



# Release Bulletin



78-0501A  
Printed in the U.S.A.  
August 2000

This document contains proprietary information that is protected by copyright. No part of this document may be reproduced, translated, or modified without the prior written consent of QAD Inc. The information contained in this document is subject to change without notice.

QAD Inc. provides this material as is and makes no warranty of any kind, expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. QAD Inc. shall not be liable for errors contained herein or for incidental or consequential damages (including lost profits) in connection with the furnishing, performance, or use of this material whether based on warranty, contract, or other legal theory.

MFG/PRO is a registered trademark of QAD Inc. QAD, QAD eQ, and the QAD logo are trademarks of QAD Inc.

Designations used by other companies to distinguish their products are often claimed as trademarks. In this document, the product names appear in initial capital or all capital letters. Contact the appropriate companies for more information regarding trademarks and registration.

Copyright ©2000 by QAD Inc.  
78-0501A

**QAD Inc.**

6450 Via Real

Carpinteria, California 93013

Phone (805) 684-6614

Fax (805) 684-1890

<http://www.qad.com>

# Contents

<b>CHAPTER 1 INTRODUCTION TO MFG/PRO eB</b> .....	<b>1</b>
Overview .....	2
QAD Web Site .....	3
Other Documentation .....	3
New Features in MFG/PRO eB .....	4
Features by Functional Area .....	6
Menu Changes .....	7
Moved Programs .....	7
Added Programs .....	10
Deleted Programs .....	10
Documentation Changes .....	11
<b>CHAPTER 2 NEW FEATURES IN MFG/PRO eB</b> .....	<b>13</b>
NetUI Enhancements .....	14
Java-Based Interface for Maintenance Programs .....	14
User Interface (UI) Configurator .....	17
Financial Enhancements .....	18
Extended Account Structure .....	19
Enhanced Fixed Assets .....	22
General Financial Enhancements .....	25
Support for One Tax System .....	28
Distribution Enhancements .....	29
EDI ECommerce Enhancements .....	30
Cumulative Shipped Reset .....	33

Manufacturing Enhancements . . . . .	34
Enhanced MRP to Repetitive Approval . . . . .	34
Kanban Sizing . . . . .	39
Component Yield Calculation . . . . .	41
Customer Services Enhancements . . . . .	42
Support for EMT in MOs . . . . .	43
Project Realization Management (PRM) . . . . .	45
System Enhancements . . . . .	52
Improved Implementation and System Administration . . . . .	52
Improved Report Performance . . . . .	55
Improved Print and E-mail . . . . .	59
Improved Label and Translation Service Capabilities . . . . .	60
PRO/PLUS Enhancements . . . . .	61
WIP Lot Trace . . . . .	62
Customer Sequence Schedules . . . . .	67
External Interface Enhancements . . . . .	71
Logistics API Enhancements . . . . .	71
Q/LinQ Enhancements . . . . .	73
Advanced Planning and Optimization API Enhancements . . . . .	75
QAD Storefront . . . . .	76

# Introduction to MFG/PRO eB

This chapter provides an overview of major updates included with MFG/PRO eB.

<i>Overview</i>	<b>2</b>
<i>New Features in MFG/PRO eB</i>	<b>4</b>
<i>Features by Functional Area</i>	<b>6</b>
<i>Menu Changes</i>	<b>7</b>
<i>Documentation Changes</i>	<b>11</b>

Field	Value
Routing Code	10-15000
Operation	20
Standard Operation	
Work Center	1030
Machine	INSPECTION, ALL SITE
Description	INSPEC PER PROC-000
Machines per Op	1
Overlap Units	1
Queue Time	1.0
Wait Time	0.0
Setup Time	0.0

## Overview

MFG/PROeB supports QAD's vision to be a supplier of industry-specific e-business solutions. MFG/PROeB is more than just the next release of MFG/PRO. Along with a broad range of functional enhancements, MFG/PROeB introduces a new architecture that opens up its business functions to easily integrate with other e-business applications.

This document provides a high-level summary of what is new in MFG/PROeB. Features for each major functional area are grouped together:

- Network User Interface (NetUI)
- Financials
- Distribution
- Manufacturing
- Customer Services
- System
- PRO/PLUS
- External Interfaces

Information for each feature is presented in a common format, using the following outline:

- Business need
- MFG/PROeB solution
- Key features
- New menu-level programs
- Modified programs
- Conversion (if needed)

## QAD Web Site

This *Release Bulletin* describes major enhancements only. To ensure complete and up-to-date information on minor updates, ECO listings are available at the QAD Web site. To view ECO listings, use the following address:

[http://support.qad.com/software\\_update\\_information/eco/](http://support.qad.com/software_update_information/eco/)

To access the ECO listings, you must have a QAD Web account. To obtain a QAD Web account, go to:

<http://support.qad.com/>

The QAD Web site also has information about training classes and other services that can help you learn about MFG/PROeB.

## Other Documentation

Complete details regarding new features are contained in the standard set of MFG/PROeB documentation describing the entire system.

- For software installation instructions, refer to the appropriate installation guide for your system.
- For instructions on navigating the MFG/PROeB Windows and character environments, refer to the appropriate chapters of *User Guide Volume 1: Introduction*.
- For instructions on accessing MFG/PROeB programs with a Web browser in a network environment, refer to the *Network User Interface Guide*.
- For information on using MFG/PROeB, refer to the *User Guides*.
- For information on the application program interfaces (APIs) that let MFG/PROeB exchange data with external applications, refer to the *External Interface Guides*.
- For technical details, refer to the *File Relationships* and *Database Definitions*.
- To view documents online in PDF format, see the *Documents on CD*.
- To download documents in PDF format or view them in HTML, go to the documentation section of the QAD Web site at:

<http://support.qad.com/documentation/>

## New Features in MFG/PRO eB

- A set of business-critical maintenance programs has been modified to display in a full Java-based graphical user interface in the Network User Interface (NetUI). To support this interface, MFG/PRO eB programs have been restructured to separate business logic from interface elements.
- A new UI Configurator tool has been provided that lets system administrators easily customize screen layout and behavior of the new Java-based maintenance programs.
- An eight-character sub-account code is now available throughout MFG/PRO eB, and the project field has been integrated into the account structure.
- An enhanced Fixed Assets module lets users efficiently run fixed-asset operations in various business environments. Users can set up, maintain, transfer, and retire fixed assets.
- A set of accounting changes supports more flexible accounting and reporting practices, especially in European countries.
- A single, unified tax environment—Global Tax Management (GTM)—is now supported.
- Continued enhancements to EDI ECommerce—previously called ECommerce Gateway—support additional business documents and integration with Enterprise Material Transfer (EMT). New gateways of special interest to Consumer Products customers let users import inventory, warehouse shipping, and warehouse receipt advice documents.
- Cumulative Shipped Reset to Zero has been replaced with a more flexible program.
- The functions introduced in MFG/PRO 9.0 to support approving MRP planned orders to production line schedules have been extended and improved.
- A new Kanban Sizing sub-module has been added to Shop Floor Control for use in flow environments.
- An alternate method can now be used for calculating more accurate yield for component items.

- Material orders (MOs)—previously known as service engineer orders (SEOs)—can now automatically generate EMT purchase orders to transmit to suppliers.
- A new module, Project Realization Management (PRM), has been added to support defining, tracking, and invoicing projects delivered to and implemented at customer sites.
- Installation and system administration has been streamlined and improved to take advantage of PROGRESS 9 features, including storage areas. Using storage areas provides additional options for performance tuning and optimization by letting you separate database tables into distinct areas and place the areas on different physical disks.
- Report generation has been streamlined to improve performance and prevent record locking problems.
- New print options are available for generating reports to a Windows default printer or to a previously defined E-mail system.
- Changes to the database infrastructure will facilitate deploying patches and service packs for non-English installations.
- The optional PRO/PLUS package now includes two new modules: WIP Lot Trace and Customer Sequence Schedules.
- The Logistics Application Program Interface (API) has been extended to manage new kinds of data.
- Q/LinQ has been extended to support additional business object documents (BODs) and provide better control over the import/export process.
- The Advanced Planning and Optimization API has been extended to manage multiple-site processing.
- An interface with IBM's WebSphere Commerce Suite (WCS) supports the new QAD Storefront, which integrates the order-entry functions of the WCS electronic storefront product with sales order processing features of MFG/PROeB.

▶ See the QAD Web site for information on the QAD Storefront.

## Features by Functional Area

All of the features listed in Table 1.1 are included in MFG/PRO eB. The table summarizes features by functional area and indicates where each is described in more detail.

**Table 1.1**  
Features by  
Functional Area

<b>MFG/PRO eB Area</b>	<b>New Feature</b>	<b>Described On...</b>
Network User Interface (NetUI)	Java-Based GUI for Maintenance Programs	See page 14.
	UI Configurator	See page 17.
Financials	Extended Account Structure	See page 19.
	Support for One Tax System	See page 28.
	Enhanced Fixed Assets Module	See page 22.
	General Financial Enhancements	See page 25.
Distribution	EDI ECommerce Enhancements	See page 30.
	Cumulative Shipped Reset	See page 33.
Manufacturing	Enhanced MRP to Repetitive Approval	See page 34.
	Kanban Sizing	See page 39.
	Component Yield Calculation	See page 41.
Customer Services	Support for EMT in MOs	See page 43.
	Project Realization Management (PRM)	See page 45.
System	Improved Implementation and System Administration	See page 52.
	Improved Report Performance	See page 55.
	Improved Print and E-mail	See page 59.
	Improved Label and Translation Service Capabilities	See page 60.
PRO/PLUS	WIP Lot Trace	See page 62.
	Customer Sequence Schedules	See page 67.
Interfaces/APIs	Logistics API Enhancements	See page 71.
	Q/LinQ Enhancements	See page 73.
	Advanced Planning and Optimization API	See page 75.
	QAD Storefront	See page 76.

## Menu Changes

To facilitate future growth and accommodate current software changes, the menus have been modified in several areas of MFG/PROeB.

### Moved Programs

Several changes involve moving top-level menu items to a lower level of the menu system, below a related top-level item.

Old	New	Menu Label	Program Name
<b>4</b>	<b>3.16</b>	<b>Physical Inventory Menu</b>	
4.1	3.16.1	Item Tag Create	piptcr.p
4.2	3.16.2	Bulk Tag Create	pibtcr.p
4.4	3.16.4	Inventory Balance Freeze	piibfrz.p
4.6	3.16.6	Tag Print	pirp01.p
4.7	3.16.7	Tag Void Status Update	pivtup.p
4.8	3.16.8	Tag Inquiry	piiq.p
4.11	3.16.11	Tag Count Entry	pitcmt1.p
4.12	3.16.12	Tag Recount Entry	pitcmt2.p
4.13	3.16.13	Tag Report	pirp03.p
4.14	3.16.14	Counted Tag Report	pirp02.p
4.15	3.16.15	Uncounted Tag Report/Update	pirp06.p
4.16	3.16.16	Frozen Inventory Valuation Report	pirp05.p
4.17	3.16.17	Tag Inventory Valuation Report	pirp07.p
4.18	3.16.18	Inventory Variance Report	pirp04.p
4.21	3.16.21	Inventory Balance Update	piibup.p
4.23	3.16.23	Tag Delete/Archive	pitdup.p
<b>6</b>	<b>7.12</b>	<b>Sales Quotation Menu</b>	
6.1	7.12.1	Sales Quote Maintenance	sqqomt.p
6.2	7.12.2	Sales Quote Browse	sqbr001.p
6.3	7.12.3	Sales Quote Print	sqqorp05.p
6.5	7.12.5	Sales Quote Copy from Order	sqqocpy.p
6.6	7.12.6	Sales Quote Copy from Quote	sqqoqo.p

**Table 1.2**  
Menu Items Moved  
in MFG/PROeB

Table 1.2 — *Menu Items Moved in MFG/PRO eB* — (Page 1 of 3)

Old	New	Menu Label	Program Name
6.8	7.12.8	Sales Quote Repricing	sqrepr.p
6.10	7.12.10	Sales Quote Release to Order	sqqoso.p
6.13	7.12.13	Sales Quote by Quote Report	sqqorp.p
6.14	7.12.14	Sales Quote by Customer Report	sqqorp01.p
6.15	7.12.15	Sales Quote by Item Report	sqqorp02.p
6.16	7.12.16	Sales Quote Gross Margin Report	sqqorp08.p
6.17	7.12.17	Sales Quote Reason Lost Report	sqqorp03.p
6.23	7.12.23	Expired Quote Delete/Archive	sqqoup.p
6.24	7.12.24	Sales Quote Control File	sqqopm.p
<b>9</b>	<b>7.17</b>	<b>Sales Analysis Menu</b>	
9.1	7.17.1	Salesperson Quota Maintenance	sasphmt.p
9.2	7.17.2	Salesperson Quota Inquiry	sasphiq.p
9.3	7.17.3	Salesperson Margin Inquiry	sasphiq1.p
9.5	7.17.5	Sales by Salesperson Browse	sabr003.p
9.6	7.17.6	Salesperson Ranking Report	sasarp04.p
9.10	7.17.10	Sales by Site Report	sasarp06.p
9.13	7.17.13	Sales by Customer Browse	sabr001.p
9.14	7.17.14	Sales by Customer Report	sasarp03.p
9.15	7.17.15	Customer Ranking Report	sasarp01.p
9.17	7.17.17	Sales by Item Browse	sabr002.p
9.18	7.17.18	Sales by Item Report	sasarp05.p
9.19	7.17.19	Item Ranking Report	sasarp02.p
9.22	7.17.22	Fiscal Year Change	safyrcg.p
9.23	7.17.23	Sales Analysis Delete/Archive	sasaup.p
<b>10</b>	<b>7.23</b>	<b>Service/Repair Order Menu</b>	
10.1	7.23.1	S/RO Maintenance	srsromt.p
10.2	7.23.2	S/RO Print	srsrorp.p
10.13	7.23.13	S/RO by Status Browse	srbr001.p
10.14	7.23.14	S/RO by Failure Browse	srbr002.p
10.15	7.23.15	S/RO by Assigned to Browse	srbr003.p
10.16	7.23.16	S/RO by Date Browse	srbr004.p
10.17	7.23.17	S/RO by Item Browse	srbr005.p

Table 1.2 — Menu Items Moved in MFG/PRO eB — (Page 2 of 3)

Old	New	Menu Label	Program Name
10.18	7.23.18	S/RO by Type Browse	srbr006.p
10.19	7.23.19	S/RO by Disposition Browse	srbr007.p
10.20	7.23.20	S/RO by Customer Browse	srbr008.p
10.23	7.23.23	S/RO Delete/Archive	srsroup.p
10.24	7.23.24	S/RO Control File	srsropm.p

Table 1.2 — Menu Items Moved in MFG/PRO eB — (Page 3 of 3)

Additionally, service engineer orders (SEOs) have been renamed to material orders (MOs). This name better reflects their use in MFG/PROeB since they can now be used in contexts other than service.

