Deltek MPM™ 3.4

Projects Manual

June 24, 2011

Contents

About this Manual

The *MPM Projects* manual describes how to create and maintain the components of the project data. The components include:

- Creating Projects and Settings
- Organizational Breakdown Structures (OBS)
- Contract Line Items (CLIN)
- Work Breakdown Structures (WBS)
- Integrated Planning (Baselines, ETCs, Milestones)
- Actuals
- Project Updating Utilities
- Program Logs
- Graphic Drill Down (GDD)
- Reports
- Imports
- Exports
- Distributed Projects

Chapter Skeleton

In writing each of the chapters in the *Globals* and *Projects* manuals, we used the following chapter skeleton as a guideline.

- Introduction to the chapter
- Accessing the application window
- Orientation to the application window
- Creating the objects managed by the application (for example, calendars)
- Field descriptions for those applications that have a large number of fields
- Maintaining the objects (for example, editing, moving, copying and pasting)
- Changing the display (for example, filtering, expanding and collapsing items, displaying and hiding fields)
- Recommended reports

This general skeleton should help you locate similar information in the chapters.

If You Need Assistance

If you need assistance installing, implementing, or using MPM, Deltek makes a wealth of information and expertise readily available to you.

Customer Services

For over 20 years, Deltek has maintained close relationships with client firms, helping with their problems, listening to their needs, and getting to know their individual business environments. A full range of customer services has grown out of this close contact, including the following:

- Extensive self-support options through the Customer Care Connect Web portal.
- Phone and email support from Customer Care analysts
- Technical services
- Consulting services
- Custom programming
- Classroom, on-site, and Web-based training

Find out more about these and other services from the Customer Care Connect site.

Customer Care Connect Site

The Deltek Customer Care Connect site is a support Web portal for Deltek customers who purchase an Ongoing Support Plan (OSP).

The following are some of the many options that the Customer Care Connect site provides:

- Download the latest versions of your Deltek products
- Search Deltek's knowledge base
- Display or download product information, such as release notes, user guides, technical information, and white papers
- Submit a support case and check on its progress
- Transfer requested files to a Customer Care analyst
- Use Quick Chat to submit a question to a Customer Care analyst online
- Ask questions, exchange ideas, and share knowledge with other Deltek customers through the Deltek Connect Customer Forums

- Subscribe to Deltek communications about your products and services
- Receive alerts of new Deltek releases and hot fixes

For more information regarding Deltek Customer Care Connect, refer to the online help available from the web site.

Access Customer Care Connect

To access the Customer Care Connect site, complete the following steps:

1. Go to https://deltek.custhelp.com.

2. Enter your Customer Care Connect **Username** and **Password**.

3. Click **Log In.**

If you forget your username or password, you can click the **Account Assistance** button on the login screen for help.

Additional Documentation

The following table lists the additional Deltek documentation available for this release. Except where noted, all the user guides listed in this table are available for download from the Deltek Customer Care Connect site.

Document Name	Description
MPM Installation Guide	This guide describes the system requirements as well as how to install MPM, Data Warehouse and OLAP.
MPM Globals Guide	This guide describes how to set up and manage your Global Sets in MPM, which are used in all your MPM projects.
MPM Standard Reports Guide	This guide describes, and provides examples of, standard reports available in MPM.

Document Name	Description
Online Help	You can access complete online Help in any of the following ways: ■ Click **Menu Manager Help » Deltek MPM Help Topics** ■ Press **F1** from within the MPM product ■ Click the **Help** button on one of the MPM dialog boxes

1

Overview of Project Management

1.1 Introduction

MPM (Micro-Frame Program Manager) is a comprehensive WBS-based system for integrating proposals, cost estimating, and program management. MPM meets all government proposal/reporting requirements and enables you to respond to the most complex Request for Proposal quickly and effectively. It is easy to use and intuitive, and provides project solutions and information in a "real time" environment. The key features of MPM are described below.

Proposals and Cost Estimating

You can use MPM to:

- Price proposals and estimate costs
- Prepare pre-RFPs
- Run "what if" analysis
- Run proposal and comparison reports
- Prepare best and final offers

Baseline Planning/Estimates to Complete

- Apply indirect costs using burden templates
- Define multiple rate tables
- Rollover from proposal to baseline(negotiated estimates become baseline)
- Maintain integrated but separate baseline and estimate to complete
- Run multiple estimate at complete calculations

Performance Measurement

- Supports major earned value methods
- Can define 99 milestones per WBS element
- Integrated program log includes management reserve and undistributed budget
- Enter actuals by resource and/or element of cost
- Enter actuals manually or by batch import, including option to apply indirect costs
- Online control account plan for simplified reporting and statusing

C/SCSC Reporting

- A complete set of standard reports

- User-defined report formats with numerous sort, conditioning, summary, and time window options
- Variance analysis
- Required government report formats including Cost Performance Report Formats, Cost/Schedule Status Report, and Contractor Cost Data Reports
- Direct report interface with Excel
- Batch reporting options

Subcontract Management

- Develop baselines across PCs at distributed sites
- Automatic update of performance and actuals
- Track subcontractor cost variance and schedule variance

1.2 General Steps for Creating and Managing a Project

Below we have listed the general steps you are most likely to perform in using MPM to track a project. The chapters in this manual are organized in the same order.

- Create a Global Set
- Create Logins for Users and Assign Access Privileges
- Create the New Project
- Create the Organizational Breakdown Structure (OBS)
- Create the Contract Line Item Numbers (CLIN) Table
- Create the Work Breakdown Structure (WBS)
- Estimate the Project Baseline
- Enter Milestones and Select EVMs
- Enter Actuals
- Revise Estimates
- Replan the Project
- Maintain Program Logs
- Analyze the project graphically
- Generate Standard Reports
- Import and Export data

MPM is a complex product with many functions. How you use the product will depend on your specific environment. Some functions have prerequisites, for example you must create a WBS before you can estimate the project baseline. But you can use the functions in any order.

Main Menu

The majority of the functions listed above can be accessed from the Globals and Projects tabs in the MPM Menu Manager window. The tabs are shown in Figure A.
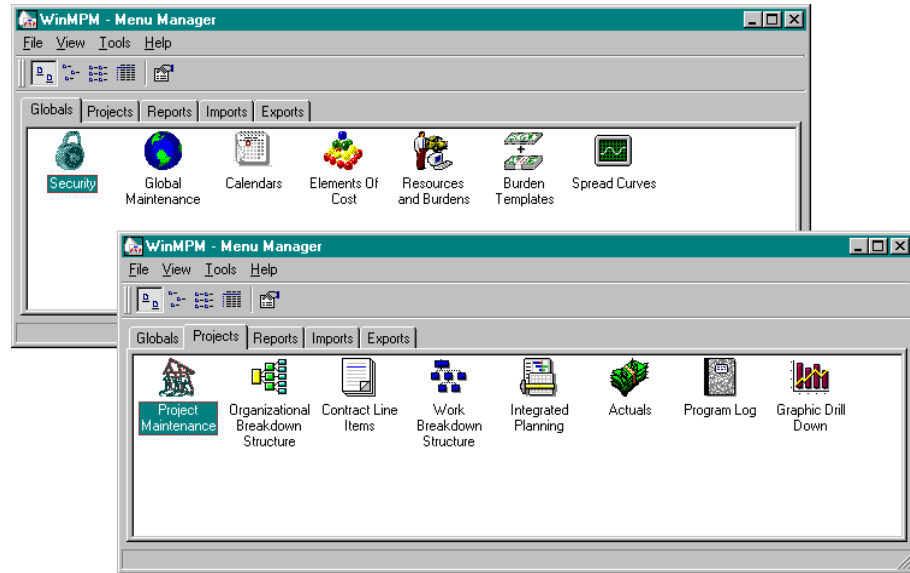
Figure A. *Most of the functions in MPM are accessed from the Globals and Projects tabs in the Menu Manager window.*

1.3 Creating a Global Set

When you create a project in MPM, you must specify a broad range of information for
the project including:

- A fiscal calendar
- A holiday calendar
- Burden templates
- Resource and burden codes
- Resource and burden rate tables
- Elements of Cost table

In MPM, you create a "global set" that contains this information. A global set is defined
by a global ID, description, and path. After defining a global set, you assign it to a project
using the Project Maintenance window. The relationship is shown in Figure A.
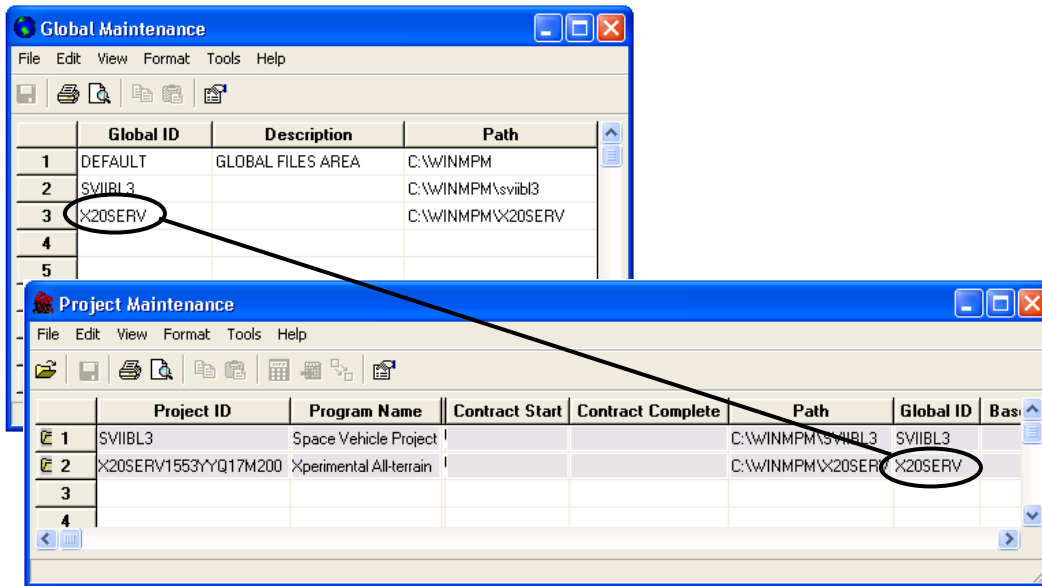
Figure A. *Global set IDs are assigned to projects.*

Multiple Global Sets, Multiple Projects

You can define an unlimited number of global sets, and you can assign a global set to an
unlimited number of projects. You can share global sets as long as the projects use the

same calendar. If projects will be using different calendars, each project will require its own global set.

For More Information

Global sets and how to create them are described in the *MPM Globals* manual.

1.4 Creating Logins and Assigning Access Privileges

MPM's security features let you control user access to:

- Different applications in the product
- Editing features for each project
- WBS elements for each project

You can customize access for each user. The Equivalent User feature lets you assign the same access privileges to many users with a single selection from a drop-down list box. The Security window is shown in Figure A.

Figure A. *You add users and assign projects to users from the Security.*

Application Access

You can control access to the following applications in MPM:

- **Globals**. A user with Globals privileges has access to all applications on the Globals tab in Menu Manager. A user without this access will not be able to select the Globals tab.

- **Report Edit**. A user with Report Edit privileges can modify the conditions defined for a report. Without this access, a user can run the standard reports, but not modify them.

- **Spread Curve**. A user with Spread Curve privileges can create custom spread curves. A user without this access can apply spread curves to baseline estimates and ETCs, but cannot create custom spread curves.

Project Feature Access

When you assign users access to a project, you can determine what types of edits they can perform by restricting their access to the different project edit features. The features are generally available from the menu items in the various project windows. You can tailor the features for each user for each project.

Authorization Levels

When you add a user to the MPM system, you can assign them to one of three authorization levels:

- **System Administrator**. A user with system administrator authorization has access to all applications, projects, and edit features.
- **Project Administrator**. A user with project administrator authorization has access to assigned applications, to assigned projects, and all edit features for assigned projects. Project administrators can also add and delete users to and from projects they administer.
- **User**. Users with "User" authorization have only those privileges assigned to them by a system administrator or project administrator.

Only system administrators and project administrators have access to the Security application.

For More Information

Creating users and assigning projects to users is covered in *Chapter 8: Controlling Security Access to MPM* in the *MPM Globals* manual.

1.5 Defining the New Project

When you are ready to create a new project in MPM, you enter information using the Project Maintenance window shown in Figure A. In the window, each row represents a project.
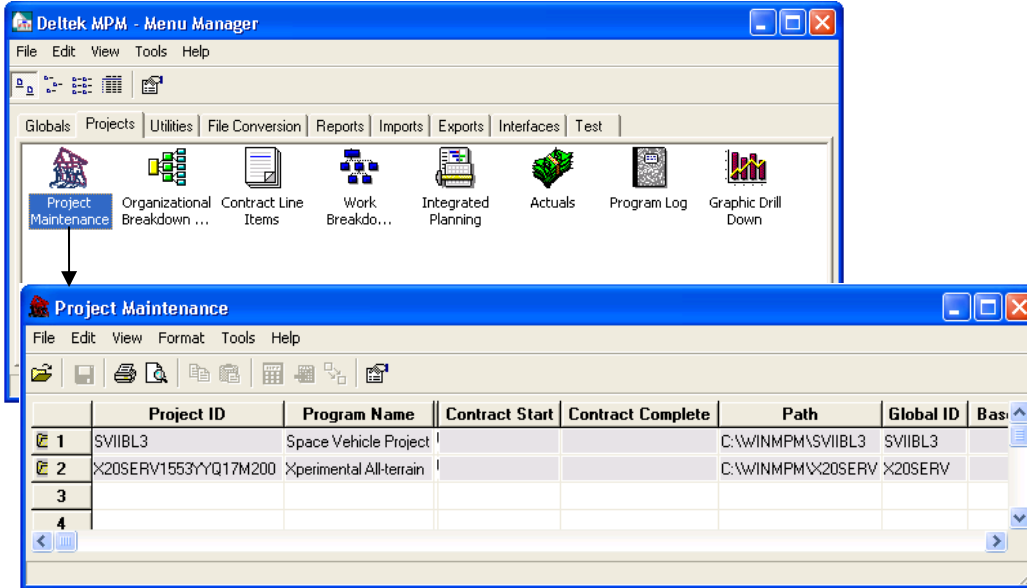
Figure A. *You create a project using the Project Maintenance window.*

Required Information

The required information includes:

- Project ID
- Path
- Global Set ID

Full Functionality

For full functionality of MPM, you must also complete the following fields:

- Contract Start
- Contract Complete
- Baseline Rate Table
- ETC Rate Table
- Actuals Rate Table
- Calendar
- Fee Calculation

For More Information

Creating projects is described in *Chapter 2: Creating and Maintaining Project Settings* in the *MPM Projects* manual.

1.6 Defining the Organizational Breakdown Structure

An Organizational Breakdown Structure, or OBS, is a pyramid- or tree-like structure which describes the relationships and work responsibilities of the people in your organization. The highest level of the OBS is the top level of management. The organizational structure is progressively detailed downward to the lowest level. To create an OBS, you use the OBS window shown in Figure A.
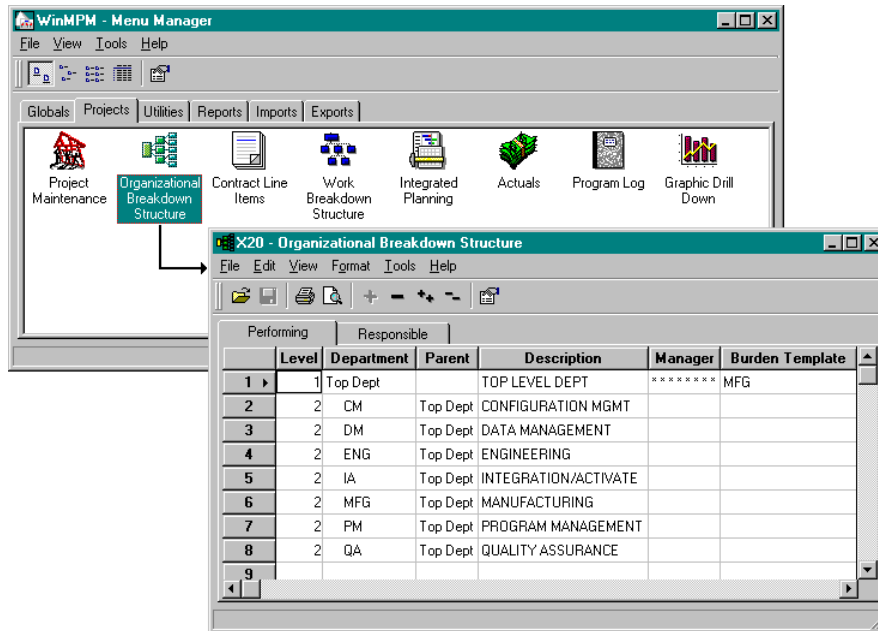
Figure A. *To create an OBS, you use the Organizational Breakdown Structure window.*

Types of OBS Trees

Within the OBS, two separate organizational hierarchies (or trees) are available to provide detail and summary project data through the company organizational structure:

- A Performing Organization tree reflects the hierarchy of reporting within a company or "line" organization.
- A Responsible Organization tree is for projects that employ some degree of matrix management. The Responsible OBS can be a functional category such as engineering, production, management, or manufacturing.

Some projects use both trees while others use neither, managing the project within the WBS framework only. You may create one or both types of OBS tree for each project.

How the OBS Works

When you create an OBS element, you specify a parent department ID. Child departments become parent departments and their parents become grandparents when you assign them subordinate departments. In Figure B, Engineering is a parent of Department 600 and a grandparent of Departments 601 and 602.
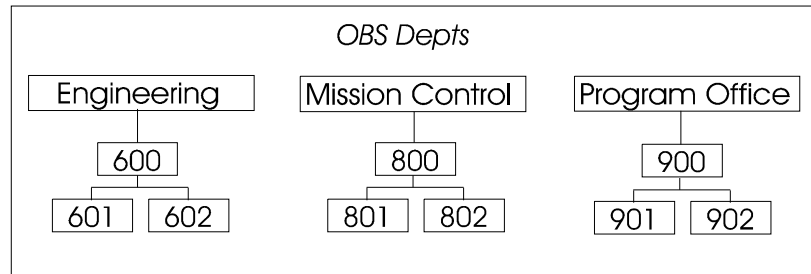
Figure B. *A Sample OBS*

When creating the WBS, you assign the WBS tasks to the OBS departments to create the Responsibility Assignment Matrix (RAM), typically matching work package WBS tasks with the Performing OBS departments, and control account WBS tasks with the Responsible OBS departments.

For More Information

Creating an OBS is described in *Chapter 3: Creating the OBS*.

1.7 Defining the Contract Line Item Number (CLIN) Tables

The Contract Line Item Number (CLIN) Table contains a list of all the Contract Line Items in the project's contract. CLINs summarize WBS tasks. The CLIN Table also contains descriptions, quantity, and reference codes for each CLIN to be reported. To define CLINs, you use the Contract Line Items window shown in Figure A.

The Role of CLINs in Government Reporting

The CLIN Table is used for providing data needed in government reports, much like headers (see *Chapter 15: Reports* for details).

Reports Summarizing CLINs

The MPM government reports which utilize the CLIN Table are:

- SF 1411 Report (includes quantity and reference codes)
- DD 1921 Report (includes element codes as defined in RFPs)
- CLIN/SOW/WBS Report (must be linked to the WBS)
- CLIN Table Report

For More Information

Defining CLINs is described in *Chapter 4: Creating the Contract Line Item Numbers*.
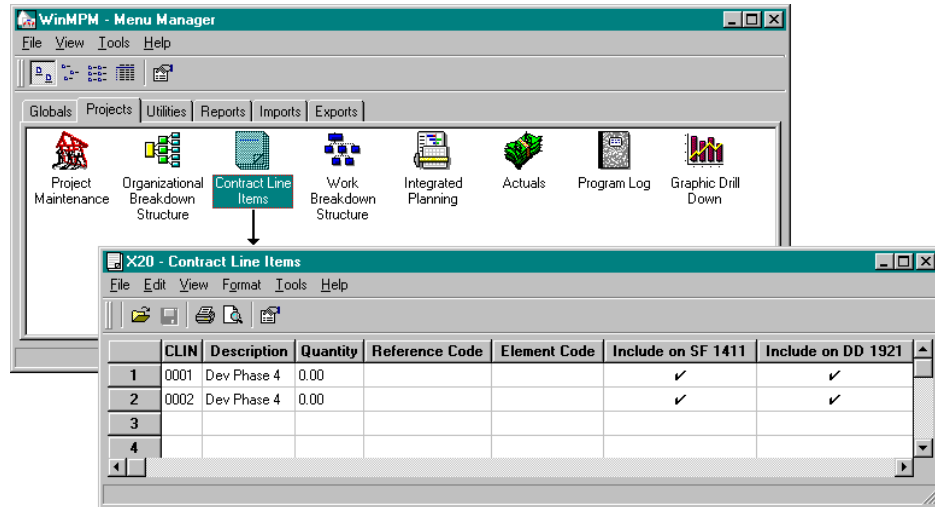
Figure A. *To define contract line item numbers, you use the Contract Line Items window.*

1.8 Defining the Work Breakdown Structure (WBS)

A Work Breakdown Structure or WBS is an organized framework in which you can progressively subdivide a project's work content into elements that can be easily identified and tracked. Using the WBS methodology:

- Makes planning, scheduling, estimating, and reporting easy
- Provides the framework for cost collection and responsibility assignment
- Provides detail and summary reporting of cost, schedule, and performance

MPM's design is based on the government's concept of supplying data by WBS, OBS, and EOC. Government contractors managing major procurements generally follow the guidelines detailed in MS-881 (DOD) and MA-0295 (DOE).
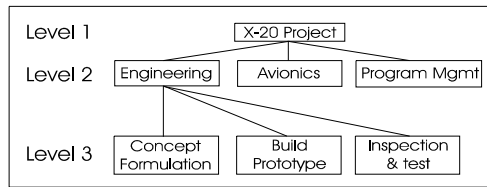
Figure A. *A Sample WBS*

To define a WBS, you use the Work Breakdown Structue window shown in Figure B. You define each WBS element, assigning it a unique WBS ID and a level.

To provide time-phased cost data, you can link your OBS (which provides your organizational breakdown structure of human resources) to your WBS (which describes the tasks to be performed in the project). Linking the WBS to the OBS assigns the responsibility of the tasks to departments within your organization.

For More Information

Defining the WBS is described in *Chapter 5:Creating the WBS*.
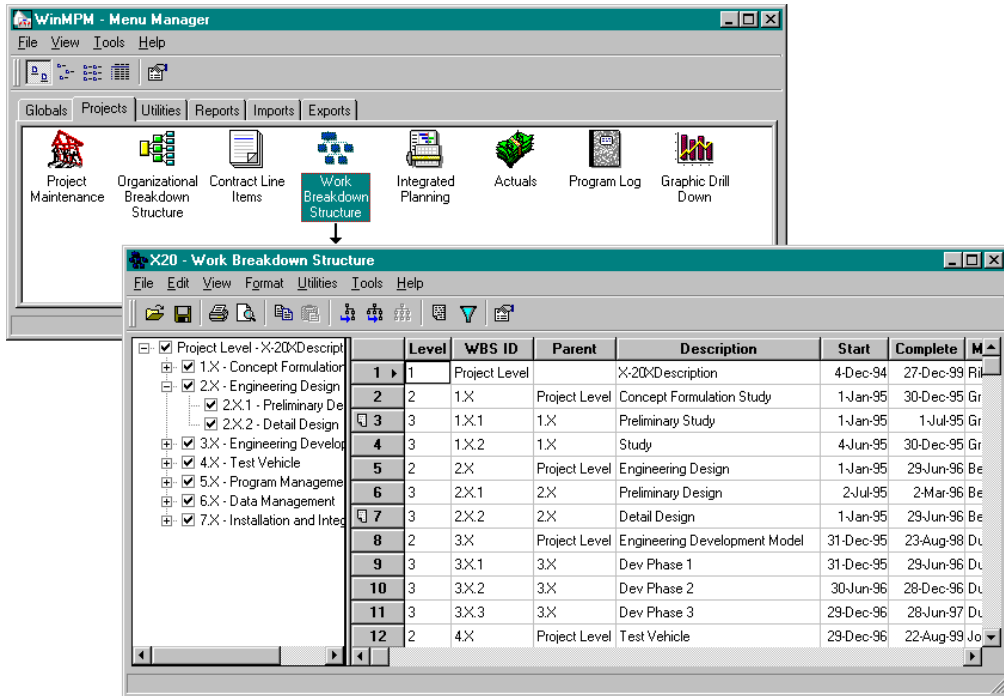
Figure A. *To create a WBS, you use the Work Breakdown Structure window.*

1.9 Creating the Project Baseline

After creating the globals and defining the WBS and OBS, you are ready to define the project baseline. The baseline defines the initial project plan. The Baseline estimate uses the WBS as its foundation. To create a baseline estimate, you use the Baseline tab in the Integrated Planning window shown in Figure A.

To generate estimates, you assign resources to each WBS element in the left pane of the window. After entering the resource information, you enter estimate values in the right pane. You can select from the following estimates types:

- Standard Hours (Industrial Engineering Standard Hour)
- Hours
- Units
- EQP (Equivalent Persons)
- Prime (Resource Rate x Hours)
- Total Burdened (Prime + Overhead)
- Total Cost (Total Burdened + G&A)
- Total Dollars (Total Cost + COM)
- Total Price (Total Dollars + Fee)

Whichever estimate type you choose to enter, MPM calculates the other values automatically. This is one of MPM's most powerful features. You can view any of the values at any time by selecting from the Estimate Type drop-down list box in the Toolbar.

For More Information

Creating the Baseline is described in *Chapter 7:Estimating the Project Baseline*.
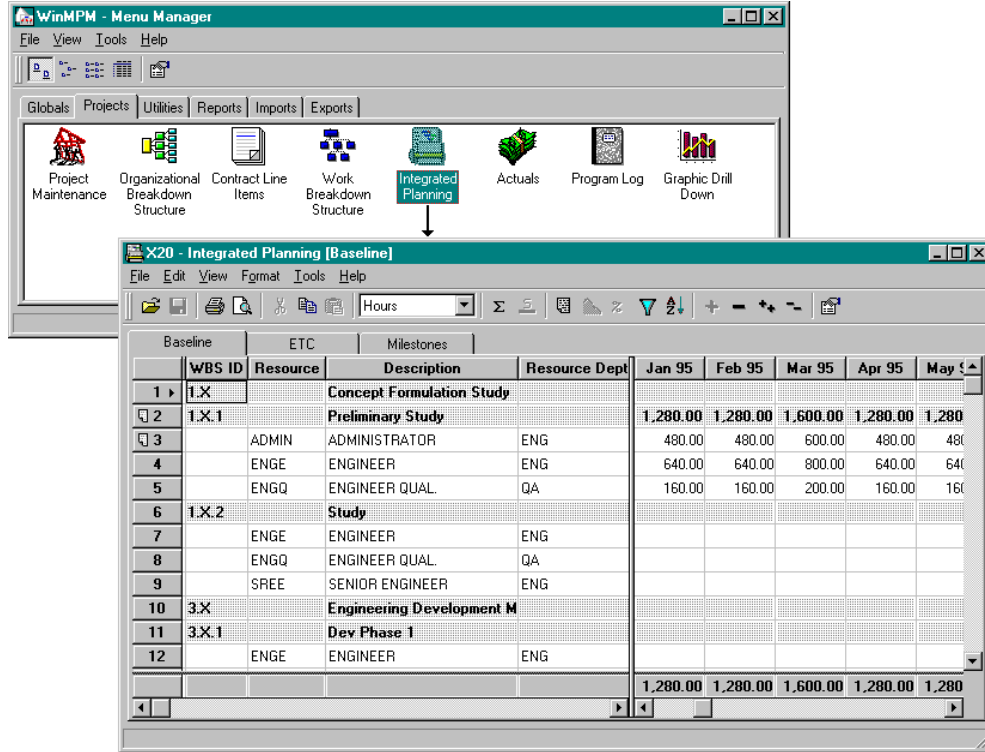
Figure A. *To create a Baseline estimate, you use the Baseline tab in the Integrated Planning window.*

1.10 Estimating Completion Costs

After you have completed the baseline estimate, you can create a revised version of the baseline using the Estimate to Complete (ETC) view in the Integrated Planning window. The ETC view is identical in look and feel to the Baseline view. Changes you make to the ETC do not change the baseline estimate, making it possible to compare current estimates to the original baseline estimates.

The original monthly baseline estimate data is automatically maintained by MPM to provide performance measurement of the baseline plan. Baseline and ETC dates are displayed in various Gantt and Time Analysis reports.

When you have created the ETC, MPM can use it to:

- Generate Estimate to Complete reports
- Generate Latest Revised Estimate (LRE) reports
- Graph LRE data in Graphic Drill Down (GDD)
- Calculate Estimate at Completion (EAC) reports

Baseline and ETC Relationship

There are two ways to create the ETC:

- You can save the resources estimates to the ETC as you create the Baseline.
- You can copy the Baseline estimates to the ETC using the Project Replan function

For More Information

Estimating completion costs is described in *Chapter 8: Revising the Forecast (ETC)*.
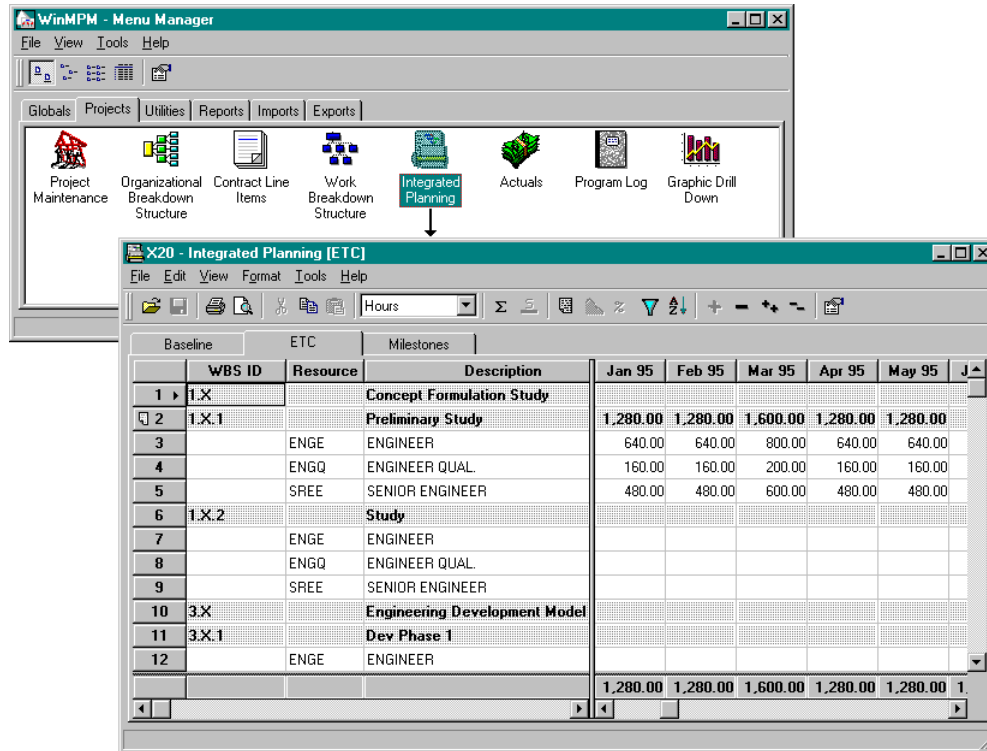
Figure A. *To create an ETC, you use the ETC tab in the Integrated Planning window.*

1.11 Entering Milestones and Selecting EVMs

The Integrated Planning Milestones window provides activity work-in-progress assessment capability. Milestones for each WBS element are represented graphically in a Gantt chart. You can "status" the milestones and review the resulting changes in the updated fields.

Each milestone is assigned a unique identifier, making it possible to export and import data keyed to specific milestones.

Note that, as with the Baseline and the ETC, the Milestones view is based on the WBS.

When you define milestones for a WBS element, you select an Earned Value Method (EVM) that you want MPM to use to calculate the Budgeted Cost of Work Performed (BCWP). You can select a different EVM for each WBS element, but the EVM you choose for a WBS element applies to all milestones assigned to that element.

As a project progresses and milestones are met, you can status the project in MPM to generate a percent that represents the work that has been completed. You will usually status a project at the end of a fiscal period. The method you use to status the project depends on the earned value method you selected for each WBS element.

For More Information

Entering milestones is described in *Chapter 9: Tracking the Project Milestones*.
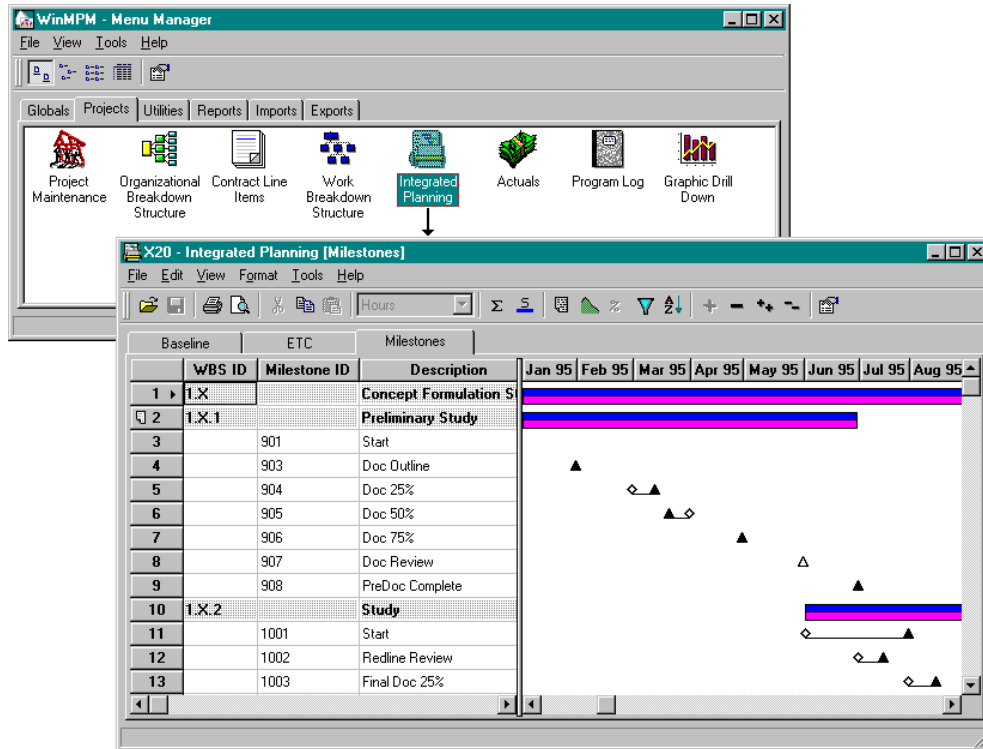
Figure A. *To create milestones, you use the Milestones tab in the Integrated Planning window.*

1.12 Entering Actuals

You can enter or import the actual costs incurred by the project into MPM for analysis and comparison with the budget. Actuals are not collected by MPM. Your accounting system provides the actuals, which you can either input manually or import directly. MPM sorts and summarizes actual costs by WBS/OBS and then provides comparative reports and graphs. Actuals may be collected by Element of Cost or by Resource at any level of the WBS.
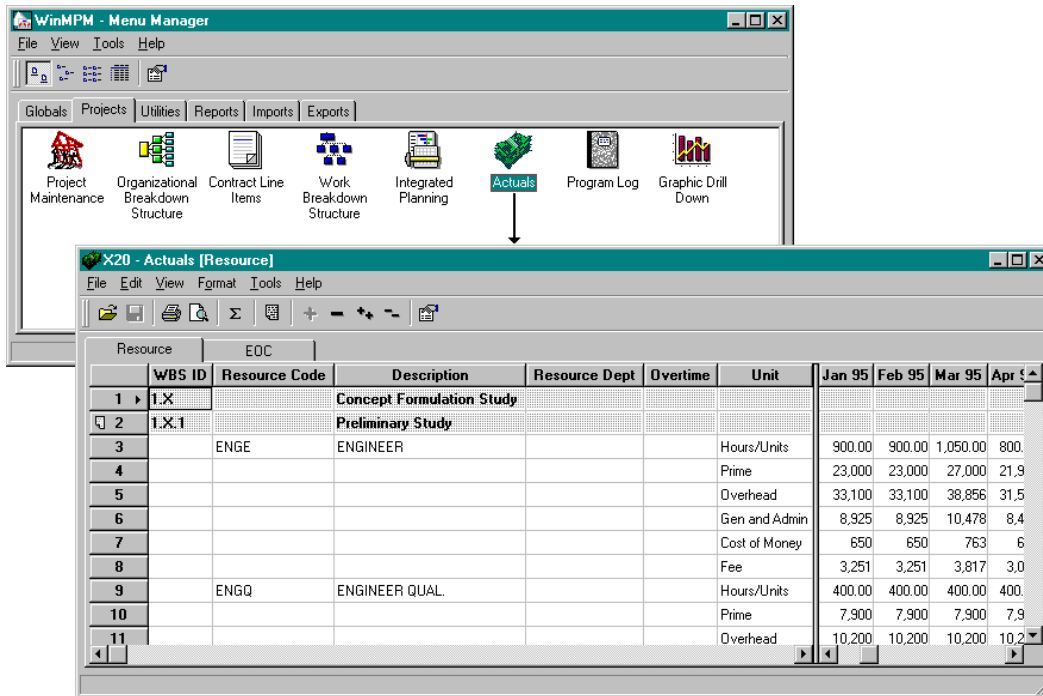
Figure A. *You enter actuals using the Actuals window.*

You can enter actuals data for resources and Elements of Cost (EOCs) by selecting the appropriate tab in the Actuals window.

Once you have entered your actuals, you can run several reports and graphs to compare your actuals to your budget and try to predict the costs and schedule required to finish the project. The graph in Figure A shows the SPA Line Graph, which compares BCWS, BCWP, ACWP (actuals), Schedule Variance, and Cost Variance.
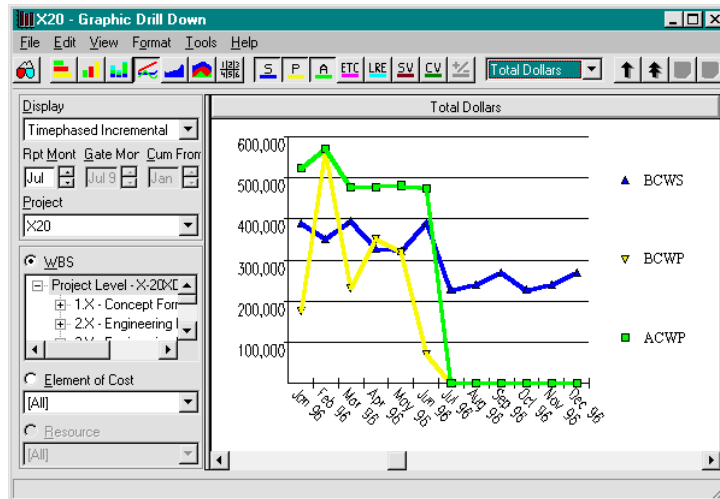
Figure B. *You can run several reports and graphs to compare your actuals to your budget.*

For More Information

Entering actuals is described in *Chapter 10:Entering the Project Actuals*.

1.13 Revising Estimates

Even the most carefully planned project will require changes throughout its life span. MPM provides several utilities that facilitate making changes to estimates across an entire project, or selected WBS elements and legs.

You access the utilities from the Tools menu in the Project Maintenance window.
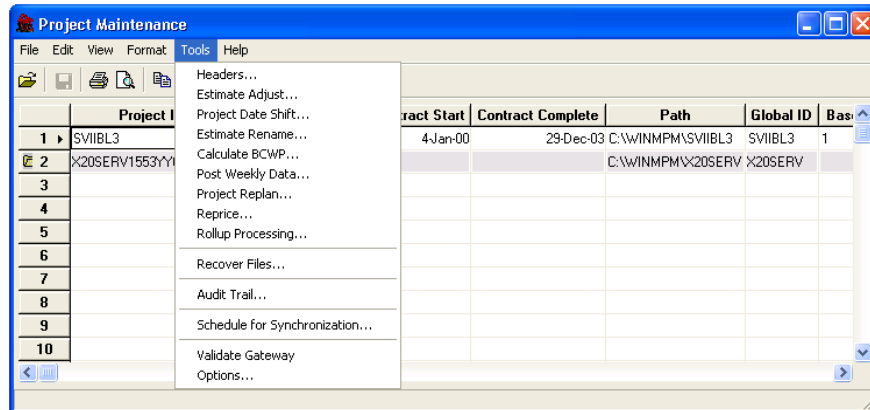
Figure A. *Access the Estimate utilities from the Tools menu.*

Reprice

You can revise Baseline, ETC, and actuals estimates in one process using the Reprice utility. This saves a great deal of time over modifying each estimate separately. Repricing is usually performed when there are major modifications to burden templates or rate tables. You can also use the Reprice utility to run "what if" scenarios against copies of your project. You can easily shift resources and change direct or indirect rates to produce different pricing scenarios.

Estimate Adjust

You can revise Baseline and ETC estimates in one process using the Estimate Adjust utility. The Estimate Adjust utility uses a fixed percentage to adjust the estimates. Estimate Repricing uses the underlying rate tables. Estimate Adjust is most useful in cost proposal/bid development to produce "what if" scenarios.

Estimate Rename

You can rename resource codes or resource departments in the Baseline and ETC estimates for a project using the MPM Estimate Rename utility. The function renames and reprices at the same time.

Date Shift

If you want to change the start date for a project, or part of a project, you can use the MPM Project Date Shift utility. The function changes dates and reprices.

Calculate BCWP

Whenever you need to calculate Budgeted Cost of Work Performed (BCWP), you use the Calculate BCWP utility in Project Maintenance. For example, whenever you modify milestone information in Integrated Planning, you will want to calculate a new BCWP.
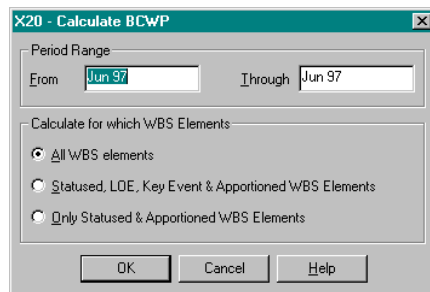
Figure B. You can calculate BCWP.

For More Information

Using the utilities is described in *Chapter 11: Utilities*.

1.14 Replanning the Project

During the life of a contract, changes may take place that make the available contract budgets for the remaining work insufficient. When this happens, it is no longer practical to measure performance against the available budgets. Under these circumstances, you should formally reprogram or replan the project. You access the Project Replan utility from the Tools menu in the Project Maintenance window.

Figure A. *Project Replan dialog box*

Formal reprogramming by a contractor may include replanning future work, replanning in-process work, or adjusting cost and/or schedule variances. Reprogramming allows the contractor to adjust the amount of budget for the remaining work to a more practical amount that provides realistic budget objectives, work control, and performance measurement.

The MPM replanning function conforms to government requirements, and can be tailored to meet the needs of the contracting parties. All changes to baseline budgets are fully documented and traceable.

Applications

Using the MPM replanning function, you can:

- Replan an entire project, or specific WBS elements and legs
- Replan smaller projects that do not require earned value
- Nullify a cost variance
- Nullify cost and schedule variances
- Nullify a schedule variance
- Establish ETC after entering baseline estimates
- Set ETC equal to baseline after replanning the baseline

For More Information

Replanning projects is described in *Chapter 12: Replanning Projects*.

1.15 Maintaining Program Logs

Program Logs provide a synergistic link between budget data and the internal control procedures and practices that implement budget changes. The logs are used to record total budget and all customer-directed changes that affect the baseline. Changes are identified as negotiated changes or authorized unpriced updates. Program Logs contain the status of the Management Reserve (MR) and Undistributed Budget (UB). To create program logs, you use the Program Log window.
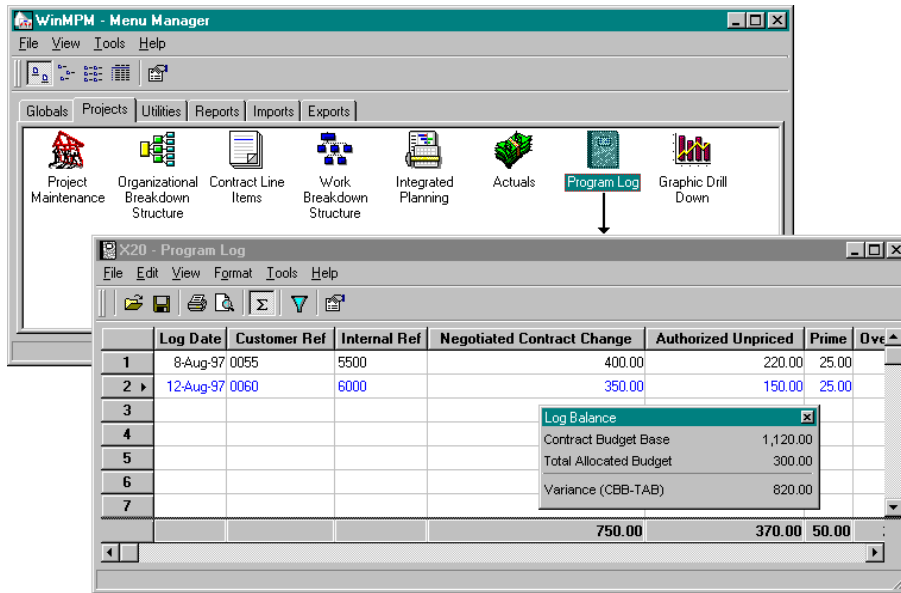
Figure A. *To create program logs, you use the Program Log window.*

The Role of Program Logs in Government Reporting

If your project requires submittal of the government reports C/SSR, CPR, or NASA, you can create and maintain program logs to satisfy control and auditability requirements for government contracting.

MPM uses the values you enter in the Program Logs to perform calculations, which in combination with header values you also enter, result in computed fields displayed on the C/SSR, CPR and NASA report headers

Program Log	+	C/SSR Header values you enter	=	Calculated values on C/SSR Report
Program Log	+	CPR Header values you enter	=	Calculated values on CPR Reports

Figure A. Calculations Used in Government Reporting.

For More Information

Program logs are described in *Chapter 13: Maintaining the Program Log*.

1.16 Analyzing Data Graphically

Graphic Drill Down™ (GDD) is a management tool that provides the ability to graphically display and explore data created in MPM. GDD provides a wide range of 2-D and 3-D charts, graphs, and grids. You can graph schedule, cost, actuals, variances, and condition the data in many powerful ways, to represent and analyze the data in your project.

By displaying your project's data as a graph, you can *drill down* (display additional detail information) into the data by clicking on a portion of a graph. For example, you can view a Horizontal Bar Graph that displays Timeframe cumulative BCWS in Total Dollars, then click on a bar representing a specific month to view a breakdown of cumulative BCWS data through that fiscal month. You can continue to drill down into a time period and into a WBS leg.

You can drill down by WBS, Element of Cost, or Resource. You can also choose to display any or all of the following types of data:

- Budgeted Cost of Work Scheduled (BCWS)
- Budgeted Cost of Work Performed (BCWP)
- Actual Cost of Work Performed (ACWP)
- Estimate to Complete (ETC)
- Latest Revised Estimate (LRE)
- Schedule Variance
- Cost Variance
- Other Variance

For More Information

Graphic Drill Down is described in *Chapter 14: Analyzing the Project Graphically (GDD)*.
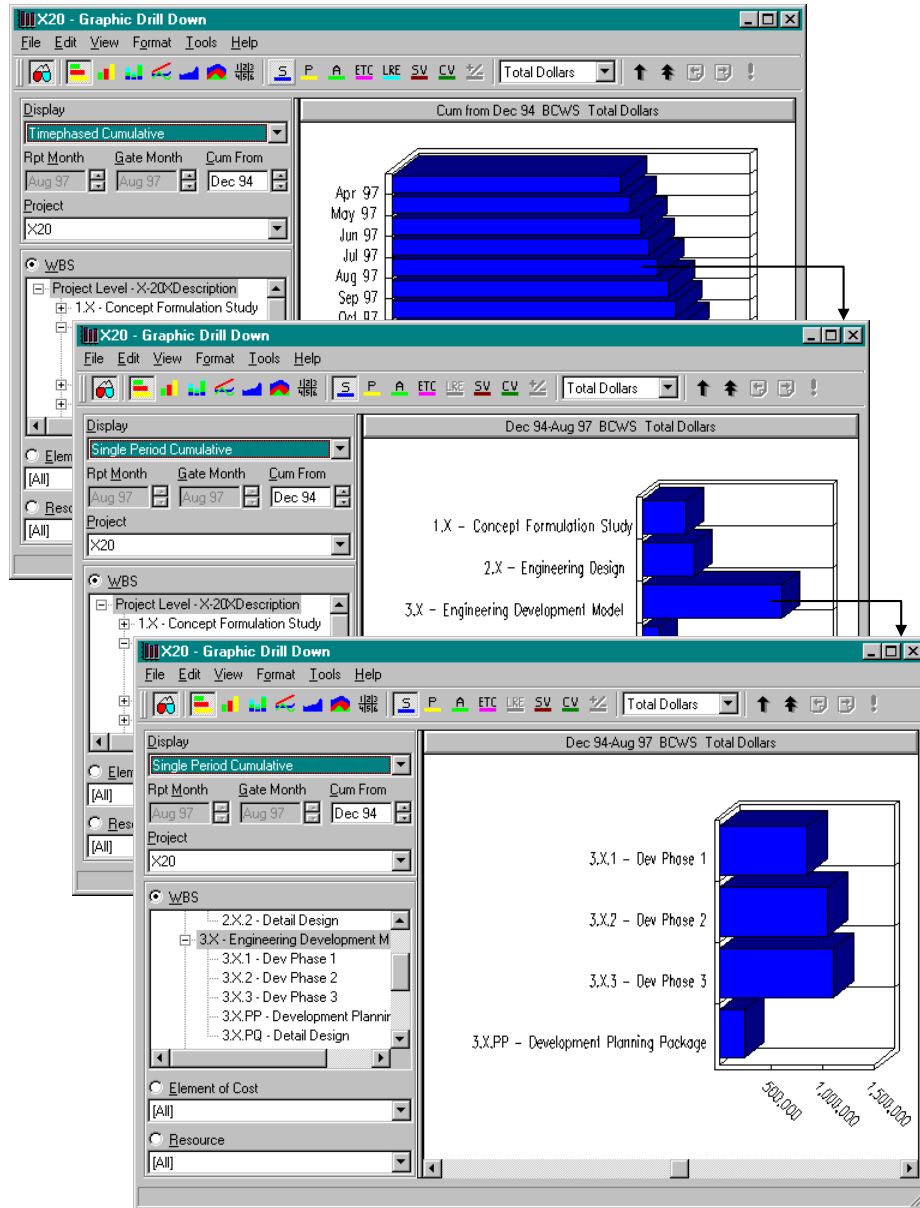
Figure A. *You can drill down to see increasing levels of detail.*

1.17 Generating Standard Reports

MPM provides a variety of tabular and graphic standard reports, specifically designed to meet government reporting requirements and your in-house reporting and analysis needs. You can condition each report to select its content and format for a specific purpose. To run the reports, you use the Reports tab in the Menu Manager window. For more information on reports, see *Chapter 15: Reports*.
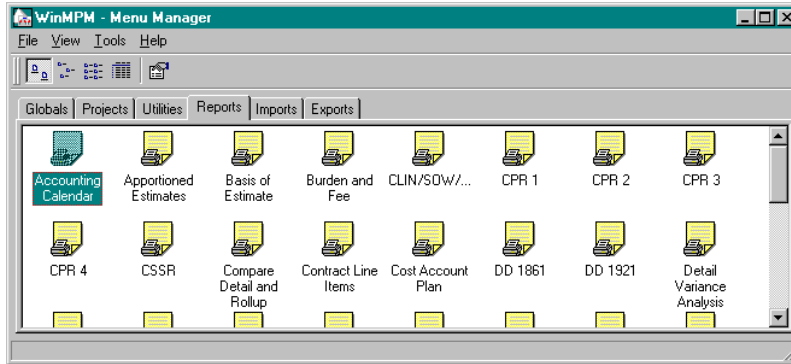
Figure A. *You run reports from the Reports tab in the Menu Manager window.*

The table below lists the types of reports offered in MPM:

Type	Reports
Baseline Reports	Resource Detail and Summary Reports
	Manpower Detail and Summary Reports
	Responsibility Assignment Matrix Reports
	Work Authorization Document Reports
	Project Comparison Reports
	Apportioned Estimates Relationships – Baseline Reports
Proposal Reports	SF 1411 Reports
	DD 1861 Reports
	DD 1921 Reports
	CLIN Table Reports
	Resource Department Summary Reports
	Resource and Summary Basis of Estimate Reports
	CLIN/SOW/WBS Reports
	Proposal Summary Reports by WBS or CLIN Reports
	Labor/Price Summary by WBS or CLIN Reports
	Burden/Fee Detail/Summary – Baseline/ETC Reports
Cost and Forecast Reports	Resource Detail/Summary – Actuals, ETC, Budget/LRE

Type	Reports
Cost and Forecast Reports *(cont.)*	Element of Cost Reports, including:
	WBS Recap by EOC Reports
	Budget/Actuals Recap by EOC Reports
	Element of Cost/Class Detail Reports
	S/P/A Tabular and Recap by EOC Reports
	Actuals by EOC or Charge Number Reports
	Project Comparison Reports
	Work Status Document – EV or Budget/LRE Reports
Planning and Analysis Reports	Detail Variance Analysis Reports
	EVM Planning & Analysis Reports
	Program Log, Management Reserve Log, Undistributed Budget Log Reports
	Apportioned Estimates Relationships – ETC Reports
	Price/Usage Variance Analysis Reports
	Control Account Plan Report
	Compare Detail versus EOC Rollup Reports
	Compare Detail versus Summary Rollup Reports
	EAC Comparison Reports
	Weekly Performance Report
	Weekly EOC Detail Report
	Weekly EOC Rollup Report
DOD/DOE Reports	CPR Format 1 Reports (in three formats)
	CPR Format 2 Reports (in three formats)
	CPR Format 3 Reports (in three formats)
	CPR Format 4 Reports (in three formats)
	C/SSR Reports (in two formats)
NASA Reports	NASA533 M Reports
	NASA533 P Reports
	NASA 533 Q Reports
Administrative Reports	OBS Indented Reports
	OBS Burden Templates Reports
	WBS Hierarchy Reports
	WBS Indented Reports
	Task Description Reports
Globals Reports	Element of Cost Table
	Resources and Burdens
	Responsibility Assignment Reports
	Accounting Calendar Reports
	Spread Curves Reports
Worksheets/Documents	Milestone Status Turnaround Document
	Variance Analysis Turnaround Document

1.18   Importing and Exporting Data

Importing Data

Use the Data Imports to bring data into the various MPM modules. Many customers import some of their cost or scheduling data from other software systems, such as accounting or personnel systems. There are also customers who export their MPM data, make some change to it, and then import it back into MPM.

MPM allows import of the following types of data:

- Actuals
- Calendars
- EOC Tables
- Burden Templates
- Milestones
- Basis of Estimate
- WBS Schedule data

- BCWP
- Distributed Projects
- Burdens and Resources
- Estimates
- Task descriptions
- Descriptive WBS data
- OBS data
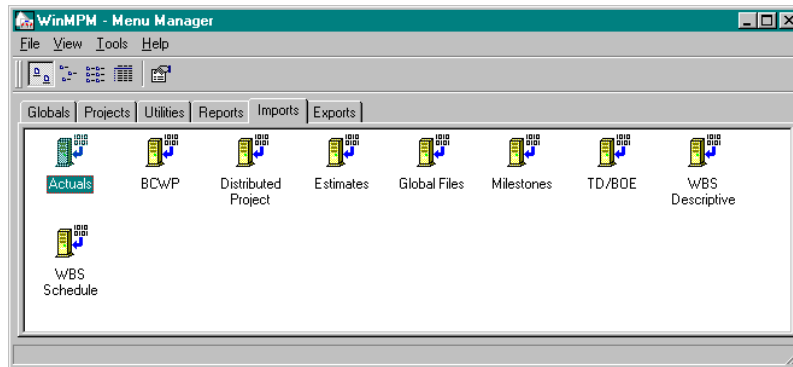
Figure A. *To import data, you use the Imports tab in the Menu Manager window.*

Exporting Data

You can use the Data Exports to save data out of the various MPM modules. Many customers export some of their cost data for use in other software systems, such as accounting or personnel systems. There are also customers who export their MPM data, make some change to it, and then import it back into MPM.

MPM performs exports of the following kinds of global data:

- Fiscal Calendar
- Burden Templates
- Resource Library

- Holiday Calendar
- Element of Cost Table

MPM performs exports of the following kinds of project data:

- Actuals by WBS
- Distributed Project
- Estimates by WBS
- Resource BOE
- WBS

- BCWP Status
- EOC Rollup by WBS
- Milestones
- Task Descriptions
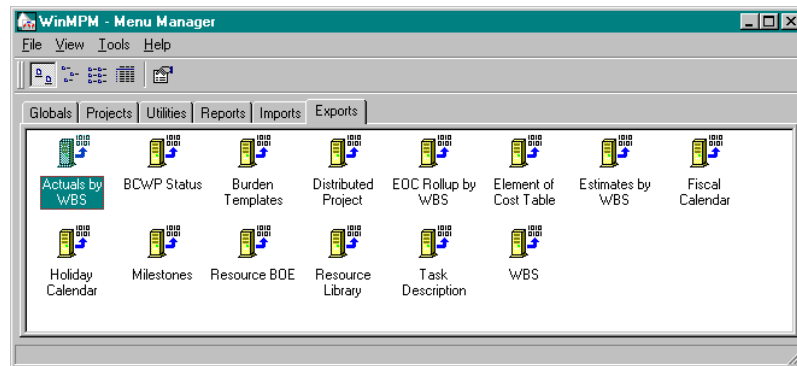
Figure B. *To export data, you use the Exports tab in the Menu Manager window.*

For More Information

Importing data is described in *Chapter 16: Importing Data*. Exporting data is described in *Chapter 17: Exporting Data*.

2
Creating and Maintaining Project Settings

2.1 Introduction to Creating a Project

To create a project in MPM, you enter information using the Project Maintenance window shown in Figure A.
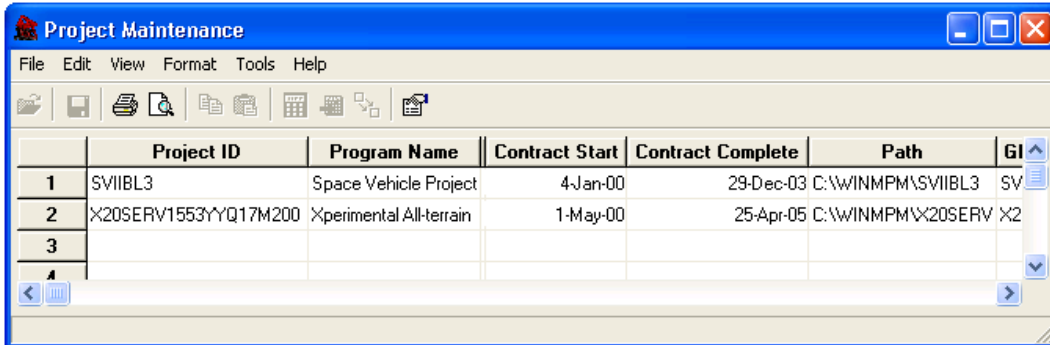
Figure A. *You create a project using the Project Maintenance window.*

The required information includes:

- Project ID
- Path for project files
- Global ID

For full functionality of MPM, you must also complete the following fields:

- Contract Start date
- Contract Complete date
- Baseline Rate Table
- ETC Rate Table
- Actuals Rate Table
- Fiscal and Holiday Calendar
- Fee Calculation (by WBS or Resource)

Before You Begin

Before you can create a project, you must have defined a global set for the project in the Global Maintenance application. If you have not defined a specific global set for the project, you can use the Default global set, but this is not recommended. For information on defining global sets, see *Chapter 1: Creating and Managing Global Sets* in the *MPM Globals* manual.

Headers

The MPM government-required reports contain data which is not tracked by MPM. You can enter values for the Header, Variance, and COM data in the Program Log and/or on the Header dialog. These values are saved with the project. You can then use the values repeatedly on multiple reports. The values appear as the default when requesting reports that use them. For more information on the operation of the Program Log and headers, see topic *13.1 Introduction to the Program Log* and topic *15.4.1 Entering Government Report Data*.

2.2 Accessing the Project Maintenance Window

You access the Project Maintenance view from the MPM Menu Manager. When you open the Project Maintenance window, the projects displayed are those to which you have been given access. Rows containing projects are displayed in gray with only the Project ID, Program Name, Project Description, Path and Global ID columns populated. By loading only a partial record for each project, performance is increased.
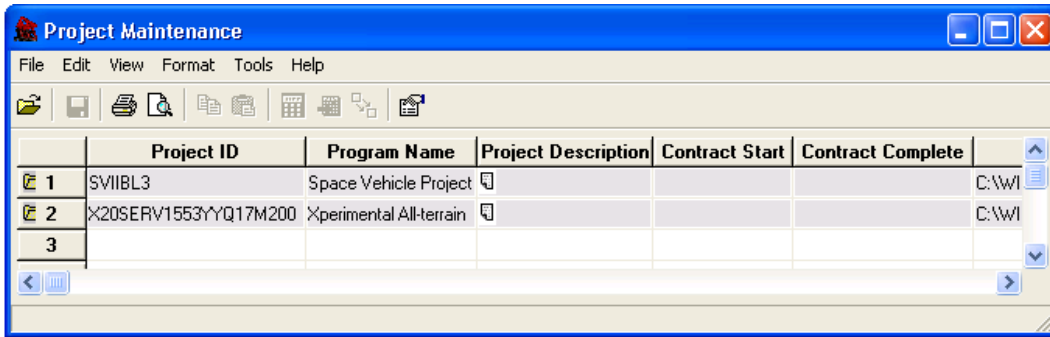
Figure A. *Project records as displayed upon opening Project Maintenance.*

The remaining project data is loaded by double-clicking the Folder Open icon next to the row number of the project you want to work with. The entire project record is then loaded and displayed for the project you selected.

You can also open several projects at one time using the Multiple Projects Open function. (See topic *2.2.1 Opening Multiple Projects,* for detailed information.)

Most functions on the Edit menu and the Tools menu cannot be used until the entire project record is loaded.
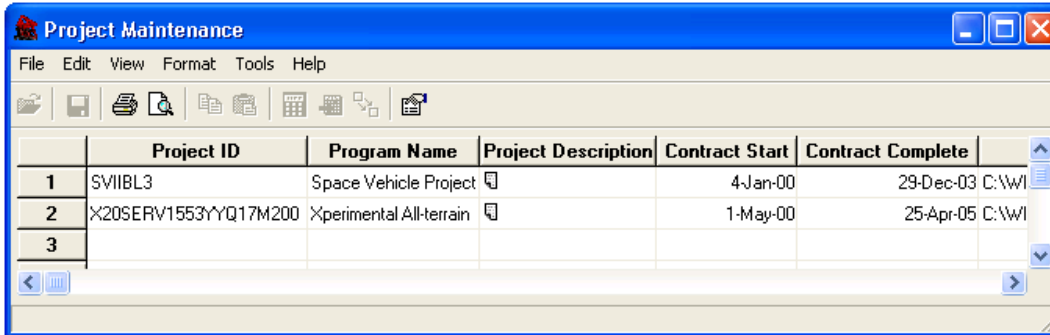
Figure B. *Project records as displayed after clicking the Folder Open icon.*

Procedure

To access the Project Maintenance window:

1. From the Menu Manager window, click the Projects tab and do one of the following:

   - Select the Project Maintenance icon.
   - From the File menu, select Projects | Project Maintenance.

   MPM displays the Project Maintenance window shown in Figure A listing the Project ID, Program Name, Path and Global ID information for each project.

2. Double-click the Folder Open icon for the project you want to work with to display the entire project record for the project.

Accessing the Project Maintenance Window
2.2.1 Opening Multiple Projects

The Multiple Projects Open function allows you to open several projects in one operation.

Procedure

To access the Multiple Project Open function:

1. From the Menu Manager window, click the Projects tab.

2. Click the Project Maintenance icon to display the Project Maintenance window.

3. From the File menu, select Multiple Project Open. MPM displays the Multiple Project Open dialog shown in Figure A.
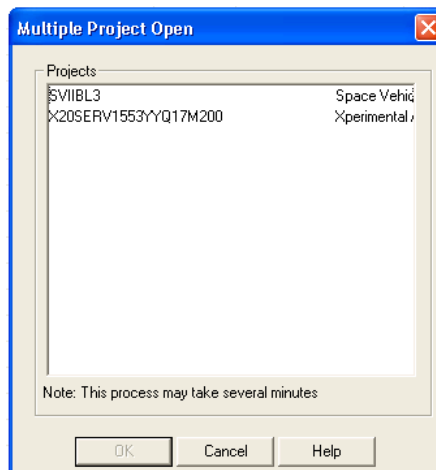
Figure A. Multiple Project Open

4. Highlight all the projects you want to open. To select contiguous projects, press Shift+Enter. To select noncontiguous projects, press Ctrl+Enter.

5. Click OK when you have selected all the projects you want to open.

2.3 Orientation to the Project Maintenance Window

The Project Maintenance window is the grid you use to enter project information. You can scroll the window left and right, and up and down. Projects are listed alphabetically by Project ID.
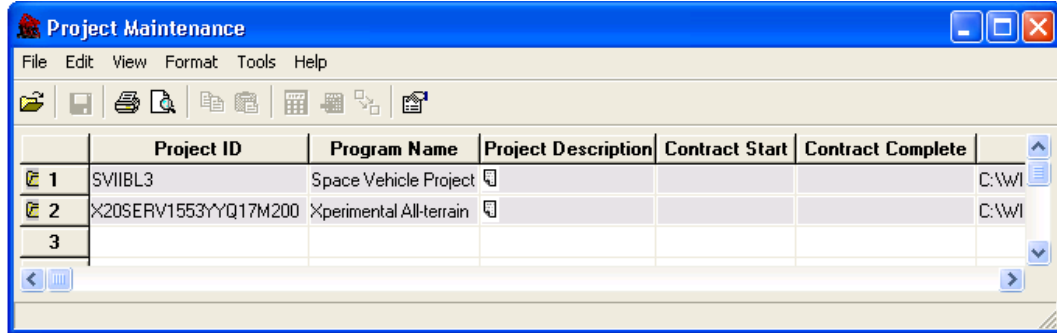
Figure A. *Project Maintenance window*

Navigating

You can scroll the display horizontally and vertically, and resize the window. When you scroll the window, MPM displays locator boxes showing the column name when you scroll horizontally, and the row number and Project ID when you scroll vertically.

Special Symbols

If MPM has trouble accessing a project file, it displays an icon in front of the row number. The different icons are described below.

Icon	Description
	Indicates the .HED file cannot be found. Double clicking the icon brings up the Locate Project Files dialog box.
	Indicates the .HED file is locked. Double-clicking the icon tries again to get the file.

Previewing and Printing

You can preview the grid online and print it by clicking the corresponding buttons in the Toolbar, or by selecting the corresponding commands under the File menu.

2.4 Creating a Project

To create a project in MPM, you enter information using the Project Maintenance window shown in Figure A.
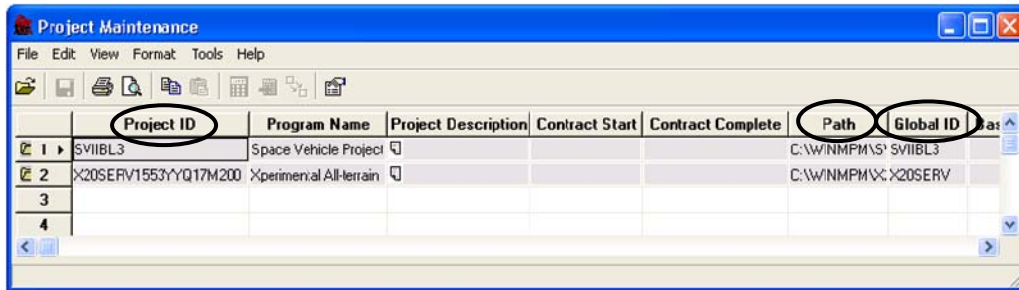
Figure A. *The required fields are Project ID, Path, and Global ID.*

The required information includes:

- Project ID
- Path for project files
- Global ID

For full functionality of MPM, you must also complete the following fields:

- Contract Start date
- Contract Complete date
- Baseline Rate Table
- Fiscal and Holiday Calendar
- Fee Calculation

All other fields are optional and do not impact the functionality of the product.

Each of the fields is described in the sub-topics that follow. The fields are described in the order they are displayed in the window. To facilitate documenting the fields, the fields have been grouped into the following topics:

Topic	Fields Described
2.4.1 Entering the Basic Project Information	Project ID Program Name Project Description Contract Start Contract Complete Path Global ID
2.4.2 Entering Pricing Options	Baseline Rate Table ETC Rate Table Actuals Rate Table Rate Table Override Burden Template Override
2.4.3 Calendar Fields	Calendar
2.4.4 Fee Calculation Fields	Fee Calculation
2.4.5 Company and Manager Information Fields	Company Name Program Manager Program Manager Phone Number Proposal Manager Proposal Manager Phone Number
2.4.6 Contract Information Fields	Proposal No. Contract No. Internal ID Program Type Contract Type
2.4.7 Cross References Fields	Xref-1 through Xref-10

2.4 Creating a Project
2.4.1 Entering the Basic Project Information

When you setup a project, you should enter the following fields:

- Project ID (required)
- Program Name (optional)
- Project Description (optional)
- Contract Start and Complete dates (required)
- Path for project files (required)
- Global ID (required)
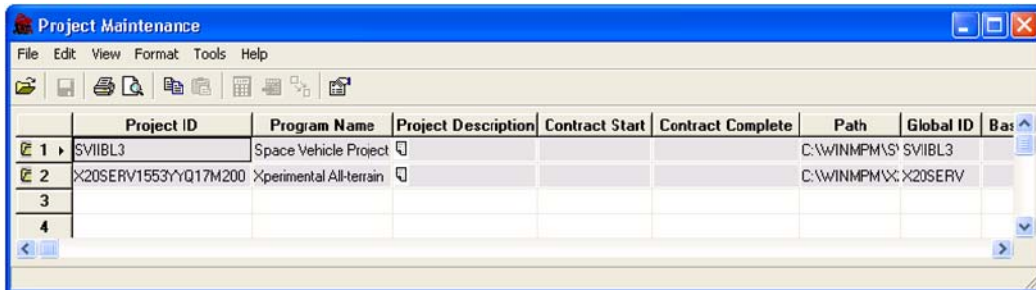
Figure A. *There are only a handful of required fields.*

Path Conventions

You can use Universal Naming Conventions (UNC) for the path of global or project files. You can also use UNC when saving exports or reports to a file or for the location of an import file.

The following information is excerpted from the Microsoft Developers Network:

> You can access a file on a shared network resource by entering the file's location in UNC format, or by browsing Network Neighborhood. To specify a file using UNC format, use the following syntax:

> \\computername\sharename\path\filename

> For example, to access a file named Report.xls in the Current\Month folder on a share named Documents on a computer named Sales, you would use the following syntax:

> \\sales\documents\current\month\report.xls

The file system uses the backslash (\) character to separate directory names and the file name when forming a path.

- Use a period (.) to separate the base file name from the extension in a directory name or file name.

- Do not use device names, such as aux, con, lpt1, and prn, as file names or directory names.

- Do not assume case sensitivity. Consider names such as *OSCAR*, *Oscar*, and *oscar* to be the same.

Do not use the following characters in directory names or file names because they are reserved:

Symbol Name	Symbol	Symbol Name	Symbol
Less Than	<	Backslash	\
Greater Than	>	Forward Slash	/
Colon	:	Quotation Mark	"
Pipe	|		

Backward slashes (\) are used as element dividers in paths (dividing the file name from the path to it, or directories from one another in a path). You cannot use them in file or directory names. They may be required as part of volume names (for example, C:\).

For additional information about UNC Path Support, please refer to msdn.Microsoft.com.

Procedure

To enter the fields:

1. Enter a unique project ID.

    The project ID can be up to 20 characters long. You can use letters and numbers, as well as the other standard characters.

2. (Optional) Enter a Program Name for the project.

    The description can be up to 40 characters long.

3. (Optional) Enter a description for the project, then select OK. The description will only be saved when the project information is saved. I.e., When you remove focus from that project row, a Project Maintenance dialog asks if you would like to save the changes. The information is only saved once you select Yes.

This field contains a notepad button 🔲. When the notepad button is clicked, the project description dialog is displayed (*see Figure B*). This dialog has a field size of 450 characters, with the first 30 characters (or first characters prior to a carriage return) displayed in the Project Description cell.

If the notepad button is double-clicked when the project is in grey mode, the Project description dialog will be Read Only regardless of security rights.

If the notepad button is double-clicked when the project is in edit mode, the Project Description dialog will be Read/Write if the user has Edit Project Information rights.

A user with no edit rights will still be able to click on the notepad button and view the description, but will not be able to make any changes to it.
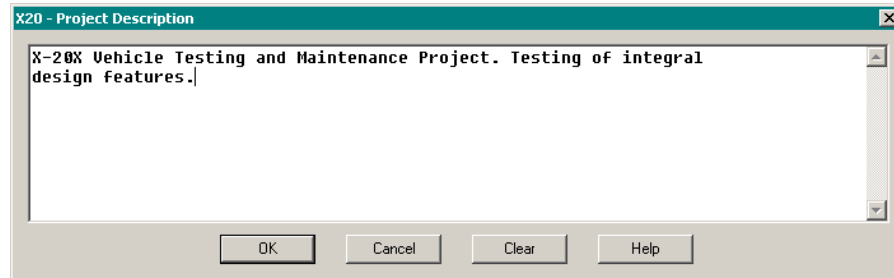
Figure B. *Project Description dialog.*

4. Enter the contract start and complete dates.

MPM accepts most date formats up to eight characters long, then converts them to the DD-MMM-YY format shown in Figure A.

5. Enter the path where the project files will be located, or select it by clicking on the button at the end of the Path field.

If you clicked on the button, MPM displays the Choose Directory dialog box shown in Figure C.
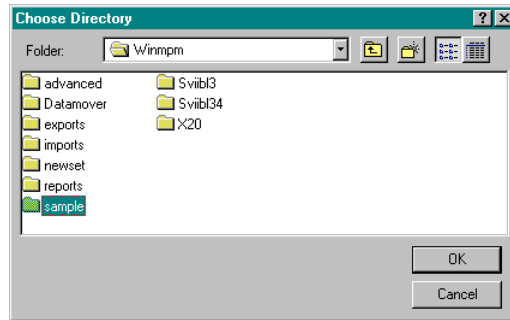
Figure C. *You can select a project path.*

6. Select the directory and choose **OK**.

7. After entering the path, select the Global ID you want assigned to the project.

For information on defining global IDs, see *Chapter 1: Creating and Maintaining Global Sets* in the *MPM Globals* manual.

8. Select the default resource tables to be used for each of the following:

- Baseline Rate Table
- ETC (Estimate to Complete) Rate Table
- Actuals Rate Table

For information on defining resource tables, see the *MPM Globals* manual.

9. Save the project information by doing one of the following:

- Click the Save button ![save] in the Toolbar.
- From the File menu, choose Save.
- Press Ctrl+S.

2.4 Creating a Project
2.4.2 Entering Pricing Options

MPM bases its baseline, ETC (estimate to complete), and actuals calculations on rate
tables defined in the Globals application. When you define a project, you designate which
rate tables to use for each calculation. In Figure A, all projects are using Baseline Rate
Table 1. For information on defining resource tables, see the *MPM Globals* manual.

Figure A. *Select the rate tables you want used for calculating baseline, ETC,
and actuals.*

You can also specify if the rate table selections and burden templates can be overridden
in the Baseline and ETC windows in the Integrated Planning application. The Baseline
fields in Integrated Planning are shown in Figure B.

Figure B. *The Override options control whether you can select different rate
tables and burden templates in the Integrated Planning window.*

Selecting Rate Tables

To select the rate tables:

    1. Open the Baseline Rate Table drop-down list box and select a rate table.

    2. Do the same for the ETC and Actuals rate tables.

Setting Rate Table Overrides

By default, the rate tables you select cannot be overridden in the Integrated Planning application. You should begin a project with the override options set to off (no checkmark). If a situation arises that requires you to override the rates, you can change the setting.

To change the setting, double-click in the Rate Table Override field. MPM places a check mark in the field indicating that the rate tables can be overriden.

Setting the Burden Template Override

When you define a resource in the Globals – Resources and Burdens application, you can assign the resource a burden template. When you add the resource to the WBS structure in a baseline estimate or ETC, you can assign a different burden template if the Burden Template Override field in the Project Maintenance window is checked.

To change the setting, double-click in the Rate Table Override field. MPM places a check mark in the field indicating that the rate tables can be overridden.

2.4 Creating a Project
2.4.3 Selecting the EQPM Calculation Method

The Calendar field lets you select how MPM will calculate equivalent person months. The options are Resource Work and EQPM Hours.
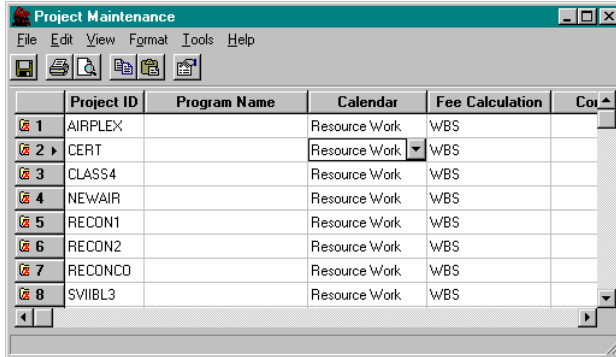
Figure A. *The Calendar field lets you select how MPM will calculate equivalent person months.*

Resource Work

If you select Resource Work, MPM calculates equivalent person months using the hours per day and days per week defined for each resource in the Resources and Burdens Global window shown in Figure B.
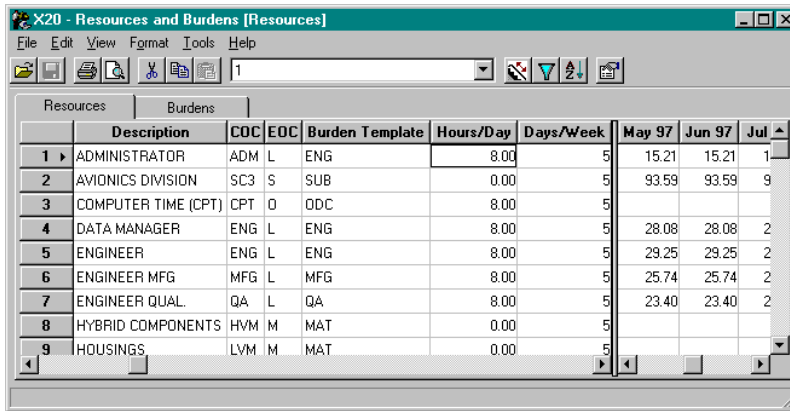
Figure B. *The Resource Work option uses the Hours/Day and Days/Week fields to calculate equivalent persons.*

EQPM Hours

If you select the EQPM Hours option, MPM calculates equivalent person months using the figures entered in the Equivalent Person Month Hours grid of the Calendar application shown in Figure C.
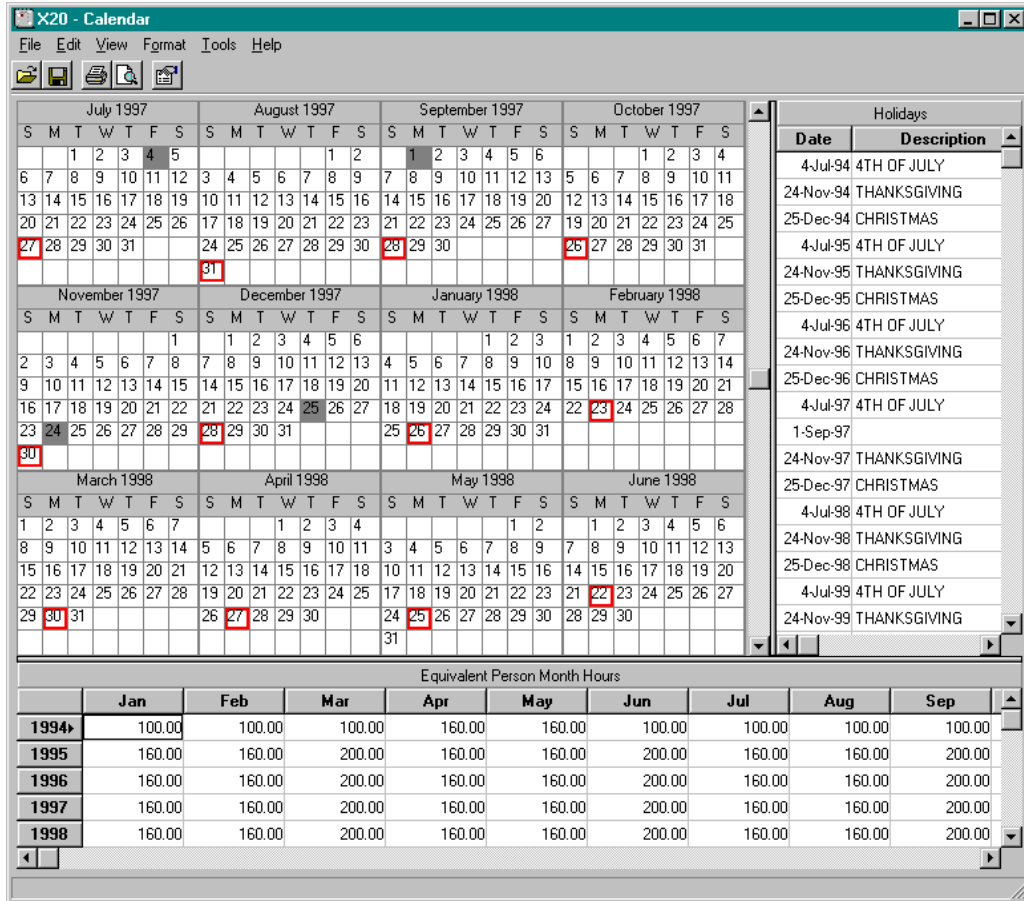
Figure C. *The EQPM Hours option uses the Equivalent Person Month Hours grid to calculate equivalent persons.*

2.4 Creating a Project
2.4.4 Selecting a Fee Calculation Method

The Fee Calculation field lets you select how MPM will calculate fees: by WBS or by Resource.
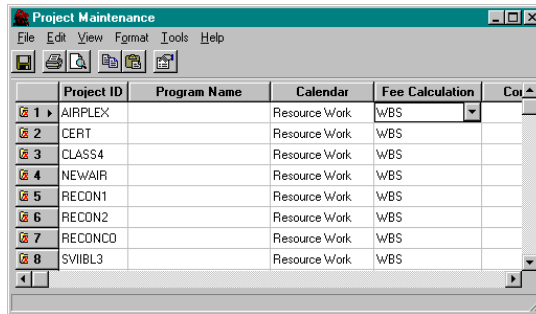
Figure A. *The Fee Calculation field lets you select how MPM will calculate fees.*

WBS Option

If you select the WBS option, MPM calculates fees for baseline estimates and ETC using the Fee % assigned to the WBS element in the Work Breakdown Structure window shown in Figure B. When fee is calculated by WBS:

- Fee is always calculated against total cost in Integrated Planning.

- Repricing actuals will not generate fee if the WBS option is selected; reprice calculates fee only if the Resource option for fee calculation is selected.

Figure B. *The WBS option uses the Fee % field to calculate fees.*

Resource Option

If you select the Resource option, MPM will calculate fees for baseline estimates and ETC using the burden template assigned to the resource in the Resources and Burdens application.

Figure C. The Resource option uses the burden template assigned to the resource to calculate fees.

2.4 Creating a Project
2.4.5 Entering Company and Manager Information

All company and manager information fields are optional. They do not impact any of the calculations performed by MPM. To enter information in any of these fields, select the field and type in the information. The fields are shown in Figure A.

Figure A. *The company and manager fields are optional.*

Company Name

You can enter up to 40 characters, including spaces.

By default, this field is hidden. To display the field, select Column Hide from the Format menu. MPM displays the Column Hide dialog box. To select the field, hold down the Ctrl key and click on the column name.

Program Manager

You can enter up to 20 characters, including spaces.

Program Manager Phone Number

You can enter up to 12 characters, including spaces.

By default, this field is hidden. To display the field, select Column Hide from the Format menu, hold down the Ctrl key, and click on the column name.

Proposal Manager

You can enter up to 20 characters, including spaces.

Proposal Manager Phone Number
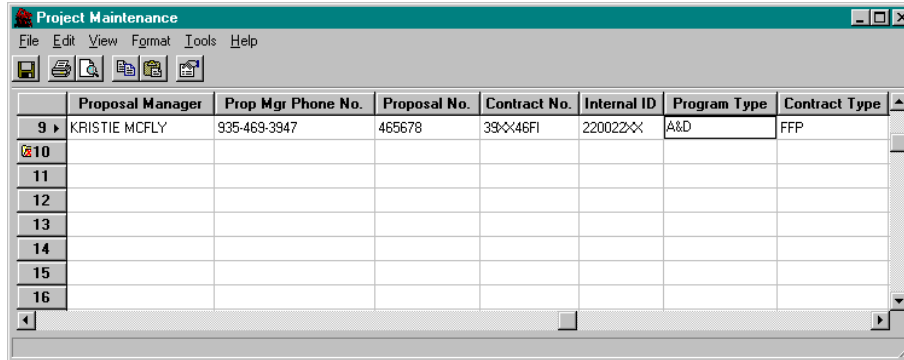
You can enter up to 12 characters, including spaces.

By default, this field is hidden. To display the field, select Column Hide from the Format menu. MPM displays the Column Hide dialog box. To select the field, hold down the Ctrl key and click on the column name.

2.4 Creating a Project
2.4.6 Entering Contract Information

All contract information fields are optional. They do not impact any of the calculations performed by MPM. The fields are shown in Figure A.

Figure A. *The contract information fields are optional.*

Proposal No.

Enter the customer's proposal identifier number if applicable. The number may be up to 20 characters.

If you enter a number, the number will be printed in the upper right corner of the header on all tabular Baseline reports.

Contract No.

Enter the customer's contract number if applicable. The number may be up to 20 characters.

If you enter a number, the number will be printed in the upper right corner of the header on all tabular Baseline reports.

Internal ID

Enter the number assigned to the project by your accounting department. The number may be up to 20 characters.

By default, this field is hidden. To display the field, select Column Hide from the Format menu. MPM displays the Column Hide dialog box. To select the field, hold down the Ctrl key and click on the column name.

Program Type

You can use the Program Type field to identify the different types of programs conducted by your company. You identify the programs by entering abbreviations that can be up to five characters.

Contract Type

You can use the Contract Type field to identify the different types of contracts used by your company. You identify the contracts by entering abbreviations that can be up to five characters long. For example, "PROD" could be used for Production.

