as part of the Routing Cost Roll-Up

When a work order is entered for a purchased or manufactured item, the system uses this lead time to calculate the release date

**Manufacturing Resource Planning (MRP II).** A comprehensive planning method integrating business plans, MPS, MRP, CRP, and execution support systems with financial reports and inventory projections.

**Marketing Site.** A site generating sales forecast demand for an item, such as sales offices and distribution centers. An item can be sold from multiple marketing sites. The same site can be both a supply site and a marketing site. See Supply Site and Source Matrix.

**Mark for Release.** To mark an approved but not yet released PCR/PCO for release at the next run.

**Mark Printed.** To mark an already registered NRM sequence number (see Register Value) as printed.

**Master Data.** Master data provide basic business information to other QAD Application programs. Master data include information about items, sites, locations, pricing, compliance (to government regulations), addresses, taxes, and so forth.

**Master File.** A master file is not actually a file, but a database record that manages master data. See master data.

**Master Production Schedule (MPS).** An anticipated build schedule resulting from master scheduling. Takes into account forecast, production plan, backlog, availability of material, capacity, management policies and goals, and so on. Details what a company plans to produce in specific configurations, quantities, and dates.

**Master Schedule.** An anticipated build schedule resulting from master scheduling. Takes into account forecast, production plan, backlog, availability of material, capacity, management policies and goals, and so on. Details what a company plans to produce in specific configurations, quantities, and dates.

**Master Scheduled Receipts.** Total scheduled receipts from supply orders, which are planned, firmed, released, etc. Can be master schedule order, purchase order, or distribution order planned receipts.

**Master Schedule Item.** An item selected for planning by the master scheduler. An item with critical impact on lower-level components and resources, including work force, key work centers, and cash flow. The master scheduler, not the computer, maintains the plan for an item. Can be an end item, component, or phantom.

**Master Scheduler.** Manager of the master schedule. Must have both shop and product knowledge.

**Matching.** The matching of amounts recorded on supplier invoices to purchase order receipts and calculation of variances.

**Matching Posting.** A tab on the Supplier Invoice Create screen in which you configure matching postings for the invoice.

**Material Order (MO).** An internal order for managing the transfer of inventory between a supply center and designated service or project locations. There are four types of MOs:

- MOs associated with a call
- MOs associated with a project activity order
- MOs to replenish an engineer's stock
- MOs that are expensed

**Material Rate Variance.** The difference between cost of components when and where issued and the frozen work order bill of material cost.

**Material Requirements Planning (MRP).** A time-phased priority planning system that calculates material requirements using product structures, inventory status, the master production schedule, and open order dates. Determines what to order, when, and how much. Supply is scheduled and rescheduled to meet changing demand and maintain valid due dates. MRP requires a source of demand, product structures and routings, accurate inventory balances, and planning data.

**Material Run-out.** An inventory planning strategy in which you base the lot size on consuming a given amount of a setup-intensive material, rather than on the kanban quantity. For example, you might plan to run enough items to use up an entire spool of steel coil regardless of the kanban size.

**Material Usage Variance.** The difference between quantity required of a component and quantity actually issued.

**Maximum Aging Days.** Maximum aging days helps keep track of the inventory at your customer's facility and how long it's been there without being used. This plays an important role in some industries more than others. But it became apparent to some of the customers that the ADG has talked to that, they would like to keep track of their inventory because of its turnover rate.

This could also be a potential liability if your customer holds inventory for a long period of time then wants to return it to you. Part of what you negotiate is effectively a shelf life expiration date of the agreement as to how long the customer can hold with without paying for it.

For example in Electronics Manufacturing businesses, items that have a really short life cycle like electronic components, processors that change over and over again that maybe if you ship some out to your customer he agrees to use them within some certain amount of days so that you make sure that they are used and they're not returned. And when they return they're obsolete and you can't use them anymore. So the maximum number of aging days is determined on each shipment that goes out to your customer.

**Maximum Order Quantity.** An order quantity modifier applied after a lot size is calculated that limits order quantity to a predetermined maximum.

**Maximum Taxable Base.** The maximum transaction amount subject to tax rate.

**Maximum Weeks of Coverage.** An item's maximum allowable global inventory coverage level. Affects either family plans or operations plans, depending on when target inventory levels are calculated. When you increase an item's production due quantity, a plus sign (+) alerts you to potential inventory surpluses.

**MC.** Management Currency. Management currencies are used to provide a base currency for the consolidation entity during the consolidation process. The management currency can be different from the base currency in the source consolidation entities, but is also used in transactions created in these entities.

**Member Currency.** Identifies a national currency that has joined a monetary union, such as the EMU. Applies only during the transition period. An example of a member currency was the French franc. During transition to the euro, member currencies are denominations of the union currency at a fixed exchange rate.

**Memo Entry.** An entry made to the GL that is posted to memo accounts. A memo account is used to record and report reference information. Amounts posted to memo accounts print on financial statements, but are not included in any totals or calculations.

**Memo Item.** A non-inventory item not found in the item master table or considered by MRP. Shipping or receiving memo items does not affect inventory or create GL transactions.

**Menu.** A list of available submenus and programs.

**Menu Substitution.** Replacing one program with another on the menu. For example, you can set up the menu so that when users select a particular program, they get a customized version of it instead of the one delivered with QAD Enterprise Applications.

**Merge RSS.** A program merging open requirements in an active required ship schedule (RSS) to a new active RSS using Required Ship Schedule Update and Selective Required Ship Schedule Update. See Required Ship Schedule (RSS).

**Metaschema.** Tables or fields with initial underscore.

**Meter.** Measures the usage of a fixed asset. Used by the units-of-production depreciation method.

**Method Variance.** Unexplained variance. Any amount left in WIP at the end of work order or cumulative order accounting calculations.

**MFGX.net.** The QAD portal, which is a collaborative environment where members of the manufacturing community can share information and work together to achieve overall competitiveness.

**Milestone Operation.** An operation, defined in Routing Maintenance (14.13.1) that is used to report completions.

**MIME (Multipurpose Internet Mail Extension).** A protocol for exchanging different kinds of information on the Internet. The MIME header is inserted at the beginning of a Web transmission so that client programs can select the appropriate associated application.

**Minimum Inventory.** The planned minimum allowable inventory for an independent demand item.

**Minimum Order Quantity.** An order quantity modifier applied after a lot size is calculated that increases order quantity to a predetermined minimum.

**Minimum Taxable Base.** The minimum transaction amount subject to a tax rate.

**Minimum Weeks of Coverage.** An item's minimum allowable global inventory coverage level. Affects either family plans or operations plans, depending on when target inventory levels are calculated. When you decrease an item's production due quantity, a minus sign (–) alerts you to potential inventory shortages.

**Minor Setup.** Incremental setup activities required when changing from one item to another within a group of items.

**Miscellaneous Creditor.** A generic supplier used as a reference when generating payments for organizations that are not set up as suppliers.

**Mission Critical Item.** An item for which there must be sufficient quantity on hand for a work order to be released and a picklist printed.

**MLT.** Manufacturing Lead Time. Manufacturing lead time is the normal or average number of working days it takes to manufacture the item, including the time to process paperwork, issue components, inspect the finished product, and receive it into stock.

For items with Pur/Mfg code = M, the manufacturing lead time may be calculated from the item's routing/process as part of the Routing Cost Roll-Up

When a work order is entered for a purchased or manufactured item, the system uses this lead time to calculate the release date

**MO.** Material Order. An internal order for managing the transfer of inventory between a supply center and designated service or project locations. There are four types of MOs:

- MOs associated with a call
- MOs associated with a project activity order
- MOs to replenish an engineer's stock
- MOs that are expensed

**Modified Half-year Convention.** Depreciation convention. If the asset is put into service in the first half of the year, a full year of depreciation is calculated. If the asset is put in service in the second half of the year, a half-year depreciation is calculated. If the asset is disposed of in the first half of the year, no depreciation is calculated for the year. If the asset is disposed of in the second half of the year, a half-year depreciation is calculated.