See *User Guide Volume 8B: Service/Support Management*.

The engineer order functions that were previously located on the SSM menu as option 11.13.19, Engineer Orders Menu, are now available as option 11.11, Material Order Menu.

Table 1.3 lists the current and the previous menu positions and names.

Current MO Menu		Former SEO Menu	
Number	Label	Number	Label
11.11	Material Order Menu	11.13.19	Engineer Orders Menu
11.11.1	Material Order Maintenance	11.13.19.1	SEO Maintenance
11.11.2	Material Order Confirmation	11.13.19.2	SEO Confirmation
11.11.4	MO Manual Allocations	11.13.19.4	SEO Manual Allocations
11.11.5	MO Automatic Allocations	11.13.19.5	SEO Automatic Allocations
11.11.6	Material Order Shipments	11.13.19.6	SEO Shipments
11.11.8	MO Direct/Pending Returns	11.13.19.8	SEO Direct/Pending Returns
11.11.9	MO Pending Return Report	11.13.19.9	SEO Pending Return Report
11.11.11	Open Material Order Report	11.13.19.11	Open SEO Report
11.11.12	Material Order Backlog Report	11.13.19.12	SEO Backlog Report
11.11.13	Material Order Shipment Report	11.13.19.13	SEO Shipment Report
11.11.24	Material Order Control File	11.13.19.24	Engineer Orders Control File

**Table 1.3**  
New MO Menu  
Listing

## Added Programs

Functional enhancements to MFG/PRO eB have resulted in the addition of many new programs to the menu. These new programs are listed under the new feature descriptions in Chapter 2.

**Table 1.4**  
New Menu  
Programs

Description	Menu Listing On...
UI Configurator for the NetUI	See page 17.
Enhanced Fixed Assets module	See page 24.
Financial enhancements	See page 27.
Enhanced EDI ECommerce	See page 32.
Cumulative Shipped Reset (7.5.18); replaces Cumulative Shipped Reset to Zero	See page 33.
Enhanced MRP to Repetitive Approval; includes both new menu programs and changes in the menu locations of several existing programs	See page 35 and page 37.
Kanban Sizing	See page 40.
Project Realization Management	See page 48.
Improved Label and Translation Service Capabilities	See page 61.
WIP Lot Trace	See page 65.
Customer Sequence Schedules	See page 69.
Logistics API	See page 72.
Q/LinQ	See page 74.
QAD Storefront	See page 76.

## Deleted Programs

Because of functional changes to MFG/PRO eB, some menu items have been deleted.

▶ See page 28.

- MFG/PRO eB supports all tax environments through Global Tax Management (GTM), option 2.13. The programs previously used for US sales tax, value-added tax (VAT), and Canadian tax are no longer included under option 2.15.
- The Payroll module (formerly option 29) has been retired and is not available in MFG/PRO eB. Payroll programs are no longer on the menu.

## Documentation Changes

The user documentation for MFG/PRO eB has been updated to include the new features described in this *Release Bulletin*. Additionally, several structural changes to the documentation set have been made since the release of MFG/PRO 9.0.

- The *User Interface Guide* is no longer a separate document. Instead, updated information on how to use the Windows and character interfaces is provided in the appropriate chapters of *User Guide Volume 1: Introduction*.

Similar information on the NetUI is still provided in the *Network User Interface Guide*. This book has been updated to include information on how to use the new Java-based graphical user interface maintenance programs added in MFG/PRO eB.

- The master index to the user guides is no longer available.
- *Volume 4: Financials* has been expanded to include Volume 4A, previously existing financial information, and Volume 4B, information about the enhanced Fixed Assets module.
- GTM conversion information has been moved from *User Guide Volume 6: Master Files* to the installation guide.
- Information on the Compliance module has been moved from *User Guide Volume 9: Compliance* to *User Guide Volume 6: Master Files*.
- *User Guide Volumes 10A and 10B: External Interfaces* have been removed from the user guide set. The information on application program interfaces (APIs) between MFG/PRO eB and external applications has been moved to a new set of documents, the *External Interface Guides*.

PDF versions of the *External Interface Guides* are available on a separate new *Documents on CD*.

- Manager Functions information is now provided in *User Guide Volume 9*.
- A user guide has been added for the new Project Realization Management (PRM) module.
- The *Screen Books* are no longer available.

- Electronic copies of the installation guides are no longer provided on the *Documents on CD*. Instead, a printed copy of the appropriate installation guide is provided with the MFG/PRO eB installation media. Updates are available on the QAD Web site.

# New Features in MFG/PRO eB

This chapter describes significant enhancements and changes introduced in MFG/PRO eB.

<i>NetUI Enhancements</i>	<b>14</b>
<i>Financial Enhancements</i>	<b>18</b>
<i>Distribution Enhancements</i>	<b>29</b>
<i>Manufacturing Enhancements</i>	<b>34</b>
<i>Customer Services Enhancements</i>	<b>42</b>
<i>System Enhancements</i>	<b>52</b>
<i>PRO/PLUS Enhancements</i>	<b>61</b>
<i>External Interface Enhancements</i>	<b>71</b>

Routing Code	Operation	Standard Operation	Work Center	Machine	Description	Machines per Op	Overlap Units	Queue Time	Wait Time	Setup Time
10-15000	20	1030	1030	INSPECTION, ALL SITE	INSPEC PER PROC-000	1	1	1.0	0.0	0.0

## NetUI Enhancements

▶ See the *Network User Interface Guide*.

MFG/PRO eB introduces major enhancements to the Network User Interface (NetUI).

- A number of business-critical maintenance programs have been modified to support an advanced Java-based graphical user interface (GUI). These programs can be invoked using standard features of the NetUI desktop.
- The screen design for programs that use this new interface can be modified easily with the UI Configurator.

### Java-Based Interface for Maintenance Programs

A subset of business-critical programs can now be run in the NetUI with a full Java-based graphical user interface. This subset represents the first phase in the restructuring of maintenance programs.

#### Business Need

QAD introduced the Network User Interface (NetUI) for the Java platform with MFG/PRO 9.0 to provide direct access to MFG/PRO browses and reports over an intranet. With the NetUI, users access report programs from a Web browser, eliminating the need to install MFG/PRO components on client machines. Traffic between client and server is minimized since only information requested by end users is transferred from server to client.

The initial release of NetUI provided a Java-based interface for reports, browses, and inquiries only. Maintenance programs were accessed through a telnet session within the NetUI desktop. As a result, maintenance programs retained a linear, character-based interface.

## MFG/PRO Solution

Beginning with MFG/PROeB, selected maintenance programs have been restructured to display with a Java-based graphical user interface in the NetUI. The primary goals of this restructuring are to:

- Provide an easy-to-use and powerful interface with the features that users expect in world-class systems.
- Support multisite organizations by optimizing performance over a wide-area network (WAN).
- Enable users to easily adapt the interface to their own business practices and user needs without expensive custom coding.

Restructured programs in the NetUI follow the same business logic as the character and Windows versions of the programs. Only the way users interact with these programs has changed.

## Key Features

Using the browser-based interface for maintenance programs in the NetUI, you can:

- Open multiple maintenance sessions simultaneously, in the same way that you can run multiple browses and reports.
- Use a customizable navigation tree to view and filter records being maintained. Records are filtered based on the criteria that are important to you. For example, you can view purchase orders sorted by buyer, supplier, or requisition.
- Update selected information quickly and easily by clicking on tabs, which organize related data entry fields. This UI approach eliminates the need to move sequentially through a maintenance program. You can decide the sequence you want to use to fill out order information and move back and forth between tabs as needed with minimum key strokes.
- Update records with multiple lines using a flexible grid display, similar to a spreadsheet. Grids are used whenever multiple records are related to one parent record, such as purchase order lines for a single purchase order, or salespersons for a customer. You can resize the columns in the grid and change their order using simple mouse

drag-and-drop techniques. This ensures that you can always give the data that is most important to your business processes the highest visibility.

- Use command buttons to save your changes when you choose, or cancel unwanted changes made since the last save.
- Resize display areas by dragging split panels with the mouse. For example, while filling out an order header, you can minimize the space used by the order line panel. This lets you manage data display in a way that is convenient for you.

### Modified Programs

The programs listed in Table 2.1 have been modified to use the new Java-based graphical user interface in the NetUI.

In some cases, the Java maintenance program combines functions of another related program in the character and Windows interfaces.

- Customer Maintenance includes the functions of Customer Ship-to Maintenance (2.1.13).
- Supplier Maintenance includes the functions of Supplier Remit-to Maintenance (2.3.13).

**Table 2.1**  
GUI NetUI  
Maintenance  
Programs

Menu Number	Description	Program Name
1.4.1	Item Master Maintenance	ppptxu.p
2.1.1	Customer Maintenance	adcuxu.p
2.3.1	Supplier Maintenance	adsuxu.p
5.3.1	Blanket Order Maintenance	popoxu1.p
5.7	Purchase Order Maintenance	popoxu.p
5.13.1	Purchase Order Receipts	porcxu.p
7.1.4	Sales Order Read	sosoxu.p
13.5	Product Structure Maintenance	bmpsxu.p
14.13.1	Routing Maintenance	rwroxu.p
14.13.2	Routing Maintenance (Rate Based)	rwroxu1.p
15.5	Formula Maintenance	fmpsxu.p
15.13	Process Definition Maintenance	rwroxu2.p
27.10	Customer Credit Review/Update	arcsxu.p

In addition, several menus and a control file related to NetUI functions have been renamed.

Menu Number	New Description	Old Description
36.20.10	NetUI Menu	Web Menu
36.3.21	NetUI Security Menu	Web Security Menu
36.3.21.23	Reports and Utilities Menu	Web Reports and Utilities Menu
36.3.21.24	NetUI Security Control File	Web Security Control File

**Table 2.2**  
Menu Items  
Renamed for NetUI

Two existing NetUI programs have been modified to support the new Java-based maintenance programs.

Menu Number	Description	Program Name
36.3.21.1	Program Information Maintenance	mgpgmimt.p
36.3.21.2	Program Information Browse	mgbr060.p

**Table 2.3**  
Modified NetUI  
Programs

### User Interface (UI) Configurator

A new tool has been provided that lets a system administrator manage multiple versions of a screen design for Java-based maintenance programs in the NetUI.

#### Business Need

Many businesses would like to tailor the appearance of MFG/PROeB functions to reflect their unique business practices. In addition, individual users may need a custom interface to accommodate their skill level or work style.

Without design tools, changing the interface requires custom programming, which can be expensive and difficult to maintain.

#### MFG/PRO Solution

The new Java-based interface for maintenance programs in the NetUI is designed to adapt easily to each organization’s requirements. Modifications to screen design are made with the UI Configurator, a utility that lets you edit the various properties of each element on a screen. No recompiling is required.

Modified screens can be made available on a company-wide or individual basis. When a screen design is created for an individual user, it is available from any workstation that individual uses to log in to the NetUI.

### Key Features

Using the UI Configurator, you can:

- Modify screen layout by rearranging screen elements such as tab folders, fields, groups, and grids.
- Move or copy screen elements from one tab to another.
- Hide unused fields so they no longer appear on the interface.
- Define fields as display only.
- Modify the label associated with a field.
- Easily access user fields reserved for custom programming.
- Save screen versions for individual users or company-wide access.

### New Programs

The UI Configurator has been added as menu option 36.20.10.17. It can be accessed from the NetUI only.

## Financial Enhancements

Significant enhancements have been made to financial modules in these areas:

- The basic accounting structure has been modified.
- An enhanced Fixed Assets module replaces the previous fixed-asset functions.
- A set of minor accounting changes supports more flexible accounting and reporting practices, especially in European countries.
- A single, unified tax environment—Global Tax Management (GTM)—is now supported.

In addition to these changes, the Payroll module is no longer available.

## Extended Account Structure

An eight-character sub-account code is now available throughout MFG/PROeB, and the project field has been integrated into the account structure.

▶ See *User Guide Volume 4A: Financials*.

### Business Need

Prior to MFG/PROeB, the system's account structure included these elements:

- Account and Sub-Account Codes. These codes can be defined as eight characters each in the General Ledger (GL) and Fixed Assets modules. In other modules, account and sub-account are combined and limited to eight characters total.
- Cost Center. A four-character field providing additional detail for tracking and reporting.

As a result, the total effective length for defining an account structure was limited to twelve characters. This length is insufficient for many businesses, especially those that must comply with standards for complex corporate charts of accounts.

### MFG/PROeB Solution

The MFG/PROeB account structure is now expanded to provide more flexible options in designing an account structure.

- A separate eight-character sub-account field has been added in every program that previously referenced the combined account/sub-account field.
- Standard reports have been enhanced to include sub-account as a separate field in the report output. Some reports also include sub-account as a separate selection criterion.
- The project field can now be validated with other account elements, adding a further dimension to the account structure.