2.4 Creating a Project
2.4.7 Entering Cross References

You can use the cross reference fields to enter information specific to your operation. There are 10 cross reference fields: Xref-1 through Xref-10. The values you enter for the Xref fields in the Project Maintenance window become column headings for fields in the WBS window, and can be used in reports.
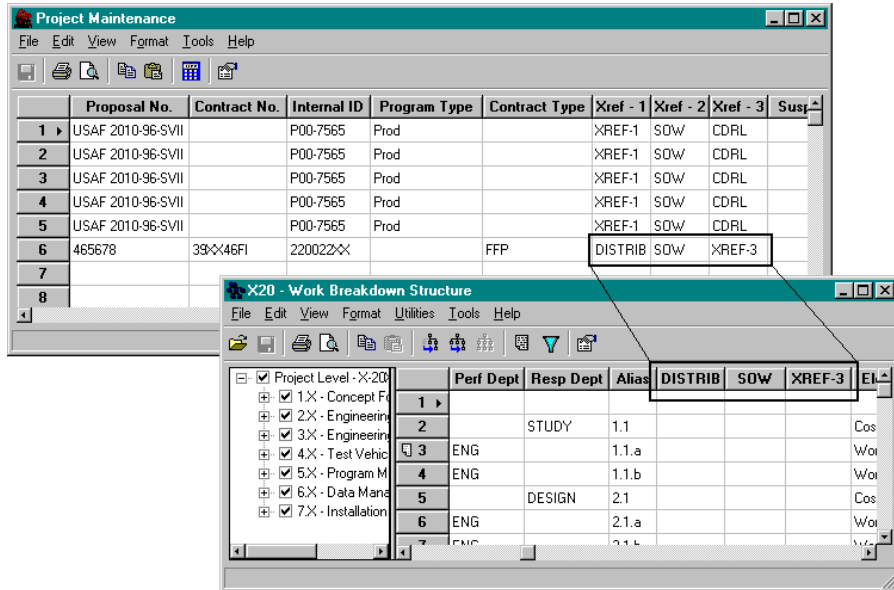
Figure A. *The values you enter in the Xref fields become column headings in the WBS window.*

SOW

If you want SOW data included on the CLIN/SOW/WBS Baseline Report, one of the Xref fields must be labeled "SOW."

Distributed Project Function

If you plan to use the Distributed Project function, you must change the Xref-1 field label to "DISTRIBUTED" in all upper case letters.

2.5 Copying and Pasting Project Information

If you have the appropriate access privileges to a project, you can copy and paste individual fields or all fields for a project.

You can copy individual fields for one or more projects at a time. Read-only fields and hidden columns included in a selection, although not visible, are copied along with the editable fields.

When you paste information, MPM checks the format of the data to ensure it conforms to the field requirements.

If you copy and paste a project, you must specify a new Project ID, and optionally change the path. You can copy only one project at a time.

Copying and Pasting Fields

To copy and paste one or more fields:

1. Select one or more adjacent fields.

    You cannot select fields that are not adjacent. However, by using the Column Hide feature, you can remove intervening fields.

2. Place the contents of the fields onto the clipboard by doing one of the following:

    ■ Click the Copy button ![copy icon] in the Toolbar.

    ■ From the Edit menu, choose Copy Cell(s).

3. Place the cursor at the location where you want to insert the information and do one of the following:

    ■ Click the Paste button ![paste icon] in the Toolbar.

    ■ From the Edit menu, choose Paste Cell(s).

    MPM pastes the information into the cells. If the information is not valid for a field, MPM displays an appropriate message.

Copying and Pasting Projects

To copy and paste projects:

1. Select a project.

    You can only select one project at a time.

2. Place the contents of the project onto the clipboard by doing one of the following:

- ■ Click the Copy button in the Toolbar.
- ■ From the Edit menu, choose Copy Project.

3. Select the empty row where you want to paste the project information.

4. From the Edit menu, choose Paste Project.

MPM displays the Copy Project dialog box shown in Figure A.
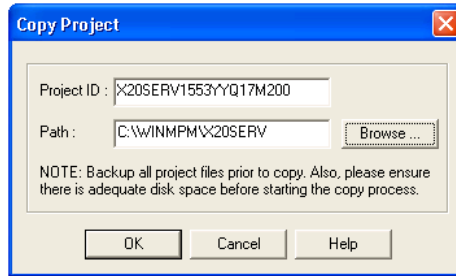
Figure A. *Specify a project ID and path.*

5. Enter a unique Project ID. The Project ID can be up to 20 characters long. You can use letters and numbers, as well as the other standard characters.

6. Enter a path for the project, or select a path by clicking the Browse button.

7. To accept the settings, click OK.

MPM inserts a new project row and fills in the project data.

2.6 Changing the Path for a Project

You can move the files for a project to a new directory by entering a new path in the Path field. When you enter a new path, MPM runs a number of checks to make sure the move can be executed. The checks performed are summarized below.

If:	Then MPM displays the following message:
Path has been changed on an existing project	Move project files from xxx to yyy?
All project files are not available for moving	The operation cannot be performed because there are users currently accessing Project xyz.
Path does not exist	The specified directory path x:\yyyy\zzz does not exist. Do you wish to create it?
Adequate disk space does not exist	Insufficient disk space at x:\yyyy\zzz. Space required: NN,NNN Space Available: N,NNN
Only a drive letter is entered for the path	Root directory files are not supported
Drive specified is not available or invalid	Invalid disk drive
Directory	Invalid directory name
Users are accessing the project	The operation cannot be performed because there are users currently accessing Project XYZ

To move project files, you must have the appropriate rights.

Procedure

To move the files for a project to a new directory:

1. Enter the directory name in the Path field.

2. Save the change.

   If MPM successfully completes all the checks, it performs the move.

2.7 Deleting Project Data

You can delete data in cells on the Project Maintenance grid, delete all project data or delete selected categories of data using the Delete Project Data command under the Edit menu. To delete project data, you must have the appropriate access privileges. If someone is currently working with a project, you cannot delete the project data.

Deleting data from cells and deleting all project data are described in this topic. Deleting selected categories of data is described in the next topic.

> **Warning!** Deletion of project data is final. Exercise extreme caution when deleting project data. Always back up your project data before deleting the data. Always delete project files through MPM, never through any file management tool. Project files contain pointers. If you delete them through a file management tool, you will corrupt the database.

Deleting Data in Cells

To delete project data in one or more cells:

1. Select one or more cells in one or several projects.

   The cells must be adjacent to one another.

2. Initiate the delete by doing one of the following:

   - Open the Edit menu and select Delete Cell(s).
   - Press the Delete key.

MPM deletes the selected data from the cells and takes one of several actions based on the data you deleted.

If you deleted one of these fields:	Then MPM:
Project ID Path	Fills the field with <Required>.
Global ID Baseline Rate Table ETC Rate Table Actuals Rate Table Calendar Fee Calculation	Fills the field with the default value.

Deleting Projects

You can delete the data for an entire project. You can delete only one project at a time.

Warning! Once you delete a project, you cannot restore it from MPM.

To delete a project:

1. Select a project.

2. Initiate the delete by doing one of the following:

   - Open the Edit menu and select Delete Cell(s).
   - Press the Delete key.

   MPM asks you to confirm the delete.

3. To confirm the delete, click Yes.

   If MPM cannot find the files, it will still delete the project data from the grid.

   If the project is locked, you will not be able to delete the project.

2.8 Deleting Selected Categories of Project Data

If you want to delete selected categories of project data, you use the Delete Project Data command under the Edit menu.
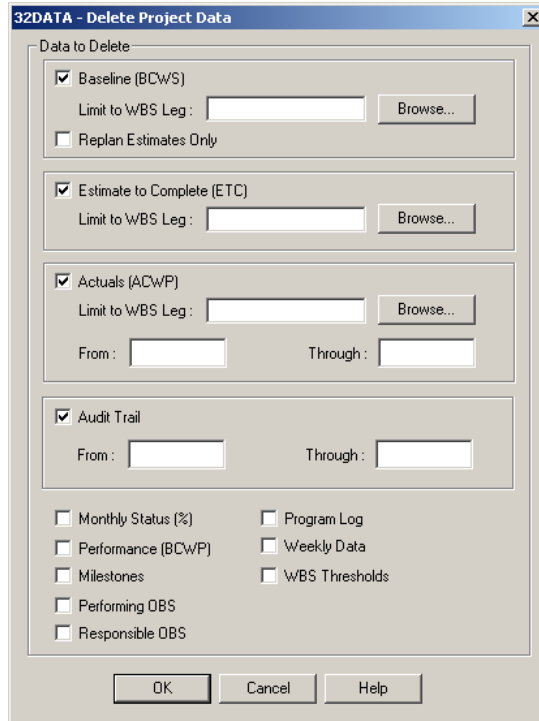
Figure A. *Select the types of data you want to delete.*

Warning! Deletion of project data is final. Exercise extreme caution when deleting project data. Always back up your project data before deleting the data. Always delete project files through MPM, never through any file management tool. Project files contain pointers. If you delete them through a file management tool, you will corrupt the database.

Procedure

To delete selected categories of project data:

1. From the Edit menu, choose Delete Project Data.

MPM displays the Delete Project Data dialog box shown in Figure A.

2. Select the data you want to delete.

3. To accept the categories and execute the delete, click OK.

Limiting Deleted Data

You can specify limits for deleting BCWS, ETC, and ACWP data. The limits are described below.

Data	Limits
BCWS	You can select a specific WBS leg. If you do not select a leg, BCWS will be deleted for the entire project. You also can limit the delete to replan estimates only.
ETC	You can select a specific WBS leg. If you do not select a leg, ETC will be deleted for the entire project.
ACWP	If selected, both actuals by resource and actuals by element of cost will be deleted. You can select a specific WBS leg. If you do not select a leg, ACWP will be deleted for the entire project. You can limit the delete using the From and Through months. The dates entered must fall within the projects' fiscal calendar. If you do not enter months, ACWP will be deleted for the entire duration of the project.
Monthly Status %	If selected, this option deletes both BCWP Monthly Status records and BCWP from rollup file. When Monthly Status (%) is selected, the Performance (BCWP) option is automatically included and the check box is dimmed.
Performance (BCWP)	If selected, BCWP only is deleted from the rollup file.

2.9 Setting Rollup Processing

If you are working on large projects, the time it takes MPM to calculate rollup values can slow down data entry. MPM gives you the option of turning off rollup processing. After you have entered the data, you can turn rollup processing back on and MPM will calculate and update all rollup figures.
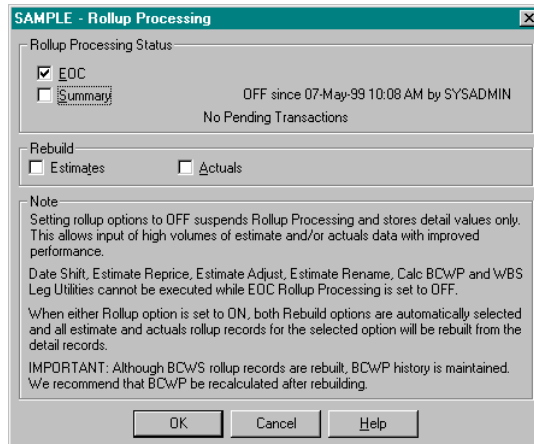
Figure A. *Rollup Processing dialog box*

EOC and Summary Options

There are two types of rollup processing: EOC and Summary. The EOC rollup controls all onscreen summaries. The Summary option controls summaries for Proposal Summary Reports only.

If you turn the EOC rollup option off, it has the following effects:

- The WBS element summaries and WBS column totals will not be updated.
- The following utilities will be unavailable: Date Shift, Estimate Reprice, Estimate Adjust, Estimate Rename, Calculate BCWP, and WBS Leg Utilites.
- The Summary option is disabled.
- The Rollup Processing dialog box shown in Figure A displays a message next to the option indicating when it was set to off.

If you turn the Summary option off, it has the following effects:

- Summary records are not available in the following reports: Proposal Summary Report by WBS, Proposal Summary Report by CLIN, Labor/Price Summary by WBS, Labor/Price Summary by CLIN, and Resource Department Summary.
- The Rollup Processing dialog box shown in Figure A displays a message next to the option indicating when it was set to off.

Rebuild Options

You can choose to rebuild estimates, actuals, or both. If you turn on the EOC or Summary option after they have been off, MPM automatically calculates and rebuilds the values for these options when you choose OK.

Procedure
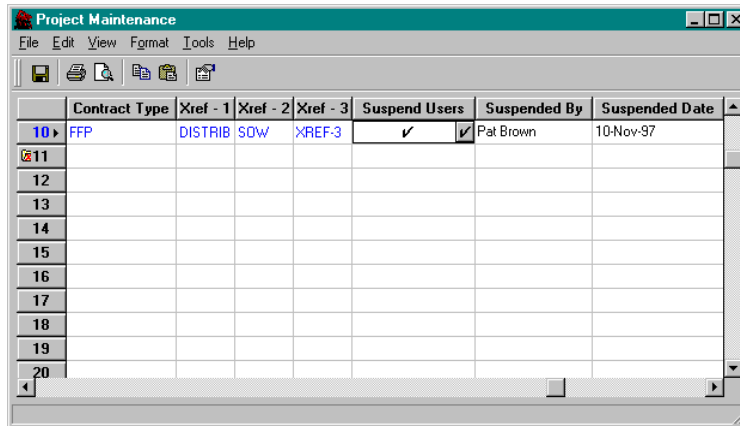
To set the Rollup Processing options:

1. Select a project.

2. From the Tools menu, choose Rollup Processing.

   MPM displays the Rollup Processing dialog box shown in Figure A.

3. Select the appropriate options and click OK.

2.10 Suspending Access to a Project

If you are going to use one of the utilities, or perform other maintenance on a project, it is best to prevent users from working with the project by using the Suspend function. The Suspend function prevents users from accessing a project. If a user is currently editing a project when you initiate the Suspend, they will be able to continue working until they close the project.

You control the Suspend function using the Suspend Users field in the Project Maintenance grid.

Figure A. *You can suspend access to a project.*

Procedure

To suspend access to a project:

1. Double-click the Suspend Users field.

MPM places a check mark in the field, enters your user ID in the Suspended By field, and enters the current system date in the Suspended Date field.

2. To clear the suspend, double-click the Suspend Users field.

MPM removes the check mark from the field, clears your user ID from the Suspended By field, and clears the date from the Suspended Date field.

2.11 Recovering Project Data

It is possible for one or more of the data files that make up a project to become corrupted. When this happens, you need to run the recover utility. The recover utility attempts to reset the database indexes and correct any internal file errors.
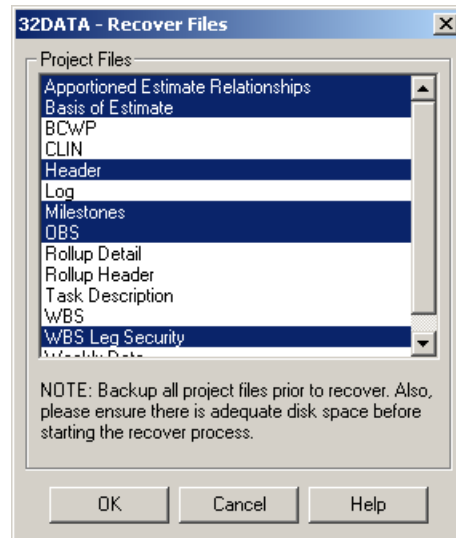
Figure A. *You can recover project files that have been corrupted.*

The files that can be recovered are shown in Figure A

Before You Begin

Before you begin the recovery process, be sure all users are logged out of MPM. This will prevent a user from accessing the files while you are running the recovery.

Procedure

To recover project files:

1. Select the project that has the corrupted files.

2. From the Tools menu, select Recover Files.

   MPM displays the Recover Files dialog box shown in Figure A.

3. Select the files you want to recover.

   You can use the Shift+Click and Ctrl+Click combinations to select two or more files.

4. To start the recovery process, click OK.

   MPM asks you to confirm the recovery operation.

5. To continue with the recovery, click Yes.

MPM executes the recovery, displaying an hour glass during the process.

If there are files that could not be recovered, MPM displays the following message:

> *Data records from the following files cannot be recovered: 'xxxx', 'yyyyy'. Files may have to be recovered from backup.*

If any project files are unrecoverable, then the entire project must be restored from a full backup.

3
Creating the Organizational Breakdown Structure (OBS)

3.1 Introduction to OBS

An Organizational Breakdown Structure, or OBS, is a pyramid- or tree-like structure which describes the relationships and work responsibilities of the people in your organization. The highest level of the OBS is the top level of management. The organizational structure is progressively detailed downward to the lowest level.

Types of OBS Trees

Within the OBS, two separate organizational hierarchies (or trees) are available to provide detail and summary project data through the company organizational structure:

- A Performing Organization tree reflects the hierarchy of reporting within a company or "line" organization.
- A Responsible Organization tree is for projects that employ some degree of matrix management. The Responsible OBS can be a functional category such as engineering, production, management, or manufacturing.

Some projects use both trees while others use neither, managing the project within the WBS framework only. You may create one or both types of OBS tree for each project.

If you are using both performing and responsible OBS trees, MPM treats them as separate organizational structures.

How the OBS Works

When you create an OBS element, you specify a parent department ID. Child departments become parent departments and their parents become grandparents when you assign them subordinate departments. In Figure A below, Engineering is a parent of Department 600 and a grandparent of Departments 601 and 602.
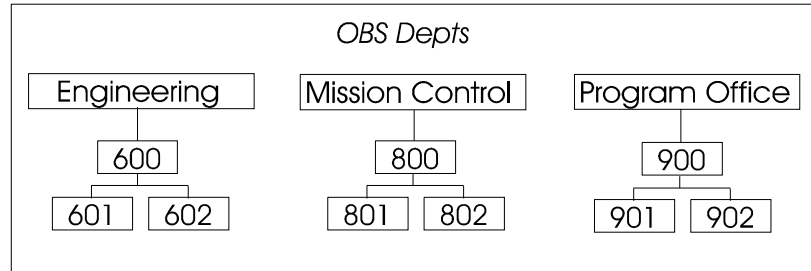
Figure A. A Sample OBS

When creating the WBS, you assign the WBS tasks to the OBS departments to create the Responsibility Assignment Matrix (RAM), typically matching work package WBS tasks with the Performing OBS departments, and control account WBS tasks with the Responsible OBS departments. See *Chapter 5: Creating the WBS* for details.

The Role of Burden Templates

Burden Templates are used when estimating to add indirect costs. You can assign a Burden Template to a Department in the OBS, which is then used in Integrated Planning when creating the Baseline and ETC estimates.

If you assign the Burden Template to the resource (in the Resources and Burdens window under the Globals tab), that Burden Template is used during Integrated Planning. However, if you don't assign the Burden Template to the resource directly, the Burden Template assigned to the Resource Department in the OBS is used.

See *MPM Globals* for more information about entering burden templates and resources. See Chapters 6, 7, 8 and 9 of this manual for details about creating, revising and tracking the project estimates.

3.2 Accessing the OBS Window

You open the OBS window from the MPM Menu Manager. When you open the OBS window, you select the project you want to view and the starting view: performing or responsible.

Procedure

To open the OBS window:

1. From the Menu Manager window shown in Figure A, do one of the following:

   - Select the Projects tab and choose Organizational Breakdown Structure
   - Choose Projects|Organizational Breakdown Structure from the File menu
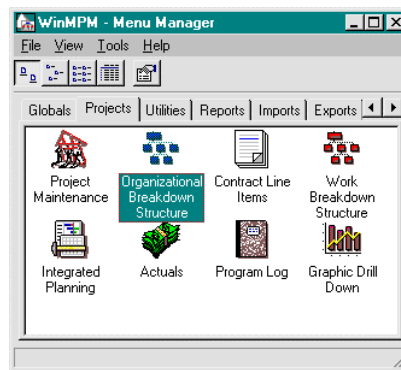
Figure A. *Select the OBS icon.*

   MPM displays the Organizational Breakdown Structure Open dialog box shown in Figure B.
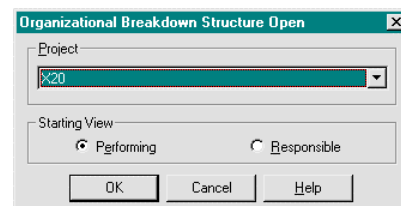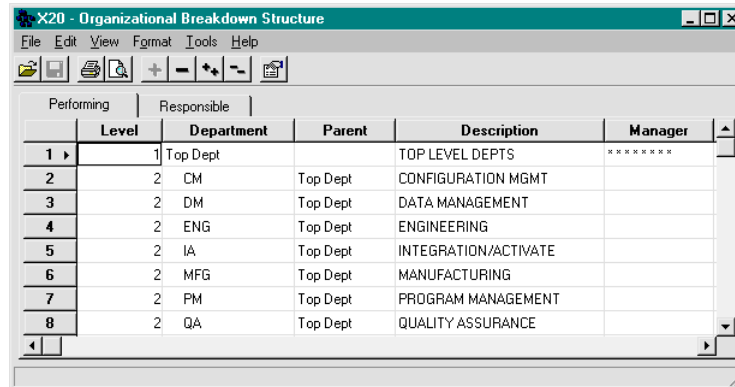
Figure B. *Select a project and a starting view.*

2. Choose a project from the Project list box.

3. Select the starting view: Performing or Responsible.

Note that you can switch between the two views at any time.

4. To accept the selections and display the OBS window, click OK.

Figure C. *The Organizational Breakdown Structure window*

3.3 Orientation to the OBS Window

You use the OBS Window to enter, edit, and view the OBS elements. A toolbar gives you quick access to common tasks, and two tabs (Performing and Responsible) allow you to switch between Performing and Responsible OBS Tree views. The OBS Grid displays the information about each OBS element. Each element is represented by a single row.
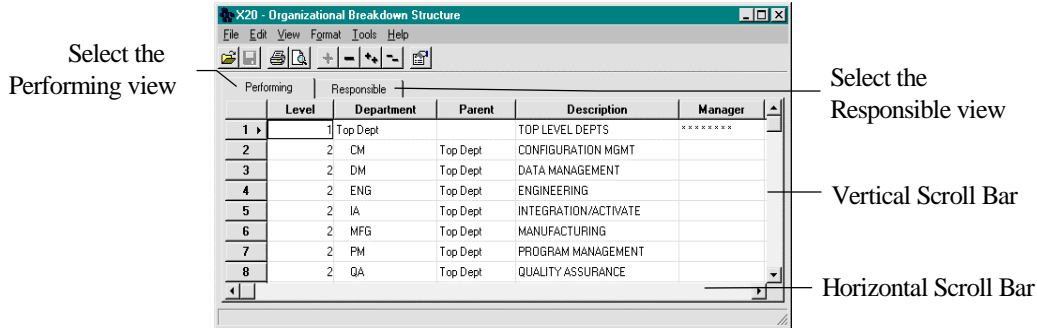
Figure A. *The Organizational Breakdown Structure window*

Hierarchical/Alphabetical Listing

MPM automatically sorts the departments first by level and then alphabetically by Department ID each time you open the OBS window. In Figure B below, notice that the Level 2 departments CM, DM, and ENG are sorted alphabetically, and DM's Level 3 children AC and IS are inserted under their parents alphabetically.
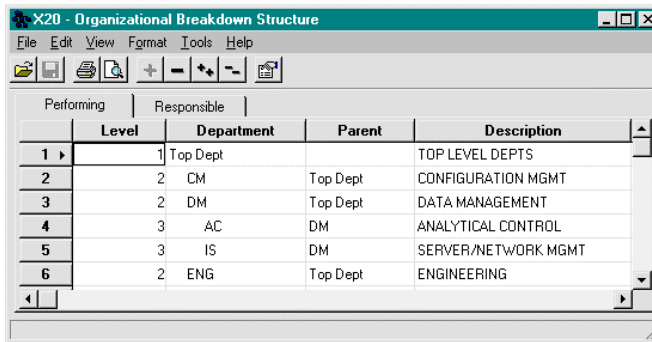
Figure B. *Departments are sorted by parent and then alphabetically.*

Departments are indented to depict their levels. In Figure B, the Level 2 Departments are indented one tab. Level 3 Departments are indented two tabs, and so on.

You cannot have one description for a department in the Performing Tree and a different description for that same department in the Responsible Tree. They must be the same.

Navigating the Grid

- To advance to the next or previous field, press the Tab and Shift+Tab or the left- and right-arrow keys. To move between rows, use the Up and Down-arrow keys.

- Use the horizontal and vertical scroll bars to bring additional columns and rows into view. When clicking and dragging the vertical scroll bar, a pop-up label displays the current OBS department and row number.

  ```
  Row: 8
  Department: QA
  ```

  When clicking and dragging the horizontal scroll bar, a pop-up label displays the current OBS field (column).

  ```
  Burden Template
  ```

Expanding and Collapsing the OBS Levels

Initially, all OBS levels are shown. To see the children of a collapsed level, click the parent, and then click the ➕ button or choose Show Children on the Tools menu. To collapse the children of a parent level, click the parent, and then click the ➖ button or choose Hide Children on the Tools menu. To see only Level 1 (Top Dept), click the ➖ button, or choose Hide All Departments on the Tools menu. To expand all collapsed levels, click the ➕ button or choose Show All Departments on the Tools menu.

Displaying and Hiding OBS Fields

MPM displays the OBS fields as columns in the OBS Grid. You can display or hide any or all of the columns, using Column Hide on the Format menu. To select a column, click in the column's heading. To select or deselect multiple columns, use the SHIFT and Ctrl while clicking the mouse.

Previewing and Printing OBS Elements

You can preview and print the OBS data using the options on the File menu. For complete details on using these options, see *Using MPM* of the *Getting Started* manual. Note that Print and Preview only show the columns and OBS elements which you have displayed on the OBS Grid; either Performing or Responsible departments (whichever tab you had selected), the columns displayed, and the OBS legs as you have expanded or collapsed them.

3.4 Creating the OBS

You use the OBS Grid to create and edit the OBS elements. Each parent can have up to 200 children. MPM supplies powerful spreadsheet-like controls to make it easy. Most operations can be performed in several different ways, using either the keyboard, the mouse, or both.

MPM treats the performing and responsible OBS trees as two separate organizational structures. If you want to include a department in both the OBS trees, you must enter the department in both trees. However, once you enter a Department in one OBS Tree (Performing or Responsible), you need only enter the Department name in the other Tree and MPM will automatically fill in the Description, Manager, and Burden Template fields you had previously entered.

Figure A. *To create a new department, select a parent department and press the Insert key.*

Procedure

To add a new OBS element:

1. Select the parent element. In Figure A, the QA department is selected.

2. Press the Insert key or choose Insert Department from the Edit menu.

   MPM inserts a new row after the other children associated with the parent, and auto-fills the name of the parent in the Parent field. In Figure A, the new line has been added after QA. The <Required> Department field awaits entry.

   Note: For information on importing OBS data from outside of MPM, see *Chapter 16: Importing Data* in the Projects manual.

If the Department you enter already exists in the other OBS Tree (Performing or Responsible), MPM automatically displays the other fields entered in the other OBS Tree. The OBS fields may be changed in either Tree of the OBS Grid, and the changes can be seen immediately in the other Tree. For example, if you entered the QA Department under the Performing tab, and then created a new QA Department under the Responsible tab, everything you entered under the Performing tab is displayed under the Responsible tab, and all edits made under the Responsible tab can be seen immediately under the Performing tab.

Required Entries

You must fill in the following fields when creating new OBS elements: Department and Parent. See topic *3.5 OBS Field Descriptions* for detailed information.

Saving OBS Information

To save the OBS data, do one of the following:

- Click the Save button ![save icon].
- Choose Save from the File menu or press Ctrl+S.
- Close the OBS window, by clicking the Close box ![close icon] or choosing Close from the File menu.

3.5 OBS Field Descriptions

These are the fields on the OBS Grid. Several fields are required entries, and display <Required> in the cell until you fill them. You can change the columns that are displayed using Column Hide on the Tools menu.

Level

This read-only field shows the hierarchical level of the OBS element and the relationship of the element to its parent. MPM automatically creates the top level of the OBS tree (just as it does in the WBS Tree). The top level, or Top Department, is Level 1, and <u>always</u> includes the total organization. Every new OBS element is created as a child of the Top Department or as a child of another department.

Department

This required field contains a Department identifier (ID) of up to 10 characters. MPM supports a maximum of 200 children for each parent department. The department name for new OBS elements must be unique within the project. The names are case sensitive, so MPM would recognize Design and DESIGN as different departments.

If you enter a new department with a name that already exists, MPM displays an error message, and will not allow you to leave the Department field until you have entered a unique name. Spaces and other special characters are not allowed.

If you enter an existing top level department name, MPM displays an error message. If a department that has children is modified, the parent fields of the children are automatically changed to reflect the new department. If the department exists in both trees, it is changed in both trees, and the Parent cells of the children in both trees are also changed.

Parent Dept

This required field identifies the Parent Department to this Department. All Departments in the project are shown on the drop-down list box. This field is auto-filled with the Department ID which was selected when you added the new OBS element, but you can override the default and choose another in the list. If a burden template has been assigned to the Parent Department, it is automatically displayed here in the child. You cannot identify a department as a child department in the Performing OBS and then enter that department in the Parent Department while working in the Responsible OBS (or vice versa) unless you have already also added the department to the Responsible OBS. Also, you cannot assign a Parent Department to one of its children or itself.

Description

This optional field provides a 20-character description of the Department. The Top Department description is automatically filled as "Top Dept" but may be edited.

Manager

This optional field identifies the Manager of this Department. All WBS and OBS managers in the project are shown on the drop-down list box. You can select a manager's name from the list, enter a new manager, or leave the manager field blank.

Burden Template

This optional field assigns a Burden Template to this Department. All Burden Templates in the global set assigned to the project are shown on the drop-down list box. When a burden template is assigned at the parent level, the burden template of the parent is initially assigned to the children, but may be changed in the child department.

When you change an existing Burden Template for a parent department that is using the same template for any or all of its children, MPM prompts you to assign the same template to the children.

Burden Templates may be specified for a department in the OBS Tree and/or for an individual resource on the Resources and Burdens window on the Globals tab. The Burden Template designated at the resource level always takes precedence for estimating purposes. Therefore, in carrying out the estimating process, the Burden Template identified at the OBS level is used only if the resource code to be estimated has no Burden Template assigned.

3.6 Maintaining the OBS

Editing OBS Departments

Perform the following steps to change information for an existing OBS department:

1. Click on the department in the OBS Grid.

2. If necessary, use the Horizontal Scroll Bar to show the desired field to be changed. If a field you need is not displayed, use Column Hide on the Format menu to change the displayed fields.

3. Change the data in one or more editable fields in the current row. Press the Tab or arrow keys to continue editing other fields or rows.

4. If attempting to edit a required field (Department or Parent Department fields), you must first put the cell into Edit Mode by double-clicking the cell box.

Deleting OBS Data

To delete the data in an OBS cell:

1. To select the data to be deleted, click in the cell(s).

2. Press the Delete key or choose Delete from the Edit menu.

MPM erases the data in the selected cell(s). Note: you cannot delete the data from the Department or Parent Department fields since these are required fields.

Deleting OBS Departments

To delete an entire OBS Department:

1. Highlight the entire department row by clicking the row number.

2. Press the Delete key or choose Delete from the Edit menu.

MPM prompts for confirmation.
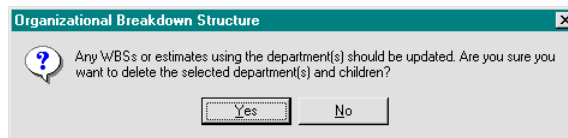
Figure A. OBS Deletion Confirmation.

To delete more than one OBS department at one time:

1. Highlight the desired departments using the Shift or Ctrl keys when clicking the row number, or by clicking the mouse button and dragging it downward.
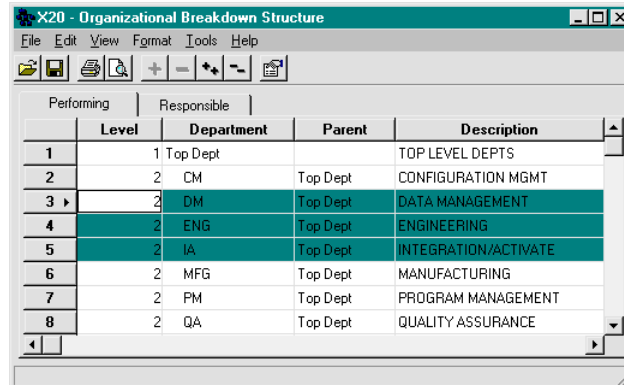
Figure B. *Selecting three rows for deletion.*

2. Press the Delete key or choose Delete from the Edit menu.

3. MPM prompts for confirmation.
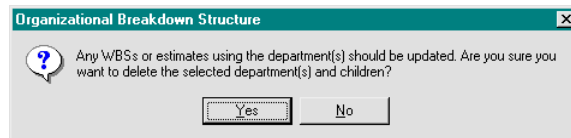
Figure C. *You must confirm the delete.*

If the project data includes estimates that were assigned to the deleted OBS, you must edit those estimates in Integrated Planning and select another OBS department.

3.7 Recommended Reports

Use these standard MPM reports to check your OBS structure and see its current status with other data.

- **OBS Indented Report** — Shows the OBS Performing/Responsible department data in outline (indented) format. Use conditioning to show particular department(s).

- **Responsibility Assignment Matrix Report** — Shows WBS data cross-referenced with OBS Performing/Responsible department data in a tabular format. Use conditioning to restrict WBS legs, elements or levels.

- **OBS Burden Template Report** — Shows the Burden Templates assigned to the OBS in tabular format. Use conditioning to show particular department(s).

- **Resource Detail - Baseline Report** — Shows the lowest level of time-phased budget detail and constitutes the project baseline at the resource level, with subtotals for each resource and WBS. Use conditioning to restrict data by OBS department or resource.

- **Resource Summary - Baseline Report** — Shows time-phased budget summary and constitutes the project baseline at the resource level, sorted by resource. Use conditioning to restrict data by OBS department or resource.

- **Manpower Detail Report** — Shows manpower loading sorted by labor categories, with subtotals for each labor categories. Use conditioning to select Performing or Responsible OBS.

- **Manpower Summary Report** — Shows manpower loading sorted by labor categories, with subtotals for each labor categories. Use conditioning to select Performing or Responsible OBS.

- **Element of Cost EOC/Class - Baseline Report** — Shows baseline data sorted by EOC/COC. Use conditioning to select Performing or Responsible OBS.

4
Creating the CLIN Table

4.1 Introduction to CLIN Table

The Contract Line Item Number (CLIN) table contains a list of all the Contract Line Items in the project's contract. CLINs summarize WBS tasks. The CLIN table also contains descriptions, quantity, and reference codes for each CLIN to be reported.

The Role of CLINs in Government Reporting

The CLIN table is used for providing data needed in government reports, much like headers (see *Chapter 15: Reports* for details).

The SF1411 (Contract Pricing Proposal Cover Sheet) report is used by DoD contractors for providing all required information for your proposal, sorted by CLIN (Contract Line Item).

The DD1921 (Cost Data Summary) report is used by DoD contractors for reporting cost data summaries for providing all required information for your proposal, sorted by CLIN (Contract Line Item) in OMB format.

To include the CLIN table in either or both of these reports, see topic *4.5 CLIN Table Field Descriptions*.

Reports Summarizing CLINs

The MPM government reports which utilize the CLIN table are:

- SF 1411 Report (includes quantity and reference codes)
- DD 1921 Report (includes element codes as defined in RFPs)
- CLIN/SOW/WBS Report (must be linked to the WBS)
- CLIN Table Report

Linking the WBS to the CLIN

To link a CLIN element with a WBS element, access the WBS window and enter the CLIN code on the applicable WBS element. The WBS element must contain a CLIN element or it will not be included in the CLIN/SOW/WBS Report. See the table below.

Contract Line Item	WBS ID	Description
0050 - PROPULSION	11-200 11-210 11-211 11-212	Research Software & Communications Systems Engineering Development T&E
0055 - EQUIPMENT	20-300 20-310	Equipment Spare Parts

4.2 Accessing the Contract Line Items window

You open the Contract Line Items window from the MPM Menu Manager in the Projects tab. When you open the Contract Line Items window, you select the project to view.

Procedure

To open the Contract Line Items window:

1. From the Menu Manager window shown in Figure A, do one of the following:

    ■ Select the Projects tab and choose the Contract Line Items icon

    ■ Choose Projects|Contract Line Items from the File menu.

    MPM displays the CLIN Table Open dialog box shown in Figure A.
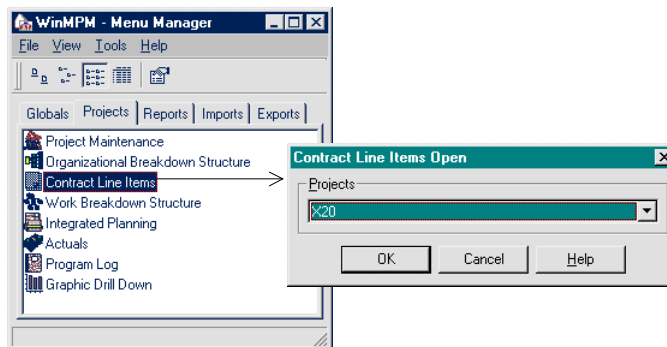
Figure A. *Select the Contract Line Items icon.*

2. Choose a project from the Project list box.

3. To accept the selections and display the Contract Line Items window shown in Figure B, click OK.
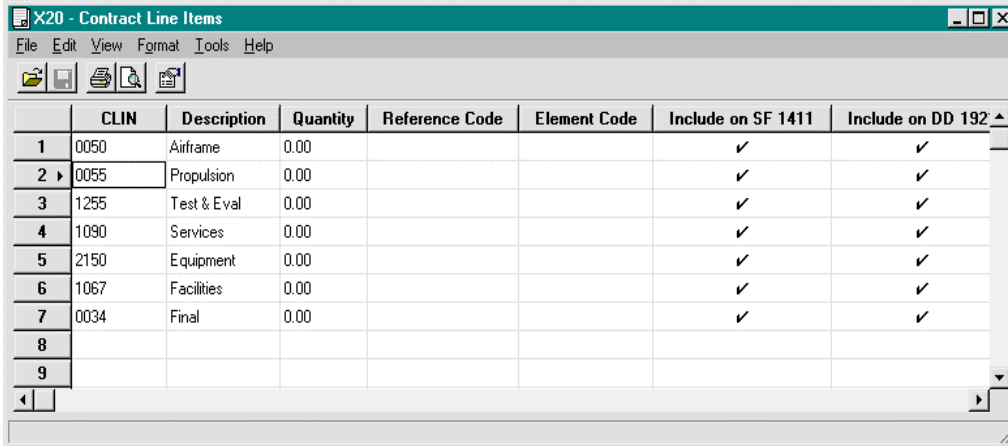
    MPM displays the Contract Line Items window.

Figure B. *The Contract Line Items window*

4.3 Orientation to the Contract Line Items Window

You use the Contract Line Items window to edit and view the CLIN elements. A toolbar gives you quick access to common tasks. The CLIN table grid displays the information about each CLIN table element. Each element is represented by a single row.

Figure A. *The Contract Line Items window*

CLIN Element Listing

MPM automatically sorts all CLIN table elements by CLIN number each time you open the Contract Line Items window.

Navigating the CLIN Table Grid

To navigate through the fields in the CLIN table grid:

- To advance to the next or previous field, press the Tab and Shift+Tab or the Left and Right arrow keys.
- To move between rows, use the Up and Down arrow keys.
- Use the horizontal and vertical scroll bars to bring additional columns and rows into view. When clicking and dragging the vertical scroll bar, a pop-up label displays the current CLIN table department and row number.
- To move to any cell, click in the cell with the mouse.

Displaying and Hiding CLIN Table Fields
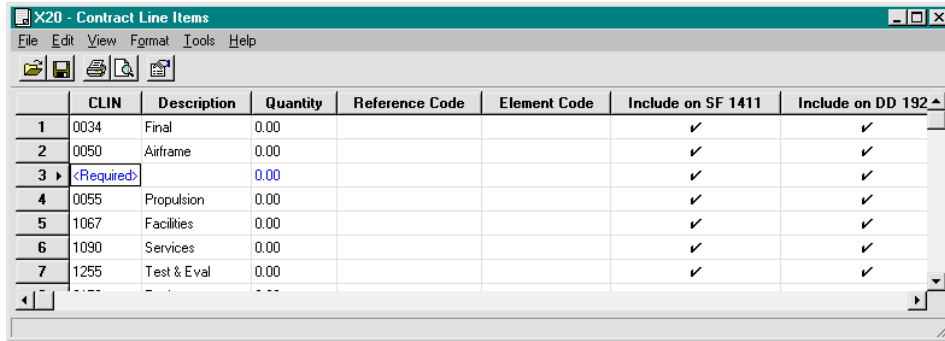
MPM displays the CLIN table fields as columns in the CLIN table grid. You can display or hide any or all of the columns, using Column Hide on the Format menu. To select a column, click in the column's heading. To select or deselect multiple columns, use the Shift and Ctrl keys while clicking the mouse button as you normally would within Windows.
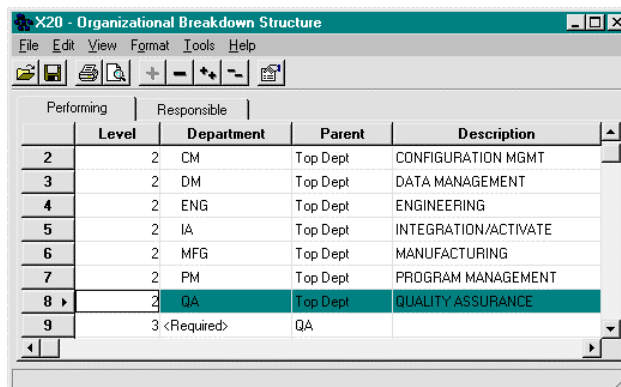
Previewing and Printing CLIN Table Elements

You can preview and print the CLIN table data using the options on the File menu. For complete details on using these options, see *Using MPM* in the *Getting Started* manual. Note that Print and Preview only show the columns and CLIN table elements which you have displayed on the CLIN table grid.

4.4 Creating the CLIN Table

You use the CLIN table grid to create and edit the CLIN table elements. MPM supplies powerful spreadsheet-like controls to make it easy. Most operations can be performed in several different ways, using the keyboard, the mouse, or both.

Figure A. *To create a new CLIN, press the Insert key.*

Adding CLIN Elements

To add a new CLIN table element, press the Insert key or choose Insert CLIN from the Edit menu.

MPM inserts a new row just before the current row. In Figure A, the new line has been added before CLIN 0055. The <Required> CLIN table field awaits entry.

Note spaces are not allowed in the CLIN column entries.

Required Entries

You must fill in the CLIN field when creating new CLIN table elements. See *topic 4.5 CLIN Table Field Descriptions* for detailed information.

Saving CLIN Table Information

To save the CLIN table data, do one of the following:

- Click the Save button ![save icon].
- Choose Save from the File menu or press Ctrl+S.

If the Prompt for Save option has been set, MPM prompts for verification.

4.5 CLIN Table Field Descriptions

These are the fields on the CLIN table grid. The CLIN field is a required entry, and is displayed with <Required> in the cell until you fill it. You can change the columns that are displayed using Column Hide on the Tools menu. See the *Getting Started* manual for details.

CLIN

This required field contains the CLIN table identifier (ID) of up to eight characters which must be unique and cannot contain spaces.

Description

This optional field provides a 40-character description of the CLIN element.

Quantity

This optional field identifies the quantity of this CLIN element to be contracted. Valid values are -9999.99 to 99999.99. Values are rounded to two decimal places. This value is displayed on the SF 1411 Proposal report.

Reference Code

This optional field is displayed on the SF 1411 proposal report if you have additional information about the Contract Line Item that you would like to reference elsewhere.

Element Code

This optional field is displayed on the DD 1921 proposal report to identify the type of cost data incurred for the Contract Line Item.

Include on SF 1411

If you want to display this CLIN element on the SF 1411 proposal report, click this box or press the spacebar so that a check mark appears. If this box is left blank, this CLIN element will not be included in the SF 1411 report.

Include on DD 1921

If you want to display this CLIN element on the DD 1921 proposal report, click this box or press the spacebar so that a check mark appears. If this box is left blank, this CLIN element will not be included in the DD 1921 report.

4.6 Maintaining the CLIN Table

Editing CLIN Elements

To change information for an existing CLIN element, perform the following steps:

1. Click on the department in the CLIN table grid.

2. If necessary, use the horizontal scroll bar to show the desired field to be changed.

If a field you need is not displayed, use Column Hide on the Format menu to change the displayed fields.
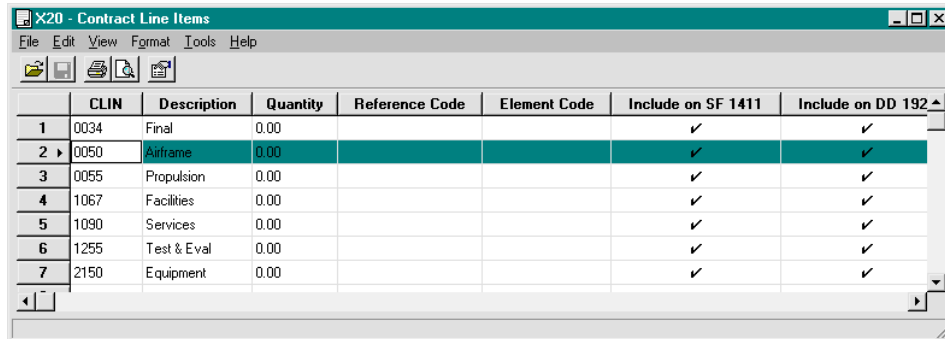
3. Change the data in one or more editable fields in the current row.

Press the Tab or arrow keys to continue editing other fields or rows.

4. To save your changes, click the Save button 🖫 or press Ctrl+S.

Deleting One CLIN Element

To delete one CLIN element:

1. Highlight the entire CLIN Table row by clicking the row number.

In Figure A below, row 2, CLIN 0050 – Airframe is selected.

Figure A. *Select the entire CLIN table row to be deleted.*

2. Press the Delete key or choose Delete CLIN(s) from the Edit menu.

MPM displays the dialog box shown in Figure B.
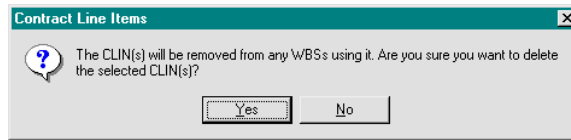
Figure B. Contract Line Items Deletion dialog box.

If you click Yes, the CLIN is removed from the CLIN table and from the WBS element(s) that reference it.

If the Prompt for Save option has been set, MPM prompts for confirmation.

Deleting Two or More CLIN Elements

To delete more than one CLIN element at the same time:

1. Highlight the desired CLIN element(s) using the Shift key when clicking the row number, or click the mouse button and drag it up or down.

2. Press the Delete key or choose Delete CLIN(s) from the Edit menu.

If the Prompt for Save option has been set, MPM prompts for confirmation.

4.7 CLIN Table Recommended Reports

Use these standard MPM reports to check your CLIN table and check its current status with other data.

- SF 1411 Report (includes quantity and reference codes)
- DD 1921 Report (includes element codes as defined in RFPs)
- CLIN/SOW/WBS Report
- CLIN Table Report

5
Creating the Work Breakdown Structure (WBS)

5.1 Introduction to WBS

A Work Breakdown Structure or WBS is an organized framework in which you can progressively subdivide a project's work content into elements that can be easily identified and tracked. Using the WBS methodology:

- Makes planning, scheduling, estimating, and reporting easy
- Provides the framework for cost collection and responsibility assignment
- Provides detail and summary reporting of cost, schedule, and performance

MPM's design is based on the government's concept of supplying data by WBS, OBS, and EOC. Government contractors managing major procurements generally follow the guidelines detailed in MS-881 (DOD) and MA-0295 (DOE).
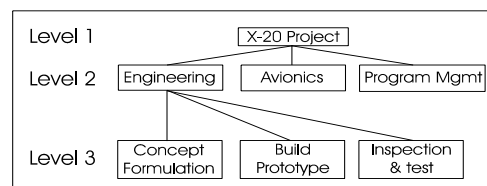
Figure A. *A Sample WBS*

WBS Elements and the WBS Tree

A WBS element is a product, set of data, or service produced by the project. The collection of all WBS elements in a project, organized into levels, is called the WBS Tree. In Figure A, the WBS elements in Level 2 are: Engineering, Avionics, and Program Mgmt.

A WBS element that has one or more sub-elements is known as a parent element or a parent. Each sub-element under the parent element is known as a child element or child. A WBS Tree with at least three levels may also contain grandparents and grandchildren.

In Figure A, the Level 2 element, Engineering, is a parent element with three children (Concept Formulation, Build Prototype, and Inspection & Test). These three elements are grandchildren of the Project Level 1.

WBS Roll-Ups Provide Cumulative Costs

In Figure A, the WBS elements in Level 3 all roll up to Level 2, the Control Account elements, meaning that all cost, schedule, and performance data in these children will roll up creating totals at the parent level.

For example, all of the costs, schedule, resources, and performance data associated with the Level 3 WBS element Concept Formulation, together with those of Build Prototype and Inspection & Test, will be rolled up into Engineering. This allows the project leaders of the X-20 Project to know how much it cost to do the engineering segment of the X-20 project, how long it took, and how well the participants stayed within the baseline schedule and budget of the project. Using the rolled up data, you can then generate management reports showing both detailed and summary information.

For example, in Figure B below, the Estimated time, Estimated cost, Time spent so far, Cost so far, and Percent complete for the three child elements at Level 3 roll up into the parent at Level 2. MPM individually adds the estimates and actuals of the children, and their totals are saved at the parent level.

The Total Estimated Time (not elapsed time) to complete the tasks for all three child elements, 21 months, becomes the estimated time to complete the task at level 3, Concept Formulation. The Total Estimated Cost of $240,000 becomes the estimated cost at Level 3. The project has started and three months have elapsed. Preliminary Study is about 35% complete after three months of work and has cost $40,000 so far. Engineering Design is about 15% complete after two months of work and has cost $20,000 so far. Detail Design hasn't started yet.

So the Concept Formulation portion of the project has spent 3 months (elapsed time) and $60,000 so far, and is about 25% complete. Estimating the time and cost that it will take to complete the tasks (Estimate To Complete - ETC and Budgeted Cost of Work Scheduled - BCWS) and then adding that estimate to the actuals so far, we can get an idea of how closely the project is following what was estimated.

	Preliminary Study	Engineering Design	Detail Design	Concept Formulation
Estimated time:	6 months	9 months	6 months	21 months
Estimated cost:	$100,000	$70,000	$70,000	$240,000
Time spent so far:	3 months	2 months	0 months	3 months
Costs so far:	$40,000	$20,000	$0	$60,000
Percent complete:	35%	15%	0%	25%

Figure B. *How a WBS Works*

5.1 Introduction to WBS

5.1.1 Linking the WBS to the OBS

To provide time phased cost data, you can link your OBS (which provides your organizational breakdown structure of human resources) to your WBS (which describes the tasks to be performed in the project). Linking the WBS to the OBS assigns the responsibility of the tasks to departments within your organization.

Responsibility Assignment Matrix (RAM)

To link the WBS and OBS, assign each WBS control account (task) to an OBS element, which represents the department or organization responsible for completing the task. The resultant grid is called the Responsibility Assignment Matrix (or RAM), also known as a Control Account Matrix. The RAM sometimes becomes quite large, but it does provide a useful summary of the work contained in the WBS, and places responsibility for performance of all tasks. A RAM is most helpful when used early in a program, but can also be used during the proposal stage, and can be updated after the program is awarded. See *Chapter 15: Reports* about the Responsibilities Assignment Matrix report.

Linking a Responsible OBS Tree to a WBS

Figure A below illustrates a RAM which links the responsible organization tree and its interaction with a WBS:
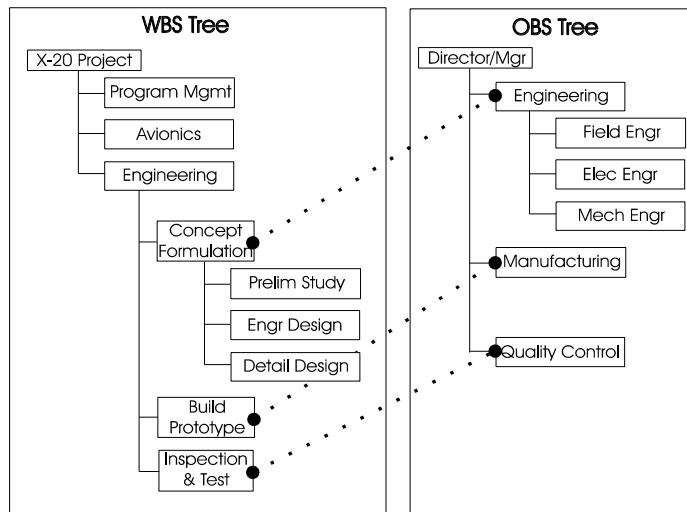
Figure A. *Linking a Responsible OBS to the WBS*

Linking a Performing OBS Tree to a WBS

Figure B below illustrates a RAM which links the performing organization tree and its interaction with a WBS:
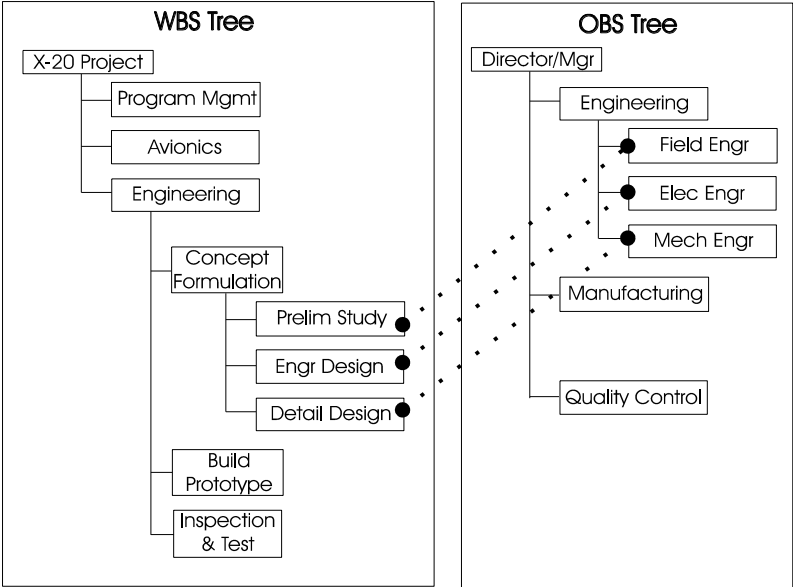
Figure B. *Linking a Performing OBS to the WBS*

5.1 Introduction to WBS

5.1.2 Structuring the WBS

MPM provides several fields which describe your WBS elements. Many of these fields have important implications in how you will use your WBS. Consider these suggestions when structuring your WBS.

WBS IDs

The WBS element identifier (WBS ID) is a 40-character label used to identify each WBS element. This required identifier need not follow any particular sequence, and except for spaces or asterisks, any alphabetical or numerical sequence can be used. For example, 222, BB, and C.B. are all valid WBS identifiers. We recommend that your WBS IDs be numbered in a sequence. By using a sequence that describes your data, WBS IDs are more easily identified which makes managing your project easier. See the samples below. Although MPM allows all special characters except spaces, we recommend that you only use dashes or periods.

Note: Special characters that result in binary characters (for example, "em dash" (–)) are not to be used in MPM as they may cause problems in reports.

Numbered Outline		**Structured Scheme**	
1.0	X20 PROJECT	X20	X20 PROJECT
1.1	Concept Formulation	1X	Concept Formulation
1.2	Systems	11-110	Systems
1.3	Electrical Design	11-120	Electrical Design
2.0	Engineering	2X	Engineering
2.1	Vehicle	21-210	Vehicle
2.2	Avionics	21-220	Avionics
2.3	Prototype	21-230	Prototype

Alias

Alias is an optional 20-character field you define to meet any unique internal organizational data requirements, such as CDRL elements, interdivisional assist effort, remote site effort, phase of contract elements, etc. You can use the Alias field to extract the WBS elements you need when running reports. The Alias field can also act as a *wildcard*. You can use the Alias field's contents to match a specific group of data during reporting, exporting, or onscreen filtering.

For example, suppose you are using the Alias field to store Contract Data Requirements List (CDRL) elements, and your WBS includes CDRLs A001 through A009 and B001 through B009. To extract all CDRL elements that begin with the letter B for a report, you would type B in the Alias field when conditioning for a report. The output would then be limited to include only those CDRLs beginning with B (B001, B002, etc.).

XREF Fields

- **XREF-1 through XREF-10** — These optional fields are provided as additional identifiers that can be used for reporting, exporting, or onscreen filtering. You enter the field name for these fields in the Project Maintenance window.

  For example, if you renamed the XREF-2 label to "SOW" (in the Project Maintenance window) and you entered Statement of Work (SOW) numbers for all WBS elements, you can now create a report that lists all WBS elements that pertain to SOW 1.1.

5.2 Accessing the WBS Window

You open the WBS window from the MPM Menu Manager. When you open the WBS window, you select the project you want to view and the data to download.
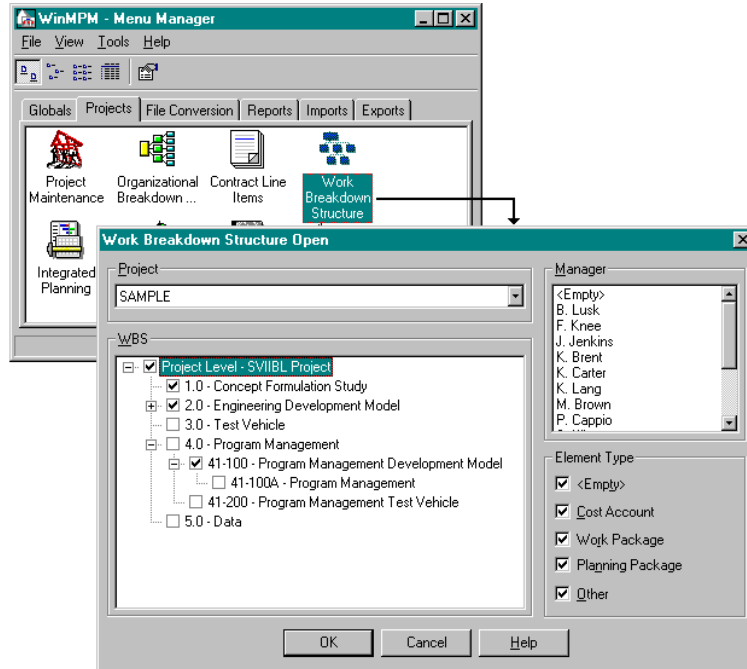
Figure A. *You can filter the data that is downloaded.*

Procedure

To open the WBS window from the Menu Manager:

1. Begin by doing one of the following:

- Select the Projects tab and choose the Work Breakdown Structure icon
- Choose Work Breakdown Structure from the File|Projects menu

MPM displays the WBS Open dialog box shown in Figure A.

2. Choose a project from the Project list box.

3. To select the data to be downloaded, do one or more of the following:

   ■ Filter by WBS Leg

     Click the check mark box next to the desired WBS Leg(s), using the ⊞ and ⊟ boxes to expand or collapse the legs if necessary.

   ■ Filter by WBS Manager

     Using the Shift and Ctrl keys, click the particular Manager(s) who are assigned to the WBS elements you want to download.

   ■ Filter by WBS Element Type

     Select the type(s) of WBS elements you want to download.

4. To accept the selections and display the WBS window, click OK.

When the WBS window opens, the WBS elements you described here are downloaded.

Selecting Project Start and Complete Dates

If the project you selected does not yet have Start and Complete dates assigned in the Project Maintenance window, MPM displays the Project Start and Complete Dates dialog box so you can enter these dates.

Figure B. Setting the Project Start and Complete Dates.

5.3 Orientation to the WBS Window

You use the WBS Window to add, edit and view the WBS elements. A toolbar gives you quick access to common tasks. This window is split into two panes. The left pane shows the *WBS Tree* which displays the WBS hierarchically, and the right pane shows the *WBS Sheet* which displays the detail information for each WBS element. Each element is represented by a single row. See Figure A.
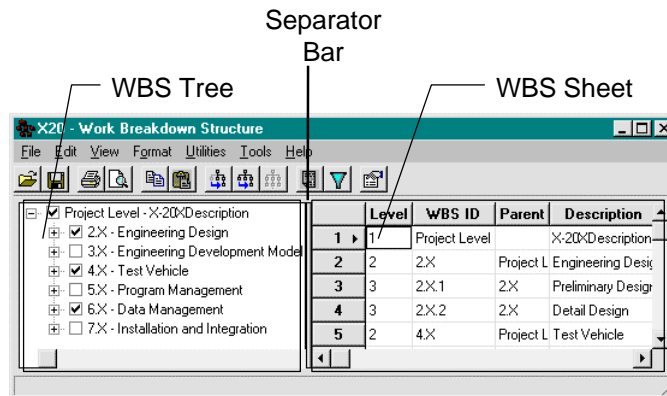
Figure A. *The WBS Window*

The WBS Tree

You can use the WBS Tree (the left pane in the WBS window) to view the WBS hierarchically and review the parent/child relationships of the WBS elements. You can also add new WBS elements, move, copy, or delete entire WBS legs, or select and deselect the WBS elements displayed on the WBS Sheet.

The WBS Tree always contains all WBS elements to which you have access in the project, regardless of the data downloaded using the WBS Open dialog box. The WBS elements you selected for download are displayed in the WBS Tree with either a check mark ☑ (indicating the leg has been downloaded) or filter 🔽 (indicating the leg has been downloaded but is currently filtered). Elements displayed with an empty box have not been downloaded, but you can download them immediately by checking the box.

The WBS Sheet

Use the WBS Sheet (the right pane in the WBS window to add, edit, and view selected WBS element information in a spreadsheet-like format. The WBS Sheet has a vertical scroll bar and horizontal scroll bar to help you position your cursor anywhere on the sheet while working with the WBS elements. The fields (columns) in the WBS Sheet contain the descriptive, accounting, status, and customization information about each WBS element.

Hierarchical Listing

MPM automatically sorts all WBS elements in a hierarchical order according to the way you have structured your WBS when adding new child elements and creating new parents. To change the structure, see topic *5.7.4 Sorting WBS Legs*. The structure of the WBS Tree is used throughout the project.

Previewing and Printing the WBS

You can preview or print the WBS data using the options on the File menu. Note that Print and Preview only show the columns and WBS elements which you have displayed on the WBS Sheet. For complete details on using these options, see *Using MPM* in the *Getting Started* manual.

To preview your WBS, do one of the following:

- Click the Print Preview button
- Choose Print Preview on the File menu
- Press Alt+F and then V

MPM displays the WBS Print dialog box. This dialog allows you to select whether to display task descriptions in your printout.
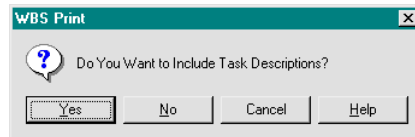
Figure B. *Indicate whether to include Task Descriptions.*

To print your WBS, do one of the following:

- Click the Print button
- Click the Print button in the Print Preview window
- Choose Print on the File menu, or press Ctrl+P

MPM displays the WBS Print dialog box, as described above, followed by the standard Windows dialog box.

5.3 Orientation to the WBS Window

5.3.1 Navigating the WBS Window
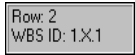
Navigating the WBS Tree

To navigate the WBS Tree (the left window pane):

- To advance to the next or previous WBS Leg, use the Up and Down Arrow keys.
- To move to a specific WBS Leg, click on its description with the mouse.
- To see additional fields and columns, use the horizontal and vertical scroll bars.
- To show more or less of the WBS Leg descriptions, drag the separator bar.

Navigating the WBS Sheet

To navigate the WBS Sheet (the right window pane):

- To advance to the next or previous field, use Tab and Shift+Tab, or the Left and Right Arrow keys.
- To move between rows, use the Up and Down Arrow keys.
- When clicking and dragging the vertical scroll bar, a pop-up label informs you of the current WBS element's ID and row number. This makes scrolling through large databases very efficient.

  Row: 2
  WBS ID: 1.X.1

- When clicking and dragging the horizontal scroll bar, a pop-up label informs you of the current field (column).

  Level

- To move to any cell, click in the cell with the mouse.
- To select an entire WBS element (row), click on the row number.

For more detailed information on navigating, see the *Getting Started* manual.

Navigating Between the WBS Panes

You can navigate between the WBS Tree and WBS Sheet quickly using GoTo**.**

To find the WBS detail data in the WBS Sheet when navigating the WBS Tree:

1. Select a WBS leg in the WBS Tree by clicking on it.

2. To find its detail data, choose GoTo WBS on the Edit menu, or press Ctrl+G.

    MPM displays the selected WBS in the WBS Sheet, displaying additional rows if necessary to display that WBS.

To find the WBS leg in the WBS Tree when navigating the WBS Sheet:

1. Select a WBS element by clicking its row number in the WBS Sheet.

2. To find its leg, choose GoTo WBS on the Edit menu, or press Ctrl+G.

    MPM displays the selected WBS in the WBS Tree, expanding the parent if necessary to display that WBS.

Searching the WBS

To search for a word in the WBS Sheet (the right window pane only), click inside the Sheet.

1. Choose Find WBS on the Edit menu, or press Ctrl+F.

    MPM displays the Find Options dialog box shown in Figure A.
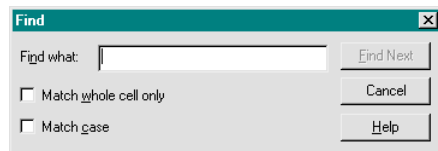
Figure A. Specify the text to be found.

2. Enter the text to find and click Find Next.

    ■ The WBS elements in the Sheet are searched.

For more detailed information on searching, see the *Getting Started* manual.

5.3 Orientation to the WBS Window

5.3.2 WBS Thresholds

WBS thresholds allow users to establish thresholds for the various WBS elements.

- Schedule variance thresholds can be established for the Current Period or the Cumulative Period and can be specified in value (hours or dollars) and/or percent.

- Cost variance thresholds can be established for the Current Period, Cumulative Period or At Complete, and can be specified in value (hours or dollars) and/or percent.

For schedule variance and cost variance, both favorable (positive) and unfavorable (negative) thresholds can be established.

Add, edit, or delete thresholds from the Work Breakdown Structure View located on the Projects Tab of the Menu Manager. The thresholds column is automatically displayed on the WBS view and is not populated by default.

Inheritance

The concept of inheritance is applied to the MPM threshold functionality. Thresholds established at a parent WBS Level are automatically inherited by the children WBS elements.

For example, in the WBS shown below (Figure A), the threshold values established for Element 2.2 are automatically inherited by elements 2.2.1, 2.2.2, 2.2.2.3 and 2.2.2.4.
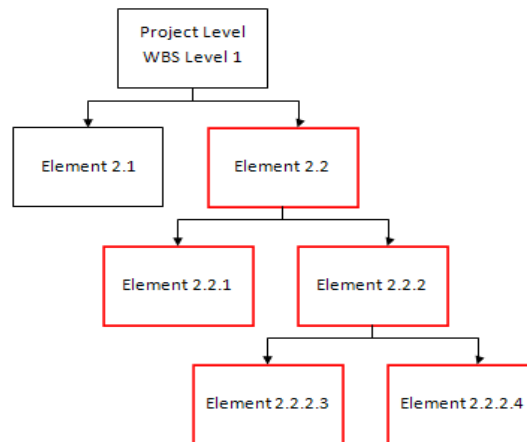
Figure A. *Example of Inheritance*

Threshold Example

The threshold dialog box below (see Figure B) represents the thresholds established for a Project Level as indicated in the window title bar. The comparison logic is applied between each value and %.

Figure B. *Threshold dialog box*

- **SV = BCWP – BCWS**
    - The favorable current period schedule variance threshold is 25.00 and 4%. This means that current period SVs >[25.00 AND 4% of BCWS] will be flagged in the Detail Variance Analysis Report and the Variance Analysis Turnaround Document reports.
    - The unfavorable current period schedule variance threshold is -15.00 and – 3.00%. This means that current period SVs < [-15.00 AND -3% of BCWS] will be flagged in the Detail Variance Analysis Report and the Variance Analysis Turnaround Document reports.
- **CV= BCWP-ACWP**
    - The favorable current period cost variance threshold is $100.00 and 8%. This means that current period CVs > [$100 AND 8% of BCWP] will be flagged in the Detail Variance Analysis Report and the Variance Analysis Turnaround Document reports.

- The unfavorable current period cost variance threshold is -25.00 and -9%. This means that current period CVs<[-25.00 AND -9% of BCWP] will be flagged in the Detail Variance Analysis Report and the Variance Analysis Turnaround Document reports.

Threshold Fields

Use the Thresholds dialog box to establish both favorable and unfavorable thresholds for cumulative, current period, and at-complete variances. You can set values by the WBS element. Values are automatically copied down or inherited from the parent.

- **Comparison Logic** — From the dropdown menu, select the logic to use between the Value and % (percent), as follows:

    - **And** – Select this so that the variance has to meet the Value and % (this is the default).

    - **Or** – Select this so that the threshold has to meet the Value or %.

    Note: The Comparison Logic, AND or OR, can only be established at the Project level of the WBS. The window title bar identifies the WBS element for which the thresholds are being established.

- **Units** — You can set units by WBS element as needed. From the dropdown menu, select the units, as follows:

    - **Dollars** – Select to enter values as dollar amounts.

    - **Hours** – Select to enter values as hourly amounts.

- **Schedule Variance** — The Schedule Variance (SV) is equal to the BCWP less the BCWS, as follows:

    SV = BCWP - BCWS

    Enter Favorable (positive threshold) and Unfavorable (negative threshold) values as needed in the following fields:

    - **Current Period** — Enter the Value and/or % (percentage) for favorable and unfavorable conditions for the current period.

    - **Cumulative** — Enter the Value and/or % (percentage) for favorable and unfavorable conditions for the cumulative amount through the current period.

- **Cost Variance** — The Cost Variance (CV) is equal to the BCWP less the ACWP, as follows:

  CV = BCWP - ACWP

  Enter Favorable (positive threshold) and Unfavorable (negative threshold) values as needed in the following fields:

  - **Current Period** — Enter the Value and/or % (percentage) for favorable and unfavorable conditions for the current period.

  - **Cumulative** — Enter the Value and/or % (percentage) for favorable and unfavorable conditions for the cumulative amount through the current period.

  - **At Complete** — Enter the Value and/or % (percentage) for favorable and unfavorable conditions for the At Complete value.

Adding or Editing Threshold Values

Thresholds are copied down to lower level breakdown elements or inherited at lower levels only if higher levels have values entered, as follows:

- If the Thresholds are defined at the project level, the Threshold dialog is disabled for all lower level breakdown elements.

- If the Thresholds are defined at WBS parent level, the Threshold dialog is disabled for all children elements.

To add, edit, or view the threshold values, do the following:

1. Click the ellipses ... in the Threshold column of the Work Breakdown Structure (WBS) window. The Threshold dialog box displays for the WBS element.

2. Select the Comparison Logic dropdown as "And" or "Or."

   Note: Comparison Logic can only be established at the highest level element (i.e., Project level) of the WBS.

3. Set the Units dropdown to "Dollars" or "Hours."

4. Enter up to 12 digits in the *Value* fields (in addition to the commas and decimals that are automatically added).

5. Enter up to seven digits in the *%* (percent) fields (in addition to the commas and decimals that are automatically added).

- ■   You can enter negative values or percentages only in the Unfavorable fields.

- ■   You can enter positive values or percentages only in the Favorable fields.

- ■   You can add percentage values of more than 100%.

6.   Click the left or right arrows to go to the next or previous WBS.

7.   Click OK to save all Threshold values and exit, or click one of the following:

- ■   **Clear** — erases any contents in the Threshold dialog and resets all values to zero (0). Note that a value of zero indicates no threshold for that particular item. It is not a zero-value threshold for dollars, hours or percent.

- ■   **Cancel** — closes the window without saving changes, and returns to the Work Breakdown Structure window.

- ■   **Help** — accesses online help for this topic.

Deleting WBS Threshold Values

WBS Thresholds can be deleted manually by zeroing out the values at the highest level, or can be deleted for the entire project by selecting the WBS Thresholds box in the Delete Project Data dialog box which is accessible from Project Maintenance.

To delete WBS threshold values using the Delete Project Data dialog box, do the following:

1.   Within MPM, open the Project Maintenance applet from the Projects tab.

2.   Click **Edit** » **Delete Project Data**.
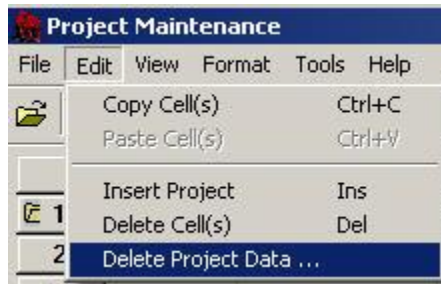
The Delete Project Data dialog box displays.
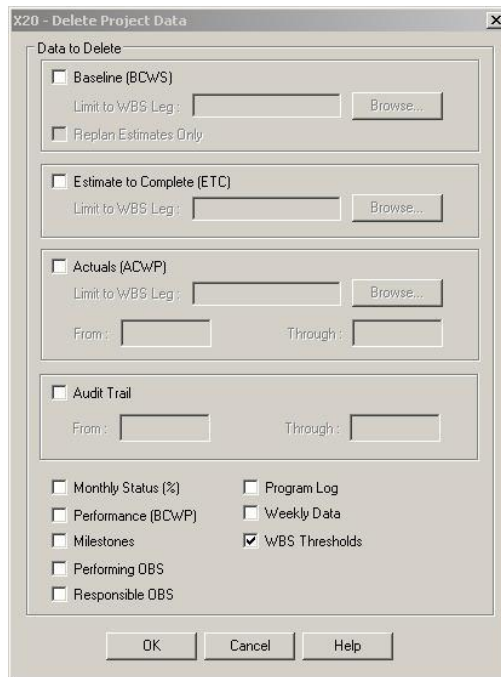
Figure C. *Select the WBS Thresholds check box*

3.   Select the WBS Thresholds check box.

4.   Click **OK**.   All WBS threshold data is deleted.

5.4 Creating Work Breakdown Structures

Use the WBS window to create and edit WBS elements. Most operations can be performed in several ways, using the keyboard, the mouse, or a combination of both, in the WBS Tree or the WBS Sheet.

Inserting New WBS Elements Using the Tree

To add a WBS element using the WBS Tree, perform the following steps:

1. To add the new child, click on the prospective parent WBS leg in the WBS Tree.

2. Select Insert WBS from the Edit menu, or press the Insert key.

    MPM displays the Insert WBS Element dialog box shown in Figure A.
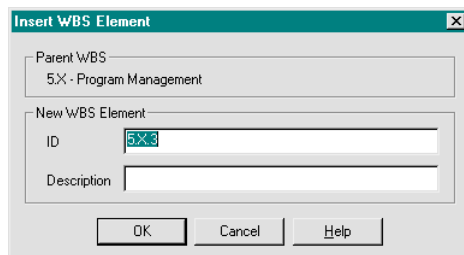
Figure A. Identify the new element's ID

3. The Parent field is auto-filled from the WBS element you had selected in the WBS Tree. If the wrong parent is displayed, click Cancel.

4. The WBS ID field is auto-filled using the next numerical ID for the selected parent. You can override this and enter any ID desired.

5. Enter the Description if desired. Click OK.

A new row is inserted with the Level, Parent, and WBS ID fields filled. Edit the other fields as desired.

Inserting New WBS Elements Using the Sheet

You can also add a new element using the WBS Sheet:

1. To add the new child, click on the prospective parent WBS in the WBS Sheet.

2. Choose Insert WBS on the Edit menu or press the Insert key.

A new row is inserted in the WBS Sheet in Edit Mode (shown in blue), with the Level, Parent, and WBS ID fields auto-filled. Edit the fields as desired.

You cannot add a WBS element beneath an element which has been labeled as a DISTRIBUTED field in XREF-1.

Required Entries

You must fill in the following fields when creating new WBS elements: WBS ID, Parent, Start, and Complete. See *topic 5.5 WBS Field Descriptions* for detailed information.

Downloading Additional WBS Data

The WBS legs containing downloaded data are displayed in the WBS Tree with either a check mark ☑ (indicating the leg has been downloaded) or filter 🖫 (indicating the leg has been downloaded but is currently filtered).

To download additional WBS legs, click in an empty check mark box. A check mark is inserted, the data is downloaded, and the additional records are displayed in the WBS Sheet. See *topic 5.8 Changing the WBS Display* for more information.

To remove WBS legs from the display, click in the check marked box. The box is now empty, the data is released from memory, and those records are removed from the WBS Sheet. Any changes made to the data are saved prior to its release.

Saving WBS Information

To save the WBS data, do one of the following:

- Click the Save button 💾.
- Choose Save from the File menu, or press Ctrl+S.
- Move to another WBS row, using the Up or Down arrow keys.

If Prompt for Save has been set, MPM prompts for verification.

Importing WBS elements from outside of MPM

Many organizations have created their WBS structure using spreadsheets or accounting systems. You can import the WBS Tree or WBS Schedule data from your spreadsheet or accounting system. For more information about importing WBS data, see *Chapter 16: Importing Data*.

5.5 WBS Field Descriptions

These are the fields or columns displayed in the WBS Sheet. Fields which are required display <Required> in the cell. These fields must be filled. You can change the columns that are displayed using Column Hide. See *Using MPM* in the *Getting Started* manual for details.

Level

The Level field shows the hierarchical level of the WBS element and the relationship of the element to its parent. The top element in the WBS has a Level value of 1. This field is assigned when you create the new WBS element and cannot be edited.

WBS ID

The WBS element identifier (WBS ID) is a required 40-character label used to identify each WBS element. This identifier need not follow any particular sequence, and except for spaces, any alphabetical, numerical or special characters can be used. This field can only be edited on existing WBS elements if you have been granted WBS Rename access to the project. This field must be unique. See *topic 5.1.2 Structuring the WBS* for samples.

Parent

The Parent field positions the WBS element hierarchically within the WBS Tree. You can specify the WBS ID of the parent element when creating a new WBS element, but the field becomes read-only once the new WBS element information is saved. After creating a new WBS element, click on the ⋯ button in the Parent field to select a Parent element from the drop-down list box of existing WBS elements. MPM automatically creates the Project Level WBS element (Level 1). Level 1 represents the *total project* and its WBS ID cannot be changed. This field can only be edited if you have been granted Move WBS Leg access to the project.

Description

The Description field is an optional 100-character field used to provide a more detailed description of a WBS element. Level 1, the project level, defaults to the project name.

Using commas in the WBS Description field (and other text fields) is not recommended, as commas are used as field separators when importing information. However, if the content of a string field does contain a comma, you can surround the field with quotation marks to avoid confusion.

Start/Complete

Enter the scheduled start and completion dates for the WBS. See *Appendix D* for a list of valid date formats. These fields are filled automatically when the WBS is built by using the date of the parent as the default date. The top level date (the total project start and complete date) defaults to the project start and complete dates entered in the Project Maintenance window. If only the month and year (MMYY) are entered in the Start field, MPM defaults to the fiscal start date for that period entered in the Fiscal Calendar.

Likewise, if MMYY is entered in the Complete field, MPM defaults to the fiscal complete date for that period from the Fiscal Calendar. If no project Start and Complete dates exist, MPM prompts you to enter them the first time the WBS is accessed for that project. Dates for a child WBS must be within the parent dates (inclusive). Once estimates have been entered for new WBS elements, the dates can only be changed by updating the underlying resource estimate dates using the Integrated Planning Baseline window.

Manager

The Manager field is an optional 20-character field used to specify the WBS manager's name. The drop-down list box always reflects all manager entries that currently exist on any WBS in the project. You can also type in a new name, and the name is added to the list shown. The managers entered in the Manager field can be used to select which WBS elements to download when opening the WBS, Integrated Planning, or Actuals windows.

Charge Number

The Charge Number field is a 20-character internal accounting system identifier used to collect costs. This is an optional field; however, a WBS ID must have a Charge Number for actuals to be collected in MPM. An error will result if you attempt to enter or import Actuals for a WBS without a Charge Number.

Perf Dept

The Performing Department is an optional field which identifies the organization or department that is performing the WBS task. Select from the displayed drop-down list box of Department IDs from the Performing OBS Tree, or you can enter a new department, but you must also add them to the OBS Tree to use them in reports. See *Chapter 3: Creating the OBS* for details. Although this is an optional field, we recommend you enter a Performing Department when creating new WBS elements if you are required to generate functional reports.

Resp Dept

Responsible Department is an optional field which identifies the organization or department that is responsible for the WBS task. Select from the displayed drop-down list box of Department IDs from the Responsible OBS Tree, or you can enter additional departments, but you must also then add them to the OBS Tree to use them in reports. See *Chapter 3: Creating the OBS* for details.

In an Integrated Product Team (IPT) environment, the Responsible OBS Tree can be used as the IPT structure. This enables you to link WBS elements to an IPT rather than to a department. Although this is an optional field, we recommend you enter a Responsible Department when creating new WBS elements if you are required to generate functional reports.

Threshold

You can assign cost and schedule variance thresholds, such as hours, dollars, or percent, to each WBS. Use this dialog box to establish both favorable and unfavorable thresholds for cumulative, current period, and at-complete variances. Click the ellipses ⌈...⌉ to access the Threshold dialog and assign cost and schedule variance thresholds to each breakdown structure element. See section 5.3.2, "WBS Thresholds" for details.

Alias

Alias is an optional 20-character field you define to meet any unique internal organizational data requirements, such as CDRL elements, interdivisional assist effort, remote site effort, phase of contract elements, etc. Select from the displayed drop-down list box, which always reflects all Alias entries that currently exist on any WBS in the project. You can also enter a new Alias which is then added to the list.

You can use the Alias field to extract the WBS elements you need when running reports. The Alias field also acts as a "wild card" to match a specific group of data during reporting, exporting, or onscreen filtering. The Alias field and the Xref-1 field are the only unique selection fields that can be printed on the CPR Format 1 and C/SSR reports in place of the WBS ID field. See *topic 5.1.2 Structuring the WBS* for samples.

XREF-Fields

These optional 20-character user-defined fields, Xref-1 through Xref-10, are provided as additional identifiers that can be used for reporting, exporting, or on-screen filtering. Select from the displayed drop-down list box for each field, which always reflects all the entries that currently exist on any WBS in the project. You can define the field name for these fields in the Project Maintenance window. You can use the Xref fields during reporting, exporting, or onscreen filtering as wild cards, to match a specific group of data.

XREF-1 is used for identifying distributed WBSs. If Xref-1 is changed to DISTRIBUTED, it cannot be a parent WBS.

The CLIN/SOW/WBS Baseline Report will not include SOW data unless one of the XREF fields is named "SOW" in the Project Maintenance window. For example, if you

renamed the XREF-2 label to "SOW" (in the Project Maintenance window) and you entered Statement of Work (SOW) numbers for all WBS elements, you can now create a report that lists all WBS elements that pertain to SOW 1.1.

Element Type

The Element Type describes the element's position and function in the WBS Tree. This field is used for creating reports, filtering exports, onscreen filtering, and filtering when using the WBS and Integrated Planning windows. It is recommended that you identify the type of all WBS elements in your Tree. WBS elements above the control account are typically blank. Available Element Types are:

- **Control Account:** A Control Account WBS element is normally used as a management control point where actual costs are accumulated and compared to the budget. Control Accounts are usually at a high level of the WBS Tree. All Control Accounts must be identified before running the Control Account Plan report.

- **Work Package:** A Work Package WBS element is normally a detail task representing a unit of work in a Control Account at the level where the work is performed, having scheduled start and completion dates and a budget. Work Packages are usually in a lower level of the WBS Tree.

- **Planning Package:** A Planning Package WBS element is normally a detail task similar to a Work Package, but with no budget or time estimates, created during the planning phase of a project to collect time and resources within a Control Account. Planning Packages are usually in a lower level of the WBS Tree.

- **Other:** A WBS element identified as type Other is normally a detail task similar to a Work Package, but used for any user-defined purpose.

Recur

Recur is an optional field that identifies a WBS element as an activity that is repeated (recurring) or an activity that is done only once (nonrecurring). MPM automatically marks all children of a WBS element as Recurring if the parent is a recurring element, or as Nonrecurring if the parent is a nonrecurring element. The Recur field of the child elements cannot be individually changed if the parent element's Recur field is set.

CLIN

CLIN is an optional eight-character field which identifies the Contract Line Item Number for this WBS. Although CLIN is an optional field, we recommend you select a CLIN for

new WBS elements if the program utilizes CLINs and requires CLIN reporting. You create and maintain the CLIN table in the CLIN window. See *Chapter 4: CLIN Table* for details. The WBS window contains a drop-down list of items entered in the CLIN window. You cannot enter a CLIN that does not exist in the CLIN table.

When a CLIN value is entered for a WBS element, that CLIN value is used for all children and grandchildren of that WBS element. The CLIN field may only be edited on the parent WBS element where the CLIN was originally entered. If children of that parent must have different CLINs, the value must be removed from the parent and added at the child level where the CLIN values must be different.

The CLIN/SOW/WBS Report is sorted by CLIN. WBS elements without a CLIN value will not appear on the report. Any estimates entered above the level at which the CLIN is entered will not be included in the report.

Fee %

Fee % is an optional field where you enter the percentage of the fee allocable to each WBS element and its children. This field is available for entry only if you select Fee by WBS on the Project Maintenance window. The Fee % (if any) is displayed on reports that show WBS fee amounts. The Fee % should be specified at the lowest level of a WBS leg where different Fee % values must be applied. You can enter whole numbers or decimals. A fee percentage input for a WBS element is applied to all children of that element and is displayed as a read-only field for child elements. The only way to edit the Fee % is to edit the Parent WBS element where the Fee % was originally entered.

If you change the Fee % on the WBS element, the project must be repriced to reflect those changes. See *Chapter 11: Using the Project Updating Utilities* for information.

Fee Limit

Fee Limit is an optional field where you can enter the fee limit (up to 16 digits) for a WBS element. This field is only available for entry if you have selected Fee by WBS on the Project Maintenance window. The Fee Limit (if any) is displayed on reports that show WBS fee amounts. Once you enter a Fee Limit for a WBS element, the Fee Limit is set to blank on all child WBS elements (even if a value previously existed there) and cannot be edited on the child elements.

Fee Limit is a reference field only. MPM continues to accumulate fee even after the limit is reached.

Revised Letter Date

This field shows the date when this WBS was last revised. It can be edited only on control accounts.

Schedule Reference Date

This field shows the date when this WBS schedule was last updated. It can be edited only on control accounts.

5.5 WBS Field Descriptions

5.5.1 WBS Fields for Display Only

The following fields cannot be edited in the WBS window. They are updated automatically in Integrated Planning and appear in this window only for reference.

- **EVM** — This field shows the Earned Value Method (EVM) used to calculate BCWP.

- **BCWP Base** — This field shows the unit type used to compute the earned value for the WBS element.