**Modular Product Structure.** A type of planning bill arranged in product modules or options. Often used where products have many options, such as automobiles.

**Modular Programming.** A general approach to programming in which programs are broken down into components, called modules, each containing its own procedures and data. Modules are coupled as loosely as possible, with interactions minimized and tightly controlled.

**Module.** A group of programs for related business activities such as Purchasing or Sales Orders/Invoices.

**Monetary Assets and Liabilities.** Assets and liabilities that are treated as cash, or cash equivalents, representing a claim to receive or pay a fixed sum of money. Examples are cash, accounts receivable, and accounts payable. These assets and liabilities should be reported at their estimated realizable value.

**Move.** Physical movement of inventory from one location to another within a facility. Usually made under the direction and control of an inventory system.

**Move Time.** The time a work order spends between work centers.

**Moving Average.** An arithmetic average utilizing the most recent data. As new data is added, the oldest data is dropped.

**MPS.** Master Production Schedule. An anticipated build schedule resulting from master scheduling. Takes into account forecast, production plan, backlog, availability of material, capacity, management policies and goals, and so on. Details what a company plans to produce in specific configurations, quantities, and dates.

**MRP.** Material Requirements Planning. A time-phased priority planning system that calculates material requirements using product structures, inventory status, the master production schedule, and open order dates. Determines what to order, when, and how much. Supply is scheduled and rescheduled to meet changing demand and maintain valid due dates. MRP requires a source of demand, product structures and routings, accurate inventory balances, and planning data.

**MRP horizon.** Also known as the MRP planning horizon, the MRP horizon is how far to plan forward in time, and is determined by how far ahead demand is known and by the lead times through the manufacturing operation.

**MRP II.** Manufacturing Resource Planning. A comprehensive planning method integrating business plans, MPS, MRP, CRP, and execution support systems with financial reports and inventory projections.

**MTZ.** See Multiple Time Zones (MTZ).

**Multilevel Product Structure.** A product structure showing all components used in an assembly, and the quantity required of each. If a component is a subassembly, all components are also shown.

**Multilevel Where-Used.** A list of all assemblies where a component is used and the next higher level where the parents are used.

**Multiple Co-Product (Process).** A process resulting in more than one co-product. Applications are:

- Demand for one of multiple co-products results in initiation of a process producing all the multiple co-products.
- Multiple co-products represented by items having BOM/formula codes that reference the same base process.

**Multiple Order Quantity.** An order quantity modifier applied after a lot size is calculated. Forces order quantity to be predetermined or a multiple of that quantity. For example, if multiple order quantity is 5, an order can be placed for 5, 10, 15, or any other multiple of 5.

**Multiple Time Zones.** An optional feature of SSM that enable the system to present call dates and times from the point of view of a call's end user. This allows users in diverse geographical locations to view times relative to their own time zones.

## N

**N-Tier Architecture.** Applications can be distributed across multiple systems. A three-tier architecture is one in which user interface components are on a user's client machine, the business components are on an application server, and the database is on a separate data server.

**NAFTA.** North American Free Trade Agreement.

**NDC.** National Drug Code.

**Need Date.** The date items must be available for shipping or for issuing to manufacturing. The due date plus inspection lead time (if any) should equal the need date.

**Net Book Value.** Fixed-asset acquisition cost minus accumulated depreciation.

**Net Change MRP.** Replans those items that have had changes in supply or demand since the last MRP run.

**Net Forecast.** The amount of forecast not sold in a given week.

**Net Requirements.** Gross requirements for an item or product less quantity-on-hand.

**Netscape Server Application Programming Interface (NSAPI).** A program-level means of communicating with the Netscape Web server.

**Nettable.** An inventory status attribute that determines whether MRP includes items in its planning.

**Netting.** Calculating net requirements by subtracting quantity-on-hand from gross requirements.

**Netting Logic.** The way in which the system calculates a required shipping schedule. There are four options:

- If 1, only shipping schedules are used.
- If 2, only planning schedules are used.
- If 3, planning and shipping schedules are combined, with the shipping schedule taking precedence where schedules overlap (replace logic).
- If 4, planning and shipping schedules are combined, with the greater of the shipping or planning schedule taking precedence where schedules overlap (consume logic).

**Net Weight.** The item weight per unit after deduction of tare weight.

**Network.** A series of points or nodes interconnected by communication paths. The Internet is a common example of a network. See also Internet, Extranet, Internet Server Application Programming Interface (ISAPI), and Wide Area Network (WAN).

**Next-Period Convention.** A depreciation convention in which a full period depreciation is calculated for the period following the period that the asset was placed into service. A full period depreciation is taken in the last period of the asset's life.

**Node.** Item number or customer number linked to an analysis code used in the best pricing model for sales quotes and orders and RMA issues. In the Process Editor, nodes represent steps in a process and can contain URL links to other resources.

**Non-accelerated Depreciation.** Depreciation methods that divide the amount of depreciation equally over the life of the asset. An example is the straight-line method.

**Non-AR Payments.** Payments such as tax refunds or rebates that do not originate as a result of customer sales.

**Non-depreciable Assets.** Assets that have characteristics of a fixed asset, but cannot be depreciated. Generally, these assets include:

- Property placed in service and disposed of in the same taxable year
- Tangible property including land, inventory, rented property, and term interest in property
- Intangible property including goodwill, trademarks, and trade names

**Non-inventory items.** A non-inventory item not found in the item master table or considered by MRP. Shipping or receiving memo items does not affect inventory or create GL transactions.

**Non-monetary Assets and Liabilities.** Assets and liabilities that are not readily convertible to cash such as items that will be used in the future production and sale of goods and services. An example of a non-monetary asset is inventory.

**Non-productive Labor.** Labor costs for time spent in non-production activities such as preventive maintenance, cleanup, or down time.

**Non-significant Item Number.** An item number that identifies but does not describe an item.

**Normal Distribution.** A statistical distribution that is unimodal (observations close to one mean) and symmetrical (deviation is as likely to be plus as minus). Forms a bell-shaped curve when graphed.

**Notification List.** List of people to be advised when a change managed within the Product Change Control module is routed and/or approved. Attached to the approval routing.

**NRM.** Number Range Management. Function that supports regulatory controlled document numbering. NRM includes the content and sequencing of a numeric series, as well as preventing gaps in a series.

**N-tier architecture.** Computer architecture in which applications are distributed across multiple, or n, systems. A three-tier architecture is one where user interface components are on a user's client machine, business components are on an application server, and the database is on a separate data server.

A reusable development model, through which developers can modify or add to an application's functionality without rewriting the entire application code. n refers to the number of tiers used in the application.

**Number Range Management (NRM).** Function that supports regulatory controlled document numbering. NRM includes the content and sequencing of a numeric series, as well as preventing gaps in a series.

## O

**OBCM.** Acronym for Object-Based Component Model; MFG/PRO's model-based development environment for building and running object-based components and applications.

**Object ID (OID).** A means of uniquely identifying a database record. In QAD Enterprise Applications, OIDs are decimal values based on a date/time stamp and sequence number on the left of the decimal. The right side of the decimal is a registration value based on the OID Generator Code specified in Database Control (36.24).

**ODETTE.** Organization for Data Exchange by Teletransmission in Europe. The primary standards organization for automotive EDI in Europe.