**Note** While project codes are now validated with other account elements, they do not occur everywhere accounts are referenced. Project codes have not been added anywhere they did not previously exist.

## Key Features

Using these enhancements, you can:

- Set up an account structure that potentially includes 28 characters: eight-character account, eight-character sub-account, four-character cost center, eight-character project.
- Create GL allocation codes up to the full eight-character account length.
- Define valid ranges of accounts, sub-accounts, and cost centers for GL projects.
- Enter an eight-character sub-account in a separate field in all modules where accounts are specified. The Sub-Module Sub-Account Length field has been removed from the System/Account Control File (36.1).
- Combine validation of all account elements, including project codes. A single field in the System/Account Control File—Verify GL Accounts—now controls this validation. The Verify Projects field has been removed.
- Use intelligent browses to look up account elements when account validation is active.
  - The sub-account browse displays only active sub-accounts valid for the account entered.
  - The cost center browse displays only active cost centers valid for the account and sub-account range.
  - Similarly, the project browse displays only active GL projects valid for the account, sub-account, and cost center range. (Note that this is true only when the Project field occurs in combination with other account elements in the same program frame.)
- Use a streamlined method that reduces redundant data entry to set up default accounts. Since sub-accounts and cost centers are typically the same for the accounts, you can specify a default sub-account and cost center and the system applies them to each account being set up in the following programs:
  - Product Line Maintenance (1.2.1)
  - Inventory Accounts Maintenance (1.2.13)
  - Sales Accounts Maintenance (1.2.17)
  - Department Maintenance (14.1)

- Generate a set of reports using sub-account as a selection criterion and view report output with a separate column for sub-account.

## Modified Programs

No new menu-level programs have been added to support the extended account structure. However, every program that references account elements has been modified to support this enhancement. Since these programs represent a significant percentage of the product, they are not listed individually.

You will note significant changes to the user interface in the following programs:

- The Verify Projects and Sub-Module Sub-Account Length fields have been removed from the System/Account Control File (36.1).
- Project Code Maintenance (25.3.11) has been enhanced to support specifying valid account, sub-account, and cost center ranges.
- Default sub-account and cost center fields have been added to Product Line Maintenance (1.2.1), Inventory Accounts Maintenance (1.2.13), Sales Accounts Maintenance (1.2.17), and Department Maintenance (14.1).
- Mirror Table Maintenance (3.20.1) now supports an All Sub-Accounts option similar to the All Cost Center option previously available.
- Two fields in Service/Support Management (SSM) control files that controlled the display of sales accounts now control whether these accounts can be modified.
  - The Display Contract Accounts field in the Contract Control File (11.5.24) has been changed to Modify Sales Accounts.
  - The Invoice Accounts field in the Call Management Control File (11.1.24) has been changed to Modify Sales Accounts.
- Minor changes were made in Call Quote Maintenance (11.1.1.7) and Call Activity Recording (11.1.1.13) so that you can specify separate projects for costs and revenue, based on the Project Code Handling field in the Call Management Control File (11.1.24).

- If you use Electronic Data Interchange (EDI) or EDI ECommerce, the format of the remittance advice (document 820) has been modified to include the sub-account field. Sub-account was added as the last field in the document to minimize problems that might occur when reordering data.

## Conversion

To use the new extended account structure, conversion is required. This conversion is performed as part of the installation and conversion procedure. The conversion routines move the substring that represented a sub-account from the account field to its new, separate sub-account field. A report is generated documenting the number of records converted.

If you have created scripts for loading data into maintenance functions using CIM Data Load (36.15.1), you must adjust the scripts to accommodate the new sub-account field.

As much as possible, the functional flow has been preserved whenever account, sub-account, cost center, and project are updated through the interface. However, some additional changes were required in Call Activity Recording (11.1.1.13) to accommodate the use of multiple projects for revenue and costs. You should validate that associated CIM scripts work correctly before using them in a production environment.

## Enhanced Fixed Assets

▶ See *User Guide Volume 4B: Financials*.

MFG/PROeB provides an enhanced Fixed Assets module that replaces the legacy Fixed Assets module in MFG/PRO versions prior to 9.0.

## Business Need

Fixed assets are tangible assets that a business uses to produce income and typically represent a substantial financial investment. The costs of acquiring, maintaining, insuring, and replacing fixed assets, along with depreciation, can have a substantial impact on both financial statements and tax liabilities.

## MFG/PROeB Solution

The enhanced Fixed Assets module lets users efficiently run fixed-asset operations in various business environments. Users can set up, maintain, transfer, and retire fixed assets.

**Note** The Fixed Assets module is not integrated with Purchasing and Accounts Payable functions in MFG/PROeB. All fixed-assets transactions take place in the system base currency; multiple-currency processing is not supported.

## Key Features

Using the enhanced Fixed Assets module, you can:

- Set up business rules to define your accounting needs, including:
  - Depreciation methods and books
  - Fixed-asset calendars
  - Fixed-asset locations
  - Fixed-asset classes
- Enter fixed assets into the system individually or in a batch. Use standard CIM-load functions to batch load fixed-asset data into the system.
- Perform the following functions after creating a fixed asset:
  - Maintain asset account information.
  - Retire or transfer an asset.
  - Enter asset comments.
  - Maintain user fields for customizations.
  - Maintain insurance data.
  - Adjust depreciation books.
  - Adjust posted depreciation.
  - Maintain book detail.
  - Maintain information for the units-of-production depreciation method.
  - Maintain information about the asset's components.
  - Divide an asset into two or more separate assets.

- Retire or transfer a group of assets.
- Post GL entries for acquisition, depreciation expenses, transfer, retirement of assets, and adjustments. You can also correct any GL errors by creating reverse GL transactions for the original GL entries.
- Optionally delete/archive retired assets at period or year-end.
- Run fixed-asset reports that provide accounting and management information.

### New Programs

Table 2.4 lists the new programs added to MFG/PRO eB to support the enhanced Fixed Assets module.

**Table 2.4**  
New Fixed Assets  
Programs

Menu Number	Description	Program Name
32.1.1	Method Maintenance	famtmt.p
32.1.2	Method Report	famtrp.p
32.1.5	Fixed Asset Calendar Maintenance	facalmt.p
32.1.6	Fixed Asset Calendar Report	facalrp.p
32.1.9	Book Maintenance	fabkmt.p
32.1.10	Book Browse	fabr012.p
32.1.13	Location Maintenance	falcmt.p
32.1.14	Location Report	falcrp.p
32.1.17	Class Maintenance	facclmt.p
32.1.18	Class Report	facclrp.p
32.3	Fixed Asset Maintenance	fafamt.p
32.4	Fixed Asset Browse	fabr019.p
32.5.1	Periodic Activity Report	faparp.p
32.5.3	Depreciation Adjustment Report	faajrp.p
32.5.5	Acquisition Report	faaqrp.p
32.5.7	Depreciation Expense Report	faderp.p
32.5.9	Asset Depreciation Array Report	fadar.p
32.5.11	Asset Owned Report	faaorp.p
32.7	Fixed Asset Batch Maintenance	fabchmt.p
32.8	Fixed Asset Batch Report	fabchrp.p
32.11	Fixed Asset Meter Maintenance	famtrmt.p

Menu Number	Description	Program Name
32.12	Fixed Asset Meter Report	famtrrp.p
32.13	Fixed Asset Transaction Post	fapsmt.p
32.14	Fixed Asset Transaction Void	favdmt.p
32.16	Fixed Asset Transfers	fatrmt.p
32.17	Fixed Asset Transfer Report	fatrrp.p
32.19	Fixed Asset Retirements	fartmt.p
32.20	Fixed Asset Retirement Report	fartrp.p
32.23	Retired Asset Delete/Archive	fartup.p
32.24	Fixed Asset Control File	fafapm.p
32.25.2	Fixed Assets Migration Utility	facvmt.p
32.25.3	Fixed Assets Migration Report	facvrp.p

## Modified Programs

The enhanced Fixed Assets module did not modify any existing programs.

## Conversion

If you have legacy fixed-assets data in your system, conversion utilities transfer this data to the enhanced Fixed Assets module as part of the conversion to MFG/PROeB.

## General Financial Enhancements

A number of financial enhancements make MFG/PROeB more flexible and support European regulatory requirements and standard accounting practices.

▶ See *User Guide Volume 4A: Financials*.

## Business Need

To support general ledger (GL) reporting requirements, customers may need to:

- Track GL year-end adjustment transactions separately. These transactions are created after the end of the fiscal year, but effective in the previous fiscal year.

- Ensure that no unmonitored updates are made to unposted GL transactions.
- Maintain a record of each document referenced on accounts payable (AP) and accounts receivable (AR) transactions.

Prior to the release of MFG/PRO eB, these requirements were not supported.

### **MFG/PRO eB Solution**

Three key new features have been added to MFG/PRO eB to support these reporting requirements:

- The new Year End Adjustment Transaction program lets you create and maintain transactions identified with a YA transaction type.
- The GL Transaction Audit Trail field in the General Ledger Control File supports auditing of changes and deletions to unposted GL transactions.
- The Summarization Level field replaces the Summarized Journals field in the Accounts Payable and Accounts Receivable Control Files. This field supports three levels of summarization:
  - Level 1 creates detailed AP/AR transactions by entity, account, sub-account, cost center, and project code, with one GL distribution line for each AP/AR transaction
  - Level 2 creates AP/AR transactions summarized by batch, account, sub-account, cost center, and project.
  - Level 3 creates detailed individual AP/AR transactions with separate GL references for each document.

### **Key Features**

Using these financial enhancements, you can:

- Maintain an audit trail of updates and deletions of unposted GL transactions.
- Create, manage, and report year-end adjustment transactions with a transaction type of YA.
- Specify one of three levels of summarization for AP and AR transactions.

**New Program**

Table 2.8 lists the new program added to MFG/PRO eB to support financial enhancements.

Menu Number	Description	Program Name
25.13.5	Year End Adjustment Transaction	glyamt.p

**Table 2.5**  
New Financial Program

**Modified Programs**

The following programs have been modified to support financial enhancements:

- The Summarized Journal field in the Accounts Payable Control File (28.24) and Accounts Receivable Control File (27.24) has been replaced by the Summarization Level field. Programs that previously checked the value of Summarized Journal now check the new field.
- A new GL Transaction Audit Trail field has been added to the General Ledger Control File (25.24). This field is checked in:
  - Standard Transaction Maint (25.13.1)
  - Retroactive Transaction Maint (25.13.2)
  - Reversing Transaction Maint (25.13.3)
  - Year End Adjustment Transaction (25.13.5)
  - GL Transaction Delete/Archive (36.23.2)
- Programs that report and maintain GL transactions have been modified to include the YA transaction type.

**Conversion**

As part of the standard conversion process, the system sets the value of Summarization Level based on the previous setting of Summarized Journals:

- Yes is set to level 1.
- No is set to level 2.

## Support for One Tax System

▶ See *User Guide*  
*Volume 6: Master*  
*Files*.

Beginning with MFG/PRO eB, all tax systems are supported through Global Tax Management (GTM).

### Business Need

Regional tax systems vary widely in tax methods and regulations. In addition, tax systems can be very volatile, changing rapidly as local and regional regulations change. Multinational companies especially need a flexible tax system that accommodates diverse local requirements.

### MFG/PRO eB Solution

GTM was introduced in MFG/PRO 7.4 to accommodate this business need. QAD continued to support existing regional tax environments within MFG/PRO including U.S. sales tax, Canadian taxes, and value added taxes (VAT) through later releases.

However, GTM offers the most precise tax calculations and the greatest flexibility when taxes are calculated for multiple countries. In the United States, GTM is a prerequisite for using the interface to the Vertex Quantum™ for Sales and Use Tax system.

To provide the highest level of tax support, users of MFG/PRO eB now must convert to GTM. Programs are supplied on the Global Tax Management Menu (2.13.22) to support these conversions.

### Changed Programs

The following changes have been made to the user interface:

- The three fields in the System/Account Control File that determined the database tax system have been removed: Canadian Tax, Value Added Tax, and Use Tax Management. Global Tax Management is always the active tax system.
- The Load Tax Management field has been removed from the Global Tax Management Control File (2.13.24).
- The Taxes Menu (2.15) has been removed from the Addresses/Taxes module.

## Conversions

The programs on the GTM Conversion Menu (2.13.22) automate most of the conversion tasks. These programs generate GTM codes and update existing records. They also create records required for tax reporting.

▶ See the installation and conversion guide for your system for details on using these programs.

Use these programs to:

- Convert tax data associated with master records such as customers, items, and suppliers.
- Convert tax data related to transactions, such as sales orders, purchase orders, invoices, and vouchers.
- Create user-defined mapping of regional tax codes to GTM codes.
- Generate a full audit trail of all conversion changes.

Converting to GTM requires planning and is not part of the automated conversion process described in the installation guide. Depending on your current version of MFG/PRO, you may be able to convert to GTM before you convert to MFG/PROeB.

- Users from 8.5G or higher with Canadian or U.S. taxes can convert to GTM before converting to MFG/PROeB.
- Users converting from 8.6C or higher with any tax environment can convert to GTM before converting to MFG/PROeB.
- All other users must convert to GTM after converting to MFG/PROeB.

## Distribution Enhancements

Two changes have been made in the Release Management functions that are part of Distribution:

- Continued enhancements to EDI ECommerce—previously called ECommerce Gateway—support additional business documents and integration with Enterprise Material Transfer (EMT).
- Cum Ship Reset to Zero has been replaced with a more flexible program.

▶ See page 61 for details.

In addition, the new PRO/PLUS Customer Sequence Schedules module has added two new reports that are available to all users of customer schedule functions:

- Ship Schedule Variance Report (7.5.21)
- Ship to Plan Variance Report (7.5.22)

## EDI ECommerce Enhancements

▶ See *User Guide Volume 7: Release Management* for details on EDI ECommerce.