- **WBS % Complete** — This field shows the cumulative percent complete of the WBS element.

- **Last Statused Date** — This field shows the date that the WBS was last statused.

- **Base WBS ID** — This field shows the WBS ID used as the base WBS for an apportioned effort task.

- **ETC Start** — This field shows the earliest date the ETC is scheduled to start.

- **ETC Complete** — This field shows the latest date the WBS is estimated to complete.

- **Early Start** — This field shows the earliest date that the WBS should start.

- **Early Finish** — This field shows the earliest date that the WBS should be completed.

- **Late Start** — This field shows the latest date that the WBS can start.

- **Late Finish** — This field shows the latest date that the WBS should be completed.

- **Float** — This field shows the number of days between the earliest start and latest start dates.

5.5 WBS Field Descriptions

5.5.2 Task Descriptions

The Task Description is an optional entry that can be used to describe an individual WBS element. You can create a task description for each element in a WBS. When you create a task description, the ⬚ icon is displayed in front of the row number for the WBS element. In Figure A, WBS element 21-100 has a task description.
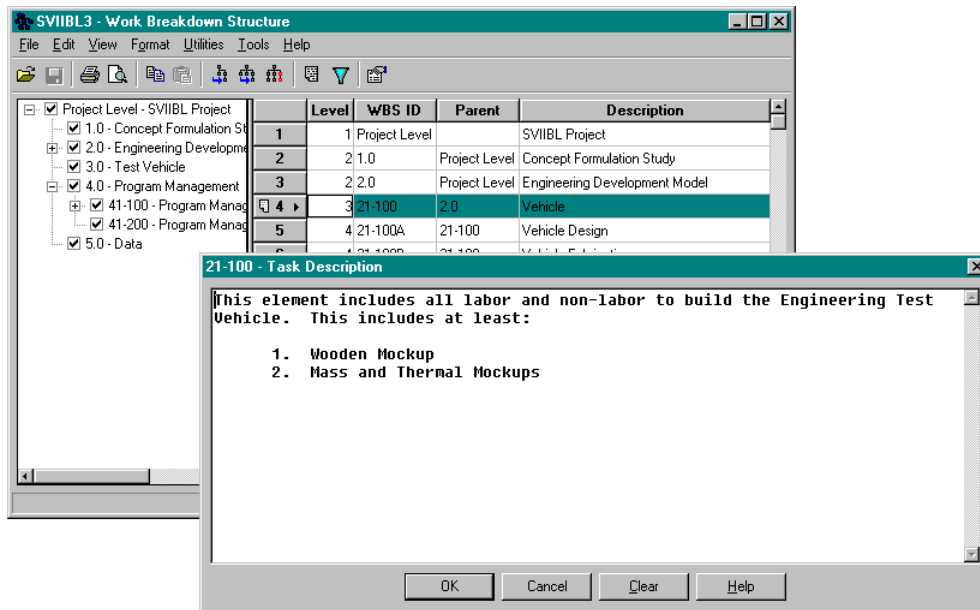
***Figure A.** Enter a description of the WBS Task here.*

To view or edit the task description for a WBS element:

1. Select the WBS element by clicking anywhere in the row for the WBS element.

2. Do one of the following:

    ■ Click the ⬚ button in the Toolbar.

    ■ Choose Task Description from the Tools menu.

    ■ If the task description already exists, click the ⬚ icon in front of the row number.

    MPM displays the Task Description dialog box shown in Figure A. Note the WBS ID is displayed in the Task Description title bar.

Editing Text

Enter the descriptive text and click OK to save, or Cancel to escape out of the Task Description window. There is a maximum of 100 lines of 78 characters per task description available in this window.

Basic text editing capabilities are incorporated within MPM. Just type in your text as you would with any text editor.

If you want to enter a tab to indent text, use the Ctrl+Tab key combination. If you press only the Tab key, the selection moves to the next button at the bottom of the text box.

The Clear button clears the text so you can start over.

5.6 Maintaining WBS Data

Editing WBS Elements

Perform the following steps to change information for an existing WBS element:

1. To show the field to be changed, use the Horizontal Scroll Bar. If the field you need is not displayed, use Column Hide on the Format menu to change the displayed fields.

2. To select the WBS, click on the desired row in the WBS Sheet (or click on the leg in the WBS Tree and choose GoTo WBS on the Edit menu).

3. To edit a cell, double-click the desired cell. If your cursor is already placed in the cell you want to edit, press F2 to access Edit mode.

4. Change the data in one or more editable fields in the current row. After modifying and leaving a cell, the row is shown in blue to indicate that it is in Edit mode

5. To advance to the next field, use Tab, Shift+Tab, or the Left or Right Arrow keys.

Filling Down Cells

A quick way to propagate your data is to use Fill Down, which automatically fills the selected cells with the data in the first cell of the selected cells. The cell(s) to be filled must be in rows below the cell(s) to be copied. Copied dates must be within the Start and Complete dates of the parent. Perform the following steps to auto-fill WBS element cells:

1. To select the data to be copied, select the cell that contains the desired data.

2. To select the cells to be filled with this data, drag the mouse down the column, or click the desired rows while holding the Shift key.

3. Select Fill Down on the Edit menu, or press Ctrl+D.

4. Click Yes when asked to save the changes.

The cells below the first cell will all now contain the same data as the first cell of the selected cells.

Copying / Pasting Cell Data

Copying element cells using the clipboard is another fast way to enter data into new WBS elements. Perform the following steps to copy WBS cell data:

1. To select the cells to be copied, click on the cell(s) in the WBS Sheet. To choose multiple elements, use Shift and Ctrl while clicking the mouse button.

2. To copy the data to the clipboard, click the Copy button , choose Copy Cell(s) on the Edit menu, or press Ctrl+C.

3. Highlight the cell(s) into which you would like to paste the copied cell(s).

4. To paste, click the Paste button , choose Paste on the Edit menu, or press Ctrl+V.

MPM pastes the new cell information over any existing information in the selected cells.

Be sure that the target cell(s) contain the same type of information as the cell(s) you copied. If you copied more than one cell, you may have copied hidden fields. Copying hidden fields causes a problem if you attempt to paste the copied cells into cells that do not contain corresponding hidden fields. To solve this problem, copy and paste visible cells one at a time, or display hidden fields before copying and pasting.

Deleting the Contents of One or More Cells

To delete the data from one or more cells, choose the cell(s) from the WBS Sheet. Then select Delete Cell(s) on the Edit menu, or press the Delete key. If the deletion is across more than one row and any errors are encountered during the delete (for example: <Required> fields have been deleted), a message is displayed for each row that encounters an error.

Deleting Entire WBS Legs

When deleting WBS legs, all data (BCWS, BCWP, ACWP, BOEs, etc.) associated with that WBS element is also deleted.

Once a WBS element is deleted, the only way to restore that element and its children is from a backup of the data. Be sure to back up your data first!

To delete a WBS element and all of the WBS element's children, perform these steps:

1. To select the WBS leg to be deleted, click on the WBS in the WBS Tree, or click on the row number of the WBS leg in the WBS Sheet. To choose multiple elements, use Shift and Ctrl while clicking the mouse button.

2. To delete the selected legs, choose Delete WBS(s) on the Edit menu or press Del.

3. MPM asks you to verify the deletion. Click Yes.

5.6 Maintaining WBS Data

5.6.1 Copying/Pasting WBS Legs

You can also Copy and Paste entire WBS legs, in two ways:

- Using the clipboard, which copies just the data displayed in the WBS Sheet.

- Using the Copy WBS Utility, which copies the WBS Sheet data <u>and</u> any associated data. See *topic 5.7.1 Using the Copy WBS Utility* for details.

A copied WBS element becomes a child under the target WBS element. If the copied elements contain children or grandchildren, they retain their parent-child relationship when pasted. The WBS ID field is updated based on the replacement characters.

If the start and complete dates of the WBS element that is being copied fall <u>within</u> the range of the new parent WBS element's dates, MPM pastes in the dates with no change.

If the start and complete dates of the WBS element that is being copied fall <u>outside</u> the range of the new parent WBS element's dates, MPM changes the child WBS element's dates to match those of the new WBS parent's dates.

If you have copied several (but not all) children of a parent and then pasted them under a different parent, only the selected children are copied. If the selected child also has children, all children are copied and the hierarchy is preserved.

Note that you can also select WBS legs in the WBS Tree for copying, but only when using the Copy WBS Utility (see *topic 5.7.1 Using the Copy WBS Utility*). You cannot select WBS in the WBS Tree when copying and pasting to the clipboard.

Copying/Pasting WBS Legs Using the Clipboard

Copying WBS Legs to the clipboard is a fast way to populate the WBS when many elements contain similar information; however, remember that any associated data such as Task Descriptions and Estimate data is not copied using this method.

To copy and paste WBS elements using the clipboard:

1. To select the WBS leg(s) to be copied, in the WBS Sheet click on the row number of the WBS leg to be copied. The entire row becomes highlighted. To choose multiple contiguous rows, click and drag on the row numbers, or hold the Shift key while clicking the first and last row numbers.

2. To copy the WBS leg(s) to the clipboard, click the Copy button , choose Copy WBS(s) on the Edit menu, or press Ctrl+C.

3. Click on the row number of the WBS parent under which you would like the copied element(s) to be pasted. If you have more than one WBS window open, you can copy and paste elements between WBS windows.

4. Paste the WBS leg(s) from the clipboard. Click the Paste button , choose Paste on the Edit menu, or press Ctrl+V. WBS leg(s) are pasted as new WBS leg(s). Pasting does not override any existing WBS leg(s).

5.7 Changing WBS Data

MPM provides several utilities for making large-scale changes to the WBS Tree. These utilities are available on the Utilities menu. Most utilities can also be invoked using the mouse. Be sure to back up your data before attempting to run any of the WBS utilities. This protects you from losing or disorganizing your data.

Use the WBS utilities to:

- Copy WBS legs into another parent
- Move WBS legs to a different parent
- Rename WBS legs
- Reorder (sort) WBS legs

Specifying Replacement Characters

Each of these utilities requires you to specify replacement characters, which MPM uses for creating new unique WBS IDs. For each child element in the leg being copied, MPM replaces the same number of characters as was contained in their old parent ID. For example, assume the parent ID in the old leg contains two characters, and the new ID contains five characters. The first two characters of each child are replaced with the five-character new ID. All remaining original characters in the ID are retained. WBS 21-100 with replaced characters TEST becomes TEST-100. TEST-100 with replaced characters ZZ becomes ZZ-100. See Figure A.

Old WBS ID	Replacement Characters	New WBS IDs
2X 　　21-100 　　21-200 　　21-300	TEST	TEST 　　TEST-100 　　TEST-200 　　TEST-300
12 　　12A 　　12B 　　12C	123	123 　　123A 　　123B 　　123C
TEST 　　TEST-100 　　TEST-200 　　TEST-300	ZZ	ZZ 　　ZZ-100 　　ZZ-200 　　ZZ-300

***Figure A.** Results of Specifying Replacement Characters*

If the natural progression in the naming process would result in duplicate WBS IDs, MPM reports the error on the Processing Results report.

Processing Results Log and Report

MPM keeps a log of the processing results when using the WBS utilities. Each time you launch the WBS window, a new WBS session is started and a log file is created. When you invoke one of the WBS utilities and an error results, all errors of processes you request are stored in the log file and are displayed in the Report Viewer. If no errors result, the log file is automatically deleted when you close the WBS window.

If you have more than one WBS window open, you have more than one log file.

Printing or Saving the Log

If you run one of the WBS utilities and encounter an error, MPM displays the Report Viewer with the error. You can print or save the log file results using those options within the Report Viewer. When exiting the Report Viewer, if you have not saved its contents, MPM deletes the log file.

5.7 Changing WBS Data

5.7.1 Using the Copy WBS Utility

Use this utility to copy selected WBS elements and their associated data. There are three ways to access this utility:

* Click the button.
* Choose the Copy WBS Leg on the Utilities menu.
* Using the mouse on the WBS Tree.

Be sure to back up your data before using this utility!

Copying WBS legs using the button or menu

Note that this button and menu option are only available if you have been granted WBS Leg Utility access. Once you click the button or choose the menu option, MPM displays the Copy WBS Leg Options dialog box.
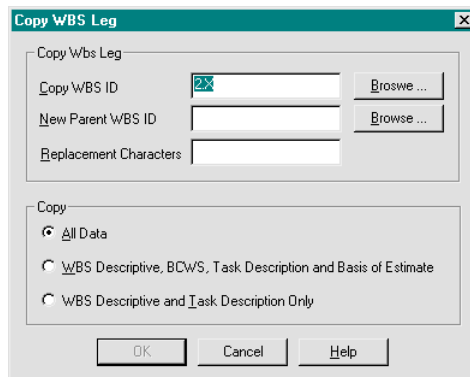
Figure A. *Copy WBS Leg Utility*

Enter the WBS element to copy, the new parent's ID, and the replacement characters for the ID (see *topic 5.7 Changing WBS Data* for information about specifying replacement characters). If you are unsure of the name of the IDs to copy, use the Browse button to select them from existing WBS elements.

You can also choose to copy all data, or certain subsets. If any field is blank, OK is unavailable. If you have selected a WBS element or leg, the ID is shown as the default WBS to copy, which you can override if desired.

Copying WBS Legs using the mouse

This utility is also available using drag-and-drop with the mouse on the WBS Tree. While pressing the Ctrl key, click on the WBS leg to copy, drag it to the new parent, and drop it onto the new parent (release the mouse button). MPM displays the Copy WBS Leg Utility dialog box, with both WBS IDs auto-filled.

When using drag-and-drop with the mouse on the WBS Tree, make sure to keep the Ctrl key down. Without pressing Ctrl, you will be moving the WBS legs, not copying them!

How MPM Copies WBS Legs

The selected WBS element/leg is copied to a temporary area and a new leg is added to the WBS tree. The new leg is a duplicate of the old leg with the new IDs containing the replacement characters, and is placed as the last child in the hierarchy on the new parent.

If All Data is selected, all existing BCWS, ACWP, BCWP, and ETC values are rolled up into the new parent's hierarchy. This includes milestones, status information, Task Descriptions, and Basis Of Estimates. If one of the subsets were selected, only values for that subset are rolled up.

All rollup date ranges are adjusted as necessary, whether estimates exist or not.

If the new parent has a value for Recur/Nonrecur, Fee Limit or Fee% that is different than the new parent, values are automatically changed down the leg and the resulting changes are shown in the Processing Results report.

If the new parent has a CLIN value, the leg being copied becomes associated with the new CLIN. If the WBS element being copied has a CLIN, the CLIN is cleared and the resulting changes are shown in the Processing Results report.

For more information about this report, see *topic 5.7 Changing WBS Data*.

5.7 Changing WBS Data

5.7.2 Moving WBS Legs

You might need to move a WBS leg from one parent to another, perhaps as the result of a project reorganization. Use this utility to move selected WBS elements under a new parent.

Be sure to back up your data before using this utility!

To move WBS legs:

- Click the ⬛ button.

- Use the Move WBS Leg option on the Utilities menu.

- Click the leg to be moved in the WBS Tree, drag it to the new location in the Tree, and drop it (releasing the mouse button).

Moving WBS Elements Using the Button or Menu

Note that this button and menu option are only available if you have been granted WBS Leg Utility access. Once you click the button or choose the menu option, MPM displays the Move WBS Leg Options dialog box.
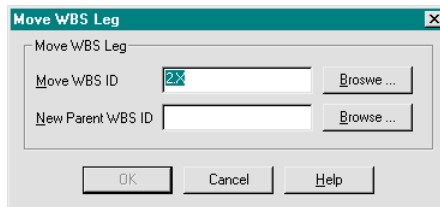
***Figure A**. Move WBS Leg Options*

Specify the WBS to be moved, and its new parent. If you are unsure of either entry, click Browse to find the desired WBS elements. Note that you must enter both fields; if either field is blank, OK is unavailable. If you have selected a WBS element or leg, the ID is shown as the default to move, which you can override if desired.

Moving WBS Elements Using the Mouse

You can also move WBS elements using the drag-and-drop method with the mouse. In the WBS Tree, click on the desired WBS element/leg and while keeping the mouse button down, drag it to the desired new parent, and drop it (release the mouse button). MPM displays a confirmation message.

How MPM Moves WBS Elements

MPM moves the WBS element to be the last child in the hierarchy on the new parent. All existing BCWS, ACWP, BCWP, and ETC values are unrolled from the old parent's hierarchy; all values are then rolled up into the new parent's hierarchy. All date ranges are adjusted (even if there are no existing estimates).

If the new parent has a value for recur/nonrecur, Fee Limit or Fee% that is different from the parent being moved, the values are changed down the leg and resulting changes are shown in a processing report.

If the new parent has a CLIN, the WBS leg being moved becomes associated with the new CLIN. If the element being moved has a CLIN, the CLIN is cleared and resulting changes are shown in a processing report.

5.7 Changing WBS Data

5.7.3 Renaming WBS Legs

You might need to rename a WBS leg, perhaps as the result of a reorganization. Use this utility to select all the WBS elements under the current parent and rename those elements as directed.

Be sure to back up your data before using this utility!

To rename WBS legs, do one of the following:

- Click the ![icon] button.

- Choose the Rename WBS Leg option on the Utilities menu

- (This utility has no mouse equivalent.)

Note that this button and menu option are only available if you have been granted WBS Leg Utility access. Once you click the button or select the menu option, MPM displays the Rename WBS Leg Options dialog box.
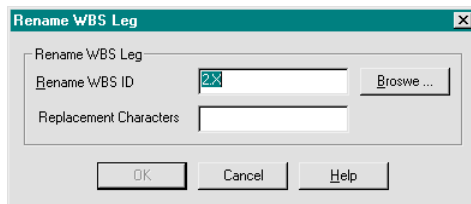
Figure A. *Rename WBS Leg Utility*

Enter the WBS element to rename and the replacement characters for the ID (since you must keep WBS IDs unique, you must give MPM a way to keep the new leg unique). If you are unsure of the desired ID, use the Browse button to find them. If any field is blank, OK is unavailable. If you have selected a WBS element or leg, the ID is shown as the default, which you can override if desired.

How MPM Renames WBS Legs

See topi*c 5.7 Changing WBS Data* for information about specifying replacement characters. The WBS ID of the parent element in the selected leg is renamed with the new WBS ID. For each child element in the leg, MPM replaces the same number of characters as was contained in the old parent ID. If the natural progression in the naming process would result in a duplicate WBS ID, MPM adds the old name at the end of the new name, and reports the solution in the Processing Results Log.

All detail estimates, milestones, task descriptions, BOEs, actuals, and other associated data are relabeled for the leg being renamed.

5.7 Changing WBS Data

5.7.4 Sorting WBS Legs

You might need to sort a WBS leg after renaming or copying WBS data. Use this utility to select all the WBS elements under the current parent and reorder those elements as directed.

Be sure to back up your data before using this utility!

To sort your WBS data:

1. Choose the Reorder WBS Leg option on the Utilities menu.

Note that this menu option is only available if you have been granted WBS Leg Utility access. MPM displays the Reorder WBS Leg dialog box shown in Figure A.
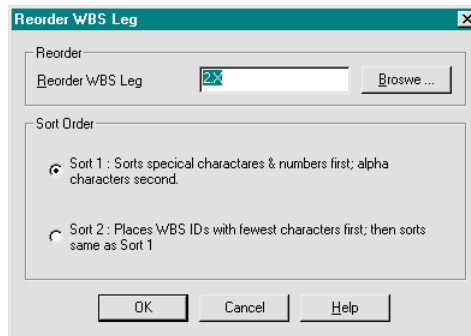
Figure A. *Reorder WBS Leg Utility*

2. Click on the desired WBS leg to reorder. Click Browse to find the WBS if you are unsure.

  ■ To sort the entire project, select either the Project Level WBS ID in the WBS Tree or WBS Sheet. All WBS IDs in the project are reordered.

  ■ To sort just one WBS leg, select the desired WBS leg in the WBS Tree or WBS Sheet.

3. Select the desired type of sort.

If the ID is blank, OK is unavailable. If you have selected a WBS element or leg, the ID is shown as the default, which you can override if desired.

- ▪ **Sort 1: By Character** — This sort reorders the WBS elements by the characters in the WBS ID, regardless of the length of the ID. The elements are first sorted by the first character in the ID, then the second, etc. This sort works best with alphanumeric WBS IDs but not with numeric IDs, as you can see in the example below.

- ▪ **Sort 2: By Length** — This sort reorders the WBS elements first by the length of the ID (shortest IDs first), then by character as in Sort 1. This sort works best with numeric IDs (see example below).

4. To accept the settings, click OK.

How MPM Sorts WBS Legs

MPM reorders the selected WBS leg(s) using the sort method selected. For example,

Sort Method	Alpha IDs	Numeric IDs	Alpha-numeric IDs	Alpha-num w/ special chars
Sort 1: by character	A AAC ABC CC Z	1 10 2 20 5	100 10AA 10B 2 21	10-MATL 160-PUR 2-ENGR 4-DESIGN 7-MFG
Sort 2: by length	A Z CC AAC ABC	1 2 5 10 20	2 21 100 10B 10AA	7-MFG 2-ENGR 10-MATL 160-PUR 4-DESIGN

5.8 Changing the WBS Display

There are several ways to change the WBS window display. You can change the window to display only the information you are currently working with, by selecting the WBS legs to edit or view, displaying the columns to edit, or changing window characteristics such as pane size. See *Getting Started* for complete details.

Filtering the WBS Legs

You can filter the WBS legs to display only the data you need to see. To do this, you can expand or collapse the legs on the WBS Tree (the left window pane) or use Filter on the Tools menu to select a subset of WBS legs using any of the fields shown in Figure A. Selecting one of the menu options brings up a dialog box with a drop-down list box of available values to choose from. In Figure A, the user filtered to see only WBS starting in the date range 1-Jan-96 to 1-Jul-96.

Figure A. *Filtering WBS legs by date range.*

Notice in the WBS Tree that some of the check mark boxes now show the 🔽 **Filter** symbol.
This indicates that only some of the WBS elements in those legs are being displayed, and some have been filtered out.

Expanding and Collapsing WBS legs

The Expand/Collapse Box shows whether the WBS displays all of the sub-elements under a WBS element. To expand an entire WBS leg, highlight the parent and press Ctrl+E. To expand the entire WBS Tree, highlight the Project Level WBS and press Ctrl+E.

A plus sign ⊞ indicates that the WBS is collapsed and there are lower level WBS children that are not currently displayed.

A minus sign ⊟ indicates that the WBS is expanded and all children are displayed.

The lack of an Expand/Collapse Box indicates the element has no children.

The Expand/Collapse Box ⌐ ⌐ The Select/Deselect Box

Loads the WBS Element and all its children

Does not load the WBS Element or its children

Load the WBS Element and selected children

Figure B. Expanding and Collapsing WBS

Selecting and Deselecting WBS Legs

To select or deselect which WBS elements to view, click the check mark box. MPM saves the status of which WBS elements are selected/deselected for the current project, so that the same selections are displayed the next time you open the project.

- Selecting a collapsed WBS element downloads the WBS element and *all* of its children and grandchildren.

- Selecting an expanded WBS element downloads just the selected WBS.

- Deselecting a collapsed WBS element releases the WBS element and its children and grandchildren from memory. You must select this element to download its data again.

Distributed WBS elements are not downloaded. See *Chapter 19: Distributed Projects* for more information about distributed projects.

Displaying and Hiding WBS Fields

The WBS fields appear as columns in the WBS Sheet. You can display or hide any or all of the columns, using Column Hide on the Format menu. To select a column, click in the column's heading. To select or deselect multiple columns, use the Shift and Ctrl keys.

5.9 Recommended WBS Reports

There are several standard MPM reports which you can use to check your WBS structure and see its coordination with other data.

- **WBS Indented Report** — Shows the WBS in outline (indented) format. Use conditioning to show particular WBS leg(s).

- **WBS Hierarchy** — Shows the WBS in tabular format. Use conditioning to show particular WBS leg(s).

- **Responsibility Assignment Report** — Shows the OBS cross-referenced with the WBS in a tabular format. Use conditioning to restrict WBS legs, elements or levels.

- **Milestone Bar chart** — Contains a combination milestone and Gantt chart with WBS elements shown as bars and milestones shown under the bars using the standard milestone symbols.

6
Integrated Planning -- An Overview

6.1 Introduction to Integrated Planning

To successfully complete a project, you must accurately track the projects schedule and budget. Accurate schedule and budget information lets you detect variances early and make informed adjustments as needed.

MPM provides a suite of Integrated Planning views that you use to track projects. You can establish a baseline for a project, maintain up-to-date estimates on the costs to complete the project, and set milestones to directly measure performance.

Three Views

There are three Integrated Planning views (see Figure A):

- **Baseline (BCWS):** You use the Baseline view to create and maintain the initial project plan.
- **Estimate to Complete (ETC):** You use the ETC view to calculate the estimated costs to complete a project. MPM can automatically generate the initial ETC as you create the Baseline. You can then edit the ETC data as required to reflect changes in the project.
- **Milestones:** You use the Milestones view to create, monitor, and measure performance for a WBS element. It presents the data in tables as well as in a Gantt chart.

Chapter Organization

This chapter describes the elements and actions common to the three views. The unique functions of each view are described in the following chapters:

Chapter 7: Estimating the Project Baseline
Chapter 8: Revising the Forecast (ETC)
Chapter 9: Tracking the Project Milestones
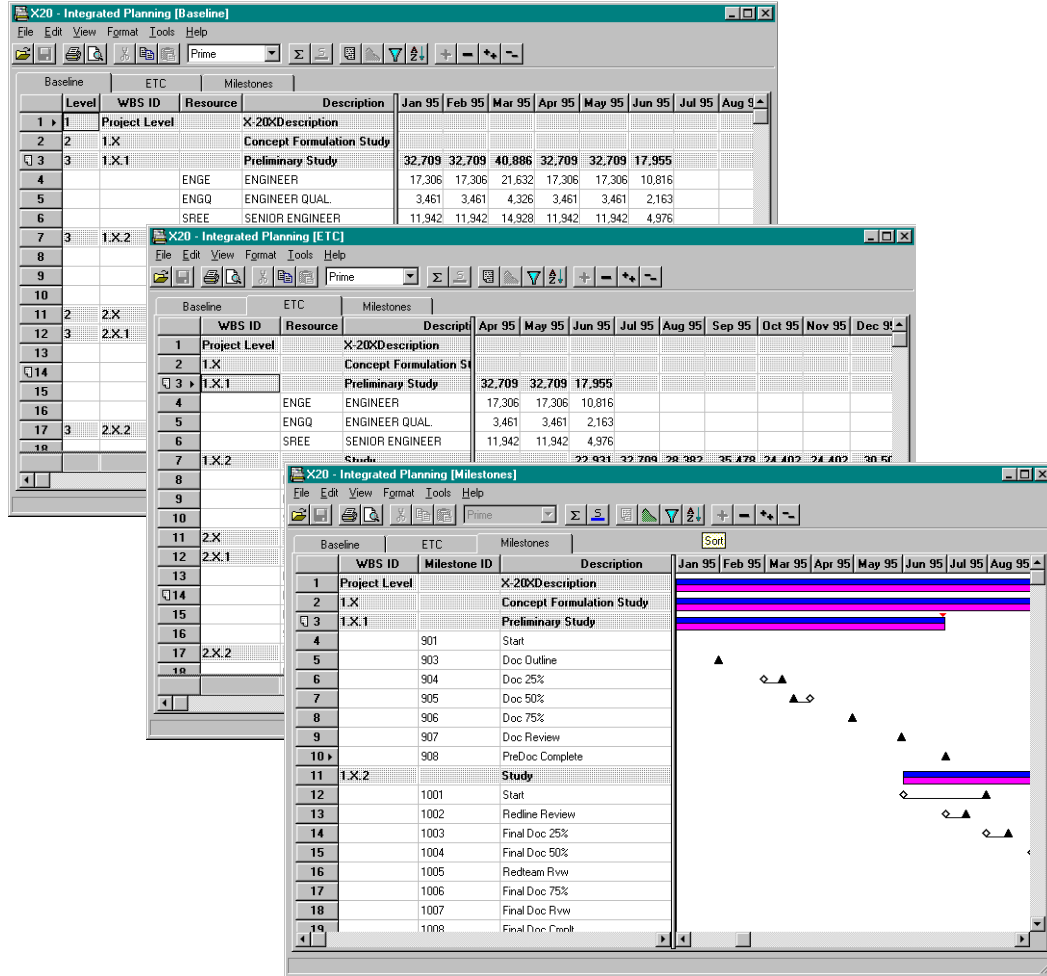
Figure A. *You use the Integrated Planning views to establish a baseline, estimate costs to complete, and track key milestones for projects.*

6.2 Accessing the Views

You access the three Integrated Planning views from the MPM Menu Manager. Before the view is displayed, you are given the opportunity to select a project, the WBS elements of the project that you want downloaded, and the type of view. You can also filter the WBS elements downloaded by Manager and Element Type.
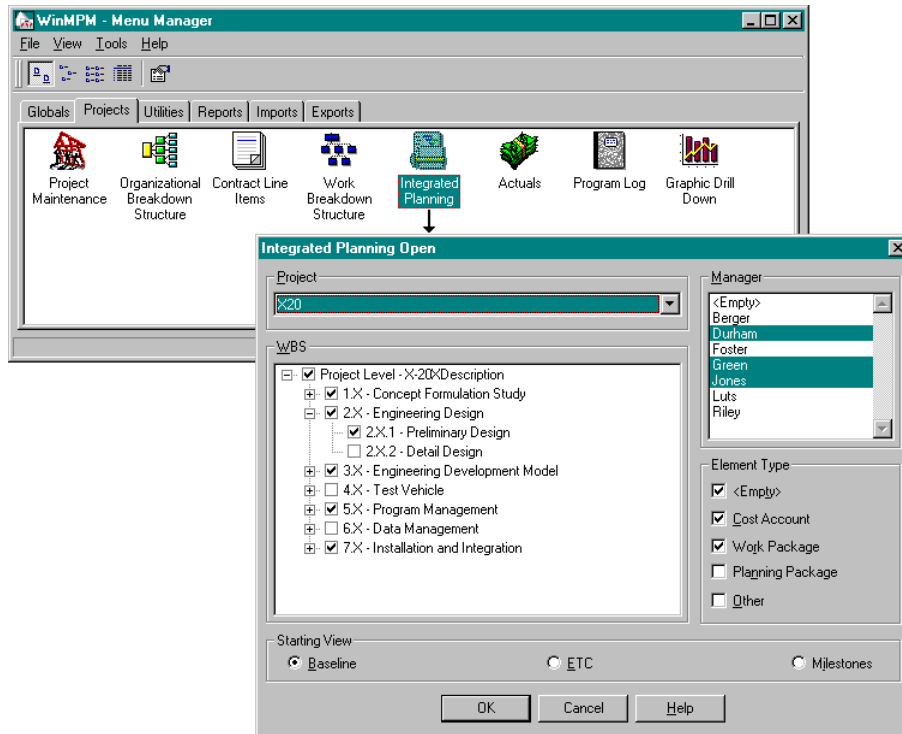
Figure A. *To access the Integrated Planning views, double-click the Integrated Planning icon on the Projects tab in the Menu Manager.*

Downloading Elements

When you select the options in the Integrated Planning Open dialog box, you are telling MPM which elements of the selected project to download. In large projects, this can be useful to reduce the amount of time it takes to open a view. Once you have opened a view, you are limited to working with the elements that were downloaded. If you want to work with other elements, you must reopen the view with the appropriate elements selected.

Procedure

To open an Integrated Planning view:

1. From the Menu Manager window, do one of the following:

   - Double-click the Integrated Planning icon.
   - From the File menu, select Projects|Integrated Planning.

   MPM displays the Integrated Planning Open dialog box shown in Figure A.

2. Select the project from the Project drop-down list box.

3. Select the WBS elements you want downloaded.

   For details on selecting WBS elements, see the next topic: *6.3 Selecting WBS Elements to Download*.

4. If appropriate, select one or more managers to be used as filters on the WBS elements downloaded.

   If you want to download elements that do not have a designated manager, select the <Empty> option. To select more than one manager, use the Shift+Click and Ctrl+Click combinations.

5. If appropriate, select the element types to be used as filters on the WBS elements downloaded.

   The element types are assigned to projects at the time the WBS structure is created. You must select at least one element type. Usually elements above the control account level are not assigned an element type. To download only those high-level elements, select the <Empty> option only.

6. Select a starting view.

7. To accept the settings and begin the download, click OK.

6.3 Selecting WBS Elements to Download

If you are working with a large project, downloading all WBS elements in the project may be time consuming. Using the WBS tree in the Integrated Planning Open dialog box, you can select the elements you want downloaded.

Click to expand and collapse an element

Click to mark element for downloading
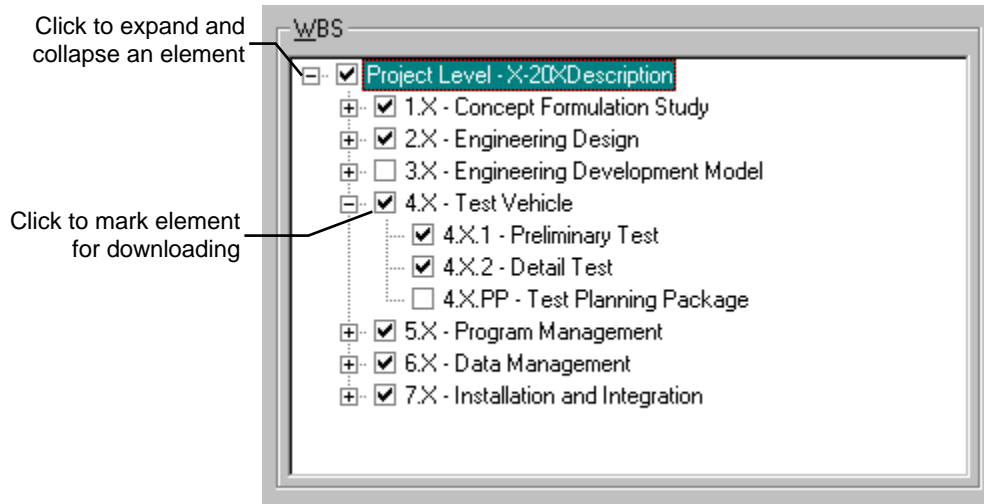
Figure A. *Use the WBS tree to select the elements you want downloaded.*

Selection Guidelines

Below are guidelines for selecting elements.

- If none of the elements are selected, MPM downloads all elements.
- If a collapsed element is selected, MPM downloads the element and all children of the element.
- If an expanded element is selected, MPM will download the selected element, but you must also select each of the child elements you want downloaded.
- Its possible to select children elements and not the parent elements, and MPM will download only the selected children elements.

Expand/Collapse Boxes

The table below describes how to expand, collapse, select, and deselect elements in the WBS tree.

To:	Do this:
Expand a WBS element to the next level	Click the expand box ⊞ next to the element to display.
Collapse a WBS element	Click the collapse box ⊟ next to the element
Select a WBS element	Click the select box ☑ next to the element to display a check mark.
Deselect a WBS element	Click the select box ☐ next to the element to remove the check mark.

6.4 Navigating the Views

The Integrated Planning window follows many of the standard Microsoft Windows conventions. You can:

- Size the window by dragging the borders and corners.
- Minimize and restore the window using the buttons in the upper right corner of the window.
- Horizontally scroll the left and right panes individually using the horizontal scroll bars in each pane.
- Vertically scroll the left and right panes at the same time using the vertical scroll bar at the right edge of the window. You cannot individually scroll the panes vertically.
- Change the size of the panes by dragging the separator bar between the two panes.
- Switch among the three Integrated Planning views by selecting the tabs.
- Access the more frequently used commands from the Toolbar.
- Hide the Toolbar and Status Bar using the commands under the View menu.

WBS Elements

All three views display the WBS elements. The elements are shaded gray. These serve as the foundation for the views. They cannot be edited in the Integrated Planning windows.

In the Baseline and ETC views, resource estimates are listed under each WBS element. In the Milestones view, milestones are listed under each WBS element.

Searching and Going to WBS Start

If you are working with a large WBS, you may have hundreds of resource estimates defined. To help you find a specific entry, MPM provides a search feature for the Integrated Planning windows. You can search on any text string, and restrict the search by matching for a whole cell and/or case. To use the search feature, choose Find from the Edit menu.

If your project spans several years, you can go to the first value for a WBS element using the Go to WBS Start feature. To use the feature, press Ctrl+G or select Go to WBS Start from the Edit menu.

For more information on using these features, see the *MPM Getting Started* manual.

Use tabs to
switch views

Left pane

Drag separator bar to
change size of panes

Right pane

	WBS ID	Resource	Description	Apr 95	May 95	Jun 95	Jul 95	Aug 95
1	Project Level		X-20XDescription					
2	1.X		Concept Formulation Study					
3	1.X.1		Preliminary Study	1,280.00	1,280.00	700.00		
4		ADMIN	ADMINISTRATOR	480.00	480.00	200.00		
5		ENGE	ENGINEER	640.00	640.00	400.00		
6		ENGQ	ENGINEER QUAL.	160.00	160.00	100.00		
7	1.X.2		Study			900.00	1,280.00	1,120.00
8		ENGE	ENGINEER			400.00	640.00	480.00
9		ENGQ	ENGINEER QUAL.			100.00	160.00	160.00
10		SREE	SENIOR ENGINEER			400.00	480.00	480.00
11	2.X		Engineering Design					
				2,080.38	2,080.47	3,000.38	2,720.00	2,720.00

Scrolls both
panes vertically

Scrolls left pane
horizontally

Scrolls right pane
horizontally

Figure A. *The Integrated Baseline window conforms to the Microsoft
Windows conventions.*

6.5 Viewing Totals

MPM displays totals for estimates in the WBS element rows, in the Total Values row at the bottom of window, and in a separate Totals window. You can view the totals for a WBS element or resource estimate in any of the views by displaying the Total window shown in Figure B. If you select a WBS element row, MPM shows the totals for that WBS element.

Figure A. The WBS element rows show rolled up totals for all resource estimates under the element.

Rollup Totals
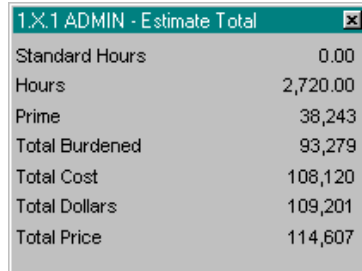
The totals displayed in the WBS element rows are generated by MPM's rollup feature. Each time you enter a new estimate, MPM updates the totals as long as the rollup processing toggle is set to on.

During the initial data entry phase on a large project, you may not want MPM to recalculate totals after every entry. You can turn the rollup feature off and on from Project Maintenance. For more information on the rollup feature, see *Chapter 2: Creating and Maintaining Project Settings.*

Burdened Totals for WBS Elements and Resource Estimates

The Totals window shown in Figure B displays the burdened totals for a WBS element or a resource estimate. To display the window, do one of the following:

- Click the Totals button $\boxed{\Sigma}$ in the Toolbar.
- Open the View menu and choose Total Window.

1.X.1 ADMIN - Estimate Total	⊠
Standard Hours	0.00
Hours	2,720.00
Prime	38,243
Total Burdened	93,279
Total Cost	108,120
Total Dollars	109,201
Total Price	114,607

Figure B. Total window

The title bar of the window displays the name of the WBS element or the WBS element and resource estimate selected. In Figure B, the totals shown are for the Administrator resource under the 1.X.1 WBS element. Once opened, the Total window floats on top of the Integrated Planning windows so it is always visible. If you want to move the window to another location on the screen, click on the title bar of the window and drag it.

Formulas

MPM uses the following formulas to calculate the estimate totals displayed in the Total window:

Total Burdened	=	Prime + Overhead
Total Cost	=	Total Burdened + G&A
Total Dollars	=	Total Cost + COM
Total Price	=	Total Dollars + Fee

7

Estimating the Project Baseline

7.1 Introduction to Estimating the Project Baseline

How you develop baseline estimates for a project will depend on the WBS you are using and whether you are developing the baseline in a proposal or contract environment.

Estimating in a Proposal Environment

In a proposal environment, there is no requirement that estimating be done at a particular level of the WBS. With MPM, you have the flexibility to estimate on any level with any element within your WBS structure. However, it is recommended that estimating for proposals be done at the level at which you would manage a project, usually the work package level. Doing this eliminates a great deal of duplication of effort when you move from proposal to contract once the award is made. You can use the proposal baseline as the management tool for the contract setup.

Estimating in a Contract Environment

In a contract environment, work content typically is estimated at the lowest level of the WBS. This lowest level of effort usually is assigned to a single performing organization responsible for an element of work. In government contracting, this element of work is referred to as the work package.

Baseline and ETC Relationship

MPM lets you create a Baseline estimate and an Estimate to Complete (ETC). The two estimates allow you to compare your original plan against the actual progress on a project. MPM gives you the option to create the initial ETC as you create the baseline estimate. For information on creating the ETC as you create the baseline estimate, see topic *7.3.1 Saving Estimates*.

Accessing the Baseline View

To access the Baseline View:

1. Click the Projects tab in Menu Manager and do one of the following:

- Double-click the Integrated Planning icon as shown in Figure A.
- Open the File|Projects menu and choose Integrated Planning.

2. Select the WBS elements you want downloaded.

3. Select Baseline as the starting view.

For details on opening the Baseline view, see *Chapter 6: Integrated Planning – An Overview*.
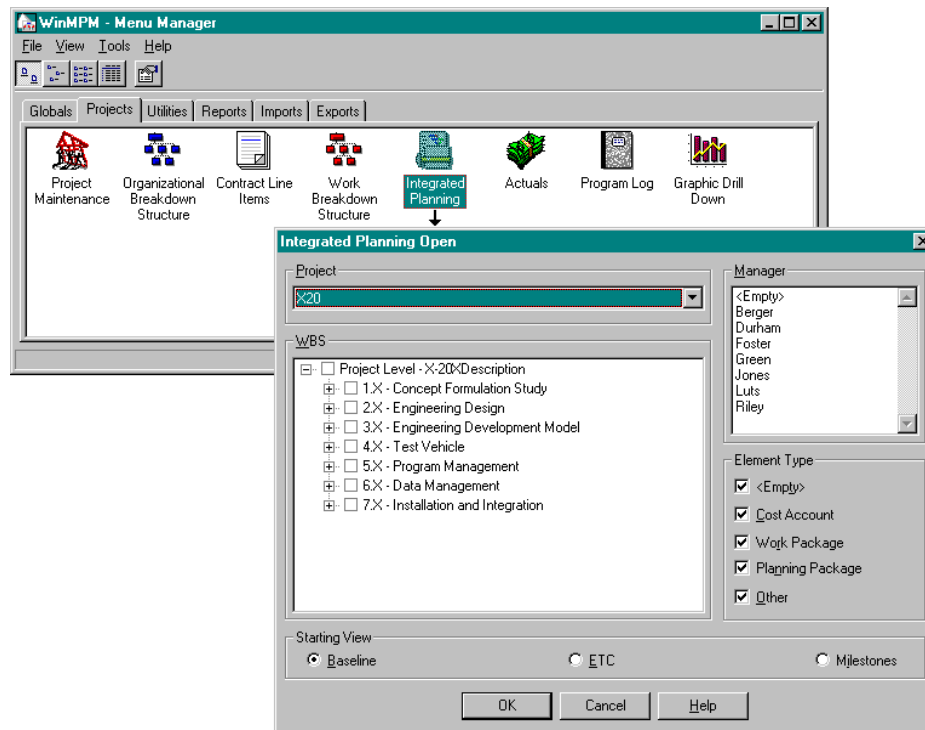
Figure A. *To open a Baseline view, select Integrated Planning from the Menu Manager.*

7.2 Orientation to the Baseline View

The Baseline view is divided into two panes:

- The Resource Sheet on the left
- The Values Sheet on the right
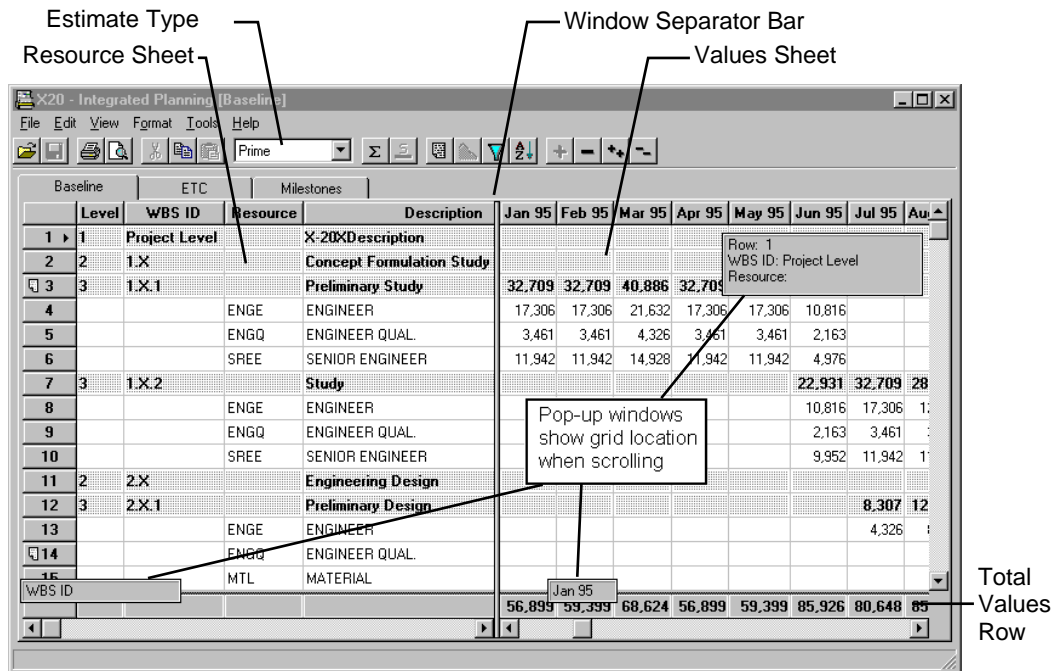
Figure A. Integrated Planning Baseline view

Resource Sheet

The Resource Sheet displays information about the WBS elements and their resources. You can scroll the window horizontally to bring columns into the viewing area, and vertically to bring WBS elements and resources into the viewing area. Initially, only the most important columns are displayed. You can display and hide columns by choosing the Column Hide command under the Format menu. For more information on displaying and hiding columns, see topic *7.8 Changing the Baseline Display*.

The WBS elements displayed in the view are taken from the WBS you defined for the project. You cannot edit the WBS elements in this view.

Values Sheet

The Values Sheet displays the timephased values for the WBS elements and their resources. You control the type of data displayed by selecting an estimate type from the Toolbar. The values displayed for a WBS element are the totals of the values displayed for the resources under the WBS element. You can scroll the window to bring columns into the viewing area. You can control the time span represented by each column (month, quarter, year) by choosing Periods from the View menu.

Total Values Row

The Total Values Row at the bottom of the Values sheet displays totals for each period for all currently displayed WBS elements and resources. However, if the estimate type is set to Units, totals are not shown.

Multiple Windows

You can open more than one Baseline view if you wish. To open another view, do one of the following:

- Click the Open button ![icon] in the Toolbar.
- From the File menu, choose Open.

Before You Begin

Before you can define a baseline estimate, the following tasks must have been completed:

- A Work Breakdown Structure (WBS) must have been created for the project. (See *Chapter 5: Creating the WBS*.)
- A burden template must have been created for burdening to occur. (See *Chapter 5: Defining Burden Templates* in the *MPM Globals* manual.)
- Resources and their rates must have been defined. (See *Chapter 6: Defining Resources* in the *MPM Globals* manual.)

7.3 Adding Resource Estimates

You build a baseline estimate by adding resource estimates to the WBS elements in a project. To add a resource estimate, you select a WBS element and choose Insert Estimate from the Edit menu. Estimates can not exceed a 10 year time span.

The combination of the WBS ID, Resource, Resource Department, and Overtime fields uniquely identify each estimate. If you wish, you can use the Overtime field to identify resources for different estimates by entering a one to four-letter code. You can then filter the display by the code. You can use this approach to enter different estimates for the same resource.

When adding the estimate values, it is useful to keep the Totals window open as shown in Figure A. The Totals window shows the burdened totals for the currently selected element or resource. To display the window, select Total Window from the View menu.

Figure A. *The Totals window shows the totals for the currently selected element or resource.*

Procedure

To add a new resource estimate:

1. Select an estimate type from the Estimate Type list box in the Toolbar.

2. Select a WBS element and do one of the following:

    ■ Select a resource code from the Resource drop-down list box in the WBS row.

    ■ Press the Insert key.

    ■ Select Insert Estimate from the Edit menu.

MPM inserts a line below the existing estimates for the WBS element and highlights the text in blue to indicate the line is in edit mode.

3. Select a resource from the drop-down list.

MPM automatically fills in the Resource Description and Resource Department fields. The Resource Department field is filled in with the performing department based on the department entered when the WBS was created.

4. If you wish, you can select a different resource department from the drop-down list box.

For example, an Engineer Resource may normally be assigned to the performing organization but may be loaned to a different department for a specific work package. To show this assignment, you would select the department borrowing the resource.

5. (Optional) Select an identifier from the XREF-EST field drop-down or enter a new one.

The XREF-EST field is an optional 20-character user-defined field that can be used as a wild card for reporting, exporting, or onscreen filtering to match a specific group of data. You can define the XREF-EST field on the Baseline and ETC tabs in Integrated Planning or the Actuals screen. You cannot rename the XREF-EST field label.

6. If appropriate, make an entry in the Overtime field.

The Overtime field can be used to calculate overtime for a resource, or as a reference field used to create more than one estimate for a resource. For more information on using this field, see topic *7.3.2 Using the Overtime Field*.

7. Enter the Start and Complete dates for the resource.

MPM accepts most common date formats, then converts them to the dd-mmm-yy format.

8. Note the rate table and burden template assigned to the resource. These fields typically are read-only unless the Rate Table Override option and Burden Template Override option in the Project Maintenance window have been set to ON. For more information on these fields, see the descriptions in topic *7.5 Baseline Field Descriptions*.

9. To save the estimate, do one of the following:

- Click on another row in the window.
- Click on the Save button [icon] in the Toolbar.

- From the File menu, choose Save.
- Press Ctrl+S.

You may be prompted to confirm the save and asked if you want to save the changes to the ETC. For information on the Save options, see the next topic *7.3.1 Saving Estimates*.

7.3 Adding Resource Estimates
7.3.1 Saving Estimates

When you save data in the Integrated Planning views, how MPM responds depends on the Save options you set. The options control:

- If you must confirm save commands.
- If Baseline or Baseline and ETC data is saved.
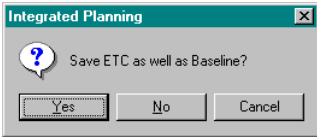
Confirming Saves

There is an option you can set that requires you to confirm changes you make anywhere in MPM if you move the focus away from the item being edited without first saving it. You can move the focus by clicking on another row, tabbing to another row, selecting File|Close or File|Exit, switching to another application, as well as several other ways.

You set the confirm option by choosing Options from the Tools menu in any of the application windows, selecting the General tab in the Options dialog box, and selecting Prompt Before Saving Modifications. For more information on this option, see the *MPM Getting Started* manual.

Three Baseline Save Options

When you are creating a baseline estimate, you can have MPM create the initial Estimate to Complete (ETC) at the same time. There are three Baseline save options available:

Option	Result
Save Baseline only	MPM saves the Baseline data only.
Save Baseline and ETC	MPM saves the Baseline data and saves the corresponding changes in the ETC data.
Prompt for ETC save	MPM saves the Baseline data and displays the dialog box below asking if you want to save the corresponding changes in the ETC data.

Procedure

To set the Baseline save options:

1. From the Tools menu, select Options.

   MPM displays the Options dialog box shown in Figure A.
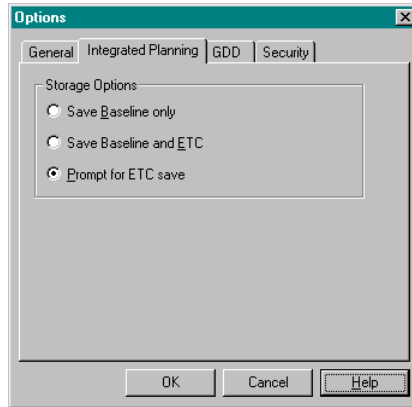
Figure A. *You can save Baseline changes to the ETC as well.*

2. Select the Integrated Planning tab.

3. Select the appropriate option.

4. To save your selection and close the dialog box, click OK.

7.3 Adding Resource Estimates
7.3.2 Using the Overtime Field

The Overtime field has several uses. It can be used to:

- Calculate overtime rates for resources
- Indicate different estimates for the same resource
- Enter code information specific to your operation

If you do not want to use the field for these purposes, you can leave the field blank.

Calculating Overtime Rates

If you want to calculate overtime rates for a resource, you can enter a numeric value in the Overtime field as shown in Figure A. MPM uses the value as a multiplier against the basic rate. For example, if overtime is billed out at one and one-half times the normal rate, you would enter the value as 1.5.

Figure A. *If you want MPM to calculate overtime, enter a numeric value.*

Note that to show overtime, you create two entries for the resource. In Figure A, two entries have been created for the Senior Engineer resource. One entry is used to calculate the basic rate; the other entry is used to calculate the overtime. Burdens for both the basic rate and overtime rate are calculated as straight time based on the burden template assigned to the resource.

Indicating Different Estimates

If you want to indicate different estimates for the same resource in the same resource department, the Overtime field can be used to distinguish the entries. The entry can be up to 20 characters and must contain at least one alpha character. When an entry in the Overtime field contains one or more alpha characters, it is interpreted as a reference code rather than a multiplier.

In Figure B, two entries have been made for the Senior Engineer resource. You could now filter the display to show one entry or the other.

***Figure B.** You can use the Overtime field to enter multiple estimates for the same resource.*

Another way to indicate different estimates is to use the XREF-EST field to filter information to match a specific group of data.

7.3 Adding Resource Estimates

7.3.3 Entering Estimate Values

After entering the resource information in the Resource Sheet, you can enter estimate values in the Values Sheet. You can select from the following estimates types:

- Standard Hours (Industrial Engineering Standard Hour)
- Hours
- Units
- EQP (Equivalent Persons)
- Prime (Resource Rate x Hours)
- Total Burdened (Prime + Overhead)
- Total Cost (Total Burdened + G&A)
- Total Dollars (Total Cost + COM)
- Total Price (Total Dollars + Fee)

Which ever estimate type you choose to enter, MPM calculates the other values automatically. This is one of MPM's most powerful features. You can view any of the values at any time by selecting from the Estimate Type drop-down list box in the Toolbar.

Estimate Total Window

When you are entering estimates, it is helpful to have the Estimate Total window open as shown in Figure A. You can open the window by clicking the Show Total Window button Σ in the Toolbar. For more information on the Total window, see *Chapter 6: Integrated Planning – An Overview*.

Entering a Value

To enter a value in the Values sheet:

1. Place the cursor in the cell where you want to enter the value.

2. Select an Estimate Type from the drop-down list box in the Toolbar.

3. Type in the value.

4. To save the entry:

- Click on another row in the window.

- Click on the Save button ![save] in the Toolbar.

- From the File menu, choose Save.

- Press Ctrl+S.

You may be prompted to confirm the save and asked if you want to save the changes to the ETC. For information on the Save options, see topic *7.3.1 Saving Estimates*.
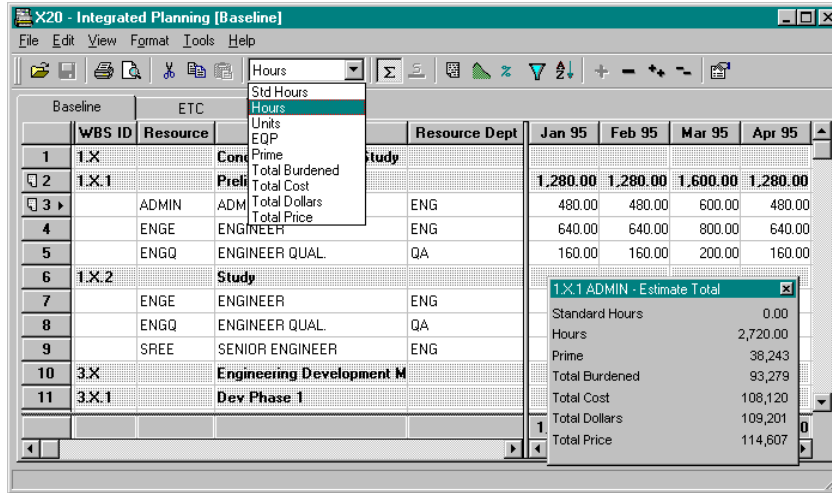
Figure A. *You can select the estimate type displayed in the Values sheet.*

Other Ways

There are two other ways you can enter estimates. They are covered in the following topics:

7.3.4 Entering Information Using Autofill
7.3.5 Entering Estimate Values Using Autospread

7.3 Adding Resource Estimates

7.3.4 Entering Information Using Autofill

Drawing on its similarity to a spreadsheet, MPM provides autofill features for replicating data across adjacent cells. In the Resource Sheet, you can autofill down a column. In the Values Sheet, you can autofill down a column and across a row. In both windows, you are restricted to autofilling within the resource estimates for a single WBS element. If you want to replicate resource estimates from one WBS element to another, you can use the Copy/Paste features. These are described in topic *7.6 Maintaining Estimate Data*.

Figure A. *You can use the autofill feature to replicate data across adjacent cells.*

Procedure

To autofill data in adjacent cells:

1. Select the source cell(s) and the adjacent target cell(s).

In the Resource Sheet window, you can only autofill down a column. In the Values Sheet window, you can autofill down a column and across a row.

2. To fill right, do one of the following:

    - From the Edit menu, select Fill Right.
    - Press Ctrl+R.

    To fill down, do one of the following:

    - From the Edit menu, select Fill Down.
    - Press Ctrl+D.

7.3 Adding Resource Estimates
7.3.5 Entering Estimate Values Using Autospread

Instead of manually entering estimate values for a resource estimate, you can use MPM's Autospread feature to automatically spread values. Autospread distributes a total value across a specified period of time using predefined or custom curves. This topic describes how to apply Autospread curves. For information on the predefined curves and how to create custom curves, see *Chapter 7: Defining Spread Curves* in the *MPM Globals* manual.

When you use Autospread to enter estimate values, MPM places the ⌇ symbol in the Estimate Type field. Double-clicking on the symbol will display the Autospread window.
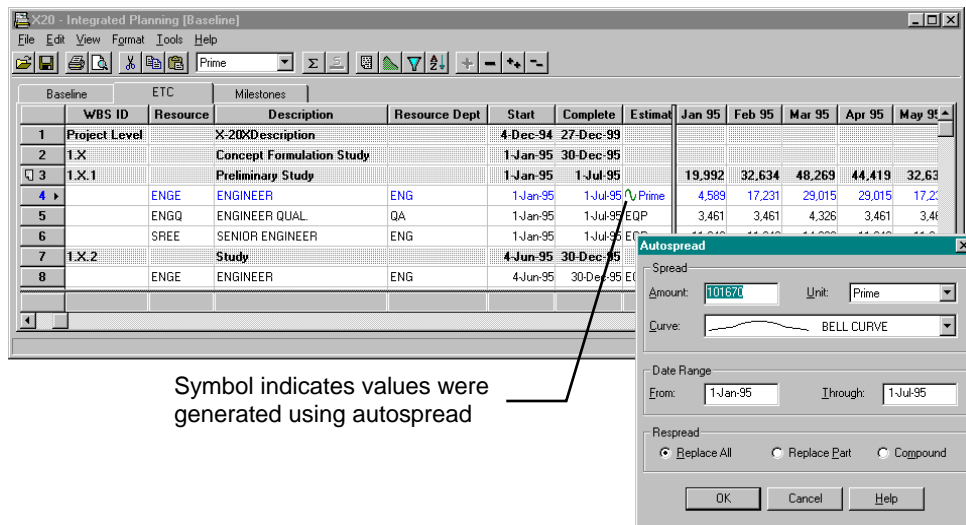
Figure A. *The Autospread feature automatically distributes values across a specified time period.*

Respread Options

When you apply the Autospread function to existing estimates, you can select one of three options.

- **Replace All:** replaces all existing values for the estimate with the value being respread.
- **Replace Part:** only replaces values for the periods between the From and Through dates, and leaves any values outside that range alone.

■ **Compound:** adds new amounts to any existing values for the periods defined by the From and Through dates.

Procedure

To enter values using the Autospread feature:

1. Select a resource by clicking on the row number at the left of the Resource Sheet grid, or select a range of dates in the Values Sheet grid for the resource.

You will have the opportunity to change the range of dates in the Autospread dialog box.

2. To display the Autospread dialog box, do one of the following:

■ Click the Autospread button in the Toolbar.

■ From the Tools menu, choose Autospread.

■ Press Ctrl+A.

MPM displays the Autospread dialog box shown in Figure A.

3. Enter the amount you want distributed.

4. Enter the units you want to use.

5. Select the curve to apply.

6. Enter different From and Through dates if appropriate.

If you are entering a new estimate, MPM displays the WBS Start and Complete dates. If you selected a range of columns, the first and last column dates are displayed.

7. Select a Respread option.

8. To apply the Autospread settings, choose OK.

7.4 Creating Apportioned Estimates

An apportioned estimate is an estimate based on a percentage of an existing baseline or ETC estimate. You can use the same base estimate for more than one apportioned estimate. You cannot base an apportioned estimate on another apportioned estimate.

Characteristics of Apportioned Estimates

An apportioned estimate has the following characteristics:

- It has the same start and complete dates as the base estimate.
- The values are calculated using the same estimate type and estimate curve as the base estimate.
- Any changes made to the base estimate are automatically propagated in the apportioned estimate.

Apportioned estimates are displayed towards the bottom of the list of resource estimates for each WBS element, just before any replan estimates. They are flagged with a percent symbol ( ) next to the resource code.

Figure A. *You can specify apportioned estimates.*

Procedure

To create an apportioned estimate:

1. Select the base estimate from the baseline (or ETC) window and do one of the following:

    ■   Click the New Apportioned Estimate button ![%] in the Toolbar.

    ■   From the Tools menu, choose Create Apportioned Estimate.

    MPM displays the Apportioned Estimate dialog box shown in Figure A. Information about the base estimate is displayed in the top half of the dialog box. You use the bottom half of the dialog box to define the apportioned estimate.

2. Enter a valid WBS ID for which the estimate that will be created.

    You may also click the button at the end of the WBS ID field to select a WBS ID from a list.

3. Select a resource from the drop-down list box.

4. Select a department from the drop-down list box.

5. Enter an overtime multiplier or reference code if appropriate.

    For more information on using the Overtime field, see topic *7.3.2 Using the Overtime Field*.

6. Enter the percentage of the base estimate that is to be used to create the apportioned estimate values.

7. To have MPM calculate the estimates, click the Calculate ![Calculate >>] button.

8. To accept the new estimate and close the dialog box, click OK.

    MPM displays the new apportioned estimate at the bottom of the WBS ID.

7.4 Creating Apportioned Estimates

7.4.1 Special Guidelines for Apportioned Estimates

MPM handles apportioned estimates differently than regular estimates. Below are a number of guidelines describing how MPM works with apportioned estimates.

Importing Data

- If an import estimate record has the same key (WBS, Resource Code, Resource Department, Overtime) as an existing apportioned estimate, MPM will reject the imported record.

- You cannot import over an existing baseline or ETC apportioned estimate. If a base estimate is overwritten by an import, the apportioned estimate is recalculated per the new base estimate.

- If you import WBS schedule dates, MPM will not shift resources on an apportioned estimate to the new time period if the base estimate is not also shifted.

Exporting Data

An apportioned estimate may be exported from MPM in the same manner as any other estimate.

Estimating

An apportioned estimate may be retrieved and viewed or deleted. You may also edit the apportioned percentage of an existing estimate.

Estimating Utilities

- **Project Date Shift:** If the base estimate is shifted, MPM adjusts the apportioned estimates to be consistent with the base estimate. Apportioned estimates are not directly shifted by this utility.

- **Estimate Reprice**: MPM processes the base estimates first, then the apportioned estimates using the repriced estimates.

- **Estimate Adjust:** MPM processes the base estimates first, then the apportioned estimates as needed.

- **Estimate Rename:** Apportioned estimates can be renamed using this utility. This function also renames all associated Resource BOEs.

WBS Leg Utilities

- **Copy Leg:** Apportioned estimates cannot be copied.
- **Delete Leg:** When you delete a WBS ID, all apportioned estimates using base estimates within the deleted WBS are also deleted.
- **Rename Leg:** The WBS can be renamed and all appropriate relationships will be maintained.

WBS Rename

- You can rename the WBS and MPM will maintain all appropriate relationships.

7.5 Baseline Field Descriptions

The fields (columns) in the Resource Sheet provide information about the estimates. MPM displays <Required> in fields that are required. The WBS ID, Resource, Description, and Overtime fields uniquely define each estimate.

Most of the WBS fields can be displayed in the Baseline view. However, they cannot be edited and initially they are hidden in the view. The WBS fields are listed below. For more information on the fields, see topic *5.5 WBS Field Descriptions*.

The fields can be displayed or hidden using the Column Hide command on the Format menu. The most frequently used fields are described below.

WBS ID

The WBS ID is a unique ID assigned to each element of the WBS when the WBS is created. To edit this field, you must be in the Work Breakdown Structure window.

Resource

This is a unique code assigned to each resource at the time the resource is defined in the Resources and Burdens window. You can select a resource code from the drop-down list box. This field is required.

Description

The Description is entered for the element at the time the resource code or WBS is defined. To edit this field, you must be in the Work Breakdown Structure window or the Resources and Burdens window.

Resource Department

You can select a Resource Department from the drop-down list box. The field defaults to the Performing Organization department assigned to the WBS element. You may change the department from the default. The Resource Department list contains the Performing Departments, but Responsible Departments may also be entered.

XREF-EST

Use this optional 20-character user-defined field as a wild card identifier for reporting, exporting, or onscreen filtering to match a specific group of data.

You can define the XREF-EST field on the Baseline and ETC tabs in Integrated Planning or the Actuals screen. You cannot rename the XREF-EST field label.

Overtime

You can use the Overtime field as an overtime multiplier, or as a cross-reference field. For more information on this field, see topic *7.3.2 Using the Overtime Field*.

Start and Complete

The Start and Complete fields default to the WBS start and complete dates. You can enter different dates if you wish. The maximum time span is 10 years.

You can work around the 10-year limit by entering a resource estimate in 10-year increments. For example, assume your contract runs for 15 years. You could create two estimates for Resource A. The first estimate would span 10 years; the second estimate would span the remaining five years. To use this approach, at least one of the key fields (Resource Code, Resource Department, or Overtime) must be different in the two estimates.

Estimate Type

This field displays the estimate type that was last used to create the resource estimate's value. The field is read-only after the resource has been entered on the grid. If the values were generated by the Autospread function, MPM displays the symbol ∿ in the field.

Rate Table

This field specifies the rate table used to calculate the estimates. This field is usually read-only. However, if the Rate Table Override option is set to Yes in the Project Maintenance window, you can select a rate table from the drop-down list box.

Burden Template

This field specifies the burden template used to calculate the burden applied to the estimates. This field is usually read-only. However, if the Burden Template Override option is set to Yes in the Project Maintenance window, you can select a burden template from the drop-down list box.

You can define burden templates by department in the Organizational Breakdown Structure window, and by individual resource in the Resources and Burdens window. The burden template assigned to the resource takes precedence for estimating purposes. If there is no burden template defined for the resource, MPM will use the department burden template.

Efficiency

The Efficiency field applies only to the Standard Hours estimate type. All companies do not have established efficiency factors. If your company has established efficiency factors for various activities, the percentage factor is entered in this field.

For example, based on a given quantity and learning to date, it is anticipated that worker performance for a particular task is 90% or 90% productive. In this case, you would enter 90 in this field.

Scrap and Rework

The Scrap and Rework field applies only to the Standard Hours estimate type. All companies do not have established scrap and rework factors. If your company has established efficiency factors for various activities, the percentage factor is entered in this field.

For example, those tasks that must meet extremely close tolerances may have a high rejection and/or rework requirement. If 25% of all items must be rejected and/or reworked, the scrap and/or rework allowance provides for this estimate contingency. In this example, you would enter 25 in the field.

7.6 Maintaining Estimate Data

Most of the fields in the Baseline display are read-only, with the information pulled from other areas of MPM. The editable fields are:

- Resource
- Start
- Resource Department
- Rate Table (if override option is set
- Overtime
- Burden Template (if override option is set)
- Complete

The editable fields are shown in Figure A.

	Resource	Description	Resource Dept	Overtime	Start	Complete	Rate Table	Burden Template
1		X-20XDescription			4-Dec-94	27-Dec-99		
2		Concept Formulation Study			1-Jan-95	30-Dec-95		
3		Preliminary Study			1-Jan-95	1-Jul-95		
4	ADMIN	ADMINISTRATOR	ENG		1-Jan-95	1-Jul-95	1	ENG
5	ENGE	ENGINEER	ENG		1-Jan-95	1-Jul-95	1	ENG
6	ENGQ	ENGINEER QUAL.	QA	1.5	1-Jan-95	1-Apr-95	1	QA
7		Study			4-Jun-95	30-Dec-95		
8	ENGE	ENGINEER	ENG		4-Jun-95	30-Dec-95	1	ENG
9	ENGQ	ENGINEER QUAL.	QA		4-Jun-95	30-Dec-95	1	QA
10	SREE	SENIOR ENGINEER	ENG		4-Jun-95	30-Dec-95	1	ENG

Figure A. *There are several fields you can edit.*

Editing an Estimate

To edit a resource estimate:

1. Select the field you want to edit.

2. Make the change.

    When you change a field value, MPM changes the color of the resource estimate field text to blue indicating the estimate has been changed but not saved.

3. To save the change, do one of the following:

    ■ Click on another row in the window.

    ■ Click on the Save button 🖫 in the Toolbar.

    ■ From the File menu, choose Save.

    ■ Press Ctrl+S.

    You may be prompted to confirm the save and asked if you want to save the changes to the ETC. For information on the Save options, see topic *7.3.1 Saving Estimates*.

    If you do not want to save the changes, press Esc.

When you modify an estimate, all of the values are re-priced based on the current Global rates. The displayed values will be maintained and MPM will calculate the others. EQP is the exception. EQP will always recalculate based on hours, even if you are viewing EQP values.

Sub-Topics

Other editing functions are covered in the following sub-topics:

7.6.1 Copying and Pasting Estimates
7.6.2 Copying and Pasting Cells
7.6.3 Deleting Estimates and Cells

7.6 Maintaining Estimate Data
7.6.1 Copying and Pasting Estimates

You can copy and paste resource estimates from one WBS element to another WBS element using the Copy and Paste commands under the Edit menu. If you have two different projects in two Integrated Planning windows open, you can copy and paste estimates between the windows. Copying estimates is a fast way to enter new estimates when estimates are similar. You can also copy individual cells. Copying cells is described in topic *7.6.2 Copying and Pasting Cells*.

Figure A. *You can copy and paste estimates.*

Procedure

To copy and paste an estimate:

1. Select a single estimate by clicking on the row number in the left most column, or select multiple estimates by holding down the left mouse button and dragging across the row numbers.

If you select multiple estimates, they must be contained within the same WBS element. If you select multiple estimates across more than one WBS element, MPM will assume you want to copy the selected cells. For more information on copying cells, see topic *7.6.2 Copying and Pasting Cells*.

   2. Place the estimate(s) on the clipboard by doing one of the following:

- Click the Copy button.
- From the Edit menu, select Copy Estimate(s).
- Press Ctrl+C.

   3. Select the WBS element where you want to paste the estimate(s) and do one of the following:

- Click the Paste button.
- From the Edit menu, select Paste Estimate(s).
- Press Ctrl+V.

MPM may display a dialog box asking you to confirm the paste. Otherwise, the estimates are pasted immediately into the grid.

   4. To confirm the paste, choose Yes.

MPM may display a dialog box asking if you want to save the changes in the ETC as well. Otherwise, the estimates are pasted immediately into the grid.

   5. To save the changes to the ETC, choose Yes.

Cutting and Pasting

If you want to remove estimates from one WBS element and place them in another WBS element, you can use the Cut and Paste commands. The procedure is the same as copying and pasting, except you use the Cut command instead of the Copy command.

7.6 Maintaining Estimate Data
7.6.2 Copying and Pasting Cells

You can copy and paste resource estimate cells in the resource sheet and values sheet. If you have two Integrated Planning windows open, you can copy and paste cells between the windows. Copying estimates is a fast way to enter information into a resource estimate. You can also copy entire resource estimates. Copying estimates is described in topic *7.6.1 Copying and Pasting Estimates*.

Figure A. *You can copy and paste one or more cells.*

Procedure

To copy one or more cells:

1. Select the cell(s) you want to copy.

    To select more than one cell, hold down the left mouse button and drag across the cells.

2. Place the cell(s) on the clipboard by doing one of the following:

- Click the Copy button.

- From the Edit menu, select Copy Cell(s).

- Press Ctrl+C.

3. Select the cell(s) where you want to paste the information (if you are pasting more than one cell, the paste range must be the same size as the range copied) and do one of the following:

- Click the Paste button.

- From the Edit menu, select Paste Cell(s).

- Press Ctrl+V.

MPM may display a dialog box asking you to confirm the paste. Otherwise, the estimates are pasted immediately into the grid.

4. To confirm the paste, choose Yes.

MPM may display a dialog box asking if you want to save the changes in the ETC as well. Otherwise, the estimates are pasted immediately into the grid.

5. To save the changes to the ETC, choose Yes.

Cutting and Pasting

If you want to remove cells from one WBS element and place them in another WBS element, you can use the Cut and Paste commands. The procedure is the same as copying and pasting, except you use the Cut command instead of the Copy command.

7.6 Maintaining Estimate Data
7.6.3 Deleting Estimates and Cells

You can delete an entire estimate, individual monthly estimates, or a cell or group of adjacent cells. Adjacent cells can run across one or more WBS elements.

Deleting Estimates

To delete one or more resource estimates:

1. Select a single estimate by clicking on the row number in the left most column, or select multiple estimates by holding down the left mouse button and dragging across the row numbers.
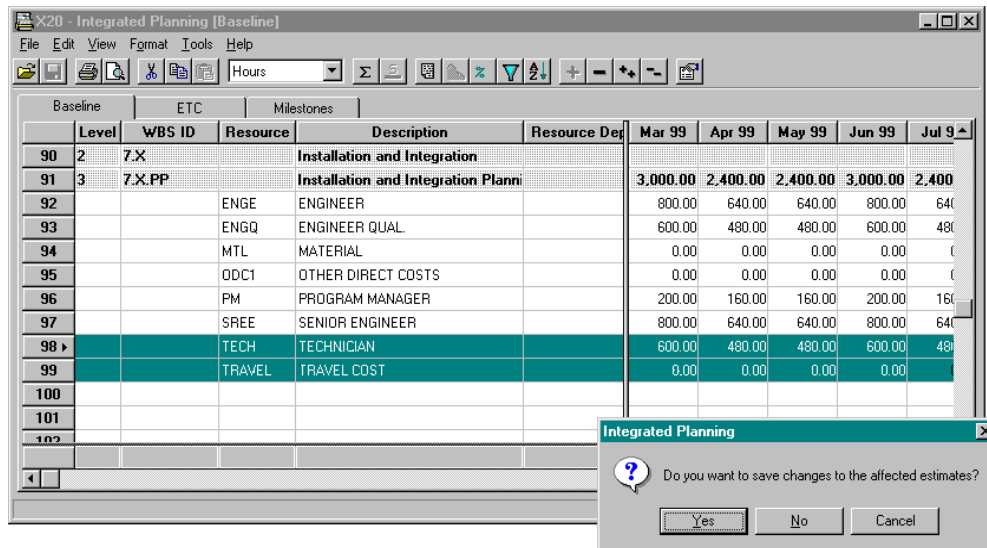
Figure A. *You can delete one or more estimates.*

2. To delete the estimate, do one of the following:

    ■   From the Edit menu, choose Delete Estimate(s).

    ■   Press the Delete key.

    Depending on the options set, MPM may ask you to confirm the delete and ask if you want to make the same changes to the ETC, or immediately delete the estimate.

Deleting Cells

To delete one or more cells:

1. Select the cell(s) you want to delete.

To select more than one cell, hold down the left mouse button and drag across the cells.
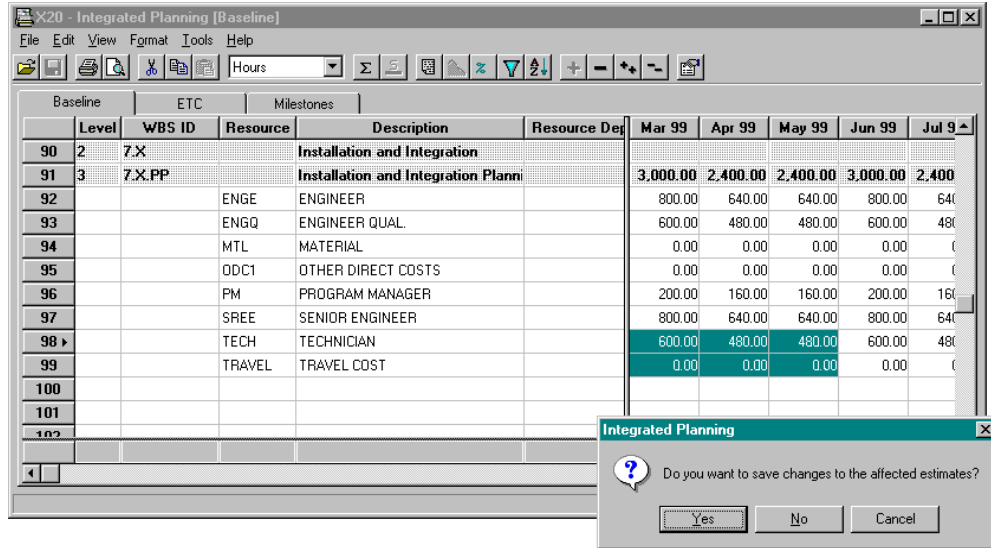
Figure A. *You can delete one or more cells.*

2. To delete the cell(s), do one of the following:

- From the Edit menu, choose Delete Cell(s).
- Press the Delete key.

Depending on the options set, MPM may ask you to confirm the delete and ask if you want to make the same changes to the ETC.

7.7 Adding, Editing, and Viewing Task Descriptions

When you create a WBS for a project, you can add descriptions for each of the WBS elements. If a WBS element has a task description, MPM displays the ▦ symbol to the left of the row number for the element. In Figure A, row 16 shows this symbol. A task description is a free-form description of the element. You can view the description by double-clicking the icon or choosing Task Description from the Tools menu.

If an element does not currently have a description, you can add a description from the Integrated Planning window.
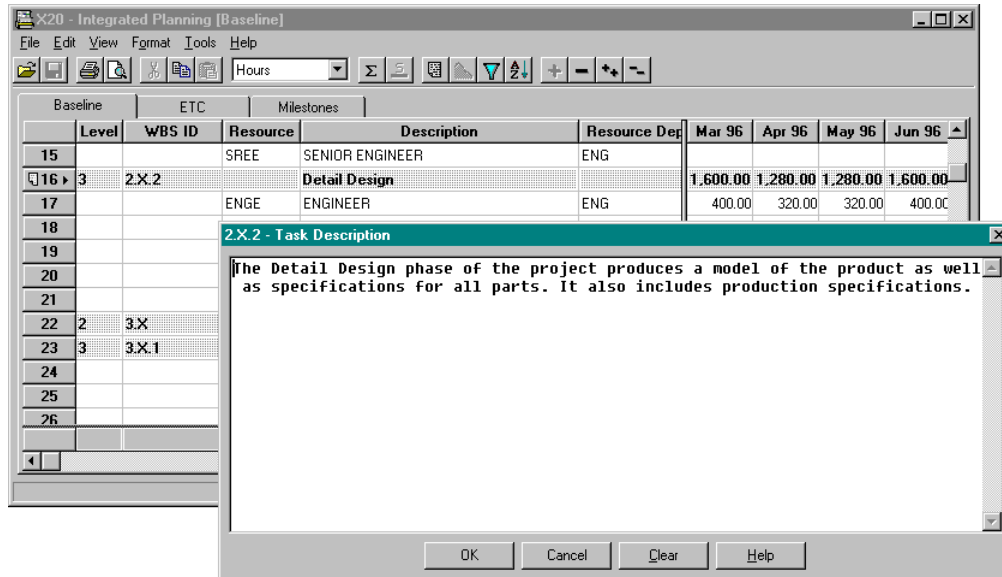
Figure A. *You can add, edit, or view a description for a WBS element or summary.*

Viewing and Editing a Task Description

To view or edit a task description, do one of the following:

- Double-click the ▦ icon next to the WBS element row number.
- Select the WBS element or summary and choose Task Description from the Tools menu.

When MPM displays the Task Description window, make any edits required. To save the changes, click OK.

Adding a Task Description

To add a description for a WBS element:

1. Select the WBS element and choose Task Description from the Tools menu.

    MPM displays the Task Description dialog box shown in Figure A.

2. Enter a description.

    The description can be up to 100 lines long.

3. To accept the description, choose OK.

7.8 Changing the Baseline Display

The Baseline display follows the standard MPM conventions for grids. The tools available for changing the display are described briefly in this chapter. For more information on changing the display, see the *MPM Getting Started* manual.

Filtering Data

Filtering is used to limit the amount of data displayed in the grid. You can apply a filter to the Baseline data by clicking on the Filter button ▼ or by choosing Filter from the Tools menu. MPM displays the Filter dialog box shown in Figure A where you can type in an entry or select an entry from the drop-down list box.
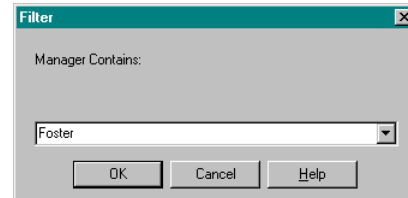
Figure A. *Filter dialog box*

The filter function filters all resource estimates. You can apply one filter at a time. They are not cumulative. To display all resource estimates, select All Data from the drop-down list box in the Filter dialog box.

Hiding and Showing Estimates

You can expand and collapse the resource estimates under each WBS element using the Toolbar buttons ➕ ➖ ➕ ➖ shown below or the commands under the Tools menu.

Displaying and Hiding Columns

You can display and hide any combination of columns using the Column Hide command under the Format menu. In the Column Hide dialog box shown in Figure B, you can select and deselect columns to hide using the Shift+Click and Ctrl+Click combinations. Selected columns will be hidden in the display.
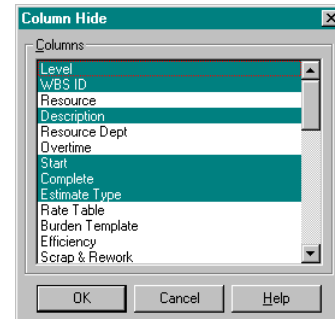
Figure B. *Hiding columns*

Sorting WBS Elements

You can sort on the WBS elements, but not the resource estimates in a Baseline view. Sorts apply to all resource estimates regardless of the current selection. To sort the WBS elements, click the Sort button ![sort icon] in the Toolbar, or choose Sort from the Tools menu. MPM displays the Sort dialog box shown in Figure C. To return the display to its original order (by WBS ID), choose Reset in the Sort dialog box.
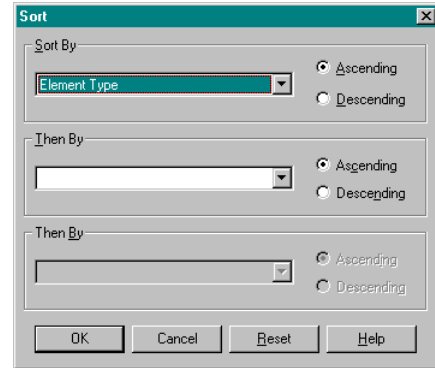
Figure C. Sort dialog box

Changing the Periods

You can change the periods displayed in the Values sheet columns to month, quarter, or year. To select a period, choose Period from the View menu.

Showing Apportioned Estimates

To show apportioned estimates, choose Apportioned Estimates from the View menu. The estimates are displayed at the bottom of the WBS elements, but before the Replan estimates. For more information on Apportioned Estimates, see topic *7.4 Creating Apportioned Estimates*.

Show Replan Estimates

To show replan estimates, choose Replan Estimates from the View menu. The estimates are displayed at the bottom of the WBS elements and after the Apportioned estimates. For more information on Replan estimates, see *Chapter 12: Replanning Projects*.

7.9 Basis of Estimates

Basis of Estimates (BOEs) describe the methodology used to estimate the resources included in a work package. They are a text narrative and cannot exceed 100 lines.

You can create BOEs for resources and for WBS elements. There are two types of BOEs: Resource and Summary. When a BOE has been defined for a resource, a BOE symbol is placed in front of the row number. To edit an existing resource BOE, you can double-click on the symbol. Resource Basis of Estimates are described in this topic. Summary Basis of Estimates are described in the next topic.
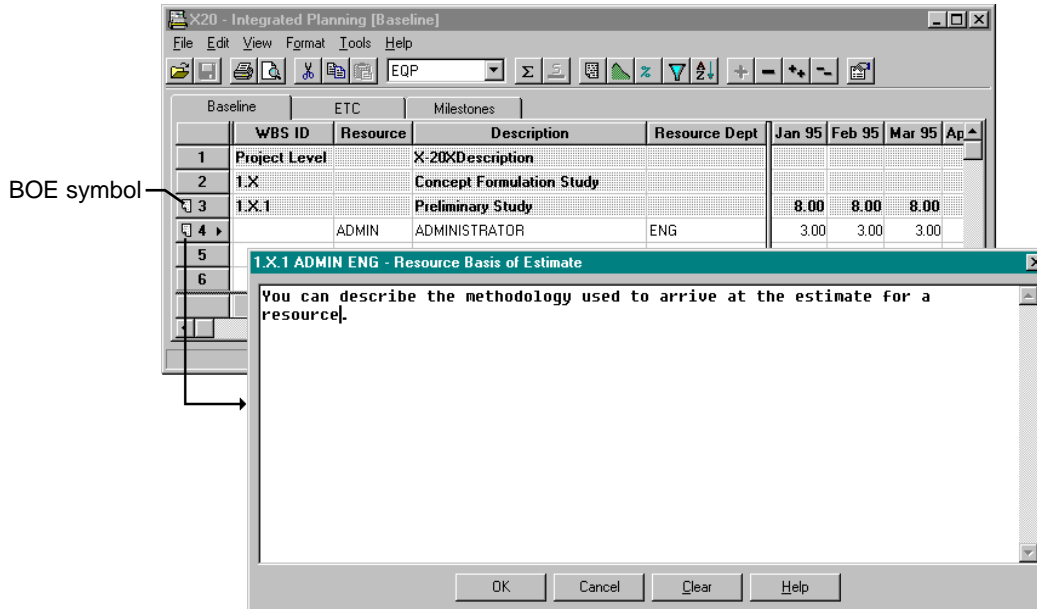
Figure A. When a Resource BOE has been defined, a BOE symbol is placed in front of the row number.