**Official Layer.** The official layer is used for statutory postings, for example, GAAP purposes, fiscal stock valuation, or fiscal depreciation, and is mandatory and system-defined. All official postings are posted to the official layer and cannot be deleted or transferred to another layer. A combination of the official layer and a number of management layers will typically be used in reporting to show the results according to the relevant statutory requirements.

**Offset.** Time, in months, between start of production and date a resource is needed.

**On-call Schedule.** An engineer schedule created to cover nights, weekends, and holidays.

**One-card Loop.** A kanban system that uses a single card both to authorize production and to signal movement from the supplying source to the consuming location. See also Two-Card Loop.

**One-Time Only (OTO).** A lot-sizing technique that produces an order only once, based on the due date of the first item required. Used for projects such as creating an engineering drawing that occur only once in the manufacturing of a product.

**Open Database Connectivity (ODBC).** A data access method that supports data access from any application, regardless of the database management system (DBMS) being used.

**Opening Balance.** The balance of an account at the start of an accounting period.

**Open Item.** Unpaid and partly-settled invoices, both from customers and suppliers, where the transaction is not completed at the end of the

**Open Order.** An active manufacturing order, purchase order, or unfilled customer order.

**Operating System (OS).** Software that allows a computer, terminal, printer, and storage device to work together efficiently. Examples are Windows and UNIX.

**Operation.** A single job or task performed as part of a work order. All operations required to manufacture an item constitute a routing.

**Operation/process Yield.** The ratio of usable output from a process, process stage, or operation to input quantity, usually expressed as a percentage.

**Operation-based Yield.** A technique for determining component item requirements. Op Based Yield uses the yield percentage of the item's routing information to determine if parent items scrapped earlier in the manufacturing process require fewer component items for subsequent manufacturing operation processes.

**Operation Number.** A number indicating the order in which operations are performed in a routing.

**Operation Priority.** A scheduled due date and/or start date of a specific operation of a specific job, usually as determined by a back-scheduling process.

**Operation Reporting.** The recording and reporting of every manufacturing (shop order) operation occurrence on an operation-to-operation basis.

**Operations Plan.** A plan showing an end item's sales forecasts, target inventory levels, and production demands for the planning horizon. Can be viewed from global, site, and production line levels.

**Operations Planning.** A mechanism for planning global replenishment from supply sites based on demand and desired inventory levels from marketing sites. Strives to simplify factory production planning by combining demand from multiple sites. Enables you to allocate production across multiple production sites. Supports monitoring of actual sales, production, and inventory against targets. Maximizes labor, equipment, and other assets.

**Operations Sequence.** Ordered steps for processing an item or assembly in a manufacturing system. Usually defined on a route sheet.

**Operation Start Date.** The date by which an operation must be started to be finished by the order due date. Calculated using scheduled quantities and lead times (queue, setup, run, move), or using work and time remaining to complete the job.

**Operation Time.** Setup time plus run time.

**Optimized Schedule.** A production schedule that operates within the material and capacity constraints on an enterprise to best meet a set of predefined business objectives. Optimized schedules are produced using advanced planning and scheduling (APS) systems.

**Option.** For configured products, a choice between two or more versions of a required component, such as the choice of engine size for a car.

**Order.** A contract with a supplier for items to be delivered on specified dates. States who is involved, terms, tax data, and shipping costs.

**Order Entry.** Acceptance and translation of a customer order into terms used by the manufacturer. Can range from processing shipping documents for finished goods to creating engineering documents for make-to-order items.

**Order Modifiers.** Item characteristics such as order quantity, order policy, order period, order minimum, and order multiple.

**Order Point.** [A level of inventory that signals the need to reorder. Usually calculated by adding safety stock quantity to expected usage during lead time.

**Order Policy.** Method of specifying the number and size of each MRP planned order. There are five types:

- Period Order Quantity (POQ). Generates planned orders to cover demands during a specified order period.
- Fixed Order Quantity (FOQ). Generates planned orders equal to order quantity.
- Lot for Lot (LFL). Generates a planned order to satisfy each demand.
- One-Time Only (OTO). Prototype items that MRP orders only once.
- Blank. Ignored by MRP.

**Order Quantity Modifier.** Adjustment to lot sizing rules due to special considerations. Examples are maximum order quantity, minimum order quantity, and multiple order quantity.

**Order Quantity Multiple.** A user-defined value that causes Kanban Workbench to set the loop order quantity to a multiple of the specified value. This results in a number of kanbans that is also a multiple of the same value.

**Orders Plan.** A plan projecting how many sales orders will be booked each month for a given product line at a given site. Records the actual number booked for comparison.

**Order Status.** A code indicating whether an item or order is open, canceled, or closed.

**Originating Entry.** Any entry that increases the value of a sub-ledger account. For example, posting an invoice is an originating entry because it increases the value of Accounts Receivable.

**OS.** Operating System. Software that allows a computer, terminal, printer, and storage device to work together efficiently. Examples are Windows and UNIX.

**OTO.** One-Time Only. A lot-sizing technique that produces an order only once, based on the due date of the first item required. Used for projects such as creating an engineering drawing that occur only once in the manufacturing of a product.

**Outbound Logistics Charge.** A cost incurred and payable to a third-party supplier for the transportation of goods from a company location to a customer or to another company location.

**Outside Shop.** A vendor. Used to convey the idea of a vendor as an extension of a shop, typically in subcontracting operations.

**Overhead.** Costs incurred in operation of a business not directly related to products or services produced. Distributed to units of product using a standard method such as direct labor hours.

**Overissue.** Removal from stock and assignment to a schedule of a quantity higher than the schedule quantity.

**Override Depreciation.** The amount of depreciation previously taken in another fixed-assets system.

**Overview.** An introductory treatment of a product or module, trending towards broad coverage and familiarity rather than deep functional excursions.

## P

**Pacemaker Process.** A series of production steps, frequently at the downstream (customer) end of the value stream in a facility, that are dedicated to a particular product family and respond to orders from external customers. This process determines the demand pattern and sets the required production pace for upstream processes.

**Packing Slip.** A document included with a shipment that itemizes and details the contents.

**Pallet.** A portable platform used to store and transport inventory. Some companies group items by pallet for operations planning.

**PAO.** Project Activity Order. In PRM, a group of related project activities that are managed and completed together as a unit of work.

**PAR.** Project Activity Recording. The recording of actual time, materials, and expenses consumed in executing a PRM project.

**Parent.** See Parent Entity and Parent Item.

**Parent-component Hierarchies.** An indicator of how tax amounts are reported. Tax amounts for a lower-level zone are reported both at that level and at a higher-level zone.

**Parent Entity.** A company that owns a majority of the voting stock for another company, known as a subsidiary. Each subsidiary exists as a separate, legal entity. However, the two companies function as a single economic entity because the parent company controls the activities and resources of the subsidiary. As a result, the separate financial statements of the parent company and its subsidiaries are combined into a single set of financial statements called consolidated financial statements.

**Parent Item.** An item that is a final product in itself, for which an order or independent requirement exists. Can be a component of a different parent item. Also called end item.

**Pareto's Law.** Concept that a small percentage of a group typically accounts for the greatest percentage of value or effort generated by the group. For example, 20% of items in inventory comprise 80% of inventory value. Also known as the 80/20 Rule.

**Partial Order.** Any shipment less than the amount ordered. See also Backorder.

**Past Due Demand.** An order not completed by the date scheduled.

**Patch/Fix/Bug/ECO.** A documented change to source code. A patch may also be referred to as an ECO, or Engineering Change Order. Patches typically refer to software fixes but could also include enhancements to functionality. Patches consist of an ECO ID along with one or more changed files. A patched file contains the ECO ID in the left margin of any line that was added or converted to a comment. No lines of code are deleted from the patched file.