In MFG/PRO eB, EDI ECommerce provides additional gateway programs to support the same types of business documents as MFG/PRO eB's standard Electronic Data Interchange (EDI) functions. Additional new gateways of special interest to Consumer Products customers let users import inventory, warehouse shipping, and warehouse receipt advice documents.

EDI ECommerce now supports the existing Enterprise Material Transfer (EMT) features, which automate the task of converting sales orders to purchase orders and communicating them through multiple levels of the supply chain.

### Business Need

ECommerce Gateway, available with MFG/PRO 9.0, provided customers with a more practical, table-based solution to exchanging business documents with trading partners than traditional EDI tools.

However, the initial version did not offer a complete set of gateway programs—applications that move data into and out of the MFG/PRO database. Therefore, it did not support as many types of business documents as MFG/PRO's standard EDI module, including the documents needed to use EMT.

### MFG/PRO eB Solution

EDI ECommerce incrementally builds on the original ECommerce Gateway module by adding several gateway programs to support import and export of additional business documents.

- Import gateways:
  - Remittance advice

- Purchase order acknowledgment
- Purchase order change (for EMT)
- Purchase order change acknowledgment (for EMT)
- Advance ship notice
- Inventory advice
- Warehouse receipt advice
- Warehouse shipping advice
- Export gateways:
  - Planning schedule
  - Shipping schedule
  - Purchase order
  - Purchase order acknowledgment
  - Purchase order change (for EMT)
  - Purchase order change acknowledgment (for EMT)

**Note** Some of these gateway programs were available in MFG/PRO 9.0, Service Pack 1.

Additionally, EDI ECommerce has been modified for use with EMT.

With these changes and additions, EDI ECommerce now supports the same types of document exchanges as the standard MFG/PROeB EDI module, as well as additional document types.

## Key Features

Using the features added by EDI ECommerce, you can:

- Perform all the functions of the standard EDI module.
- Use EDI ECommerce to support the EDI requirements of EMT, which lets you automatically convert sales orders to purchase orders and transmit them to your business partners.
- Import three types of documents not supported by standard EDI:
  - Inventory advice
  - Warehouse shipping advice
  - Warehouse receipt advice

## New Programs

Table 2.4 lists the new programs added to MFG/PRO eB with EDI ECommerce.

**Table 2.6**  
New EDI  
ECommerce  
Programs

Menu Number	Description	Program Name
35.21.4.5	Purchase Order Acknowledgment	edomack.p
35.21.4.8	Supplier Shipping Schedule	edomsch.p
35.21.4.9	Purchase Order Export	edompo.p
35.21.17.3	Transformation Renummer Utility	edtrrenm.p
35.21.22.13	ECommerce EMT Manager	edectrmg.p
35.21.22.15	PO Change Ack Export	edomackc.p
35.21.22.16	PO Change Export	edompoc.p

Additionally, the existing programs used in EMT that are listed in Table 2.7 are now also available from the EDI ECommerce EMT menu.

**Table 2.7**  
EMT Programs  
Added to EDI  
ECommerce Menu

Menu Number	Description	Program Name
35.21.22.1	Manual Ack Resolution	edbtbmar.p
35.21.22.2	Supplier Change Rejection Maint	edbtbscr.p
35.21.22.4	Change Management File Report	edcmfrp.p

## Conversion

A conversion program run during installation, `tvecg.p`, updates values in the following tables:

- `abs_mstr`. The program extracts advance ship notice (ASN) export data generated by the EDI module and uses it to populate ECommerce fields.
- `ih_hist`. The program extracts invoice export data generated by the EDI module and uses it to populate ECommerce fields.
- `edtpparm_mstr`. The program adds trading partner parameters for variables used by the new gateways.

## Cumulative Shipped Reset

This program was previously only available as part of PRO/PLUS, an optional set of modules purchased separately. It has now been added as a standard MFG/PROeB function replacing Cumulative Shipped Reset to Zero.

▶ See *User Guide Volume 7: Release Management*.

### Business Need

Companies involved in a close relationship with suppliers through scheduled orders do not always want to reset cumulative order totals to zero.

### MFG/PROeB Solution

Cumulative Shipped Reset to Zero (7.5.18) has been replaced by Cumulative Shipped Reset (7.5.18). Like Cumulative Shipped Reset to Zero, Cumulative Shipped Reset can be used to reset the cumulative totals for customer scheduled orders and generate a summary or detail report showing the orders reset. You can reset one or a range of scheduled orders.

However, using the replacement program, you do not have to reset the Cum Shipped quantity to zero. You can reset the quantity to zero or some other specified quantity based on shipping details from any specific date and time.

### Key Features

Using Cumulative Shipped Reset, you can:

- Specify a cumulative ship start time as well as date.
- Indicate if the date is the actual shipment date or the GL effective date.
- Choose to include or exclude manual adjustments.
- Specify the level of detail for the report output.

## New Programs

Cumulative Shipped Reset (rccup01.p) has been added to the Customer Schedule Processing Menu to replace Cumulative Shipped Reset to Zero (rccup.p) as option 7.5.18.

## Manufacturing Enhancements

Manufacturing enhancements include the following:

- MRP to repetitive approval functions introduced in MFG/PRO 9.0 have been extended and improved.
- A new Kanban Sizing sub-module has been added to Shop Floor Control to be used in flow environments.
- An alternate method can now be used for calculating more accurate yield for component items.

▶ See page 61 for details.

In addition, the new PRO/PLUS WIP Lot Trace module has added two programs that are available to all users of MFG/PRO eB:

- Work Order Operation Backflush (16.19)
- Operation Scrap Transaction (17.17)

## Enhanced MRP to Repetitive Approval

▶ See *User Guide Volume 3: Manufacturing*.

Introduced in MFG/PRO 9.0, Material Requirements Planning (MRP) to Repetitive Approval lets users approve MRP planned orders for repetitive manufacture.

Enhanced MRP to Repetitive Approval improves this functionality by providing more control over the sequence in which items are scheduled on production lines. New report, browse, and inquiry programs let users view production line schedules by line and by date.

## Business Need

Customers need to control the sequence of items produced on a given line to minimize changeover time and optimize capacity.

## MFG/PROeB Solution

Enhanced MRP to Repetitive Approval provides more control over production line schedule sequencing by introducing primary and secondary run sequences.

Users can now specify primary and secondary run sequences for any item manufactured on a production line. When MRP planned orders for these items are approved using Planned Repetitive Sched Approve (23.8), they can be sorted and sequenced using run sequences. This lets users schedule items on a production line in the most efficient sequence possible.

## Key Features

Using the MRP to Repetitive Approval enhancements in MFG/PROeB, you can:

- Specify primary and secondary run sequences for items.
- Use run sequences to schedule items on production lines when approving MRP planned orders for line manufacture. Approved orders can be sorted and scheduled by due date, primary run sequence, secondary run sequence, and item number.
- Review the production schedule for a selected production line and day.
- Review the production schedule for a range of production lines and dates.

## New Programs

Table 2.8 lists the new programs added to MFG/PROeB to support MRP to Repetitive Approval enhancements.

Menu Number	Description	Program Name
18.2.13	Production Line Schedule Inquiry	relsiq.p
18.2.14	Production Line Schedule Browse	rebr011.p
18.2.15	Production Line Schedule Report	relsrp.p
18.22.2.13	Production Line Schedule Inquiry	relsiq.p
18.22.2.14	Production Line Schedule Browse	rebr011.p
18.22.2.15	Production Line Schedule Report	relsrp.p

**Table 2.8**  
New MRP to  
Repetitive  
Approval Programs

## Modified Programs

The following programs have been modified to support MRP to Repetitive Approval enhancements:

- Primary and secondary run sequence fields were added to Item Master Maintenance (1.4.1), Item Planning Maintenance (1.4.7), Item-Site Planning Maintenance (1.4.17), and Production Line Maintenance (18.1.1 and 18.22.1.1). These fields let you assign run sequences that can be used to schedule items for production line manufacture.
- A Sort by Run Sequence flag was added to Planned Repetitive Sched Approve (23.8). This flag enables a sort mechanism that schedules items on a production line using the item's run sequences. Items are scheduled by due date, primary run sequence, secondary run sequence, and then item number.

## Conversion

MRP to Repetitive Approval enhancements are implemented in converted or upgraded systems automatically during the conversion process.

If you have set up generalized codes for the Pur/Mfg field, you must add L (line) as a valid code using Generalized Codes Maintenance (36.2.13). You may also want to add generalized codes for the primary and secondary run sequence fields.

You can modify Pur/Mfg codes for existing items one at a time using item maintenance functions (1.4.1, 1.4.7, and 1.4.17), or use a batch file to update some or all of them automatically. For more information, see the section on post-conversion steps in the "Convert an Existing Database" chapter in the installation guide for your system.

## Menu Changes

To accommodate the new report, browse, and inquiry programs, menus in the Repetitive module have been reorganized. The new menu structure mirrors the Advanced Repetitive module.

Table 2.9 lists the new Repetitive menu structure and indicates the previous and current menu positions.

**Table 2.9**  
Repetitive Menu Structure

Previous Menu	Current Menu	Description
18	Same	Repetitive
18.1	Same	Production Line Menu ...
18.1.1	Same	Production Line Maintenance
18.1.2	Same	Production Line Browse
18.1.3	Same	Production Line Detail Browse
18.1.4	Same	Production Line Report
18.1.6	Same	Line Changeover Maintenance
18.1.7	Same	Line Changeover Browse
18.1.8	Same	Line Changeover Report
18.1.10	Same	Line Schedule Workbench
18.1.11	Same	Line Allocation Maintenance
18.1.12	Same	Line Allocation Inquiry
18.1.13	Same	Line Schedule Browse
18.1.14	Same	Line Schedule Report
18.1.15	Same	Line Utilization Report
18.1.18	Same	Repetitive Schedule Update
18.1.22	Same	Shift Maintenance
18.1.23	Same	Shift Report
New	18.2	Schedule Menu...
18.3	18.2.1	Schedule Maintenance
18.4	18.2.2	Item Schedule Inquiry
18.5	18.2.3	Item Schedule Summary
18.6	18.2.4	Schedule Explosion
18.7	18.2.5	Operation Schedule Report
New	18.2.13	Production Line Schedule Inquiry
New	18.2.14	Production Line Schedule Browse
New	18.2.15	Production Line Schedule Report
18.8	18.3	Picklist Menu ...
18.8.1	18.3.1	Repetitive Picklist Calculation
18.8.2	18.3.2	Repetitive Picklist Inquiry
18.8.3	18.3.3	Repetitive Picklist Report

Table 2.9 — Repetitive Menu Structure — (Page 1 of 3)

Previous Menu	Current Menu	Description
18.8.5	18.3.5	Repetitive Picklist Print
18.8.6	18.3.6	Repetitive Picklist Transfer
18.8.8	18.3.8	Repetitive Picklist Undo
18.8.9	18.3.9	Repetitive Picklist Delete
18.21	18.4	Reports Menu ...
18.21.1	18.4.1	Repetitive Transaction Browse
18.21.2	18.4.2	Repetitive Trans Detail Inquiry
18.21.4	18.4.4	Reject by Item Report
18.21.5	18.4.5	Reject by Reason Report
18.21.6	18.4.6	Down Time by Reason Report
18.21.8	18.4.8	Work Center Dispatch Report
18.21.10	18.4.10	Rep Operations Accounting Report
18.21.12	18.4.12	Repetitive WIP Cost Report
18.21.13	18.4.13	Operations by Item Report
18.21.14	18.4.14	Operations by Employee Report
18.21.15	18.4.15	Operations by Work Center Report
18.21.17	18.4.17	Productivity by Item Report
18.21.18	18.4.18	Productivity by Employee Report
18.21.19	18.4.19	Productivity by Work Center Report
18.21.21	18.4.21	Efficiency by Item Report
18.21.22	18.4.22	Efficiency by Employee Report
18.21.23	18.4.23	Efficiency by Work Center Report
18.9	18.6	Cumulative Order Maintenance
18.10	18.7	Cumulative Order Browse
18.11	18.8	Cumulative Order Report
18.12	18.9	Cumulative Ord Accounting Close
18.13	Same	Repetitive Setup Transaction
18.14	Same	Repetitive Labor Transaction
18.15	Same	Repetitive Down Time Transaction
18.16	Same	Repetitive Rework Transaction
18.17	Same	Repetitive Reject Transaction
18.18	Same	Repetitive Scrap Transaction

Table 2.9 — Repetitive Menu Structure — (Page 2 of 3)

Previous Menu	Current Menu	Description
18.19	Same	Non-Productive Labor Feedback
18.23	Same	History Delete/Archive Menu ...
18.23.1	Same	Operation History Delete/Archive
18.23.2	Same	Cumulative Order Delete/Archive
18.24	Same	Repetitive Control File

Table 2.9 — *Repetitive Menu Structure* — (Page 3 of 3)

## Kanban Sizing

MFG/PROeB now provides functions that support kanban sizing, useful in flow and repetitive manufacturing environments. Kanban production uses standard containers or lot sizes with a single card (kanban) attached to each. Work cells use these cards to pull components from feeding operations or suppliers.

▶ See *User Guide Volume 3: Manufacturing*.

## Business Need

Kanban management is a critical requirement for short-term planning in some manufacturing environments.

## MFG/PROeB Solution

The Kanban Sizing module lets you identify items that are kanban controlled, maintain kanban-related data for these items, and automatically calculate the number of kanban cards based on number of containers. Kanban Sizing also prints kanban cards on demand.

The features of this module provide the foundation for building additional functions that address the integration of kanban with other requirements of flow manufacturing.

## Key Features

Using Kanban Sizing, you can:

- Define planning periods identifying the number of work hours for use with kanban-sizing calculations.
- Define seasonal demand patterns and specify the current pattern.