Creating a Resource Basis of Estimate

A Resource Basis of Estimate is defined for a specific resource assigned to a WBS element.

To define a Resource BOE:

1. Select the resource and do one of the following:

    ■ Click the Resource BOE button in the Toolbar.

■   Open the Tools menu and choose Resource Basis of Estimate.

MPM displays the Resource BOE dialog box shown in Figure A.

2.   Enter the description.

7.10 Summary Basis of Estimate

You can define a Summary Basis of Estimate for any level of the WBS. For a general explanation of estimates, see topic *7.9 Basis of Estimates*.

Procedure

To define a Summary BOE:

1. Select a WBS element, open the Tools menu, and choose Summary Basis of Estimate.

   MPM displays the Summary Basis of Estimate dialog box shown in Figure A.

Figure A. *You can define a BOE for WBS elements.*

2. Select the department(s) to be covered by the BOE.

   Leaving the Department field blank selects all departments. Selecting <Empty> from the list, selects all estimates which do not have a Resource Department assigned. You can also use a wildcard character (asterisk *) to select departments that start with certain characters. For example, 10* would select all estimates for departments 101, 102 and 1001, etc.

3. Select the EOCs (elements of cost) to be covered by the BOE.

Leaving the EOC field blank will include estimates for all EOCs and the selected departments.

4. Click on the Add/Edit button.

If a Summary BOE already exists for the Department/EOC combination entered, it will be displayed. The Estimates Included section will fill in with all estimates which will be covered by the Summary Basis of Estimate being entered.

5. Enter the basis of estimate in the text field.

6. To accept the description, click OK.

7.11 Baseline Calculations and Formulas

EQP Calculation

Equivalent persons (EQP) is calculated based on the calendar selected when a project is first defined in the Project Maintenance window.

Calendar	Calculation based on:
Resource Work	Hours, converted from the Hours/Day and Days/Week field identified in the Resources window.
Equivalent Person Months	Equivalent Person Month hours entered in the fiscal calendar

EQP Formulas

MPM uses the following formulas when calculating equivalent persons.

Calculation	Equation
Standard Hours	Hours x (Efficiency / 100) / (1 + Scrap & Rework / 100)
Hours	Standard hours x (1 + Scrap & Rework / 100) / (Efficiency / 100)
Person Months for reporting purposes only	Person hours / Equivalent person month hours entered in the Fiscal Calendar
Person Months for estimating purposes only	Hours / Hours per day / Days per week / (52 / 12)
Equivalent Persons if Resource Work Calendar was selected in Project Maintenance.	Hours in estimate / (resource hours per day x number of work days in estimate)
Equivalent Persons if Equivalent Person Month Hours Calendar was selected in Project Maintenance.	Hours in estimate / ((calendar days in estimate / calendar days in month) x equivalent person month hours entered in the fiscal calendar)

For reporting, the Person Months are always calculated using the number of calendar hours entered in the Equivalent Person Month Hours field of the Fiscal calendar. If all months in the calendar are zero, Person Months are not shown on the reports.

For reporting, the Equivalent Persons calculation always reflects the project's Calendar designation (Resource Work or EQPM Hours) which was saved at the time resources were estimated. It is not recalculated at report run time. If the designation of Resource Work or EQPM Hours was changed in the Project Maintenance window after estimating, the change is not reflected on the report unless the estimate itself is changed or the project is repriced.

7.12 Previewing and Printing Baseline Estimates

At any time, you can preview and print the baseline estimates. The basic report includes all currently displayed rows and columns. You have the option of adding task descriptions, Resource BOEs, and timephased values. You may also choose to include timephased values and specify From and Through dates.

Previewing Estimates

To preview the baseline estimates onscreen:

1. Do one of the following:

- Choose the Print Preview button in the Toolbar.
- From the File menu, choose Print Preview.

MPM displays the Print Preview dialog box shown in Figure A.
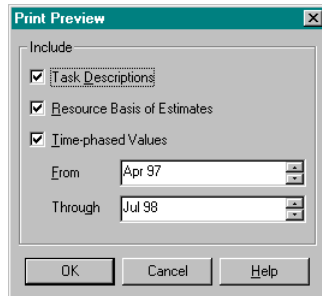
Figure A. *Select the information*
you want included.

2. Select the information you want included in the report.

3. To display the report, click OK.

Printing Estimates

To print a baseline estimate:

1. Do one of the following:

- Choose the Print button ![print icon] in the Toolbar.

- From the File menu, choose Print.

   MPM displays the Print dialog box shown in Figure B.
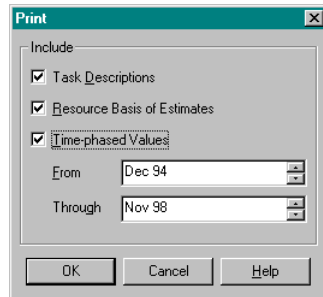
*Figure B. Select the information
you want included.*

2. Select the information you want included in the report.

3. To print the report, click OK.

   MPM displays the standard Windows print dialog box shown in Figure C.
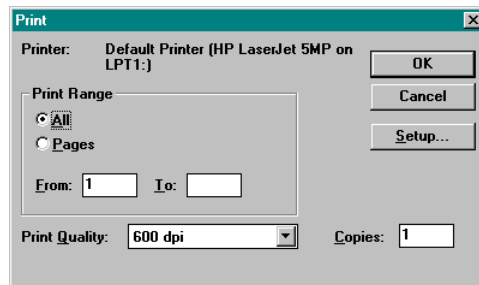
Figure C. Select the print options.

4. Select the appropriate options and click OK.

7.13 Recommended Baseline Reports

There are several standard MPM reports that you can use to review baseline information. The reports are listed below. For information on the reports, see the *MPM Standard Reports* manual.

- Resource Detail
- Resource Summary
- Element of Cost
- Manpower Detail
- Manpower Summary
- WBS Recap by Element of Cost
- EOC/Class Detail
- Responsibility Assignment Matrix

8
Revising the Forecast (ETC)

8.1 Introduction to Forecasting

After you have completed the baseline estimate, you can create a revised version of the baseline using the Estimate to Complete (ETC) view in the Integrated Planning window. Changes you make to the ETC do not change the baseline estimate, making it possible to compare current estimates to the original baseline estimates.

The original monthly baseline estimate data is automatically maintained by MPM to provide performance measurement of the baseline plan. Baseline and ETC dates are displayed in various Gantt and Time Analysis reports.

When you have created the ETC, MPM can use it to:

- Generate Estimate to Completion reports
- Generate Latest Revised Estimate (LRE) reports
- Graph LRE data in Graphic Drill Down (GDD)
- Calculate Estimate at Completion (EAC) reports

Baseline and ETC Relationship

There are two ways to create the ETC:

- Save the resources estimates to the ETC as you create the Baseline. This approach is described in this chapter.
- Copy the Baseline estimates to the ETC using the Project Replan function (see *Chapter 12: Replanning Projects)*

Accessing the ETC View

To access the ETC view:

1. From the Menu Manager window, do one of the following:

- Select the Integrated Planning icon.
- From the File menu, select Projects|Integrated Planning.

MPM displays the Integrated Planning Open dialog box shown in Figure A.

2. Select the WBS elements you want downloaded.

3. Select ETC as the starting view.

For details on opening the ETC view, see *Chapter 6: Integrated Planning – An Overview*.
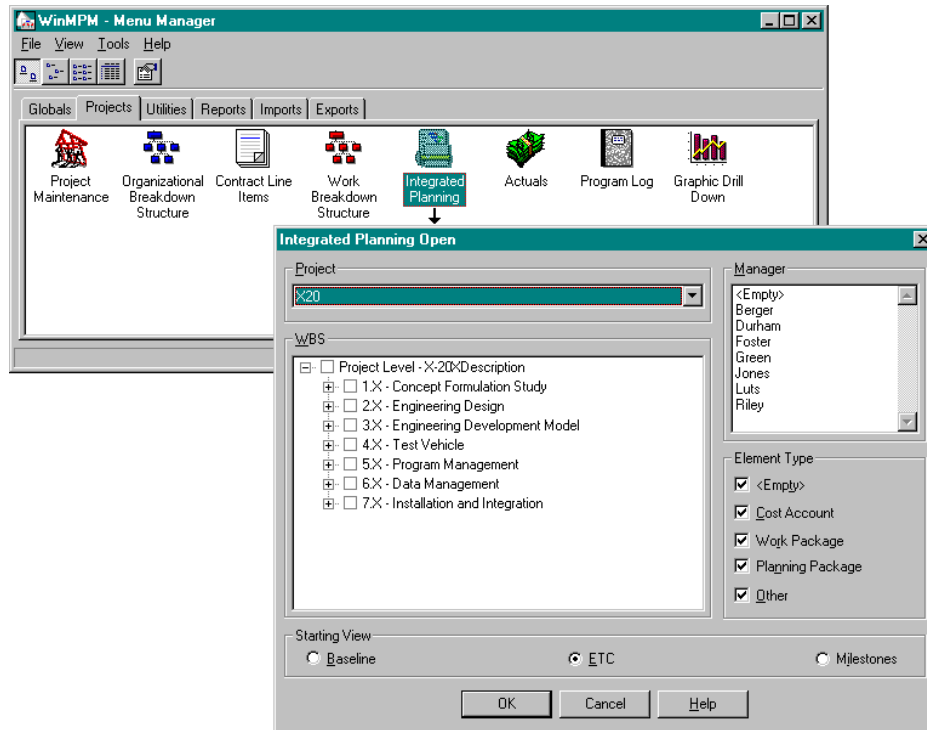
Figure A. *To open the ETC view, select Integrated Planning from the Menu Manager.*

8.2 Orientation to the ETC View

The ETC view is identical to the Baseline view. The Resource Sheet and Values Sheet have the same fields. However, changes you make to one view are not reflected in the other view. For example, you can hide different columns and change column widths in each view. For information about the view, see topic *7.2 Orientation to the Baseline View*.
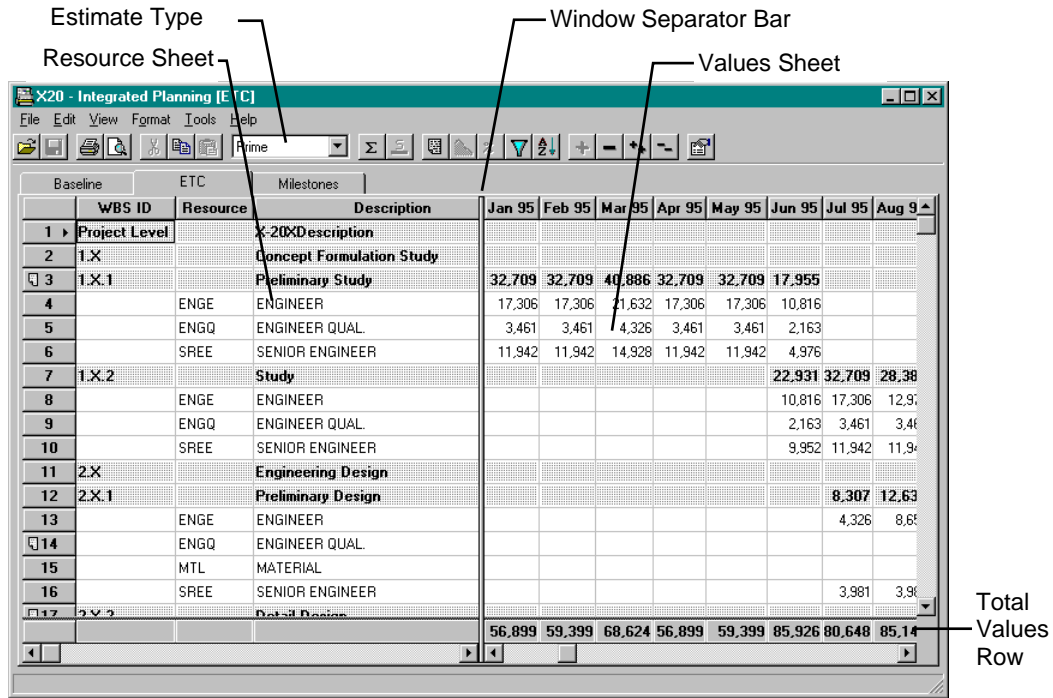
Figure A. *The ETC view is divided into two panes: the Resource Sheet and the Values Sheet.*

Editing Data

As the work progresses in a project, you can edit the data in the ETC view without affecting the original baseline data. However, if you change the data in the ETC view, the data for the edited cells are no longer linked to the baseline data. If you subsequently make changes in the baseline data, the changes will not be reflected in the ETC view. You can also add estimates directly in the ETC view that are not included in the baseline.

You use the same procedures to edit the data in the ETC view that you use for the Baseline view. For information on editing data, see *Chapter 7: Estimating the Project Baseline.*

8.3 Creating an ETC as You Create the Baseline

The easiest way to create an Estimate to Complete (ETC) is to have MPM enter the ETC data at the same time you enter the baseline data. To do this, you select one of three appropriate storage options shown in Figure A.
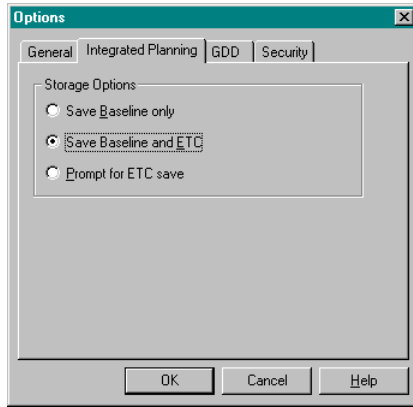
Figure A. *To create the ETC at the same time as the baseline, select the second or third option.*

Three Options

There are three Integrated Planning storage options available:

Option	Result
Save Baseline only	MPM saves the baseline data only.
Save Baseline and ETC	MPM saves the baseline data and saves the corresponding changes in the ETC data.
Prompt for ETC save	MPM saves the baseline data and displays the dialog box below asking if you want to save the corresponding changes in the ETC data.

To create the ETC data at the same time as the baseline data, you can select the Save Baseline and ETC or the Prompt for ETC Save option.

Procedure

To set the storage option:

1. From any MPM window, open the Tools menu and select Options.

MPM displays the Options dialog box shown in Figure A.

2. Select the Integrated Planning Tab.

3. Select the appropriate option.

Other Procedures Identical to Baseline

The procedures for adding, editing, and deleting information in the ETC window are identical to the procedures for the Baseline window. This includes:

- Adding resource estimates
- Entering estimate values using autospread
- Entering information using autofill
- Copying and pasting estimates
- Copying and pasting cells
- Deleting estimates and cells
- Creating apportioned estimates
- Previewing and printing estimates

For information on these procedures, see *Chapter 7: Estimating the Project Baseline*.

8.4 Recommended ETC Reports

There are several standard MPM reports that you can use to review ETC information. The reports are listed below. For information on the reports, see the *MPM Standard Reports* manual.

- Actuals by EOC
- Actuals by Charge Number
- Resource Detail - Actuals
- Resource Summary - Actuals
- Budget/Actuals Recap by EOC
- Element of Cost - LRE
- Resource Detail - Budget/LRE
- Project Comparison - LRE
- Resource Detail - ETC
- Resource Summary - ETC
- Element of Cost - ETC
- EOC/Class Detail - ETC
- Burden and Fee Detail - ETC
- Burden and Fee Summary - ETC
- Work Status Document - Bud/LRE
- Apport'd Est Relationships - ETC

9

Tracking the Project Milestones

9.1 Introduction to Tracking Project Milestones

The Integrated Planning Milestones window provides activity work-in-progress assessment capability. Milestones for each WBS element are represented graphically in a Gantt chart. You can status the milestones and review the resulting changes in the updated fields.

Each milestone is assigned a unique identifier, making it possible to export and import data keyed to specific milestones.
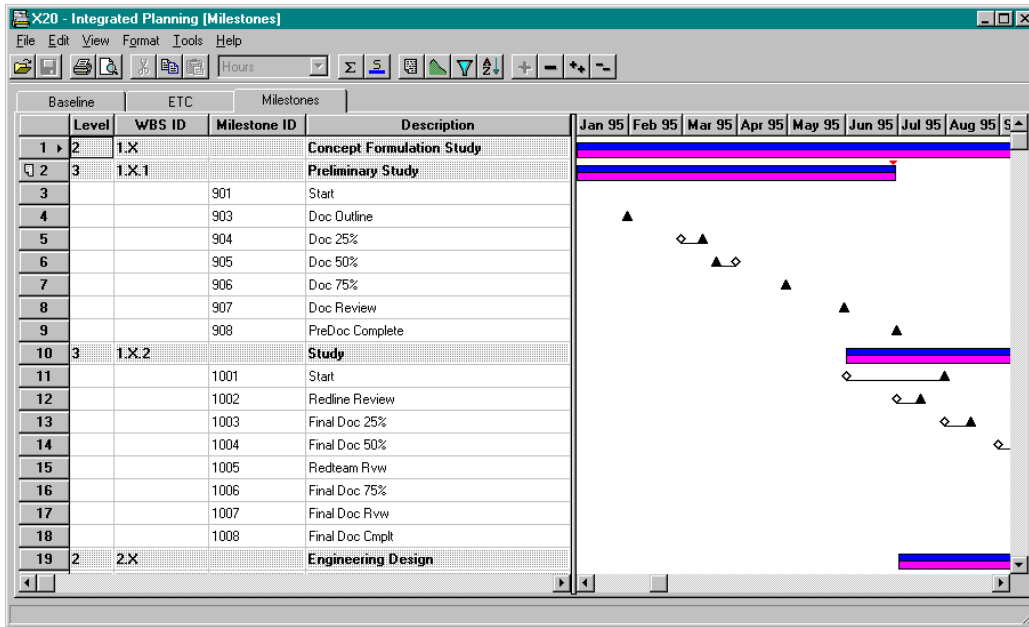
Figure A. *Milestones let you track a project.*

Accessing the Milestones View

To access the Milestones View:

1. From the Menu Manager window, do one of the following:

- Select the Integrated Planning icon.
- Open the File menu and select Projects|Integrated Planning.

  MPM displays the Integrated Planning Open dialog box shown in Figure B.

2. Select the WBS elements you want downloaded.

3. Select Milestones as the starting view.

For details on opening the Baseline view, see *Chapter 6: Integrated Planning – An Overview*.
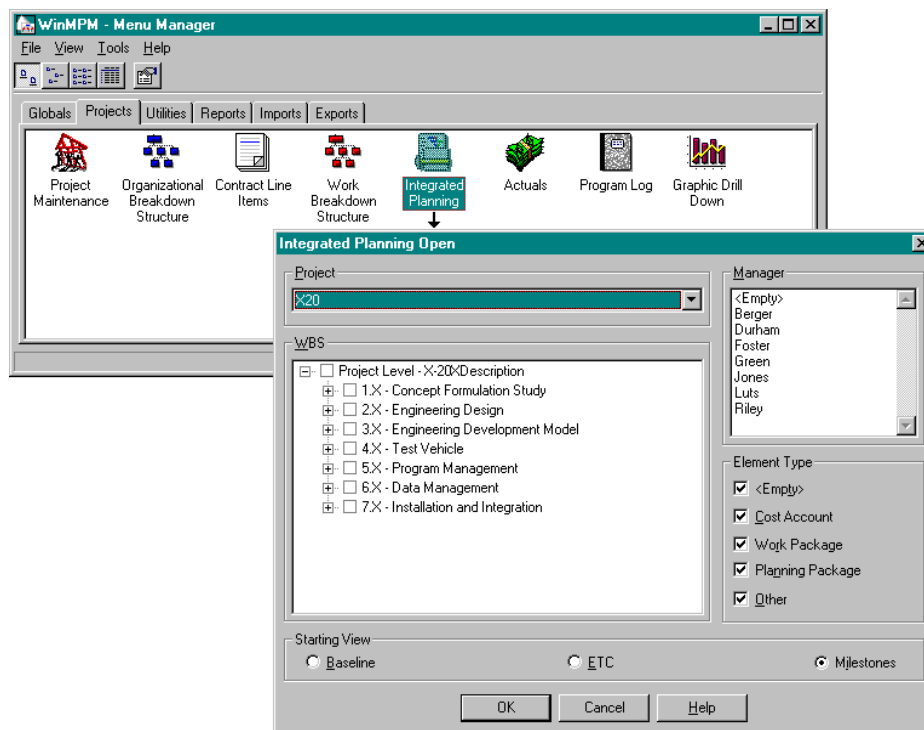
Figure B. *To open a Milestone view, select Integrated Planning from the Menu Manager.*

9.2 Orientation to the Milestones View

The Milestone view is divided into two windows: a Milestone sheet and a Gantt chart. You use the Milestone sheet to enter milestones. You can use the Gantt chart to review and adjust the scheduled dates.
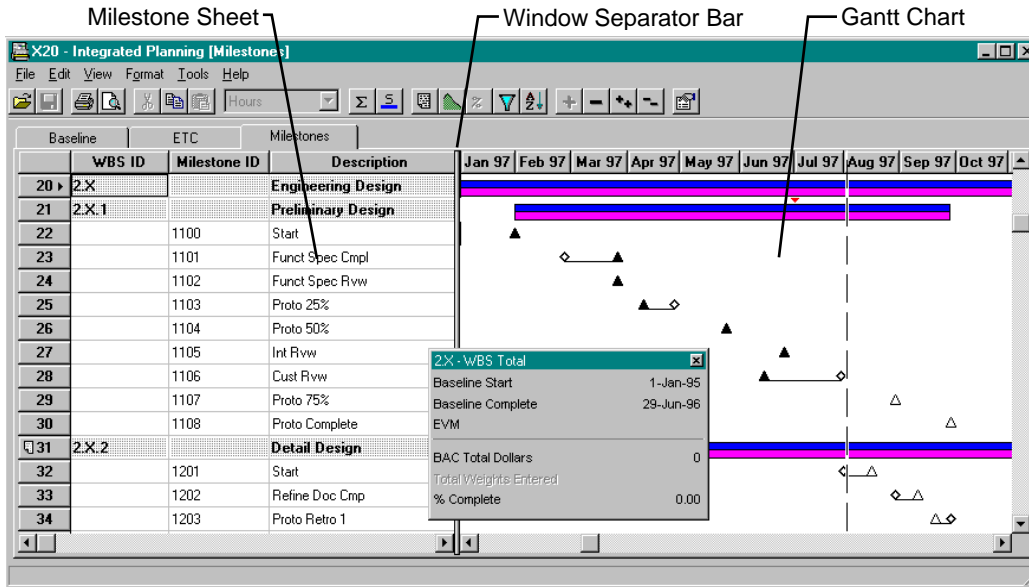
Figure A. *The Milestones view is divided into a Milestones Sheet and a Gantt chart.*

Milestone Sheet

The Milestone sheet displays the WBS elements and their milestones. The columns display information including, but not limited to, a description, the Earned Value Method (EVM), scheduled and forecast completion dates, and percent complete. You can scroll the window to bring columns into the viewing area. You can customize the window by displaying or hiding the columns.

Gantt Chart

The Gantt chart displays milestone information graphically, including:

- WBS start and complete
- Last statused date
- Baseline Gantt: WBS Start and Complete
- ETC Gantt: ETC Start and Complete

- Milestone
- Completed milestone
- Revised milestone
- Current system date
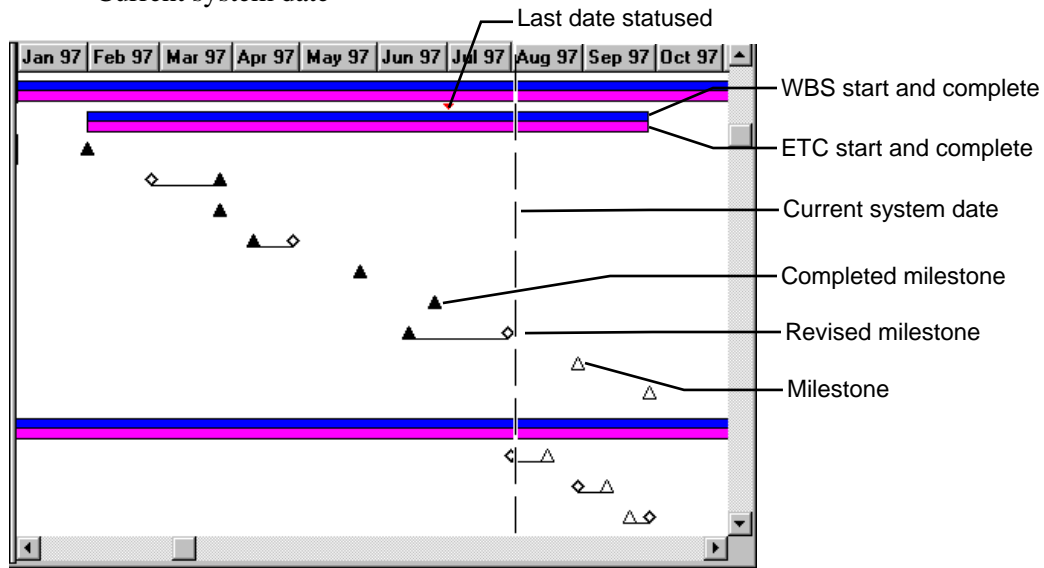
Figure B. Gantt chart of milestones

WBS Total Window

The WBS Total window shown in Figure A gives you a summary of the WBS element under which you are adding milestones. The window floats above the Milestones window so it is always visible. You display the window by clicking the Total button Σ in the Toolbar. You can move the window by dragging the Title bar.

Timephased BCWS Window

The Timephased BCWS Window shows the timephased information for the currently selected WBS element. Like the Total window, the Timephased BCWS window floats above the Milestones window. You can resize the window by dragging the sides and corners, and move the window by dragging the Title bar. You display the window by clicking the Show Timephased BCWS button $\underline{5}$ in the Toolbar. An example of the window is shown in Figure C.

2.X.1 - Timephased BCWS	
Period	Hours/Units
Jul 95	320.00
Aug 95	480.00
Sep 95	600.00
Oct 95	640.00
Nov 95	640.00
Dec 95	800.00
Jan 96	720.00
Feb 96	720.00

Figure C.

9.3 Creating Milestones

You create milestones by selecting a WBS element and inserting milestone rows. Each milestone must be assigned a unique milestone ID.

Figure A. Each milestone must be assigned a unique milestone ID.

The basic steps for creating a milestone are described in this topic. More detailed information on specific steps is provided in the topics that follow in this chapter.

Key Steps

The key steps to create a milestone are:

1. From the EVM field drop-down list box, choose an Earned Value Method (EVM) for the WBS element that will contain the milestone.

2. If using Apportioned Weights, select the base WBS before selecting an EVM.

3. Select a BCWP Base from the drop-down list box.

4. Insert the milestone, enter the milestone ID, and add a description.

5. Enter the scheduled date and choose a Gantt chart symbol to represent the date.

6. Enter weights for the milestone if applicable.

7. Save the milestones by doing one of the following:

   ■ Click on another WBS element in the window.

- Click on the Save button 💾 in the Toolbar.
- From the File menu, choose Save.
- Press Ctrl+S.
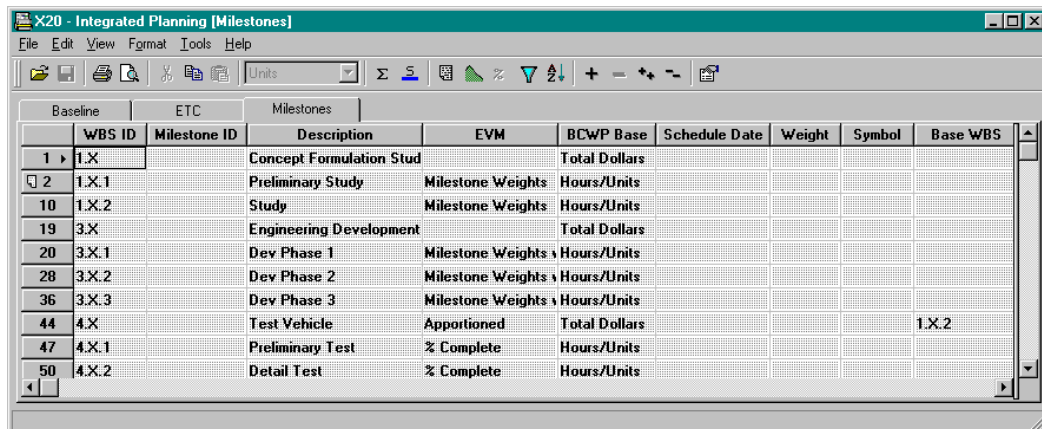
You may be prompted to confirm the save. To undo the entry before saving, press Esc.

Preparing the Display to Create Milestones

You need only a handful of required fields for creating a milestone, even though you can display most of the WBS fields. To simplify data entry, use the Column Hide feature to display only the following columns:

- WBS ID
- Milestone ID
- Description
- EVM
- BCWP Unit

- Schedule Date
- Weight
- Symbol
- Base WBS

When you are done, the Milestones sheet should look like Figure B. Note no milestones have been added yet.

Figure B. *To prepare the window for entering milestones, display the columns shown.*

9.3 Creating Milestones
9.3.1 Choosing an Earned Value Method

The Earned Value Method (EVM) you specify is used by MPM to calculate the Budgeted Cost of Work Performed (BCWP) for each milestone. You can select a different EVM for each WBS element, but the EVM you choose for a WBS element applies to all milestones assigned to that element.

When you first select an EVM for a WBS element, MPM automatically adds Start and Complete milestones to the element. In Figure A, this is illustrated by WBS ID 4.X.1. For a complete description of all EVMs available, see topic *9.3.2 Earned Value Method Descriptions*.

Figure A. *When you first select an EVM for a WBS element, MPM automatically adds Start and Complete milestones to the element.*

The EVM you select is displayed in the WBS element rows, not in the milestone rows.

If possible, you should consider using the Milestone Weights EVM. With this method, you can target specific accomplishments in the project, and get compensated accordingly. It also gives you the most accurate way to track a project.

Procedure

To choose an EVM for a WBS element:

1. Click on the EVM field for the WBS element.

2. Open the drop-down list box and select an EVM.

When you select the EVM, MPM automatically adds Start and Complete milestones to the element as shown in Figure A.

3. If you selected the Apportioned EVM, you must select a base WBS that MPM will use to determine the percent complete for the milestone. You select the WBS from the Base WBS field. MPM displays the Base WBS dialog box shown in Figure B where you can select the WBS element to be used.
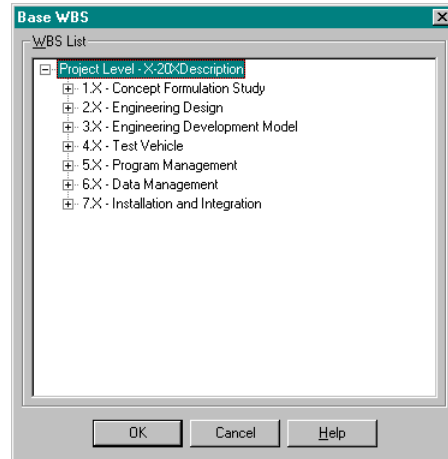
Figure B. *If you select the Apportioned EVM, you must choose a base WBS.*

9.3 Creating Milestones
9.3.2 Earned Value Method Descriptions

This topic describes each of the Earned Value Methods (EVMs) available in MPM. You must specify an EVM if you want MPM to calculate Budgeted Cost of Work Performed (BCWP).

No EVM Required

No earned value computation is required. Use this option only when you want to display milestones on the Gantt chart but EVM does not apply to the WBS element. When you select this EVM, the BCWP Base defaults to Total Dollars and cannot be changed without first changing the EVM.

% Start / % Complete

There are four different % Start / % Complete EVMs available. They are usually applied to work packages with a duration of not more than two accounting months. The methods earn the specified start percentage when the activity begins, and the specified complete percentage when the activity is completed. The four methods are:

- 0/100 (This EVM is used for work packages planned to start and complete in one accounting month. When you select EVM 0/100, the BCWP Base defaults to Total Dollars and cannot be changed unless you first select a different EVM.)
- 25/75
- 40/60
- 50/50

% Complete

Lets you manually enter a cumulative percentage for the WBS element. Budget value is earned based on the percent complete as determined by you. The percent complete is applied to the Budget at Complete (BAC) to determine BCWP.

Level of Effort (LOE)

Monthly budget value is earned with the passage of time and is equal to the monthly scheduled amount (BCWP=BCWS). This method usually is used for accounts that are more time related than task oriented. Usually there is no measurable output related to these accounts. When you select this EVM, the BCWP Base defaults to Total Dollars and cannot be changed without first changing the EVM.

Earned Standards

Earned standards (standard cumulative hours complete) is used to determine earned value for tasks whose budget value was derived using standard hours. To use this method, you must establish standards for all tasks using historical data, time and motion studies, and other statistical information. This method is used often for high-volume production environments.

Before you select Earned Standards as the EVM, you must first select Standard Hours as the Estimate Type when estimating the WBS baseline. When you select Earned Standards, MPM sets the BCWP Base field to Hours. You cannot change this setting without first changing the EVM.

Milestone Weights

Budget value is earned based on the proportional weight you assign to each milestone. The BCWP calculation used with this method is BAC (Milestone weight/Total Milestone weights). For information on assigning weights, see topic *9.4 Entering Weights*.

BCWP Entry

Select this option when you will be entering BCWP (Budgeted Cost of Work Performed) as a cumulative lump sum. When you status the WBS element, you enter cumulative BCWP in whatever base you selected. MPM calculates the percent complete by dividing the cumulative BCWP by the BAC (Budget at Completion).

Apportioned

The Apportioned EVM is used to calculate earned value for tasks that are related in direct proportion to some other work package. Apportioned Effort is also referred to as Factored Effort and Factored Method.

When you select this EVM, you must also select a Base WBS that will be used to determine the percent complete for the WBS element. Percent complete for an apportioned effort task is always equal to the percent complete of its Base WBS.

Milestone Weights with % Complete

This EVM is the same as Milestone Weights except you can enter a percent complete for each individual milestone instead of just the WBS element. You can also have MPM calculate the weights by using the Autoweight option under the Tools menu.

Key Event

The Key Event EVM is a variation on Level of Effort (LOE). A work package earns budget as long as milestones are completed on time. Additional value is earned when milestones are completed ahead of schedule. When you select EVM Key Event, the BCWP Base defaults to Total Dollars and cannot be changed unless you first select a different EVM.)

When you use the Key Event EVM:

- The work package must have at least one milestone in order to earn BCWP.
- If a month has more than one milestone, all milestones must be completed to earn BCWP.
- No BCWP is earned for any months between two incomplete milestones.
- Milestones do not have to be completed in chronological order to acquire earned value.

For example, you might have a work package that begins January 1 and ends May 31, with milestones in February, April, and May. You could earn value for the April milestone by completing it in March, even though you didn't complete the February milestone. If this happened, earned value would be LOE for January and March, plus BCWP for April.

9.3 Creating Milestones
9.3.3 Selecting a BCWP Base

After selecting an EVM for the WBS element, you must select a BCWP Base. The
BCWP Base shows which unit MPM will use to calculate the BCWP for a WBS element.
The BCWP Base unit should match the Estimate Type in the Integrated Planning
Baseline window. You can choose from five base units:

- Hours/Units
- Prime Dollars
- Total Burdened (Prime + Overhead)
- Total Cost (Total Burdened + G&A)
- Total Dollars (Total Cost + COM)

Total Dollars is the default value.
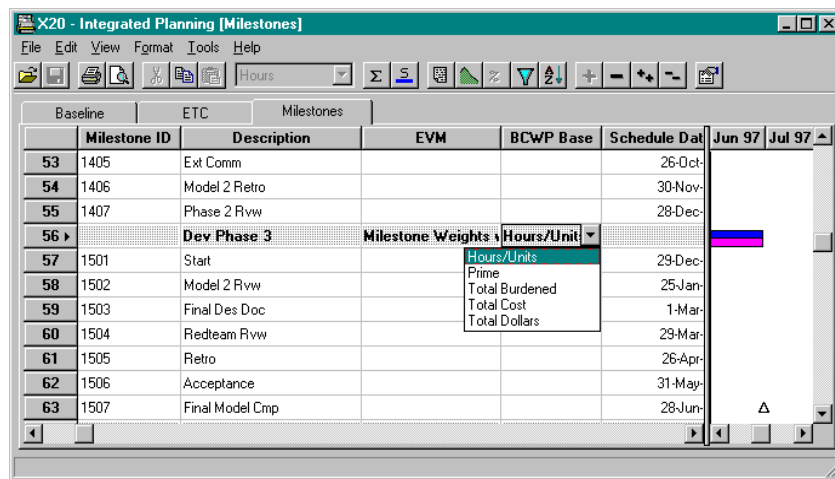
Figure A. *Select a BCWP Base.*

Procedure
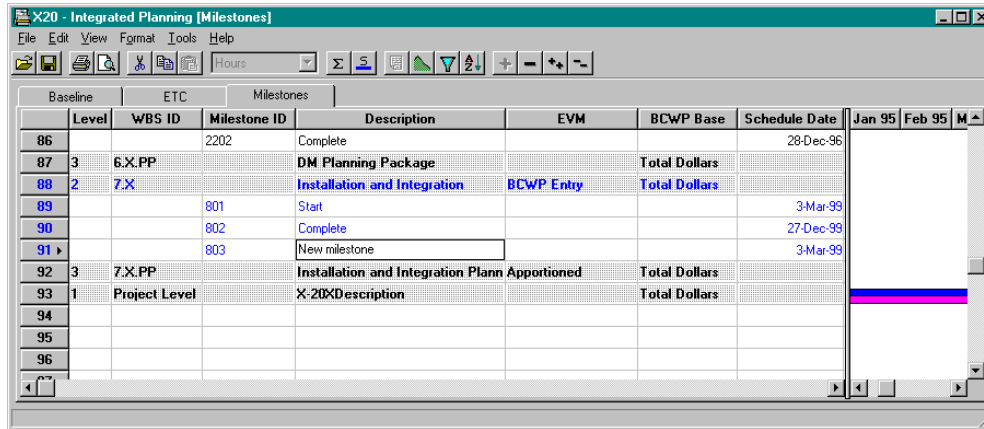
To select the BCWP Base:

  1. Click the BCWP field to display the drop-down list box shown in Figure A.

  2. Select a BCWP Base from the list.

9.3 Creating Milestones
9.3.4 Inserting a Milestone

When you first select an EVM for a WBS element, MPM automatically adds Start and Complete milestones below the WBS. You can accept these milestones, change their names, or delete them. You can add additional milestones by selecting the WBS and pressing the Insert key.

Figure A. *You add milestones to each WBS element.*

MPM lists milestones by their scheduled completion date. You can sort them by other fields if you wish.

Procedure

To insert a new milestone:

1. Select a WBS element and do one of the following:
   - Press the Insert key.
   - From the Edit menu, choose Insert Milestone(s).
   - Type a milestone ID number in the WBS Milestone ID field and press Enter.

   MPM inserts a new line at the end of the list of milestones for the WBS element with the following information: a Milestone ID, the WBS's Baseline start date in the Schedule Date field, and the default Gantt chart symbol in the Symbol field.

2. If you wish, you can change the milestone ID number by typing over the old number.

MPM sorts the milestones chronologically by their Schedule Date, not by the milestone ID number.

3. Enter a description (maximum of 40 characters) in the Description field.

4. Enter a Schedule Date.

5. Select a Gantt chart symbol.

6. To save the milestone, do one of the following:

- Click on another WBS element in the window.
- Click on the Save button in the Toolbar.
- From the File menu, choose Save.
- Press Ctrl+S.

You may be prompted to confirm the save.

To undo the entry before saving, press Esc.

9.4 Entering Weights

Budget value is earned based on the weight designated for each milestone. The weight is a proportion of the total work for all milestones assigned to a WBS element. Milestone weights are expressed in the base unit you have selected for the WBS element. The unit should match the Estimate Type for your Baseline. For example, if the Budgeted Cost of Work Performed (BCWP) is Total Cost, you would specify the milestone weights as Total Cost. Equivalent units, Budgeted Cost of Work Scheduled (BCWS) hours or dollars, or any other values may be entered in the weight field.

Figure A. *The weight assigned to a milestone is a proportion of the total work for all milestones assigned to a WBS element.*

Milestone weights must represent 100% of the work required to complete a task, but they do not have to equal 100.

How Weights are Handled

How MPM handles weights depends on the Earned Value Method (EVM) you selected for the WBS element.

- If you selected Milestone Weights or Milestone Weights with % Complete for the EVM, you can enter custom weights for each milestone.

- If you selected one of the % Start / % Complete EVMs, MPM automatically fills in the matching percentages for the Start and Complete milestones. You cannot edit these percentages. You can add other milestones to the WBS element, however, you will not be able to enter weights for them.
- If you selected any of the other EVMs, the Weight field is left blank.

Manual vs. Automatic Weighting

If you selected Milestone Weights or Milestone Weights with % Complete for the EVM, you can enter custom weights for each milestone manually. You also have the option of using the Autoweight Milestones function to have MPM automatically calculate weights.

The Autoweight Milestones function calculates weights using the timephased budget (BCWS) and the BCWP Base Unit defined for a WBS element. If weights are already entered for a milestone, the calculated weights overwrite the existing weights.

Manual and automatic weighting are discussed in the following topics:

9.4.1 Entering Weights Manually
9.4.2 Entering Weights Automatically

9.4 Entering Weights
9.4.1 Entering Weights Manually

If you selected Milestone Weights or Milestone Weights with % Complete for the EVM, you can enter custom weights for each milestone manually. Milestone weights must represent 100% of the work required to complete a task, but they do not have to equal 100.
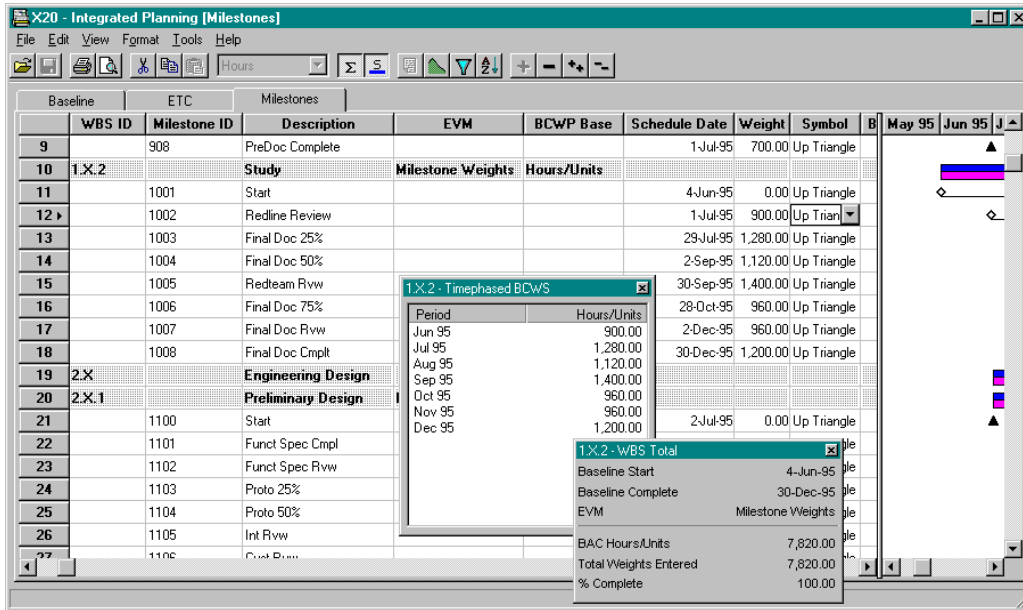
Figure A. *The Timephased BCWS and Total windows provide useful information when you are entering milestone weights.*

MPM provides two additional windows that provide summary information about the WBS element and the weighted values.

Timephased BCWS Window

The Timephased BCWS (Budgeted Cost of Work Scheduled) window shows the weighted costs by month. The display is not impacted by the period selected for the Gantt chart. To display the window, click the Show Timephased BCWS button ![S] in the Toolbar.

WBS Total Window

The WBS Total window shows summary information for the selected WBS element. To
display the window, click the Show Total Window button $\boxed{\Sigma}$ in the Toolbar.

Procedure

To enter weights manually:

1. Select the Weight field for a milestone.

2. Type in a value.

3. Save the entry by doing one of the following:

    - Click on another WBS element in the window.
    - Click on the Save button $\boxed{\blacksquare}$ in the Toolbar.
    - From the File menu, choose Save.
    - Press Ctrl+S.

    You may be prompted to confirm the save.

    To undo the entry before saving, press Esc.

9.4 Entering Weights
9.4.2 Entering Weights Automatically

If you selected Milestone Weights or Milestone Weights with % Complete for the EVM, you have the option of using the Autoweight Milestones function. The function automatically calculates weights for a WBS. After MPM calculates the weights, you can modify them manually. You can autoweight one or more WBS elements at the same time.

The Autoweight Milestones function calculates weights using the timephased budget (BCWS) and the BCWP Base Unit defined for a WBS element. If weights are already entered for a milestone, the calculated weights overwrite the existing weights.
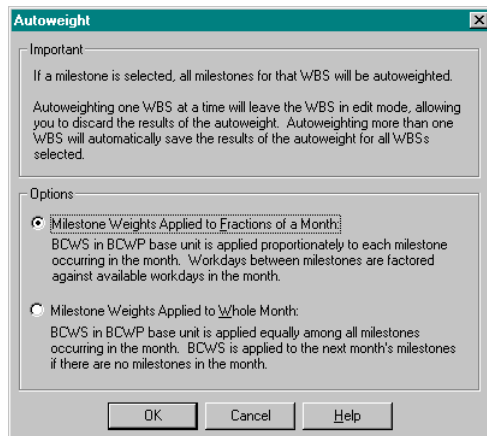
Figure A. *You can autoweight milestones.*

Autoweight Options

When you autoweight the milestones for a WBS, you have two options.

- **Milestone Weights Applied to a Fraction of a Month**

    Budgeted Cost of Work Scheduled (BCWS) in the Budgeted Cost of Work Performed (BCWP) base unit is applied proportionately to each milestone occurring in the month. Workdays between milestones are factored against available workdays in the month.

    For example, assume there are two milestones for a WBS element: one on the 5th workday of the month, and one on the 20th workday of the month. The WBS element requires 100 hours of work. If there are 20 work days in the month, the first milestone would be assigned 25% (5 workdays = ¼ of total workdays =

25%) of the hours and the second milestone would be assigned 75% of the hours.

- **Milestone Weights Applied to a Whole Month**

  Budgeted Cost of Work Scheduled (BCWS) in the Budgeted Cost of Work Performed (BCWP) base unit is applied equally among all milestones occurring in the month. BCWS is applied to the next month's milestones if there are no milestones in the month.

  Using the same example above, assume there are two milestones for a WBS element: one on the 5th workday of the month, and one on the 20th workday of the month. The WBS element requires 100 hours of work. If there are 20 workdays in the month, the first and second milestones would each be assigned 50% of the hours.

Procedure

To autoweight milestones for a WBS element:

1. Select a WBS element.

    You can select more than one WBS element if you wish. If you edit one WBS element at a time, you have the opportunity to edit the assigned autoweights before they are saved. If you edit two or more WBSs at the same time, the autoweights assigned are saved automatically.

2. From the Tools menu, select Autoweight.

    MPM displays the Autoweight dialog box shown in Figure A.

3. Select one of the two options and click OK.

    If you applied the autoweight function to only one WBS, MPM leaves the WBS milestones in edit mode. You can save, change, or press Esc to cancel the weights assigned.

9.5 Statusing Milestones

As a project progresses and milestones are met, you status the project in MPM to generate a percent that represents the work that has been completed. You will usually status a project at the end of a fiscal period. The method you use to status the project depends on the earned value method you selected for each WBS element. If work has not started on a WBS element, making a change is straight forward. If a WBS element is already in progress (has BCWP), making changes can impact the BCWP. Changing elements in progress is described in topic *9.6 Modifying Milestone Information for Work in Progress*.

Preparing the Display for Statusing Milestones

There are only a handful of fields required for statusing milestones, even though you can display most of the WBS fields. To simplify data entry, use the Column Hide command under the Format menu to display only the following columns:

- WBS ID
- Milestone ID
- Description
- Schedule Date
- Forecast Date

- Weight
- Complete
- % Complete
- Cum BCWP

It is useful to keep the Total Window displayed for reference. When you are done, the Milestones sheet should look like Figure A.

Figure A. *When you status milestones, you should display the columns shown above and the Total window.*

Key Steps

The key steps in statusing a milestone are:

- Specify the As Of Month.
- Revise the forecast date (if needed).
- Status the milestone.
- Calculate the Budgeted Cost of Work Performed (BCWP).

The first three topics are described in the sub-topics that follow. Calculating the Budgeted Cost of Work Performed (BCWP) is covered in topic *11.6 Calculating BCWP*.

9.5 Statusing Milestones
9.5.1 Specifying the As Of Month

When you status a WBS element, you select a month to which the status information will be assigned using the As Of Month dialog box shown in Figure A.
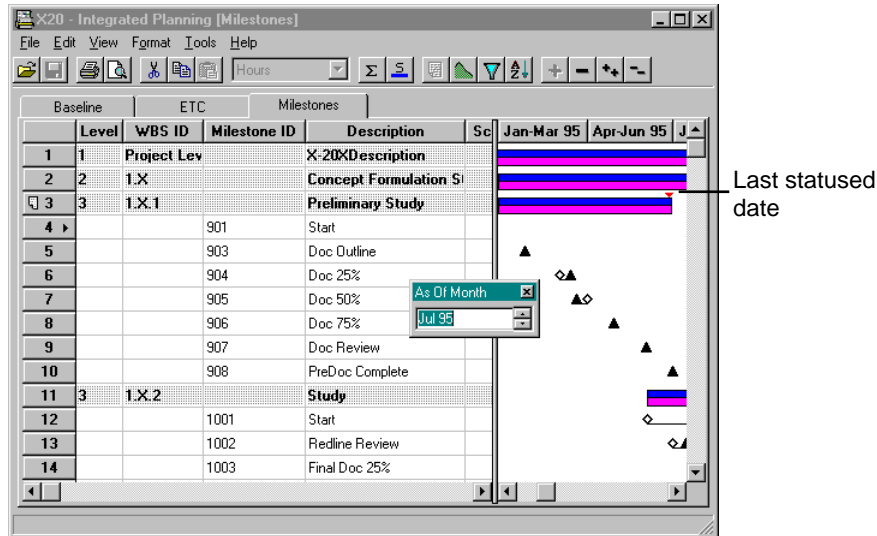
Figure A. *Set the As Of Month before statusing a milestone.*

Setting the As Of Month accomplishes three things:

- It accumulates the BCWP amount for statused activity in the As Of fiscal accounting month for all EVMs except LOE, Key Event, and Apportioned.

- It documents the last time the WBS element was statused.

- It places a "tick" mark on the Gantt chart display and the Milestone Barchart report indicating the last statused date.

Procedure

To set the As Of Month:

1. Display the As Of Month dialog box by choosing the As Of Month option from the View menu or by pressing Ctrl+M. MPM displays the dialog box shown in Figure A above.

2. Use the up and down arrows to select a month.

3. To accept the setting and close the dialog box, click the X in the top right-hand corner of the box.

As Of Month Required

If a WBS element has task work in progress (has existing BCWP for the current or prior periods), you must set the As Of Month before doing any of the following:

- Claiming a milestone as complete by putting a check mark in the Complete field
- Entering a new figure in the % Complete field
- Entering a new figure in the Cum BCWP field
- Inserting or deleting a milestone
- Changing the weight on a milestone

If you try to do any of the above without first setting the As Of Month, MPM displays the As Of Month dialog box shown in Figure B requiring you to select a month.
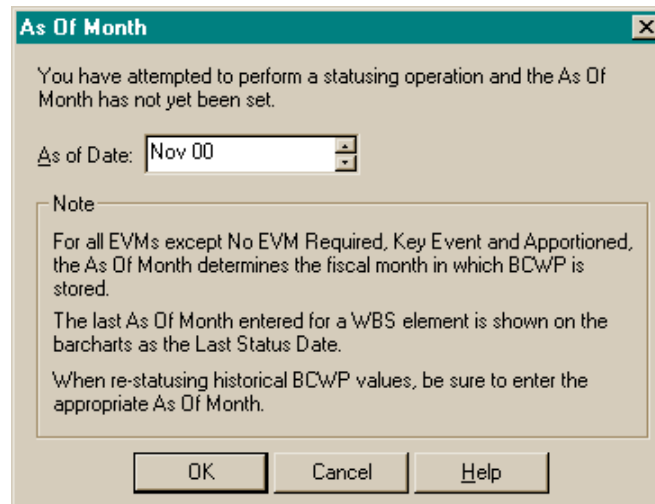
Figure B. *You must set the As Of Month before performing a statusing action.*

9.5 Statusing Milestones
9.5.2 Revising the Forecast Date

If the project slips, you will need to reflect the slip in schedule by entering a date in the Forecast Date field. The Forecast Date defaults to the Schedule date until it is modified. When the milestone is 100% complete, you can enter the completion date in this field.

When you revise a forecast date, the original planned date is displayed in the Gantt chart as a diamond. The original milestone symbol (a triangle by default) will be used for the revised forecast date.
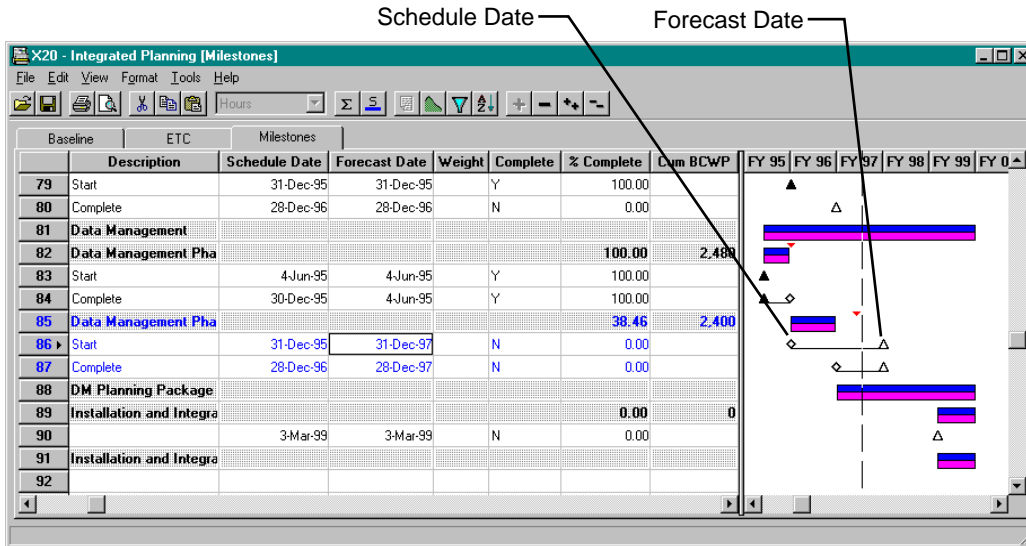
Figure A. *If the project slips, you can change the Forecast Date.*

Procedure

There are two ways to revise a Forecast Date:

- Select the Forecast Date field and type in a new date. MPM accepts most formats and converts them to the dd-mmm-yy format.
- Choose the milestone symbol in the Gantt View and drag the symbol to the new date. MPM changes the Schedule Date to a diamond and displays the Forecast date as the selected milestone symbol.

When a Milestone is 100% Complete

When a milestone is 100% complete, you should enter the actual completion date in the Forecast field if it is different from the schedule date. This will create a more accurate Earned Value Planning and Analysis report.

9.5 Statusing Milestones
9.5.3 Statusing the Milestone

After selecting the As Of Month, and entering a revised Forecast Date if necessary, you can status the milestone by doing one of the following:

- Mark the milestone as complete by double-clicking in the Complete field. MPM will place a check mark in the field as shown in Figure A.

Symbol	Complete	% Complete	Cum BCWP
		15.38	1,600
Up Triangle	✔	100.00	
Up Triangle	✔ ✔	100.00	
Up Triangle		0.00	
Up Triangle		0.00	

Figure A. *Statusing a milestone*

- If the EVM you selected requires cumulative BCWP, enter cumulative BCWP amounts in the Cum BCWP field on the WBS element row.
- If the EVM you selected requires the percent complete, enter cumulative percent complete in the % Complete field on the WBS element row.

Which action you take depends on the EVM you selected for the WBS element. The actions required for each type of EVM are described below.

After you have statused all WBS elements that are in process, run the Calculate BCWP process to calculate and determine BCWP values for the period being statused. For information on calculating BCWP, see topic *11.6 Calculating BCWP*.

No EVM

This selection does not compute BCWP. Use this option when you want the WBS element displayed on the Gantt chart, but the element does not represent budget information. If you want the milestone symbol on the Gantt chart to be shaded, check the Complete field. For example, you may be in the proposal stage and no work has been completed for a WBS element. Or you may be using a Planning Package resource to store unallocated budget and you do not want it to show on the Gantt chart.

0/100, 25/75, 40/60, 50/50

To status a milestone when one of these EVMs has been selected:

1. When work has started on the milestone, enter a check in the Complete column for the Start milestone.

MPM will use the first figure to represent the amount of the scheduled budget earned. For example, if you selected 25/75, 25% of the budget will be counted as earned.

2. When work is 100% complete, enter a check in the Complete column for the complete milestone.

MPM will use the second figure to represent the amount of the scheduled budget earned. For example, if you selected 25/75, 75% of the budget will be counted as earned.

% Complete

In the % Complete field of the WBS row, enter the cumulative percent complete for the overall WBS element for the As Of Month being statused. The cumulative percent complete reflects the status of the WBS through the As Of Month.

Level of Effort

You do not have to enter data for this EVM. MPM will automatically calculate the earned value for the fiscal periods where work (BCWS) is scheduled. BCWP = BCWS for all months for which BCWP is calculated. If you want the milestone symbol on the Gantt chart to be shaded, check the Complete field.

Earned Standards

In the Cum BCWP field on the WBS row, enter the cumulative standard hours completed for the overall WBS.

MPM uses the figures you enter in the Cum BCWP field to calculate the cumulative percent complete. The formula is:

BCWP standard hours / BAC standard hours

MPM applies the cumulative percent complete to BAC and the cumulative BCWP is displayed and stored in Standard Hours for the As Of Month. The Estimate Type for BCWS must also be set to Standard Hours so the BAC is in standard hours. If these are not the same, BCWP will not calculate accurately.

Milestone Weights

To claim a milestone as 100% complete for the As Of Date being statused, place a check mark in the Complete field.

When milestone weights are used, MPM uses the following formula to calculate a cumulative percent for the WBS:

(Weight of completed milestones / total weight for all milestones) x
BAC (in base unit selected)

The calculation is for the month in which the milestone is statused as complete. As milestones are accomplished, the WBS cumulative percent complete is adjusted based on the milestone weight ratios.

BCWP Entry

In the Cum BCWP field on the WBS row, enter the cumulative BCWP value for the overall WBS task in the base unit selected. The value you enter is stored in the As Of Month. MPM calculates percent based on the Cum BCWP you enter divided by BAC in the base unit set in the Estimate Type field of the Baseline window in Integrated Planning.

Milestone Weights with % Complete

If the milestone is 100% complete for the As Of period being statused, place a check mark in the Complete field to claim the milestone.

If the milestone is not 100% complete, enter the percent complete in the % Complete field and revise the forecast date to the planned completion date.

MPM calculates the BCWP in the same way it calculates Milestone Weights, except it adds percent complete of all completed milestones plus percentage weight of all partially earned milestones before dividing by total weight.

Key Event

Place a check mark in the Complete field to claim a milestone as complete.

This EVM allows a work package to earn LOE (Level of Effort) value for all months up to the first month with an incomplete milestone. This includes, but does not go beyond, the current month. In addition, value is earned for any future months in which all milestones are completed.

The basic criteria for this EVM are:

- The work package must have at least one milestone in order to earn BCWP.
- If a month has more than one milestone, all milestones must be completed to earn BCWP.
- No BCWP is earned for any months between two incomplete milestones.
- Milestones do not have to be completed in chronological order to acquire earned value. For example, you might have a work package that begins January 1 and ends May 31, with a milestone in February, April, and May. You could earn value for the April milestone by completing it in March, even though you didn't complete the February milestone. If this happened, earned value would be LOE for January and March, plus BCWP for April.

When MPM calculates BCWP, it stores the value in the month entered by you in the Compute BCWP Through Which Month field. This differs from other EVM calculations where the value is stored in the As Of Month.

Apportioned

You do not have to enter data for this EVM.

MPM first calculates BCWP for all WBS IDs except apportioned effort. After completing those calculations, MPM calculates BCWP for all apportioned effort WBS elements.

MPM calculates BCWP by copying the cumulative earned value percent complete from the Base WBS, applying it to the apportioned WBS, and then calculating the dollar value of BCWP based on the Apportioned WBS's base unit divided by BAC.

Calculating BCWP

After you have statused all WBS elements that are in process, run the Calculate BCWP process to calculate and determine BCWP values for the period being statused. For information on calculating BCWP, see topic *11.6 Calculating BCWP*.

9.6 Modifying Milestone Information for Work in Progress

You may find you need to make changes to a milestone after the work has begun on the WBS element. For example, you may have to add a WBS element, change the scope of work, change the EVM specified, or correct an error.

When you change a WBS element with work in progress, you must use caution because the change may impact the earned value results for the WBS element's Budgeted Cost of Work Performed (BCWP). Changes that can impact the earned value include:

- Changing the EVM
- Changing the BCWP Base Unit
- Changing a milestone weight
- Inserting a new milestone
- Deleting a milestone

If a change will impact the earned value of a WBS element, MPM displays the Integrated Planning message shown in Figure A.
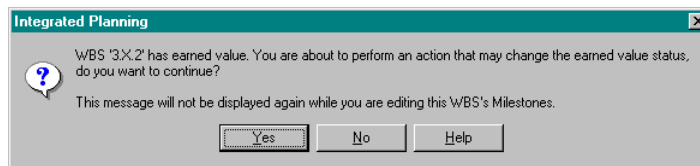
Figure A. *If a change will impact the earned value of a WBS element, MPM displays the Integrated Planning dialog box.*

Sub-Topics

The following sub-topics describe the changes that you can make:

9.6.1 Changing an Earned Value Method (EVM)
9.6.2 Changing the BCWP Base
9.6.3 Changing a Milestone Weight
9.6.4 Modifying an Element's Prior Status
9.6.5 Changing an Element's Budget at Completion (BAC)

9.6 Modifying Milestone Information for Work in Progress

9.6.1 Changing an Earned Value Method

If you change the EVM of a work package that is in progress and already has earned value (BCWP), MPM will use the new earned value method and modify the milestones if required.

For example, if the EVM is Milestone Weights and you switch the EVM to Milestone Weights with % Complete, the milestones will remain unchanged. But if you change EVM Milestone Weights to EVM 0/100, MPM will remove the existing milestones and replace them with only Start and Complete milestones.

When milestones are changed, we recommend restatusing all milestones for prior months and recalculating BCWP so that the proper earned value is earned based on the new EVM.

9.6 Modifying Milestone Information for Work in Progress

9.6.2 Changing the BCWP Base

For all Earned Value Methods (EVMs) except BCWP Entry, if you change the BCWP Base Unit and recalculate BCWP, the recalculated BCWP will reflect the new base unit. If you change the BCWP Base Unit, we recommend you recalculate the weights for the milestones in accordance with the new Base Unit in addition to recalculating BCWP.

If a WBS element has an earned value method of BCWP Entry and you change the BCWP Base Unit, the direct entry values in the BCWP file must be recalculated to reflect the new BCWP Base Unit. The % Complete field must be filled in for this calculation to take place, which means BCWP must have been previously calculated filling the % Complete field with a value.

In other words, if you have to change the base unit for a WBS element with an EVM of BCWP Entry, follow these steps:

1. Be sure BCWP has been calculated for all WBS elements.

2. Change the base unit.

3. Recalculate BCWP.

    MPM will recalculate BCWP in the new base unit and store the value accordingly.

9.6 Modifying Milestone Information for Work in Progress
9.6.3 Changing a Milestone Weight

MPM computes the percent complete for the WBS element based on the milestone weights entered for the following EVMs:

- 0/100, 25/75, 40/60, 50/50
- Milestone Weights
- Milestone Weights with % Complete

You may need to adjust the milestones if:

- You discover that weights are not correct
- You have to add new milestones
- You have to delete a milestone

After you adjust the milestone weights, you should restatus milestones for prior months and recalculate BCWP to correctly reflect the new milestones in your BCWP value. See topic *9.6 Modifying Milestone Information for Work in Progress*.

9.6 Modifying Milestone Information for Work in Progress

9.6.4 Modifying an Element's Prior Status

You modify a WBS element's prior status using the same procedure used to modify the current status. When you modify status for a WBS element using an EVM other than Key Event, the As Of Month must be the same as the month used for the original status.

For Key Event EVMs, you use the BCWP Compute Through month to determine the month used for the original status.

You can review prior status dates using the Earned Value Planning & Analysis Report or by Exporting using BCWP Status.

Example

For example, assume you originally statused WBS 1X in Jan97, Feb97, and Mar97 as follows:

As Of Month: Jan97

Milestone ID	Complete
101	✓
102	
103	

As Of Month: Feb97

Milestone ID	Complete
101	✓
102	✓
103	

As Of Month: Mar97

Milestone ID	Complete
101	✓
102	✓
103	✓

Then you discover that Milestone ID 102 was not actually completed until March. Since March status already reflects Milestone ID 102 as complete, only the February status must be modified.

To modify the status, you would:

1. Go to WBS 1X on the Milestone sheet.

2. Change the As Of Month date to Feb97.

   The Milestone sheet will display the last status of all milestones.

3. Change all milestones for WBS 1X to reflect the cum-to-date status as it should have been in Feb97.

   As Of Month: Feb97

Milestone ID	Complete
101	✓
102	
103	

4. Save the modified status for February by selecting Save from the File menu or pressing Ctrl+S.

5. Calculate BCWP for the project.

The Milestone Complete field always contains the *last* status update. If you were to view a bar chart after making the above changes, Milestone ID 102 and Milestone ID 103 would not be shaded (claimed) even though the WBS ID's BCWP is 100% complete. To display the current status, resave the milestone status using an As Of Month of Mar97.

9.6 Modifying Milestone Information for Work in Progress
9.6.5 Changing an Element's Budget at Completion (BAC)

You can directly change the BAC of a WBS element even though the element has work in-progress milestones that have already been claimed. However, be sure you want to change a WBS element's BAC, as the change will affect the BCWP for that element.

Because the BCWP of a WBS element is stored as a percentage of the BAC, changing a WBS element's BAC value will affect the BCWP of all claimed milestones to date for that WBS.

How previous BCWP values are affected depends on the EVM used.

EVMs Except BCWP Entry, Earned Standards, and Key Event

When you change the BAC, and BCWP is recalculated, the percent complete for each month remains constant but the value it represents will change. For all months that you compute BCWP, the BCWP values will change to reflect the stored percentages of the new BAC.

EVM of BCWP Entry or Earned Standards

Because an EVM of BCWP Entry or Earned Standards requires you to directly enter BCWP values, these values are saved as discreet values, not as a percentage of the total BAC.

If you increase the BAC for a WBS element and recalculate the BCWP, the direct entry value will not be changed (providing the base unit has not changed and BAC was not reduced), and the percent complete for each month is recalculated based on:

BCWP in base unit / BAC in base unit

However, if the BAC was reduced, BCWP is recalculated to avoid the BCWP at the end of the project being greater than the BAC.

This also works for Earned Value Method Standard Hours entry. Entry of Cum BCWP in standard hours results in a calculated percent complete, which is then applied to both BAC of Hours and the Cum BCWP (which is stored in Hours rather than Standard Hours).

EVM of Key Event

Prior month BCWP values and BCWP percent complete will not be modified if you change a WBS element's BAC. Any changes to BAC will not be reflected in prior month calculations.

Prior month percent complete values will always represent percent complete of BAC at the time that month was calculated.

Modifying an existing estimate after statusing the WBS will impact the calculation of BCWP values.

9.7 Impact of Budget Changes on BCWP Values

Any change you make to the budget after you status WBS elements will have an impact on the calculation of BCWP.

- Cumulative BCWP Value through a Month = (Cumulative % Complete through the Month) x (Budget at Completion).
- Each time BCWP is computed (for all EVMs except Key Event) all monthly values within the range of the selected Calculate From month and the Calculate Through month are recalculated.
- For the EVM of Key Event, a budget change will only affect cumulative values in the Calculate Through month. Historical BCWP is not recalculated.
- For each WBS element, the BCWP is computed using either BCWP Value or BCWP % Complete. Which is used depends on the EVM selected.

These EVMs:	Use:
Earned Standards BCWP Entry Key Event	BCWP Value
All others	BCWP % Complete

- For all EVMs except Key Event, if BAC is changed (any change to the budget) after a WBS element has been statused, BCWP Value or BCWP % Complete will change for all previously statused months when you recalculate BCWP.

Examples

To illustrate the impact of budget changes, assume BAC = 1000 and BCWP is statused as follows:

	JAN	FEB
Cum %	50	100
Cum $	500	1000

If an EVM of Earned Standards or BCWP Entry is used and BAC is increased to 2000, the new values after calculating BCWP will be:

	JAN	FEB
Cum %	25	50
Cum $	500	1000

If an EVM of Earned Standards or BCWP Entry is used and BAC is reduced to 500, the new values after calculating BCWP will be:

	JAN	FEB
Cum %	100	100
Cum $	500	500

If an EVM other than Earned Standards or BCWP Entry is used and BAC is increased to 2000, the new values after calculating BCWP will be:

	JAN	FEB
Cum %	50	100
Cum $	1000	2000

9.8 Entering Information Using Autofill

Drawing on its similarity to a spreadsheet, MPM provides autofill features for replicating data down adjacent cells in the Milestones sheet. You are restricted to autofilling within the milestones for a single WBS element.
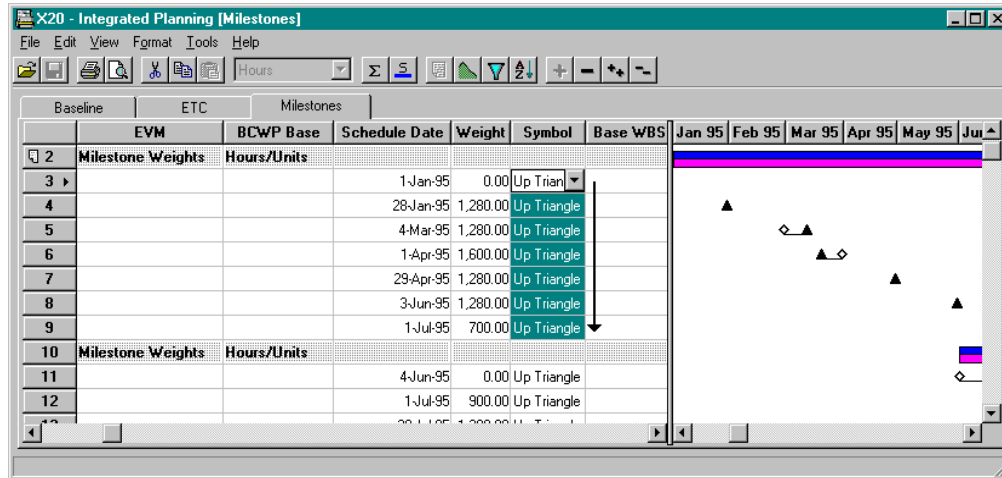
Figure A. *You can use the autofill feature to replicate data down adjacent cells.*

Procedure

To autofill data down adjacent cells:

1. Select the source cell or cells and the adjacent target cells.

In the Milestones sheet, you can only autofill down a column and within the milestones for a single WBS.

2. To fill down, do one of the following:

- From the Edit menu, select Fill Down.
- Press Ctrl+D.

Note the cells will not reflect the change until you click on another cell.

9.9 Milestone Field Descriptions

The fields (columns) in the Milestone sheet provide information about the milestones. MPM displays <Required> in fields that are required. You can display or hide the fields using the Column Hide command on the Format menu.

Most of the WBS fields can be displayed in the Baseline view. However, they cannot be edited and initially they are hidden in the view. For a description of the fields, see topic *5.7 WBS Field Descriptions*.

The important fields are described on the pages that follow. They are listed in the order they appear in the window.

Level

Level is a read-only field that displays the hierarchical level of the WBS element and shows the relationship of the element to its parent. The top element, or project level, in the WBS has a value of 1.

WBS ID

The WBS ID is a unique number assigned to each element of the WBS when the WBS is created. You cannot edit this field.

Milestone ID

This is a unique code that you enter for each milestone. It can be up to 10 characters. The ID must be unique across the entire project. The same ID cannot be used for a different work package. MPM does not sort the milestones by the Milestone ID.

Description

On a WBS row, the description is read-only and is taken from the WBS. On a milestone row, the description is a free form field that accepts up to 15 characters.

EVM

Earned Value Method (EVM) is a field on a WBS row that displays the method used to calculate BCWP for the WBS element. You select the method from the drop-down list.

If you delete an EVM from a WBS element, MPM removes all milestones from the WBS. If you assign an EVM to a WBS element that does not currently have any milestones, MPM adds default Start and Complete milestones to the WBS. You can accept, edit, or delete these default milestones.

BCWP Base

BCWP Base is a WBS field that shows which unit is to be used when calculating the BCWP for a WBS element. You can choose from five base units to be used to calculate BCWP: Hours/Units, Prime Dollars, Total Burdened, Total Cost, or Total Dollars. Total Dollars is the default value.

The BCWP Base unit should match the Baseline Estimate Type you selected in the Integrated Planning window. For example, if the estimates are being recorded as Hours, then the BCWP Base unit should also be Hours.

Schedule Date

The Schedule Date is the original date on which a milestone should be completed. The date must fall within the WBS Start and Complete dates. If you enter a Fiscal Period in the field, MPM will use the Fiscal Start date (day, month, year) from the Fiscal calendar.

If you change the Schedule Date and the Forecast Date for the milestone is blank, MPM changes the Forecast Date to match the Schedule Date.

Forecast Date

The Forecast Date is a revised Schedule Date for the milestone. If you enter a Fiscal Period in this field, MPM will use the Fiscal Complete date (day, month, year) from the Fiscal calendar. The Forecast Date defaults to the Schedule Date until it is modified.

Weight

The Weight field displays the milestone's weight, where weight represents the amount of an element's cost that is earned when the milestone is met. The field can be changed only if the EVM for the element is Milestone Weights or Milestone Weights with % Complete.

Symbol

Identifies the symbol used for the milestone's schedule/forecast date on the Gantt chart. You pick the symbol from the field's drop-down list box. The default symbol is the Up Triangle.

Complete

A check mark in this field indicates that the milestone has been completed. When a milestone is marked completed, the symbol on the Gantt chart is shaded. To check or uncheck this field, double-click on the field, press the spacebar, or click on the check button at the end of the field.

For EVMs other than No EVM Required, Level of Effort (LOE), Key Event, and Apportioned, when you update the field MPM updates the milestone's % Complete field appropriately and calculates a new percent complete and cumulative BCWP for the WBS.

% Complete

This field shows the cumulative percent complete.

WBS Row: The % Complete field shows the cumulative percent complete for a WBS element if the WBS element has an EVM assigned other than No EVM Required. N/A (Not Applicable) will display for WBS elements that use an EVM of Level of Effort or Key Event.

Milestone Row: If the milestone is checked as complete, the % Complete field will display 100%. If an EVM of Milestone Weights with % Complete is used, this field holds the current percent complete value for each milestone up to 100% and will accept up to three characters of input. If you set the % Complete field to 100%, MPM will place a check mark in the Complete field. If you set the % Complete field to less than 100%, MPM will remove the check mark from the Complete field. If you update this field, MPM will calculate a new percent complete and cumulative BCWP for the WBS.

The percent complete value displayed is the most recent non-zero month of status, not necessarily the latest percent complete. For example, assume the percent complete values after statusing several months are: Jan 10%, Feb 20%, Mar 10%, and Apr 0%. The percent complete displayed would be March's 10%.

Cum BCWP

The Cum BCWP field displays the most recent cumulative BCWP value for the WBS element when the element has an assigned EVM. If no EVM is selected, or EVM is equal to No EVM Required, the field will be blank.

If a WBS element has been assigned an EVM of BCWP Entry or Earned Standards, you must enter a value in this field to status the element. For an EVM of BCWP Entry, updating the Cum BCWP will cause MPM to calculate a new percent complete for the WBS element. For an EVM of Earned Standards, updating the field will cause MPM to calculate a new percent complete for the WBS element, then apply that percent to the BAC of Hours to calculate a new cumulative BCWP for the WBS in Hours.

Baseline Start

The Baseline Start field displays the earliest start date of any baseline resources for the WBS. This field is read-only.

Baseline Complete

The Baseline Complete field displays the latest complete date of any baseline resources for the WBS. This field is read-only.

Last Statused Date

The Last Statused Date field displays the date that the work package was last statused (the last day of the fiscal month selected for the As Of Month while statusing). This date is stored by MPM and is read-only. This date is displayed on the Gantt chart as an upside down red triangle above the Gantt bar.

Base WBS

The Base WBS is required when the Apportioned EVM is used. You enter the Base WBS ID by clicking on the ... button at the end of the field and selecting a WBS ID from the hierarchy dialog box displayed, or by typing in the WBS ID.

You cannot use any of the following as the Base WBS ID:

- A WBS designated as an apportioned effort task
- A distributed WBS
- The Project Level WBS
- The WBS element you are working in

Other Fields

Most of the WBS fields can be displayed in the Milestone sheet. However, they cannot be edited and initially they are hidden in the view. For a description of the fields, see topic *5.7 WBS Field Descriptions*.

9.10 Maintaining Milestones

Most of the fields in the Milestone display are read only, with the information pulled from other areas of MPM. The editable fields are:

- Milestone ID
- Description
- EVM
- BCWP
- Schedule Date

- Forecast Date
- Weight
- Complete
- % Complete
- Cum BCWP

Editing a Milestone

To edit a milestone:

1. Select the field you want to edit.

2. Make the change.

When you change a field value, MPM changes the color of the text of the WBS and the text of all of the milestones for the WBS to blue. The blue color indicates a milestone has been changed but not saved.

3. To save the change, do one of the following:

- Click on another WBS element row in the window.
- Click on the Save button in the Toolbar.
- From the File menu, choose Save.
- Press Ctrl+S.

You may be prompted to confirm the save.

If you do not want to save the changes, press Esc.

Sub-Topics

Other editing functions are covered in the following sub-topics:

9.10.1 Copying and Pasting Milestones
9.10.2 Copying and Pasting Cells
9.10.3 Deleting Milestones
9.10.4 Deleting Cells

9.10 Maintaining Milestones
9.10.1 Copying and Pasting Milestones

You can copy and paste milestones from one WBS element to another WBS element using the Copy and Paste commands under the Edit menu. If you have two Integrated Planning windows open, you can copy and paste milestones between the windows. When you copy milestones, MPM automatically assigns unique Milestone IDs to the new milestones. Copying milestones is a fast way to enter new milestones if the milestones are similar. You can also copy individual cells. Copying cells is described in topic *9.10.2 Copying and Pasting Cells*.

Figure A. *You can copy milestones.*

Procedure

To copy and paste a milestone:

1. Select a single milestone by clicking on the row number in the left most column, or select multiple milestones by holding down the left mouse button and dragging across the row numbers.

You can select multiple milestones across two or more WBS elements.

2. Place the milestone(s) on the clipboard by doing one of the following:

- ■ Click the Copy 📋 button.

- ■ From the Edit menu, select Copy Milestone(s).

- ■ Press Ctrl+C.

3. Select the WBS element where you want to paste the milestone(s) and do one of the following:

- ■ Click the Paste 📋 button.

- ■ From the Edit menu, select Paste Milestone(s).

- ■ Press Ctrl+V.

MPM may display the dialog box shown in Figure B asking you to confirm the paste.
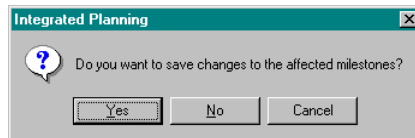
Figure B. You may be asked to confirm the paste.

4. To confirm the paste, choose Yes.

Cutting and Pasting

If you want to remove milestones from one WBS element and place them in another WBS element, you can use the Cut and Paste commands. The procedure is the same as the procedure outlined above for copying and pasting, except you use the Cut command instead of the Copy command.

9.10 Maintaining Milestones
9.10.2 Copying and Pasting Cells

You can copy and paste cells in the Milestone sheet. If you have two Integrated Planning windows open, you can copy and paste cells between the windows. Copying cells is a fast way to enter milestone information. You can also copy entire milestones. Copying milestones is described in topic *9.10.1 Copying and Pasting Milestones*.

Figure A. *You can copy one or more cells.*

Procedure

To copy one or more cells:

1. Select the cell(s) you want to copy.

To select more than one cell, hold down the left mouse button and drag across the cells.

2. Place the cell(s) on the clipboard by doing one of the following:

   - Click the Copy ⬚ button.
   - From the Edit menu, select Copy Cell(s).
   - Press Ctrl+C.

3. Select the cell where you want to paste the information and do one of the following:

   - Click the Paste ⬚ button.
   - From the Edit menu, select Paste Cell(s).
   - Press Ctrl+V.

   MPM may display the dialog box shown in Figure B asking you to confirm the paste.

Figure B. *You may be asked to confirm the paste.*

4. To confirm the paste, choose Yes.

Cutting and Pasting

If you want to remove estimates from one WBS element and place them in another WBS element, you can use the Cut and Paste commands. The procedure is the same as the procedure outlined above for copying and pasting, except you use the Cut command instead of the Copy command.

9.10 Maintaining Milestones
9.10.3 Deleting Milestones

You can delete one or more milestones. If the milestone has earned value, you will be
asked to confirm the delete.

Deleting Milestones

To delete one or more milestones:

1. Select a single milestone by clicking on the row number in the left most column,
    or select multiple milestones by holding down the left mouse button and
    dragging across the row numbers.

2. To initiate the delete, do one of the following:

    ■ From the Edit menu, choose Delete Milestone(s).
    ■ Press the Delete key.
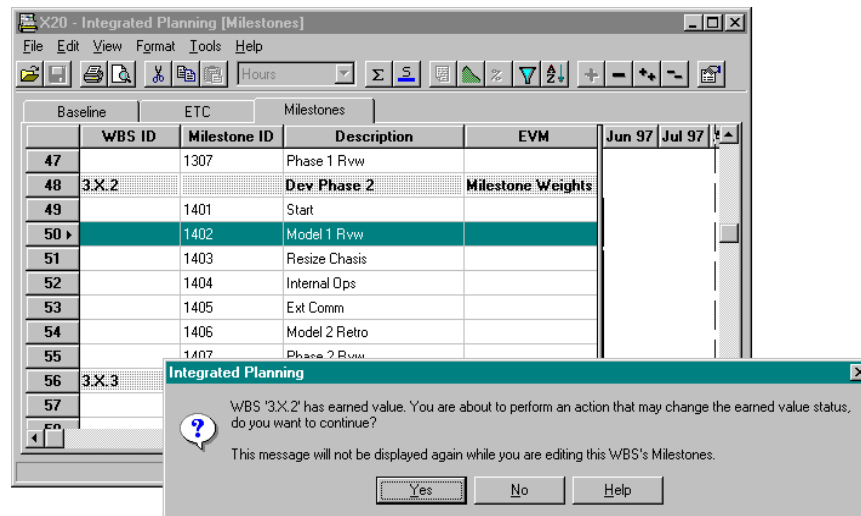
Figure A. *You can delete a milestone.*

If the milestone has earned value, MPM displays the dialog box shown in
Figure A. If you choose to delete the milestone, you will have to recalculate
BCWP. For information on calculating BCWP, see topic *11.6 Calculating BCWP*
in the *MPM Projects* manual.

3. To confirm the delete, click Yes.

4. To save the change, do one of the following:

      ■ Click on another row in the window.
      ■ Click on the Save button 🖫 in the Toolbar.
      ■ From the File menu, choose Save.
      ■ Press Ctrl+S.

    You may be asked to confirm the delete.

    If you do not want to save the changes, press Esc.

9.10 Maintaining Milestones
9.10.4 Deleting Cells

You can delete one cell or a group of adjacent cells. Adjacent cells can run across one or more WBS elements.

Procedure

To delete one or more cells:

  1. Select the cell(s) you want to delete.

   To select more than one cell, hold down the left mouse button and drag across the cells.

  2. To initiate the delete, do one of the following:

   ■ From the Edit menu, choose Delete Cell(s).

   ■ Press the Delete key.

   If the cell affects status (Complete and % Complete fields), and you have not yet set the As Of Month, MPM will display the As Of Month dialog box shown in Figure A.
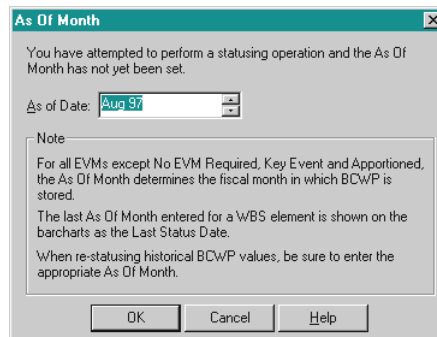
Figure A. *Set the As Of Month.*

   If the cell affects earned value (Weight field), MPM displays the dialog box shown in Figure B.
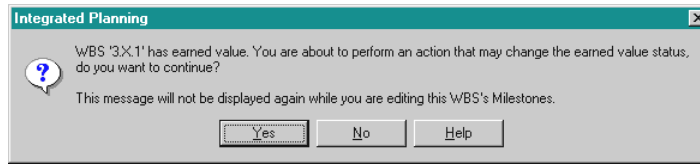
Figure B. Confirm the delete.

3. Take the appropriate action depending on the dialog box displayed.

4. To save the change, do one of the following:

- Click on another row in the window.
- Click on the Save button in the Toolbar.
- From the File menu, choose Save.
- Press Ctrl+S.

You may be prompted to confirm the save.

If you do not want to save the changes, press Esc.

9.11 Changing the Milestone Display

The Milestone display follows the standard MPM conventions for grids. The tools available for changing the display are described briefly in this chapter. For more information on changing the display, see the *MPM Getting Started* manual.

Filtering Data

You can apply a filter to the milestone data by clicking on the Filter button

or by choosing Filter from the Tools menu. MPM displays the Filter dialog box shown in Figure A where you can select a field to filter. When you click OK, MPM displays the second dialog box where you can type in an entry or select an entry from the drop-down list box.

The filter function filters all resource estimates. You can apply only one filter at a time. They are not cumulative. To display all resource estimates, select All Data from the Tools|Filter menu, or from the drop-down list box in the Filter dialog box.
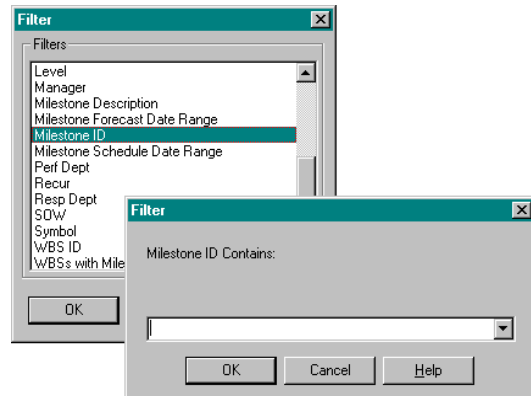
Figure A. Filter dialog box

Hiding and Showing Milestones

You can expand and collapse the milestones under each WBS element using the Toolbar buttons ![+][-][+][-] or the commands under the Tools menu.