A quick-repair job for a piece of programming. During a software product's beta distribution or try-out period and later after the product is formally released, problems (called bugs) will almost invariably be found. A patch is the immediate solution that is provided to users; it can sometimes be downloaded from the software maker's web site. The patch is not necessarily the best solution for the problem and the product developers often find a better solution to provide when they package the product for its next release.

Any instance where the code either produces an error in the data, doesn't conform to the standard look and feel of QAD's product or doesn't produce generally expected results. The R&D staff at QAD sets the standards that define a bug.

Any software modification made to product files to change or correct functionality, appearance or performance. This change can be in response to an enhancement request or to fix a reported defect.

**Pattern Code.** A code specifying the days of the week or month when shipments or deliveries are accepted by a customer.

**Payload.** The data fields specified in a synchronization profile whose values are included in a synchronization document.

**Payment Format.** The payment format defines the layout of a payment file sent to the bank for processing, and is associated with a currency code. Some countries have separate payment formats for domestic and foreign transactions. The payment formats are linked to the GL bank account.

**Payment Group.** A code grouping suppliers by priority for payment. You assign these groups when you define suppliers.

**Payment Instrument.** The methods for resolving customer and supplier open items such as checks, direct debits, drafts, promissory notes, electronic transfers, and summary statements.

**PCO.** Product Change Order. A change document that details changes to a production process and is moved through a defined approval sequence before updating production tables.

**PCR.** Product Change Request. A change document similar to a product change order, but with a shorter life cycle. Never affects production. Once approved, is either closed or converted into a PCO for further work.

**Peak Method.** A way of calculating safety stock for a kanban supermarket based on the highest average demand over a specified number of days. See also Simple Method.

**Pegging.** (1) In MRP and MPS, the capability to identify for a given item the sources of its gross requirements and/or allocations. (2) The process of consuming a shipper line that is tied to a required ship schedule requirement record.

**Performance Measurement.** Comparison of an item's actual sales, inventory, and production levels with its family plan and operations plan.

**Perform Date.** A supplier's promised delivery date.

**Periodic Expense Account.** A GL account used to track the amount of depreciation expense for the accounting period.

**Period Mark.** A code used in the GL close procedures. All normal transactions before a close get the initial mark of that period. If a period is reopened for further activity, a new mark is created so that the corrective entries can be reported separately.

**Period Order Quantity (POQ).** A lot sizing technique where lot size is equal to net requirements for a given item period; for example, a month's supply.

**Perl.** A script programming language (Practical Extraction and Reporting Language) that is similar in syntax to the C language and that includes a number of popular UNIX facilities. Perl is regarded as a good choice for developing Common Gateway Interface (CGI) programs because it has good text manipulation facilities.

**Perpetual Inventory.** A method of keeping inventory that immediately records on-hand quantity for items as they are issued or received. See Physical Inventory.

**Persistence.** A quality inherent in a procedure that creates its context when it executes and maintains that context until the end of a Progress session or until explicitly deleted. As long as a persistent procedure's context is in scope, the triggers and internal procedures of the procedure remain available for execution.

**Petty Cash.** An account and location where tangible cash is stored for use in purchasing or for reimbursing inexpensive expenditures

**Phantom.** An item or subassembly directly consumed into its parent items and not planned or stocked upon completion. Normally, lead time is zero, and lot sizing is lot for lot. Permits MRP to drive requirements through the phantom item to its components while retaining the ability to net against any subassembly inventories. Facilitates the use of common product structures for engineering and manufacturing.

**Phantom Bill of Material.** A coding and structuring technique for bills of material, used primarily for transient (non-stocked) subassemblies. For the transient item, lead time is set to zero and order quantity to lot for lot. Permits MRP to drive requirements through a phantom item to its components while retaining the ability to net against occasional inventories of the item. Facilitates the use of common bills of material for engineering and manufacturing.

**Phantom Hierarchies.** A tax reporting method in which one zone is an alias for another zone at the same level, and reporting is done only for the alias.

**Physical Inventory.** (1) Actual inventory. (2) An actual count of inventory. Can be taken on a continuous, periodic, or annual basis.

**Picking.** Removing items from stock to fill a work order or customer order.

**Picklist.** A document that lists material to be picked for manufacturing or shipping orders. In distribution functions, known as a Pre-shipper.

**Pipeline Stock.** Inventory to fill a transportation network and distribution system, including the flow through intermediate stocking points. Flow time through the pipeline has a major effect on the amount of inventory required in the pipeline. Time factors include orders transmission, order processing, shipping, transportation, receiving, stocking, and review time.

**Pitch.** A consistent increment of work used to determine the frequency at which finished goods are withdrawn from a pacemaker process as well as the corresponding amount of schedule released to that process. It is typically the basic unit of the production schedule for a product family. Pitch is often calculated based on the customer's ship container quantity.

**Planned Load.** Standard hours of work required by MRP planned production orders.

**Planned Work Orders.** A suggested order quantity, release date, and due date created by MRP processing when it encounters net requirements. Only generated outside an item's time fence. Must be approved by the master planner to become firm planned orders in the master production schedule.

**Planning Bill of Material.** A planning bill of material is an artificial grouping of items or events in bill-of-material format. It is used to facilitate master scheduling and material planning.

**Planning Horizon.** A period of time, in calendar days, over which MRP is to plan. MRP only processes material requirements within this horizon.

**Planning Product Structure.** A product structure used for planning, usually to forecast percent of demand for options and accessories.

**Planning Schedule.** A schedule used for moderate or long-term planning of production, materials, and resources. Shows weekly/monthly quantities and dates, and covers a time horizon from the present out 2–6 months.

**Plan SDT Code.** Planning Ship/Delivery Time Code. A code specifying the time of day when shipments or deliveries are accepted by a customer.

**Platform.** An underlying computer system on which application programs run. Historically, most application programs had to be written to run on a particular platform. Products written in Java, however, are cross-platform, meaning they can be run anywhere the Java runtime environment is installed.

**PM.** Preventive Maintenance. Actions taken to keep an item in a specified operating condition by performing service at regular intervals.

**PO.** Purchase Order. A contract with a supplier to purchase a specific quantity of items to be delivered at an agreed upon date for a set price. Includes order quantity, description, price, discounts, payment terms, transportation terms, and all other terms pertinent to the purchase and its execution.

**Point.** A unit of about 1/72 inch used to measure type size.

**Point of Use (POU).** The location where a kanban item is actually consumed, as opposed to the supermarket location where it is stored.

**POQ.** Period Order Quantity. A lot sizing technique where lot size is equal to net requirements for a given item period; for example, a month's supply.

**Portfolio.** A document status that applies to documents linked to open items.

**Postal Code.** Identifier for a postal district. Called a ZIP code in the U.S. You can set up tax zones by postal code whenever tax types or tax rates vary within a city.

**Posting.** Transfer of debit and credit amounts to the general ledger.

**Prepayment.** The payment of all or part of a debt prior to the creation of an invoice.

**Pre-shipper.** A preliminary and temporary shipper created either automatically from detailed allocation, or manually using Pre-Shipper/Shipper Workbench. Formerly referred to as Picklist.

**Preventive Maintenance (PM).** Actions taken to keep an item in a specified operating condition by performing service at regular intervals.

**Price Break Categories.** Volume price breaks for multiple items are entered in Item Master Maintenance 1.4.1 and Price List Maintenance 1.10.1.1. Discounts can be calculated based on the quantity or amount ordered on multiple lines of a sales order or quote. Price break categories can also be used to tie the price or discounts for one item to one or more other items.