- Define data for kanban-controlled items, based on supplying and consuming site and location. Kanban data includes the kanban type, number of cards needed (1 or 2), replenishment time, and container capacity.
- Copy kanban data for a combination of item and supplying and consuming site/location.
- Specify the maximum demand for end items.
- Calculate the maximum demand per hour for item components for the current demand pattern, based on exploding end-item product structures.
- Size and print cards based on maximum demand calculation.

### New Programs

Table 2.10 lists the new programs used in Kanban Sizing.

**Table 2.10**  
New Kanban Sizing  
Programs

<b>Menu Number</b>	<b>Description</b>	<b>Program Name</b>
17.22.1	Kanban Data Maintenance	kkbmt.p
17.22.2	Kanban Data Inquiry	kkkbiq.p
17.22.3	Kanban Data Report	kkkbrp.p
17.22.5	Kanban Data Copy	kkkbc.p
17.22.7	Planning Period Maintenance	kbppmt.p
17.22.8	Planning Period Browse	kbbr001.p
17.22.10	Maximum Demand Maintenance	kbmdmt.p
17.22.11	Maximum Demand Browse	kbbr002.p
17.22.12	Maximum Demand Report	kbmdrp.p
17.22.13	Maximum Demand Calculation	kbmdcl.p
17.22.15	Kanban Card Size/Print	kbszmt.p
17.22.16	Kanban Card Inquiry	kbsziq.p
17.22.17	Kanban Card Reprint	kbszrp01.p
17.22.24	Kanban Control File	kbpm.p

## Component Yield Calculation

MFG/PROeB now provides a new option for calculating demand for components of an assembly. This option uses the yield of the parent item's routing operations instead of the rolled-up yield of the assembly.

▶ See *User Guide Volume 3: Manufacturing*.

### Business Need

MFG/PROeB's current method of calculating the component requirements of an assembly is based on the assembly yield percent. This yield percent is entered by the user or calculated by the system based on the cumulative yield of the routing operations. This calculation method can cause dependent demand and planned order quantities at all levels to be larger than necessary.

### MFG/PROeB Solution

An additional method for determining the required quantity of components for assemblies built with work orders and repetitive schedules is now available. The new method calculates component requirements for selected items based on the yield of operations in the assembly routing.

This method is more accurate and supports cost-effective inventory planning.

### Key Features

Using operation-based component yield, you can:

- Specify in the MRP Control File (23.24) whether the programs that explode bills of material (BOM) should consider the yield percentage for each operation when determining component item requirements. This field affects BOM explosions in the following areas:
  - Material Requirements Planning (MRP)
  - Work Orders
  - Repetitive Manufacturing
  - Advanced Repetitive Manufacturing
  - Configured Products

- Specify which items should use operation-based yield calculations in Item Master Maintenance (1.4.1), Item Planning Maintenance (1.4.7), or Item-Site Planning Maintenance (1.4.17).

### Modified Programs

Table 2.11 lists MFG/PRO eB programs that were modified to support the new operation-based yield calculation method.

**Note** The table lists only programs with changes visible in the user interface. The programs that explode BOMs in MRP, Work Orders, Repetitive, Advanced Repetitive, and Configured Products have been modified to consider this option.

**Table 2.11**  
Programs Modified  
by Component  
Yield Calculation

Menu Number	Description	Program Name
1.4.1	Item Master Maintenance	ppptmt.p
1.4.2	Item Master Inquiry	ppptiq05.p
1.4.7	Item Planning Maintenance	ppptmt02.p
1.4.8	Item-Site Planning Inquiry	ppptiq02.p
1.4.17	Item-Site Planning Maintenance	pppsmt02.p
23.24	MRP Control File	mrmrppm.p

## Customer Services Enhancements

In the area of Customer Services, MFG/PRO eB includes two enhancements:

▶ See Table 1.3 on page 9 for a revised menu listing.

- Material orders (MOs)—previously called service engineer orders (SEOs)—now include support for Enterprise Material Transfer (EMT) features. Additionally, MO functionality has been moved to a different menu location.
- A new Project Realization Management (PRM) module is now available.

## Support for EMT in MOs

In the Sales Orders/Invoices module, Enterprise Material Transfer (EMT) lets you automatically generate a purchase order (PO) to your supplier directly from your customer's sales order (SO). This same functionality is now available for material orders (MOs).

▶ See *User Guide Volume 2: Distribution*.

From the time the system generates the PO until the items are received, processing is identical to the existing EMT in SOs. You can use the EDI module or EDI ECommerce to exchange electronic business documents such as POs, acknowledgments, change requests, and shipping documents with your supplier.

**Note** EMT sales orders allow two shipment options for suppliers:

- Transshipment. The supplier sends the item to the ordering business unit, which then ships it to the end customer.
- Direct shipment. The supplier is authorized to send the item directly to the end customer.

However, EMT material orders only support transshipments. The ordering business unit is always responsible for transferring the item to its final destination.

### Business Need

The ability to use EMT features was initially only included with standard sales orders. However, in the customer service environment, material orders play a role similar to sales orders. Material orders can be used to transfer inventory already available internally. However, if the ordered items are not in stock, it may be necessary to obtain them from a supplier.

Currently, if a business unit needs to fill an MO by obtaining an item from a supplier, it must first enter the MO, then manually generate a PO for the item. When the supplier sends the item, the requesting business unit often must manually enter a shipping document to acknowledge receipt.

In business environments characterized by close relationships among operating units, many manual procedures can be eliminated by using Enterprise Material Transfer features.

### MFG/PRO eB Solution

With EMT, MFG/PRO eB users enter the MO for an item provided by a supplier in a different business unit. Based on master file and setup data, the system automatically issues a PO and queues it for transmission to the supplier. The supplier's system imports the PO and converts it to a secondary SO.

When the supplier ships the order, the ordering business unit receives an advance ship notice (ASN), an electronic document that is automatically converted to a receiving document, at the same time allocating the item to the MO. The ordering business unit then transfers the item to the requestor's location.

In multilevel EMT, your suppliers can also use EMT to generate POs to lower-level suppliers based on their secondary SOs. EMT tracks the status of your original MO as it moves through the supply chain.

Throughout the process, EMT's change management features keep the MO synchronized with the purchase order and with secondary SOs at all levels.

### Key Features

Using EMT MOs, you can:

- Automatically generate POs to your suppliers from confirmed MO lines that include EMT transshipment items.
- Use the same functionality available for EMT SOs to exchange business documents with your trading partners and track the status of MOs.
- While you are creating the MO, make a preliminary allocation of your supplier's inventory directly in the supplier's MFG/PRO eB database.

### Modified Programs

- When Use Enterprise Material Transfer is Yes in the Sales Order Control File (7.1.24), two additional fields display in a pop-up window on the item order-entry line of Material Order Maintenance (11.11.1): Supplier and EMT Type.

- When site and supplier master records are set up appropriately and your supplier's MFG/PROeB database is connected with your system, you can change the Site field for an EMT item in Material Order Maintenance and allocate the item directly in the supplier's database.
- The Qty Allocated and Detail Alloc fields in MO Maintenance cannot be modified for EMT transshipment items. The system allocates items when they are received from the supplier.

For the same reason, the system displays an error message when you attempt to use MO Manual Allocations (11.11.4) or MO Automatic Allocations (11.11.5) to allocate EMT transshipment items.

- When an MO that includes EMT transshipment line items is confirmed in Material Order Confirmation (11.11.2), the system automatically creates a purchase order and queues it for transmission to the supplier.

## Project Realization Management (PRM)

The Project Realization Management (PRM) module for MFG/PROeB provides features for defining, tracking, and invoicing projects delivered to and implemented at customer sites.

### Business Need

Increasingly competitive markets are encouraging businesses to focus on providing complete solutions rather than simply selling products. A solution generally combines products and services in one package and is often delivered in a series of predefined increments over time. Typically, a solution is tailored to address specific customer requirements.

Solution providers need the ability to plan and record the items and services required to deliver a solution, or a project. They need the ability to organize and record planned components on a single, logically structured order that is easy to understand.

During the execution phase, those involved with the project must be able to record components used to complete project tasks and trace the component costs back to the project easily. They also require flexible

invoicing capabilities that let them invoice customers at specified intervals and track the revenue against the project.

### MFG/PRO eB Solution

The Project Realization Management (PRM) module provides a set of tools that enable business organizations to manage and complete complex tasks that require items, labor, and expenses. A *project* is defined as a series of such tasks delivered to a customer in one or more steps over time.

PRM functions support all phases of the project life cycle, from definition to preparation, to execution, invoicing, and evaluation.

This module lets you:

- Define project structures and indicate the quantities, prices, and costs of the items, labor, and expenses you expect to consume.
- Create budgets based on planned costs for a project.
- Combine related project components into distinct work units, called project activity orders (PAOs), for actual execution.
- Order project items from internal locations with material orders (MOs) or from external suppliers with project purchase orders.
- Record items, labor, and expenses used for the project and compare actual costs with planned costs.
- Schedule customer invoicing over the life cycle of the project.
- Use reporting tools to monitor project progress and evaluate project costs, revenue, and profit margins throughout the project life cycle.

### Key Features

Using the PRM module, you can:

- Define simple or complex project structures and tailor them for specific customer, engineering, and billing requirements.
- Set up defaults to streamline data entry in maintenance functions.
- Use flexible project-pricing features to standardize prices and planned costs for project components.

- Trace project activity in the general ledger (GL) through automatically generated GL project codes corresponding to PRM projects.
- Maintain and track project inventory separately from other items in the system with designated project locations.
- Automatically generate detailed or high-level project budgets for comparison with actual costs at any point in the project life cycle.
- Translate the project design into sets of related activities and reference these on individual project activity orders that define how the project is executed.
- Automatically generate material orders (MOs) for obtaining project inventory from internal locations, ensuring a complete transaction record of each inventory transfer.
- Create purchase orders for inventory and non-inventory items and services obtained from external suppliers and record the purchase costs against the project during order receipt.
- Create purchase requisitions using standard requisition functions or the Global Requisition System (GRS), route them through the appropriate approval processes, and reference them on project purchase orders as needed.
- Automatically generate Enterprise Material Transfer (EMT) purchase orders from MOs to obtain project items from closely linked suppliers.
- Easily record component issues and labor and expense consumption against the project and book expended costs to Work in Process (WIP).
- Manage item returns from customers and engineers and automatically deduct the cost of reusable items from accumulated project costs.
- Invoice a project incrementally over time and request, track, and process prepayments from project customers.
- Automatically generate invoices based on project prices and predefined invoice schedules and layouts.
- Use robust reporting tools to aid in planning project activities and evaluating their results.
- Close projects incrementally as each element is completed or close an entire project at once, if needed.

Although the Service/Support Management (SSM) module is not required to implement and use PRM, several additional features are available for SSM users:

- Streamline setup and support data standardization by sharing SSM setup data, such as end users, engineers, and return status codes.
- Update end-user installed base records with items issued to and returned from project customers to allow maintenance and tracking in SSM.
- Automatically apply warranty data to issued items to allow support and preventative maintenance scheduling in SSM.

### PRM Programs

The PRM module has been added as menu option 10 in MFG/PRO eB. In the Windows interface, it is grouped together with the Service/Support Management (SSM) module under the Customer Services icon.

Table 2.12 lists the programs on the Project Realization menu.

**Note** Some programs on the Project Realization menu, such as the material order (MO), engineer, and end user functions, are also available on the Service/Support menu (11). These programs are listed in *italic* typeface.

**Table 2.12**  
Project Realization  
Management  
Programs

Menu Number	Description	Program Name
10	Project Realization...	
10.1	Project Definition Menu...	
10.1.1	Project Maintenance	pjpmnt.p
10.1.2	Project Inquiry	pjpjiq.p
10.1.3	Project Detail Inquiry	pjpjiq01.p
10.1.4	Project Print	pjpjrp14.p
10.3	Project Budget Menu...	
10.3.1	Project Budget Rollup	pjbgrol.p
10.3.3	Project Budget Maintenance	pjbgmt.p
10.3.13	Project Budget Report	pjbgrrp.p

Table 2.12 — Project Realization Management Programs — (Page 1 of 4)

<b>Menu Number</b>	<b>Description</b>	<b>Program Name</b>
10.5	Project Activity Order Menu...	
10.5.1	PAO Maintenance	pjclmt.p
10.5.2	PAO Inquiry	pjcliq02.p
10.5.4	PAO Planned Detail Inquiry	pjcliq03.p
10.5.5	PAO Print	pjclrp01.p
10.5.13	Project Activity Recording	pjcarmt.p
10.5.14	Project Labor Recording	pjlbrmt.p
10.5.16	PAO Close	pjclcls.p
10.5.21	PAO Setup Menu...	
10.5.21.1	PAO Status Code Maintenance	pjcasmt.p
10.5.21.2	PAO Status Code Browse	pjbr015.p
10.5.21.4	PAO Default Maintenance	pjcdfmt.p
10.5.21.5	PAO Default Browse	pjbr029.p
10.5.24	PAO Control File	pjclpm.p
10.7	<i>Material Order Menu...</i>	
10.7.1	<i>Material Order Maintenance</i>	<i>fseomt.p</i>
10.7.2	<i>Material Order Confirmation</i>	<i>fseoco.p</i>
10.7.4	<i>MO Manual Allocations</i>	<i>fseoal.p</i>
10.7.5	<i>MO Automatic Allocations</i>	<i>fseoal1.p</i>
10.7.6	<i>Material Order Shipments</i>	<i>fseops.p</i>
10.7.8	<i>MO Direct/Pending Returns</i>	<i>fseore.p</i>
10.7.9	<i>MO Pending Return Report</i>	<i>fspenrp.p</i>
10.7.11	<i>Open Material Order Report</i>	<i>fseorp1.p</i>
10.7.12	<i>Material Order Backlog Report</i>	<i>fseodl.p</i>
10.7.13	<i>Material Order Shipment Report</i>	<i>fseorp2.p</i>
10.7.24	<i>Material Order Control File</i>	<i>fseopm.p</i>
10.9	Project Invoice Schedule Menu...	
10.9.1	Invoice Schedule Maintenance	pjismt.p
10.9.2	Invoice Schedule Inquiry	pjisiq.p
10.9.4	Project Invoice Layout	pjilmt.p
10.9.13	Invoice Generation	pjivgen.p
10.9.24	Invoice Schedule Control File	pjivpm.p