Displaying and Hiding Columns

You can display and hide any combination of columns using the Column Hide command under the Format menu. In the Column Hide dialog box shown in Figure B, you can select and deselect columns to hide using the Shift+Click and Ctrl+Click key combinations. Selected columns will be hidden in the display. To display all columns, click on one of the columns in the list, Ctrl+Click on the same column to deselect it, then click OK.
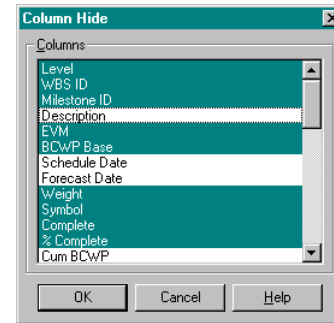
Figure B. *Hiding columns*

Sorting WBS Elements

You can sort on the WBS elements, but not the milestones in a Milestones view. Sort applies to all WBS elements regardless of the current selection. To sort the WBS elements, click the Sort button in the Toolbar, or choose Sort from the Tools menu. MPM displays the Sort dialog box shown in Figure C. To return the display to its original order (by WBS ID), choose Reset in the Sort dialog box.
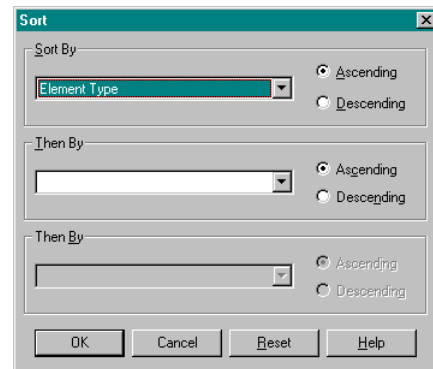
Changing the Periods

You can change the periods displayed in the Gantt chart to month, quarter, or year. To select a period, choose Period from the View menu.

Figure C. *Sort dialog box*

9.12 Previewing and Printing Milestones

At any time, you can preview and print the milestones sheet. Note you cannot print the Gantt chart directly from the Milestones window. However, you can print a Milestone Barchart report from the Reports tab in the Menu Manager window.

Previewing the Milestones Sheet

To preview the milestones sheet onscreen:

   1.   Do one of the following:

   - Choose the Print Preview button ![icon] in the Toolbar.
   - From the File menu, choose Print Preview.

   MPM displays the Print Preview dialog box shown in Figure A.
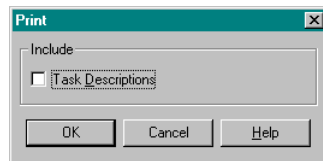
Figure A. *Select the information
you want included.*

   2.   Select the information you want included in the report.

   3.   To display the report, click OK.

   For information on using the Print Preview window, see the *MPM Getting Started* manual.

Printing the Milestones Sheet

To print a Milestones sheet:

   1.   Do one of the following:

   - Choose the Print button ![icon] in the Toolbar.
   - From the File menu, choose Print.

   MPM displays the Print dialog box shown in Figure B.
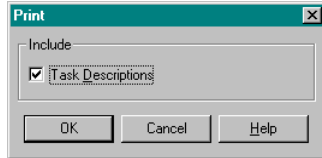
Figure B. *Select the information you want included.*

2. Select the information you want included in the report.

3. To print the report, click OK.

MPM displays the standard Windows print dialog box shown in Figure C.
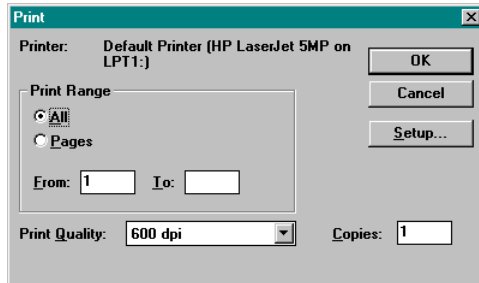
Figure C. *Select the print options.*

4. Select the appropriate options and click OK.

9.13 Recommended Milestone Reports

There are several standard MPM reports that you can use to review milestone information. The reports are described briefly below. For detailed information on the reports, see the *MPM Standard Reports* manual.

- Milestone Barchart
- Milestone Status Turnaround Document

10
Entering the Project Actuals

10.1 Introduction to Actuals

You can enter or import the actual costs incurred by the project into MPM for analysis and comparison with the budget. This is an optional feature provided by MPM.

Actuals are not collected by MPM. Your accounting system provides the actuals, which you can either input manually or import directly. MPM sorts and summarizes actual costs by WBS/OBS and then provides comparative reports and graphs.

> You must have already entered your accounting system identifier in the Charge Number field in the WBS window, or MPM will not allow the entry or importation of actuals into that WBS.

Actuals may be collected by Element of Cost or by Resource at any level of the WBS. If you collect actuals at the control account level and calculate BCWS and BCWP at the work package level and you want to set BCWS and BCWP equal to actuals when running the Replan utility, you must set it at the level of the WBS where actuals exist. This will clear your variances at the control account level, and retain the variances at the work package level.

Totals of Actuals

Whether you manually enter or import actuals, the dollar amounts are automatically accumulated using the following formulas:

- Prime + Overhead = Total Burden
- Total Burden + G&A = Total Cost
- Total Cost + Cost of Money = Total Dollars
- Total Dollars + Fee = Total Price

These totals are rolled up in each WBS parent automatically. If you are entering actuals manually and this automatic rollup is slowing you down, see *topic 10.4 Creating Actuals* for details about turning off the Rollup Toggle.

Comparing Budget to Actuals

Once you have entered your actuals, you can run several reports and graphs to compare your actuals to your budget and try to predict the costs and schedule required to finish the project. The graph below shows the SPA Line Graph, which compares BCWS, BCWP, ACWP (Actuals), Schedule Variance, and Cost Variance. See *Chapter 14: Analyzing the Project Graphically (GDD)* for details on generating this graph.
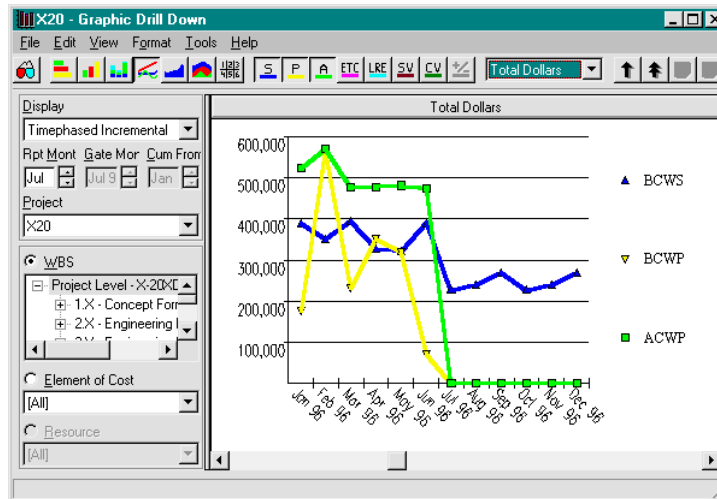
Figure A. *An SPA Line Graph*

Actuals Repricing

You can revise actuals in one process using the Reprice utility. Repricing is usually performed when there are major modifications to burden templates or rate tables. Using the utility can save a great deal of time over modifying each estimate separately. You can also use the Reprice utility to run "what if" scenarios against copies of your project. You can easily shift resources and change direct or indirect rates to produce different pricing scenarios.

You should run the Actuals Reprice if the Resource Code or Resource Department has changed for Resource Actuals, or the EOC code has changed for EOC Actuals. See *Chapter 11: Utilities* for details.

10.2 Accessing Actuals

You open the Actuals window from the MPM Menu Manager. When you open the Actuals window, you select the project you want to view and the data to download.
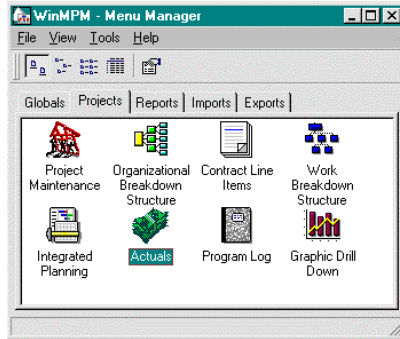
Figure A. *Accessing the Actuals Window*

Procedure

To open the Actuals window from the Menu Manager window shown in Figure A:

1. Do one of the following:

    ■ Select the Projects tab and choose the Actuals icon

    ■ Choose Actuals from the File|Projects menu

    MPM displays the Actuals Open dialog box shown in Figure B.

2. Choose a project from the Project drop-down list box.
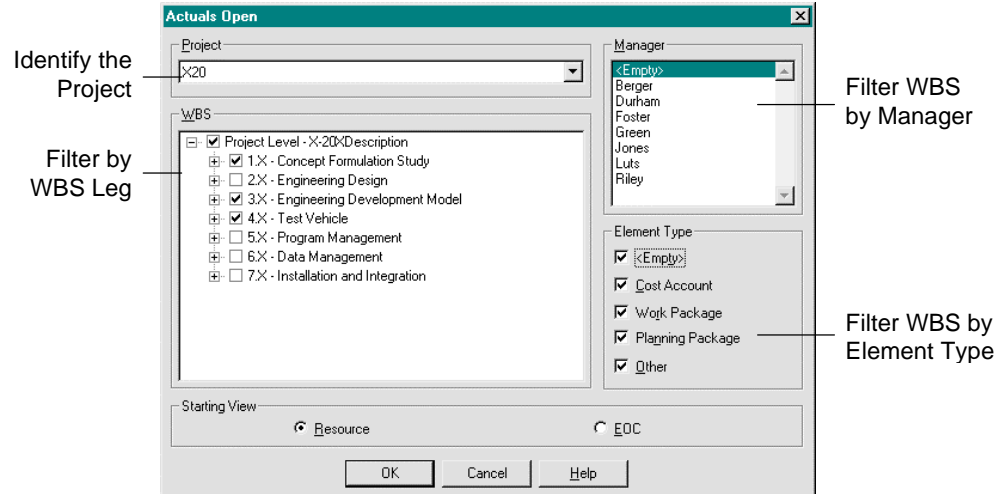
***Figure B.** Select a project and the data to download.*

3. To select the data to be downloaded, specify one or more of the following:

- ■ Filter by WBS Leg

   Click the check mark box next to the desired WBS Leg(s), using the ⊞ and ⊟ boxes to expand or collapse the legs if necessary.

- ■ Filter by WBS Manager

   Using the Shift and Ctrl keys, click the particular Manager(s) who are assigned to the WBS elements you want to download.

- ■ Filter by WBS Element Type

    Select the type(s) of WBS elements you want to download.

4. To accept the selections and display the Actuals window, click OK.

When the Actuals window opens, the WBS elements you selected here are downloaded. Note that unlike the WBS window, you cannot download additional data once you click OK here, so be sure to download all necessary WBS elements prior to clicking OK.

10.3 Orientation to the Actuals Window

You use the Actuals window to manually enter, edit and review actuals data. A toolbar gives you quick access to common tasks. The Actuals window has two window panes. The left pane shows the resource or EOC data, and the units of actuals being attributed to the current WBS element. The right pane shows all the months of the fiscal calendar for the selected project and contains the actuals data. Data is shown beginning two months prior to the current accounting month. See Figure A.

Figure A. The Actuals Window

Resource and EOC Views

To enter actuals data by resource, click the Resource tab in the left window pane. To enter actuals data by EOC, click the EOC tab.

Going Quickly to Actuals Start

MPM has a quick way to scroll the right window pane to the fiscal month where the actuals data starts.

- To scroll to the start of the WBS, click the WBS and choose Go To WBS Start from the Edit menu, or press Ctrl +G.

- To scroll to the start of the Resource, click the Resource and choose Go To Resource Start from the Edit menu, or press Ctrl +G.

- To scroll to the start of the EOC, click the EOC and choose Go To EOC Start from the Edit menu, or press Ctrl+G.

Searching Actuals

To search through your actuals, choose Find from the Edit menu. MPM displays the Find Options window. Enter the text to be found, whether you want to try to match all or part of the entire cells contents against the text, and whether to match upper/lower case. Click Find Next and MPM attempts to locate that string. MPM always searches the left window pane from the current cell, from top to bottom, left to right. The search does not wrap to the top of your data.

Checking the Totals Window

At any point in your editing process, you can easily check your totals by looking at the Totals window. Bring up the Totals window by either choosing Totals window from the Tools menu, or clicking the Total button $\boxed{\Sigma}$. The window is a floating toolbox that is always on top. You can leave it up while you continue your editing, or close it. The menu option shows ☑ if the Totals window is toggled on.

If a cell is currently selected on the left window pane, the grand totals displayed are for the entire Resource/EOC. If a cell is currently selected on the right window pane, the middle column shows the monthly totals, and totals for the entire Resource/EOC.

This window shows current and cumulative Budget at Complete (BAC) totals for the following fields: Hours/Units, Prime, Overhead, Total Burdened, G&A, Total Cost, Cost of Money, Total Dollars, Fee, and Total Price.

Printing/Previewing Actuals Elements

You can preview or print actuals data using the options on the File menu. For complete details on using these options, see *Using MPM* in *Getting Started*. When you select Print Preview or Print, MPM displays the Print/Preview dialog shown in Figure B, where you can choose whether to include Task Descriptions and/or Timephased Values.
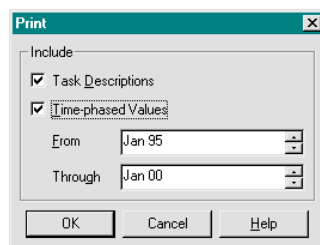
Figure B. *The Print/Preview dialog*

10.4 Creating Actuals

Inserting New Actuals

1. To indicate the WBS element to which you want to add actuals, click anywhere in its grayed row.

2. To add a new resource, click the Resource tab. To add a new EOC, click the EOC tab.

3. To insert a new block (the six rows inserted are referred to as a *block* in this document), press the Insert key or choose Insert from the Edit menu.

   MPM adds a new actuals block after the last block for the current WBS element, and puts the entire block (six rows) in edit (blue) mode.

4. Select the Resource/EOC code using the drop-down list box in that cell.

5. Enter actual values for the Resource/EOC in the right grid, in the row appropriate for the units you are entering (Hours/Units, Prime, Overhead, GA, COM, Fee), and in the column for the month(s) in which the actuals were accrued. For example, to enter $5,000 Prime dollars for October 1999, find the Prime row, the Oct 99 column, and enter 5000 in that cell.

Importing Actuals from Outside MPM

Actuals can also be imported in batch mode from a batch file provided by your accounting system can create an import file in a CSV, comma delimited format. Actuals entered in import mode can be manually overwritten. Actuals are imported by month; MPM computes cumulative totals. If collecting Actuals by Resource, you can optionally auto-burden them. See *Chapter 16: Importing Data* for a detailed explanation.

Saving the Data

When you are finished editing the Resource/EOC actuals, select Save from the File menu, press Ctrl+S, or click the Save ⊟ button. If you click outside the six-row block, or insert another cell, MPM prompts you to save the current six-row block, unless the Resource/EOC is still set as <Required>, in which case MPM prompts you to fill the <Required> fields before your data can be saved. To discard changes you have made to an actuals block, or remove a newly added actuals block, press ESC**.** MPM prompts to discard changes to the actuals.

Rollup Processing

Your Resource/EOC entries are rolled up as you enter them into the Actuals window. If you have a large amount of data, this may slow down data entry. You can optionally suspend automatic processing by turning off the Rollup Processing toggle. See *Chapter 2: Creating and Maintaining Project Settings* for instructions on using the toggle.

The Rollup Processing Toggle suspends rollup processing of entries until you manually choose to process the rollups. If Rollup Processing is turned OFF, MPM stores all actual values you enter, but does not rollup or accumulate the values into the totals until you choose to do the processing. This simplifies input of high volumes of estimate and/or actuals data with improved performance, especially if you have an extensive or complex WBS Tree. But you must later run the rollup processing, or your totals will be incorrect!

There are two settings which you can turn off: EOC and Summary processing. EOC processing rolls up EOC data. Summary processing creates summary data which is used by several reports.

- To see the current setting, check Rollup Toggle Status from the View menu. You must have been granted access to this toggle to be able to change it.

- To change the EOC or Summary toggle, you must exit the Actuals window, and in the Project Maintenance window, choose Rollup Processing on the View menu, and check or uncheck the desired toggle.

- To perform the Rollup Processing for actuals when you have set the EOC or Summary toggle OFF, in the Project Maintenance window, choose Rollup Processing on the View menu and choose to roll up actuals by clicking the check box.

10.5 Actuals Field Descriptions

For each WBS element you selected in the Actuals Open dialog box, the Actuals window displays a gray row, showing the WBS and its associated fields, which is read-only reference information about the WBS. See *Chapter 5: Creating the WBS* for details about the WBS fields.

Blocks of Actuals by Unit

When you enter actuals against the current WBS element, each Resource or EOC is given six rows in the grid, for each of the units that may be affiliated with the actuals (Hours/Units, Prime, Overhead, G&A, Cost of Money, and Fee). Those six rows of data are referred to as a *block* in this document. The units of actuals data (Hours/Units, Prime, Overhead, G&A, COM, Fee) each have their own row, which is extended in the right window pane across all the fiscal months in the project. Here you enter the number of hours, units, or dollars for the current resource or EOC into the appropriate month. You can enter values in decimals; MPM will round off the value and display the whole numbers, but the values are stored in their full precision.

These are the fields or columns displayed in the Actuals Sheet. Fields which are required display <Required> in the cell. These fields must be filled. You can change the columns that are displayed using Column Hide. See *Using MPM* in the *Getting Started* manual for details.

- Resource Code
- Resource Description
- Resource Dept
- XREF-EST
- Overtime
- Unit
- EOC Code
- EOC Description

10.5 Actuals Field Descriptions

10.5.1 Resource Actuals Field Descriptions

When entering Actuals by Resource, enter the number of hours, units, or dollars for the current resource into the appropriate fiscal month. You must first select the Resource Code from the list box, and you can optionally fill in Resource Department and Overtime. These entries can only be made on the first line of the block. See Figure A.
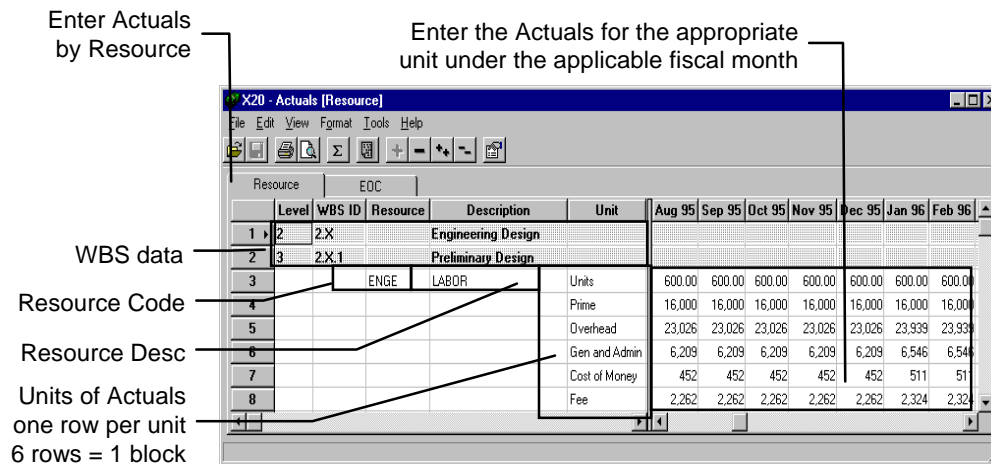
Figure A. *Resource Fields*

Unique Resource Actuals

Each block of resource actuals data is identified by a unique combination of Resource Code, Resource Dept, and Overtime. Each block must contain a unique combination of these fields to uniquely identify that block. For example, if you are reporting actuals hours data for Resource Code ENGE in Department LAB1 with OT for the months of August, September, and October 1998 for WBS 100-10, you cannot report multiple sets of hours data for ENGE in LAB1 with OT in Aug-Oct. 1998 for WBS 100-10.

Resource Code

This required field contains the code of the resource for which actuals are being entered. Select the code from a drop-down list box of resources.

Resource Description

On a Resource row, this field contains the resource description as defined for the Resource Code in the Resources and Burdens window.

Resource Dept

On a Resource row, this optional field contains the department of the resource for which actuals are being entered. Select from a drop-down list box of available performing departments.

XREF-EST

On a Resource row, use this optional identifier as a wild card for reporting, exporting, or onscreen filtering to match a specific group of data.

Overtime

On a Resource row, click this optional check mark to show that actuals represent overtime rates.

Unit

Indicates which of the six units show in the right window pane. MPM displays Hours/Units on the same row with the Resource/EOC code; all others are on the next five rows, in this order: Hours/Units, Prime, Overhead, G&A, Cost of Money, Fee. These fields cannot be edited or deleted.

10.5 Actuals Field Descriptions

10.5.2 EOC Actuals Field Descriptions

When entering actuals by EOC, enter the number of hours, units, and/or dollars for the current EOC into the appropriate fiscal month. See Figure A below. You must first select the EOC Code from the drop-down list box.
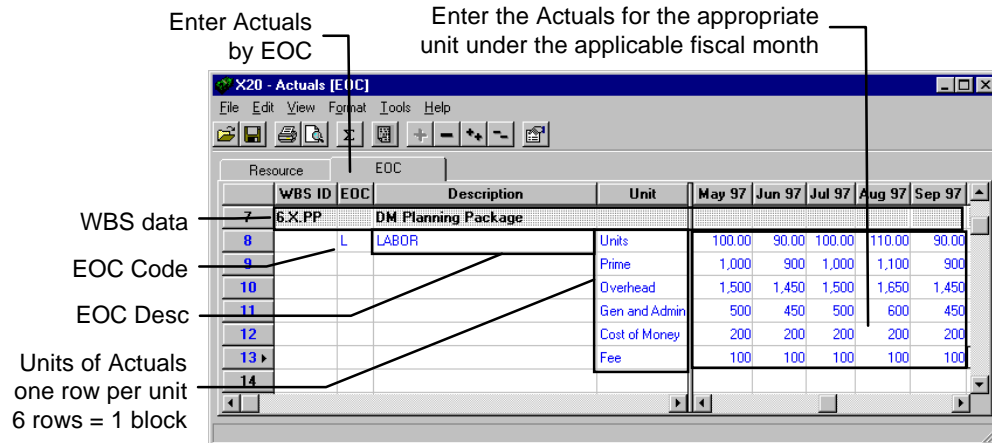
Figure A. EOC Fields

Unique EOC Actuals

Each block of EOC actuals data is uniquely identified by the EOC Code. For example, if you are reporting actuals hours data for EOC Code LABOR for the months of August, September, and October 1998 for WBS 100-10, you cannot report multiple sets of hours data for LABOR for Aug-Oct. 1998 for WBS 100-10.

EOC Code

This required field contains the code of the EOC for which actuals are being entered. Select the code from a drop-down list box of EOC codes.

EOC Description

On an EOC row, this field contains the EOC description as defined for the EOC code in the Elements of Cost window.

10.6 Maintaining Actuals

Editing Actuals

When entering or editing actuals in the right window pane, you are in Edit Mode. In Edit Mode, the text in the current block in both window panes is blue. Choose the row for the appropriate unit of actuals, and the column for the period when those units were accumulated. When a cell is edited, the values you enter are displayed in full precision based on the units for that cell. Negative numbers are normally displayed in red, but when you are in Edit Mode, they are blue. When you are finished editing the actuals, click to advance to the next Actuals field, or press the tab, Up or Down Arrow key.

Deleting Actuals

To delete an Actual amount in the right window pane, go to the desired cell and press the Delete key, or choose Delete on the Edit menu. MPM clears the amount in the cell.

To delete more than one actual at one time, select the desired elements by clicking and dragging the mouse to highlight the cell(s), or by using the Shift and Ctrl keys when clicking the mouse button, and then press the Delete key, or choose Delete Cells on the Edit menu. MPM clears the amount in the cell(s).

> You cannot delete or edit cell data on WBS rows. They are read-only reference.

If you delete one or more actuals cells, MPM prompts to save the changes.

To delete an entire resource or EOC block of actuals, highlight any row in the desired block by clicking the row number, and then press the Delete key or choose Delete on the Edit menu. MPM removes the entire actuals block.

Repricing Actuals

You can revise actuals in one process using the Reprice utility. Repricing is usually performed when there are major modifications to burden templates or rate tables. Using the utility can save a great deal of time over modifying each estimate separately. You can also use the Reprice utility to run "what if" scenarios against copies of your project. You can easily shift resources and change direct or indirect rates to produce different pricing scenarios.

The fee calculation method selected for a project determines whether fee is generated when using the Reprice utility. Repricing actuals will not generate fee if the WBS option is selected; reprice calculates fee only if the Resource option for fee calculation is selected. See *topic 2.4.4, Selecting a Fee Calculation Method*, for details.

 You should run the Actuals Reprice if the Resource Code or Resource Department has changed for resource actuals, or the EOC code has changed for EOC actuals. See *Chapter 11: Utilities* for details.

10.7 Changing the Actuals Display

Filtering Actuals

When you opened the actuals in the selected project, you selected the WBS elements (by leg, manager, and/or element type) on which to enter and edit actuals. To change the WBS leg(s) selected, choose Open on the File menu to access the Actuals Open dialog and select different or additional WBS leg(s).

Showing/Hiding Actuals

These options show resource if using the Resource tab, or EOC if using the EOC tab.

- To expand the display to show all actual rows of the selected WBS, use Show Actuals on the Tools menu.
- To collapse the display to hide the actual rows of the selected WBS, use Hide Actuals on the Tools menu.
- To show all actuals of all WBSs, use Show All Actuals on the Tools menu.
- To hide all Actual rows of all WBSs, use Hide All Actuals on the Tools menu.

Note that row numbers do not reorder when you change the actuals being shown. You can use this to know at a glance when rows are not being displayed. You can also check the Tools menu; the show/hide options that are set are disabled.

Displaying/Hiding Actuals Fields

You can display or hide any or all of the columns in the left pane of the Actuals window using Column Hide on the Format menu. Use the Shift and Ctrl keys to select and deselect the desired columns. The highlighted fields are hidden; the non-highlighted fields are displayed. See *Using MPM* in *Getting Started* for more information.

10.8 Recommended Actuals Reports and Graphs

There are several standard MPM reports that you can use to review actuals information. The reports are listed below. For detailed information on the reports, see the *MPM Standard Reports* manual.

- Element of Cost Table Report, which includes:
  - o Actuals by EOC Report
  - o Actuals by Charge Number Report
  - o Budget/Actuals Recap by EOC Report
  - o EOC - LRE Report
  - o SPA Tabular Report by EOC
  - o SPA Recap by EOC Report
- Resource Report, which includes:
  - o Resource Detail - Actuals Report
  - o Resource Detail - Budget/LRE Report
  - o Resource Summary - Actuals Report
- Work Status Document - LRE Report
- NASA and DOD/DOE Reports
- Graphs (see Chapter 14 for details on creating these graphs)
  - o S/P/A X-Y Graph

11

Utilities

11.1 Introduction to Utilities

Even the most carefully planned project will require changes throughout its life span.
MPM provides several utilities that facilitate making changes across an entire project, or
selected WBS elements and legs. The utilities are:

Reprice	Revises baseline, ETC, or actuals based on changes in burden templates and rate tables.
Estimate Adjust	Revises baseline estimates and ETC based on a fixed percentage or target value.
Estimate Rename	Renames resource codes or resource departments for estimates, and reprices.
Date Shift	Shifts the estimate start and complete dates, and reprices.
Calculate BCWP	Updates the BCWP figures.
Post Weekly Data	Provides means to calculate, store and report earned value on a weekly basis.
Project Replan	Formally reprograms or replans a project.

Each of the utilities, except Project Replan, is described in this chapter. Project Replan is
described in *Chapter 12: Replanning Projects*.

Backing Up Your Project Data Before Using Utilities

Before using any of the Utilities, you should request a full backup of the MPM database.
If one of the utilities is interrupted in the middle of executing, the database will be
corrupted. The only way to correct this is to restore the database from the backup.

Accessing the Utilities

You access the utilities from the Tools menu in the Project Maintenance window shown in Figure A.
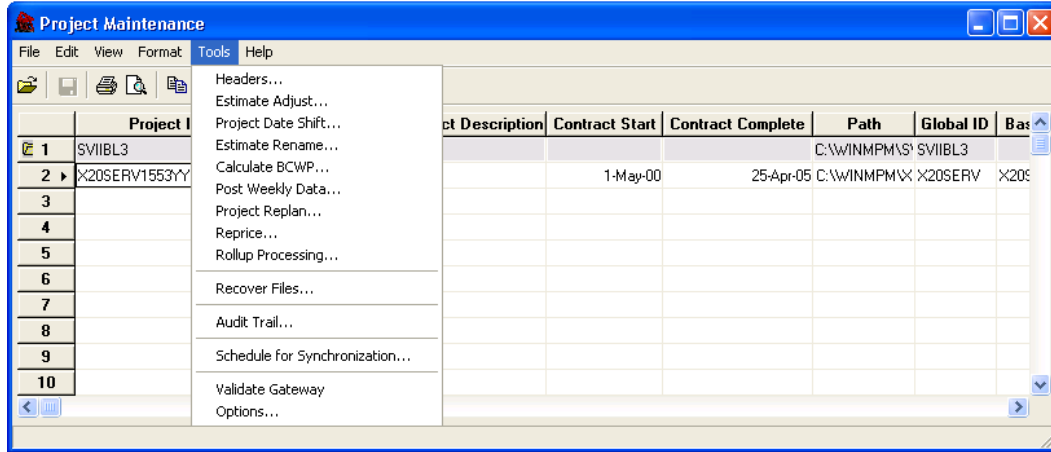
Figure A. *Access the utilities from the Tools menu.*

11.2 Repricing Data

You can revise baseline estimates, ETC, or actuals in one process using the Reprice utility. Repricing is usually performed when there are major modifications to burden templates or rate tables. For example, overhead rates might change because of a new union contract. The new rates would affect existing baseline estimates and ETC projections, and any existing actuals. They would all need to be recalculated based on the new rates.

You can also use the Reprice utility to run "what if" scenarios against copies of your project. You can easily shift resources and change direct or indirect rates to produce different pricing scenarios.

When repricing, you can apply the following restrictions:

- Reprice baseline and/or ETC, or actuals
- Limit the repricing to one or more legs of a WBS
- Limit the repricing to a specific performing, responsible, or resource department
- Specify a time period
- Target the repricing by element of cost (EOC), class of cost (COC), or resource
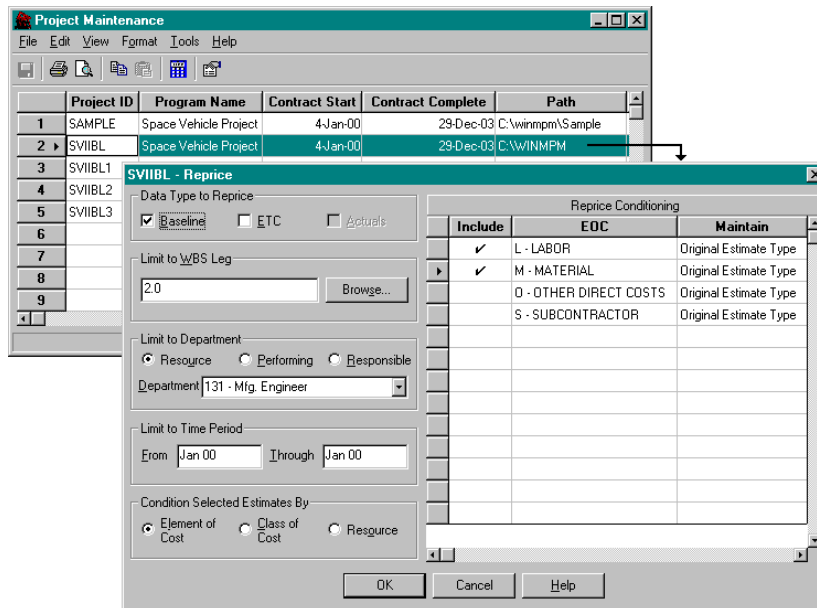
Figure A. *You can limit repricing using the options.*

Reprice Conditioning

You use the Reprice Conditioning grid in the Reprice dialog box to select the elements of cost, classes of costs, or resources to be included in the reprice, and specify the value(s) to hold constant during the reprice.

Special Guidelines

MPM uses the appropriate (baseline, ETC, or actuals) rate table designated for the project in the Project Maintenance window. If you want to use a different rate table, make the change in the Project Maintenance window before running the Reprice utility. If you change a rate table, MPM uses that rate table for all functions from that point forward.

If your project is using Fee by WBS, you should not hold price constant when repricing. If you do, new fee rates may not be applied.

Estimate Reprice modifies the entire estimate for any WBS elements you select that fall within the specified time frame. Estimates prior to the current date (history) will be recalculated if they fall within the specified time frame and meet the other conditions set in the Estimate Reprice conditioning grid.

Actuals Reprice

Actuals Reprice searches for the burden template from the resource entered for the Actual, and if that doesn't exist, searches for the department entered for the Actual. Once the right burden template is selected, the Actuals Reprice functions the same as the Estimate Reprice. Actuals Reprice only modifies the detail actuals; it does not affect the estimates. Actuals Reprice only allows you to hold Hours, Prime, or Hours and Prime constant. If no date range is defined, the reprice begins with the start of the earliest detail actuals and continues until the end of the latest detail actuals (based on any other selections such as WBS Leg). Actuals Reprice does not perform date rollup. Only actuals entered by resource will be repriced. If actuals were entered by EOC only, they will not be repriced.

Sub-Topics

Additional information is presented in the following sub-topic:

11.2.1 Repricing Procedure

11.2 Repricing Data

11.2.1 Repricing Procedure

The procedure for repricing is described below.
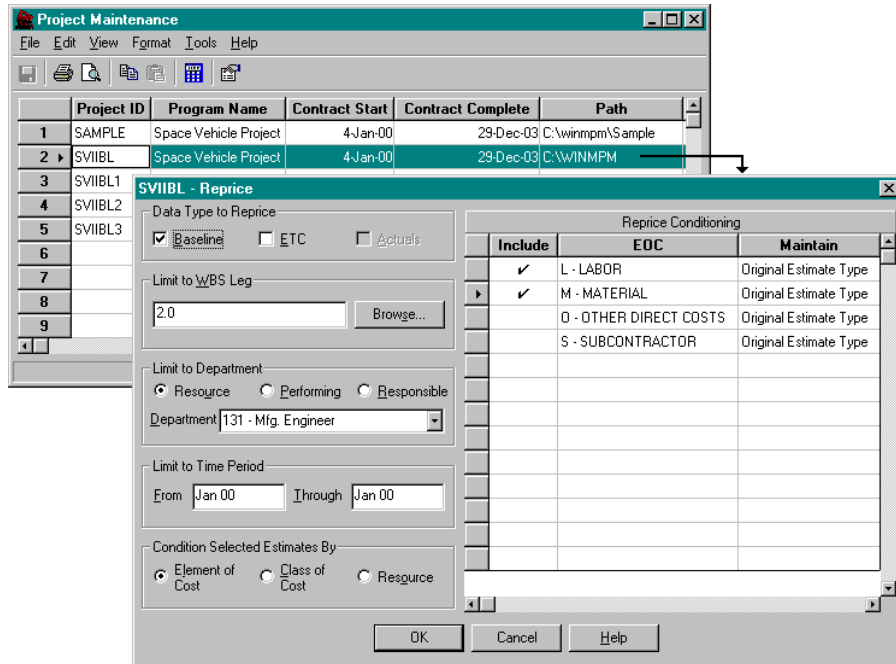
Figure A. *There are several options you can use to limit repricing.*

To reprice a project:

1. Select a project in the Project Maintenance window by clicking on the row number.

2. From the Project Maintenance window, open the Tools menu and select Reprice.

    MPM displays the Reprice dialog box shown in Figure A.

3. Select the data you want to reprice: baseline, ETC, actuals.

4. Select the WBS leg you want to reprice by clicking the Browse button.

5. Select the type of department you want to use to limit the reprice: Performing, Responsible, or Resource.

If you select Performing or Responsible, MPM ignores WBS elements that do not match. If you select Resource, MPM ignores estimates that do not match that resource.

6. After selecting the type of department, select a specific department from the drop-down list box.

7. If you want to restrict the reprice to a specific time period, enter From and Through dates.

To reprice the selected project data from start to finish, leave these fields blank.

8. Choose to condition the estimate by Element of Cost (EOC), Class of Cost (COC), or Resource.

When you select one of the above options, MPM displays all elements defined for the category in the Reprice Grid on the right side of the dialog box. For example, if you select Element of Cost, MPM displays all elements of cost in the grid.

9. Select the item(s) you want to include in the reprice by clicking the corresponding check box in the Include column.

MPM will place a check mark in the fields you select. To clear the selection, click the field again.

10. For each item you include, select the value you want to hold constant during the reprice from the corresponding Maintain field drop-down list box in the grid.

11. To begin the reprice, click OK.

If MPM encounters an error in the data, you are given the opportunity to terminate or continue the process. After the process has completed or been terminated, MPM produces the Reprice Error Report listing all errors encountered.

11.3 Adjusting Baseline and ETC Estimates

You can revise baseline and ETC estimates in one process using the Estimate Adjust
utility. The Estimate Adjust utility uses a fixed percentage or target value to adjust the
estimates, and it uses the underlying rate tables. Estimate Adjust is most useful in cost
proposal/bid development to produce "what if" scenarios. For example, you can use the
Estimate Adjust to bring a bid price into line with a specific price.
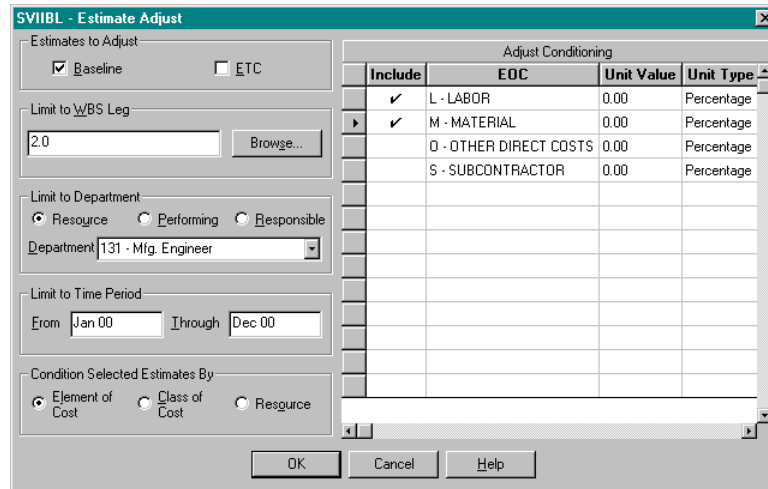
Figure A. *There are several options you can use to limit
estimate adjustments.*

When adjusting, you can apply the following restrictions:

- Adjust the baseline estimates, ETC estimates, or both.
- Limit the adjustment to one or more legs of a WBS.
- Specify a time period.
- Target the adjustment by Element of Cost (EOC), Class of Cost (COC), or
  Resource.
- If adjusting by Element of Cost (EOC), you can set a target value and select the
  Unit Value (hours, total cost, etc.).

Special Guidelines

- Estimate Adjust makes permanent changes to the project data. If processing fails
  part way through the procedure, you will need to restore the data from the most
  recent backup.

- MPM uses the rate tables designated for the project in the Project Maintenance window. If you want to use a different rate table, make the change before running the Estimate Adjust utility. If you change a rate table, MPM uses that rate table for all functions from that point forward.

- Estimate Adjust modifies only the portion of a WBS that falls within the time frame selected.

Sub-Topics

Additional information is presented in the following topics:

11.3.1 Estimate Adjust Procedure

11.3.2 Entering Adjustment Units

11.3 Adjusting Baseline and ETC Estimates

11.3.1 Estimate Adjust Procedure

The procedure for adjusting estimates is described below. Estimate Adjust is similar to Reprice except you specify a percentage factor or target amount for the adjustment.

Figure A. *There are several options you can use to limit estimate adjustments.*

Procedure

To adjust an estimate:

1. Select a project in the Project Maintenance window by clicking the row number.

2. From the Project Maintenance window, open the Tools menu and select Estimate Adjust.

    MPM displays the Estimate Adjust dialog box shown in Figure A.

3. Select the estimates you want to adjust: baseline, ETC, or both.

4. Select the WBS leg you want to adjust by clicking the Browse button.

5. Select the type of department you want to use to limit the adjustment: Performing, Responsible, or Resource.

If you select Performing or Responsible, MPM ignores estimates for WBS elements that do not match. If you select Resource, MPM ignores estimates that do not match the selected resource department.

6. After selecting the type of department, select a specific department from the drop-down list box.

7. If you want to restrict the adjustment to a specific time period, enter From and Through dates.

   To adjust the project from start to finish, leave these fields blank.

8. Choose to condition the estimate by Element of Cost , Class of Cost, or Resource.

   When you select one of the above options, MPM displays all elements defined for the category in the Adjust Conditioning grid in the dialog box. For example, if you select Element of Cost, MPM displays all elements of cost in the grid.

9. Select the items you want to include in the adjustment by clicking the corresponding check box in the Include column.

   MPM will place a check mark in the fields you select. To clear the selection, click the field again.

The next step is to specify the value and units used to adjust each item. These steps are described in the next topic.

11.3 Adjusting Baseline and ETC Estimates

11.3.2 Entering Adjustment Units

When you run an Estimate Adjust, your options for conditioning the adjustment depend on whether you are adjusting by EOC, COC, or Resource.
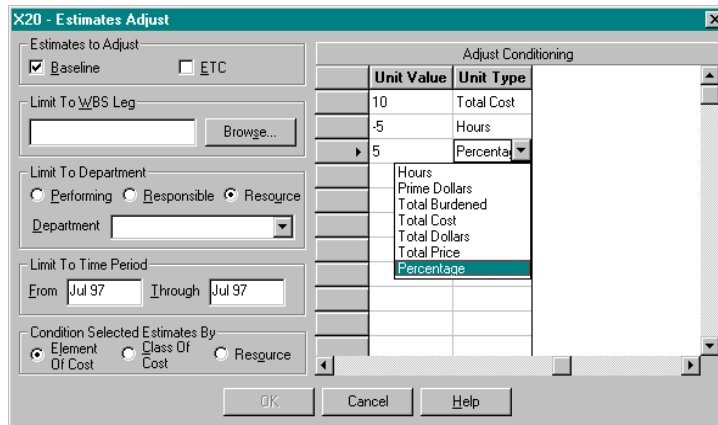
Figure A. *Your options for conditioning the adjustment depend on whether you are adjusting by EOC, COC, or Resource.*

If you are adjusting by EOC, you can condition by percentage, or specify a target value. If you are adjusting by COC or Resource, you can condition by percentage only.

Adjusting by Percentage

When you adjust by percentage, you can include decimals and specify a positive or negative percentage. Examples:

10   -10   5.5   -5.5

To specify the adjustment value:

1.   For each item you include, enter a Unit Value by which the item should be increased or decreased.

2.   Select Percentage as the Unit Type.

3.   To initiate the Estimate Adjust, choose OK.

Adjusting by Target Value

If you are adjusting by EOC, you have the option of specifying a target value for the adjustment. The target values can be:

- Hours
- Prime Dollars
- Total Burdened
- Total Cost
- Total Dollars
- Total Price

For example, if you want to adjust the estimate so that Prime Dollars for labor remains constant at $100,000, enter **100000** and select Prime Dollars as the Unit Type. Numbers are entered without commas.

To specify the adjustment value:

1. For each item you include, enter a target value.

2. Select a unit type from the Unit Type drop-down list box.

3. To initiate the Estimate Adjust, choose OK.

11.4 Renaming Resource Codes and Departments

If you want to rename resource codes or resource departments in the baseline and ETC estimates for a project, you can use the MPM Estimate Rename utility. The utility renames and reprices at the same time.
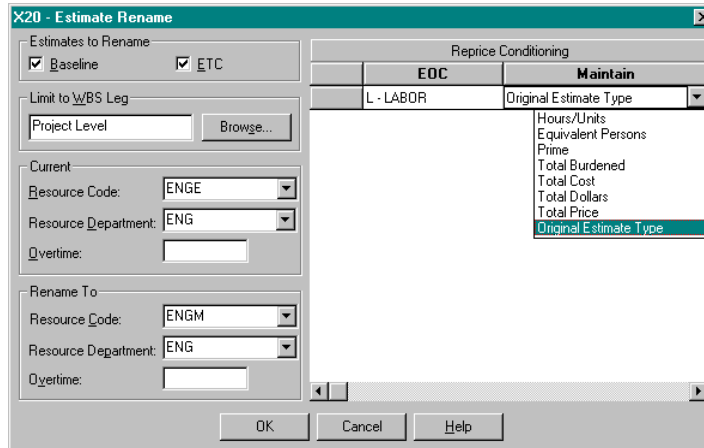
***Figure A.** You can rename resource codes and departments.*

When renaming, you can apply the following restrictions:

- Rename the baseline estimates, ETC estimates, or both
- Limit the renaming to one leg of a WBS
- Target the renaming by element of cost (EOC)

Special Guidelines

- A unique estimate is made up of four elements: WBS ID, Resource code, Resource Department, Overtime factor.

  During the renaming process, MPM will reject your rename conditioning if it would result in two estimates having the same data in all four elements. If this happens, MPM generates an error and reports that the proposed renamed estimate already exists.

- MPM uses the rate tables designated for the project in the Project Maintenance window. If you want to use a different rate table, make the change before running the Estimate Rename utility. If you change a rate table, MPM uses that rate table for all functions from that point forward.

■ Because each Resource Basis of Estimate is tied to a specific baseline estimate, Resource BOEs will be renamed *only* if you rename baseline Estimates. If you only rename ETC estimates, Resource Basis of Estimates will *not* be renamed.

■ Summary Basis of Estimates are not renamed. However, individual estimates may be removed from a Summary BOE if they are renamed and no longer fit the criteria that define the Summary BOE. Also, individual estimates may be added to a Summary BOE if the renaming process causes them to fall within the criteria that define the Summary BOE.

Sub-Topics

Additional information is presented in the following sub-topics:

11.4.1 Renaming Procedure

11.4.2 Impact on Summary BOE

11.4 Renaming Resource Codes and Departments

11.4.1 Renaming Procedure

The procedure for renaming resource codes and departments is described below.
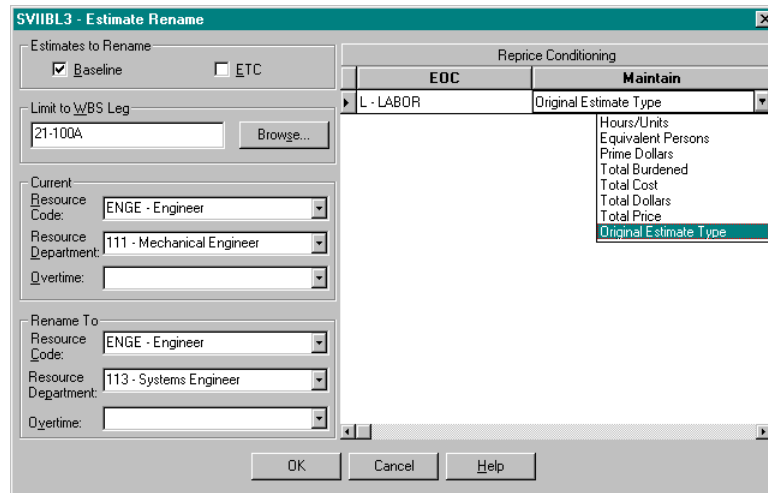
Figure A. You can rename resource codes and departments.

Procedure

To rename resource codes and departments:

1. In the Project Maintenance window, select a project.

2. Open the Tools menu and select Estimate Rename.

   MPM displays the Estimate Rename dialog box shown in Figure A.

3. Select the estimates you want the rename to affect: baseline, ETC, or both.

4. Select the WBS leg you want to affect by clicking the Browse button and selecting a WBS leg.

   To rename the entire project, leave this field blank.

5. From the Current group box, select the resource code and resource department you want to rename.

Leaving the Resource Code an Resource Department fields blank will rename all items. If you select <Empty> for the Resource Department, MPM will rename only those items with no resource department assigned to them.

"Blank" and **<Empty>** are different.

6. If appropriate, enter the current overtime entry for the resource, or select one from the drop-down list.

To rename estimates with no overtime entry, select <Empty>. To rename all estimates with any type of overtime entry, leave the field blank.

7. From the Rename To group box, select the new resource code name.

8. From the Rename To group box, select the new department name.

If you select <Empty>, the resource department will be cleared for all selected estimates.

9. From the Rename To group box, enter a new overtime value for the resource if appropriate.

If you want to maintain the same overtime factor, leave the field blank. If you want to clear all current overtime factors, select <Empty>.

10. For each EOC listed in the Rename Conditioning grid, select the element you want to maintain constant during the rename.

The Original Estimate Type option will keep constant the estimate type assigned to the resource at the time the resource was added to the baseline and ETC estimates.

11. To accept the settings and initiate the rename, choose OK.

When the process has completed or been terminated, MPM produces the Rename Error Report listing all errors encountered.

11.4 Renaming Resource Codes and Departments

11.4.2 Impact on Summary BOE

When you perform an Estimate Rename, Summary Basis of Estimates are not renamed. However, individual estimates may be removed from a Summary BOE if they are renamed and no longer fit the criteria that define the Summary BOE. Also, individual estimates may be added to a Summary BOE if the renaming process causes them to fall within the criteria that define the Summary BOE.

Two examples are presented below. In these examples, assume the Summary BOE will include all estimates that meet the following criteria:

- WBS ID: 1.1
- Resource Department: 1001
- EOC: (any value)

Example

In this example, the rename process results in an individual estimate being removed from the Summary BOE.

Existing Estimates

WBS ID	Res Code	EOC	Res Dept.	Overtime
1.1	LAB1	L	1001	1.5
1.1	LAB1	L	1002	1.5
1.1	LAB2	L	1001	
1.1	MAT1	M	1001	

Rename Criteria

Field	Renamed From	Renamed To
Resource Code	LAB2	LAB2
Resource Department	1001	1002
Overtime Factor		

Estimates Included in the Summary BOE *Before* Rename

WBS ID	Res Code	EOC	Res Dept.	Overtime
1.1	LAB1	L	1001	1.5
1.1	LAB2	L	1001	
1.1	MAT1	M	1001	

Estimates Included in the Summary BOE *After* Rename

WBS ID	Res Code	EOC	Res Dept.	Overtime
1.1	LAB1	L	1001	1.5
1.1	MAT1	M	1001	

11.5 Shifting the Dates for a Project

If you want to change the start date for a project, or part of a project, you can use the MPM Project Date Shift utility. The function changes dates and reprices.

When changing the start date, you can apply the following restrictions:

Figure A. *Shifting project dates*

- Change the baseline date, ETC dates, or both

- Limit the date changes to one or more legs of a WBS

- Change milestone schedule dates, forecast dates, or both

- Target the repricing by Element of Cost (EOC)

Special Guidelines

- MPM uses the rate tables designated for the project in the Project Maintenance window. If you want to use a different rate table, make the change before running the Estimate Reprice utility. If you change a rate table, MPM uses that rate table for all functions from that point forward.

- Project Date Shift shifts days based on work days. A resource having a four-day work week will be shifted to a later date than a resource having a five-day work week.

- Project Date Shift does not shift baseline estimates and milestone schedule dates.

- When you shift baseline and/or ETC estimates and also shift milestones, both are shifted the number of work days between the original start date and the new start date. Each time you exercise the Shift Milestones option, MPM moves the milestones.

  If you shift baseline estimates and ETC estimates at different times, and use the Shift Milestones option both times, the milestones will be shifted twice. For this reason, when shifting baseline and ETC estimates separately, use the Shift Milestones option only the first time you shift.

- Project Date Shift makes permanent changes to the project data. If processing fails part way through the procedure, you will need to restore the data from the most recent backup.
- If you use Project Date Shift to shift an estimate that was originally estimated by equivalent persons, spread non-linearly, and used the calendar equivalent person hours, the result will be a linear respread. This linear respread could give a different number of hours calculated for the estimate.
- Project Date Shift does not affect the contract start and complete dates recorded in the Project Maintenance window.
- If a WBS element and/or its children has one or more replan estimates, Date Shift does not shift baseline estimates and milestone schedule dates.

Procedure

To change the start and complete dates for a project:

1. In the Project Maintenance window, select a project, open the Tools menu and select Project Date Shift.

   MPM displays the Project Date Shift dialog box shown in Figure A.

2. Select the estimates you want the date shift to affect: baseline, ETC, or both.

3. Select the WBS leg you want to affect by clicking the Browse button and selecting a WBS leg.

4. Enter the new start date.

   MPM accepts most date formats and converts them to the format shown in Figure A.

5. Choose whether to shift the milestone Schedule dates, Forecast (revised) dates, or both.

6. For each EOC listed in the Reprice Conditioning grid, select the element you want to maintain constant during the reprice.

   Select the Original Estimate Type option to keep the estimate type originally assigned to the resource when the resource was added to the baseline and ETC estimates.

7. To accept the settings and initiate the date shift, choose OK.

   When the process has completed or been terminated, MPM produces the Reprice Error Report listing all errors encountered.

11.6 Calculating BCWP

Whenever you need to calculate Budgeted Cost of Work Performed (BCWP), you use the Calculate BCWP utility in Project Maintenance.

For example, whenever you modify milestone information in Integrated Planning, you will want to calculate a new BCWP.

When calculating BCWP, you can apply the following restrictions:

- Limit the date range
- Select different sets of WBS elements
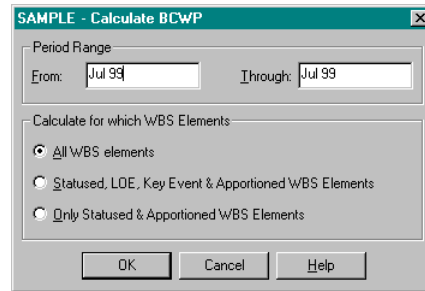
Figure A. *Calculating BCWP*

WBS Element Options

If you select this option:	MPM calculates BCWP for:
All WBS elements	All WBS elements
Statused, LOE, Key Event & Apportioned WBS Elements	Any WBS element that has an estimate saved or imported since the last BCWP calculation
	Any WBS element that has been repriced since the last BCWP calculation
	Any WBS element that has had milestone changes saved since the last BCWP calculation
	All WBS elements with apportioned, LOE, and Key Event EVMs
Only Statused & Apportioned WBS Elements	Same as above, except LOE and Key Event elements are included only if they have been statused.

Special Guidelines

- When you calculate BCWP, Fee is not calculated because it does not apply to BCWP.
- MPM always calculates a WBS percent complete for all elements in the WBS hierarchy regardless of the WBS Element option you choose.

Impact of Budget Changes on BCWP Values

Any change to the budget after WBS elements have been statused will have an impact on the calculation of BCWP. For information on budget changes, refer to section *9.7 Impact of Budget Changes on BCWP Values*.

Procedure

To calculate BCWP for a project:

1. In the Project Maintenance window, select a project.

2. Open the Tools menu and select Calculate BCWP.

   MPM displays the BCWP dialog box shown in Figure A.

3. Enter the From and Through dates.

   Enter the dates in the MMM YY format. Note, MPM will accept most date formats and convert them to this format.

4. Select one of the WBS element options.

5. Initiate the calculation by choosing OK.

11.7 Posting Weekly Data

The Post Weekly Data utility enables you to more closely manage budget, performance and actuals for each project. With this utility you can spot negative trends more quickly and take corrective action. It provides the means to calculate, store and report earned value on a weekly basis. You can track hours and dollars for BCWS, BCWP, ETC and ACWP for a three-month window that you define.
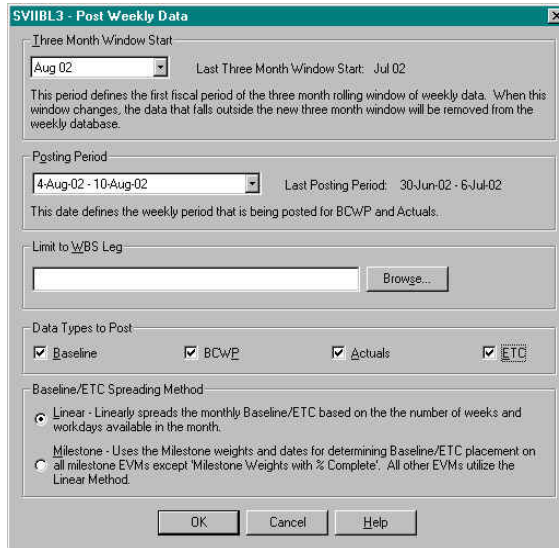
Figure A. *The process of posting weekly data begins with this dialog box.*

Only authorized users may access and use this feature. You must have been granted access to the project and to the Post Weekly Data feature within the project. Security for this feature is listed under the Project Maintenance options. (For details on setting up security for this feature, see *Global Files, Chapter 8, Controlling Security Access to MPM*.)

Before you post weekly data, the Weekly Data Information section of the Calendar Setup must be completed. On the Calendar Setup dialog box you indicate whether your organization's calendar uses whole weeks or partial weeks. If partial weeks are selected, you select the starting day for each week and enter the number of hours in your workday. (For details on setting up your calendar, see *Global Files, topic 2.4, Creating, Changing and Saving Calendars*.)

The posting start date, posting period, data types to be posted and the spreading method are specified on the Post Weekly Data dialog box shown in Figure A. You can also limit the weekly posting to a specified WBS leg. You then run the Post Weekly Data utility.

Once your weekly data has been calculated and stored, you can:

- Report the data with the Weekly Performance Report and Weekly EOC Report.
- Export the data. Two formats are provided for exporting weekly data. You may select either WBS or EOC format.
- Read the weekly table using Microsoft Access.

Three Month Window Start

The Three Month Window Start drop-down list box contains the fiscal months in the project calendar. The initial Three Month Window Start default that appears before any data is posted is the previous fiscal month. The default month may be changed by selecting a different month from the drop-down list. After a week is posted, the start month is displayed to the right of the list box.

Weekly data is stored in a rolling three month window. When the dates of the three month window change, stored data falling outside the window is removed from the weekly table.

Posting Period

The Posting Period drop-down list box contains the week beginning and end dates in the three month window. The initial default date range that appears in the Posting Period box before any data is posted is the beginning and end date of the first week in the three month window. The default week may be changed by selecting a different week from the drop-down list. After a week has been posted, the Posting Period defaults to the last week posted. The last posted week is displayed to the right of the list box as the Last Posting Period.

Data Types to Post

You can post weekly data for Baseline, BCWP, Actuals or ETC. If you want to include BCWP in the data you are posting, you must calculate BCWP in the usual manner before you begin the posting process. If you want to include Actuals in the data you are posting, you must first import or manually enter the Actuals for that month.

Baseline/ETC Spreading Method

When posting the weekly data, there are two spreading methods available for posting Baseline and ETC: Linear or Milestone. When you access the Post Weekly Data window, the system will always default to the last spreading method selected.

- **Linear:** The Linear method uses the earliest resource start and the latest resource complete to determine the start and end of the spread. Each month's budget is spread linearly based on the available weeks and workdays in the month.

- **Milestone:** The Milestone method checks the earned value method (EVM) for each WBS included in the data to be posted.

  If the WBS is using a milestone EVM (Milestone Weights, 0/100, 25/75, 40/60, or 50/50), MPM determines the percentage for each milestone by looking at the weight and date of the milestone. The percentage is determined by dividing the total weight for all milestones in the month by the weight of the milestones that fall within each week being posted. The resulting weekly percentage is then multiplied by the Baseline/ETC in the month to arrive at the weekly budget spread.

  Even though you select Milestone as the spread method, the data being posted may consist of WBS elements using a variety of EVMs; some EVMs with milestones and some without. In that case, data is spread linearly for any WBS using the following EVMs: Milestone Weights with Percent Complete, % Complete, BCWP Entry, Level of Effort, Earned Standards, or Key Event.

Special Guidelines

- In order to generate accurate data, the posting of weekly data should always be done sequentially. Process Week 1, Week 2, etc. in sequence rather than processing Week 2 and then Week 1, Week 3, etc.

- Once data for any given week has been posted, no changes should be made to the data. If changes are necessary:
  - Data must be posted in sequence again, beginning with the week in which changes to the data were made; or
  - You can make the change as of time now and see the change reflected in the current week. The cumulative for the month will be accurate.

- If you skip Week 1 and then process for Week 2, BCWS/ETC will be spread for the entire three month window including Week 1 and Week 2 but all BCWP and Actuals will appear only in Week 2. There will be no BCWP and Actuals in Week 1.

- For LOE EVM, if no BCWS is posted for the three month window, then only posting BCWP would not show any BCWP values since there is no BCWS.
  - For LOE WBS ID's Weekly BCWP = Weekly BCWS through the posted week no matter what the monthly BCWP value is.

Procedure

Before you begin posting weekly data, make sure you have completed the Weekly Data Information section of the Calendar Setup dialog.

To post weekly data for a project:

1. In the Project Maintenance window, select a project.

2. Open the project by clicking on the yellow folder icon adjacent to the project name.

3. Open the Tools menu and select Post Weekly Data.
   MPM displays the Post Weekly Data dialog box shown in Figure A.

4. Select the Three Month Window Start from the list box. The dates that appear in the list box are derived from the project calendar.

5. Select the Posting Period from the list box. The dates that appear in the list box are derived from the project calendar and the defined three month window.

6. If appropriate, limit the posting by clicking the Browse button and selecting a WBS element from the Limit to WBS Leg box.

7. Check the types of data you want to post. You may select any or all of the data types. If you want to include BCWP in the data you are posting, you must calculate BCWP in the usual manner before you begin the posting process. If you want to include Actuals in the data you are posting, you must first import or manually enter the Actuals for that month.

8. Select either Linear or Milestone as the Spreading Method.

9. To accept the settings you have selected and begin posting, click OK.

11.8 Audit Trail

The Audit Trail of Estimates creates an audit log for every estimate change that occurs. The level at which changes are tracked is dependent on the method used for updating the estimate.

For example, a change made in Integrated Planning Baseline will track to the WBS/Resource level whereby an Import will be tracked at the project level…not at the detail level.

This audit log helps system and project administrators track who made what change to what data in the system. It also assists in tracking down change control problems. When changes are occurring in the database, the database administrators can go to this log and see who made what changes when.

11.8 Audit Trail

11.8.1 Setting the Security Audit Trail Options

To allow a user access to the Audit Trail options, you will need to give them access in the Project Features dialog of the Security module. The Project Features dialog box is used to assign the features a user will be able to access. It works in the same way as other hierarchy dialog boxes in MPM.

There are three places that you can give them access:

- Project Maintenance | Audit Trail
- Project Maintenance | Delete Project Audit Trail
- Exports | Audit Trail

Note: If you do not select any items in the Project Features dialog box, the user will have access to all features.

Setting the Project Maintenance Security Audit Trail options

1. Select a project and do one of the following:

- Click the Project Features button in the Toolbar.
- Select Tools | Project Features.

 MPM displays the Project Features dialog box.

2. Now do one of the following:

   2.1. Project Maintenance | Audit Trail Option:

      2.1.1. Select the plus sign next to the Project Maintenance option to expand the view.
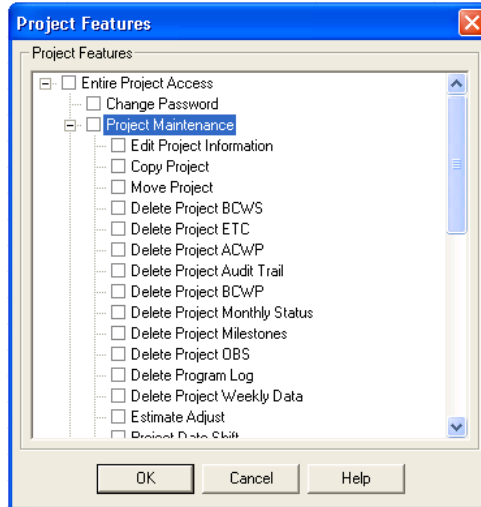
2.1.2. Click the box next to Audit Trail to select it.

2.2.   Project Maintenance | Delete Project Audit Trail Option:

2.2.1. Select the plus sign ⊞ next to the Project Maintenance option to expand the view.

2.2.2. Click the box next to Delete Project Audit Trail to select it.
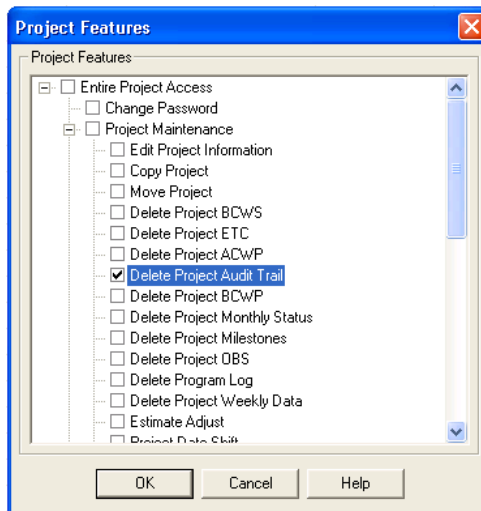
2.3. Exports | Audit Trail Option

2.3.1. Select the plus sign ⊞ next to the Project Maintenance option to expand the view.

2.3.2. Click the box next to Audit Trail to select it.
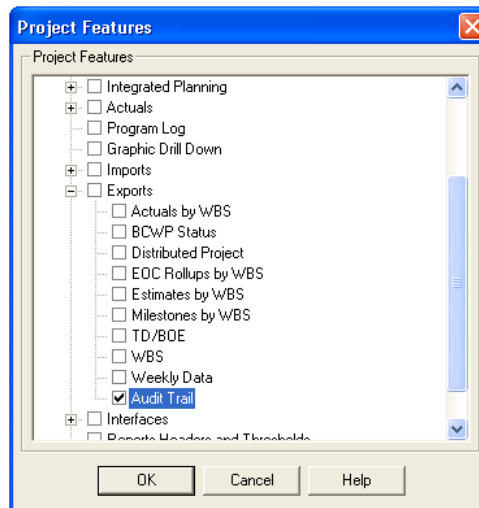
3.   To save the selections, choose OK.

11.8 Audit Trail

11.8.2 Setting the Audit Trail Options in Project Maintenance

Set the Audit Trail options in Project Maintenance using the Audit Trail options dialog box. This option will be grayed out if a user does not have security access to this (see *11.8.1 Setting the Security Audit Trail Options*).

Setting Audit Trail Options

1. In the Project Maintenance screen, select Tools | Audit Trail.
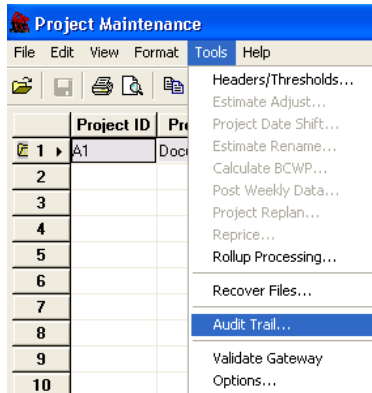
The Audit Trail Options dialog displays.
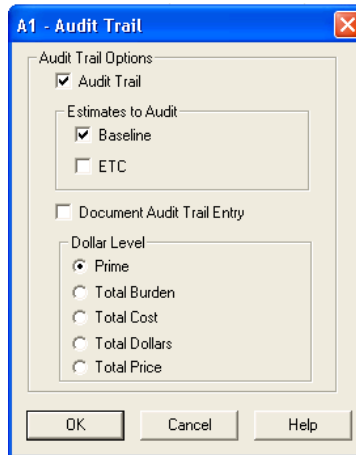
2. Select the options that you wish to use for Audit Trail:

- **Audit Trail** – Check this box to have the Audit Trail on, or deselect this box to turn the Audit Trail off.

- **Estimates to Audit** – Select either Baseline or ETC, or select both.

- **Document Audit Trail Entry** – Check this box to allow the user to enter text descriptions regarding the current changes.

- **Dollar Level** – Select which dollar level you would like the Audit Trail to track. The options are:

  o   Prime

  o   Total Burden

  o   Total Cost

  o   Total Dollars

  o   Total Price

3. Select OK to save the changes.

11.8 Audit Trail

11.8.3 Deleting Audit Trail Data in Project Maintenance

Delete the Audit Trail data in Project Maintenance using the Delete Project Data dialog box. This option will be grayed out if a user does not have security access to this (see 11.8.1 Setting the Security Audit Trail Options).

The Delete Project Data Dialog box

You can choose to delete Audit Trail data for a specific date range for a specific project.

1. In the Project Maintenance screen, select a project then click Edit | Delete Project Data
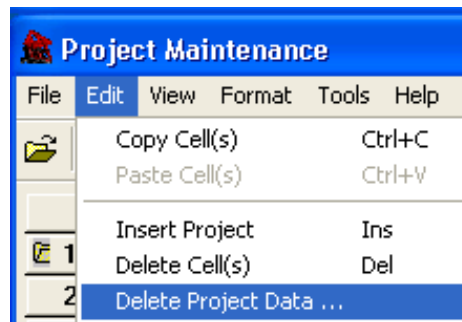
The Delete Project Data dialog displays.

2. Place a check in the Audit Trail box and type in From and Through Dates. If date fields are left blank, then the entire Audit Trail file for that project is deleted.

3. Select OK to continue with the deletion, or Cancel to cancel the deletion and return to the Project Maintenance screen.

12

Replanning Projects

12.1 Introduction to Replanning

During the life of a contract, changes may take place that make the available contract budgets for the remaining work insufficient. When this happens, it is no longer practical to measure performance against the available budgets. Under these circumstances, you should formally reprogram or replan the project.

Figure A. *Project Replan dialog box*

Formal reprogramming by a contractor may include replanning future work, replanning in-process work, or adjusting cost and/or schedule variances. Reprogramming allows the contractor to adjust the amount of budget for the remaining work to a more practical amount that provides realistic budget objectives, work control, and performance measurement.

The MPM replanning function conforms to government requirements, and can be tailored to meet the needs of the contracting parties. All changes to baseline budgets are fully documented and traceable.

Applications

Using the MPM replanning function, you can:

- Replan an entire project, or specific WBS elements and legs
- Replan smaller projects that do not require earned value
- Nullify a cost variance
- Nullify a schedule variance
- Nullify cost and schedule variances
- Establish ETC after entering baseline estimates
- Set ETC equal to baseline after replanning the baseline

Accessing the Replan Function

To access the Replan function:

1. Open the Project Maintenance window and select a project.
2. From the Tools menu, select Project Replan.

12.2 Replanning Rules and Assumptions

To use MPM's Replanning function effectively, you should understand how it works and the assumptions that the function makes. There are exceptions to these rules if you are setting baseline equal to actuals when there is no established baseline.

WBS Requirements

You can replan a project only if the following criteria are met:

- The WBS element(s) must have at least one estimate, even if the estimate has a zero balance. If there are no estimates, MPM skips the WBS element when it performs the replan.
- If there are estimates, the WBS element(s) must have appropriate cumulative values through the replan month. If there are no cumulative values, MPM skips the WBS element(s) when it performs the replan.

In-Process or Completed Work Packages Only

You can perform a replan on in-process and completed work packages only. You cannot replan future projects that have not started.

In-process work packages have one or more of the following:

- Cumulative BCWS (Budgeted Cost of Work Scheduled)
- Cumulative BCWP (Budgeted Cost of Work Performed)
- Cumulative ACWP (Actual Cost of Work Performed)

Work packages are defined as completed when the WBS percent complete equals 100%.

When replanning, no assumptions are made about future BCWS or the milestones for BCWP. It is your responsibility to replan future work by manually adjusting BCWS and milestone weights for BCWP after replanning.

What Happens During a Replan

When you perform a replan, the following happens:

- Replan estimates are stored in the format Replan *EOCcode* (for example, Replan *L).
- BCWS is adjusted at all costing levels (equivalent persons, hours through total price).
- BCWP is adjusted at costing levels hours through total dollars.
- Standard hours are not calculated.

- BCWS is summed at each burden level if you are setting Baseline = Earned Value or Actuals. Therefore, detailed burdening information for a replan estimate is not available.

Restoring Data to Its "Before Replan" State

If you want to restore your data to its "before replan" state, it is always best to go to the backup you made of the data prior to the replan. If, for some reason, you cannot go to the backed up data, you may use the procedures below for the options listed.

If you perform a replan using the Set Basline = Actuals or Set Baseline = Earned Value option, replan estimates can be deleted using the Delete Project Data option in Project Maintenance.

If you have incorrectly performed a replan using Set Earned Value = Actuals and want to restore the date to its "before replan" state, you can restatus and recalculate BCWP in the replan month.

If you perform a replan using the Set Baseline and Earned Value = Actuals option, you can delete replan estimates using the Delete Project Data option in Project Maintenance, then restatus and recalculate BCWP in the replan month.

Distributed Elements

Distributed elements may not be replanned. Replanning should be done within the sub-project and results will be rolled up and transferred via the normal distributed update cycle.

Other Guidelines

Replans can be performed more than once on a WBS. If you perform a replan more than once in the same month, the earlier value is cleared and the new replan is performed.

If you have performed one or more replans and then go back and make changes to data that occurred prior to the replan, you must also go back and redo the replans from the earliest to the latest in sequence.

All replans are calculated by adjusting cumulative values through the month and year specified for the replan.

The Replanning function is designed to be used when the WBS elements being replanned have BCWS, BCWP, and ACWP loaded at the same level of the WBS tree. If estimates and actuals are entered at different levels, you must replan the project manually.

12.3 How Replanning Affects Other MPM Functions

Replanning affects many of the other MPM functions.

WBS Tree

Replan values are rolled up the WBS hierarchy in the same manner as other values. However, start and complete replan dates for a replan estimate are not rolled up the hierarchy.

Estimating ETC

Replanning does not apply to ETC because it affects baseline estimates only.

Apportioned Estimates

A replan estimate cannot be a base estimate (an estimate used to create an apportioned estimate), or an apportioned estimate.

Estimate Reprice, Adjust, and Rename

Replan estimates are not repriced, adjusted, or renamed.

Project Date Shift

If a WBS element and/or its children has one or more replan estimates:

- Date Shift does <u>not</u> shift baseline estimates and milestone schedule dates.
- Date Shift does shift ETC estimates and milestone forecast dates.

Resource BOE

You can enter or import a Resource BOE (Basis of Estimate) against a replan estimate.

Data Export

Replan estimates can be exported in the same manner as other estimates.

Data Import

Replan estimates cannot be imported.

Reports

Replan *EOCcode is a valid resource code selection for report conditioning.

12.4 General Replan Procedure

When you replan a project, you use the Project Replan dialog box shown in Figure A. Before replanning any project, always backup the project data.
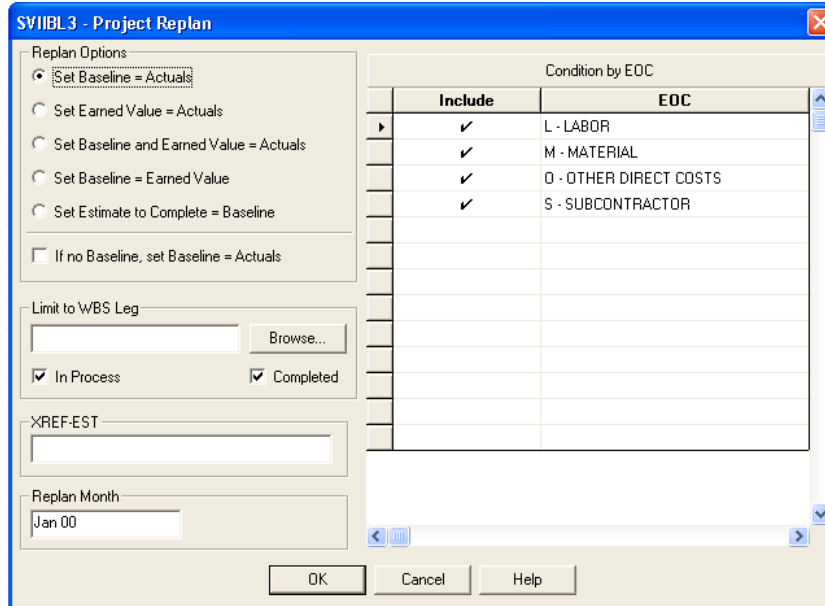
Figure A. *Project Replan dialog box*

Procedure

To replan a project:

1. Select a project in the Project Maintenance window.

2. From the Tools menu, select Project Replan.

3. Select one of the Replan options.

The options are described in detail in the next topic.

4. Select the If no Baseline, Set Baseline=Actuals option if it is appropriate and available.

This option is described in detail in the next topic.

5. If appropriate, limit the replan by clicking the Browse button and selecting a WBS element from the Limit to WBS Leg dialog box.

If you select an element, the replan is applied to the element and its children. If you leave this field blank, all WBS elements are included in the replan. For more information on using the Limit to WBS Leg dialog box, see topic *12.6 Selecting a WBS Leg*.

6. Select In-process, Completed elements, or both.

In-process work packages have either cumulative BCWS or ACWP through the replan month. Completed elements have a WBS percent complete equal to 100%.

7. (Optional) Enter an identifier into the XREF-EST field if it is available.

This option is described in detail in the next topic.

8. Set the replan month.

The replan month is the month in which the replan will occur. All replan adjustments are cumulative through the replan month. Replan estimates will be reported and displayed on reports in the month and year you enter here. Replan estimate start and complete dates are not rolled up through the WBS hierarchy.

9. Select the EOCs (Elements of Cost) you want included in the replan by double-clicking the Include field in the Condition by EOC grid.

To deselect an EOC, double-click it again.

10. To accept the settings and begin the replan, click OK.

MPM performs the replan and generates the Processing Result Report. The report lists any WBS elements that could not be processed.

Special Guidelines

- Always make a backup of the project before performing a replan.
- To do a before and after comparison, run a report before and after performing the replan that shows the data you are replanning through the replan month. For example, you could run the S/P/A Recap by EOC or CPR report.

12.5 Selecting a Replan Option

When you replan a project, you select one of five options. The option you select impacts how MPM replans the project.
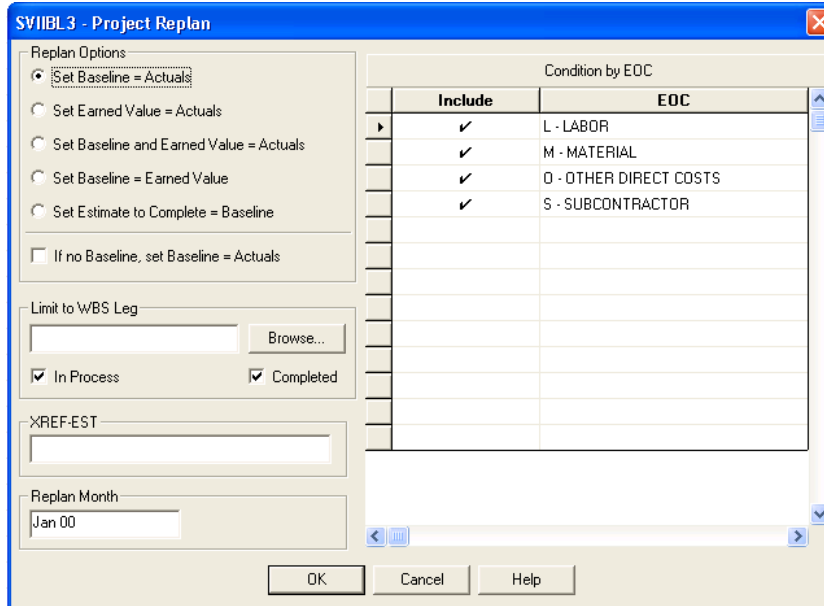
Figure A. *The Replan option you choose impacts how MPM replans a project.*

Options Purposes

The options and their purposes are:

This option:	Is used to:
Set Baseline equal to Actuals	Replan smaller projects that do not require calculation of earned value
Set Earned Value equal to Actuals	Nullify a cost variance
Set Baseline and Earned Value equal to Actuals	Formally reprogram a project and nullify both cost and schedule variances
Set Baseline equal to Earned Value	Nullify a schedule variance
Set Estimate to Complete (ETC) equal to Baseline	Establish ETC estimates based on baseline estimates or set ETC equal to baseline after replanning baseline estimates

If No Baseline Option

If there is no baseline established for the project, you can select the If No Baseline, Set Baseline = Actuals option. The option is available for the following Replan options:

- Set Baseline = Actuals
- Set Baseline and Earned Value = Actuals

This option is generally used for negotiated or undefined work where a contractor has been asked to begin work and report Actual Cost of Work Performed (ACWP) only.

If this option is not checked, the WBSs with no baseline will be skipped in the replan. If the option is checked, the actuals data will be copied to the baseline, even if no baseline exists.

Following is an example of a scenario and result that would occur if this option was used. Note the variance (difference) between Rollup BCWS and Rollup ACWP is zero.

	Detail BCWS	Detail ACWP	Rollup BCWS	Rollup ACWP
WBS A.1				
Work Package before replan	0	200	0	200
Work Package after replan	200		200	200

XREF-EST Field

The XREF-EST field is enabled when the following Replan Options are selected:

- Set Baseline = Actuals

- Set Baseline and Earned Value = Actuals

- Set Baseline = Earned Value

This is an optional 20-character user-defined field. It is provided as an additional identifier. The XREF-EST field is used during reporting, exporting, or onscreen filtering as a wild card, to match a specific group of data.

Sub-Topics

The Replan options are described in the following sub-topics:

12.5.1 Set Baseline Equal to Actuals
12.5.2 Set Earned Value Equal to Actuals

12.5.3 Set Baseline and Earned Value Equal to Actuals

12.5.4 Set Baseline Equal to Earned Value

12.5.5 Set Estimate to Complete (ETC) Equal to Baseline

12.5 Selecting a Replan Option
12.5.1 Set Baseline Equal to Actuals

The Set Baseline = Actuals (BCWS = ACWP) option is ideal for replanning smaller projects that do not require earned value.

Figure A. *Set Baseline=Actuals option*

Special Guidelines

- The If No Baseline option is available. For an explanation of this option, see topic *12.5 Selecting the Replan Options*.

- The XREF-EST option is available. For an explanation of this option, see topic *12.5 Selecting the Replan Options.*

Example

In the following example, there are actuals against only one EOC: Labor.

	JAN	FEB	MAR	APR	MAY	JUN
BCWS Cum	10	20	30	40	50	60
ACWP Cum	20	40	60	80	100	120
Replan *L				40		

In the example, a new resource estimate (Replan *L) is added to the BCWS for Labor and the estimate has only one value (40), the cumulative difference between BCWS and ACWP. The replan estimate will contain adjusted values at all costing levels (hours, OH, etc.)

If you recalculate BCWP after performing a replan using this scenario, you should specify the month of May as the Calculate BCWP From month to ensure that past history is not changed due to the adjustment to BCWS.

12.5 Selecting a Replan Option
12.5.2 Set Earned Value Equal to Actuals

The Set Earned Value Equal to Actuals (BCWP = ACWP) option is used to nullify a cost variance.

Figure A. *Set Earned Value = Actuals option*

Special Guidelines

- Back up your data before performing the replan.

- There is no EOC conditioning available for this option. All EOCs defined for the project are displayed in the Condition by EOC table, but they cannot be selected or deselected.

- This Project Replan option is designed to be used when the WBS elements being replanned have BCWS, BCWP, and ACWP loaded at the same level of the WBS tree. If estimates, earned value, and actuals are entered at different levels, you must manually replan your project.

- The If No Baseline option is not available. For an explanation of this option, see topic *12.5 Selecting the Replan Options*.

- The XREF-EST option is not available. For an explanation of this option, see topic *12.5 Selecting the Replan Options*.

Examples

In the following example, there are actuals against only one EOC: Labor.
The BAC = $210.

	JAN	FEB	MAR	APR	MAY	JUN
BCWP Cum	10	20	30	40	50	60
ACWP Cum	30	60	80	100	200	300
Replan *L				60		

When MPM performs the replan, the cumulative BCWP total dollar amount for the replan month is updated in the BCWP file to be equal to ACWP, then a new percent for April is calculated. All costing levels are adjusted (hours, prime, overhead, etc.) except fee and equivalent persons.

Results

The values are then rolled up through the WBS hierarchy for that month with the following results.

	BCWP File Content			
	Before Replan		**After Replan**	
Yr/Mo	Cum Percent	Cum Dollars	Cum Percent	Cum Dollars
199801	.0476	10	.0476	10
199802	.0952	20	.0952	20
199803	.1428	30	.1428	30
199804	**.1904**	**40**	**.0476**	**100**
199805	.2380	50	.2380	50
199806	.2857	60	.2857	60

After you replan BCWP = ACWP, replan future work by manually adjusting the BCWS and the milestone weights for BCWP. If you recalculate BCWP after performing a replan using the above scenario, specify the month of May as the Calculate BCWP From month to ensure that past history is not changed due to the adjustment to BCWP.

12.5 Selecting a Replan Option
12.5.3 Set Baseline and Earned Value Equal to Actuals

The Baseline and Earned Value Equal to Actuals (BCWS & BCWP = ACWP) option is used to formally reprogram a project. It nullifies both cost and schedule variances.

Figure A. *Set Baseline and Earned Value = Actuals*

Special Guidelines

- Back up your data before performing the replan.
- There is no EOC conditioning available for this option. All EOCs defined for the project are displayed in the Condition by EOC table, but they cannot be selected or deselected.
- When MPM performs this replan, it processes data in the following order:
  - It sets BCWS equal to ACWP.
  - It sets BCWP equal to ACWP.
- This Project Replan option is designed to be used when the WBS elements being replanned have BCWS, BCWP, and ACWP loaded at the same level of the WBS

tree. If estimates, earned value, and actuals are entered at different levels, you must manually replan your project.

- The If No Baseline option is available. For an explanation of this option, see topic *12.5 Selecting the Replan Options*.

- The XREF-EST option is available. For an explanation of this option, see topic *12.5 Selecting the Replan Options*.

Example

In the following example, there are actuals against only one EOC: Labor.

	JAN	FEB	MAR	APR	MAY	JUN
BCWS Cum	10	20	30	40	50	60
Replan *L				60		
ACWP Cum	30	60	80	100	200	300
BCWP	5	5	10	20	25	30
Adjust Labor Value of BCWP				80		

After performing the BCWP = ACWP replan, it is your responsibility to replan future work by manually adjusting the BCWS and the milestone weights for BCWP.

If you recalculate BCWP after performing a replan using the above scenario, you should specify the month of May as the Calculate BCWP From month to ensure that past history is not changed due to the adjustment to BCWP.

12.5 Selecting a Replan Option
12.5.4 Set Baseline Equal to Earned Value

The Set Baseline Equal to Earned Value (BCWS = BCWP) option is used to nullify a schedule variance.