**Price List.** A price structure defining specific prices, discounts, and markups at different quantity levels. Can be stated in terms of company base currency or any other currency.

**Price Lists.** Use Price List Maintenance (1.10.1.1) to set up the price lists that the system uses to determine best pricing. The system looks for links between customer and item codes. If no links are found, it uses the default price from the Item Master. Thus, using price lists allows for multiple discount or promotional pricing schemes.

**Primary Business Unit (PBU).** In EMT, the organization in a supply chain that processes the original customer order.

**Primary Domain.** A domain associated with the current database.

**Prior Cum Date.** The up to and through date of a prior cumulative required quantity.

**Prior Cum Required.** The total quantity required prior to the date of release.

**Priority Rules.** Method used by a dispatcher and production supervisor to rank work orders. Examples are critical ratio and operation due date.

**PRM.** Project Realization Management. A module that provides features for recording and managing complex installation tasks that require items, labor, and expenses to complete. PRM provides features for creating projects, tracking their activity, and generating invoices.

**Process.** A systematic sequence of steps producing a specified result.

**Process, Kanban.** A group of activities before and after which flow stops and inventory accumulates in a supermarket.

**Process Manufacturing.** Production that adds value by mixing, separating, forming, and/or using chemical reactions. May be done in batch or continuous mode.

**Product.** Any commodity produced for sale. End items and replacement items are products.

**Product Change Control (PCC).** A module that lets you make changes to item data, product structures, routings, formulas, processes, and item specifications in a controlled environment without affecting production processes.

**Product Change Order (PCO).** A change document that details changes to a production process and is moved through a defined approval sequence before updating production tables.

**Product Change Request (PCR).** A change document similar to a product change order, but with a shorter life cycle. Never affects production. Once approved, is either closed or converted into a PCO for further work.

**Product Family.** A group of products that go through the same or similar downstream assembly steps and equipment.

**Production Control.** Directing and regulating the movement of goods through the manufacturing cycle, from requisition of raw material to delivery of a finished product.

**Production Due.** An item's production requirement. At global and site levels, calculated as (Sales Forecast + Target Inventory) – Previous Week's Projected QOH.

**Production Environment.** This is the working environment where the business' day-to-day business transactions are entered.

**Production Forecast.** A predicted level of customer demand for an option or feature of an assemble-to-order or finished-to-order product. Calculated by netting customer backlog against MPS for a family or product line. A product's available to promise quantity is then factored based on the option percentage in the planning product structure.

**Production Line.** A set of production equipment dedicated to a particular item or family of items. Production lines are used in operations planning and repetitive and flow scheduling environments.

**Production Plan.** A projection of how much of a given product line will be produced each month at a given site; also records actual amount produced for comparison. The key input into MPS and resource planning.

**Product Life Cycle.** (1) The stages a new product idea goes through. (2) The time from initial research and development to the time sales and support of the product to customers are withdrawn. (3) The time during which a product can be produced and marketed profitably.

**Product Line.** Similar items or products grouped for accounting and planning purposes. Every item must belong to only one product line. For operations planning, can identify items planned as a group due to similarity of manufacturing processes, sales channels, or other characteristics.

**Product Line Plan.** A plan of sales, shipments, and production for a group of items classified as a product line.

**Product Line Resource Bill.** The amount of a resource required to produce one unit of a production plan.

**Product Load Profile.** A list of key resources needed to manufacture one unit of a specified product. Shows the timing and duration of each resource relative to the due date of the product. Used with a master production schedule to determine the total load on each resource by time period. Also known as bill of resources or bill of labor.

**Product Number.** A unique number identifying an item.

**Product Structure.** A method of identifying all raw materials, components, and subassemblies in a product. Recorded as a single-level relationship between a parent item and component, product structures determine when and how many component items are needed. Also called a bill of material (BOM), parts list, or formula.

**Profile.** A code used to indicate for a record in a shared set the specific records to be used within another shared set. For example, an account profile is associated with a supplier indicating the GL account to be used in all linked account shared sets. Since both records are part of a shared set, depending on the combination of shared sets in use in an entity, a different link may need to be established.

**Profit and Loss Account.** An account in which the profit for a GL period is calculated. It shows details of revenues and expenses for that period.

**Profit Margin.** The difference between production cost and sales price.

**Program Name.** The technical program name, as opposed to the description that appears in the title bar. For example, Customer Data Maintenance is the description of a program called adcsmt.p.

**Progress.** A database. Also a programming language for accessing data in a database.

**Progress Status Bar.** An area at the bottom of the QAD Enterprise Applications screen containing information on available options. Also called status bar.

**Project.** In PRM, a series of installation tasks that require items, labor, and expenses to complete. Projects are delivered to designated customers in one or more steps over time.

**Project Activity Order (PAO).** In PRM, a group of related project activities that are managed and completed together as a unit of work.

**Project Activity Recording (PAR).** The recording of actual time, materials, and expenses consumed in executing a PRM project.

**Project Codes.** Optional component of an account number defined in GL setup functions. Other components are account, sub-account, and cost center. Project codes are not available for all GL transactions. Inventory value, but not physical inventory, can be tracked by project codes.

**Projected on Hand.** In MRP, an inventory balance projected into the future. The running sum of on-hand inventory minus gross requirements, plus scheduled receipts.

**Projected Quantity on Hand.** A global projected on-hand inventory quantity, calculated as (Previous Week's Projected QOH + Production Due) – Sales Forecast. For the first week, projected QOH is the opening QOH. Displayed by both family plan and operations plan.

**Projected Weeks of Coverage.** The number of weeks of inventory coverage on hand after producing quantities indicated by a family plan or operations plan. Initially, equals the item's average weeks-of-coverage factor. When you change production due, the system recalculates this using the item's minimum and maximum coverage factors to project inventory shortages (–) and surpluses (+) relative to the average weeks of coverage. An asterisk (\*) indicates that projected coverage satisfies the maximum coverage requirement.

**Project Location.** An inventory location where items are stored before they are consumed by a PRM project.

**Project Realization Management (PRM).** A module that provides features for recording and managing complex installation tasks that require items, labor, and expenses to complete. PRM provides features for creating projects, tracking their activity, and generating invoices.

**Project Sub-Ledger.** In PRM, a set of fields for tracking quantities and costs related to project components.

**Promissory Note.** A promissory note only differs from a draft in that it is issued in the form of a promise of payment made by the debtor instead of an unconditional payment order to the beneficiary. A promissory note carries more risk for the beneficiary and has less legal consequences for the issuer in case of no payment.

**PROPATH.** An environment variable containing the list of directories Progress searches when looking for a program to execute.

**Proximo Terms.** A special type of credit term used in France and some other countries. Allows you to manage due dates so processing occurs once a week, once a fortnight, or monthly.

**PST.** Provincial Sales Tax. The system of taxes used in Canada.

**Pull System.** (1) In production, the production of items only as demanded for use, or to replace those taken for use. (2) In material control, the withdrawal of inventory as demanded by using operations. Material is not issued until a signal comes from the user. (3) In distribution, a system for replenishing field warehouse inventories where replenishment decisions are made at a field warehouse or at a central warehouse or plant.

**Purchase Order (PO).** A contract with a supplier to purchase a specific quantity of items to be delivered at an agreed upon date for a set price. Includes order quantity, description, price, discounts, payment terms, transportation terms, and all other terms pertinent to the purchase and its execution.

**Purchase Price.** The amount required to purchase a fixed asset.

**Purchase Price Variance.** The difference between unit cost on a purchase order and GL unit cost in an item master. Calculated when a purchase order is received.

**Purchase Requisition.** An authorization for a buyer to purchase a specific item, in a specific quantity, at a specific due date. Can be produced by approving MRP-generated planned orders or by manual entry.