Table 2.12 — *Project Realization Management Programs* — (Page 2 of 4)

Menu Number	Description	Program Name
10.11	Project Reports Menu...	
10.11.1	Project Report	pjprp01.p
10.11.7	Project Transactions Inquiry	pjshiq.p
10.11.8	Project Transactions Report	pjshrp.p
10.11.14	Project-PAO WIP Report	pjprp10.p
10.11.15	PAO WIP Status Report	pjprp11.p
10.11.19	Project Invoice Detail Report	pjprp12.p
10.13	End User Address Menu...	
10.13.1	End User Address Maintenance	adeumt.p
10.13.2	End User Address Browse	adbr007.p
10.13.3	End User Address Report	adeurp.p
10.13.24	End User Control File	fsucpm.p
10.15	Engineer Menu...	
10.15.1	Engineer Maintenance	fsegmt.p
10.15.4	Engineer Status Maintenance	fscn001.p
10.15.5	Engineer Skills Maintenance	fscn006.p
10.17	Area Menu...	
10.17.1	Area Maintenance	fsregmt.p
10.17.2	Area Browse	gpbr346.p
10.17.5	Area Structure Maintenance	fssvar.p
10.17.6	Area Structure Inquiry	fssvariq.p
10.19	Project Pricing Menu...	
10.19.1	Project Pricing Maintenance	pjfpmt.p
10.19.2	Project Pricing Inquiry	pjfpqiq.p
10.19.3	Project Pricing Report	pjfprrp.p
10.21	Project Realization Setup Menu...	
10.21.1	Work Code Maintenance	fscn011.p
10.21.2	Work Code Inquiry	fsfwkiq.p
10.21.3	Work Code Report	fsfwkrp.p
10.21.5	Invoice Sort Maintenance	fsfismt.p
10.21.6	Invoice Sort Inquiry	fsfisiq.p
10.21.7	Invoice Sort Report	fsfisrp.p

Table 2.12 — Project Realization Management Programs — (Page 3 of 4)

Menu Number	Description	Program Name
10.21.9	Service Category Maintenance	fsfscmt.p
10.21.10	Service Category Inquiry	fsfsciq.p
10.21.11	Service Category Report	fsfscrp.p
10.21.13	Default PRM Site Maintenance	pjrdfmt.p
10.21.14	Default PRM Site Browse	pjbr030.p
10.21.15	Default PRM Site Report	pjrdfrp.p
10.21.17	Return Status Maintenance	fscn007.p
10.21.18	Return Status Inquiry	fsfpstiq.p
10.21.19	Return Status Report	fsfpstrp.p
10.21.21	Project Type Maintenance	pjsvmt.p
10.21.22	Project Type Browse	pjbr031.p
10.21.23	Project Type Report	pjsvrp.p
10.23	Project Close Menu...	
10.23.1	Project Line Close Report	pjclrp.p
10.23.2	Project Activity Close	pjpjcl.p
10.23.3	Project Accounting Close	pjclswip.p
10.23.23	Closed Project Delete/Archive	pjpjup.p
10.24	Project Realization Control File	pjpjpm.p

Table 2.12 — Project Realization Management Programs — (Page 4 of 4)

## Modified Programs

Table 2.13 lists programs that were modified to support PRM. This list does not include programs on the Project Realization menu that are shared with the Service/Support Management (SSM) module, even though some were modified. These programs are listed in Table 2.12.

Menu Number	Description	Program Name
1.1.18	Location Maintenance	iclomt.p
5.7	Purchase Order Maintenance	popomt.p
5.13.1	Purchase Order Receipts	poporc.p
5.13.5	Purchase Receipt Report	poporp06.p
7.13.2	Pending Invoice Register	soivrp.p.p
7.13.3	Invoice Print	sosorp10.p

**Table 2.13**  
Programs Modified  
by PRM

Menu Number	Description	Program Name
7.13.4	Invoice Post	soivpst.p
7.13.12	Closed Invoice Reprint	soivrp10.p
27.1	DR/CR Memo Maintenance	ardrmt.p
27.15	DR/CR Memo Print	armorp.p
28.1	Voucher Maintenance	apvomt.p

## System Enhancements

A number of general improvements have been made that affect functions throughout the system.

- Installation and system administration have been streamlined and improved to take advantage of PROGRESS 9.1 features.
- Report generation has been streamlined to improve performance and prevent record locking problems.
- New print options are available for generating reports to a Windows default printer or to a previously defined E-mail system.
- Changes to the database infrastructure will facilitate deploying patches and service packs for non-English installations.

## Improved Implementation and System Administration

▶ See the appropriate installation and conversion guide for your system.

QAD has improved MFG/PRO eB implementation to make installation easier and more efficient and to expand system configuration possibilities. System administration tasks have been reduced by combining databases. Finally, by taking advantage of the PROGRESS 9.1 database structure, QAD has increased the scalability of MFG/PRO eB databases.

**Important** These improvements dramatically affect implementation and system administration. Be sure to read the appropriate installation guide and the system administration reference guide for your system even if you are already familiar with the MFG/PRO eB environment.

## Business Need

Businesses need to implement MFG/PRO eB in distributed environments with diverse hardware and network infrastructures. Once installed, the

MFG/PROeB environment must be easy to manage and must scale well to grow with the business.

## MFG/PROeB Solution

QAD has improved several key features of MFG/PROeB implementation and system administration.

### Installation

The installation script and configuration elements of the installation process have been separated to simplify MFG/PROeB implementation. Under the improved model, the installation script gathers environment information and copies the contents of the MFG/PROeB media to an installation directory. Then, the MFG/PROeB system configuration utility, MFG/UTIL, is used to create an environment specific to your business needs.

For the ORACLE database environment, the Structured Query Language (SQL) scripts have been refined to reduce the time required to create an MFG/PROeB ORACLE database.

### System Configuration

MFG/PROeB is now delivered on three separate pieces of media (media refers to either tapes or CD-ROMs): Database Server, Character Client, and GUI Client. By separating the client and database server code, QAD increases the number of MFG/PROeB configuration possibilities.

The separation of the MFG/PROeB code also facilitates the application of multiple MFG/PROeB user interfaces in a single environment. These interfaces include QAD's Network User Interface (NetUI), a character user interface (CHUI), and a graphical user interface (GUI). These interfaces support users in diverse computing environments.

### Reduced Database Schema

The database schemas required for MFG/PROeB have been reduced to simplify system administration. The configurator (*cfg*) and *gui* schemas have been combined in the new administration (*admin*) schema.

- For PROGRESS database environments, the MFG/PRO eB database set includes a main database and help and administration databases.
- For ORACLE database environments, the MFG/PRO eB schema holder requires the main, help, and administration schemas.

### Improved Scalability for PROGRESS Databases

For PROGRESS database environments, QAD has taken advantage of the PROGRESS 9.1 database structure to offer database flexibility and scalability previously only available by creating custom multi-volume databases.

The new MFG/PRO eB database structure includes storage areas that let you distribute the database to facilitate database growth and improve system performance. To accomplish this, QAD supplies default structure files for each of the MFG/PRO eB databases. These structure files let you define the location and size of the storage areas that make the database.

By modifying the default structure files, you can distribute an MFG/PRO eB database across multiple disks and disk controllers to facilitate database growth and increase system performance.

### Key Features

Using MFG/PRO eB's improved installation, configuration, and system administration features, you can:

- Implement MFG/PRO eB more simply with the improved installation script and configuration utility.
- Install and configure NetUI, GUI, and character clients to work efficiently in a variety of computing environments. For example, you can:
  - Support Windows users by installing the GUI client media on a local file server and accessing it through a local-area network.
  - Support UNIX users by installing the character client media on the database server and configuring local-shared memory clients.

- Support remote users accessing the MFG/PROeB database over a wide-area network (WAN) by installing the character client media on a file server located on the user's local-area network (LAN) and accessing the MFG/PROeB database using the NetUI over an intranet.
- Streamline database administration using the new *admin* schema, which combines the functionality of the earlier *cfg* and *gui* schemas.
- Customize the default PROGRESS database structure files to meet specific business requirements. For example, heavily used database tables and indices can be stored on a separate disk to allow for growth and eliminate input/output (I/O) contention with other database elements.

### New and Modified Programs

This project adds no new programs. However, the MFG/PROeB installation script and configuration utility, MFG/UTIL, have been modified.

### Improved Report Performance

Various MFG/PROeB programs have been modified to improve system performance by reducing the amount of time database records are locked in a multi-user environment.

### Business Need

When running various programs, slow system response can occur because database records are locked while the system updates them. For example, Sales Order Print (7.1.3) prompts the user to verify that the sales order printed correctly before updating the system. All the item/site records being processed remain locked until the user responds.

In this case, multiple records can remain locked for a substantial period of time, during which other users cannot perform inventory transactions involving any of these records. In a multi-user environment, the inability to perform transactions while records are locked reduces efficiency.

## MFG/PRO eB Solution

To address the record-locking issue, MFG/PRO eB programs have been modified to reduce either the number of records the transaction locks at one time or the length of time records are locked. These goals have been achieved in the following ways:

- User interaction has been removed from many print programs to reduce the amount of time records are locked. Previously, user verification of the print process was required before the system updated a record in the database and released a lock. Users can now print a simulated report for review and then print the actual report, which updates the database immediately.
- For programs that lock records in the Inventory Master table (in\_mstr), the transaction scope has been limited to a single master-file record; for example, Sales Order Master (so\_mstr).
- For Sales Order Manual Allocations (7.1.6) and MO Manual Allocations (11.11.4), the transaction scope has been limited by processing each line item individually.

## Key Features

Using the new reporting features, you can:

- Print simulated reports for review in most programs that perform batch updates by specifying No in the Update field.
- Review the report output, marked with SIMULATION to indicate no updates were recorded, and make any corrections required before updating the database.
- Reexecute the program with Update set to Yes to modify database records.
- Run programs that perform allocations without locking entire database tables.

## Modified Programs

No new menu-level programs were added to support improved report performance. However, the programs listed in the following tables have been modified to either reduce the number of records locked or the amount of time they are locked.

The programs in Table 2.14 have been modified to include SIMULATION in the report header when they are executed in a report-only mode.

Menu Number	Description	Program Name	Table 2.14 Programs with Modified Report Header
1.4.20	Item Burden Cost Update	ppbdov01.p	
1.4.21	Item Overhead Cost Update	ppbdov02.p	
1.9.13	PCR/PCO Import/Export	ecdmpld.p	
1.10.1.8 or 1.10.2.5	Price List Copy	pppicp.p or pppccp.p	
1.10.2.6	Price List Generation by Item	pppceptup.p	
1.22.19	Multi-Lot Inven. Detail Update	clltamt.p	
1.22.22	Lot Master File Build	clltbd.p	
4.21	Inventory Balance Update	piibup.p	
5.5.3.1	Schedule Update from MRP	rssup.p	
5.5.5.14	Cum Received Reset to Zero	rscup.p	
7.5.5	Required Ship Schedule Update	rcrsup.p	
7.5.6	Selective Req Ship Sched Update	rcrssup.p	
7.5.18	Cum Shipped Reset	rccup01.p	
12.15.9	Intersite Demand Transfer	dsdmup01.p	
12.15.10	Intersite Demand Export	dsdmexp.p	
12.17.10	Intersite Demand Import	dsdmimp.p	
12.17.12	Intersite Demand Validation	dsdmup02.p	
11.17.4	Service Price List Copy	fsfpccp.p	
14.13.7	Routing Update	rwroup.p	
15.9	Batch Quantity Change	fmptbmt.p	
18.1.18	Repetitive Schedule Update	recrms.p	
18.22.2.7	Schedule Delete	reschdel.p	
18.22.9	Post Accumulated Usage Variances	reuvup.p	
18.22.10	Cumulative Order Close	reclose.p	
22.7.13	Simulation to Summarized Fcst	ffsucp.p	
30.17.10	Item-Element Cost Calculation	ppbdov03.p	
30.17.11	Item-Element Cost Name Change	cscecg.p	
30.20	Cost Update from Cost Elements	csscup.p	
35.13	Document Import	edimport.p	

The programs in Table 2.15 have been modified to:

- Remove user verification of the print process.
- Include an Update field to enable printing of simulated reports. When Update is No, SIMULATION appears in the report header.

**Table 2.15**  
Programs with  
Modified User  
Interaction

Menu Number	Description	Program Name
6.3	Sales Quote Print	sqqorp05.p
5.1.8	Req. Approval Document Print	poprrp02.p
5.3.5	Blanket Order Print	poblrp03.p
5.10	Purchase Order Print	poporp03.p
5.13.8	Purchase Return Document Print	porvrp.p
7.1.3	Sales Order Print	sosorp05.p

The programs in Table 2.16 have been modified in the following ways:

- The transaction scope has been limited to a single master-file record; for example, Sales Order Master (so\_mstr).
- An Update field (if not already present) enables printing of simulated reports. When Update is No, SIMULATION appears in the report header.

**Table 2.16**  
Programs with  
Single Master-File  
Transaction Scope

Menu Number	Description	Program Name
7.1.7	Sales Order Auto Allocations	sosoa1.p
7.1.8	Available Kit Quantity to Ship	sosoktrp.p
7.9.1	Picklist/Pre-Shipper-Automatic	sososl.p
7.9.13	Sales Order Packing List	sosopk.p
11.11.5	MO Automatic Allocations	fseoal1.p
12.17.19	Distrib Order Picklist Print	dsdopk01.p

The programs in Table 2.17 have been modified to limit their transaction scope to a single line item.