Figure A. *Set Baseline = Earned Value*

Special Guidelines

- Back up your data before performing the replan.
- In-process work packages are defined as work packages that have either cumulative BCWS or cumulative BCWP through the replan month.
- MPM performs a replan only if there is cumulative BCWS or BCWP through the replan month on the WBS. If an EOC does not have cumulative BCWS or BCWP through the replan month, that EOC will be skipped during the replan.
- The If No Baseline option is not available. For an explanation of this option, see topic *12.5 Selecting the Replan Options*.
- The XREF-EST option is available. For an explanation of this option, see topic *12.5 Selecting the Replan Options*.

Example

In the following example, there are actuals against only one EOC: Labor.

	JAN	FEB	MAR	APR	MAY	JUN
BCWS Cum	10	20	30	40	50	60
BCWP Cum	5	5	10	10	20	30
Replan *L				-30		

In the example, a new resource estimate (Replan *L) is added to the BCWS for labor and the estimate has only one value (-30), the cumulative difference between BCWP and BCWS. The replan estimate (Replan *L) will contain adjusted values at all costing levels (hours, overhead, etc.) except fee.

If you recalculate BCWP after performing a replan using this scenario, you should specify the month of May as the Calculate BCWP From month to ensure that past history is not changed due to the adjustment to BCWS.

12.5 Selecting a Replan Option
12.5.5 Set Estimate to Complete Equal to Baseline

When you are entering baseline estimates for a project (ETC = BCWS), you have the option of entering the estimates as ETC as well. If you set the option to save baseline only, you can use this replanning method to establish ETC estimates for the project without going back and re-entering all the estimates.

Figure A. *Set Estimate to Complete = Baseline*

Special Guidelines

- Back up your data before performing the replan.
- When you select the Estimate to Complete = Baseline option, MPM inactivates all other options in the Project Replan dialog box.
- All baseline estimates are copied to the ETC.
- The system ignores the ETC Rate Table specified in the Project Maintenance window and sets ETC equal to BCWS.

12.6 Selecting a WBS Leg

You can limit the replan to a WBS element and its children using the Limit to WBS Leg option. The option is available for all replans except Set Estimate to Complete = Baseline.
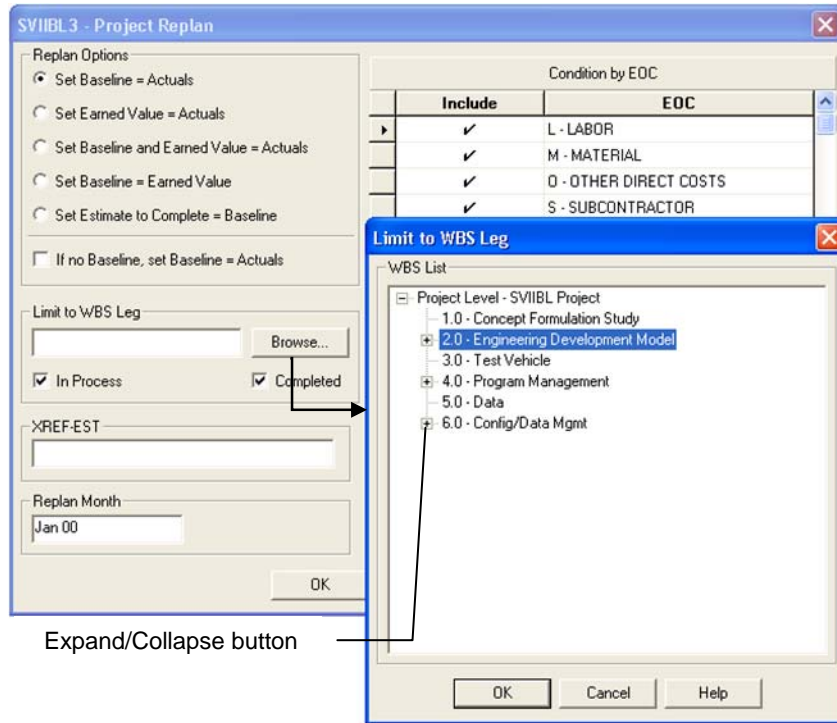
Figure A. *You can limit a replan to a specific WBS leg.*

Procedure

To select a WBS leg:

1. After selecting a replan option, click the Browse button in the Limit to WBS Leg group box.

MPM displays the Limit to WBS Leg dialog box shown in Figure A.

2. Expand and collapse the legs by clicking the Expand/Collapse buttons.

If you select a collapsed parent element, the parent element and its children will be included in the replan. If you select a child element, only that child element will be included in the replan.

13
Maintaining the Program Log

13.1 Introduction to the Program Log

The Program Log provides a synergistic link between budget data and the internal control procedures and practices that implement budget changes.

The Program Log is used to record total budget and all customer-directed changes that affect the baseline. Changes are identified as negotiated changes or authorized unpriced updates. The Program Log contains the status of the Management Reserve (MR) and Undistributed Budget (UB).

The values recorded on the Program Log are displayed on the Headers dialog when you access it in preparation for generating a C/SSR or CPR. The table shown in Figure A lists the values for each report that are derived from the Program Log.

Header Values Derived from Program Log				
Values	C/SSR	CPR 1	CPR 2	CPR 3
Original Target Cost	✓			✓
Negotiated Cost		✓	✓	
Negotiated Contract Change	✓			✓
Current Target Cost	✓			✓
Authorized Upriced Work	✓	✓	✓	✓
Contract Budget Base	✓	✓	✓	✓
Target Profit Amount		✓	✓	
Estimated Price		✓	✓	
Target price		✓	✓	
Management Reserve (BCWS)	✓	✓		✓
Management Reserve (LRE)	✓	✓		
Undistributed Budget (BCWS)	✓	✓		
Undistributed Budger (LRE)	✓	✓		

Figure A. *Values that appear in these fields on reports are derived from the Program Log and/or the Headers conditioning window.*

By entering new values for the above fields on the Headers dialog, you can override the values derived from the Program Log. However, if your organization uses the Program Log to record contract data, we recommend that changes to these values be made using

the Program Log so as to maintain its accuracy. When changes are made on the Headers window, the changes appear only on the report currently being generated and do not change the values previously recorded on the Program Log.

The Role of the Program Log in Government Reporting

If your project requires submittal of the C/SSR and CPR government reports, it is very important to create and maintain Program Log to satisfy control and audit requirements for government contracting. MPM uses the values you enter in the Program Log to perform calculations, which in combination with header values you also enter, result in computed fields displayed on the C/SSR and CPR report headers. See Figure B.

| Program Log | + | C/SSR Header values you enter | = | Calculated values on C/SSR Report |
| Program Log | + | CPR Header values you enter | = | Calculated values on CPR Reports |

Figure B. Calculations Used in Government Reporting.

Contract Budget Base (CBB) and Total Allocated Budget (TAB)

The Contract Budget Base (CBB) represents two things on a contract: 1) the total amount of work authorized and 2) the amount of budget allocated to accomplish the work.

CBB = Negotiated Cost + Authorized Unpriced Work

The Total Allocated Budget (TAB) is the sum of the Total Dollars in the budget, the Management Reserve (MR) and the Undistributed Budget (UB).

TAB = Total Dollars + MR + UB

To keep your project in balance:

- The CBB should equal the TAB
- The TAB shown in the Program Log should equal the MPM derived data

Figure C illustrates the relationship between the different components which make up the Program Log.
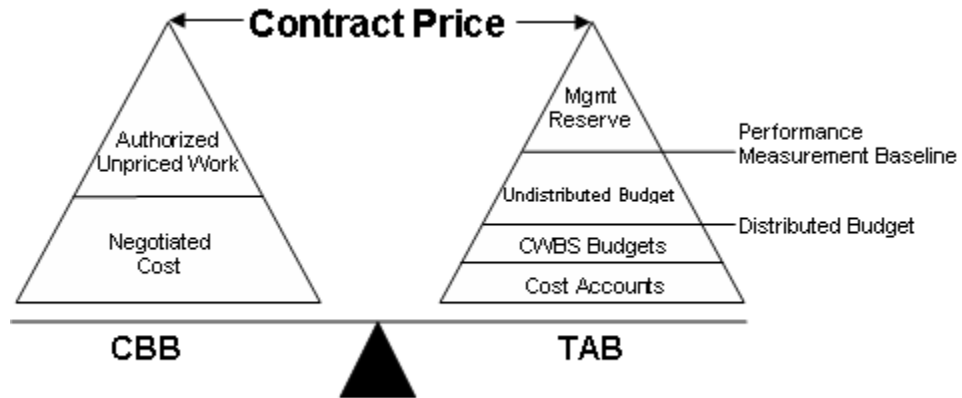
Figure C. The balancing act between CBB and TAB

Creating CBB Transactions

When you first initiate your project, enter a Program Log transaction for the original contract price (less the contract fee), which becomes the beginning CBB. Then as time goes on, enter additional transactions to document changes in your contract. MPM automatically calculates the new CBB total, which you can compare to the TAB total.

Creating TAB Transactions

To distribute CBB to the budget, MR and UB, enter transactions for these amounts. If desired, you can monitor prime, overhead, total burden, G&A, and COM coming from your MPM project and enter those budget values into the Log. The Element of Cost (Baseline – Recap) Report provides all these values. To incorporate them into your Log:

1. Run the Element of Cost (Baseline – Recap) Report prior to entering Logs.

2. Incorporate budget changes in the WBS.

3. Rerun the Element of Cost (Baseline – Recap) Report and enter G&A and COM amount differences in the G&A and COM fields in the Program Log.

4. Enter the total burden amount (distributed budget) differences that can be derived by comparing the two Element of Cost (Baseline – Recap) reports.

If differences exist between the CBB total and the TAB total, adjustments must be made to the Log. The Element of Cost (Baseline – Recap) Report can show where discrepancies exist, or where budget adjustments are needed, by comparing the total costs.

13.2 Accessing the Program Log Window

You open the Program Log window from the MPM Menu Manager. When you open the Program Log window, you select the project you want to view.

Procedure

To open the Program Log window:

1. From the Menu Manager window shown in Figure A, do one of the following:

- Select the Projects tab and choose the Program Log icon
- Choose Projects|Program Log from the File menu.

   MPM displays the Program Log Open dialog box.
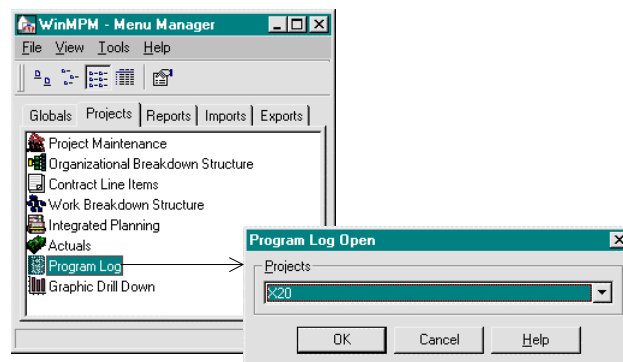
Figure A. *Select the Program Log icon.*

2. Choose a project from the Project list box.

3. To accept the selections and display the Program Log window shown in Figure B, click OK.

Figure B. *The Program Log window*

13.3 Orientation to the Program Log Window

You use the Program Log Window to edit and view the Program Log transactions. A toolbar gives you quick access to common tasks, and an optional Total window shows the CBB and TAB totals. The Program Log grid displays the information about each Program Log transaction. Each transaction is represented by a single row.
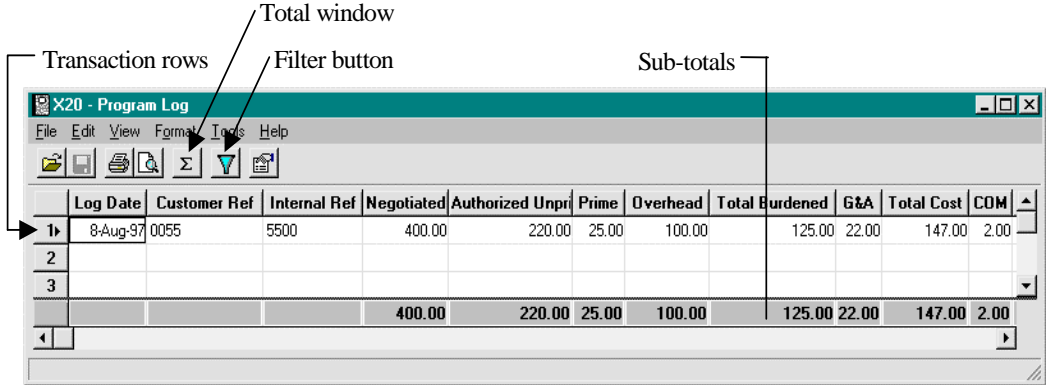
Figure A. The Program Log window

Program Log Listing

MPM automatically sorts all Program Log transactions by transaction date each time you open the Program Log window.

Navigating the Program Log Grid

To navigate through the fields in the Program Log grid:

- To advance to the next or previous field, press the Tab/Shift+Tab or Arrow keys.
- To move between rows, use the Up and Down Arrow keys.
- Use the horizontal scroll bar to bring additional columns into view. When dragging the horizontal scroll bar, a pop-up displays the current Log field.
- Use the vertical scroll bar to bring additional rows into view. When dragging the vertical scroll bar, a pop-up displays the current Program Log row and number.
- To move to any cell, click the cell with the mouse.

Displaying and Hiding Program Log Fields

MPM displays the Program Log fields as columns in the Program Log grid. You can display or hide any or all of the columns, using Column Hide on the Format menu. To select a column, click in the column's heading. To select or deselect multiple columns, use the Shift key while clicking the mouse button as you normally would within Windows.

Filtering Program Log Transactions

You can filter the Program Log to display only the transactions you need to see. To do this, use Filter on the Tools menu (or click the Filter button) to select a subset of transactions by customer reference, internal reference, or a range of log dates. Selecting one of the menu options brings up a dialog box with a list box of available values to choose from. In Figure B, the user filtered to see only log transactions in the date range 1-Aug-97 to 1-Sep-97. To turn off filtering, choose All Data.
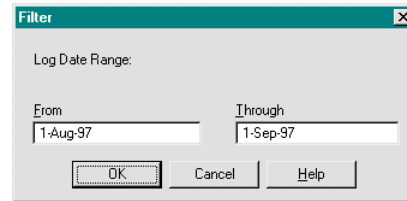
Figure B. *Enter a range of Log Dates to filter the Log Transactions.*

Checking the Totals Window

At any point in your editing process, you can easily check your totals by looking at the Totals window. Bring up the Totals window by either choosing Total Window from the View menu, or clicking the Total button Σ . This window is a floating toolbox that is always on top. You can leave it up while you continue your editing, or close it. The menu option shows ✔ if the Totals Window is toggled on. This window shows CBB, TAB, and the variance between them (CBB - TAB).
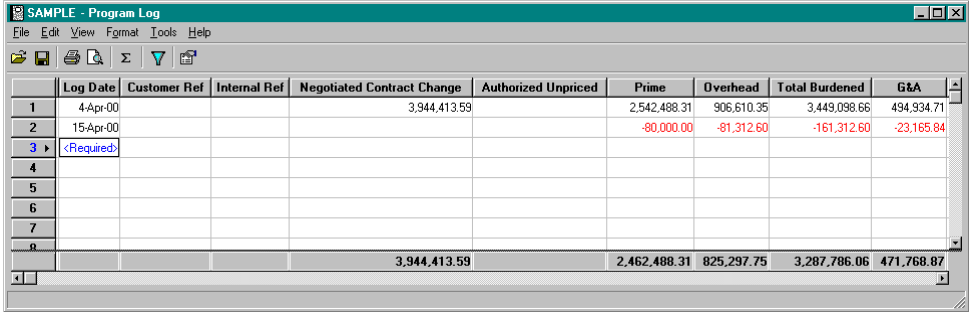
Figure C. *Check the Totals Window.*

Previewing and Printing Program Log Transactions

You can preview and print the Program Log data using the options on the File menu. For complete details on using these options, see *Using MPM* of the *Getting Started* manual. Note that Print and Preview only show the columns and Program Log transactions which you have displayed on the Program Log grid.

13.4 Creating the Program Log

You use the Program Log grid to create and edit the Program Log transactions. MPM supplies powerful spreadsheet-like controls to make it easy. Most operations can be performed in several different ways, using either the keyboard, the mouse, or both.

Figure A. *To create a new transaction, press the Insert key.*

To add a new Program Log transaction, press the Insert key or choose Insert Log from the Edit menu. MPM inserts a new row after the current transaction. In Figure A, the new line has been added after 1-Aug-97. The <Required> Program Log field awaits entry.

Required Entries

You must fill in the Log Date field when creating new Program Log transactions. See *topic 13.5 Program Log Field Descriptions* for detailed information.

Entering Transactions

To enter a Negotiated Cost transaction, enter the Negotiated Contract Change.

To enter an Authorized Unpriced Work transaction, enter the Authorized Unpriced Work amount.

To enter a Management Reserve (MR) transaction, enter the Management Reserve amount, and optionally, a description of the MR transaction. MR identifies contract budget set aside for contingencies. MR is always maintained at the total cost level.

***Figure B.** Entering data*

To enter an Undistributed Budget (UB) transaction, enter the Undistributed Budget amount, and optionally, a description of the UB transaction. UB identifies budget not yet distributed to control accounts, usually as a result of contract changes, and is normally a temporary repository for unallocated budget. UB is always maintained at the total cost level.

To maintain the Total Allocated Budget (TAB) with a greater level of detail, you can also enter transactions which contain Prime, Overhead, Total Burdened, G&A, COM, Total Cost, and Total Dollars from the Element of Cost (Baseline – Recap) report.

Entering Numeric Values

When entering numeric values for contract changes, enter positive values preceded by a plus (+) sign or without a precedent; enter negative values preceded by a minus sign (-).

Saving Program Log Information

To save the Program Log data, do one of the following:

- Click the Save button 🖫
- Choose Save from the File menu or press Ctrl+S

If *Prompt for Save* has been set, MPM prompts for verification.

13.5 Program Log Field Descriptions

These are the fields on the Program Log grid. Several fields are required entries, and display <Required> in the cell until you fill them. You can change the columns that are displayed using Column Hide on the Tools menu.

- **Log Entry Number** — This read-only field shows the Log Entry Number, which MPM automatically generates.

- **Log Date** — This required field contains the Program Log date of this transaction, in DDMMMYY format.

- **Customer Reference** — This optional field provides a 10-character customer reference to this transaction.

- **Internal Reference** — This optional field provides a 10-character internal reference to this transaction.

- **Negotiated Contract Change** — When entering a Negotiated Contract Change transaction, enter the amount of the change. If entering the first transaction for this contract, enter the entire contract price less the contract fee.

- **Authorized Unpriced Work** — When entering an Authorized Unpriced Work transaction, enter the amount of the authorized unpriced work.

- **Prime** — You can optionally enter the prime dollars value shown in the Element of Cost (Baseline – Recap) report for totaling the TAB.

- **Overhead** — You can optionally enter the overhead dollars value shown in the Element of Cost (Baseline – Recap) report for totaling the TAB.

- **Total Burdened** — The Total Burdened value is a display-only field showing Prime + Overhead.

- **G&A** — You can optionally enter the G&A dollars value shown in the Element of Cost (Baseline – Recap) report for totaling the TAB.

- **Total Cost** — The Total Cost value is a display-only field showing Total Burdened + G&A.

- **COM** — You can optionally enter the COM dollars value shown in the Element of Cost (Baseline – Recap) report for totaling the TAB.

- **Total Dollars** — The Total Dollars value is a display-only field showing Total Cost + COM.

- **Management Reserve** — When entering a Management Reserve transaction, enter the amount of the transaction.

- **Undistributed Budget** — When entering an Undistributed Budget transaction, enter the amount of the transaction.

- **Management Reserve Description** — When entering a Management Reserve transaction, enter a description of the transaction.

- **Undistributed Budget Description** — When entering an Undistributed Budget transaction, enter a description of the transaction.

13.6 Maintaining the Program Log

Editing the Program Log
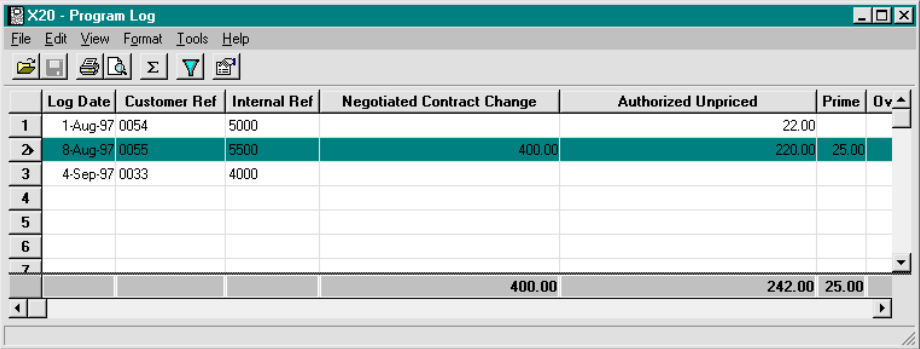
To change information for an existing transaction, perform the following steps:

1. Click on any field in the Program Log grid.

If necessary, use the horizontal scroll bar to show the desired field to be changed. If a field you need is not displayed, use Column Hide on the Format menu to change the displayed fields.

2. Change the data in one or more editable fields in the current row. Press the Tab or arrow keys to continue editing other fields or rows.

3. To save your changes, click the Save button ![save icon] or press Ctrl+S.

Deleting a Single Program Log Transaction

To delete a single Program Log transaction:

1. Highlight the entire Program Log row by clicking the row number. In Figure A, row 2 is selected.

Figure A. *Select the entire Program Log row to be deleted.*

2. Press the Delete key or choose Delete from the Edit menu.

If the Prompt for Save option has been set, MPM prompts you to confirm the delete.

Deleting Several Program Log Transaction

To delete more than one Program Log at one time:

1. Highlight the desired transaction using the Shift key when clicking the row number.

2. Press the Delete key or choose Delete from the Edit menu.

   If the Prompt for Save option has been set, MPM prompts you to confirm the delete.

Modifications to the Program Log will automatically update the computed values displayed on the C/SSR, CPR, and NASA reports.

13.7 Program Log Recommended Reports

Use these standard MPM reports to check your Program Log:

- **Element of Cost (Baseline – Recap) Report**

  A summary of proposal or baseline budget with EOC reconciliation. Includes subtotals for individual EOCs and totals for the entire project. Recommended if tracking TAB.

- **Program Log Report**

  The historical record of contract budget baseline and total allocated budget, integrated with Undistributed Budget and Management Reserve logs.

- **Management Reserve Log Report**

  The historical record of all Management Reserve transactions, integrated with Program Log.

- **Undistributed Budget Log Report**

  The historical record of all Undistributed Budget transactions, integrated with Program Log.

14

Analyzing the Project Graphically (GDD)

14.1 Introduction to Graphic Drill Down

Graphic Drill Down™ (GDD) is a management tool that provides the ability to graphically display and explore data created in MPM. GDD provides a wide range of 2-D and 3-D charts, graphs, and grids. You can graph schedule, cost, actuals, variances, and condition the data in many powerful ways, to represent and analyze the data in your project.

Drilling Down

By displaying your project's data as a graph, you can *drill down* (display additional detail information) into the data by clicking on a portion of a graph. For example, assume you are viewing a horizontal bar graph that displays timeframe cumulative BCWS in Total Dollars (see Figure A).
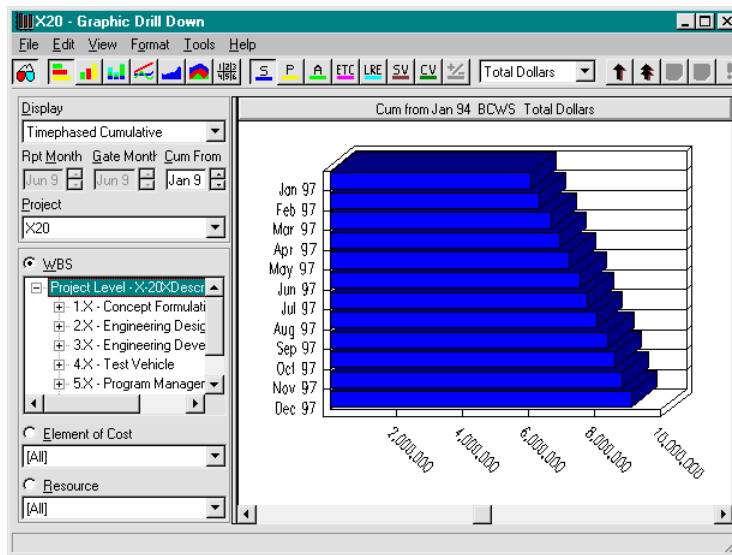
Figure A. *Viewing Timeframe Cumulative BCWS in Total Dollars*

For example, to drill down into a time period, click on the bar representing June 1997 to view a breakdown of cumulative BCWS data through that fiscal month (see Figure B).
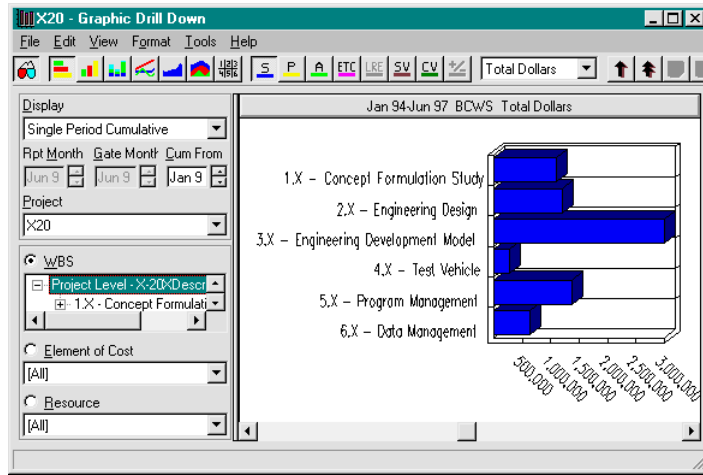
Figure B. *Drilling Down to June 1997*

To drill down into a WBS leg, click on the bar representing WBS Leg 4.X to view a breakdown of the cumulative BCWS through June 1997 for the children of 4.X (see Figure C). Notice that we had selected the WBS drill down method (radio button in the left window pane).
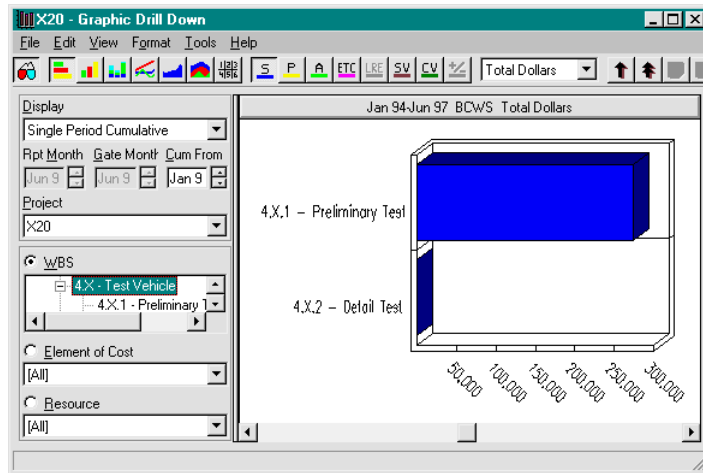
Figure C. *Drilling Down to WBS 4.X*

14.2 Accessing the GDD Window

To open the GDD window from the Menu Manager, do one of the following:

- Choose Graphic Drill Down from the File|Projects menu.
- Select the Projects tab and double-click on the Graphic Drill Down icon shown in Figure A below.
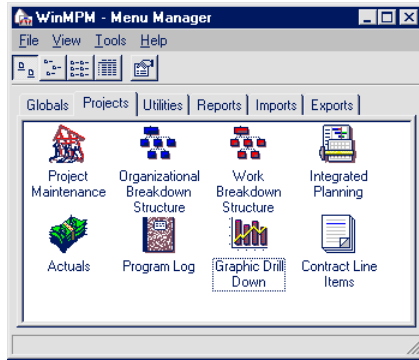
Figure A. *Accessing the GDD Window*

MPM displays the Graphic Drill Down (GDD) window, as shown in Figure B below.
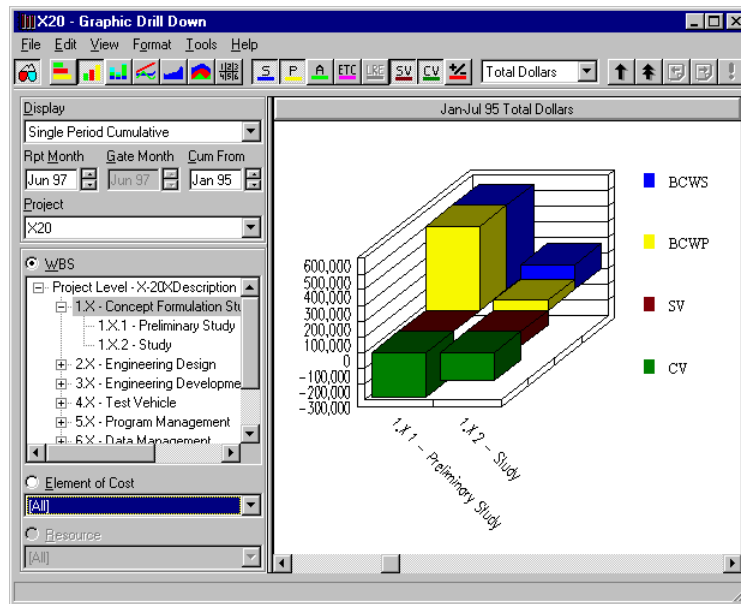
Figure B. *The Graphic Drill Down Window*

14.3 Orientation to the GDD Window

You use the GDD window to drill down and manipulate the data and the resulting graphic in many powerful ways. A toolbar gives you quick access to the graph controls. This window is split into two panes. The left pane contains the data conditioning controls. The right pane contains the graph, chart, or grid. Use the pane separator bar to display more or less of either pane.
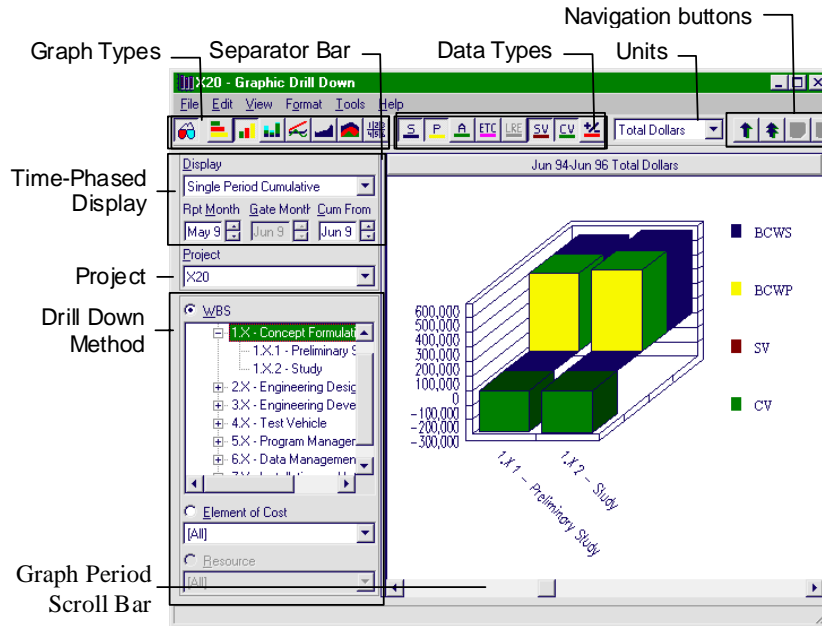
Figure A. *The Graphic Drill Down Window*

Controlling the Content of the Graph

To control the content of the graph:

- Select the type of graph using the Graph Type buttons
- Select the project using the Project list box
- Specify the units of data to be displayed using the Units list box
- Choose the Drill Down method using the radio buttons
- Specify the type of data to include using the Data Type buttons
- Choose the Timeframe display using the Display list box
- Condition the timeframe using the Graph Period scroll bar

Selecting the Project

To select the project to be graphed, use the Project list box. The list box contains all MPM projects to which you have been granted access. When you start GDD, the last project used in MPM is automatically selected.

Specifying the Units of Data

To specify the units to be used, use the Units drop-down list, or choose Units from the View menu. Choose from: Hours, Prime, OH (Overhead), Total Burdened, G&A (General & Administrative), Total Cost, COM (Cost of Money), Total Dollars, Fee, or Total Price. If you select Fee or Total Price, data types BCWP, SV, and CV are disabled.

Automatically and Manually Redrawing the Graph

GDD automatically redraws the graph every time any data source, display type, data type, unit, period, or graph type item is changed. If redrawing the graph takes a long time on your computer, if you are working with a large amount of data, or if you want to set several parameters before the graph is redrawn, you can set the Manual Redraw toggle to stop the automatic redraw and only redraw on demand. See *topic 14.9 Outputting the Graph* for details on setting this toggle. When you are ready to redraw the graph, click the Draw Graph Now button.

Drilling Up

When you are ready to drill back up after you have drilled down, click the Drill Up button. Drill Up uses the same method you chose for Drill Down. For example, if you view a graph with the Drill Down method WBS and drill down into several levels of a WBS leg, you can click the Drill Up button to progressively retrace your steps until you reach the Project Level WBS element. See *topic 14.6 Drilling Methods* for more information.

Resetting the Graph

To return the graph to the default settings, click the Reset Graph button.

Viewing the Previous or Next Page

To see additional data, click the Previous Page and Next Page buttons to view the entire graph.

14.4 Selecting the Graph

The graph type buttons on the tool bar select the type of graph desired. Selecting the 3D button adds a third dimension to the type of graph you have selected (bar, line, area, etc.) You can also select the Graph Type using the View menu.

Adding the Third Dimension

To make your graph three dimensional, click the 3D button. Viewing graphs in 3D makes it easier to click and drill down into a portion of the graph. The sample shows a 3D vertical bar graph.
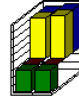
Bar Charts

To select a horizontal bar chart, click the Horizontal Bar button. This chart is best for viewing one or more elements with period values. The sample shows 2D and 3D horizontal bar charts.
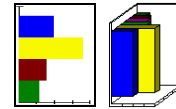
To select a vertical bar chart, click the Vertical Bar button. This chart is best for viewing one or more elements with period values. The sample shows 2D and 3D vertical bar charts.
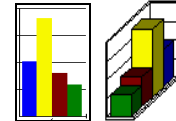
To select a stacked vertical bar chart, click the Stacked Bar button. This chart is best for viewing one element and its components. This chart only displays a single data type at a time, and cannot display negative numbers. The sample shows 2D and 3D stacked bar charts.
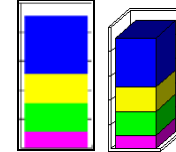
Line Charts

To select a line chart, click the Line Chart button. A line chart is best for viewing trends and multiple elements. The sample shows 2D and 3D line charts.
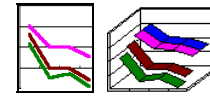
You can also view a 2D line chart with symbols which indicate the type of data represented on each line. To add symbols to a line chart, select 2D Line Graph Symbols in the GDD Options window. The following symbols are displayed:

▲	BCWS	●	Latest Revised Estimate
▼	BCWP	+	Schedule Variance
■	ACWP	×	Cost Variance
◆	ETC	⊠	Other Variance

Area Charts

To select an area chart, click the Area Chart ![button] button. An area chart is best for proportional timephased totals. An area chart only displays a single data type at a time, and cannot display negative numbers. The sample shows 2D and 3D area charts.
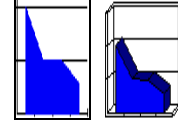
To select a stacked area chart, click the Stacked Area ![button] button. A stacked area chart is best for proportionally viewing timephased totals and their components. A stacked area chart cannot display negative numbers. The sample shows 2D and 3D stacked area charts.
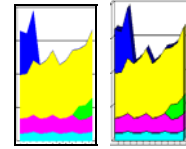
Grids

To view data as a table of numbers, click the Grid ![button] button. Use the Grid when you need to see the exact values from which a graph was derived. This graph is not available to display Stacked Bar or Stacked Area Chart values, and cannot be seen in 3D.

Jan 94-Aug 97 Total Dollars		
	BCWS	BCWP
2.X - Engineering Design	1,206,480	936,894
3.X - Engineering Development Model	3,227,090	686,630
4.X - Test Vehicle	380,014	0
5.X - Program Management	1,451,020	822,527
6.X - Data Management	682,441	297,892
1.X - Concept Formulation Study	1,018,296	1,102,333

14.5 Conditioning the Timeframe

Use the Display field to select the type of timeframe display. Use the Rpt Month, Gate Month, and/or Cum From date to specify a range of fiscal period(s) used with the selected timeframe display.

Selecting the Timeframe Display

There are five types of timeframes to choose from.

Option	Description
Single Period Incremental	Displays data for one period only. When this option is selected, the LRE data type is unavailable.
Single Period Cumulative	Displays cumulative data through one period only. When this option is selected, the LRE data type is unavailable.
Timephased Incremental	Displays 12 periods of values.
Timephased Cumulative	Displays 12 periods of cumulative values.
At Complete	Displays At Complete values for the selected data types. This is just like a Single Period Cumulative graph except data is always cumulative from the first accounting month of the project through the last accounting month of the project and is not controlled by changing the graph timeframe scroll bar or the Cum From option.

- ▪ **Rpt Month** — The Report Month is the last month for which actuals and BCWP values are reported (usually the previous month).

- ▪ **Gate Month** — The Gate Month is only used in conjunction with the LRE data type. For LRE, actuals are reported through the Gate Month, and ETC values are reported after the Gate Month.

- ▪ **Cum From** — The Cum From month is the month from which graphed values should be cumulated. This does not affect At Complete graphs.

Changing Graph Periods

To change the amount of time that constitutes a period, select Periods from the View menu, then select Month, Quarter, or Year.

Quarter and Yearly periods are calculated by starting at the first month of the fiscal calendar. For example, if the fiscal calendar starts in October, then the first quarterly period would include October, November, and December. The year displayed is the year of the last month in the fiscal year.

For more information about MPM fiscal calendars, see *Chapter 3: Calendars* in the *MPM Globals* manual.

Using the Graph Period Scroll Bar

The period to be graphed defaults to the current accounting period (the period containing the current accounting month). To change which periods are displayed in the current graph, use the Graph Period Scroll Bar, which is located directly below the graph. When you drag the button on the scroll bar, MPM displays a popup label `Jul 96` which shows the periods you are scrolling through. When you release the mouse button, the graph displays the period shown in the box. You can define the period as Month, Quarter, or Year by selecting Periods from the View menu.

The Scroll Bar is used to change the period (month, quarter, or year) of the graph. Do not use the Scroll Bar to view multiple page graphs. To view multiple pages, use the Previous and Next Page buttons.

If you are viewing a timephased graph and you drag the button on the scroll bar, when you release the mouse button, the period you selected will be in the center of the graph.

Going Quickly to WBS Start

To change the graph period to the start month for the currently selected WBS element, select Go to WBS Start from the Edit menu or press Ctrl+G.

14.6 Drilling Methods

Drilling down into your data is a powerful way to view and analyze your project. You can drill down using one of three methods:

Drilling Down by WBS

Drilling down by WBS takes you into lower levels of your WBS Tree each time you click. Starting at the Project Level with Drill Down by WBS selected, you can click either on the desired WBS Leg in the Tree pictured in the lower left part of the GDD window, or click on the desired WBS where it appears in the graph. In Figure A, to drill into WBS 2.X.1, click on the horizontal bar next to the WBS ID. When viewing WBS 2.X.1, you can drill down into 2.X.1.1, 2.X.1.2, etc. If you click on a WBS ID with no children, the drill down method changes to EOC, and EOCs are displayed.
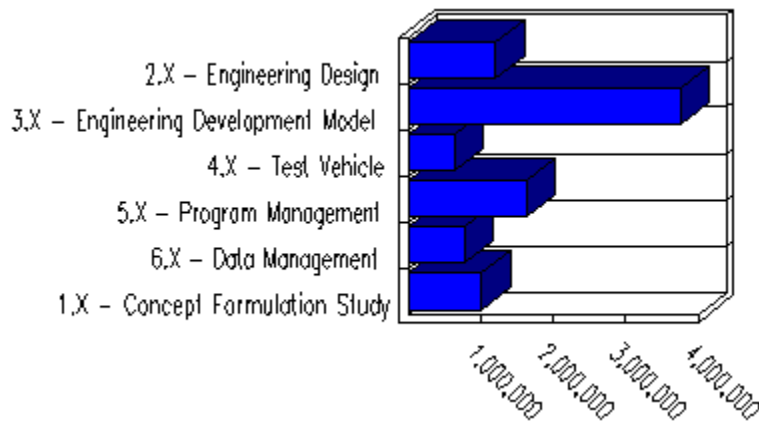
Figure A. *You can drill down by WBS.*

Drilling Down by EOC

Drilling down by EOC takes you into the resources. With Drill Down by EOC selected, you can click either in the EOC list box, or click on the EOC where it appears in the graph. In Figure B, to drill into the Labor EOC, click on the horizontal bar next to Labor. When you drill into a specific EOC, you begin drilling into the resources for that EOC.
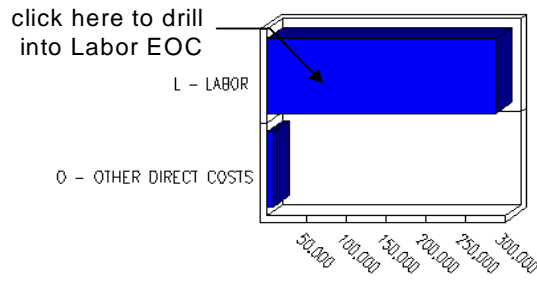
Figure B. You can drill down by EOC.

Drilling Down by Resource

Drilling down by Resource takes you into the individual resources. Starting at the Project Level with Drill Down by Resource selected, you can click either on the Resource list box in the left pane of the GDD window, or click on the resource where it appears in the graph. In Figure C, to drill down into the Resource ADMIN, click on the bar next to ADMIN.
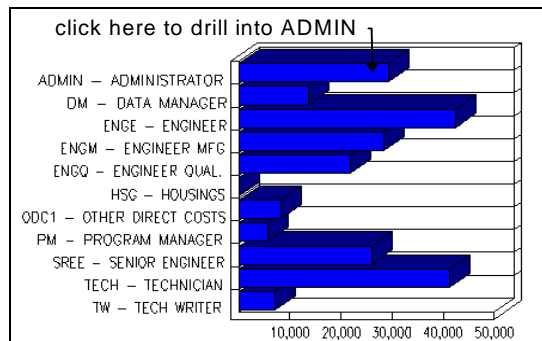
Figure C. You can drill down by resource.

14.6 Drilling Methods

14.6.1 Specifying the Drill Down Method

To specify the Drill Down method desired, you can:

- Select View By on the View menu and choose WBS, EOC or resource.
- Click the appropriate radio button: WBS, element of cost, or resource. See Figure A.
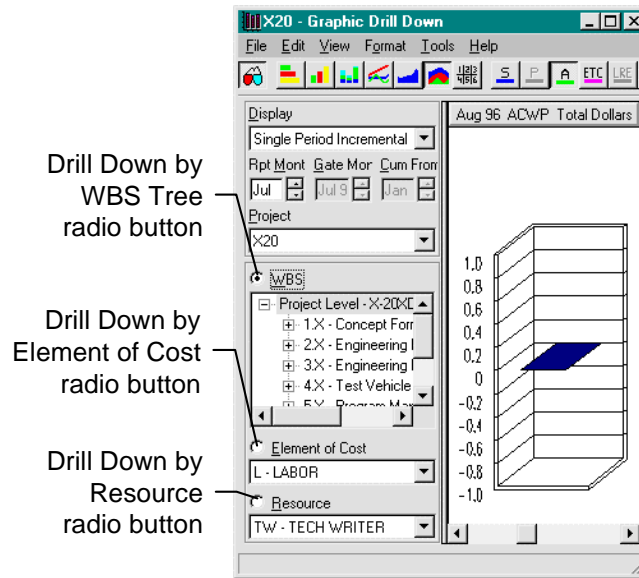
Figure A. *Selecting a drill down method*

Specifying Drill Down by WBS

To specify Drill Down by WBS, click the WBS button. To select a WBS element and all of its children, click the WBS Leg. To expand or collapse WBS legs, click the ⊞ and ⊟ boxes. To select the entire WBS and all of its children, click the ⊟ box in front of Project Level.

Specifying Drill Down by Element of Cost

To specify Drill Down by EOC, click the Element of Cost radio button. To select a specific EOC to graph, select an EOC shown in the EOC list box.

Specifying Drill Down by Resource

To specify Drill Down by Resource, click the resource radio button. To select a specific resource to graph, select a resource shown in the Resource list box. You cannot drill down by resource when displaying BCWP, SV or CV data.

[Other] EOCs or Resources

If you see an element of cost or resource listed as [Other], this means that there is data which is not associated with a specific EOC or resource. This can happen:

- if Summary or EOC rollup toggles were set to OFF when you entered estimates or actuals data, and that data has not been rolled up yet. See *Chapter 2: Creating and Maintaining Project Settings* for details about using the Rollup Toggles.

- if an EOC or resource is deleted when it has existing estimates assigned to it. We suggest that you export estimates and examine the text in a word processor.

14.6 Drilling Methods

14.6.2 Drilling Down Bar or Line Graphs

These graphs contain a separate bar or line for every type of data (S/P/A/…) selected. To drill down into these graphs, click on the line/bar that represents the desired data.

Drilling Into Timephased Bar or Line Graphs

If you have selected a timephased graph, MPM displays additional bars/lines for every time period. When you drill into a specific time period, MPM changes to a Single Period Incremental/Cumulative graph for that single time period using the drill down method.
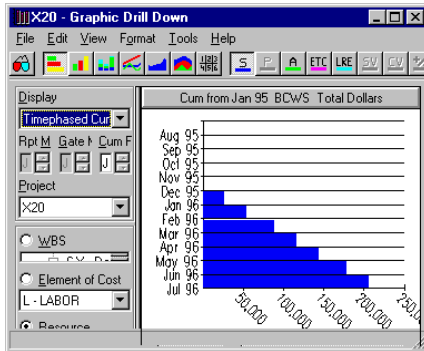
When drilling into Timephased data…   **MPM** changes display to Single Period
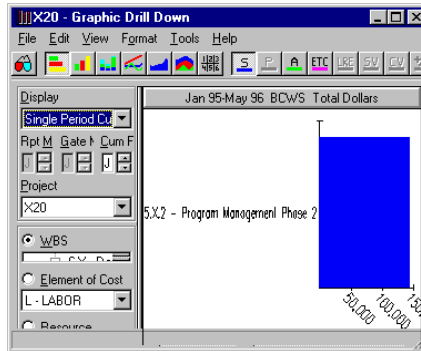
Drilling Into Single Period Bar or Line Graphs

When drilling down into a specific WBS, MPM displays its children. If the selected WBS has no children, MPM displays all EOCs for that WBS and begins to drill down by EOC.
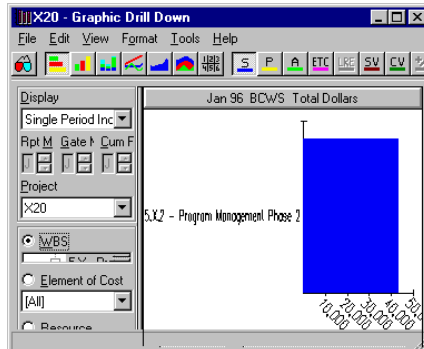
Drilling into a WBS Leg with no children   MPM begins drill down by EOC
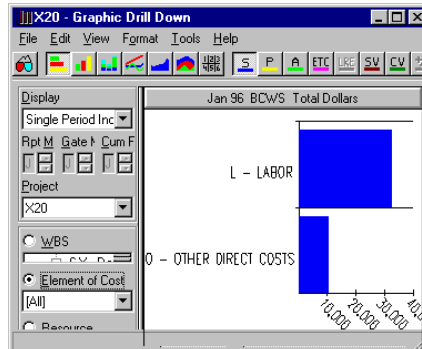
When drilling down by EOC, if you drill into a specific EOC, MPM displays the resources that apply to that EOC and changes the Drill Down Method to Resource.

When drilling into the Labor EOC…   MPM displays Resources in Labor EOC
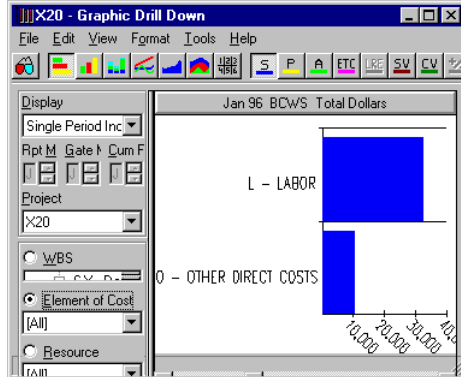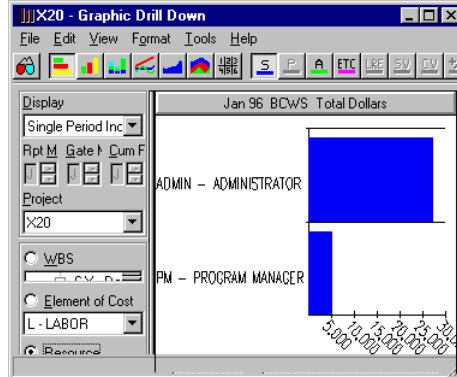
When drilling down by resource, if you drill into a specific resource, MPM displays that one resource in the graph.

When drilling into the ADMIN Resource…   MPM displays detail about the Resource
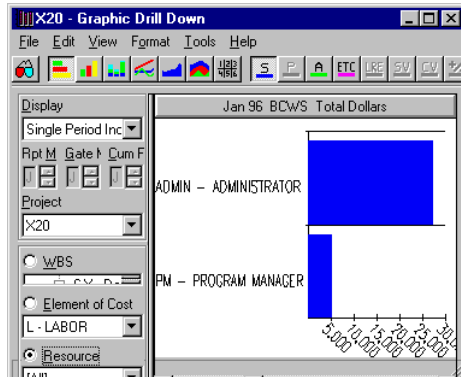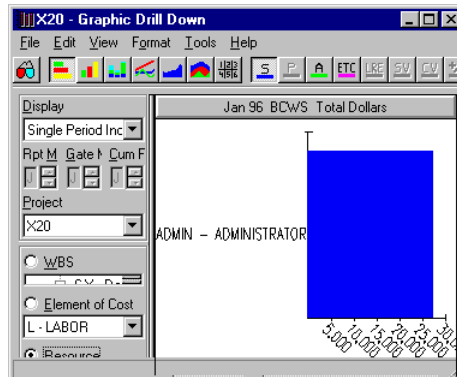
Drilling Into At Complete Bar or Line Graphs

If you have selected At Complete, MPM displays the same graph as Single Period Incremental, except that the single period is the end of the project, and the numbers reflect the values at completion.

14.6 Drilling Methods

14.6.3 Drilling Down Stacked Bar Graphs

To drill down into Stacked Bar Graphs, click on the segment of the bar which corresponds to the WBS/EOC/resource you want to see. You can only select one type of data (S/P/A/…) at a time. When drilling down into a Stacked Bar Graph, each section of the bar represents a WBS, an EOC, or a resource, depending on the drill down method.

Drilling Into Timephased Stacked Bar Graphs

If you have selected a Timephased Incremental or Timephased Cumulative Stacked Bar graph, to drill into the graph, you click <u>once</u> on the bar that represents the single period period <u>and</u> the desired WBS/EOC/resource. MPM changes to a Single Period Incremental or Cumulative graph for that single time period.

When drilling into Timephased data…   MPM changes to Single Period, shows the WBS/EOC/Res
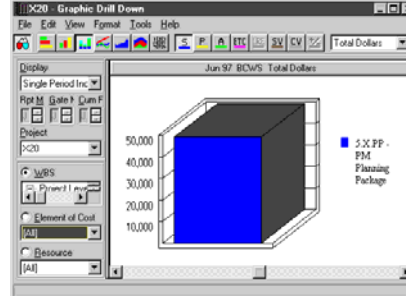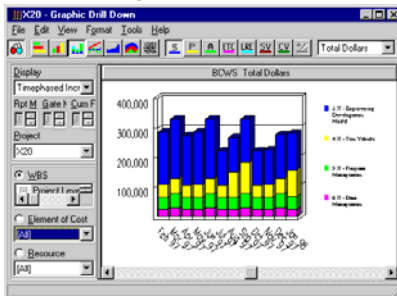
Drilling Into Single Period Stacked Bar Graphs

When drilling down by WBS, if you drill into a specific WBS, MPM displays its children. If the selected WBS Leg does not have any children, MPM displays all Elements of Cost for that WBS and begins to drill down by EOC.

Drilling into a WBS Leg with no children…   MPM begins drill down by EOC

When drilling down by EOC, if you drill into a specific EOC, MPM displays the resources that apply to that EOC and changes the Drill Down Method to Resource.

When drilling into the Labor EOC…   MPM displays Resources in Labor EOC

When drilling down by resource, if you click to drill into a specific time period, MPM displays the resources for the selected WBS. If you click to drill into a specific resource, MPM displays that one resource in the graph.

clicking on the PROG MGR Resource…   MPM displays detail about the Resource

Drilling Into At Complete Stacked Bar Graphs

If you have selected At Complete, MPM displays the same graph as Single Period Incremental, except that the single period is the end of the project, and the numbers reflect the values at completion.

14.6 Drilling Methods

14.6.4 Drilling Down Stacked Area Graphs

To drill down into Stacked Area graphs, click on the colored bar which corresponds to the WBS/EOC/resource to display. You can only select one type of data (S/P/A/…) at a time. When drilling down into a Stacked Area Graph, each bar represents a WBS Leg, an element of cost, or a resource, depending on the selected drill down method.

Drilling Into Timephased Stacked Area Graphs

If you have selected a Timephased Incremental or Timephased Cumulative Stacked Area graph, you drill into the WBS/EOC/resource by clicking on the color that represents the WBS, EOC or resource. MPM shows the WBS/EOC/resource selected.
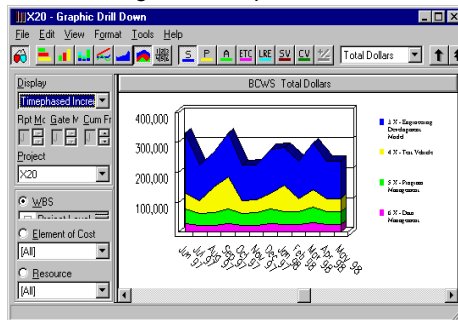
When drilling into Timephased data…   MPM shows the WBS/EOC/Resource
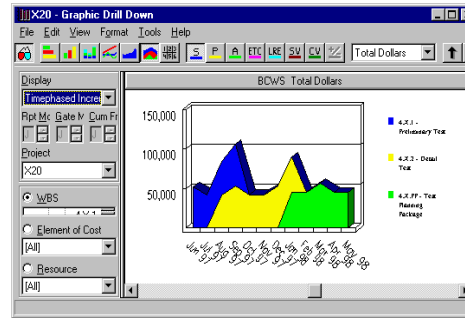
Drilling Into Single Period Stacked Area Graphs

When drilling down by WBS, if you drill into a specific WBS, MPM displays its children. If the selected WBS Leg does not have any children, MPM displays all Elements of Cost for that WBS and begins to drill down by EOC.

Drilling into a WBS Leg with no children…   MPM begins drill down by EOC

When drilling down by EOC, if you drill into a specific EOC, MPM displays the resources that apply to that EOC and changes the Drill Down Method to resource.

When drilling into the Labor EOC…   MPM displays Resources in Labor EOC

When drilling down by resource, if you click to drill into a specific time period, MPM displays the resources for the selected WBS. If you click to drill into a specific resource, MPM displays that one resource in the graph.

clicking on the PROG MGR Resource…   MPM displays detail about the Resource

Drilling Into At Complete Stacked Area Graphs

If you have selected At Complete, MPM displays the same graph as Single Period Incremental, except that the single period is the end of the project, and the numbers reflect the values at completion.

14.6 Drilling Methods

14.6.5 Drilling Down Area Graphs or Grids

You cannot drill down into Area Graphs or Grids.

When displaying Area Graphs using timephased display, the drill down method is ignored, and the points in the graph reflect the fiscal periods.
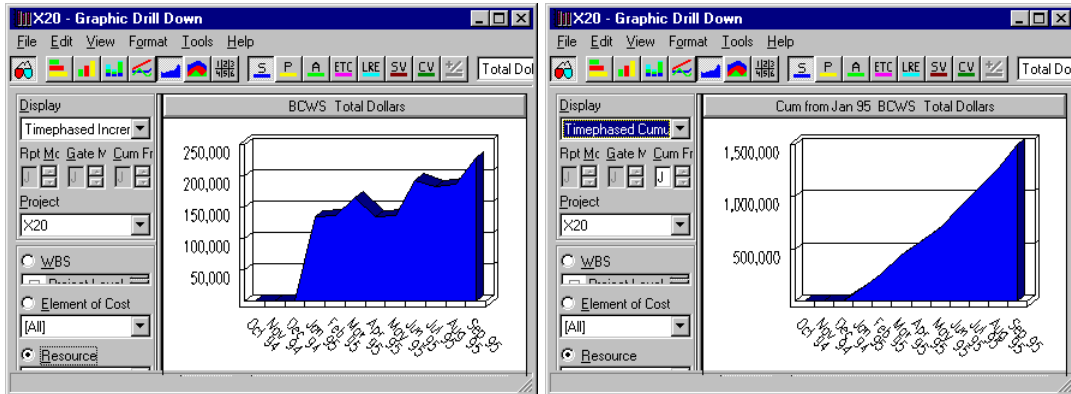
Figure A. *Sample Area Graphs Showing Timephased Incremental and Cumulative*

When displaying Area Graphs using Single Period display, you can specify the Drill Down Method, which is used to display all or selected WBSs, EOCs or resources.
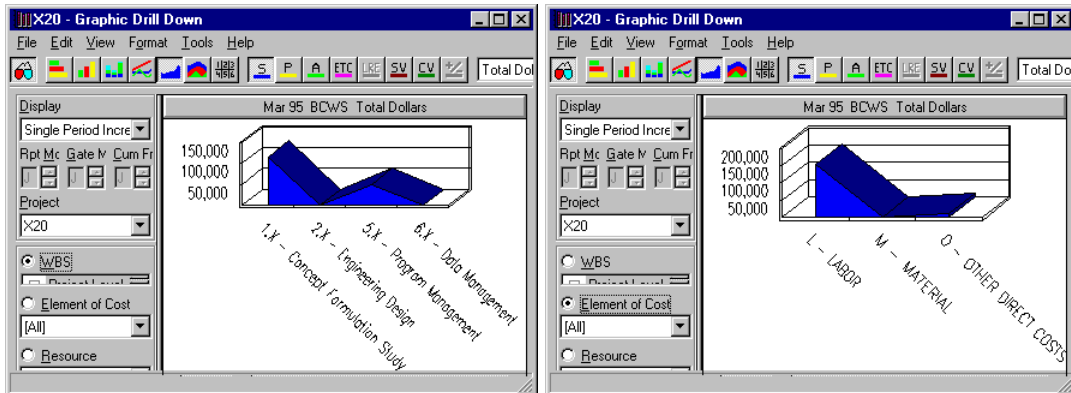
Figure B. *Sample Area Graphs Showing WBS and EOC data for a Single Period*

Area Graphs using At Complete values use the selected Drill Down Method in the same way as Single Period displays.
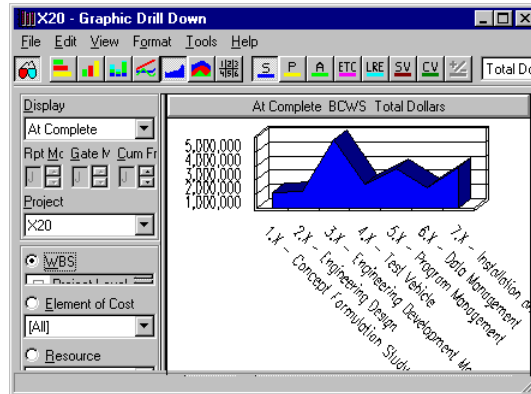
Figure C. *Area Graph Showing At Complete*

Grids show the numeric values of Single periods, At Complete or Timephased values, and also utilizes the selected Drill Down Method to select the data to be displayed.

Figure D. *Sample Grid Showing Resources BCWS At Complete Values*

14.7 Selecting the Data to Include

The data type buttons control the type of data displayed in the graph. You can also select data types by choosing Data Type on the View menu and selecting the desired type.

- **BCWS** represents the Budgeted Cost of Work Scheduled. Click the BCWS [S] button to include BCWS values in your graph. If selecting Single Period Cumulative or Timephased Cumulative graphs, the Cum From date is used to calculate displayed values. The Rpt Month and Gate Month have no effect on BCWS.

- **BCWP** represents Budgeted Cost of Work Performed. Click the [P] button to include BCWP values in your graph. If selecting Single Period Cumulative or Timephased Cumulative graphs, the Cum From date and the Rpt Month are used to calculate displayed values. The Gate Month has no effect on BCWP.

- **ACWP** represents the Actual Cost of Work Performed. Click the [A] button to include ACWP values in your graph. If selecting Single Period Cumulative or Timephased Cumulative graphs, the Cum From date and the Rpt Month are used to calculate displayed values. The Gate Month has no effect on ACWP.

- **ETC** represents the Estimate to Complete the project. Click the [ETC] button to include ETC values in your graph. If selecting Single Period Cumulative or Timephased Cumulative graphs, the Cum From date is used to calculate displayed values. The Gate Month and the Rpt Month have no effect on ETC.

- **LRE** represents the Latest Revised Estimate of the entire project. Click the [LRE] button to include LRE values in your graph. This option is unavailable when displaying Single Period graphs. If selecting Timephased or At-Complete graphs, the LRE includes actual costs up to the Gate Month and ETC after the Gate Month. The Cum From date and Rpt Month have no effect on LRE.

Showing Variance

To include Schedule Variance in your graph, click the [SV] button. Schedule Variance represents the variance between the work performed and the work scheduled (BCWP – BCWS). If selecting Single Period Cum or Timephased Cum graphs, the Cum From date and the Rpt Month are used to calculate displayed values. The Gate Month has no effect on SV.

To include Cost Variance in your graph, click the [CV] button. Cost Variance represents the variance between the cost of the work performed and the actual costs (BCWP – ACWP). If selecting Single Period Cum or Timephased Cum graphs, the Cum From date

and the Rpt Month are used to calculate displayed values. The Gate Month has no effect on Cost Variance.

You can also display the variance between two data types. When graphing variance data, you can either graph the variance with the values that are being compared, or graph the variance alone. To display the values you selected compared with the variance, select Include Data with Other Variance from the View menu. To display the variance alone, select Include Data with Other Variance from the View menu again.

To show variances between two selected data types, click the [button icon] button after clicking the other two data types. The table below shows the effects of selecting various combinations of data types.

Selected	Variance Calculation	Comments
S P	BCWP – BCWS	Same as SV - shows variance between work performed and work scheduled.
S A	BCWS – ACWP	Show variance between work scheduled and actual costs incurred.
S ETC	BCWS – ETC	Shows variance between work scheduled and estimates of remaining work.
S LRE	BCWS – LRE	Shows variance between work scheduled and the latest revised estimate of final project costs.
P A	BCWP – ACWP	Same as CV - shows variance between work performed and actual costs incurred.
P ETC		Not available
P LRE		Not available
A ETC	ETC – ACWP	Shows variance between estimates and actual costs incurred.
A LRE	LRE – ACWP	Shows variance between final projections and actual costs incurred.
ETC LRE		Not Available

14.8 Changing the GDD Display

Changing the Decimal Display

To specify how many decimal places should be displayed on the graph for dollar and non-dollar (hours) numeric data, select Dollars or Non-Dollars on the Format menu, and then select one of the following options (you can have different options for each):

Option	Description
1,235	No decimal places
1,234.6	One decimal place
1,234.57	Two decimal places

Displaying IDs and/or Descriptions

To change the GDD options, select Options from the Tools menu. MPM displays the GDD Options window.
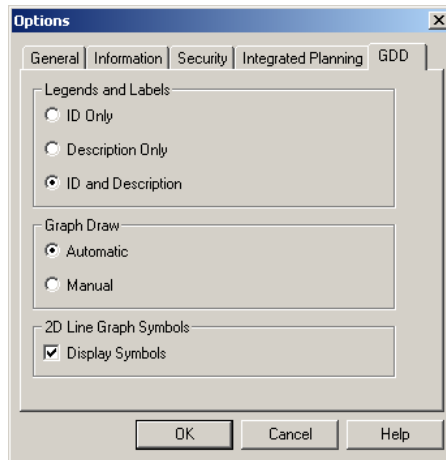
Figure A. *GDD Options Window*

The following Graphic Drill Down options are available on the GDD Options Window:

Field	Option	Description
Legends and Labels	ID Only	The graph displays only the element ID (identification) of the WBS, element of cost, or resource elements. This is useful when you are graphing elements with long descriptions.
	Description Only	The graph displays only the description of the WBS, element of cost, or resource elements.
	ID and Description	The graph displays both the element ID and the description of the WBS, element of cost, or resource elements.
Graph Draw	Automatic	GDD automatically re-draws the graph every time any data source, display type, data type, unit, period or graph type item is changed.
	Manual	GDD does *not* automatically re-draw the graph every time a graph element is changed. This is useful when you need to set several parameters before viewing the final graph. Use the Draw Graph Now ❗ button when you want the system to re-draw the graph.
2D Line Graph Symbols	On or Off	Adds symbols on 2D Line Graphs to differentiate the data types. See *topic 14.6.2 Drilling Down Bar or Line Graphs.*

14.9 Outputting the Graph

To speed up the graphing process so the graph is not redrawn after every change, set graph drawing to Manual by selecting Options from the Tools menu and setting Graph Draw under the GDD Tab to Manual.

You can then redraw the graph by clicking the Draw Graph Now ![button] button or by choosing Draw Graph Now on the View menu.

Previewing and Printing the Graph

You can preview or print the graph using the options on the File menu. Print and Print Preview show the graph exactly as displayed in the GDD window. For complete details on using these options, see *Using MPM* in the *Getting Started* manual.

To preview your graph, do one of the following:

- Click the Print Preview button ![button]
- Choose Print Preview on the File menu
- Press Alt+F, and then V

To print your graph, do one of the following:

- Click the Print button ![button]
- Choose Print on the File menu
- Press Ctrl+P

MPM displays the standard Windows dialog box asking you for number of copies, etc.

Copying/Exporting Graph Data

You can copy a graph (and/or graph data) to the Windows clipboard, if you wish to paste the data into another Windows application.

If you are viewing a graph, select Copy Graph on the Edit menu, or press Ctrl+C. Both the graph, and the data the graph was derived from the graph, are copied to the clipboard. If the application you are pasting the graph into has Paste Special capabilities, you can choose whether to paste the graph or the text.

If you are viewing a grid, select the information to copy by clicking the mouse button and dragging it through the desired rows and columns. Then select Copy Cells on the Edit menu, or press Ctrl+C. If at least one entire row or one entire column is selected, the column and row titles are also copied to the clipboard.

This option is unavailable if the Draw Graph option is set to Manual and the graph is not current.

14.10 Creating Common Graphs

The sub-topics that follow describe how to create the most frequently used graphs.

14.10.1 Creating an SPA Line Graph

14.10.2 Creating an EOC/Resource Usage Graph

14.10.3 Examining Work Done
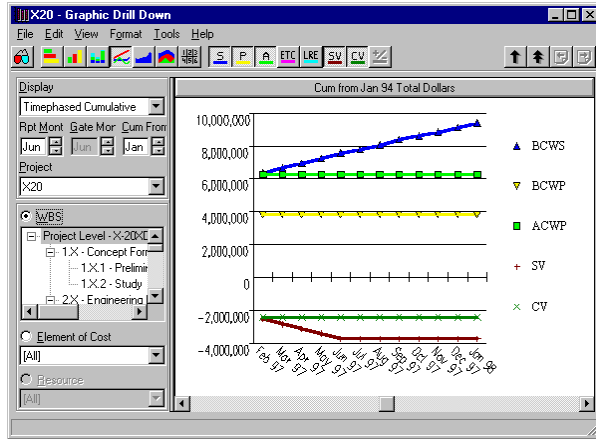
Figure A. The SPA Line Graph.
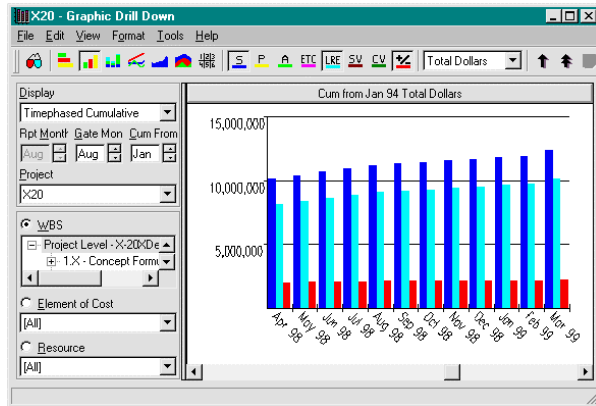
Figure B. The BCWS versus LRE Graph.
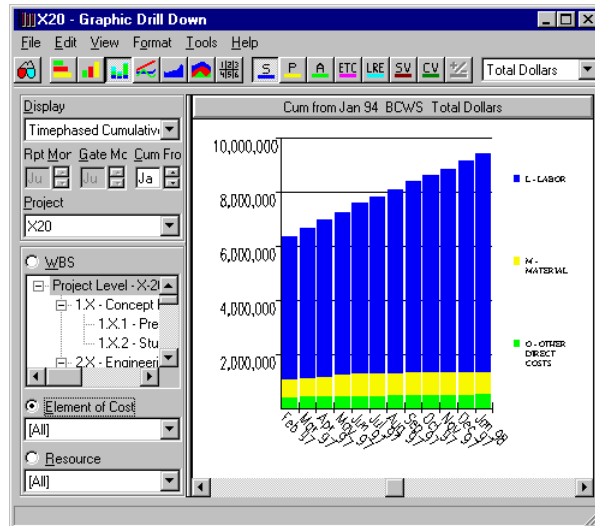
Figure C. *Display the EOC Usage graph.*
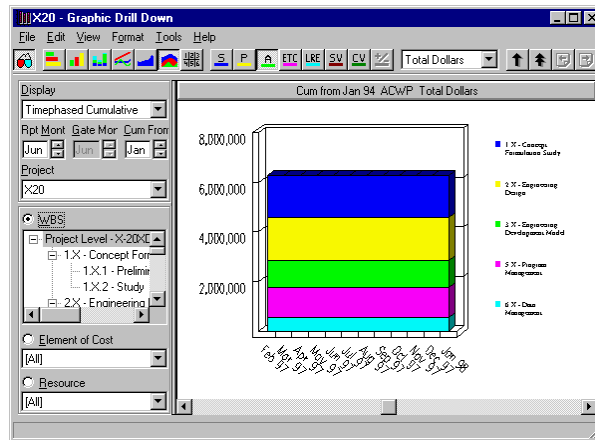
Figure D. *Stacked Area Actuals Graph by WBS*

14.10 Creating Common Graphs

14.10.1 Creating an SPA Line Graph

To create an SPA line graph:

1. Access GDD from the Menu Manager on the Projects tab.

2. Select a project from the Project list box.

3. Select Timephased Incremental from the Display list box.

4. Set the Rpt Month to the last month for which WBS data has been entered.

5. To select a Line Graph, click the Line Graph button.

6. To add BCWS, BCWP, and ACWP data to the graph, click the   buttons, and ensure that no other data type buttons are selected.

7. Set Units to Total Dollars.

8. Check the GDD Options window and ensure that Display Symbols under the 2D Line Graph section of the GDD tab has been selected.

9. To add Schedule Variance and Cost Variance, click the and buttons.

MPM displays the SPA line graph. An example is shown in Figure A.
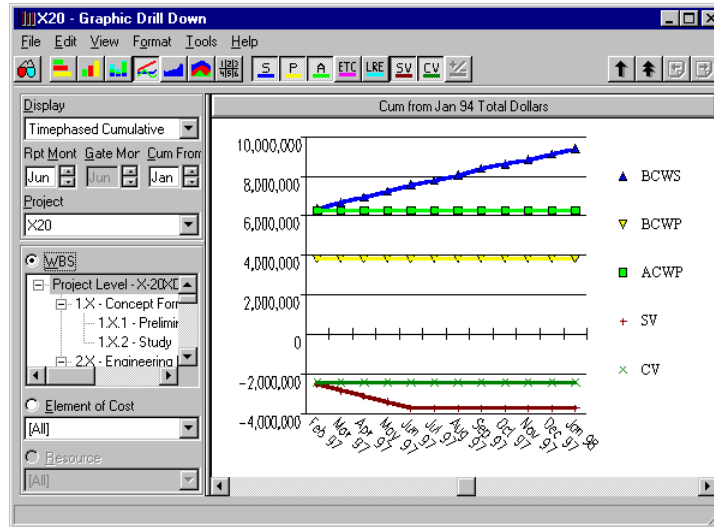
Figure A. *The SPA Line Graph.*

To view the data used to derive the current graph, click the Grid button.

Figure B. *The Grid Data Used to Generate the SPA Line Graph.*

14.10 Creating Common Graphs

14.10.2 Creating an EOC/Resource Usage Graph

To create an Element of Cost or Resource Usage graph:

1. If you had created a graph previously, click the Reset ![Reset button] button.

2. To select a Stacked Bar Graph, click the Stacked Bar Graph ![Stacked Bar Graph button] button.

3. To graph BCWS data, click the ![S button] button.

4. To make the graph three-dimensional, click the 3D ![3D button] button.

5. Select Timephased Cumulative from the Display list box.

6. Select Drill Down by Element of Cost to view EOC usage.

   MPM displays the EOC Usage graph shown in Figure A.
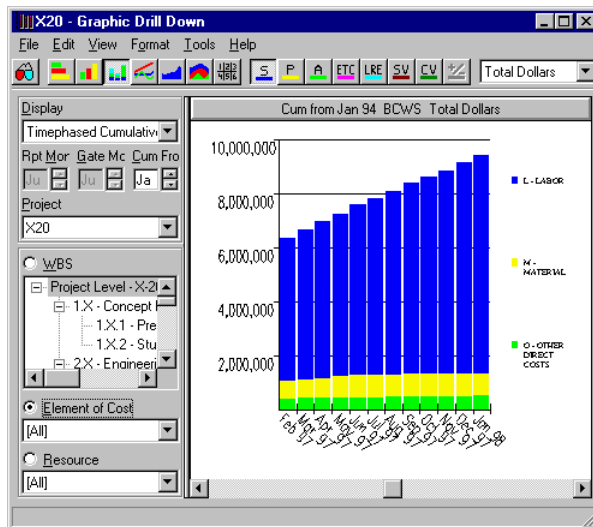
Figure A. *Display the EOC Usage graph.*

See *topic 14.6.3 Drilling Down Stacked Bar Graphs* for complete instructions on how to drill down into this graph.

7. Select Drill Down by Resource to view resource usage.

MPM displays the Resource Usage graph shown in Figure B.

Figure B. *Drilling Down by Resource and Fiscal Period.*

See *topic 14.6.3 Drilling Down Stacked Bar Graphs* for complete instructions on how to drill down into this graph.

14.10 Creating Common Graphs

14.10.3 Examining Work Done

You use the actuals graphs to examine work that has already been completed. To create the actuals graphs:

1. If you created a graph previously, click the Reset ![button] button.

2. To select a Stacked Area Graph, click the Stacked Area Graph ![button] button.

3. To graph ACWP (actuals) data, click the ![button] button.

4. To make the graph three-dimensional, click the 3D ![button] button.

5. Select Timephased Cumulative from the Display list box.

6. Select Drill Down by WBS.

   MPM displays the graph:
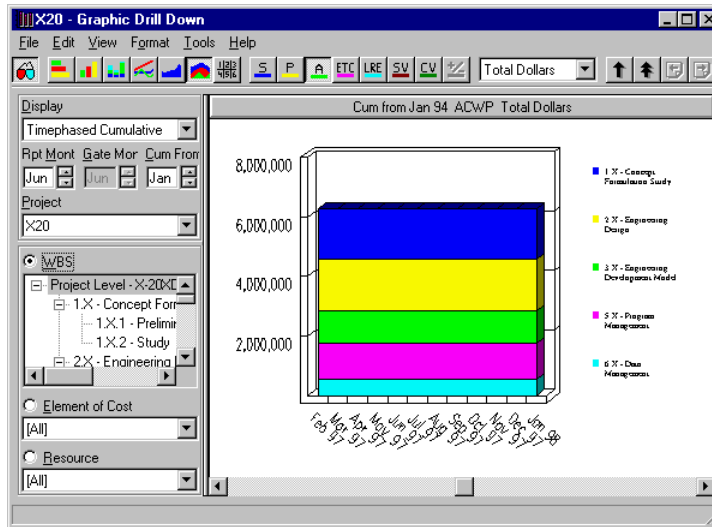
Figure A. *Stacked Area Actuals Graph by WBS*

See *topic 14.6.4 Drilling Down Stacked Area Graphs* for complete instructions on how to drill down into this graph.

The largest colored bar (in the graph above, WBS 2.X) represents the most expensive task in the project.

7. Select Drill Down by Resource. MPM displays the graph:
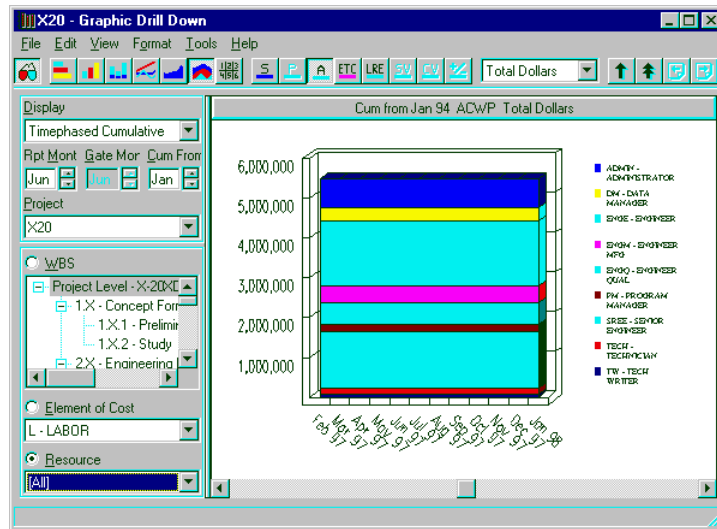
Figure B. Stacked Area Actuals Graph by Resource

8. Select a resource in the list box, or drill into the graph by selecting a colored bar.

The largest colored bar (in the graph above, Resource ENGE) represents the most expensive resource in the project. MPM displays the graph:
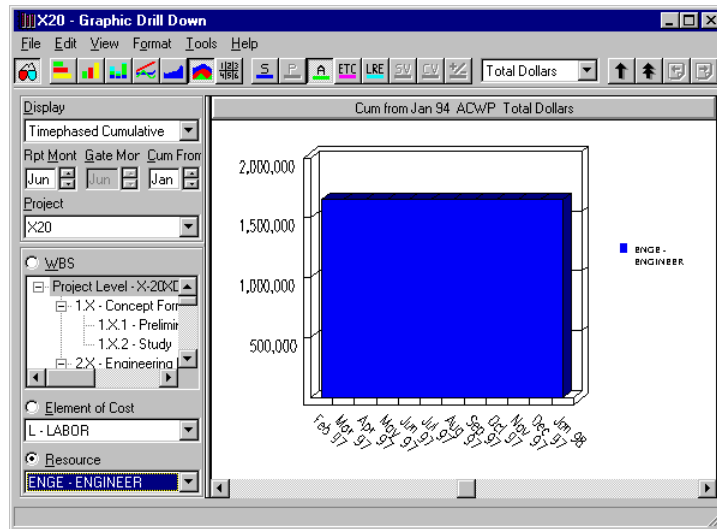
Figure C. Stacked Area Actuals Graph for Selected Resource

15

Reports

15.1 Introduction to Reports

MPM provides a variety of tabular and graphic standard reports, specifically designed to meet government reporting requirements and your in-house reporting and analysis needs. You can condition each report to select its content and format for a specific purpose.

Because MPM is so flexible, the options in the conditioning can produce numerous reports. The table below describes how to receive the desired report.

Procedure

1. Find the report you want in the first column.

2. Access the icon in the second column from the Menu Manager under the Reports tab (see topic *15.2 Accessing the Report Conditioning Windows* for instructions).

3. Choose the designated Data Type in the third column in the conditioning window (see topic *15.3 Orientation to the Report Conditioning Windows* for instructions).

Report Description	Report Name on icon	Data Type
Accounting Calendar	Accounting Calendar	n/a
Analyze Distributed Project Imoort	Analyze Distributed Project Import	n/a
Apportioned Estimates Relationships – Baseline	Apportioned Estimates	Baseline
Apportioned Estimates Relationships – ETC		ETC
Resource Basis of Estimate	Basis of Estimate	Resource
Summary Basis of Estimate		Summary
Burden and Fee Detail – Baseline	Burden and Fee	Detail - Baseline
Burden and Fee Detail – ETC		Detail - ETC
Burden and Fee Summary – Baseline		Summary - Baseline
Burden and Fee Summary – ETC		Summary - ETC
CLIN Table	Contract Line Items	n/a
CLIN/SOW/WBS	CLIN/SOW/WBS	n/a
Compare Detail versus EOC Rollup	Compare Detail and Rollup	EOC Rollup
Compare Detail versus Summary Rollup		Summary Rollup
Control Account Plan	Control Account Plan	n/a
CPR Format 1	CPR Format 1	n/a
CPR Format 2	CPR Format 2	n/a
CPR Format 3	CPR Format 3	n/a
CPR Format 4	CPR Format 4	n/a
C/SSR	CSSR	n/a
DD 1861	DD 1861	n/a
DD 1921	DD 1921	n/a
Detail Variance Analysis	Detail Variance Analysis	n/a
EAC Comparison	EAC Comparison	n/a
Actuals by EOC	Element of Cost	Actuals by WBS
Actuals by Charge Number		Actuals by Charge Number
Element of Cost		Baseline
WBS Recap by EOC		Baseline – Recap
Budget/Actuals Recap by EOC		Budget/Actuals – Recap

Report Description	Report Name on icon	Data Type
Element of Cost/Class Detail	Element of Cost	EOC/Class – Baseline
Element of Cost/Class Detail – ETC		EOC/Class – ETC
Element of Cost – ETC		ETC
Element of Cost – LRE		LRE
S/P/A Tabular by EOC		S/P/A Tabular
S/P/A Recap by Element of Cost		S/P/A Recap
Element of Cost/Class	Element of Cost Table	n/a
EVM Planning & Analysis	EVM Plan and Analysis	n/a
Labor/Price Summary by WBS	Labor/Price Summary	WBS
Labor/Price Summary by CLIN		CLIN
Program Log	Logs	Program Log
Management Reserve Log		Management Reserve Log
Undistributed Budget Log		Undistributed Budget Log
Manpower Detail	Manpower	Detail
Manpower Summary		Summary
Milestone Barchart	Milestone Barchart	n/a
Milestone Status Turnaround Document	Milestone Status Turnaround Document	n/a
NASA533 M	NASA 533 M	n/a
NASA533 P	NASA 533 P	n/a
NASA 533 Q	NASA 533 Q	n/a
OBS Indented	OBS Indented	n/a
OBS Burden Templates	OBS Burden Template	N/a
Price/Usage Variance Analysis	Price/Usage Variance Analysis	n/a
Project Comparison	Project Comparison	Baseline
Project Comparison LRE		LRE
Proposal Summary by WBS	Proposal Summary	WBS
Proposal Summary by CLIN		CLIN
Resource Detail	Resource	Detail - Baseline
Resource Detail – Actuals		Detail - Actuals
Resource Detail – ETC		Detail -ETC
Resource Detail – Budget/LRE		Detail - Budget/LRE
Resource Summary		Summary - Baseline
Resource Summary – Actuals		Summary - Actuals
Resource Summary – ETC		Summary –ETC
Resource Department Summary	Resource Department Summary	n/a
Resources and Burdens	Resources and Burdens	n/a
Responsibility Assignment	Responsibility Assignment	n/a
Responsibility Assignment Matrix	Responsibility Assignment Matrix	n/a
SF 1411	SF 1411	n/a
Spread Curves	Spread Curve	n/a
Task Description	Task Description	n/a
Variance Analysis Turnaround Document	Variance Analysis Turnaround Document	n/a
WBS Hierarchy	WBS Hierarchy	n/a
WBS Indented	WBS Indented	n/a
Weekly - Performance	Weekly	Performance
Weekly - EOC Detail		EOC Detail
Weekly - EOC Rollup		EOC Rollup
Work Authorization Document	Work Authorization Document	n/a
Work Status Document – EV	Work Status Document	Earned Value
Work Status Document – Budget/LRE		Budget/LRE

15.2 Accessing the Report Conditioning Windows

You open the Report Conditioning windows by clicking the Reports tab on the MPM Menu Manager. When you access the Reports tab, all reports to which you have been granted access are listed. Double-click the desired report icon.

Each report has a window which contains the conditioning options that modify the report. Every available conditioning option for the specified type of report is shown.
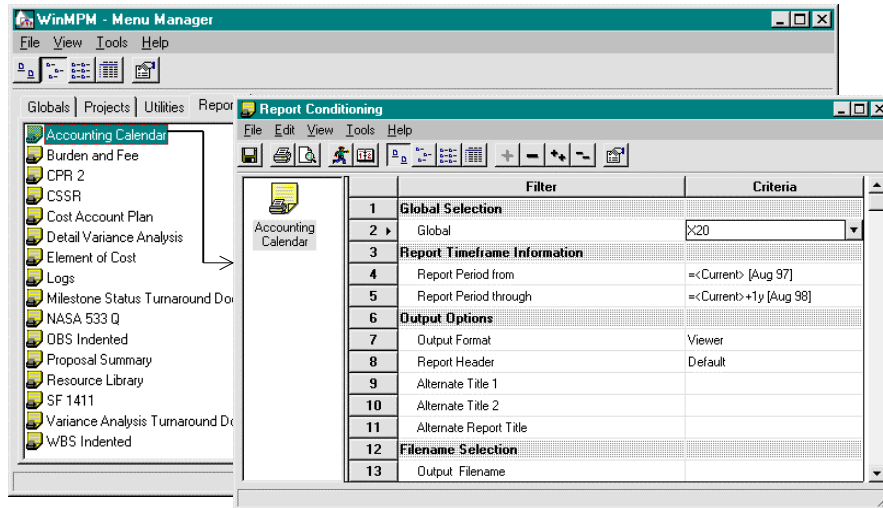
Figure A. Double-click the icon on the Reports tab of the MPM Menu Manager.

Procedure

To run the desired report:

1. From the Menu Manager window shown in Figure A, do one of the following:

   ■ Select the Reports tab and double-click the icon for the desired report.

   ■ Choose Reports | [report] from the File menu.

   MPM displays the Report Conditioning window for the selected type of report. Figure A shows the Accounting Calendar Report Conditioning window.

2. If the report contains more than one Report Type (refer to topic *15.1 Introduction to Reports*), select the desired report type.