**Purchases Account.** A GL account charged when non-inventory goods are vouchered in Accounts Payable.

**Purchasing Lead Time.** The number of calendar days from the date the need for a purchased item is recognized until the item is available for sale or issue. Includes time for procurement, vendor lead, and receiving. Does not include inspection lead time.

**Purpose Code.** In a customer-scheduled order, a code communicated as part of an EDI transaction that indicates how the imported schedule should be processed.

**Push System.** Replenishment or production of items or materials in response to a given schedule or order from a centralized authority, or warehouse.

## Q

**QDoc.** A data document in XML format inbound to QAD Enterprise Applications that conforms to generated schemas and events files from the QGen utility.

**QOH.** Quantity on Hand. The amount in inventory of an item for a site or location.

**Quality Order.** A document authorizing a test or inspection. It specifies four things about an item: how much will be tested, where, when, and by what procedure.

**Quality Procedure.** A set of inspection or testing operations linked to a work center. Used by quality orders in the same way work orders use routings.

**Quantity Allocated.** The quantity reserved for use on specific sales orders or manufacturing orders.

**Quantity Available.** The quantity available to allocate to sales orders or manufacturing orders.

**Quantity on Hand (QOH).** The amount in inventory of an item for a site or location.

**Quantity On Order.** Total quantity for an item on all replenishment, purchase, or manufacturing orders.

**Quantity Per.** Quantity of an item used in the production of its parent.

**Quantity Qualifier.** A character value indicating whether a requirement quantity is firm or in planning stages.

**Quantity Required.** Total requirements for an item at a site, either for shipment on sales orders or use on manufacturing orders.

**Query Specification.** A set of data retrieval codes.

**Queue.** (1) A waiting area. (2) The time work normally waits at a work center before operations begin. (3) A holding area for a call, call quote, or service request before the next event takes place in its life cycle.

**Queue Time.** The time a work order spends at a work center before being worked on. Higher queue times result in higher manufacturing lead times.

**Quotation.** A statement of price, terms of sale, and description of goods or services offered by a vendor to a prospective purchaser. When given in response to an inquiry, it is usually considered an offer to sell.

## R

**Rate Amount.** A numerical field that functions as one part of the ratio that defines an exchange relationship between two currencies. An exchange rate can be presented in the following way: rate amount 1 units of currency 1 equal to rate amount 2 units of currency 2.

**Rate Variance.** The difference between the actual output rate of product and planned or standard.

**Raw Auth Days.** Raw Authorization Days. The number of days a customer commits to paying a supplier for raw materials purchased for a scheduled item.

**Raw Authorization.** A customer's agreement to pay a supplier for materials the supplier purchases for a scheduled item within a specified time period.

**Raw Qty.** Raw Quantity. The maximum quantity of a product for which a supplier is authorized to acquire raw materials in anticipation of a customer's scheduled demand.

**Realized Exchange Rate Gain/Loss.** The amount that the base currency value of an asset or liability, denominated in a foreign currency, has increased or decreased due to a fluctuation of exchange rates over time. Realized gains or losses occur at the time of settlement or when the risk of exchange rate fluctuation is eliminated.

**Reason Code.** A code used to categorize activities based on their cause. Reason codes are associated with a type. Predefined types— including Quote, Down, Downtime, Reject, Rework, Scrap, and Ord\_Chg—are used by functions in modules such as Sales Quotes, Repetitive,

Advanced Repetitive, Shop Floor Control, and Sales Orders/Invoices. Other types can be created as needed. In the Product Change Control module, reason codes are user defined and specify severity levels related to the approval process.

**Reason Lost.** Indicates the reason why the customer did not place an order against the quote.

**Receipt.** (1) Physical acceptance of an item into a stocking location. (2) A transaction recording this activity.

**Receivable.** A financial claim against another business or individual.

**Receiver.** A record that goods have been received into inventory. Updates inventory balances, and allows Accounts Payable to verify quantities and prices against the purchase order before paying.

**Receiving.** Physical receipt of material. Includes checking a purchase order against a receipt document, delivery to the proper destination, and completion of receiving reports.

**Receiving Site Lot Number.** Any distinctive combination of letters, numbers, or symbols from which a complete history of the manufacture, processing, packing, holding, and distribution of a batch or lot of drug product or other material can be determined. Defined, maintained, and recorded by the receiving site. See Supplier Lot Number.

**Recipe.** Expression of ingredient usage as a quantity per batch or percent of batch. Can also include processing instructions and ingredient sequencing directions.

**Reciprocal Exchange Rates.** A separate exchange rate calculated as the inverse of an existing exchange rate relationship. For example, if the exchange rate of the euro (EUR) to the Mexican Peso (PES) is defined as 2.23456 EUR: 1 PES, the reciprocal exchange rate (PES to EUR) is calculated as: 1 divided by 2.23456, or .447515 PES: 1 EUR.

**Record.** Related data items treated as a unit. Usually accessed by a unique code.

**Recoverable Tax.** A tax paid on purchases that is offset against tax collected on sales. Common in VAT countries.

**Recurring.** A quote may record a recurring sale, such as monthly fees for maintenance charges. An entire year may be quoted, but a sales order and invoice are generated on a monthly basis.

**Recyclable By-Product.** A product that can be reintroduced into the process that created it or into higher- or lower-level processes within any product structure/formula hierarchy. Technically, by-products should be defined as components with negative quantities or percentages, not as part of a co-product/byproduct relationship.

**Reference.** Supply Chain: See lot reference and installed base reference number.

**Reference Date.** An attribute of an Intrastat history record stating when the record is to be reported. The main criterion in selecting history records for inclusion in an Intrastat declaration.

**Refurbish.** To clean and replace worn parts in an assembly.

**Regenerative MRP.** An MRP process that re-explodes MRP planned items down through all bills of material, creating a completely new material plan. Maintains all valid priorities and synchronizes all plans.

**Register Value.** To make a permanent record indicating that a given NRM sequence number, within the set defined by a sequence, has been used. Once registered, a sequence number cannot be used again.

**Regression Analysis.** Statistical method to determine the best relationship between a response and independent variables. See Calculation Methods and Simple Regression.

**Regressive Tax.** A tax that includes the tax amount as part of a transaction taxable base.

**Rejected Item.** An item not meeting quality requirements and, therefore, not able to be moved to the next operation. Can be treated as scrap, a rework item, or if purchased, a return.

**Relational Database Management System (RDBMS).** The Progress software that manages and provides access to the QAD Enterprise Applications databases.

**Release.** A schedule based on a scheduled order.

**Release Count.** The number of releases for this quote.

**Release Date.** The date an order is scheduled to be released to the shop floor. Orders not released by this date are flagged on the MRP reports. The system calculates either release or due date, creating in effect, forward or backward order scheduling.

**Released Order.** An active work order.

**Release ID Number.** A sequential number identifying a released schedule.

**Remote Method Invocation (RMI).** A set of protocols that enables Java objects to communicate remotely with other Java objects.

**Reorder Point.** A level of inventory that signals the need to reorder. Usually calculated by adding safety stock quantity to expected usage during lead time.

**Repair Parts.** Individual parts or assemblies required for maintenance or repair of equipment. Can be repairable or non-repairable assemblies or one-piece items. Does not include consumable supplies such as solvents or lubricants.

**Repetitive.** The production of discrete units, planned and executed to a schedule, usually at relatively high speeds and volumes. material trends to move in a continuous flow during production, but different items can be produced sequentially within the flow.

**Repetitive Schedule.** A response to a manually entered demand or an MRP-generated demand for materials. Indicates how much production of a certain item is planned for each day at a particular production line and site. Used to control and monitor the progress and cost of manufacturing.