**Table 2.17**  
Programs with  
Line-Item  
Transaction Scope

Menu Number	Description	Program Name
7.1.6	Sales Order Manual Allocations	sosoa1.p
11.11.4	MO Manual Allocations	fseoal.p

## Improved Print and E-mail

MFG/PROeB now provides two additional output options for reports, browses, and inquiries:

- From a graphical user interface (GUI) Windows client, users can directly access printers on the Windows network.
- Users can output the report, browse, or inquiry directly to an E-mail message.

▶ See *User Guide Volume 9: Manager Functions*.

## Business Need

MFG/PROeB GUI users require more control over printing formats for the output of reports, browses, and inquiries. This is particularly true of companies doing business in double-byte languages such as Chinese. Currently, such companies are required to output these documents to a file, then open the file in a text-processing program for printing.

Companies that want to distribute reports by E-mail currently are required to use a similar method. They must send the output to a file, then attach the file to an E-mail message.

## MFG/PROeB Solution

Improved printing and E-mail adds two more options—Winprint and EMail—to the list of user-specified output devices for all reports, browses, and inquiries.

- By selecting Winprint in the Output field, GUI users can choose a printer and modify printer options directly through their Windows network, rather than by using printer control functions within MFG/PROeB. Users in a double-byte language environment can specify the appropriate output font for 80-column and 132-column report formats in the PROGRESS initialization file on their client computer.
- By selecting the EMail output option, users access an address frame that lets them specify the E-mail addresses of report recipients, including the logon IDs of MFG/PROeB users. This feature uses MFG/PROeB's standard E-mail function—employing a customer-furnished command-line E-mail program—to include the report output as the body of the E-mail message.

## Key Features

Using the new Winprint and EMail output options, you can:

- Print reports in a double-byte language on a local printer or one on your computer's Windows network. This feature is available only from GUI clients.
- E-mail report output directly to one or more recipients inside your company or to an external E-mail address.

## New and Modified Programs

This project adds no new programs. It modifies numerous programs throughout the system to allow access to Windows printers and provide E-mail output.

## Improved Label and Translation Service Capabilities

New features in MFG/PRO eB facilitate support for translations and label modification. These improvements enable QAD to provide faster and more consistent service worldwide.

## Business Need

In the global economy, service and localization requests often result in the need for solutions in multiple languages. Past versions of MFG/PRO have required code-invasive procedures to solve user-interface (UI) display issues. However, international businesses require a faster response for services that involve user-interface modifications.

## Solution

New tools and tables enable QAD to respond rapidly to requests for label modification. In addition, these changes support delivery of translated service patches for the first time.

## Key Features

With these enhancements, you can:

- Handle UI translations with new capabilities.
- Deploy non-English service packs and patches.

## New Programs

Table 2.18 lists the new programs added to MFG/PROeB to support the enhanced interface management features.

Menu Number	Description	Program Name
36.4.17.1	Label Master Maintenance	gplblmt.p
36.4.17.2	Label Master Browse	gpbr405.p
36.4.17.5	Label Detail Maintenance	gplbldmt.p
36.4.17.6	Label Detail Browse by Field	gpbr406.p
36.4.17.7	Label Detail Browse by Program	gpbr407.p
36.4.17.24	Label Control File	gplblpm.p

**Table 2.18**  
New Label  
Programs

## Modified Programs

All MFG/PROeB programs have been modified to access labels from the label master table when this feature is enabled.

## PRO/PLUS Enhancements

PRO/PLUS now includes two additional modules: WIP Lot Trace and Customer Sequence Schedules.

▶ See *PRO/PLUS User Guide*.

**Note** The optional PRO/PLUS package includes programs not offered with the standard release of MFG/PROeB. The PRO/PLUS package is fully supported and includes its own unified documentation set. For PRO/PLUS availability, contact your sales representative.

To support these two new modules, PRO/PLUS has also added four programs that are available to all users of MFG/PRO eB.

- Work Order Operation Backflush (16.19) streamlines the process of issuing items and reporting labor and production by combining the basic functions of:
  - Work Order Component Issue (16.10)
  - Labor Feedback by Work Order (17.1)
  - Work Order Receipts (16.11)

This program performs all the general ledger (GL) functions to maintain accurate issues, consumption, and production records. You can use this program with or without WIP Lot Trace.

- Operation Scrap Transaction (17.7) can be used to scrap material at work order operations. The program performs GL functions by crediting WIP and debiting Scrap for the material value. It uses operation cost to calculate the scrap value. You can use this program with or without WIP Lot Trace.
- Ship Schedule Variance Report (7.5.21) lets you compare one ship schedule or release with another and review variance percentages for schedule line details by item ABC class.
- Ship to Plan Variance Report (7.5.22) lets you compare a ship schedule with a planning schedule and review variance percentages for schedule line details by item ABC class.

## WIP Lot Trace

The Work in Process (WIP) Lot Trace module lets you:

- Assign lot/serial numbers to WIP.
- Trace WIP lot/serial numbers throughout the manufacturing process and into finished material inventory.
- Trace the lot/serial numbers of any components consumed into traced work in process.

WIP Lot Trace can be used in manufacturing environments that use functions in Repetitive, Advanced Repetitive, or Work Orders.

## Business Need

Many companies need to keep detailed records of the raw materials they receive from their suppliers, the WIP that consumes those raw materials, and the finished items produced from the WIP. Additionally, they must be able to track any WIP material sent for subcontract processing. Some manufacturing environments require the ability to trace WIP to comply with government and customer safety requirements and regulations.

## MFG/PROeB Solution

The WIP Lot Trace module adds WIP lot/serial number inventory and tracing functions to MFG/PROeB. It enhances the Repetitive, Advanced Repetitive, and Work Orders manufacturing modules. WIP Lot Trace enhances subcontract shipping functions, providing greater visibility of WIP lot numbers sent to subcontractors.

In addition, you can set up system-wide tracing defaults, and then customize these settings for each bill of material (BOM) or routing code.

For example, you can trace all components system wide, except for specific BOMs. You can also indicate that component items should not be traced system wide, and turn tracing on for components used in specific BOMs.

**Note** This module does not capture WIP lot trace information for the following transactions:

- Inventory backflush
- Work order receipt backflush
- Sales order shipments of final assembly work orders
- Transactions created by the Service/Support Management (SSM) and Project Realization Management (PRM) modules

## Key Features

Using the WIP Lot Trace module, you can:

- Trace lot and serial numbers of WIP material throughout the manufacturing process, including WIP material processed by multiple subcontractors.

- Create flexible registrations to activate or deactivate WIP lot/serial tracking for all or specific BOMs, routing codes, parent items, component item, routings, and routing operations.
- Maintain complete WIP tracing history.
- Generate reports providing visibility of WIP lot/serial numbers and quantities.
- Optionally generate and assign WIP lot/serial numbers automatically using MFG/PRO eB Number Range Management features.
- Control the lot sizes for all traced material.
- Control combining and splitting of lot and component material being traced.
- Control the WIP inventory quantity-on-hand balances for WIP material lot/serials being traced.
- Trace component material lots consumed at any operation in a routing to WIP or finished material lots.
- Trace WIP material lots from operation to operation.
- Renumber lot/serials from one operation to the next, or retain the same numbers throughout all operations.
- Determine the constituent WIP or component material lots of finished or WIP material lots.
- Maintain up-to-date cumulative scrapped, consumed, and produced quantities for traced WIP lot/serials at the operation level.
- Maintain quantity-on-hand balances at the operation level for traced WIP lot/serials.

#### Subcontract Processing Features

With WIP Lot Trace, you can track all subcontracted WIP material. With the subcontract tracing features, you can:

- Capture WIP lot/serial information and maintain quantity-on-hand balances for WIP material sent to multiple subcontractors.
- Print WIP lot numbers in subcontract shippers.
- Move WIP lots to subcontract operations during shipper confirm.
- Print WIP lot numbers on subcontract POs.
- Backflush subcontracted WIP lots as part of the PO Receipts process.

## New Programs

Table 2.19 lists MFG/PRO eB programs added to support the WIP Lot Trace module.

Menu Number	Description	Program Name
3.22.13.1	Routing Registration Maintenance	wlrmmt.p
3.22.13.2	Routing Registration Inquiry	wlrmiq.p
3.22.13.4	BOM Registration Maintenance	wlbmt.p
3.22.13.5	BOM Registration Inquiry	wlbmiq.p
3.22.13.13	WIP Lot Inventory Status Report	wlrp01.p
3.22.13.14	Item Lot Ship Transaction Report	wlrp04.p
3.22.13.15	WIP Lot Convert Trans Report	wlrp06.p
3.22.13.16	WIP Lot Non-Convert Trans Report	wlrp07.p
3.22.13.17	WIP Lot Inquiry	wliq01.p
3.22.13.18	Supplier Lot Transaction Report	wlrp08.p
3.22.13.19	WIP Lot Where-Used Report	wlrp02.p
3.22.13.20	WIP Lot Actual Bill Report	wlrp03.p
3.22.13.23	WIP Lot Delete/Archive	wldel.p
3.22.13.24	WIP Lot Trace Control File	wlpm.p

**Table 2.19**  
New WIP Lot  
Trace Programs

## Modified Programs

Table 2.20 lists the MFG/PRO eB programs modified to support the WIP Lot Trace module.

Menu Number	Description	Program Name
3.4.3	Transfer With Lot/Serial Change	iclotr03.p
3.4.4	Batchload Transfer With Lot/Seri	iclotr04.p
3.21.1	Transactions Detail Inquiry	ictriq.p
5.7	Purchase Order Maintenance	popomt.p
5.10	Purchase Order Print	poporp03.p
5.13.1	Purchase Order Receipts	poporc.p
5.13.7	Purchase Order Returns	porvis.p

**Table 2.20**  
Programs Modified  
for WIP Lot Trace

Table 2.20 — *Programs Modified for WIP Lot Trace* — (Page 1 of 3)

<b>Menu Number</b>	<b>Description</b>	<b>Program Name</b>
5.13.13	PO Container Maintenance	rsctmt.p
5.13.14	PO Shipper Maintenance	rsshmt.p
5.13.20	PO Shipper Receipt	rsporc.p
16.9	Work Order Split	wowosp.p
16.10	Work Order Component Issue	wowois.p
16.11	Work Order Receipts	woworc.p
16.12	Work Order Receipt Backflush	wowoisrc.p
16.19	Work Order Operation Backflush	wobkfl.p
17.1	Labor Feedback By Work Order	sfoptr01.p
17.2	Labor Feedback By Employee	sfoptr02.p
17.3	Labor Feedback By Work Center	sfoptr03.p
17.6	Operation Move Transaction	sfoptr06.p
17.7	Operation Scrap Transaction	sfscrap.p
17.8	Operation Transaction Browse	sfbr001.p
17.9	Operation Transaction Detail Inquiry	sfopiq12.p
17.13	Operation By Work Center Report	sfopr11.p
17.14	Operation By Work Order Report	sfopr12.p
17.15	Operation By Employee Report	sfopr13.p
18.4.2	Repetitive Trans Detail Inquiry	reopiq12.p
18.13	Repetitive Setup Transaction	reoptr07.p
18.14	Repetitive Labor Transaction	reoptr10.p
18.16	Repetitive Rework Transaction	reoptr13.p
18.17	Repetitive Reject Transaction	reoptr11.p
18.18	Repetitive Scrap Transaction	reoptr14.p
18.22.4.2	Operation Trans Detail Inquiry	reopiq02.p
18.22.4.11	WIP Status Report	rewor05.p
18.22.5.4	Sub Container Maintenance	rectmt.p
18.22.5.5	Sub Shipper Maintenance	reshmt.p
18.22.5.9	Sub Shipper Print	rerp11.p
18.22.5.11	Sub Shipper Issue	resubis.p
18.22.10	Cumulative Order Close	reclse.p
18.22.12	WIP Status Inquiry	rewoiq05.p

Table 2.20 — *Programs Modified for WIP Lot Trace* — (Page 2 of 3)

Menu Number	Description	Program Name
18.22.13	Backflush Transaction	rebkfl.p
18.22.14	Run Labor Transaction	relbr.p
18.22.15	Setup Labor Transaction	reset.p
18.22.16	Reject Transaction	reject.p
18.22.17	Rework Transaction	rework.p
18.22.18	Scrap Transaction	rescrap.p
18.22.19	Move Transaction	remove.p
18.22.21	WIP Adjust Transaction	rewadj.p

Table 2.20 — *Programs Modified for WIP Lot Trace* — (Page 3 of 3)

## Customer Sequence Schedules

The PRO/PLUS Customer Sequence Schedules module enhances functions in MFG/PROeB Release Management by letting you add sequence delivery information to customer schedules. These enhancements let users receive customer sequence schedule information using Electronic Data Interchange (EDI) and EDI ECommerce.

Once in the system, you can use sequence schedule data to plan production and shipping of customer requirements.

### Business Need

Many companies that operate in just-in-time (JIT) environments regularly provide detailed customer sequence schedules to key suppliers. These schedules list requirements in the order needed to build products. Schedules can additionally specify a delivery date and time and specify dock and assembly line-feed delivery location. Suppliers use these schedules to plan production and deliveries.

Suppliers that receive customer sequence schedules need accurate and timely visibility into customer production-line activity. They use the sequence schedule requirements to plan the manufacturing and delivery of the correct parts, in the correct sequence, to their customer. The sequence information also alerts them to any fluctuations in customer production.

## MFG/PRO eB Solution

The Customer Sequence Schedules module enhances the standard MFG/PRO eB Customer Schedules functions to include sequence delivery information on customer schedules. Additionally, other standard functions have been modified to use this information for planning and shipping requirements.

You can set up customer sequence schedule defaults in a control file and then customize these settings for individual customers. For example, you can indicate whether to print sequences on the shipper or invoice, or whether to send sequences on the advance ship notice (ASN) or invoice for individual customers.

You can also generate reports comparing shipping or planning schedule releases to a sequence schedule or comparing two different releases of a sequence schedule.