MPM displays the Report Conditioning for the select report type (if different than the default).

15.3 Orientation to the Report Conditioning Windows

You use the Report Conditioning window to select the content and format for a specific report. A toolbar gives you quick access to common tasks. The Report Conditions grid displays the information about the report.

Report Conditions Grid

In every Report Conditioning window, the left pane of the window displays the icon(s) for the selected type of report, and the right pane displays the conditioning information about the report. The right pane is divided into two columns. The Filter column shows the report condition field to be specified, such as Project. The Criteria column contains the list boxes, check mark boxes, or text entry boxes in which you enter the criteria for the condition. The rows are grouped into categories. Category headings are shown in gray for reference.

Required Entries

Most Report Conditioning windows have at least one required entry; some have several. Figure A below shows the Management Log Report Conditioning window. All entries are entered or selected in the Criteria column of a conditioning window. Those containing required entries show <Required> in the Criteria column. The default project is the first project in the PROJ.DAT to which you have been granted access.
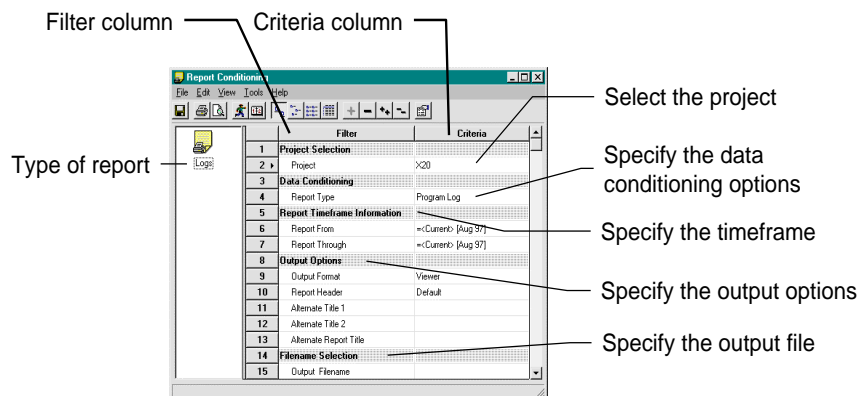
Figure A. *Management Log Report Conditioning Window*

Running the Report

To set up and run the report:

1. Choose a project from the Project list box.
The Criteria box for the project contains a list box of available projects.

2. Specify the report data conditioning.
Many reports have several conditioning options to choose from.

3. Enter the report timeframe information.
If applicable, provide starting and ending periods to be included in the report.
You can enter formulated dates here, if desired. See topic *15.6.1 Using Formulated Dates* for instructions.

4. Select the output option.
You can send this report directly to the printer, view it in the Report Viewer (see topic *15.5.1 Orientation to the Report Viewer Window*), or save it in several formats. You can also change report heading and other formatting options.

5. If desired, you can change the current date by clicking the Set Date [image] button, or by selecting Set Current Date on the Tools menu.

6. To accept the selections and run the report, do one of the following:

   ▪ Click the Run button [image]
   ▪ Choose Run Report on the Tools menu, or press Ctrl+R.

Previewing and Printing Report Conditioning

You can preview and print the report conditioning data using the options on the File menu. For complete details on using these options, see *Using MPM* of the *Getting Started* manual. Note that the Print and Preview only show the report conditioning criteria which you have displayed on the grid. It does not display the results for running the conditioning.

Saving the Report Conditioning

To save the Report Conditioning data, do one of the following:

   ▪ Click the Save button [image]
   ▪ Choose Save from the File menu, or press Ctrl+S

MPM prompts for the location and file name to be saved. See *topic 15.6 Batch Report Processing* for details on using saved conditioning.

15.3 Orientation to the Report Conditioning Windows

15.3.1 Conditioning the Report

When reporting MPM data, most reports contain these conditioning options:

- **Global ID:** On all Global reports, specify the Global File in which the data to be reported resides, from a drop-down list of Global IDs.

- **Project ID:** On all Project reports, specify the Project in which the data to be reported resides, from a drop-down list of Project IDs.

- **Report Timeframe Information:** To change the timeframe to be reported, specify the Report From/Start dates or the Report Period From/Through dates. Dates can be entered in the usual formats, or as Formulated Dates. See topic *15.6.1 Using Formulated Dates* for instructions on using Formulated Dates.

- **WBS fields:** On most Project reports, you can specify a particular WBS Leg or Level to be included, or select a subset of data using the WBS fields Alias, Manager, Cross Reference, Element Type, Performing/Responsible OBS, CLIN.

- **WBS Leg (optional):** To report a particular WBS Leg, enter the WBS ID, or click the ... button which is added to the WBS Leg criteria box when clicked. MPM displays the WBS Leg dialog box shown below. Highlight the desired leg, expanding the levels if necessary. The WBS ID selected is inserted in the Criteria box.

Figure A. *WBS Leg Dialog Box*

- **WBS Level (optional):** Enter a value from 1 through 99 to export WBS elements at the level entered. If a WBS leg is entered, the WBS level will validate the lowest level of that leg.

- **Type of Data:** On most Project reports, you can choose to include Incremental, Cumulative, and/or At Complete values in the report.

- **Level of Detail:** You can choose to include data rolled up to the EOC, COC, or Resource level. You can also choose to include summary or detail data on some reports.
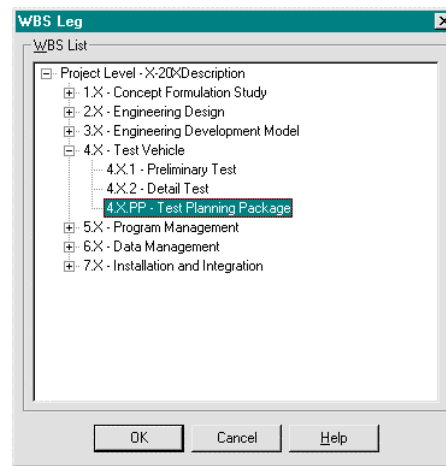
■ **Additional Data:** You can add information to some reports such as Task Descriptions, BOEs, Milestones, Performance Summaries, Financials, Recap, and many other special processing options. Some are unique to the report you requested. See the *MPM Standard Reports* manual for details.

15.3 Orientation to the Report Conditioning Windows

15.3.2 Outputting the Report

MPM offers several options for outputting the report. You can send it to:

- a local or network printer, plotter, or other output device.
- the Report Viewer, which allows you to edit, rearrange, and reformat the report before printing it.
- a file saved on your local machine or network.

Sending the Report to a Printer

To print the report:

1. Enter the report conditioning options.

2. Under Output Options, select Printer for the Output Format conditioning option.

3. Click the Run button.

> Choosing Print on the File menu will only print your report options!

4. If you have left any required entries blank, MPM prompts you to enter them.

5. MPM displays the setup options for the printer, such as page number range, number of copies, etc. Make any desired changes.

6. If desired, you can click Setup to change other setup options for the printer, such as page orientation, print quality, etc.

7. Click OK.

MPM sends the report to the printer as requested.

Sending the Report to a Plotter or Other Output Device

To send the report to something other than a printer, first choose Print on the File menu, and click Setup. Choose any other installed device listed. If necessary, click Network to scan the network for other devices on your network. Click OK.

Then follow the rest of the steps above. MPM uses the drivers for the selected output device, and will prompt you for device-specific information in Steps 6 and 7.

Sending the Report to the Report Viewer

To send the report to the Report Viewer:

1. Enter the report conditioning options.

2. Under Output Options, select Viewer for the Output Format conditioning option.

3. Click the Run 🏃 button.

MPM compiles the report and displays the data in the Report Viewer. In the Viewer, you can rearrange, change, or reformat the report as desired. See topic *15.5 Viewing and Editing Reports* for instructions on using the Viewer.

Sending the Report to a Saved File

To save the report to a file:

1. Enter the report conditioning options.

2. Under Output Options, select one of these values for the Output Format conditioning option:

- **UN/CEFACT (*.XML)** for a UN/CEFACT standard XML file (CPR1 through CPR4 only).

- **Comma-Separated Values (*.CSV)** for a text file with values separated by commas.

- **Excel 95 (*.XLS)** for an Excel spreadsheet in Excel 95 format.

- **Excel 97 – 2000 (*.XLS)** for an Excel spreadsheet in Excel 97-2000 Format.

- **Tab-Separated Values (*.TXT)** for a text file with values separated by tabs.

- **HTML (*.HTM)** for an HTML file which you can view in an Internet browser program like Netscape or Internet Explorer.

3. Specify the saved file name and location.
When you click in the Criteria box for the Output Filename, a `...` button is added to the box. Use this button to bring up the standard Windows browse window for finding the correct folder. This is the text file to be created by MPM.

4. Click the Run 🏃 button.

15.4 Creating Government-Required Reports

MPM provides a standard set of reports which can be used for reporting your project to U.S. government agencies in prescribed formats. These reports include data which is outside of MPM which these reports require, including headers, thresholds, variances, and Cost of Money overrides. See topic *15.4.1 Entering Government Report Data* for instructions on entering this data.

CPR Reports for DoD/DoE Reporting

The CPR reports are used primarily for reporting cost and schedule progress to the government or government contractors on specific procurements. There are four CPR reports, each of which can be printed in one of three formats. The 1989 format report complies with OMB No. 22R0327. The 1995 format report complies with OMB No. 0704-0188 and DID No. DI-MGMT-81466. The 2005 format report complies with DID No. DI-MGMT-81466A. Please refer to your contractual reporting requirements for the appropriate use and application of the various versions of the CPR.

There is an additional output option for CPR1 through CPR4 reports called "UN/CEFACT (*.XML)". The UN/CEFACT XML schemas are an international data exchange standard format that replaces the older ANSI X12 electronic data interchange (EDI) format such as the 839 transaction set, used to submit Contract Performance Reports (CPRs) electronically to government customers.

These schemas are designed to support the exchange of program management related cost and schedule data between all project stakeholders. For more information about the schemas, see the UN/CEFACT web site (www.unece.org/cefact/) or the Defense Contract Management Agency (DCMA) web site (www.dcma.mil/divisions/dcmaa/LosAngeles/XSD/index.htm). The DCMA web site includes industry guidelines for using the schemas.

- **CPR1 – Cost Performance Functional Categories Report** *in three formats*

  This report includes current period, cumulative, and At complete values for each WBS element, and contains header data showing quantity, targets, ceilings, and Management Estimate At Completion (MEAC) calculations. This report also contains computed and overridden data about budget, price, Management Reserve (MR), Undistributed Budget (UB), and MEAC cases.

- **CPR2 – Cost Performance Organizational Categories Report** *in three formats*

  This report includes current period, cumulative, and At complete values for each Organization (Performing or Responsible), and contains header data showing quantity, targets, ceilings, and MEAC cases. This report also contains computed

and overridden data about budget, price, Management Reserve (MR), Undistributed Budget (UB), and MEAC cases.

■   **CPR3 – Cost Performance Baseline Report** *in three formats*

This report displays a forecast of monthly changes to the Baseline, Management Reserve, and Undistributed Budget for the entire project, and contains header data showing schedule dates for the contract and the project.

■   **CPR4 – Cost Performance Manpower Loading Report** *in three formats*

This report displays a forecast of hours and person-months by organization (Performing/Responsible), and contains header data showing schedule dates for the contract and the project. This report also contains program variance thresholds for month, cumulative, and at-complete percents and values.

C/SSR Reports for DoD/DoE Reporting

The C/SSR (Cost/Schedule Summary) report is used primarily for reporting cost and schedule summary data to the government or contractors on specific procurements. This report can be printed in one of three formats. The 1989 OMB format report complies with OMB No. 22R0327. The 1995 DID report complies with OMB No. 0704-0188 and DID No. DI-MGMT-81466. Definitions and instructions for these reports can be found in the DoDI publication 5000.2.

This report includes cumulative and At complete summaries for each WBS element, and contains header data showing contractor and contract information, and MEAC calculations. This report also contains computed and override data about contract price, budget, Management Reserve (MR), Undistributed Budget (UB), and MEAC cases.

Reports for NASA Reporting

The NASA reports are used primarily for reporting contractor financial management to NASA. MPM offers three NASA 533 formats: 533-M (Monthly), 533-Q (Quarterly), and 533-P (Monthly Performance Analysis). Definitions and instructions for these reports can be found in the NASA publication NHB 9501.2b.

These reports include cumulative and ETC summaries for each WBS element, and contain header data showing contract information and billing data. You can also select detail increments by month, quarter or year.

Contract Proposal Reports for DoD Reporting

The SF1411 (Contract Pricing Proposal Cover Sheet) report is used by DoD contractors for providing all required information for your proposal, sorted by CLIN (Contract Line Item). This report is available in new or old (pre-1995) formats.

The DD1921 (Cost Data Summary) report is used by DoD contractors for reporting cost data summaries for providing all required information for your proposal, sorted by CLIN (Contract Line Item) in OMB format. This report has header data showing contract price, ceiling, type, fiscal year funding, and contractor data.

The DD1861 (Contract Facilities Capital and COM) report is used by DoD contracts for reporting methods of allocation of contractor facilities costs. This report is available as a monthly or yearly report, and has header data showing Treasury rate, proposal, and contract data.

15.4 Creating Government-Required Reports

15.4.1 Entering Government Report Data

The MPM government-required reports contain data which is not tracked by MPM. You must enter these values separately. You can enter values for the Header, Threshold, Variance, and COM data on the Headers dialog. However, some of the values for the C/SSR and CPR reports that appear on the Headers dialog are derived from the Program Log. See Special Guidelines in this section for additional details.

To set up government-required reports, follow these steps:

1. On the Menu Manager with the Reports tab showing, double-click the desired government-required report.
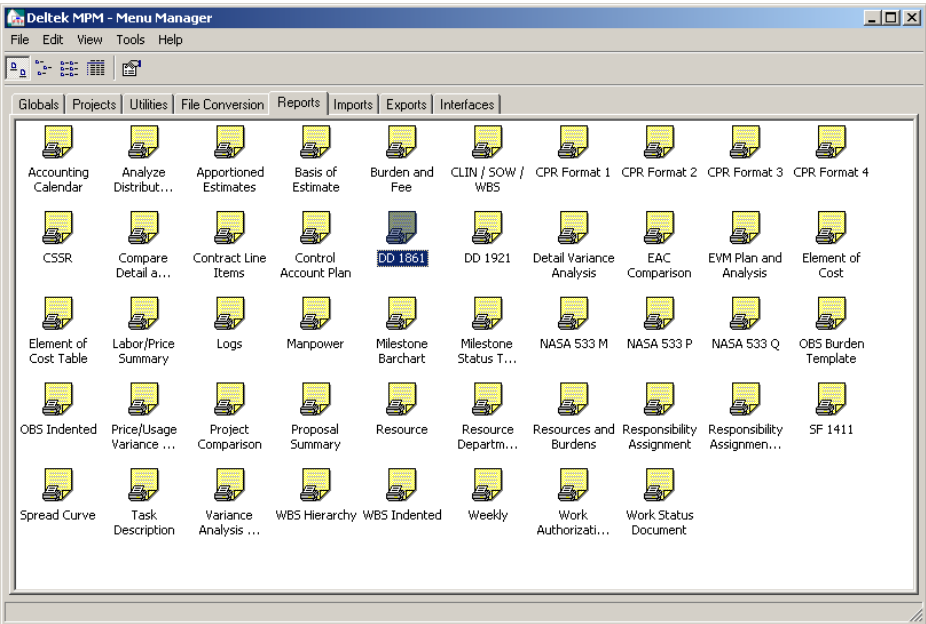
Figure A. *Select the desired government report*

MPM displays the Report Conditioning window for the report you selected.

To enter headers, click here
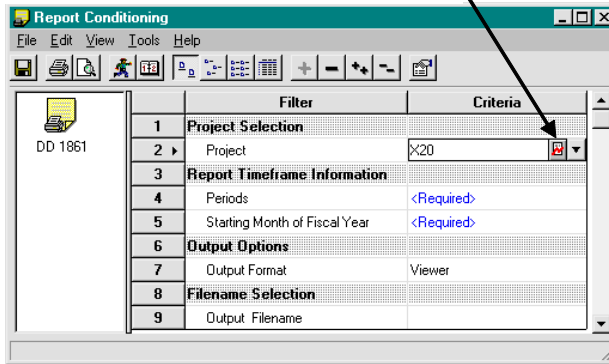
Figure B. Inside the Report Conditioning window.

2. Click the ![icon] icon next to the Project drop-down list box to access the Headers dialog. You can also access the Headers dialog from the Tools Menu of the Project Maintenance window.
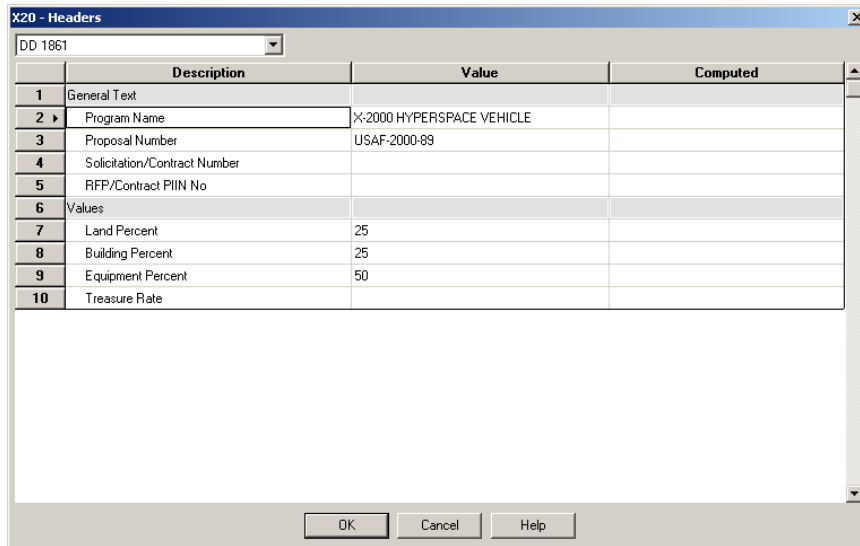
Figure C. Entering Headers for a report.

3. In the Value column, enter the Header, Variance, and any other data necessary for this government report. The drop-down list box at the top shows the selected report.

Special Guidelines

- The values that appear on the Headers dialog are saved with the project. You can then use those values repeatedly on multiple reports. The values appear as the default when requesting reports that use them.

- If exporting CPR 1 through CPR 4 reports via the UN/CEFACT format refer to the MPM Standard Reports CPR 1 through CPR 4 sections for required entries in the Type field.

- If MPM's Program Log is used in your organization, the values derived from the Program Log take precedence over values entered on the Headers dialog. When changes to previously recorded Program Log values are made on the Headers window, the changes appear only on the report currently being generated and are not saved with the project. If your organization is *not* using the Program Log, all values entered on the Headers dialog are saved with the project.

- If your organization uses the Program Log to record contract data, we recommend that changes to the values shown in Figure D be made using the Program Log so as to maintain its accuracy.

- The values recorded on the Program Log are shown on the Headers dialog when you prepare to generate a C/SSR or CPR. The table shown in Figure D lists the values in each report that are derived from the Program Log.

Headers Values Derived from Program Log				
Values	**C/SSR**	**CPR 1**	**CPR 2**	**CPR 3**
Original Target Cost	✓			✓
Negotiated Cost		✓	✓	
Negotiated Contract Change	✓			✓
Current Target Cost	✓			✓
Authorized Upriced Work	✓	✓	✓	✓
Contract Budget Base	✓	✓	✓	✓
Target Profit Amount		✓	✓	
Estimated Price		✓	✓	
Target price		✓	✓	
Management Reserve (BCWS)	✓	✓		✓
Management Reserve (LRE)	✓	✓		
Undistributed Budget (BCWS)	✓	✓		
Undistributed Budger (LRE)	✓	✓		

Figure D. *Values that appear in these fields on reports are derived from the Program Log and/or the Headers conditioning window.*
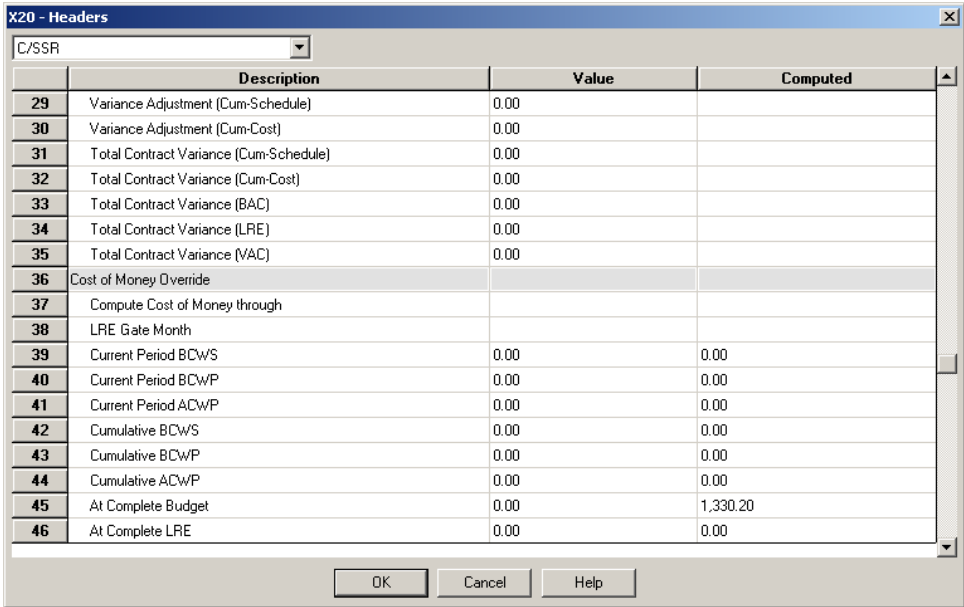
For a complete listing of fields necessary for each report, refer to the *MPM Standard Reports* manual.

15.4 Creating Government-Required Reports

15.4.2 Cost of Money Override

You can use the Cost of Money (COM) processor to override computed COM values for CPRs and C/SSR. Recall that MPM computes COM values during estimating based on COM burden rates in the Burdens window.

The computed values can be overridden using the Cost of Money Override section of the Headers report conditioning window shown in Figure A.

	Description	Value	Computed
29	Variance Adjustment (Cum-Schedule)	0.00	
30	Variance Adjustment (Cum-Cost)	0.00	
31	Total Contract Variance (Cum-Schedule)	0.00	
32	Total Contract Variance (Cum-Cost)	0.00	
33	Total Contract Variance (BAC)	0.00	
34	Total Contract Variance (LRE)	0.00	
35	Total Contract Variance (VAC)	0.00	
36	Cost of Money Override		
37	Compute Cost of Money through		
38	LRE Gate Month		
39	Current Period BCWS	0.00	0.00
40	Current Period BCWP	0.00	0.00
41	Current Period ACWP	0.00	0.00
42	Cumulative BCWS	0.00	0.00
43	Cumulative BCWP	0.00	0.00
44	Cumulative ACWP	0.00	0.00
45	At Complete Budget	0.00	1,330.20
46	At Complete LRE	0.00	0.00

Figure A. *You can override computed COM values for CPRs and C/SSR.*

Value Column

You can enter override values in any or all of the fields in the Value column. The override values affect only the CPRs and C/SSR. The COM previously established and stored in the project will not be affected. In order to zero out COM on C/SSR and CPR reports, you must enter '.1' in the Value Column.

Computed Values

The values in the Computed column are computed by MPM using the COM data stored in the project. You cannot edit these values.

Compute Cost of Money Through

In the Compute Cost of Money Through field, enter the month and year in MMMYY format for which the CPR is to be produced. You must enter this value each time you run the report. The Value and Computed columns will be filled in with the computed values based on the date you enter.

LRE Gate Month

Enter the month and year in MMMYY format. The data is used to calculate Cost of Money LRE values. If you enter a date in this field, Cost of Money LRE = CUM ACWP through Gate Month + ETC. You must enter these values each time you run a report. The Value and Computed columns will be filled in with the computed values based on the date you enter.

BCWP and ACWP Values

The BCWP values for COM are proportional to the total project BCWP. The ACWP values are derived from the Actuals function. You can accept the calculated COM values or enter override values for inclusion on the final customer report.

At Complete Budget

If you enter a value in the At Complete Budget field, the CPR Format 3 report values will be at the Total Cost Level and a separate line item will be added to the Totals Section called Cost of Money. This is because the input value on the COM Override is not timephased.

If the field is left blank, the reporting level for the CPR is at Total Dollar and no separate line appears at the bottom for COM.

15.5 Viewing and Editing Reports

The Report Viewer in MPM allows you to view, change, redirect, export and summarize your MPM reports.

Accessing Report Viewer From the Individual Report

To launch the Report Viewer with your report's data in it, follow these steps:

1. All reports have a condition under Other Options called Output Options, and its default is Viewer. See Figure A.
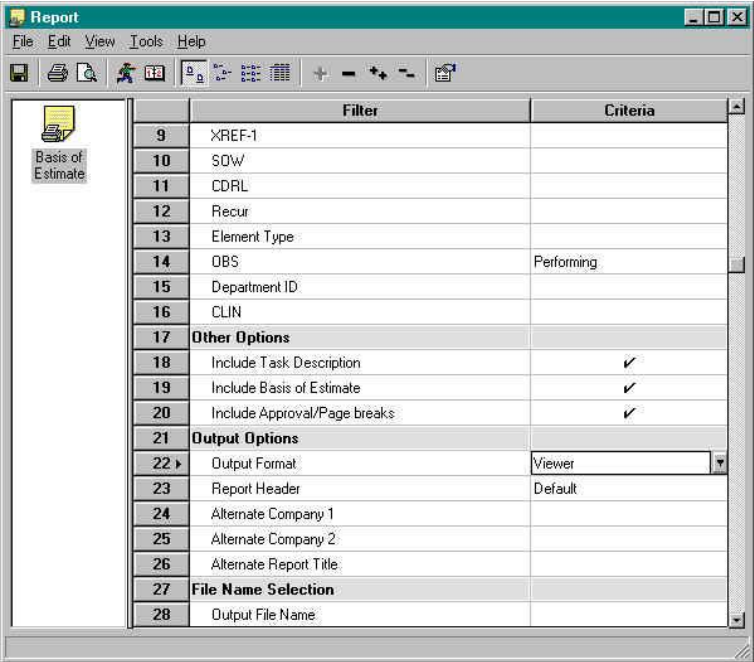
Figure A. *Select the Report Viewer output option.*

2. Run your report. MPM launches the Report Viewer.

In Figure B, you can see the Report Viewer displaying the Resource BOE report.

Figure B. *The Report Viewer editing the Resource BOE Report output.*

15.5 Viewing and Editing Reports

15.5.1 Orientation to the Report Viewer Window

You use the Report Viewer window to edit and view the data in your report. To access this window, select Viewer in the Output Options on the report conditioning window.
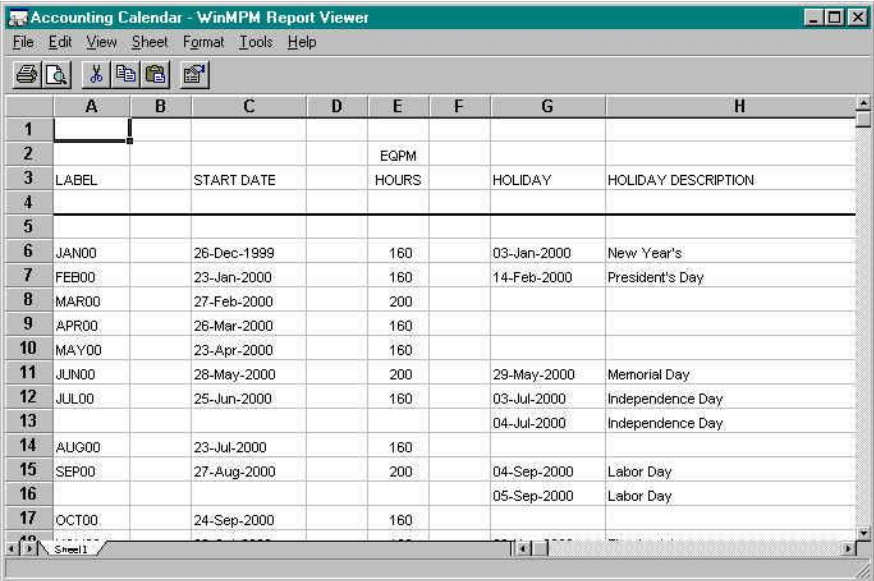
Figure A. The Report Viewer Window.

Report Viewer Window Grid

This window works much like a spreadsheet. The rows and columns contain the generated report data and headings. You can use the Toolbar and status bar toggles on the View menu to show or hide either bar. See Figure A. Your report is displayed in the Report Viewer grid. Each field in the report is displayed as a column numbered A-Z, and each row represents a record of data numbered numerically. The column (field) headings are shown above a black bar. If your report contains totals, they are shown in a row at the bottom under another black bar. To see more data, use the horizontal or vertical scroll bars.

This window allows you to edit, reformat, add calculations, reorganize, or selectively display or save your report data. You can also export the report data using a number of different formats.

Saving/Exporting the Report Data

To save the report data to a file:

1. Edit the data in the Viewer as desired.

2. Select File | Save As.

MPM displays the standard Windows Save dialog.

3. Enter a file name.

4. Select the type of Save/Export using the Save As Type list box.

- **UN/CEFACT (*.XML)** for a UN/CEFACT standard XML file (CPR1 through CPR4 only).

- **Comma-Separated Values (*.CSV)** for a text file with values separated by commas.

- **Excel 95 (*.XLS)** for an Excel spreadsheet in Excel 95 format.

- **Excel 97 – 2000 (*.XLS)** for an Excel spreadsheet in Excel 97-2000 Format

- **Tab-Separated Values (*.TXT)** for a text file with values separated by tabs.

- **HTML (*.HTM)** for an HTML file which you can view in an Internet browser program like Netscape or Internet Explorer.

5. Click Save.

Printing/Previewing From Report Viewer

- To preview the report, choose File | Print Preview.

- To change the print options, choose File | Print Setup.

- To send the report to the printer, choose File | Print.

Changing the Page Format

To change the page format, choose File | Page Setup. Use this dialog box to change headers, footers, scale, grids, margins, page order, and alignment.
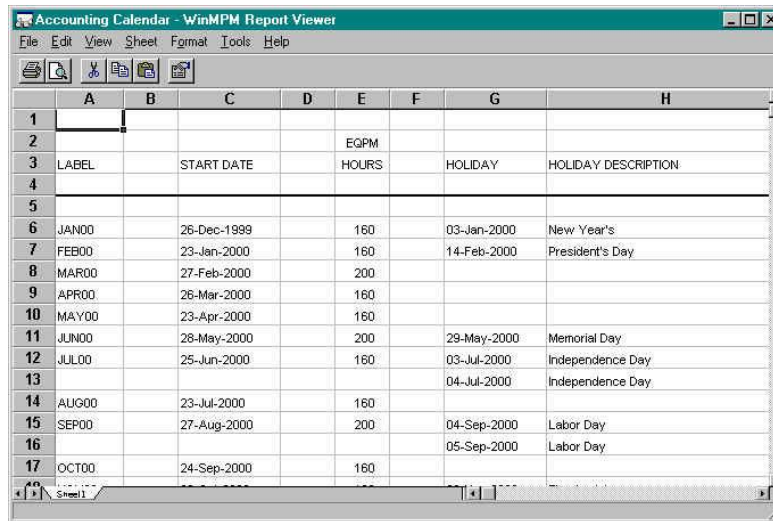
15.5 Viewing and Editing Reports

15.5.2 Editing Report Data

You can use the Report Viewer to edit, reformat, or change anything in the report.

Editing Cell Data

To edit the data inside the cells (either headings or data values), position the cursor over the cell box, click the mouse button, and type the new data.

Figure A. To edit data, click the cell and type the new data.

Inserting Rows

To insert a new <u>row</u> (which pushes the current row down), click the number of the row where you want to insert the row and choose Insert on the Edit menu.

Replicating Report Data

To move data from selected cell(s) to a new location:

1. Highlight the desired cell(s).
2. Choose Cut from the Edit menu.
3. Click the cursor in the new cell location.
4. Choose Paste from the Edit menu.

To copy data from selected cell(s) to another location:

1. Highlight the desired cell(s).
2. Choose Copy from the Edit menu.
3. Click the cursor in the new cell location.
4. Choose Paste from the Edit menu.

To paste the new data into the new cell(s) without copying the formatting:

1. Choose Paste Values from the Edit menu instead.

To copy data from a selected cell to fill a lot of cells in the same column:

1. Highlight the desired cell to be copied and the target cells below it to be filled.
2. Choose Copy Down from the Edit menu, or press Ctrl+D.

To copy data from a selected cell to fill a lot of cells in the same row:

1. Highlight the desired cell to be copied and the target cells to its right to be filled.
2. Choose Copy Right from the Edit menu, or press Ctrl+R.

Deleting Report Data

- To delete a single or multiple cells, highlight the cell(s) and choose Delete from the Edit menu or press Ctrl+K.
- To delete an entire row, highlight the row by clicking on the row number and choose Delete from the Edit menu or press Ctrl+K.
- To clear all the values in a cell or row, highlight the cell(s) or row and choose Clear from the Edit menu or press the Delete key. A dialog box prompts you to select All, Formats, or Values. To clear the format changes you made, select Formats.
- To delete the values in the cells but keep the formatting, select Values.
- To delete both values and formatting, select All.

Finding/Replacing Cell Data

- To find cell data, use the Find dialog box. Access the Find dialog box by choosing the Find option on the Edit menu or pressing Ctrl+F.
- To search down, choose Search By Rows. To search to the right, choose Search by Columns.
- To look in the cell data for the search string, choose Look in Values.
- To look in the formulas the report contains for the string, choose Look in Formulas.
- To replace the text that was found, click the Replace button on the Find dialog, or by choosing the Replace option on the Edit menu or pressing Ctrl+H. You can replace one occurrence at a time, or choose Replace All.

15.5 Viewing and Editing Reports

15.5.3 Formatting Cell Content Output

To change the format of an entire row, highlight the row by clicking the row number. You can change the row height and hide or display the entire row using the options on the Format|Row menu option.

To change the format of an entire column, highlight the column by clicking the column number. You can change the column width and hide or display the entire column using the options on the Format|Column menu option.

Setting the Alignment

To specify the horizontal and vertical alignment of data in the selected cells, choose Alignment on the Format menu. MPM displays the alignment dialog box shown in Figure A.

Changing the Font

To change the font of the selected cell(s), use the Font option on the Format menu.
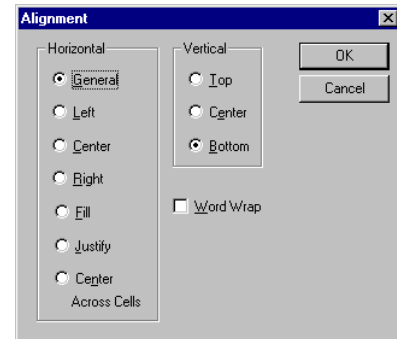
Figure A. *Alignment Dialog Box.*

Note: MPM is designed to use True Type fonts for printing, scaling, scale, etc. If you select non-True Type fonts, these attributes may be adversely affected.

Border

To change the border design or color of the selected cell(s), use the Border option on the Format menu. MPM displays the Border dialog box shown in Figure B.
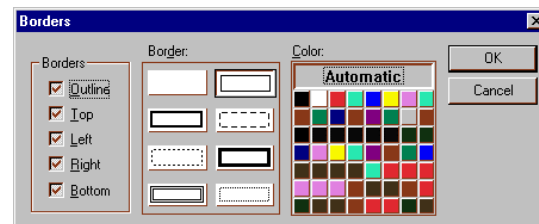
Figure B. *Border Dialog Box.*

Pattern

To change the fill pattern and/or color of the selected cell(s), use the Format|Pattern menu option. MPM displays the Pattern dialog box shown in Figure C.
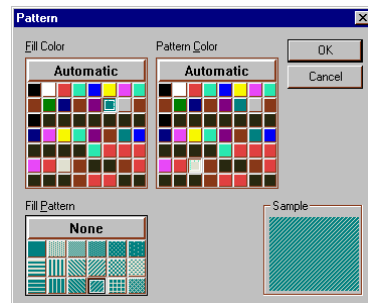
Figure C. *Pattern Dialog Box.*

Custom Numbers

Use the Numbers option on the Format menu to create a custom number format. The following list shows the results of applying different formats to a positive number (3), a negative number (-3), and a decimal number (.3).

Category	Format	3	-3	.3
Currency	$#,##0_);($#,##0)	$3	($3)	$0
	$#,##0_);[RED]($#,##0)	$3	($3)	$0
	$#,##0.00_);($#,##0.00)	$3.00	($3.00)	$0.30
	$#,##0.00_);[RED]$(#,##0.00)	$3.00	($3.00)	$0.30
Fixed	0	3	-3	0
	0.00	3.00	-3.00	0.30
	#,##0	3	-3	0
	#,##0.00	3.00	-3.00	0.30
	#,##0_);(#,##0)	3	(3)	0
	#,##0_);[RED](#,##0)	3	(3)	0
	#,##0.00_);(#,##0.00)	3.00	(3.00)	0.30
	#,##0.00_);[RED](#,##0.00)	3.00	(3.00)	0.30
Percent	0%	300%	-300%	30%
	0.00%	300.00%	-300.00%	30.00%
Fraction	# ?/?	3	-3	2/7
	# ??/??	3	-3	3/10
Scientific	0.00E+00	3.00E+00	-3.00E+00	3.00E-01

15.5 Viewing and Editing Reports

15.5.4 Report Viewer Sheets

Sheets are a great way to split up your data into logical, separate pieces.

Inserting Additional Sheets

To insert a new sheet, choose Insert Sheet on the Sheet menu. MPM displays the Report Viewer window with a new, empty sheet and a new tab labeled Sheet2 as shown in Figure A. You can then add new data or replicate data from Sheet1 using Copy | Paste if desired.
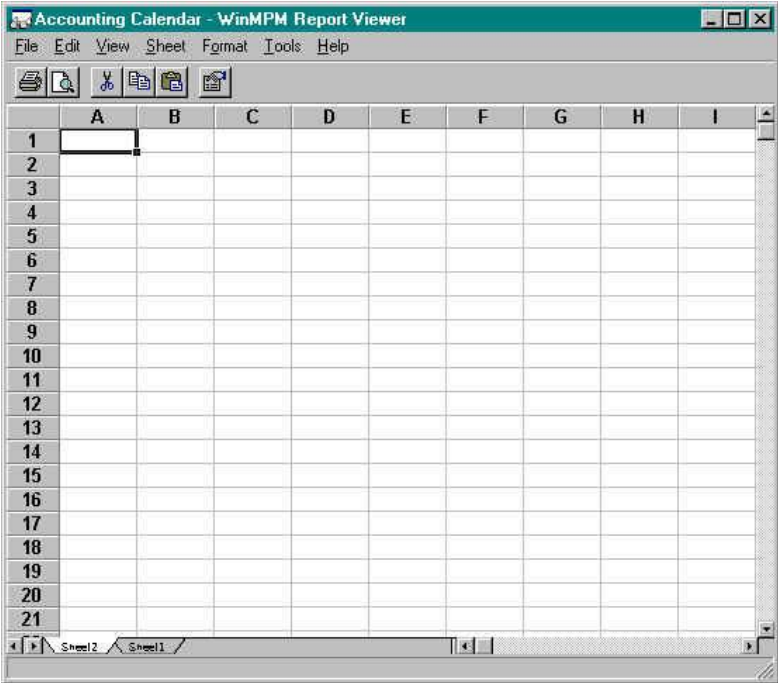
Figure A. *Inserting a New Sheet.*

To rename the sheet, double-click the desired sheet tab. In Figure A, the Sheet2 tab was double-clicked. MPM displays the Sheet Name dialog box as shown in Figure B.
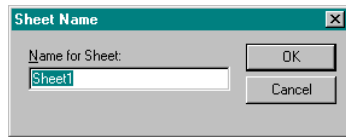
Figure B. *Renaming the sheet*

Deleting Sheets

To delete a sheet, click the sheet's tab and choose Delete Sheet on the Sheet menu.

Note: You will not be prompted for confirmation of the delete, and you cannot undo the deletion, so be sure you are deleting the correct sheet before selecting this option!

You cannot delete the last sheet in the Report Viewer; an error message will result.

15.5 Viewing and Editing Reports

15.5.5 Setting the Report Viewer Output

Selecting the Print Area

You can select only a portion of the current data to be printed, by setting the Print Area. This can be very useful if you only need to print part of one column, or just the totals, etc. To do this, highlight the cell(s) you want to print, and choose Set Print Area on the Sheet menu, and then Print from the File menu. MPM uses the titles, header, footer, and other settings to print a report which only contains the data in the selected print area.

Changing the Header or Footer

To change the header or footer, choose the Page Setup option on the File menu. MPM displays the Page Setup dialog box shown in Figure A. Use the Header text box to enter your page header. Use the Footer text box to enter your page footer.

To insert variables such as Page Number or Today's Date, use these Format Codes. Codes and text are, by default, centered unless &L or &R is specified.
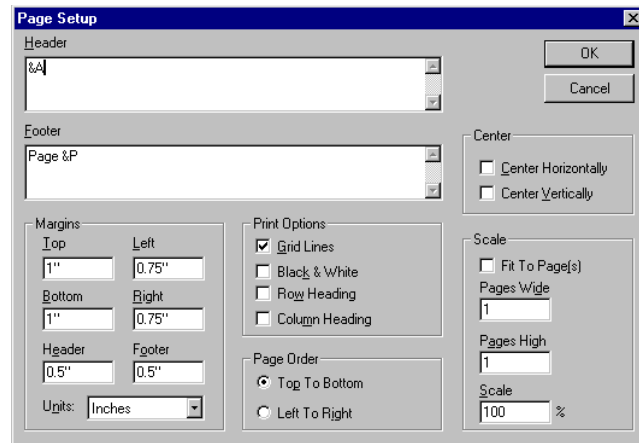
Figure A. *The Page Setup Dialog Box.*

Code	Description
&L	Left-aligns the characters that follow.
&C	Centers the characters that follow.
&R	Right-aligns the characters that follow.
&D	Prints the current date.
&T	Prints the current time.
&F	Prints the workbook name.
&A	Prints the worksheet name.
&P	Prints the page number.
&P+#	Prints the page number plus a number you enter (for example,, &P+1.)
&P-#	Prints the page number minus a number you enter (for example, &P-1.)
&&	Prints an ampersand.
&N	Prints the total number of pages in the document.

The following font codes must appear before other codes and text or they are ignored. The alignment codes (for example, &L, &C, and &R) restart each section; new font codes can be specified after an alignment code.

&B   Makes text bold.
&I   Makes text italicized.
&U   Underlines the header.
&S   Strikeout the header.
&*fontname*   Use the specified font.
&nn   Use the specified font size - must be a two digit number.

Changing the Margins, Page Range, Scale, and Column Headers

To change any of these options, access the Page Setup dialog box as described above.

Setting and Removing Page Breaks

To set a page break, click the cell or row and choose Set Page Break on the Sheet menu. To remove a page break, click the cell and choose Sheet | Remove Page Break.

Fixing and Releasing Rows/Columns

To fix a row at the top of the screen that you will continue to see when scrolling down, click the row number(s) and choose Fix Rows on the Sheet menu.

To fix a column at the left edge of the screen that you will continue to see when scrolling to the right, click the column number(s) and choose Fix Columns on the Sheet menu.

To release the fixed row/column(s), select it and choose Sheet | Unfix Rows/Columns.

Inserting a Formula

To insert a formula, click the desired cell and begin the entry with an equal sign (=). You can perform the following types of calculations:
+ (addition)   - (subtraction)   / (division)   * (multiplication)

Use % to indicate percentage, ^ (exponentiation), & (concatenation).

To perform comparisons, use = (equal to), > (greater than), < (less than), >= (greater than or equal to), <= (less then or equal to), <> (not equal to).

To identify the cells in a formula, refer to the row and column headings of the cell. A1 refers to the cell in row 1, column A. To reference a range of cells, use a colon (:). For example, A1:C3 refers to all cells in columns A, B, and C of rows 1, 2, and 3.

You can also enter functions into a formula, such as SUM, AVERAGE, COUNT. For example, to sum the first 10 cells of column A, enter the formula =SUM(A1:A10).

15.6 Batch Report Processing

Many MPM users run the same set of reports every month as part of their monthly status processing. To set up a batch report process that runs several reports, create a Batch Report file.

Creating a Batch Report File

There are two ways to create a Batch Report File:

- On the Menu Manager with the Reports tab selected, double-click the icon for the first report to be performed. Inside the Report Conditioning window, click in the left window pane and choose Add Report on the Edit menu. MPM displays a list of all available reports. Double-click the next report to be added.
- On the Menu Manager with the Reports tab selected, use the Shift and Ctrl keys to select more than one type of report. Double-click on the last icon selected.

Figure A shows a Batch Report file with the four CPR reports.
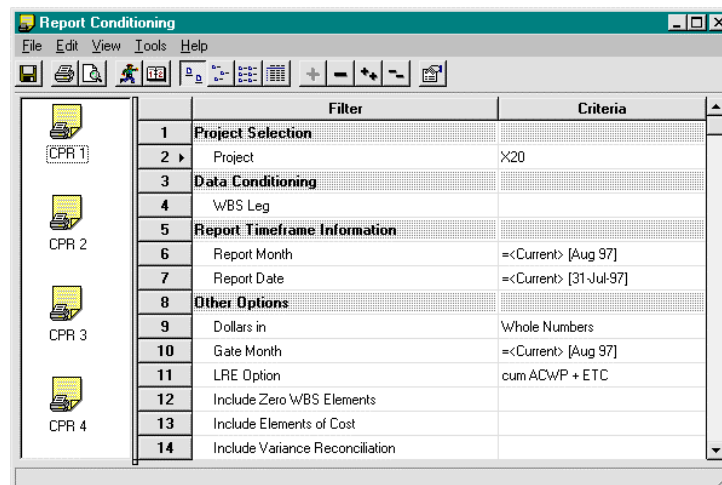
Figure A. *Creating a Batch Report File to process four CPR reports.*

The icons in the left window pane show you the report(s) you have added to this Batch Report File. When you click on an icon in the left pane, the right pane shows the Report Conditioning for that report.

In Figure A, CPR1 is selected and the CPR1 Report Conditioning is displayed. If you click the CPR2 icon, the CPR2 Report Conditioning would be displayed in the right pane. Enter the desired report conditions.

To accept the selections and run the selected reports, do one of the following:

- Click the Run button ![run icon]
- Choose Run Report on the Tools menu, or press Ctrl+R

To save the Report Conditioning data, do one of the following:

- Click the Save button ![save icon]
- Choose Save from the File menu, or press Ctrl+S

MPM prompts for the location and file name to be saved. The default location will be a directory called REPORTS located under the WINMPM directory. Saved reports are given the name *report*.MFR. Once you have saved a report, MPM adds a Saved Reports tab to the Menu Manager, where all saved reports can be accessed later.

Adding Additional Reports

To add additional reports, in the Report Conditioning window with the left window pane selected, choose Add Report on the Edit menu, or press the Insert key. MPM displays the Add Report dialog.

Accessing Saved Reports

When you save your Batch Report file, MPM adds a tab to the Menu Manager next to Reports called Saved Reports, which shows an icon for every saved Batch Report file you have created. (Issue the Edit|Refresh command to display the Saved tab.) In Figure B,

you can see several saved Batch Reports. To access a saved Batch Report file, double-click its icon.

MPM displays the Report Conditioning window with icons for all the reports in the selected Batch Report file. Change any options as desired and run the report when ready.
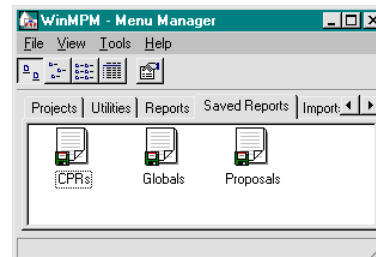
Figure B. *Viewing Batch Report Files*

Deleting Batch Reports

To delete a Batch Report from the Saved Reports tab, do one of the following:

- Right click on the report then select Delete Item.

- Select the report then choose Edit|Delete Item.

- Delete the corresponding *report.MFR* file from the Reports folder in the WINMPM directory.

  In Menu Manager, open the View menu and choose Refresh.

  MPM removes the batch report icon from the Saved Reports tab. If the batch report is the last icon on the tab, MPM also removes the Saved Reports tab.

15.6 Batch Report Processing

15.6.1 Using Formulated Dates

In all Report Conditioning options that require a date, instead of entering an actual date, you can enter a date formula. A date formula is a calculation based on the current date. If you have a standard set of reports that are run every month, using this feature will save you a lot of time, because you can reuse the report conditioning without modifying it for the current period.

The current accounting period is substituted in any report conditioning criteria when you enter =<CURRENT>, based on your system date or the date you enter in Set Current Date on the Tools menu. To substitute other dates, modify the date formula by adding or subtracting d)ays, m)onths, p)eriods, or y)ears.

In conditioning options that require a date (for example, 17-JUL-97), you can use d)ays or y)ears in your formula. For example, if today is July 17th, 1997:

    =<CURRENT> + 3y   would be calculated as July 18th, 2000
    =<CURRENT> + 60d   would be calculated as Sept 15th, 1997

In conditioning options that require a period (for example, JUL-97), you can use m)onths or p)eriods in your formula. For example, if the current period is JUL-97:

    =<CURRENT> + 3p   would be calculated as OCT-97
    =<CURRENT> - 2m   would be calculated as MAY-97

Once you enter a formulated date and move to another field on the Report Conditioning window, the date is calculated based on the current date and displayed in brackets next to the formula in the Criteria box. See Figure A. The Gate Month entered is three fiscal months after the current month.

Using formulated dates is extremely valuable when you save report conditioning for later batch processing, especially when a Batch Report file contains multiple reports. Each time you run the same report(s), the dates will be recalculated based on the current date without you having to re-enter the new dates.

Always be sure that the Current Date is set correctly before running the report, either in the system date or by using Set Current Date, so that your formulated dates are calculated correctly.

You cannot use formulated dates on Headers.
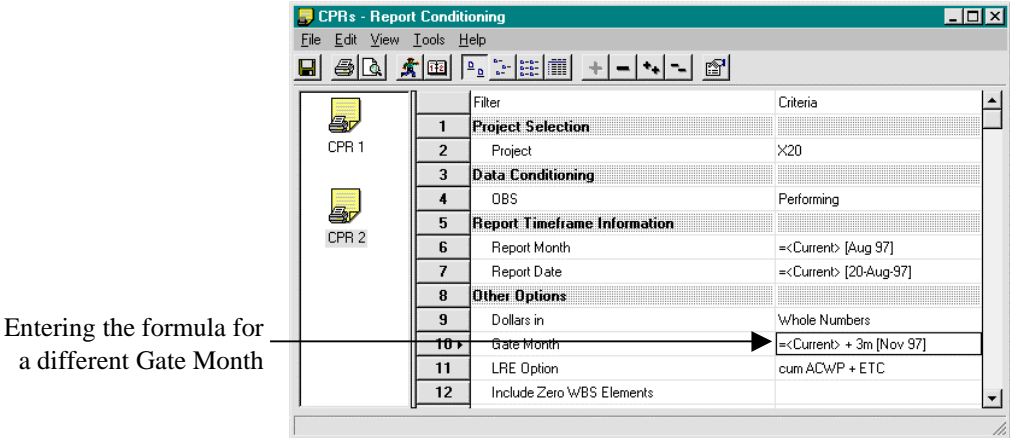
Figure A. *Setting the Gate Month using a Formulated Date which is three months later than the current fiscal month.*

16
Importing Data

16.1 Introduction to Data Imports

Use Data Imports to bring data into the various MPM modules. Many customers import some of their cost or scheduling data from other software systems, such as accounting or personnel systems. There are also customers who export their MPM data, make some change to it, and then import it back into MPM.

Types of Imports

MPM allows import of the following types of data:

- A
  ctuals
- B
  CWP
- D
  istributed Projects
- E
  stimates
- G
  lobal File Data
- F
  iscal and Holiday Calendars
- E
  OC Tables
- B
  urden Codes and Rates
- R
  esource Codes and Rates
- B
  urden Templates
- M
  ilestones
- O
  rganizational Breakdown Structure (OBS)

- Task descriptions

- Basis of Estimate

- Descriptive WBS data

- WBS Schedule data

16.1 Introduction to Data Imports

16.1.1 General Import Steps

To import data into MPM from an outside spreadsheet, accounting system, or other system, follow these general steps:

1. Create the import file in comma-delimited, ASCII format.

    If your system does not provide exports, or if the available file formats differ from the format described in this chapter, you will need to use a file editor, such as Windows Notepad or a spreadsheet package, to edit the file. The import file must be formatted exactly as described, or errors may result causing data corruption! Be sure to read the guidelines in topic *16.4 Creating Import Files*.

2. Backup your MPM data before running the import!

3. Access the correct Import Conditioning window as described in topic *16.2 Accessing the Import Conditioning Windows*.

4. Fill in the import conditions for that particular import, as described in topics *16.6 through 16.14*.

5. Run the import as described in topic *16.3 Orientation to the Import Conditioning Windows*.

16.2 Accessing the Import Conditioning Windows

You open the Import Conditioning windows by clicking the Imports tab on the MPM Menu Manager. When you access the Imports tab, all imports to which you have been granted access are listed. Double-click the desired import icon.
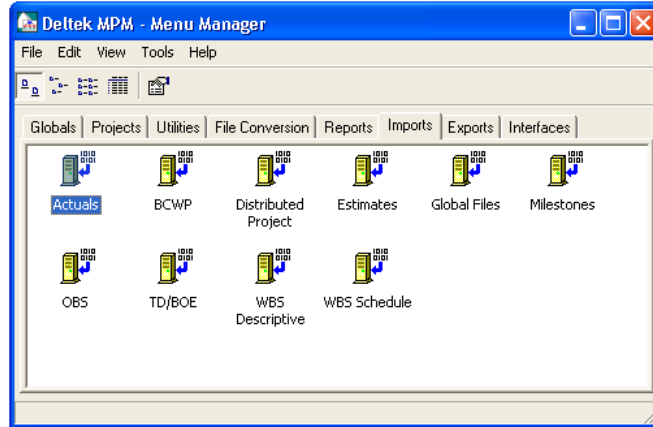
Figure A. *Select the icon on the Imports tab of the **MPM** Menu Manager.*

Procedure

To open the desired Import window:

1. From the Menu Manager window shown in Figure A, do one of the following:

   ■ Select the Imports tab and choose the icon for the desired type of import.

   ■ Choose Imports from the File menu and select from the list of imports available.

Each import has a window which contains the conditioning options that modify the import. MPM displays the Import Conditioning window for the selected type of import. Figure B below shows the Actuals Import Conditioning window.
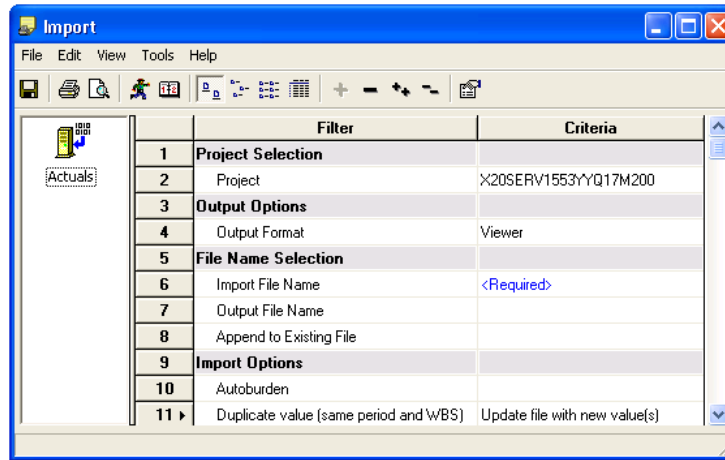
Figure B. *Select a project and other options.*

To run more than one import at once, see topic *16.5 Batch Import Processing.*

16.3 Orientation to the Import Conditioning Windows

You use the Import Conditioning windows to setup an import of data into MPM. A toolbar gives you quick access to common tasks. The Import Conditions grid displays the information about the import.
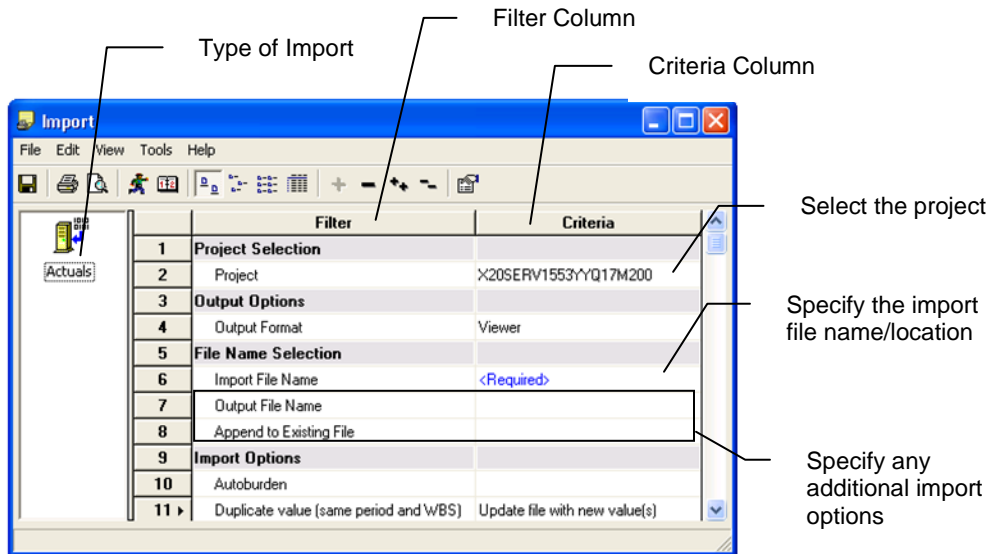
Figure A. *Selecting the Import Conditions.*

Import Conditions Grid

In every Import Conditioning window, the left pane of the window displays the icon(s) for the selected type of import, and the right pane displays the conditioning information about the import. The right pane is divided into two columns. The Filter column shows the import condition field to be specified. The Criteria column contains the list boxes, check mark boxes, or text entry boxes in which you enter the criteria for the condition. The rows are grouped into categories; category headings are shown in gray for reference.

In every import conditioning window, you must specify the name of the project and the name and location of the import file. You enter this criteria in the white boxes under the gray categories Project Selection and Filename Selection. Some Import Conditioning windows only contain these two conditions. Other Import Conditioning windows, such as Actuals shown in Figure A, contain additional conditions which are specific to that type of import and may be required. These conditions are shown under an additional category named Import Options.

Running the Import

To set up and run the import:

1. From the Menu Manager window, select the Imports tab and double-click the icon for the desired import. MPM displays the Import Conditioning window for the selected type of import.

2. The Criteria box for the project contains a list box of available projects. To view this list, click in the Criteria column on row 2. Choose a project from the list box.

3. Specify the import file name and location.
   When you click in the Criteria box for the import file, a **...** button is added to the box. Use this button to bring up a browse window for finding the correct file.

4. Select other options (if applicable).

5. If desired, you can change the current date by clicking the Set Date 🔢 button, or by selecting Set Current Date on the Tools menu.

6. To accept the selections and run the import, do one of the following:

   ▪ Click the Run button 🏃.
   ▪ Choose Run Import on the Tools menu, or press Ctrl+R.

Previewing and Printing Import Conditioning

You can preview and print the import conditioning data using the options on the File menu. For complete details on using these options, see *Using MPM* of the *Getting Started* manual. Print and Preview only show the conditioning which you have entered on the grid. They do not display the results of running the import.

Saving the Import Conditioning

To save the Import Conditioning data, do one of the following:

Click the Save button 💾.

Choose Save from the File menu, or press Ctrl+S.

MPM prompts for the location and file name to be saved. See topic *16.5 Batch Import Processing* for details on using saved conditioning.

Processing Report

When the import is processed, a report is produced which lists items that were updated or added to the project along with errors encountered (if any) during the import. You can select from the following options when generating the processing report:

Output Options: The report can be viewed (default), printed, or saved as a .CSV file.

Output File Name: If you select CSV as your output option, you must enter a name for your file with the three-character extension of .CSV.

Append to Existing File: This option allows you to append multiple processing reports to one file. This option is used for batch imports or to keep a running log of import processing.

16.3 Orientation to the Import Conditioning Windows

16.3.1 Import Data Conditioning

There are import conditioning options that are specific to particular imports. When specifying your selections on these options, choose the values from the drop-down list available for the option. See the topic later in this chapter that describes the particular import in more detail.

Conditioning Global Data Imports

When importing Global data, one or more of the following data conditioning options will be available:

Global ID (required) - On all Global imports, specify the Global File from which the data is to be imported, from a drop-down list of Global File IDs.

Report Timeframe Information (optional) - Dates can be entered in the usual formats, or as Formulated Dates. See topic *16.5.1 Using Formulated Dates* for instructions on using Formulated Dates.

There are import conditioning options that are specific to these imports. When specifying your choice for these options, select from drop-down lists of all possible values. See the topic later in this chapter that describes the desired import for more detail.

Conditioning Project Data Imports

1. When importing Project data, one or more of the following data conditioning options will be available:

Project Selection (required) - For all imports, specify the Project from which the data is to be imported, choose from a drop-down list of Project IDs.

Report Timeframe Information (optional) - Dates can be entered in the usual formats, or as Formulated Dates. See topic *16.5.1 Using Formulated Dates* for instructions on using Formulated Dates.
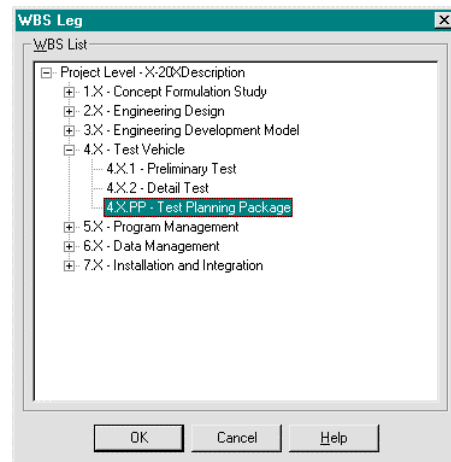
Figure A. *WBS Leg Dialog Box*

WBS Leg (optional) - To import a particular WBS Leg, enter the WBS ID, or click the ... button which is added to the WBS Leg criteria box when clicked.

MPM displays the WBS Leg dialog box shown in Figure A.

Highlight the desired leg, expanding levels if necessary.

The WBS ID selected is inserted in the Criteria box.

WBS Level (optional) - Enter a value from 1 through 99 to import WBS elements at the level entered. If a WBS leg is entered, the WBS level will validate the lowest level of that leg.

WBS Manager (optional) - To import only WBS elements assigned to a specific Manager, enter or select the Manager's name from the drop-down list box.

XREF, Alias, Element Type (optional) - To select data to be imported using any of these fields, click in the Criteria box and select from the drop-down list containing all possible values.

Recurring/Non-recurring (optional) - To select Recurring or Non-recurring WBS elements, select either option on the drop-down list in the Criteria box.

OBS (optional) - To select the WBS elements assigned to either the Performing or Responsible OBS departments, select either option on the list in the Criteria box.

Department (optional) - To select data assigned to a particular OBS Department, enter the Department.

CLIN (optional) - To select data assigned to a particular Contract Line Item (CLIN) Table, click in the Criteria box and select from the list containing all possible CLINs.

16.4 Creating Import Files

When creating import files, follow these important guidelines:

Files must be created in ASCII format.

Each file is made up of a number of records (or rows), separated by a carriage return. If you are creating your import files in a word processor, be sure to save the file as a .TXT (text) file, not .DOC (document). Most spreadsheet packages offer an option to save the file in both a CSV and comma delimited format which is an acceptable file format for importing.

Each record must start on a new row/line.

Each record must have commas as column separators; all fields in the record (even blank fields) must be separated from the next field by a comma.

Avoid using commas in all text fields (for example, do not include commas in the Resource Code Description). If a text string field contains one or more commas, surround the field with quotation marks. For example, "21-100,A" or "21,100".

Do not use commas in writing numerical values (i.e., write **10000** <u>not</u> **10,000**), or dollar signs in dollar amounts (i.e., write **10000** <u>not</u> **$10000**).

Use decimal points when writing dollar amounts (i.e., <u>DO</u> write **10000.00**).

Use the minus symbol (-) preceding dollar amounts to indicate negative values. To indicate positive values, enter the numbers without a symbol or precede the dollar amounts with the plus symbol (+).

Numeric fields equal to zero can be designated by a zero or a blank. For example, you may enter either the delimiting comma for the previous field, a zero and the delimiting comma for the next field (,0,) or enter two commas together (**,,**). (This does not apply to date fields.)

Valid date formats:

M/D/YY	DD/MMM/YY	MM-DD-YY
M/DD/YY	DD/MMM/YYYY	D-MMM-YYYY
M/D/YYYY	M-D-YY	DD-MMM-YY
M/DD/YYYY	M-DD-YY	DD-MMM-YYYY
MM/D/YY	M-D-YYYY	DMMMYY
MM/DD/YY	M-DD-YYYY	DMMMYYYY

MM/D/YYYY	MM-D-YY	DDMMMYY
MM/DD/YYYY	MM-D-YYYY	DDMMMYYYY
D/MMM/YY	MM-DD-YYYY	YYMMDD*
D/MMM/YYYY	D-MMM-YY	YYYYMMDD

* The YYMMDD date format is not a valid format for the BCWP import.

If no data is to be input in a field, you must still enter a comma as a column separator to indicate the blank field. For example, in the import record **CAL,01FEB94,,172** there is a blank field between **01FEB94** and **172**.

Any special characters that result in binary characters (for example, "em dash" (–)) are not to be used in MPM as they may cause problems in reports.

Fields will be truncated if they exceed the maximum size specified for that field.

Import File Formats Legend

Many of the topics that follow describe the file formats for imports. The formats are presented in tables with the following columns:

Field Position - Each record (row) is broken into a number of fields, separated by commas. The Field Position column describes where each field should be located in the record.

No. of Chars - This column lists the maximum number of characters this field may contain. If the Fee field contains 12 characters, you can enter less than 12 characters, but not more. MPM knows how long the field is because it starts and ends with a comma.

Type - This column shows the type of data you should enter into this field. The field types in the import files are listed with the following abbreviations:

> A Alphanumeric
> N Numeric
> Y/N Yes/No (field would contain Y or N only)

Field Content - This column describes the general content of the field's data, which should correspond to a field on the window for that data type. For example, the Resource Code field in the actuals import file corresponds to the resource code that you would enter into the Actuals window. To find more information about that field, refer to the chapter about the window.

Fields marked with ♦ are mandatory fields. You must provide data in these fields or you will receive an error when you run the import and the record will not be imported.

16.5 Batch Import Processing

Many MPM users perform the same set of imports every month as part of their monthly status processing. To set up a batch import process which performs several imports, create a Batch Import file.

Creating a Batch Import File

There are two ways to create a Batch Import File:

On the Menu Manager with the Imports tab selected, double-click the icon for the first import to be performed. Inside the Import Conditioning window, click in the left window pane and choose Add Import on the Edit menu. MPM displays a list of all available imports. Double-click the next import to be added.

On the Menu Manager with the Imports tab selected, use the Shift and Ctrl keys to select more than one type of import. Double-click on the last icon selected.

In the example in Figure A, we have created a Batch Import file with two imports: WBS Schedule data and WBS Descriptive data.

The icons in the left window pane show you the import(s) you have added to this Batch Import File. When you click on an icon in the left pane, the right pane shows the Import Conditioning for that import. In Figure A, WBS Schedule is selected and the WBS Schedule Import Conditioning is displayed. If you click the WBS Descriptive icon, the WBS Descriptive Import Conditioning would be displayed in the right pane. Enter the desired import conditions.
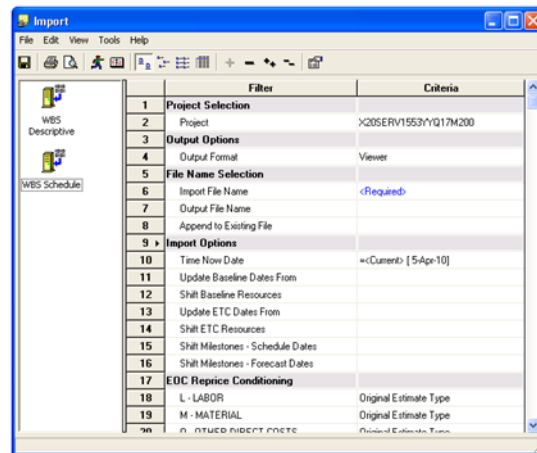
Figure A. *Creating a Batch Import File to process WBS Descriptive and Schedule Data.*

To accept the selections and run the import, do one of the following:

Click the Run button ![run button].

Choose Run Import on the Tools menu, or press Ctrl+R.

The Processing Result Report prints as it does after every import.

To save the Import Conditioning data, do one of the following:

Click the Save button .

Choose Save from the File menu, or press Ctrl+S.

MPM prompts for the location and file name to be saved. The default location will be a directory called IMPORTS located under the DELTEKMPM directory. Saved imports are given the name *import*.MFI. Once you have saved an import, MPM adds a Saved Imports tab to the Menu Manager, where all saved imports can be accessed later.

Accessing Saved Conditioning

When you save your Batch Import file conditioning, MPM adds a tab to the Menu Manager next to Imports called Saved Conditioning, which shows an icon for every

saved Batch Import file you have created. In Figure B, you can see several saved Batch Imports. To access any of the saved Batch Import files, double-click the icon.

MPM displays the Import Conditioning window with icons for all Batch Import Files. Change any conditioning as desired, and run the import when ready.
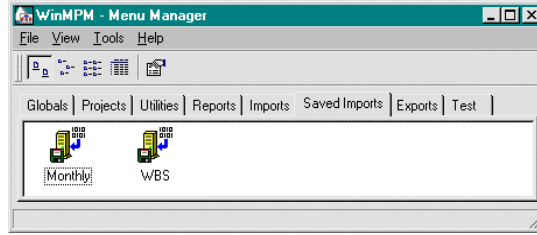
Figure B. *Viewing Batch Import Files on the Menu Manager*

Deleting a Batch Import

To delete a batch import from the Saved Imports tab, do one of the following:

- Right click on the import then select Delete Item.

- Select the import then choose Edit|Delete Item.

- Delete the corresponding .MFI file from the Imports subdirectory in the DELTEKMPM directory. In Menu Manager, open the View menu and choose Refresh.

MPM removes the batch import icon from the Saved Imports tab. If the batch import is the last import icon on the tab, MPM also removes the Saved Imports tab.

16.5 Batch Import Processing

16.5.1 Using Formulated Dates

In all Import Conditioning options that require a date, instead of entering an actual date, you can enter a date formula. A date formula is a calculation based on the current date. If you have a standard set of imports that are run every month, using the date formula allows you to reuse the import conditioning without having to modify it for the current period.

The current accounting period is substituted in any import conditioning criteria when you enter =<CURRENT>, based on your system date or the date you enter in Set Current Date on the Tools menu. To substitute other dates, modify the date formula by adding or subtracting d)ays, w)eeks, p)eriod, or y)ears.

When filling conditioning options that require a date (for example, 17-JUL-97), you can use d)ays or y)ears in your formula. For example, if today is July 17th, 1997:

> =**<CURRENT> + 3y**   would be calculated as July 18th, 2000
> =**<CURRENT> + 60d**   would be calculated as Sept 15th, 1997

When filling conditioning options that require a period (for example, JUL-97), you can use m)onths or p)eriods in your formula. For example, if the current period is JUL-97:

> =**<CURRENT> + 3p**   would be calculated as OCT-97
> =**<CURRENT> - 2m**   would be calculated as MAY-97

Once you enter a formulated date and move to another field on the Import Conditioning window, the date is calculated and displayed in brackets based on the current date. See Figure A. The Gate Month entered is three fiscal periods after the current period.

Using formulated dates is extremely valuable when you save import conditioning for later batch processing, especially when a Batch Import file contains multiple reports. Each time you run the same report(s), the dates will be recalculated based on the current date without you having to re-enter the new dates.

Always be sure that the Current Date is set correctly before running the report to ensure that your formulated dates are calculated correctly. The date can be set by updating the system date or by using Set Current Date on the Tools menu.

Entering the formula for a different Gate Month
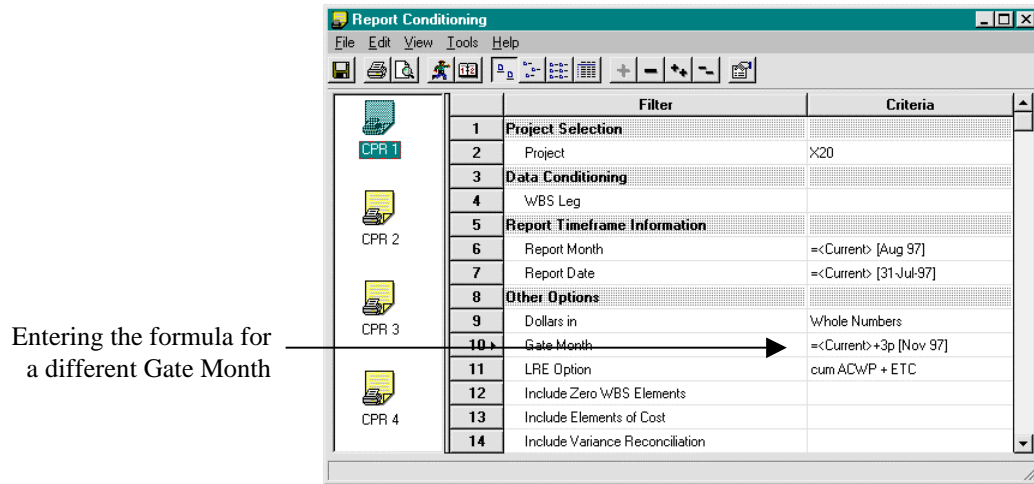
Figure A. *Setting the Gate Month using a Formulated Date based on the current period.*

16.5 Batch Import Processing

16.5.2 Batch Import Conversion Utility

The Batch Import Conversion Utility (BICU) provides another way to create saved imports in MPM. Saved exports and saved imports used with distributed projects can also be created using this utility. You can create Comma Separated Value (.CSV) files outside of MPM and then use BICU to convert them into saved import (.MFI) and saved export (.MFE) files used in MPM.

Parameters

The BICU accepts these parameters:

Input file name

Output file name

/D Distributed project file

/O Processing report file name

Input File Name Parameter

This parameter is the batch file that will be converted into the .MFI or .MFE file. See the section on Batch Import Conversion Utility (BICU) File Formats for more information. The input file must be in Comma Separated Value (CSV) format. The file name must have an extension. If no extension is given, the system defaults to CSV. You can specify the drive and path for the file.

For example:

BICU C:\BATCH\STANDARD.CSV

Output File Name Parameter

This parameter is the batch import file (and batch export file when using the Distributed parameter) that will be created in MPM. The output file name must be a valid DOS name with a maximum of eight characters. It is not necessary to include an extension because the BICU will automatically add the extension .MFI.

You can specify the drive and path for the file, if you wish. If you do not specify a drive and path, the BICU automatically places the file in the Imports subdirectory under the MPM executable directory. If the Imports subdirectory does not exist, the utility creates it. If you place the file in a directory other than Imports, the file does not appear on the Saved Imports tab in Menu Manager.

When converting a Distributed file, a batch export file with an extension of .MFE is created in the Exports subdirectory. The same rules that apply for the batch import file apply to the batch export file.

> BICU C:\BATCH\STANDARD.CSV STANDARD

If the input file contains fewer options than required by the .MFI file, the BICU adds the MPM default values for the options.

If a file already exists in the target directory with the same name as the output file, the existing file will be overwritten.

For Admin/Workstation Installations, the .MFI and .MFE files need to be copied to the Imports and Exports folders under the Working directory on every user's hard drive.

/D Distributed Project File Parameter

If you are using a distributed project batch file, you must add the /D parameter at the end of the command line. For example:

> BICU C:\BATCH\DISTRIB.CSV DISTRIB /D

This creates a batch import and batch export file that can be used in MPM for Windows.

/O Processing Report File Name Parameter

Use this optional parameter in order to specify an output file name for the Import Processing report. The file name must be a valid DOS name with a maximum of eight characters. The file name must have an extension. If no extension is given, the system defaults to CSV. The file will be placed in the MPM System folder.

> BICU C:\BATCH\STANDARD.CSV STANDARD /O REPORT

> BICU C\BATCH\DISTRIB.CSV DISTRIB /D /O REPORT

The Append to Existing File option is automatically selected in the Import Conditioning window. Therefore, you can report multiple imports on the same processing report without entering a new file name. If you want a separate processing report on each import, clear the Append check box and enter a new file name for each import.

If this parameter is not used, then the Import Processing report is output to the Report Viewer.

Running the Batch Import Conversion Utility

To run the BICU:

1. Run the BICU.EXE executable file from the command prompt, specifying the input and output file names.

As the Utility begins executing, it displays a message confirming the type of input file being converted.

> **BICU: This batch import conversion is for distributed project(s).**
> or
> **BICU: This batch import conversion is for standard import(s).**

As the Utility converts the records in a Distributed Project batch file to a batch import file, it displays the following confirmation message for each record.

> **BICU: Converted Source Project: <source project>; Transfer File Name: <transfer file name>**

As the Utility converts the records in a Distributed Project batch file to a batch export file, it displays the following confirmation message for each record.

> **BICU: Converted Project (export): <source project>; Transfer File Name: <transfer file name>**

As the Utility converts the records in a Standard batch import file, it displays the following confirmation message for each record.

> **BICU: Converted Project: <project>; Import ID: <import type>; File Name: <import file name>.**

If an error occurs during the conversion process, the BICU displays an error message, aborts the conversion, and deletes the .MFI file it created. See the Troubleshooting subheading below for a description of the most common error messages.

2. Check the target directory to confirm that the file was created.

Troubleshooting

If an error occurs during the conversion process, the utility displays an error message. The most common error messages are described below.

BICU: Usage: bicu <InputFile> <OutputFile> [/D] [/O <Filename>]

Indicates the number of arguments on the command line is less than three or greater than four.

BICU: This batch import conversion is for standard import(s).

BICU: Conversion process failed. Please check <InputFile> for errors.

The input file is a distributed project batch file, but the /D parameter was not specified on the command line. Add the /D parameter and run the utility again.

- **BICU: This batch import conversion is for distributed project(s).**

- **BICU: Conversion process failed. Please check <InputFile> for errors.**

    The input file is a standard batch import file, but the /D parameter was specified on the command line. Remove the /D parameter and run the utility again.

- **BICU: Failed to create IMPORTS directory.**

    The BICU was not able to create the IMPORTS subdirectory.

- **BICU: Failed to open file. <InputFile>.**

    The Utility could not open the file. Check the format of the file and try running the utility again.

- **BICU: File size is zero. <InputFile>.**

    Indicates the input file is empty. Check the file contents and run the utility again.

- **BICU:Conversion process failed. Please check <InputFile>, for errors.**

    The conversion process failed. Check the input file for errors and run the utility again

Batch Import Conversion Utility (BICU) File Formats

The following tables contain file formats used in the Batch Import Conversion Utility (BICU).

Use the following tables to create Comma Separated Value (.CSV) file equivalents of batch import and distributed batch import/export files. BICU can then be used to convert them into saved import (.MFI) and saved export (.MFE) files used with MPM.

In the Type column, A = alphanumeric and Y/N = Yes/No (field would contain Y or N only).

Actuals Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	7	A	Import ID for Autoburden option. Valid entries are: **ACTUALS** = Autoburden disabled **ACTUALS-A** = Autoburden enabled
3	30	A	Import File Name
4	1	A	If duplicate actuals are encountered, define handling. Valid entries are: A = Update file with new values B = Accumulate old values and new values C = Ignore the new values

Each record must contain three commas as column separators, one after each field except the last field.
Example: *projname,*ACTUALS,*filename,*A
Example: *projname,*ACTUALS-A,*filename,*A

Basis of Estimate Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	3	A	Import ID (**BOE**)
3	30	A	Import File Name

Each record must contain two commas as column separators, one after each field except the last field.

Example: *projname,BOE,filename*

BCWP Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	4	A	Import ID (BCWP)
3	30	A	Import File Name

Each record must contain two commas as column separators, one after each field except the last field.
Example: *projname,BCWP,filename*

Estimates Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	11	A	Import ID to specify monthly or autospread values. Valid entries are: **ESTIMATES-M** = Monthly Values **ESTIMATES-A** = Autospread
3	30	A	Import File Name
4	1	A	Import Estimate Data for Baseline, ETC, or Both Baseline and ETC. Valid entries are: A = Baseline Estimates B = ETC Estimates C = Both

Each record must contain three commas as column separators, one after each field except the last field.
Example: *projname,ESTIMATES-M,filename,A*
Example: *projname,ESTIMATES-A,filename,A*

Milestone Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	10	A	Import ID (**MILESTONE**)
3	30	A	Import File Name
4	1	A	Identify Milestones by ID, Description, or by Symbol, Description and Schedule Date. Valid Entries are: I = Milestone ID D = Milestone Description S = Symbol + Description + Schedule Date
5	1	Y/N	Update BCWP Status = Y or N
6	9	A	Fiscal Status As Of Date (DD-MMM-YY)

Each record must contain five commas as column separators, one after each field except the last field.
Example: *projname,MILESTONES,filename,S,Y,01-JUN-02*

OBS Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	3	A	Import ID (**OBS**)
3	30	A	Import File Name
4	1	A	Organization Type P = Performing R = Responsible

Each record must contain three commas as column separators, one after each field except the last field.
Example: *projname,OBS,filename,P*

Task Description Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	2	A	Import ID (**TD**)
3	30	A	Import File Name

Each record must contain two commas as column separators, one after each field except the last field.
Example: *projname,TD,filename*

WBS Descriptive Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	8	A	Import ID (**WBS-DESC**)
3	30	A	Import File Name

Each record must contain two commas as column separators, one after each field except the last field.
Example: *projname*,WBS-DESC,*filename*

WBS Schedule Batch Import File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Project Name
2	9	A	Import ID (**WBS-SCHED**)
3	30	A	Import File Name
4	9	A	TIME Now Date (DD-MMM-YY)
5	1	Y/N	Update Baseline Dates from early or Late = Y or N
6	1	Y/N	Shift Resources = Y or N
7	1	A	Update Baseline Dates from Early or Late = E or L
8	1	Y/N	Shift Resources = Y or N
9	1	Y/N	Shift Milestones Schedule Dates = Y or N
10	1	Y/N	Shift Milestone Forecast Dates = Y or N
*11-23	1	A	Hold constant Value for the number of EOCs you have in your library; include a Hold Constant Value for each EOC to be included in the import. Valid entries are: H = Hours E = Equivalent Men P = Prime Dollars B = Total Burdened C = Total Cost D = Total Dollars T = Total Price O = Original Estimate Type

* If you have elected to Shift Resources by entering Y in Fields 6 and/or 8, then you must also select a Hold Constant Value for each EOC in your library (Fields 11 through 23.)

Each record must contain twenty-two commas as column separators, one after each field except the last field.

Example: *projname*,WBS-SCHED,*filename*,01-JUN-02,E,Y,E,Y,Y,Y,H,P,O,,,,,,,,,,

Distributed Project Batch File Format

Field Position	No. of Chars	Type	Field Content
1	20	A	Source Project
2	40	A	Source WBS
3	20	A	Target Project
4	40	A	Target WBS
5			Import Filters: Place a Y or N in each of six positions for the import options depicted below. Example YYYYYY would be used to include all import options. Position Import Option 1 BCWS Data 2 BCWP Data 3 ACWP Data 4 ETC Data 5 Schedule Dates 6 Milestones
6	1	A	Transfer File Drive Letter
7	30	A	Transfer File Name
8	10	A	Export Conversion Code
9	10	A	Import Conversion Code

Each record must contain eight commas as column separators, one after each field except the last field.

Example: *sourceproj,sourcewbs,targetproj,targetwbs*,YYYYYY,C,*transferfilename,*ABC,COM

16.6 Importing Actuals

You use the Actuals window to import actual costs from outside MPM, typically from your accounting system. This feature eliminates the necessity of manually entering actual cost data. Your import file should contain monthly values; MPM then calculates cumulative totals such as Total Burdened, Total Dollars, etc. actuals may be imported by Resource or EOC. Actuals by Resource may optionally be autoburdened.

Access the Actual Import Conditioning window by selecting Actuals on the Imports tab. MPM displays the Actual Import Conditioning window shown in Figure A.
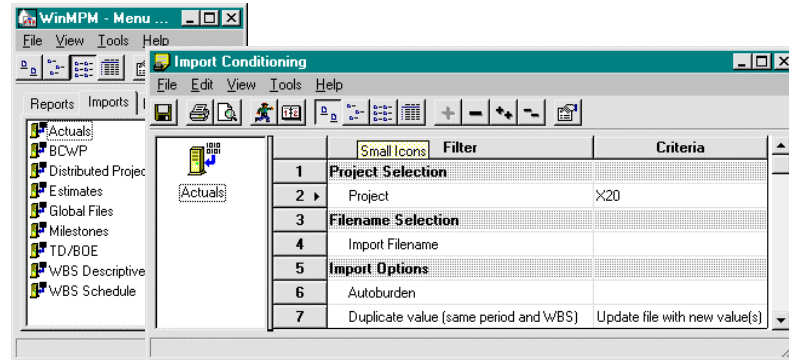
Figure A. *To import Actuals, select the Actuals Import on the Menu Manager.*

The actuals import has two additional options on the Import Conditioning window: Autoburden and Duplicate Value.

Import Actuals with Autoburdening

To add burdening automatically to your actuals while importing, click the $\boxed{\checkmark\checkmark}$ check mark box in the Criteria column. This option calculates burden values for actuals imported by Resource. Using the Prime Dollars you supply in the import file, MPM calculates Overhead, G&A, COM, and Fee using the Burden Template assigned to each Resource. If the Burden Template contains more than one burden of the same type (for example, OH1, and OH2), they are both used and a total Overhead is accumulated.

This option defaults to no autoburden. If you are not autoburdening, your import file must contain any applicable burden values for Overhead, G&A, COM, and Fee. If you do select autoburdening, these values are automatically calculated and are ignored if entered in your import file.

Duplicate Values Processing

When importing your actuals, there is a possibility that MPM may encounter an actual value that already exists in your project under the specified WBS/Resource/fiscal period. The Duplicate Value option tells MPM how to handle duplicate actual values. Select one of the following options:

Update file with new value(s) - If you select this option, any duplicate values in the project are overwritten with the import value.

Accumulate old and new value(s) - If you select this option, any duplicate values in the imported data are added to the value in the project. If actuals are imported more often than once a month, this is usually the best option.

Ignore the new value(s) - If you select this option, any duplicate values in the imported data are ignored.

This option defaults to Update File With New Value(s)**.**

Import Processing of Actuals

When you import monthly actual values, the following values are calculated automatically: Total Burdened, Total Cost, Total Dollars, and Total Price. These values cannot be imported. If you choose to add autoburdening, Overhead, G&A, COM, and Fee are also calculated. If you are not autoburdening, you must supply these values in the import file.