**Replacement Value.** Amount to replace a fixed asset. Used for management purposes, primarily in estimating budget or insurance requirements. Not used for calculating depreciation.

**Replenishment Time.** Total time between recognizing that a product should be reordered and having the product supply available for use. Represents the maximum turnaround time between supplying and consuming sites.

**Report.** A number input by an engineer or assigned by the system during CAR representing a service report document from the engineer listing all labor, parts, and expenses consumed on a call.

**Reporting Currency.** The currency that financial data is translated in, for the purpose of producing financial reports.

**Reporting Zone.** A tax zone for which separate tax reports are required.

**Report Record.** In GL Report Writer, the report title, format, row groups, and column groups used in a report.

**Repository.** A database that stores persistent data. The place where component specifications reside.

**Repository Document.** An electronic business document as represented in the EDI eCommerce data tables in one of a number of well-defined states of transformation between trading partner and QAD Enterprise Applications document requirements.

**Repricing.** Sales Order Repricing 7.1.11 updates the sales order to the latest corresponding price list price. The ability to reprice is controlled by the user. Reprice sales orders so that quantities are added, across orders, to calculate quantity breaks.

**Required Ship Schedule (RSS).** A schedule containing customer requirements as derived from a customer's planning and ship schedule transmissions.

**Requirement Detail.** Information received in a schedule that is specific to a requirement. Examples include authorization numbers, packaging information, and administrative contacts.

**Requisition.** A statement indicating need for a specific quantity of an item at a specific time and place.

**Reserved Location.** A location with inventory that is dedicated to a specific customer or customers to ensure an adequate supply for sales orders.

**Resource.** Anything required for production of a product. Considered critical if difficult to obtain, or has a long lead time or other significant constraint.

**Resource Bill.** A statement of the amount of a resource required to produce one unit. Two types: product line resource bill and item resource bill. Resources can be defined for both end items and families.

**Resource Load.** Demand placed on a resource by a production plan. Calculated by multiplying product forecast from a production line plan by resource requirements.

**Resource Requirements Planning.** The calculation of resource load. Uses demand from production plan and master schedule. Can then be compared to capacity of each resource.

**Response Time.** The average delay between initiation of a call and its resolution.

**Retained Tax.** A purchase tax remitted directly to the government instead of to a supplier.

**Retirement Date.** Date of permanent removal of a depreciable asset from income producing activities. Disposition can be made by sale, exchange, abandonment, or destruction of the property. Often referred to as Disposition Date.

**Retrobilling.** The process of determining a net amount due by applying a price change to a range of historical invoices.

**Return.** (1) An item sent back to its supplier. (2) A transaction recording this activity.

**Return Material Authorization (RMA).** A transaction used to manage simple returns. The customer is given an authorization number to reference when returning the material and it is used to track the return through its phases:

- Receipt of returned items for repair or replacement
- Issue of replacement items
- Documentation and billing of return activity

It is generally used when engineer involvement is not required.

**Return Material Authorization (RMA).** RMA is a transaction used to manage customer returns. The RMA consists of receipts of returned items for repair or replacement, issues of replacement items, and documentation and billing of return activity.

**Return Status.** A status code specifying the condition of items being returned during customer service activities. Determines which default sites are recommended by the system for the return.

**Return to Supplier (RTS).** In a customer service environment, a method for documenting and managing items returned to a supplier for repair or replacement. Enables you to link a return from your customer to a return to your supplier.

**Return To Vendor.** Material rejected by a buyer's inspection department and awaiting replacement, repair, or credit.

**Revaluation.** The restatement of an amount denominated in one currency, into another currency, using the current exchange rate for the functional currency. Other base currencies can use a non-current exchange rate for revaluation if necessary. The restatement determines the gain or loss that results from an exchange rate fluctuation.

**Revenue Product Line.** A product line used to provide GL account codes for Call Invoice Recording.

**Reversing Transaction.** There are two types of reversing transactions.

The reversal of an original transaction that has not had any subsequent activity. For example, the return of a purchased item to the vendor is a reversing transaction, as long as the item was not paid for, or had an unrealized gain or loss recognized, during sub-ledger revaluation.

To support accrual accounting when revenue is recognized after it is earned, rather than when it is received. This type of transaction is also used when expenses are recognized after the benefits associated with them have been received, rather than when payment is due.

**Revision Level.** An engineering change level for an item. Typically used in place of a number change to control modifications that do not change the form, fit, or function of an item.

**Rework Item.** An item requiring additional processing.

**Rework Order.** An order to rework a defective part or item.

**RMA.** Return Material Authorization. A transaction used to manage simple returns. The customer is given an authorization number to reference when returning the material and it is used to track the return through its phases:

- Receipt of returned items for repair or replacement
- Issue of replacement items
- Documentation and billing of return activity

It is generally used when engineer involvement is not required.

**Role.** A job requiring competency in a specific set of skills. The skills required for the role may, in part, be acquired by successfully completing a learning path.

**Rolling Forecast.** A 12-month forecast beginning with the current month. Not aligned with the calendar or fiscal year.

**Rounding Method.** A record specifying how currency amounts are rounded on printed documents and reports. Determines rounding level (for example, to the nearest dollar) and threshold.

**Rounding Threshold.** The point at which amounts are rounded up or down. If 0.5, amounts from 0.00 to 0.49 are rounded to 0.00, and amounts from 0.5 to 0.99 are rounded to 1.00.

**Rounding Unit.** Determines rounding level. Must be a positive number that is a power of 10 multiplied by 1 or 5, such as 10, 500, 0.01, and 0.005.

**Routing.** A set of operations required to manufacture a product. Shows work centers, machines used, sequence of operations, and tools and standard hours required. Setup and run time can also be entered. In some companies, includes information on tooling, operator skill levels, inspection operations, testing requirements, and so on.

**Routing Code.** A code identifying a set of routing or process operations required to manufacture a product. Usually the item number, but can be different for alternate routings or for similar routings or processes at different sites.

**Routing Roll-Up.** Use of a routing to calculate manufacturing lead time, labor, burden, and subcontract costs for a product.

**Routing Slip.** A slip attached to a document in an approval cycle showing who is to receive the document, and who has already approved it.

**Row Group.** A set of user-defined rows. Identify the structure of a report, line item by line item.

**Row Type.** A required attribute of a row in a group. Values are:

Data. Holds a query specification used to extract data from GL database tables.

Calculation. The result of an algebraic formula utilizing values from other rows.

Text. Displays text information only.

**RSA (Rivest-Shamir-Adleman).** An Internet encryption and authentication system that uses an algorithm developed in 1977 by Ron Rivest, Adi Shamir, and Leonard Adleman. The RSA algorithm is included with Netscape Navigator and Microsoft Explorer.

**RSS.** Required Ship Schedule. A schedule containing customer requirements as derived from a customer's planning and ship schedule transmissions.

**RTS.** Return to Supplier. In a customer service environment, a method for documenting and managing items returned to a supplier for repair or replacement. Enables you to link a return from your customer to a return to your supplier.

**Rule.** A programming expression, such as IF/THEN, linking a condition and an action.

**Run Sequence.** A code used to schedule items on production lines when approving MRP planned orders for line manufacture.

**Run Time.** The time it takes to process one unit of the product of a given operation.

**RVC.** Regional Value Code.

## S

**Safety Lead Time.** The time added to normal lead time for the purpose of completing an order in advance of its need date.

**Scrap Account.** A general ledger account charged when items or products are scrapped.

**Screen.** A means of accessing a program where you can add, delete, view, or modify data.

**System-Level Items.** Typically an item that is the parent or top-level item in a configured product structure. However, you can use this attribute in any way that is meaningful to your organization.