## Key Features

Using the features of Customer Sequence Schedules, you can:

- Set up default customer schedule details, and then tailor defaults for individual customers as needed.
- Receive incoming customer sequenced schedules using standard EDI or EDI ECommerce.
- Selectively include sequenced requirement information on:
  - Picklists
  - Pre-shippers
  - Shippers
  - Invoices
  - Advanced ship notices (ASN)
  - Required ship schedules
- View variances between shipping or planning schedules and sequence schedules or between different releases of a sequence schedule.
- Generate sequence packing lists automatically when creating pre-shippers and shippers. Print sequence packing lists in forward or reverse order.

- Maintain detailed picking records for all sequenced requirements.
- Maintain multiple sequence schedule releases.

## New Programs

Table 2.21 lists MFG/PRO eB programs added to support the Customer Sequence Schedules module.

Menu Number	Description	Program Name
7.5.4.1	Customer Controls Maintenance	adccmt.p
7.5.4.2	Customer Controls Inquiry	adcciq.p
7.5.4.5	Sequence Schedule Maintenance	resqscmt.p
7.5.4.6	Sequence Schedule Inquiry	resqsciq.p
7.5.4.7	Sequence Schedule Report	rcrp05.p
7.5.4.10	Sequence Pre-Shipper–Automatic	sosqsl.p
7.5.4.11	Sequence Shipper Report	resqrp03.p
7.5.4.13	Sequence Cross-Ref Maintenance	resqsxmt.p
7.5.4.14	Sequence Cross-Ref Report	resqsxrp.p
7.5.4.16	Sequence Schedule Variance Rpt	resqrp01.p
7.5.4.17	Plan/Ship Sequence Variance Rpt	resqrp02.p
7.5.4.22	Sequence Schedule Detail Delete	resqsctl.p
7.5.4.24	Sequence Schedule Control File	resqpm.p

**Table 2.21**  
New Customer  
Sequence  
Schedules  
Programs

## Modified Programs

Table 2.20 lists the MFG/PRO eB programs modified to support the Customer Sequence Schedules module.

Menu Number	Description	Program Name
7.3.13	Scheduled Order Maintenance	rcsomt.p
7.3.14	Scheduled Order Inquiry	rscoiq.p
7.3.15	Scheduled Order Report	rcsorp.p
7.5.5	Required Ship Schedule Update	rcrsup.p
7.5.6	Selective Required Ship Schedule Update	rcrssup.p
7.5.20	Shipment History Report	rcrp08.p

**Table 2.22**  
Modified Programs  
for Customer  
Sequence  
Schedules

<b>Menu Number</b>	<b>Description</b>	<b>Program Name</b>
7.5.23	Schedule Delete/Archive	rcdel.p
7.7.5	SO Container Maintenance	rcctmt.p
7.9.1	Picklist/Pre-Shipper–Automatic	sososl.p
7.9.2	Pre-Shipper/Shipper Workbench	rcshwb.p
7.9.3	Pre-Shipper/Shipper Inquiry	rciq03.p
7.9.4	Pre-Shipper/Shipper Print	rcrp13.p
7.9.5	Pre-Shipper/Shipper Confirm	rcsois.p
7.9.6	Pre-Shipper/Shipper Report	rcshrp01.p
7.9.8	Sales Order Shipper Maintenance	rcshmt.p
7.9.9	Sales Order Shipper Print	rcrp11.p
7.9.15	Sales Order Shipments	sosois.p
7.9.20	Undo Shipper Number Assignment	rcslrb.p
7.9.21	Shipper Unconfirm	rcunis.p
7.9.22	Shipper Gateway	rcshgw.p
7.13.2	Pending Invoice Register	soivrp.p
7.13.3	Invoice Print	sosorp10.p
7.13.4	Invoice Post	soivpst.p
7.13.12	Closed Invoice Reprint	soivrp10.p
27.6.12.1	Self-Bill Maintenance	arsbmt.p
27.6.12.4	Self-Bill Auto Create	arsbac.p
27.6.12.10	Self-Bill Discrepancy Report	arsbrp02.p
27.6.12.13	Self-Bill Report	arsbrp.p
27.6.12.15	Shipment-Invoice Crossref Report	arsbsirp.p
35.5	ASN Export	edexasn.p
35.8	Invoice Export	edexinv.p
35.13	Document Import	edimport
35.21.1	Document Import	edixsnf.p
35.21.4.1	Shipment ASN Export	edomasn.p
35.21.14.3	Invoice Export	edominv.p
35.21.15.6	Exchange Definition Maintenance	edxfmt.p
35.21.15.10	MFG/PRO Definition Maintenance	edmfmt.p
35.21.15.13	Implementation Definition Maintenance	edmimt.p
35.21.15.17	Transformation Definition Maint	edtrmt.p

## External Interface Enhancements

Modifications have been made to a number of application program interfaces (APIs):

- The Logistics API has been extended to manage new kinds of data.
- Q/LinQ has been extended to support additional business object documents (BODs) and provide better control over the import/export process.
- The Advanced Planning and Optimization (APO) API has been extended to manage multiple-site processing.

Also, QAD Storefront has been added to support the exchange of data between MFG/PROeB and IBM's WebSphere Commerce Suite (WCS). Using QAD Storefront, customer orders placed through an Internet browser interface are automatically recorded in MFG/PROeB as sales orders.

### Logistics API Enhancements

The Logistics Application Program Interface (API) has been extended to support exchanging additional types of data between MFG/PROeB and external logistics applications.

▶ See *External Interface Guide: Logistics*.

### Business Need

The current version of the Logistics API does not provide all of the functionality that customers need in an interface between MFG/PROeB and external logistics applications.

### MFG/PROeB Solution

Extensions to the Logistics API more fully meet MFG/PROeB customer needs for data exchange with logistics applications. The extensions conform to the OAGIS standard and are exposed for use by non-QAD interface developers and integrators.

## Key New Features

Using the new Logistics API features, you can:

- Create and post invoices that are not necessarily synchronized with the fulfillment of the associated sales orders.
- Import tax amounts for sales order lines and trailer charges on invoices or credit memos; then create GTM records for audit trails, reports, and accounting entries.
- Export selected accounts receivable (AR) balances to populate external databases; for example, during implementation.
- Control sales order status by importing sales order credit hold and release data from logistics applications.
- Automatically export inventory allocation data, payment data, and AR balance data to keep MFG/PRO eB and external logistics databases synchronized.
- Browse the items, customers, and sales orders owned by external logistics applications.

## New Programs

Table 2.23 lists the new programs added to MFG/PRO eB to support enhancements to the Logistics API.

**Table 2.23**  
New Logistics API  
Programs

Menu Number	Description	Program Name
36.5.7.15	Mass A/R Balance Export	lgmsarex.p
36.5.7.18	Item Owner Browse	lgbr003.p
36.5.7.19	Customer Owner Browse	lgbr004.p
36.5.7.20	Sales Order Owner Browse	lgbr005.p

## Modified Programs

Table 2.24 lists MFG/PRO eB programs that were modified to support enhancements to the Logistics API.

**Note** Table 2.24 includes only programs with modifications that are visible in the user interface. Other programs in Inventory Control, Addresses/Taxes, and Accounts Receivable were also modified to support data exchange between MFG/PRO eB and external logistics applications.

Menu Number	Description	Program Name
36.5.7.1	Logistics System Maintenance	lglgsmt.p
36.5.7.13	Mass Item Export	lgmssyit.p

**Table 2.24**  
Modified Logistics  
API Programs

## Q/LinQ Enhancements

Q/LinQ has been extended to provide a more complete set of tools for the development, administration, and management of application program interfaces (APIs).

◆ See *External Interface Guide: Runtime Q/LinQ*.

## Business Need

The previous version of Q/LinQ did not provide all of the features that customers need to implement flexible and cost-effective interfaces between MFG/PROeB and external applications.

## MFG/PROeB Solution

The extensions to Q/LinQ more fully meet MFG/PROeB customer needs to build, administer, and manage interfaces with external applications.

## Key New Features

Using the new Q/LinQ features, you can:

- Define ASCII value mappings between business object documents (BODs) and MFG/PROeB for trailer charges.
- Specify the character to use as a delimiter when importing or exporting data in the triplet format.
- Deliver credit holds and approvals and new invoices and debit/credit memos to MFG/PROeB.
- Deliver inventory detail allocations, data on payments applied to externally owned sales orders, and AR balance information to external applications.

## New Programs

Table 2.25 lists the new programs added to MFG/PRO eB to support enhancements to Q/LinQ.

**Table 2.25**  
New Q/LinQ  
Programs

Menu Number	Description	Program Name
36.8.20	Code Mapping Maintenance	qqcodmt.p
36.8.21	Code Mapping Inquiry	qqcodiq.p

## Modified Programs

Table 2.26 lists MFG/PRO eB programs that were modified to support new features in Q/LinQ.

**Table 2.26**  
Modified Q/LinQ  
Programs

Menu Number	Description	Program Name
36.8.1	Register External Applications	qqaprmt.p
36.8.2	Export Specification Maint	qqespmt.p
36.8.3	Import Specification Maint	qqispmt.p

## New Business Object Documents

Table 2.27 lists new BODs added to MFG/PRO eB for exchanging sales order and inventory management information between MFG/PRO eB and external applications.

**Table 2.27**  
New Q/LinQ BODs

BOD Name	Function
UPDATE_PRODUCTREQ and CANCEL_PRODUCTREQ	Deliver inventory detail-allocation information to external applications
CHANGE_STATUS	Delivers credit hold and approval information to MFG/PRO eB
LOAD_RECEIVABLE	Delivers new invoices and debit/credit memos to MFG/PRO eB  Delivers information on payments applied to logistics-owned sales orders to external applications
UPDATE_CREDIT	Delivers AR balance changes or mass exports to external applications

## Advanced Planning and Optimization API Enhancements

The Advanced Planning and Optimization (APO) API can now be used with Supply Chain Optimizer as well as Factory Optimizer.

▶ See *External Interface Guide: Advanced Planning and Optimization*.

### Business Need

Previous versions of the APO API provide an interface only between MFG/PRO and Factory Optimizer, a single plant application. QAD customers with multiple sites need support for tactical and operational planning across multiple sites.

### MFG/PROeB Solution

The extension of the APO API leverages the Supply Chain Optimizer as a planning replacement for combined manufacturing resource planning, distribution resource planning, and capacity requirements planning in MFG/PROeB.

### Key New Features

Using the new APO API, you can implement schedules based on advanced capacity and material constraints at multiple sites.

### Modified Programs

Table 2.28 lists MFG/PROeB programs that were modified to support the Advanced Planning and Optimization API.

Menu Number	Description	Program Name
36.5.5.1	Planning Data Export	giapexp.p
36.5.5.2	Planning Schedule Import	giapimp.p

**Table 2.28**  
Modified Planning API Programs

▶ See *External Interface Guide: QAD Storefront* and the QAD Web site for more information.

## QAD Storefront

To support the QAD Storefront, MFG/PRO eB provides an interface to IBM's WebSphere Commerce Suite (WCS) electronic storefront to mediate the exchange of data between the two products.

The interface includes a set of APIs that access the MFG/PRO eB business logic used to add customers and create sales orders.

Additionally, the interface implements communication with credit card services provide by CyberCash, Inc., which authorizes shopper credit card numbers entered at the storefront and then captures the final credit card transaction at invoice post so that the merchant can be paid.

### Business Need

Many companies using MFG/PRO eB need to have orders placed on an Internet storefront recorded as MFG/PRO eB sales orders so that they can better support their business-to-business customers.

### MFG/PRO eB Solution

By integrating MFG/PRO eB sales order processing with the WCS electronic storefront, QAD Storefront lets you create, ship, and invoice sales orders for items ordered through an Internet interface.

### Key New Features

Using the QAD Storefront, you can:

- Automatically create and maintain MFG/PRO eB customer master records from a combination of shopper data entered at the storefront and control file entries.
- Use standard MFG/PRO eB features to determine best pricing, taxes, and freight charges, which are then returned to display at the storefront before the shopper completes the order.
- Generate MFG/PRO eB sales orders, which can be processed, shipped, and invoiced using standard procedures.
- Send credit card authorization data from the storefront to MFG/PRO eB.

- Automatically capture payment from the customer's credit card through the credit card clearinghouse at invoice post.
- Update customer credit card information as needed so that the information required for successful payment capture is correct.
- Automatically create a payment record in Accounts Receivable when the credit card payment is captured.

## New Programs

Table 2.29 lists the new programs added to MFG/PROeB to support the QAD Storefront.

Menu Number	Description	Program Name
7.21	Storefront Integration Menu...	
7.21.1	External Address X-Ref Browse	adbr024.p
7.21.2	Credit Card Transaction Browse	sobr018.p
7.21.24	Storefront Control File	ncpm.p
36.19	AppServer Menu...	
36.19.1	AppServer Service Maintenance	mgasmt.p
36.19.2	AppServer Service Browse	mubr222.p

**Table 2.29**  
New Programs to Support QAD Storefront

## Modified Programs

Table 2.30 lists MFG/PROeB programs that were modified to support the QAD Storefront.

Only one program—Sales Order Credit Maintenance (7.1.13)—was modified in a way that changed the user interface by adding fields and frames. The other programs were changed to validate credit card data during shipping and invoicing, and to display related messages.

Menu Number	Description	Program Name
7.1.13	Sales Order Credit Maintenance	soasmt.p
7.9.5	Pre-Shipper/Shipper Confirm	rcsois.p
7.9.15	Sales Order Shipments	sosois.p
7.13.1	Pending Invoice Maintenance	soivmt.p
7.13.3	Invoice Print	sosorp10.p

**Table 2.30**  
Modified Programs

<b>Menu Number</b>	<b>Description</b>	<b>Program Name</b>
7.13.4	Invoice Post	soivpst.p
7.13.12	Closed Invoice Reprint	soivrp10.p