## T

**Tare Weight.** The weight of just the containers. Does not include the weight of its contents.

**Target Dataset.** Number Range Management (NRM) sequences are associated with dataset identifiers. These are called the *Target Dataset* for the sequence. The target dataset can indicate who owns the sequence, or where its sequence numbers will be used. A sequence owner can be a process, a document, or some other entity that the client can recognize. For example, the target dataset may be the name of the principal database field where numbers from the sequence will be used.

**Trial Daybook Report.** Lists individual entries for a specified daybook or range of daybooks. A trial report displays all data specified in the selection criteria, but it does not update page and entry numbers.

## U

**Unapplied Payments.** Payments such as deposits and prepayments that do not apply to specific customer invoices, memos, or finance charges.

**Utilization.** A measure of how intensively a resource is being used. Utilization equals the direct time charged divided by the clock time scheduled.

## V

**Value.** The element information entered for this category. This value may be an authorization number, a contact name, or packaging information.

**Value Added Tax (VAT).** A tax legislative system used in Europe and Asia.

**Value Stream.** All activities, both value added and non-value added, required to bring a product from raw material into the hands of the customer.

**Variability Factor.** A multiplier used in buffer sizing to limit or increase the amount of inventory in a kanban supermarket. Variability can be used to account for the effects of such things as seasonality or sales promotions.

**Variable Yield.** A process output that is not consistently repeatable in quantity or quality.

**Variance.** (1) The difference between what is expected, budgeted, or planned and what actually occurs. (2) In statistics, a measure of dispersion of data.

**VAT.** Value Added Tax. A tax legislative system used in Europe and Asia.

**VAT Registration Number.** A company-specific ID code that appears on sales and purchasing transactions in European Union (EU) countries. Consists of a 2-digit alphabetic country code and a numeric or alphanumeric code.

**VDA.** Verband der Automobilindustrie e.V. (VDA). A set of fixed-format EDI standards developed to enable EDI between automotive manufacturers in Germany.

**Vendor.** A company or individual that supplies goods or services. See Supplier.

**View.** A mechanism that joins data from two or more tables. A browse uses a view for searching. See also Join.

**Voucher.** A document conveying authority to pay an invoice and record all relevant details on the nature of the liability and the payment, including a unique ID for an invoice or invoice line. This verifies invoiced items and quantities against a purchase order and receiving records prior to processing payment.

## W

**Wait Time.** The time a work order must wait after it has been worked on, but before it is moved to the next operation. For example, drying, curing, cooling.

**WAN.** Wide Area Network. Generally a corporate private network that connects computers between remote company sites.

**WAR.** Web Archive File. A compressed file containing a Web application and its related files. Assists in easily deploying an entire application.

**Warehouse Management Systems.** Warehouse Management Systems are computer applications used in external warehouse systems that exchange data with QAD Enterprise Applications through the warehousing interface.

**Warehouse System.** Computer application used in external warehouse that exchanges data with MFG/PRO through the Warehousing Interface, as well as interface processing of its own.

**Warranty.** An agreement to provide a customer a specified level of service for a specified time. Indicates exact terms and conditions.

**Waste Product.** A by-product with no economic value that can be considered a financial liability. May require an expense for disposal or removal.

**WBS.** Work Breakdown Structure. Hierarchical tree structure of deliverables and tasks that need to be performed to complete a project.

**Web Archive File (WAR).** A compressed file containing a Web application and its related files. Assists in easily deploying an entire application.

**Web-enabled.** Distinguishes .NET browses from other types of programs that run in the .NET framework.

**Web Site.** A related collection of Web files that includes an introductory file called a home page. From the home page, you can get to all the other pages at that site.

**WebSpeed.** A product from Progress Software consisting of two parts: a set of Web-centric development tools and a transaction Web server. The server manages high-volume database transactions across multiple servers.

**Weeks of Coverage.** A mechanism for calculating target inventory levels based on upcoming sales forecasts.

**Where Clause.** Record-selection criteria.

**Where-Used.** Logic determining where an item or assembly is used in any product's product structure. Used to find all items or sub-assemblies that contain a given component item.

**Wide Area Network (WAN).** Generally a corporate private network that connects computers between remote company sites.

**Widget.** In Java screen-design terms, identifies a unique screen element. Widgets display information or provide specific ways for users to interact with application programs.

**Wildcards.** Characters or symbols used in search or command functions in place of one or more letters or numbers.

**Window.** A window is a special frame that displays only with certain control settings.

**WIP.** Work in Progress. A product in production that is not yet completed. Stages include raw material released for manufacturing, through completely processed material awaiting final inspection and acceptance as a finished product.

**Workbench.** (1) A tool for developing combinations of records. Workbenches can be used for repetitive schedules, intersite demand, containers, and pre-shippers/shippers. (2) A system application that lets you modify some database values and analyze the effects of the changes on other values. When you are satisfied with the simulated results, you can update the database with your changes

**Work Breakdown Structure (WBS).** Hierarchical tree structure of deliverables and tasks that need to be performed to complete a project.

**Work Center.** A production area consisting of one or more people and/or machines. Considered as one unit for capacity requirements planning and detailed scheduling.

**Work Center Calendar.** The number of days and hours a work center is open for production. Shows exceptions such as scheduled overtime or shutdown periods.

**Workcodes.** Codes used to classify project or service activities according to the type of work associated with each.

**Working Days.** Actual manufacturing days. Does not include planned shutdowns, holidays, or non-workdays.

**Work In Process (WIP).** A product in production that is not yet completed. Stages include raw material released for manufacturing, through completely processed material awaiting final inspection and acceptance as a finished product.

**Work Order.** A document, group of documents, or schedules authorizing manufacture of specified parts in specified quantities by a specified date. Can also be used to designate orders to a machine shop for tool manufacture or maintenance.

**Worksheet.** A type of internal work order maintained in PRM and used to record details related to resource consumption for projects.

**Workshop.** An instructor-led learning event, occurring at a specific time and place. Overviews may be prerequisites. Uses one or more Training Guides. Documented by an Instructor Guide.

**Workstation.** Assigned location where a worker performs the job, such as a machine or workbench.

**Work Time.** The amount of time required for one unit of an item to move from the beginning through the end of a manufacturing process. Work time is typically the total run time for all operations in the process.

**World Wide Web Consortium (W3C).** An international industry consortium that seeks to promote standards for the evolution of the Web and interoperability among Internet products by producing specifications and reference software.

**X**

**XML.** Extensible Markup Language. Commonly used in creating Web pages and applications, XML is specifically designed for Web documents that allows the definition, transmission, validation, and interpretation of data between applications and organizations.

**XSL.** Extensible Stylesheet Language. A language for formatting an XML document; for example, showing how the data described in the XML document should be presented in a Web page. XSLT shows how the XML document should be reorganized into another data structure (which could then be presented by following an XSL style sheet).

**XSLT.** Extensible Stylesheet Language Transformation. A standard way to describe how to transform the structure of an XML document into an XML document with a different structure. The coding for the XSLT is also referred to as a style sheet and can be combined with an XSL style sheet or be used independently.

**Y**

**Yield.** Ratio of usable output from a process to its input.

**Yield %.** Yield Percentage. Percentage of acceptable quality of a manufacturing order.

**Z**

**Zero Inventories.** A philosophy of manufacturing based on planned elimination of all waste and consistent improvement of productivity. The goals of zero inventories are to:

- Have only the required inventory, when it is needed
- Improve quality to zero defects
- Reduce lead times by reducing setup times, queue lengths, and lot sizes
- Streamline operations to achieve these goals at minimum cost

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