The WBS ID to which you are adding actuals must contain a Charge Number, or an error will result and the imported actuals will be ignored. See *Chapter 5: Creating the WBS* for details. The Charge Number cannot be imported with this import, but can be imported using the WBS Descriptive import. See topic *16.14 Importing WBS Descriptive Data* for details.

16.6 Importing Actuals

16.6.1 Actuals Import File

Actuals Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	40	A	WBS ID; must exist in the project
♦ 2	10	A	Resource Code or *EOC Code; must exist in the global files but need not exist as an estimate for this WBS. If importing EOC Codes, you must precede the EOC Code with an asterisk.
3	10	A	Resource Department; must exist in OBS (leave blank if import is by EOC Code)
4	1	Y/N	Overtime Factor Enter **Y** or a valid numeric value if the imported actual data is overtime. This value will be changed to 1.5 upon import and will appear as such on reports. Enter **N** if the imported actual data is not O/T; appears as blank on reports.
♦ 5	6	N	Month/Year (YYYYMM)
6	12	N	Hours/Units
7	12	N	Prime dollars
8	12	N	Overhead dollars
9	12	N	G&A dollars
10	12	N	Cost of money dollars
11	12	N	Fee
12	20	A	XREF-EST*

*XREF-EST Field — The XREF-EST import field is an optional field that can be used to make the Actuals record unique.

MPM considers records as duplicates if they have the same values for the following fields:

- Period
- WBS ID
- Resource Code
- Resource Department
- XREF-EST
- Overtime

- **Using the optional XREF-EST field** — each record must contain 11 commas, one after each field except the last field (even those being left blank), and end with a carriage return.

- **Not using the optional XREF-EST field** — each record must contain 10 commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

This record imports actuals into WBS element AA for Resource ENG1 from Dept 200, for the month of January 2008. The values being imported are not overtime values. The Resource worked 200 hours, which was calculated as 30000 Prime, and burdened as 10000 OH, 500 G&A, 100 COM and 1500 Fee.

AA,ENG1,200,N,200801,200,30000,10000,500,100,1500

This record imports actuals into WBS element AA for EOC Labor, for the month of January 2008. Remember you must add an asterisk if this is an EOC Code. The values being imported are not overtime values, and EOC cannot be autoburdened. LABOR totaled 800 hours, which was calculated as 120000 Prime, and burdened as 40000 OH, 2000 G&A, 400 COM and 6000 Fee.

AA,*L,,N,200801,800,120000,40000,2000,400,6000

16.7 Importing BCWP

You use the BCWP window to import BCWP from outside MPM. Your import file should contain monthly values; MPM then calculates cumulative BCWP or Percent Complete, based on your Earned Value Method (EVM).

Access the BCWP Import Conditioning window by selecting BCWP on the Imports tab. MPM displays the BCWP Import Conditioning window shown in Figure A.
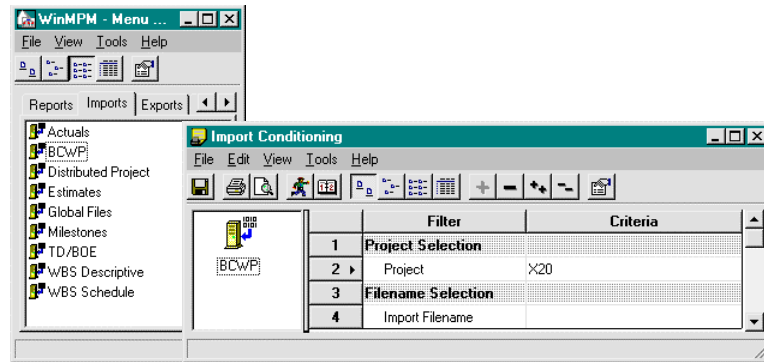
Figure A. To import BCWP, select the BCWP Import on the Menu Manager.

The BCWP import has no additional options on the Import Conditioning window. The BCWP import file contains the WBS ID, Status Date, Cum Percent Complete, and Cum BCWP Amount fields.

Importing Cumulative Percent Complete

If your WBS is set for the Percent Complete EVM, you can import Cumulative Percent Complete values for a given fiscal month. MPM then calculates Cumulative BCWP.

Importing Cumulative BCWP

If your WBS is set for either the Earned Standards or BCWP Entry EVM, you can import Cumulative BCWP values for a given fiscal month. MPM then calculates Cumulative Percent Complete.

Import Processing of BCWP

The BCWP database stores only cumulative values. Therefore, the BCWP records being imported must contain cumulative BCWP values. When you import BCWP, MPM always refers first to the EVM (Earned Value Method) that you have specified in Integrated Planning for the WBS to which you are importing values. To check the current EVM, access the WBS window. To change your EVM, access the Integrated Planning - Milestone window.

Since each record (row) in your import file contains the WBS ID, your import file can contain either or both types of BCWP import data, and each record will be processed individually for that WBS.

For each record (row) in your import file, if the WBS ID is set for the Percent Complete EVM, MPM will use the Cumulative Percent Complete value in the import file for the specified fiscal month, and calculate the Cumulative BCWP. If you supply a Cum BCWP value in the import file, it is ignored.

If the WBS ID is set for either the Earned Standards or BCWP Entry EVM, MPM will use the Cumulative BCWP value in the import file for the specified fiscal month, and calculate the Cumulative Percent Complete. If you supply a Cum Percent Complete value in the import file, it is ignored.

If the WBS ID is set for an EVM other than Percent Complete, Earned Standards or BCWP Entry, that entire record (row) in the import file is ignored.

Only the values for the specified fiscal month are recomputed. All other monthly BCWP values remain unchanged.

Updating Milestone Status

Importing cumulative BCWP or Percent Complete does not cause milestone status to be updated. To update milestone status, you can:

Use the Integrated Planning - Milestones window to manually update milestones

Use Import Milestones (See [Importing Milestones](#))

Note: Whenever this import is used, you must always recompute BCWP.

16.7 Importing BCWP
16.7.1 BCWP Import File

BCWP Import File Content

In the table below, an ***** indicates a required field. In the Type column, A = alphanumeric, N = numeric, and Y/N = Yes or No.

Field Position	No. of Chars	Type	Field Content
1*	40	A	WBS ID; must exist in the project
2*	6/8	A	Status Date; date may be entered in year/month format or year/month/day format. If year/month format is used, date defaults to last day of fiscal month. (The full date is used only to set the "last status" tick mark on barcharts.). Note that the YYMMDD date format is not a valid format for BCWP Import. Valid date formats: See topic *16.14 Importing WBS Descriptive* Data for details.
3*	6	N	Cumulative Percent Complete; must be expressed in percent format (i.e., 50.50% = 50.50).
4*	12	N	Cumulative BCWP Amount; value must be expressed in the base unit specified for the WBS in Plan Milestones Function.

The WBS ID, Status Date, and Cum Percent Complete fields are mandatory when importing to WBS elements which use the Percent Complete EVM.

The WBS ID, Status Date, and Cum BCWP fields are mandatory when importing to WBS elements which use Earned Standards or BCWP Entry EVM.

Each record must contain three commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

This record updates WBS 1X using Percent Complete EVM 50.50%, as of the status date March 31, 1998. Since the full date was used, the "last status" tick mark on barcharts is set also.

1X,19980331,50.50,

This record updates WBS 1X using BCWP Entry EVM; as of the status date March, 1998, $15,175.50 of BCWP have been earned.

1X,199803,,15175.50

16.8 Importing Distributed Projects

You use the Distributed Projects window to import Distributed Project data into the superproject, from a previously exported distributed subproject. See *Chapter 19: Distributed Projects* for more detailed information about Distributed Projects.

Access the Distributed Projects Import Conditioning window by selecting Distributed Projects on the Imports tab. MPM displays the Distributed Projects Import Conditioning window shown in Figure A.
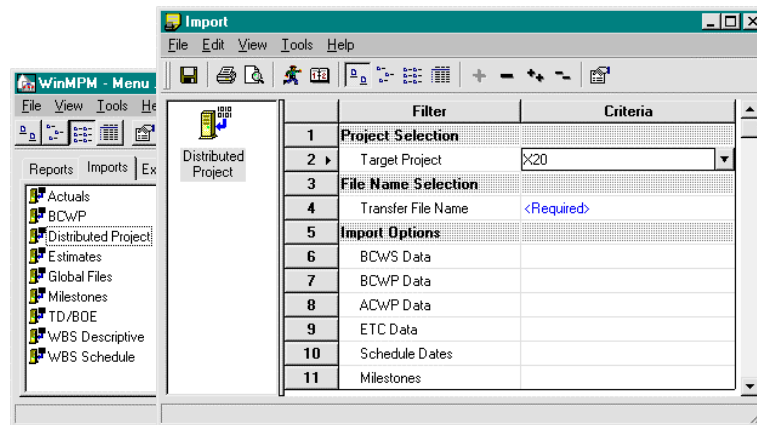
Figure A. To import Distributed Projects, select Distributed Projects Import on the Menu Manager.

The Distributed Projects import file contains the data from the subproject, which you should be importing into the superproject. See *Chapter 19: Distributed Projects* for more information about super- and subprojects.

When you specify the Target Project, MPM searches the project for the word DISTRIBUTED in the XREF-1 field. It must already be specified in the lowest level of your WBS, otherwise an error will result.

Analyzing the Import File

We recommend that you analyze your import file (and always back up your data) before running the import. To analyze your import file, run the Analyze Distributed Project File report. See *Chapter 19: Distributed Projects* in this manual for complete details on this report.

Importing Using Conversion Codes

Use these optional codes to apply timephased factors while importing (or exporting) Distributed Projects. The conversion uses the resource rates you entered in the Global Resources & Burdens window. See *Chapter 5: Defining Resources and Burdens* in the *Globals* manual for details. Please note that the Baseline Rate Table is used for Baseline, ETC and Actuals.

Specifying the Data to be Imported

When importing Distributed Project data, you can import the following types of data: BCWS, BCWP, ACWP, ETC, Schedule Dates, and Milestones. To import any or all of these data types, click the ✔✔ check mark box in the Criteria column of the desired data type.

Distributed Project File Format

The Distributed Project transfer file is internally created and cannot be externally created. The only way to create a Distributed Project import file is by exporting Distributed Project data. See *Chapter 17: Exporting Data* for details.

When you enter the name of the Distributed Project transfer file, MPM displays an additional button which allows you to check the information in the transfer file.

Transfer File Name   C:\MPM\Junk.xfr   ...

MPM displays a dialog box with the following information: Source Project, Source WBS, Target Project, Target WBS, Export Conversion Code, and Import Conversion Code.

Import Processing of Distributed Project Data

When you export Distributed Project data from the subproject, MPM exports the rolled up data at the top level within the subproject. Therefore, when you open the superproject and import the subproject's data, only the rolled up data (not the detail) is imported. Detail reporting is not available at the superproject level. See *Chapter 19: Distributed Projects* for more information about super- and subprojects.

16.9 Importing Estimates

You use the Estimates window to import monthly estimate values from outside MPM. You can replace all existing values, or partial values based on a date range.

Access the Estimates Import Conditioning window by selecting Estimates on the Imports tab. MPM displays the Estimates Import Conditioning window shown in Figure A.
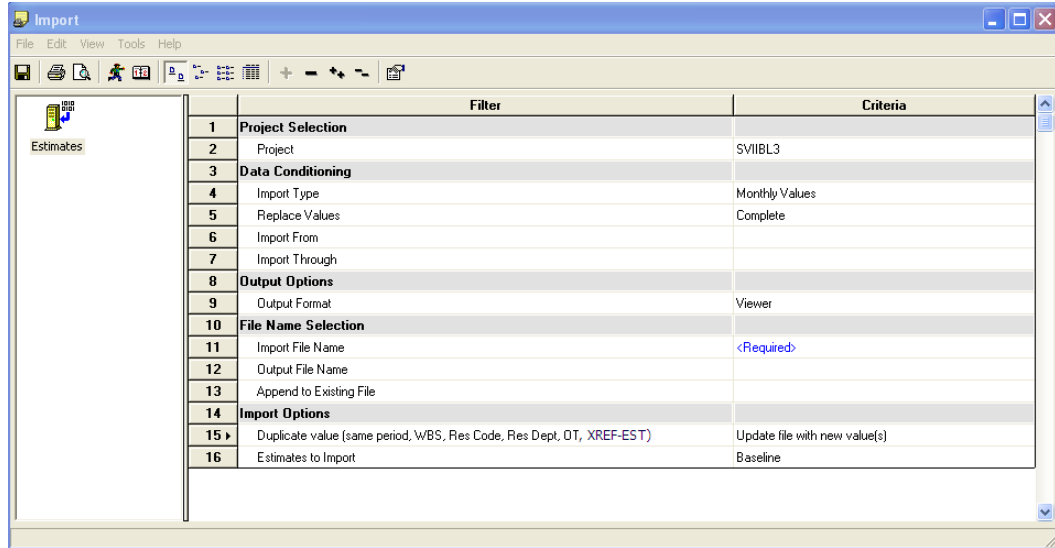

Figure A. *To import Estimates, select Estimates Import on the Menu Manager.*

The Estimates import has three additional options on the Import Conditioning window:

- Import Type

- Replace Values (and the related Import From and Import Through options)

- Duplicate value

Import Type

You can choose to import estimates of monthly values that are not autospread, or choose to autospread estimates as they are imported.

The Monthly Values option imports the monthly values you supply, and calculates burden values just as it does in Integrated Planning (see below).

The Autospread option automatically burdens the monthly values you supply and spreads the value using the spread curve you specify in the import file.

Replace Values

If you choose the Complete option, the imported estimate will replace completely the estimate currently in the database.

If you choose the Partial option, the imported data is restricted to the dates you specify in the Import From and Import Through fields. You can also choose to replace the old values with the new values (Update), or add the new values to the old values (Accumulate). For processing details on these options, see topic *16.9.2 Importing Partial Estimates*.

Duplicate Values

When you are doing a partial import, you must use the Duplicate Values field to choose replacement of the old values with the new values (Update), or addition of the new values to the old values (Accumulate).

MPM considers records as duplicates if they have the same values for the following fields:

- Period

- WBS ID

- Resource Code

- Resource Department

- XREF-EST

- Overtime

Estimates to Import

With the Estimates to Import option you can import and update baseline data, ETC data, or both provided you are importing complete estimates.

If you are importing partial estimates, you can import and update baseline data, ETC data, but not both.

16.9 Importing Estimates

16.9.1 Importing Complete Estimates

MPM identifies each different combination of WBS ID, Resource Code, Resource Department, and Overtime as a unique estimate. If the same combination already exists in the project, the import records will replace the entire existing estimate. We recommend that you group records by WBS ID and Resource in the import file. If you enter records out of order, entries for the same WBS ID will overwrite the earlier entries.

Estimate imports must include one record (row) in the import file for each month to be imported, and the start and complete dates must include the widest range of all months being imported for that particular estimate. If your import includes more than one month, records should be created in order by date. When updating existing estimates, keep in mind that the entire current estimate is replaced with the new estimate being imported, regardless of the date range. For example, an existing estimate which spanned the months of January through December would be entirely deleted and replaced with an imported estimate even if the new estimate only covered January through February.

MPM burdens the monthly values supplied in the import file in the same manner as when they are entered in Integrated Planning. See *Chapter 7: Estimating the Project Baseline* for details about this process.

MPM uses the rate table specified for the resource when calculating burdens. If you have set the Allow Rate Table Override field in the Project Maintenance window to on by placing a check mark in the column, you can specify a different rate table in the import file. Otherwise, if the Rate Table Override field is blank and you specify a rate table in the import file, it is ignored.

MPM also uses the burden template specified for the resource when calculating burdens. If you have set the Allow Burden Template Override field in the Project Maintenance window to ON by placing a check mark in the column, you can specify a different burden template in the import file. Otherwise, if the Burden Template Override field is blank and you specify a burden template in the import file, it is ignored.

When importing Baseline only, or Baseline and ETC values, Baseline is priced against the Baseline Rate Table and ETC is priced against the ETC Rate Table specified in the Project Maintenance window.

If the calendars are changed after an estimate is automatically spread, you must re-enter the estimates. Or you can export the estimates and then import them with the new dates. If you include an estimate in the import file which matches an existing apportioned estimate, an error will result. Replan estimates cannot be imported.

16.9 Importing Estimates

16.9.2 Importing Partial Estimates

If you choose a partial import of estimates, the system scans the import file and only imports those records that are within the Import From and Import Through dates specified in the Report Conditioning window. The from and through dates are validated against the period (YYYYMM) of the import file.

Estimate Types

If you choose the Monthly, Partial, and Accumulate options, only the following estimate types will be imported:

- (1)   Standard Hours
- (2)   Hours
- (3)   Prime
- (8)   EQP
- (9)   Units

The numbers in parentheses represent the estimate type codes entered in the import file. All other estimate types will not be imported, assuming the estimate already exists and you are adding to the estimate using the Accumulate option. If there is no existing estimate, any estimate type will be imported.

If the estimate type in the import file is different than the original estimate type, the estimate type in the database will be changed to the estimate type in the import file. The Processing Report displays the message: "The estimate type has been changed from 'x' to 'y'."

If the estimate type being imported is Standard Hours, the original estimate must be in standard hours. If the original estimate type is something other than standard hours, the record(s) will be rejected and an error message will be displayed, "Estimate Type cannot be changed to/from Standard Hours."

If the estimate type being imported is Hours, Standard Hours or EQP, the resource must be a labor resource or it is ignored and the following message is logged: 'Estimate Type 'X' cannot be used for Non-Labor Resource 'X".

If the estimate type being imported is Units, the resource must be a non-labor resource or it is ignored and the following message is logged: 'Estimate Type 'X' cannot be used for Labor Resource 'X".

Replace Values

If you choose the Complete option, the imported estimate will replace completely the estimate currently in the database.

If you choose the Partial option, the imported data is restricted to the dates you specify in the Import From and Import Through fields. You can also choose to replace the old values with the new values (Update), or add the new values to the old values (Accumulate).

Duplicate Values

When you are doing a partial import, you must use the Duplicate Values field to choose replacement of the old values with the new values (Update), or addition of the new values to the old values (Accumulate).

MPM considers records as duplicates if they have the same values for the following fields:

- Period
- WBS ID
- Resource Code
- Resource Department
- XREF-EST
- Overtime

Rate Table

If the import file contains a rate table override value, the override value will be ignored upon import. If the estimate already exists, the rate table saved with the original estimate will be used. If the estimate does not exist, a new estimate will be created using the default rate table in Project Maintenance.

Burden Templates

The process for handling changes in burden templates is as follows:

If the import file contains a burden template override value, the override value will be ignored upon import. The estimate will not price against this burden template.

Upon importing of partial estimates, MPM will compare the burdening structure of the saved estimate to what the current burden template (the default template or the overridden burden template) contains. If there is a difference, the entire estimate will be repriced to the new burden structure.

The only time that this situation would exist is if the burden structure has been changed and reprice has not been run. The Processing Report displays the message: "The entire estimate has been repriced to the current burden template structure."

Estimate Start Date

If an estimate start date in the import file does not match that of the estimate in the database, the system will display the following message on the Processing Report: "Estimate Start date of Import is different than the Estimate Start date of existing Estimate. Estimate Start Date is not updated."

Estimate Completion Date

The table below outlines the actions MPM takes based on the relationship between the import completion date and the existing estimate completion date.

IF the import completion date is:	THEN MPM performs the following functions:
Earlier than the existing estimate complete date	Updates any existing values contained in the import file (based on the Import From and Through dates).
	Deletes any value that was in the original estimate later than the complete date contained in the import file.
	Changes the existing estimate complete date to the imported completion date.
Later than the existing estimate complete date	Updates any existing values contained in the import file (based on the Import From and Through dates).
	Adds new values (if any) from the import file into the existing estimate (based on the Import From and Through dates).
	Changes the existing estimate complete date to the imported completion date.
The same as the existing estimate complete date	Updates any existing values contained in the import file (based on the Import From and Through dates).

If the monthly value being imported is not within the estimate start/complete dates, it is not imported and the following message is displayed: "Month/year outside of Estimate Start/Complete time-frame."

Change of Element of Cost/Class of Cost

Upon import the system will validate the element of cost and class of cost on the existing estimate to those of the global files. If the element of cost or class of cost on the Resource code has changed (in the global file) the import will unroll all the values of the old estimate and reroll the entire estimate (including the new values from the import) to the new element of cost/class of cost.

16.9 Importing Estimates
16.9.3 Estimates Import File

Estimates Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	40	A	WBS ID; must exist in the project
♦ 2	10	A	Resource Code; must exist in the global file.
3	10	A	Resource Department; must exist in the OBS
4	20	N	Overtime Factor. If you are importing overtime values, enter the appropriate value; otherwise, leave blank.
♦ 5	9	A	Start Date of estimate Valid date formats: See topic *16.14 Importing WBS Descriptive* Data for details for details.
♦ 6	9	A	Completion Date of estimate Valid date formats: Same as Start Date
♦ 7	1	N	Estimate Type (enter 1-9 or A-J) If entering monthly values, enter a <u>manual</u> estimate type (1-9) for this field. If autospreading values, enter an <u>autospread</u> estimate type (A-J) for this field. Estimate Type Standard Hours 1 A Hours 2 B Prime Dollars 3 C Total Burdened 4 D Total Cost 5 E Total Dollars 6 F Total Price 7 G EQP 8 H Person Months n/a I Units 9 J
8	3	N	Efficiency: This is a percentage factor; applies only if using Standard Hours as the estimate type.
9	3	N	Scrap & Rework: This is a percentage factor; applies only if using Standard Hours as the estimate type.
♦10	6	N	If entering monthly values, enter the year and month (YYYYMM) for which this value is being imported. If entering autospread values, enter the identifier for the Spread Curve to use; must be an existing Spread Curve. If this field is left blank, it defaults to a linear curve.

Field Position	No. of Chars	Type	Field Content
♦11	12	N	Estimate Value, expressed in the same units as the estimate type (hours, prime dollars, total burdened dollars, total dollars) If entering monthly values, enter the total value for the resource for the month specified. If autospreading values, enter the total estimate value for this resource for the month(s) specified.
12	20	A	Rate Table (enter only if you want to override current Table)
13	20	A	Burden Template (enter only if you want to override current Template)
14	20	A	XREF-EST*

*XREF-EST Field — The XREF-EST import field is an optional field that can be used to make the estimate unique.

- **Using the optional XREF-EST field** — each record must contain 13 commas, one after each field except the last field (even those being left blank), and end with a carriage return.

- **Not using the optional XREF-EST field** — each record must contain 12 commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

These records update an estimate for WBS 1X using Resource ENG1 in Department ENG with monthly values. This estimate starts January 1, 1997 and goes through April 1, 1997, and does not contain overtime, using Rate Table 001 and Burden Template ENG, with 80% efficiency. We are reporting $504,944.25 in Prime Dollars (Estimate Type 3) for Jan-97, $499,395.93 for Feb-97, and $522,333.29 for Mar-97.

1X,ENG1,ENG,,19970101,19970401,3,,,199701,504944.25,001,ENG
1X,ENG1,ENG,,19970101,19970401,3,,,199702,499395.93,001,ENG
1X,ENG1,ENG,,19970101,19970401,3,,,199703,522333.29,001,ENG

This record updates an estimate for WBS 1X using Resource ENG1 in Department ENG with autospread values. This estimate starts January 1, 1997 and goes through April 1, 1997, and does not contain overtime, using Rate Table 001 and Burden Template ENG, with 80% efficiency.

We are reporting $1,526,673.47 in Prime Dollars (Estimate Type C), using Spread Curve 2 (Bell Curve). MPM will autospread $1,526,673.47 across January through April.

1X,ENG1,ENG,,19970101,19970701,C,,,2,1526673.47,001,ENG

16.10 Importing Global Files

Use the Global Files Import window to import global files from outside MPM. You can import any or all global types of data: Calendars, EOCs, Resource or Burden Codes or Rates, or Burden Templates, with one or more global import files.

Access the Global Files Import Conditioning window by selecting Global Files on the Imports tab. MPM displays the Global Files Import Conditioning window. See Figure A.
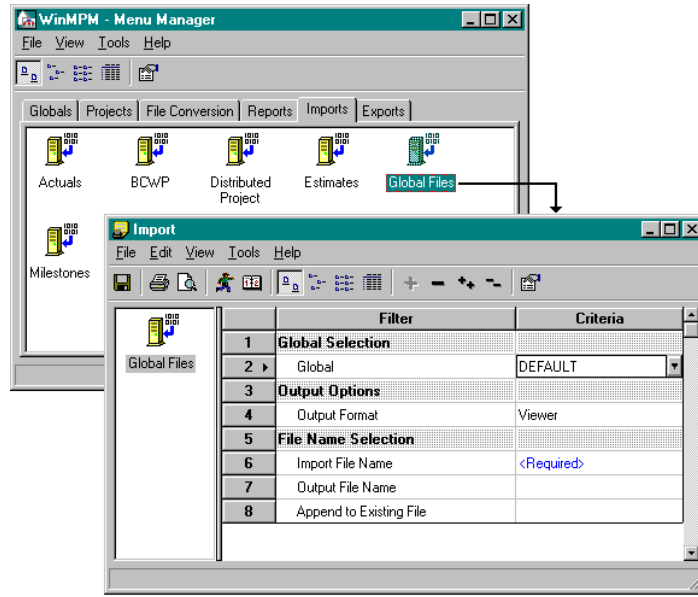
Figure A. *To import Globals, select Globals Files from the Import Tab on the Menu Manager.*

The Global Files import has no additional options on the Import Conditioning window. The global import file contains fiscal or holiday calendars, EOCs, resource or burden codes or rates, or burden templates to be imported. The Record Type field in the import file identifies the type of global file to be imported.

16.10 Importing Global Files

16.10.1 Importing Fiscal Calendars

If you have a fiscal calendar already in your global file, MPM completely overwrites it with the imported fiscal calendar. If a problem occurs during the import, the fiscal calendar import is aborted and no fiscal calendar data is imported.

The records in the fiscal calendar import file must be arranged in ascending date order. The month label is included only in the first fiscal calendar record. MPM automatically assigns subsequent month labels in consecutive order.

Fiscal Calendar Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	3	A	Global import type: enter **CAL** for Fiscal Calendars
♦ 2	9	A	Fiscal Start Date; enter the first day of the fiscal month. Valid date formats: See topic *16.14 Importing WBS Descriptive* Data for details.
3	5	A	Month label. Months must be in MMMYY format only, where MMM=month and YY=year of first month of the calendar. *Include this label in the first record only.*
4	7	N	Equivalent person month hours; enter a value of zero through 9999.99.

Each record must contain three commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

- This record imports the fiscal month of January 2007 that starts on 01-Jan-07 and contains 160 equivalent person month hours.

  CAL,01-JAN-07,JAN07,160

16.10 Importing Global Files

16.10.2 Importing Holiday Calendars

Use this format to import holiday calendar dates which occur during the contract period. The Holiday Calendar Import differs from the Fiscal Calendar Import in that only new or changed holidays are added or replaced by the import file. An existing holiday calendar will <u>not</u> be replaced, in its entirety, when a new holiday calendar is imported. Any holiday dates not affected by the import file remain unchanged by the import.

The description of a holiday date replaces an existing holiday description only if the holiday description field does not match. A blank holiday description field will not replace an existing one.

Holiday Calendar Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	3	A	Global import type: enter **HOL** for Holiday Calendars
♦ 2	9	A	Holiday Date to be added or updated Valid date formats: See topic *16.14 Importing WBS Descriptive* Data for details.
3	20	A	Holiday description

Each record must contain two commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

- This record imports the Independence Day holiday on 04-Jul-07.

  HOL,04-JUL-07,Independence Day

16.10 Importing Global Files

16.10.3 Importing Elements of Cost

Use this format to import elements of cost (EOC) and classes of cost (COC) from outside MPM. You can create new EOCs or update existing EOCs. Importing an EOC table will not replace an existing EOC table in its entirety. Any EOCs not affected by the import file remain unchanged by the import.

The EOC code, COC code, and EOC description act as unique identifiers for each record imported. If the same combination already exists in the EOC table, the import record will replace the existing EOC in its entirety. To enter an EOC code, you must enter the EOC Code, and the Labor Flag. To enter a COC code, you must enter the EOC Code and the COC Code.

Elements of Cost Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	3	A	Global import type: enter **EOC** for Elements of Cost
♦ 2	1	A	Element of Cost Code
3	3	A	Class of Cost Code. This field is mandatory for a COC record.
4	20	A	Description
5	1	Y/N	Labor Flag. This field is mandatory for an EOC record.

Each record must contain four commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

■ This record imports the Labor Element of Cost L.
   EOC,L,,Labor,Y

■ This record imports the Class of Cost MFG into the Labor EOC.
   EOC,L,MFG,Engineering Labor,

16.10 Importing Global Files

16.10.4 Importing Burden Codes

Use this format to import burden codes from outside MPM. You can create new or update existing burden codes. Importing Burden Codes will not replace existing burden codes in their entirety. Any burden codes not affected by the import file remain unchanged by the import.

Burden Code (type "C") records must be imported before Burden Rate (type "R") records in your import file.

Field Positions 5 through 9 are ignored and should be left blank. Be sure you have the correct number of commas.

Burden Code Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	1	A	Global import type: enter **C** for Burden Codes
♦ 2	10	A	Burden Code

♦ 3	1	A	Burden Type:
			
			    O = Overhead
			    G = G&A
			    C = Cost of Money
			    F = Fee

4	20	A	Description
5	0		Ignored (leave blank)
6	0		Ignored (leave blank)
7	0		Ignored (leave blank)
8	0		Ignored (leave blank)
9	0		Ignored (leave blank)

Each record must contain eight commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

■ This record imports the Overhead burden named EOH.

C,EOH,O,Eng Overhead,,,,,

16.10 Importing Global Files
16.10.5 Importing Burden Rates

Use this format to import burden rates from outside MPM. You can create new or update existing burden rates. Importing Burden Rates will not replace existing burden rates in their entirety. Any burden rates not affected by the import file remain unchanged by the import.

Burden Code (type "C") records must be imported before Burden Rate (type "R") records in your import file.

The burden code being assigned a rate must already exist in the database. If it does not already exist, add a Type "C" record prior to the Type "R" record to create the burden code.

Burden Rate Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	1	A	Global import type: enter **R** for Burden Rates
♦ 2	10	A	Burden Code
♦ 3	20	A	Burden Rate Table ID
♦ 4	6	N	Rate Period: enter the period for which this rate applies, in YYYYMM format.
5	10	N	Rate Amount

Each record must contain four commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

- This record imports a rate of 25.7% for January 2007 into Rate Table 1 for the EOH burden.

   R,EOH,1,200701,25.7

16.10 Importing Global Files

16.10.6 Importing Burden Templates

Use this format to import an entire burden template which has been created using a software application outside MPM. You can create new or update existing burden templates. Importing Burden Template data does not completely replace a burden template. Any burden templates not affected by the import file remain unchanged by the import.

Burdens should be imported in the burden template import file in the order you want them applied against the resource.

Importing a burden template for an existing burden template will not replace the entire burden template. Only the requested fields are updated.

Fields 4 and 5 may be repeated to include a maximum of ten burden codes in each burden template.

Burden Template Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	3	A	Global import type: enter **TMP** for Burden Templates
♦ 2	20	A	Burden Template ID
3	40	A	Burden Template Description
4	10	A	Burden Code; must already exist
5	1	N	Apply burden rates against: 1 = Hours 2 = Prime Dollars 3 = Previous Subtotal 4 = Previous Burden Amount 5 = Total Burdened 6 = Total Cost 7 = Previous, Previous SubTotal 8 = Previous, Previous Burden Amount

Each record must contain a minimum of four commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

This record imports the ENG1 burden template which applies the EOH burden against Prime, the FOH burden against Previous Subtotal, the G&A burden against Total Burdened, the COM burden against Total Cost, and the LF burden against Total Cost.

TMP,ENG1,Engineering Burden,EOH,2,FOH,3,G&A,5,COM,6,LF,6

16.10 Importing Global Files

16.10.7 Importing Resource Codes

Use this format to add or update resource codes from outside MPM. Importing resource codes will not replace the existing global file in its entirety. Any resources not affected by the import remain unchanged by the import.

Resource Code (type "C") records must be imported before Resource Rate (type "R") records in your import file.

See C*hapter 5: Defining Resources* in the *MPM Globals* manual for details about the fields in this import.

Resource Code Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	1	A	Global import type: enter **C** for Resource Codes
♦ 2	10	A	Resource Code
♦ 3	1	A	Resource Type: enter **R**
4	20	A	Description
5	20	A	Burden Template ID; must already exist
6	3	A	EOC Class; must already exist
7	1	A	EOC Code; must already exist
8	4	N	Hours per day; may be entered in whole numbers or decimals
9	1	N	Days per week; enter 1 - 7

Each record must contain eight commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

■ This record imports the ENGE resource that uses the ENG1 burden template, the MFG class of cost, and Labor EOC.

C,ENGE,R,Engineer,ENG1,MFG,L,8,5

16.10 Importing Global Files

16.10.8 Importing Resource Rates

Use this format to import resource rates from outside MPM. You can create new or update existing resource rates. Importing resource rates will not replace existing resource rates in their entirety. Any resource rates not affected by the import file remain unchanged by the import.

Resource Code (type "C") records must be imported before Resource Rate (type "R") records in your import file.

The resource code being assigned a rate must already exist in the database. If it does not already exist, add a Type "C" record prior to the Type "R" record to create the resource code.

Resource Rate Import File Content

Field Position	No. of Chars	Type	Field Content
♦ 1	1	A	Global import type: enter **R** for Resource Rates
♦ 2	10	A	Resource Code
♦ 3	20	A	Resource Rate Table ID
♦ 4	6	N	Rate Period: enter the period for which this rate applies, in YYYYMM format.
5	10	N	Rate Amount

Each record must contain four commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Imports

- This record imports a rate of $37.50 for January 2007 into Rate Table 1 for the ENGE resource.

  R,ENGE,1,200701,37.5

16.11 Importing Milestones

Use the Import Milestones window to import new milestones for a WBS element or update existing milestones from files created outside MPM. After importing milestones, you must recalculate BCWP to reflect the changes resulting from your import.

During the milestone importing process, MPM looks for a match on selected fields. If a match is found, the other fields for that milestone are updated with the imported data; if there is no match, a new milestone is inserted based on the Identify Milestones By field. To update an existing milestone, the milestone being imported must match exactly.
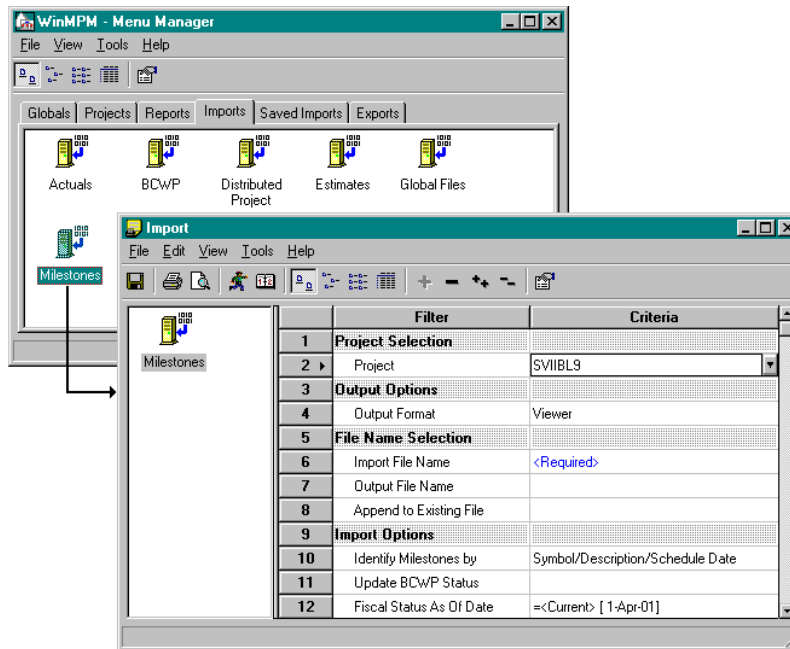
Figure A. *To import milestones, select Milestones on the Menu Manager.*

Accessing the Import Milestones Window

To access the Import Milestones window, double-click the Milestones icon on the Menu Manager with the Imports tab showing. MPM displays the Import Milestones window.

Additional Options

The Milestones import has three additional options on the Import Conditioning window: Identify Milestones By, Update BCWP Status, and Fiscal Status As Of Date. These options are described in the next module.

Sub-topics

Additional information about importing milestones is presented in two sub-topics:**16.11 Importing Milestones**

- 16.11.1 Setting the Import Milestones Options

- 16.11.2 Milestone Import File Format

16.11 Importing Milestones
16.11.1 Setting the Import Milestones Options

The Milestones import has three additional options on the Import Conditioning window: Identify Milestones By, Update BCWP Status, and Fiscal Status As Of Date.
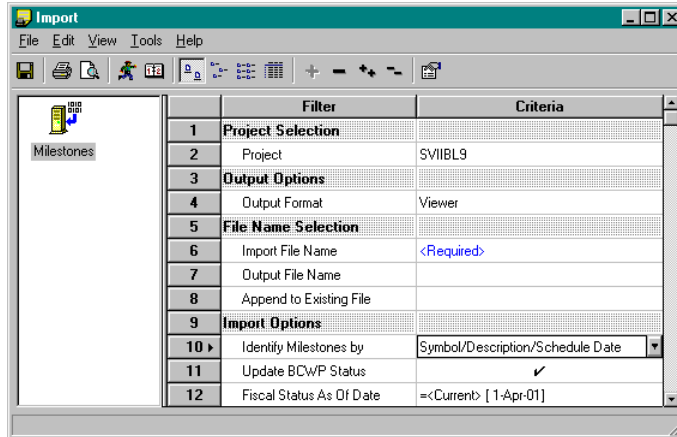
Figure A. *There are three options you can use on milestone imports*

Identifying Milestones By Option

This option determines the method for matching the milestones in the import file with the milestones in your MPM project. There are three methods to choose from:

ID - This method matches milestones by their Milestone ID. The first milestone encountered in the project with the same ID as the ID in the import file is updated with the imported data. If that exact Milestone ID is not found, the data is imported and added as a new milestone.

If the import file includes a WBS ID with a Milestone ID that exists on another WBS, the milestone is added to the WBS ID specified in the import file and removed from the WBS ID where it previously existed. When using this option for matching, the Milestone ID field is a required field in the import file. If you are updating an existing Milestone ID, the WBS ID is not a required field in the import file.

Description - This method matches milestones by their WBS ID and Milestone Description. The first milestone encountered within the WBS ID specified with the same description as the import is updated with the imported data.

If that exact description is not found, the data is imported and added as a new milestone. If the Milestone ID is blank or contains a duplicate of an existing Milestone ID, MPM generates a new unique ID for the milestone contained in the import file.

Symbol/Description/Schedule Date - This method matches milestones by their WBS ID, Symbol, Milestone Description and Schedule Date. The first milestone encountered within the given WBS with the same symbol, description and schedule date as the import is updated with the imported data.

If that exact combination of symbol, description and schedule date is not found, the data is imported and added as a new milestone. If the Milestone ID is blank or contains a duplicate of an existing Milestone ID, MPM generates a new unique ID for the milestone contained in the import file.

Update BCWP Status (Cumulative Percent Complete) Option

To update BCWP status (recalculate percent complete) when importing milestones, place a check mark in the Update BCWP Status field. MPM will re-evaluate the status of all the milestones on the WBS element and calculate a new cumulative percent complete to be stored in the designated fiscal As Of Month field for the WBS. If the Update BCWP Status field is not checked, the new milestone status will be imported but BCWP will not reflect the new status.

To use the Update BCWP Status option, your WBS must use one of these Earned Value Methods (EVM): 0/100, 25/75, 40/60, 50/50, Milestone Weights, Milestone Weights with % Complete, or Key Event.

After performing the import, you must recalculate BCWP for the project if you want BCWP to be based on the new percent complete.

Fiscal Status As Of Date Option

If you elected to update BCWP status, enter the date for the fiscal month for which BCWP is to be statused. If you elected not to update BCWP status, this field is ignored.

Retaining Percent Complete

If you want to retain percent complete when importing milestones, you must:

- Set the Identify Milestones by option to Descriptive.

- Check the Update BCWP Status option.

16.11 Importing Milestones

16.11.2 Milestone Import File Format

Import Milestones File Format

Field Position	No. of Chars	Type	Field Content
♦ 1	40	A	WBS ID; must exist in the project. This field is mandatory except when you identify Milestones by ID and the record is for an existing milestone.
2	10	A	Milestone ID
3	1	A	Milestone Symbol 1 = Up arrow 2 = Down arrow 3 = Up triangle (default) 4 = Down triangle 5 = Square 6 = Octagon 7 = Diamond 8 = Hourglass 9 = Bowtie NASA Symbols A = Down triangle (NASA approved schedule) B = Down triangle (contractor work schedule)
4	40	A	Milestone Description
5	8	N	Milestone Weight
6	9	A	Schedule Date Valid date formats: See topic *16.14 Importing WBS Descriptive* Data for details. **Note:** This field is required when importing new milestones.
7	9	A	Forecast Date
8	1	Y/N	Is the milestone complete? If you enter Y, MPM sets percent complete to 100% during import.
9	3	N	Percent complete (Note that you may enter up to three characters. A decimal place counts as one character); this field applies to EVM Milestone Weights and Milestone Weights with % Complete only. If you enter 100, MPM sets Milestone Complete to Y during import.

Each record must contain eight commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example Milestones Import

To illustrate how this import works, consider the following example, assuming:

There are four milestones; one each in January, February, March and April.

The January milestone was completed in January.

The March milestone was completed in March.

BCWP has been computed through March.

o   And these are the current Milestone Settings:

Milestone ID	Status Date	Weight	Status Flag	Cum BCWP % Complete
1	JAN98	100	Y	25%
2	FEB98	100	N	25%
3	MAR98	100	Y	50%
4	APR98	100	N	

Assume the February milestone had actually been completed in February but we had neglected to status it. It is erroneous to assume that all we have to do is import the February milestone with a Y flag and an As Of month of February. If we had done that, the results would have been as follows:

Milestone ID	Status Date	Weight	Status Flag	Cum BCWP % Complete
1	JAN98	100	Y	25%
2	FEB98	100	Y	75%
3	MAR98	100	Y	50%
4	APR98	100	N	

Because the import evaluates ALL milestones with their current flag settings, the February cumulative BCWP will be too high because the system would interpret the March milestone as having been completed in February.

The correct way to resolve this situation would be:

Manually change the March milestone flag back to N.

Import the February milestone as Y with an As Of month of February with Update BCWP Status turned on.

Manually reset the March milestone to Y then recalculate BCWP if you want to reflect the changes made to your milestones in your BCWP values

16.12 Importing OBS

Use the Import OBS window to import Organizational Breakdown Structure (OBS) data from outside MPM. Both Performing and Responsible department structures can be imported. Additionally, use Import OBS to add or modify the OBS, or move the OBS to a new parent.

Access the Import OBS window by double-clicking the OBS icon on the Imports Tab in Menu Manager. MPM displays the Filter and Criteria window shown in Figure A.
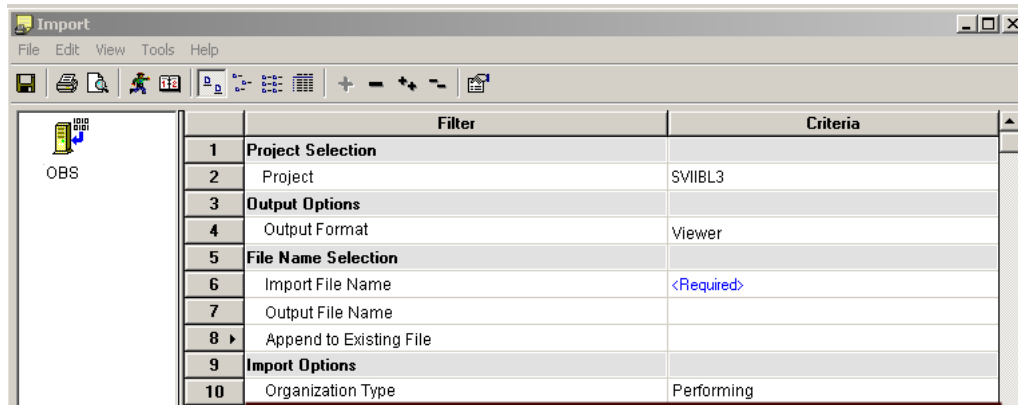
Figure A*. To import OBS, double-click the OBS icon.*

The OBS import has an additional option on the Import Conditioning window: Organization Type.

Import OBS with Organization Type

To add or modify your OBS, select the value from the Organization Type as Performing or Responsible.

Performing

This option imports the data into the Performing organizational structure. This is the default value.

Responsible

This option imports the data into the Responsible organizational structure.

OBS File Format

In the table below, in the Type column, A = alphanumeric, N = numeric, and Y/N = Yes or No.

Field Position	No. of Chars	Type	Field Content
♦ 1	10	A	Department Identifier (ID)
2	20	A	Description of the Department
3	20	A	Manager
4	10	A	Burden Template
♦ 5	10	A	Parent Department (Enter* for all departments that have the top level as the parent)

Each record must contain four commas, one after each field except the last field (even those being left blank), and end with a carriage return.

Example OBS Import

In the following example, the Department *111* is imported, the description of the Department is *Mechanical Engineer,* the Manager is *E.Levert,* the Burden template is not specified, and the Parent Department is *110*.

111,Mechanical Engineer,E.Levert,,110

16.13 Importing Task Descriptions and Basis of Estimates

Use the Import TD/BOE window to import Task Descriptions (TD) or Basis of Estimates (BOE), both Resource BOEs and Summary BOEs. You can use any word processing application outside of MPM to create the text, and then import the text into the project. In addition, you can edit the word processing file as necessary to add, modify and delete TDs and BOEs for import into any number of projects. Once a library of TDs and BOEs has been created, it is no longer necessary to re-enter them each time a new project is begun. You must already have created the WBS before importing TDs and BOEs. For Resource BOEs, the WBS must have at least one existing resource estimate. Summary BOEs may be defined for a grouping of resource departments and/or elements of cost, but at least one resource estimate must exist on the WBS or a child in that WBS leg.

Access the Import TD/BOE window by double-clicking the TD/BOE icon on the Menu Manager with the Imports tab showing. MPM displays the Import TD/BOE window.
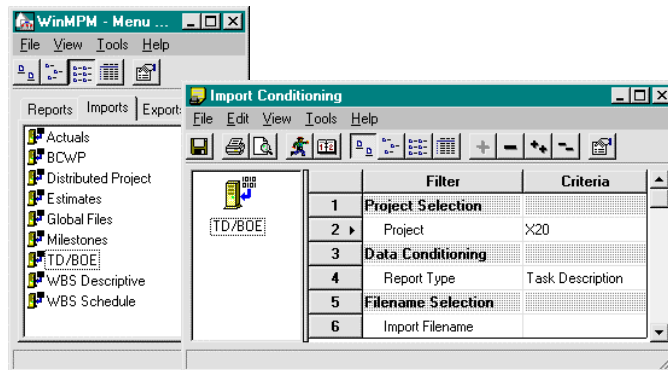
Figure A. To import Task Descriptions or Basis of Estimates, select the TD/BOE Import on the Menu Manager.

Import Processing of TDs and BOEs

- If importing TDs, any existing TD will be automatically replaced in its entirety when a new TD is imported.

- If importing BOEs, any existing BOE will be automatically replaced in its entirety when a new BOE is imported.

- An estimate must already exist before importing a Resource BOE.

- An import file can contain text for TDs or BOEs for one or more WBS elements. Each TD or BOE must be followed by an asterisk on a separate line.

16.13 Importing Task Descriptions and Basis of Estimates

16.13.1 Task Description Import File Format

Import TD File Format

Each TD imported can contain up to 102 records (rows). The first record must be formatted as follows:

Field Position	No. of Chars	Type	Field Content
♦ 1	40	A	WBS ID; must exist in the project

Up to 100 records (rows) of TD text for that WBS must be formatted as follows:

Field Position	No. of Chars	Type	Field Content
N/A	78	A	Task Description text. Text may be in upper or lowercase. More than 100 rows or 78 characters on one row will be truncated.

The last record, signifying the end of the data, must contain a single asterisk:

Field Position	No. of Chars	Type	Field Content
♦ 1	1	A	*

Example When Importing Task Descriptions

This text becomes the task descriptions for WBS 21-100 and WBS 21-200.

```
21-100
The Design Detail portion of designing the X20 prototype
is part of Contract #97-CAF-45747.
*
21-200
The component testing will be handled by the
subcontractor.
*
```

16.13 Importing Task Descriptions and Basis of Estimates

16.13.2 Resource BOE Import File Format

Import Resource BOE File Format

Each Resource BOE imported can contain up to 102 records (rows). The first record (row) must contain four commas; in subsequent lines, commas are ignored. The first record must be formatted as follows:

Field Position	No. of Chars	Type	Field Content
♦ 1	40	A	WBS ID; must exist in the project
♦ 2	10	A	Resource Code; must exist in the global file
3	10	A	Resource Department; must exist in the OBS
4	20	A	Overtime Factor. If you are importing overtime values, enter the appropriate value of 0.00 through 10.00. If you are using the Overtime field as a cross-reference field, enter up to 20 alpha characters.
5	20	A	XREF-EST*

*XREF-EST Field — The XREF-EST import field is an optional field that can be used to uniquely identify the estimate. Each XREF-EST record must contain 4 commas those without XREF-EST must contain 5 commas. These commas are used as column separators, one after each field except

Up to 100 records (rows) of BOE text for that WBS must be formatted as follows:

Field Position	No. of Chars	Type	Field Content
N/A	78	A	BOE text. Text may be in upper- or lowercase. More than 100 rows or 78 characters on one line will be truncated.

The last record, signifying the end of the data, must contain a single asterisk:

Field Position	No. of Chars	Type	Field Content
♦ 1	1	A	*

Example When Importing Resource BOEs

This text becomes the Resource BOE for the overtime Engineering resource in Department 2000 under WBS 21-100.

```
21-100,ENG,2000,1.5,ABC
The Design Detail portion of designing the X20 prototype
is subcontracted to McAfee & Co.
*
```

16.13 Importing Task Descriptions and Basis of Estimates

16.13.3 Summary BOE Import File Format

Import Summary BOE File Format

The first record (row) must contain three commas; in subsequent rows, commas are ignored. Each BOE imported can contain up to 102 records (rows).

The first record must be formatted as follows:

Field Position	No. of Chars	Type	Field Content
♦ 1	40	A	WBS ID; must exist in the project
♦ 2	2	A	Enter an asterisk (*) to include all EOCs; enter specific EOC after the asterisk to limit import to one EOC. The EOC entered must already exist in the global file.
3	10	A	Enter a specific Resource Department to include BOEs for one department. The Department entered must already exist in the OBS. Enter an asterisk to include BOEs for all departments. If the field is left blank, the report will include all BOEs that have no Resource Department defined.
			To include BOEs for a specific group of departments, enter a "wildcard" of up to nine match characters plus an asterisk. For example, enter LA* and your report will include summary BOEs for all departments that begin with LA.

Up to 100 records (rows) of BOE text for that WBS must be formatted as follows:

Field Position	No. of Chars	Type	Field Content
N/A	78	A	BOE text. Text may be in upper- or lowercase. More than 100 rows or 78 characters on one line will be truncated.

The last record, signifying the end of the data, must contain a single asterisk:

Field Position	No. of Chars	Type	Field Content
♦ 1	1	A	*

Example When Importing Summary BOEs

This text becomes the Summary BOE for WBS 21-100, limited to Labor EOCs for
Department 2000.

```
21-100,*L,2000
The Design Detail portion of designing the X20 prototype
is subcontracted to McAfee & Co., who are providing
estimates based on available resources in the Waco, Texas
branch office.
*
```

16.14 Importing WBS Descriptive Data

Use the Import WBS Descriptive window to create new WBS elements or build onto an existing WBS leg by importing new WBS elements from outside MPM. This import differs from the WBS Schedule Data Import only in that the import file contains different types of WBS information.

Access the Import WBS Descriptive window by double-clicking the WBS Descriptive icon on the Menu Manager with the Imports tab showing. MPM displays the Import WBS Descriptive window.

Figure A. *To import WBS Descriptive Data, select the WBS Descriptive import on the Menu Manager.*

Import WBS Descriptive Options

There are no additional options on the WBS Descriptive Import Conditioning window.

Import Process

WBS elements created by the import will have Start and Complete dates which default to their parent dates.

This import cannot be used to change a parent code for an existing child. When creating import records for WBS descriptive data, parent WBS IDs must be imported before their children.

The order in which elements are imported is the order that they will appear on reports. Elements should be sorted into the desired order before importing.

Data for the following fields in the WBS window cannot be imported: Revision Letter Date and Schedule Reference Date.

If your WBS is currently empty, all import records are added to the WBS.

If a WBS ID already exists in your WBS, any fields included in the import record are updated except for the parent WBS ID. Any existing fields not included in the import will not be changed.

Do not include commas in the WBS description. MPM views commas as field separators and will read the input as separate fields if it contains a comma as part of the text. If the description does contain commas, then enclose the field with quotation marks.

Any Fee Limit Amount values imported are assigned to the specific WBS element; however, those fields in children of the specified WBS are not modified.

CLIN, Recurring/Nonrecurring and/or Fee % values imported are assigned to the specific WBS element and all of its children.

16.14 Importing WBS Descriptive Data
16.14.1 Import WBS Descriptive File Format

Import WBS Descriptive File Format

Field Position	No. of Chars	Type	Field Content
♦ 1	40	A	WBS ID
2	100	A	WBS Description
3	20	A	Alias
4	20	A	User-defined XREF1
5	20	A	User-defined XREF2
6	20	A	User-defined XREF3
7	20	A	User-defined XREF4
8	20	A	User-defined XREF5
9	20	A	User-defined XREF6
10	20	A	User-defined XREF7
11	20	A	User-defined XREF8
12	20	A	User-defined XREF9
13	20	A	User-defined XREF10
14	20	A	Manager
15	20	A	Charge Number
16	10	A	Performing Department
17	10	A	Responsible Department
18	1	C/W/P/O/blank	Element Type

Field Position	No. of Chars	Type	Field Content

19	1	A	Earned Value Method
			Use the following codes:
			  0: No EVM Required
			  1: 0/100
			  2: 25/75
			  3: 40/60
			  4: 50/50
			  5: % Complete
			  6: LOE
			  7: Earned Standards
			  8: Milestone Weights
			  9: BCWP Entry
			  A: Apportioned Effort
			  P: Milestone Weights with % Complete
			  K: Key Event

20	8	A	CLIN
21	1	R/N	Recurring or non-recurring
22	6	N	Fee %
23	9	N	Fee Limit Amount
24	1	H/P/B/C/D	BCWP Base Unit (Hours/Units, Prime, Total Burdened, Total Cost, or Total Dollars)
♦ 25	40	A	Parent's WBS ID (enter * if top level)
26	20	A	Base WBS; used if EVM is apportioned

Example WBS Descriptive Import

In this example, WBS 21-100 is updated, assuming it already exists in the WBS. The Manager becomes Bob, the EVM becomes 8, the CLIN becomes 002, the BCWP units becomes H(ours), and the Parent WBS is ignored. (If the Parent WBS ID is not 2X, it will not change it.)

    21-100,,,,,,,,,,,,,,Bob,,,,,8,002,,,,H,2X,

16.15 Importing WBS Schedule Data

Use the Import WBS Schedule window to import new WBS schedule data from outside MPM. Optionally, you can also shift resources and/or milestones to new dates for WBS elements based on the imported dates.

Access the Import WBS Schedule window by double-clicking the WBS Schedule icon on the Menu Manager with the Imports tab showing. MPM displays the Import WBS Schedule window.
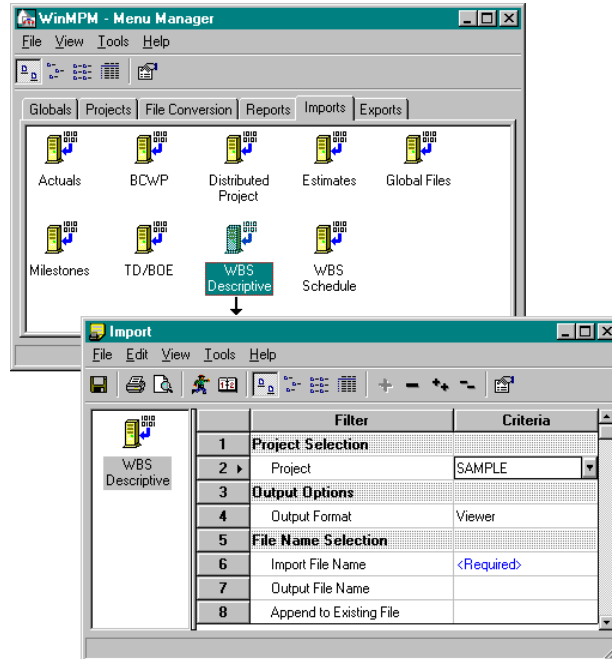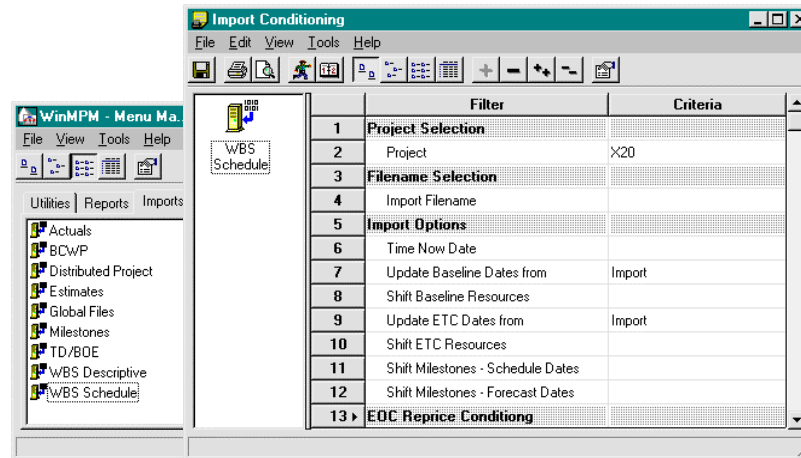

Figure A. *To import WBS Schedule Data, select the Import WBS Schedule import on the Menu Manager.*

The WBS Schedule import file contains the WBS ID, Baseline, ETC, Early, and Late start and complete dates. If you do not select any of the conditioning options, MPM copies the Early and Late start and complete dates from the import file, inserts them into the WBS element's Early and Late dates, and ignores any Baseline or ETC dates included in the import file.

Time Now Date

To specify the point in time where updating dates and shifting resources begins, enter the Time Now Date. MPM uses this optional field to determine whether to update the specified WBS elements. Only those WBS elements whose early start date is after the Time Now Date are updated. If this field is left blank, then all dates are updated.

MPM will not update WBS elements which have already started, or if they contain actuals or BCWP data.

Updating the Baseline

To update the baseline dates in MPM, choose Update Baseline Dates From. This option determines which dates in the import file are used to update the baseline dates.

Import – uses the baseline start and complete dates in the import file

Early – uses the early start and complete dates in the import file

Late – uses the late start and complete dates in the import file

MPM sets the baseline start and complete dates equal to the imported/early/late dates in the import file. If a WBS element has no resource estimates, its start date is set equal to the imported/early/late start date (whichever was selected), and the complete date is set equal to the imported/early/late finish date.

If a WBS element contains resource estimates, click the Shift Baseline Resources ✔✔ check mark box to shift baseline resource estimates from their planned start to the new start date. Further, because the completion of a WBS element is determined by the length of its estimates, only the start date will be set equal to the imported/early/late start date; the duration of the estimate will be maintained.

Updating the ETC

To update the ETC dates in MPM, choose Update ETC Dates From. This option determines which dates in the import file are used to update the ETC dates.

Import – uses the ETC start and complete dates in the import file

Early – uses the Early start and complete dates in the import file

Late – uses the Late start and complete dates in the import file

MPM sets the ETC start and complete dates equal to the imported/early/late dates in the import file. If a WBS element has no resource estimates, its start date is set equal to the imported/early/late start date, and the complete date is set equal to the imported/early/late finish date.

If a WBS element contains resource estimates, click the Shift ETC Resources ✔✔ check mark box to shift ETC resource estimates from their planned start to the new start date. Further, because the completion of a WBS element is determined by the length of its estimates, only the start date will be set equal to the imported/early/late start date; the duration of the estimate will be maintained.

16.15 Importing WBS Schedule Data

16.15.1 Shifting Milestones

If you shifted Resources, you may also want to shift your Milestone schedule and forecast dates to correspond to the new start and complete dates.

Shift Milestones - Schedule Dates

To shift the milestone schedule dates, click the Shift Milestones – Schedule Dates ✔✔ check mark box. To leave the schedule dates unchanged, leave this box empty. This option is only available if you selected Shift Baseline or ETC Resources.

If you select Baseline Update and Shift Milestones, the milestone dates are shifted the same number of days that the baseline has been shifted.

If you select ETC Update and Shift Milestones, the milestone dates are shifted the same number of days that the ETC has been shifted.

If you select both Baseline and ETC Update and Shift Milestones, the milestone dates are shifted the same number of days that the baseline has been shifted.

Shift Milestones - Forecast Dates

To shift the milestone forecast dates, click the Shift Milestones – Forecast Dates ✔✔ check mark box. To leave the schedule dates unchanged, leave this box empty. This option is only available if you selected Shift Baseline or ETC Resources.

If you select Baseline Update and Shift Milestones, the milestone dates are shifted the same number of days that the baseline has been shifted.

If you select ETC Update and Shift Milestones, the milestone dates are shifted the same number of days that the ETC has been shifted.

If you select both Baseline and ETC Update and Shift Milestones, the milestone dates are shifted the same number of days that the baseline has been shifted.

Repricing Estimates

If you have elected to update and shift resources, MPM must reprice after it shifts the estimates. To carry out the repricing, MPM displays the Project Date Shift dialog:
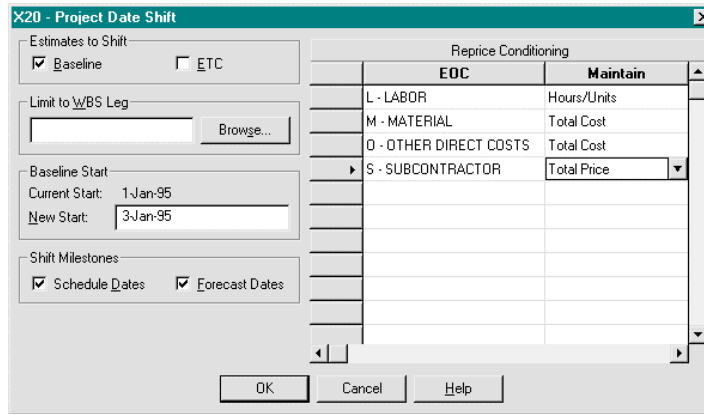
Figure A. *Project Date Shift Dialog*

The Reprice Conditioning portion of this dialog contains two columns: EOC and Maintain. All EOCs stored in the EOC Table are displayed. For each EOC, one of the following values must be maintained for repricing: Hours, Equivalent Men, Prime Dollars, Total Burdened, Total Cost, Total Dollars, Total Price, and Original Estimate Type. These values appear in the Maintain column as a list box next to each EOC. For each EOC, enter one of the above values and MPM holds that value constant. See the Project Date Shift and Estimate Reprice topics of the *Repricing Estimates section of Chapter 11: Utilities* for details on how reprices are performed.

Import Processing of WBS Schedule Data

If dates are being updated for WBS elements with no estimates (no shift required), only those WBS elements that start after Time Now are updated. If dates are being updated for WBS elements with estimates and resources are also being shifted, only those estimates that start after Time Now are shifted.

MPM will not shift resources if the Rollup Processing Toggle is Off.

16.15 Importing WBS Schedule Data

16.15.2 Import WBS Schedule File Format

Import WBS Schedule File Format

Field Position	No. of Chars	Type	Field Content
♦ 1	40	A	WBS ID; must exist in the project.
2	9	A	Baseline Start Valid date formats: See topic *16.14 Importing WBS Descriptive* Data for details.
3	9	A	Baseline Complete
4	9	A	ETC Start
5	9	A	ETC Complete
6	9	A	Early Start
7	9	A	Early Finish
8	9	A	Late Start
9	9	A	Late Finish
10	6	N	Total Float

Example WBS Schedule Import

In this example, WBS 21.1 is updated, assuming it already exists in the WBS. The Baseline Start Date is 15-Apr-98; Baseline Complete is 30-Jun-98; ETC Start is 15-May-98; ETC Complete is 30-Jun-98; Early Start is 01-Jan-98; Early Complete is 01-Jun-98; Late Start is 01-May-98; Late Finish is 01-Jul-98; Float is 30 days.

21.1,19980415,19980630,19980515,19980630,19980101,19980601,19980501,19980701,30

If we did not select the Update Baseline or Update ETC options:

- ◾ W
  BS Early Start is set to 01-Jan-98; WBS Early Complete is 01-Jun-98;

- ◾ W
  BS Late Start is 01-May-98; WBS Late Finish is 01-Jul-98;

- ◾ B
  aseline and ETC start and complete are unchanged

If we selected to Update Baseline with import dates:

- W

    BS Early Start is set to 01-Jan-98; WBS Early Complete is 01-Jun-98;

- W

    BS Late Start is 01-May-98; WBS Late Finish is 01-Jul-98;

- B

    aseline Start is 15-Apr-98; Baseline Complete is 30-Jun-98;

- E

    TC Start and Complete are unchanged

If we selected to Update Baseline with early dates:

- W

    BS Early Start is set to 01-Jan-98; WBS Early Complete is 01-Jun-98;

- W

    BS Late Start is 01-May-98; WBS Late Finish is 01-Jul-98;

- B

    aseline Start is 01-Jan-98; Baseline Complete is 01-Jun-98;

- E

    TC Start and Complete are unchanged

If we selected to Update Baseline with late dates:

- W

    BS Early Start is set to 01-Jan-98; WBS Early Complete is 01-Jun-98;

- W

    BS Late Start is 01-May-98; WBS Late Finish is 01-Jul-98;

- B

    aseline Start is 01-May-98; Baseline Complete is 01-Jul-98;

- E

    TC Start and Complete are unchanged

If we selected to Update ETC with import dates:

- W

    BS Early Start is set to 01-Jan-98; WBS Early Complete is 01-Jun-98;

- W
  BS Late Start is 01-May-98; WBS Late Finish is 01-Jul-98;

- B
  aseline Start and Complete are unchanged;

- E
  TC Start is 15-May-98; ETC Complete is 30-Jun-98

16.16 Automating Data Imports

In addition to using the MPM interface for importing data it is also possible to automate the import process outside of MPM using customer developed code and the MPM Importer dynamic link library (dll), MPMImporter.dll.

The MPMImporter dll provides a programming interface between customer or 3rd party software and the various MPM import modules. Any language capable of accessing Microsoft Active X objects can be used. Visual Basic, Visual C, C++ and other object oriented languages are excellent candidates.

Potential uses and advantages of the MPMImporter dll include:

- Automation of repetitive data imports from external systems without the need to invoke the full MPM product.
- Ability to create (program) a true database to database import solution using the logic and user interface the customer desires.
- Full MPM data validation including processing report
- Support for following imports:
    - o   Actuals
    - o   Basis of Estimates
    - o   BCWP
    - o   Distributed Projects
    - o   Estimates
    - o   Global Files
    - o   Milestones
    - o   OBS
    - o   Task Descriptions
    - o   WBS Descriptive Data
    - o   WBS Schedule Data

Requirements

Use of the MPM Importer is considered an advanced operation and should only be attempted by someone with a sound background in programming Microsoft COM objects.

The MPMImporter DLL is preinstalled with the MPM executable files. In order to interact correctly with the MPM import modules it must remain in this directory.

Any programming language which can call and set Microsoft COM object properties and methods may be used to develop the customer's interface. Visual Basic, Visual C, C++ are typical languages.

Please note that MPMImporter only provides a direct link to the various MPM import dlls. Your application, in addition to calling this dll must provide the following:

- Any User Interface to select specific imports and / or allow user choice of input files etc.

- Validation of all parameters passed to the dll since the application is bypassing the MPM program which would normally qualify these values.

- Any validation or error feedback. The individual import dlls will provide a results report to the file location specified in the .ReportFileName property as described in section 16.3.

Sample Code Example

To use the MPMImporter, client software will instantiate an instance of the MPMImporter class, assign values to the instantiated object's properties and execute its single method, Process.

Note: Failure of records to be successfully imported is handled by the appropriate import module and reported in the Report File.

The following sample code written in Microsoft Visual Basic executes a WBS Schedule import:

```
Dim MPMObject as Object
Set MPMObject =CreateObject("MPMImporter.cImporter")
With MpmObject
     .UserName = "Bob"
     .ProjectorGlobal = "SVIIBL3"
     .Datapath = "C:\DELTEKMPM"
     .ImportFileName = "A:\Oct Schedule.csv"
     .ReportFileName = "C:\DELTEKMPM\Results\Results.csv"
     .ImportCategory = 2
     'WBS Schedule
     .Options = "25-Sep-97,E,N,L,N,N"
End With
MpmObject.Process
```

The code above creates an instance of the MPMImporter class, sets its properties according to the specific import desired and executes the import by calling the Process method.

Typically the user will imbed the above code in an application which might provide for a user interface to select import type and set options, as well as display import results. Alternately the same code might be used within a fully automated application which creates the import data from an external source, schedules the import, and sends the import result to an administrator.

Common Properties

The following properties are common to all import categories:

PROPERTY	DATA TYPE	DESCRIPTION	EXAMPLE
ProjectorGlobal	String	MPM Project or Global Name	SVIIBL3, DEFAULT
UserName	String	Valid 8 character MPM user name as stored in MPMUsers.Dat	Sysadmin, Bob, Frank
DataPath	String	Data path to MPM executable files	C:\DeltekMPM
ReportFileName	String	Name and path of file to store import module result information. Note: File extension must be .csv	C:\DeltekMPM\ Importinfo\Results.csv
ImportCategory	Integer	Specifies type of import 1 – WBS Description 2 – WBS Schedule 3 – Estimates 4 – Basis of Estimate 5 – Globals 6 – Milestones 7 – BCWP 8 – Actuals 9 –Distributed Project 10 –Task Description 11 – OBS	1,2,3,4,5,6,7,8,9 or 10
ImportFileName	String	Name and path of import file	A:\OctEst.csv

Options Property

In addition to the common properties, the options property must be set for the import
category specified. This provides the conditioning normally applied through the MPM
user interface. The property is a comma-delimited string. For those imports which do not
require this additional conditioning the value should be set to blank ("").

Import Category	Condition	Value(s)	Example
WBS Schedule	Time Now	User defined point in time where updating dates and shifting reports begin	21-SEP-06
	Base Date	Possible values: (I)mport. This option is selected when using Data Import function to import a file. (E)arly. This option sets baseline start dates equal to early start date contained in the import file. (L)ate. This option sets baseline start dates equal to late start dates contained in the import file.	I or E or L
	Base Shift	(Y)es or (N)o	Y or N
	ETC Date	Possible values: (I)mport. This option is selected when using Data Import function to import a file. (E)arly. This option sets ETC start dates equal to early start date contained in the import file. (L)ate. This option sets ETC start dates equal to late start dates contained in the import file.	I or E or L
	ETC Shift	(Y)es or (N)o	Y or N
	Sched Shift	(Y)es or (N)o	Y or N
	Force Shift	(Y)es or (N)o	Y or N

Import Category	Condition	Value(s)	Example
	EOCs	26-byte string, first 13 represent EOCs in order listed on import screen. Second 13 are value to be 'held'. If blank then no value type to be held. Possible values are: (H)ours (C) total cost (E)qp (D) total $ (P)rime (T)otal Price (O)riginal Estimate (B)urden	0123456789LMOHP POOOO OOOOO
Estimates	Autospread	(Y)es or (N)o	Y or N
	Partial	Y = Partial N = Complete	Y or N
	From	Import From Date (if partial, otherwise blank)	21-SEP-06
	Thru	Import Through (if partial, otherwise blank)	02-DEC-06
	Update Option	A= Accumulate R = Replace	A or R
	Import Type	B – Baseline E – ETC A – Both	B or E or A
Milestones	Identify Milestones by	I = ID D = Description S = Symbol/Description/Schedule Date	I or D or S
	Update BCWP Status	(Y)es or (N)o	Y or N
	As of Date	Fiscal Status as of Date	YYYYMMDD
Actuals	Auto Burden	Y = Import with Autoburdening N = Import without Autoburdening	Y or N
	Duplicate Actuals	A = Update with new values B = Accumulate old and new values C = Ignore new values	A or B or C

Import Category	Condition	Value(s)	Example
Distributed Project	BCWS	Include BCWS data	Y or N
	BCWP	Include BCWP data	Y or N
	ACWP	Include ACWP data	Y or N
	ETC	Include ETC data	Y or N
	Schedule Dates	Include Schedule Dates	Y or N
	Milestones	Include Milestones	Y or N
OBS	Organization Type	P = Performing Department R = Responsible Department	P or R

Note that actual option settings must match those in the above table and are not necessarily the same characters used in the MPM Import conditioning screen.

Programming and Installation notes

Use of the MPMImporter DLL does not alter or bypass any of the MPM production import functionality.

User must provide own security surrounding execution of an application based upon the use of MPMImporter DLL. Although a user name is required to be passed to the object there is no corresponding requirement or check for a valid password.

The MPMImporter DLL expects to be located in the same directory as the MPM import DLLs i.e. MPM executables.

Depending on system environment settings it may be necessary to either copy MFPAD.DLL and MFREPORT.MFL to the \Windows\System32 directory or add the MPM executable directory to the system environment path.

17
Exporting Data

17.1 Introduction to Data Exports

Use Data Exports to save MPM data to an external file. Many customers export some of their cost data for use in other software systems, such as accounting or personnel systems. There are also customers who export their MPM data, make some change to it, and then import it back into MPM. To export data, you use the exports available on the Exports tab in Menu Manager.
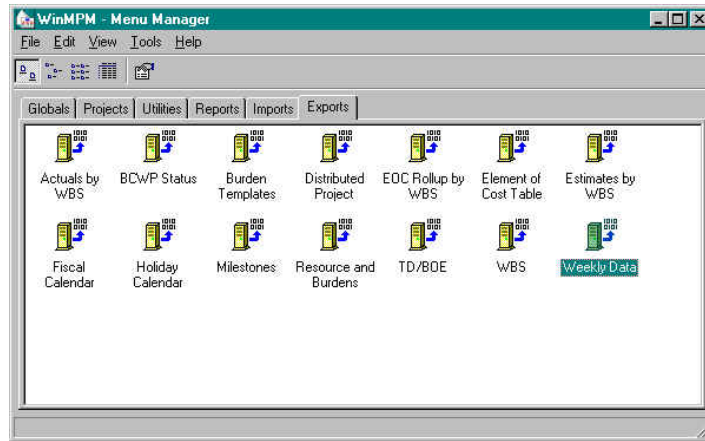
Figure A. *Exports available in MPM*

Types of Exports

MPM can create export files for the following kinds of global data:

Fiscal Calendar	Holiday Calendar
Burden Templates	Element of Cost (EOC) Table
Resources & Burdens	

MPM also can create export files for the following kinds of project data:

Actuals by WBS	Milestones
Audit Trail	Resource BOE
BCWP Status	Task Descriptions
Distributed Project	WBS
EOC Rollup by WBS	Weekly Data
Estimates by WBS	

Single and Batch Exports

You can export a single data file, or build a batch export that exports two or more data files. You can save single and batch export definitions.

General Export Procedure

To export data from MPM for an outside accounting system, spreadsheet, or other system, follow these general steps:

1. Back up your MPM data before running the export.

2. Access the correct export conditioning window as described in *topic 17.2 Accessing the Export Conditioning Windows*.

3. Fill in the export conditions for that particular export.

4. If required, specify or create a format file. See topic *17.7.1 Creating Format Files*.

5. Run the export as described in topic *17.3 Orientation to the Export Conditioning Windows*.

17.2 Accessing the Export Conditioning Windows

You open the Export Conditioning windows by clicking the Exports tab on the MPM Menu Manager. When you access the Exports tab, all exports to which you have been granted access are displayed. Double-click the export icon to open the desired Export Conditioning window. In Figure A, the Actuals export window has been opened.
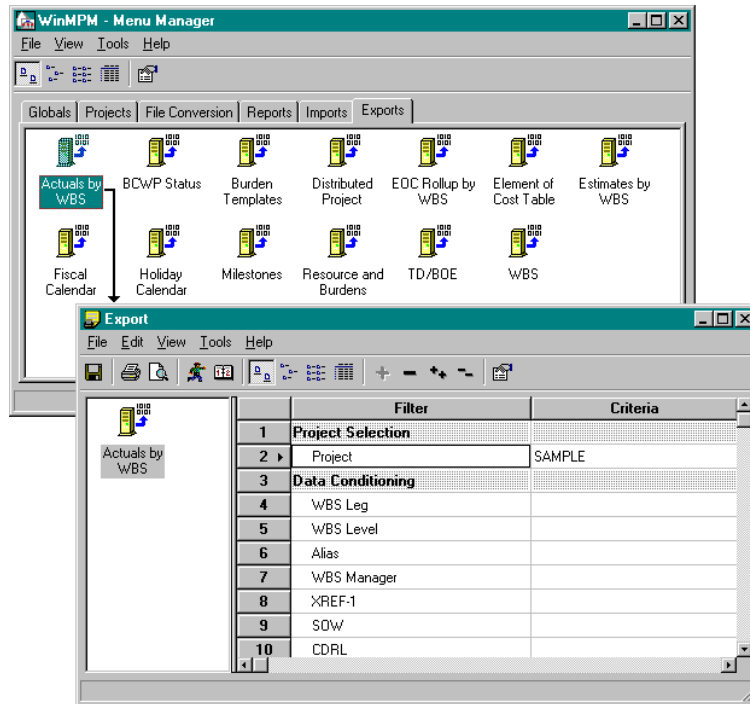
Figure A. *Select the icon on the Exports tab of the MPM Menu Manager.*

Procedure

To open the desired Export window, do one of the following from the Menu Manager window:

Select the Exports tab and choose the icon for the desired type of export.
Choose Exports|[Type of export] from the File menu.

Conditioning Options

Each export has a window which contains the conditioning options that determine the information included in the export. The options vary with the type of export.

17.3 Orientation to the Export Conditioning Windows

You use the Export Conditioning windows to setup the data to be exported from MPM. A toolbar is available to give you quick access to common tasks. The Export Conditions grid displays the information about the export.
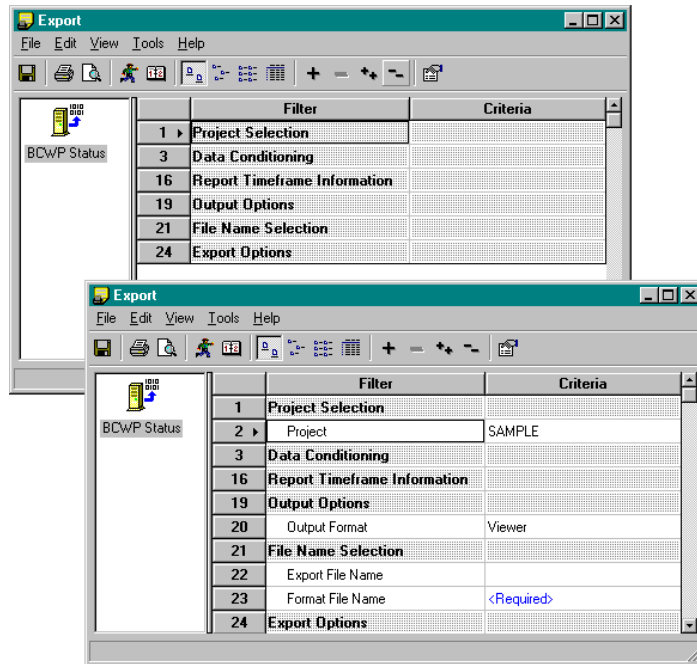
Figure A. *Each conditioning category (for example, File Name Selection) can be expanded to display conditioning options.*

Export Conditions Grid

In every Export Conditioning window, the left pane of the window displays the icon for the selected type of export or exports. In Figure A, the icon is for BCWP Status. The right pane displays the conditioning information for the export. The conditioning information is different for each type of export.

The right pane is divided into two columns: Filter and Criteria. The Filter column shows the export condition categories and options to be specified. Categories are displayed on a gray background, options on a white background. Each category can be expanded to display conditioning options. You expand and collapse the categories using the corresponding buttons **+ − +. −.** in the toolbar. For example, in Figure A, the File Name Selection

category has been expanded to display the Export File Name and Format File Name conditioning options.

The Criteria column contains list boxes, checkmark boxes, or text entry boxes in which you enter the criteria for each conditioning option. For example, in Figure A, Viewer has been selected for Output Format.

In every export conditioning window, you must specify the name of the project and the name and location of the export file. You enter this criteria in the white boxes under the gray categories Project Selection and Filename Selection. Some export conditioning windows only contain these two conditions. Other export conditioning windows, such as BCWP shown in Figure A, contain additional conditions which are specific to that type of export and may or may not be required. These conditions are shown under an additional category named Export Options.

Running an Export

After specifying the export conditions, you can the export by doing one of the following:

- Click the Run ![Run button] button.
- Choose Run Export on the Tools menu.
- Press Ctrl+R.

Previewing and Printing Export Conditioning

You can preview and print the export conditioning data using the options on the File menu or by clicking the Print button ![Print button] and Preview button ![Preview button] on the toolbar. For complete details on using these options, see *Using MPM* in the *Getting Started* manual. Print and Preview only show the export conditioning criteria displayed on the grid. They do not display the output generated by the export.

Saving the Export Conditioning

To save the Export Conditioning data, do one of the following:

Click the Save button ![Save button].

Choose **Save** from the **File** menu, or press **Ctrl+S.**

MPM prompts for the location and file name to be saved. See topic *17.8 Batch Export Processing* for details on using saved conditioning.

17.4 Global Export Conditioning Options

The conditioning options are different for each type of export. However, there are several options that are used by the majority of global or project exports. This topic describes the global conditioning options. The next topic describes the project conditioning options.

Global Exports

Conditioning options are shared by all global exports:

Burden Templates	Holiday Calendar
Element of Cost (EOC) Table	Resources & Burdens
Fiscal Calendar	

Common Global Export Categories and Options

The global exports share one or more of the conditioning categories and options listed in the table below.

Category	Conditioning Option	Criteria Column
Global Selection	Global	A drop-down list of all available global sets.
Report Timeframe Information	Report Period From	Fields accept dates in the usual formats, or you can use formulated dates. For information on formulated dates, see topic *17.7 Using Format Files*.
	Report Period Through	
Output Options	Output Format	A drop-down list of available formats.
File Name Selection	Export File Name	When you click the criteria box for this option, the Browse button **...** is displayed at the end of the box. Click the button to display the standard Windows browse dialog box where you can enter a file name and select a folder. This field is active if you select an output format other than Viewer.
	Append to Existing File	When checked, the export data will be added to an existing file rather than overwriting the data in the file.

Unique conditioning options for each export are described later in this chapter.

17.5 Project Export Conditioning Options

The conditioning options are different for each type of export. However, there are several options that are used by the majority of global or project exports. This topic describes the project conditioning options. The previous topic describes the global conditioning options.

Project Exports
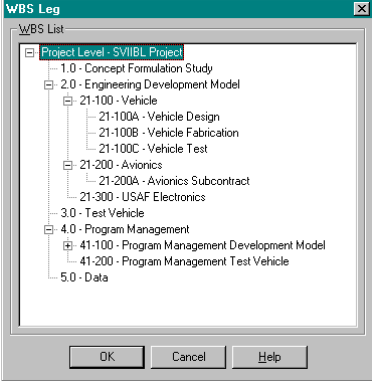
Conditioning options are shared by all project exports:

Actuals by WBS	Milestones
Audit Trail	Resource BOE
BCWP Status	Task Descriptions
Distributed Project	WBS
EOC Rollup by WBS	Weekly Data
Estimates by WBS	

Common Project Export Categories and Options

The project exports share one or more of the conditioning categories and options listed in the table below. Required options are marked with an asterisk in the table.

Category	Conditioning Option	Criteria Column
Project Selection	Project*	A drop-down list of all available projects to which you have access.

Category	Conditioning Option	Criteria Column
Data Conditioning	WBS Leg	To export a particular WBS Leg, enter the WBS ID, or click the **...** button which is added to the WBS Leg criteria box when clicked. MPM displays the WBS Leg dialog box shown below. Highlight the desired leg, expanding levels if necessary. The WBS ID selected is inserted in the Criteria box.
	WBS Level	Enter a value from 1 through 99 to export WBS elements at the level entered. If a WBS leg is entered, the WBS level will validate the lowest level of that leg.
	Alias	A drop-down list of all available aliases assigned to WBS elements.
	WBS Manager	A drop-down list used to export WBS elements assigned to a specific Manager.
	Xref-1 through Xref-10	Drop-down lists of all available values assigned to WBS elements in these fields. The names of the fields can be changed by the user in Project Maintenance.

Category	Conditioning Option	Criteria Column
Data Conditioning (continued)	Recur	A drop-down list used to select Recurring or Non-recurring WBS elements.
	Element Type	A drop-down list used to select a WBS element type.
	OBS	A drop-down list used to select the WBS elements assigned to either the Performing or Responsible OBS departments.
	Department ID	A drop-down list used to select data assigned to a particular OBS department.
	CLIN	A drop-down list used to select data assigned to a particular Contract Line Item (CLIN).
Report Timeframe Information	Report Period From	Fields accept dates in the usual formats, or you can use formulated dates. For information on formulated dates, see topic *17.7 Using Format Files*.
	Report Period Through	
Output Options	Output Format	A drop-down list of available formats.
File Name Selection	Export File Name	When you click the criteria box for this option, the Browse button ... is displayed at the end of the box. Click the button to display the standard Windows browse dialog box where you can enter a file name and select a folder. This field is active if you select an output format other than Viewer.
	Format File Name	The format file determines the fields exported and their order. You can select a predefined format file, or create a custom file. For more information, see topic *17.7 Using Format Files*.

Category	Conditioning Option	Criteria Column
Export Options	Include Header	When checked, includes the column and report headings in the export data.
	Include Project Name	When checked, includes the project name in the first column of the export file data.
	Report Title	Use to enter a report title up to 28 characters.
	Column Separation Character	If you have selected User-defined Separators in the Output Format field, you can enter a character that you want MPM to use to separate columns of data. If you have not selected User-defined Separators, the character is automatically set by MPM. For more information, see topic *17.6 Creating Export Files*.
	Text Delimiter	If you have selected User-defined Separators in the Output Format field, you can enter a character that you want MPM to insert before and after each text field in the export file. For more information, see topic *17.6 Creating Export Files*.
	Date Format	A drop-down list displaying the available date formats: YYYYMMDD, MM/DD/YY, and DD-MMM-YY.

Unique conditioning options for each export are described later in this chapter.

17.6 Creating Export Files

When exporting data from MPM, you need to specify:

Output format
Output delimiters
Output filename and location
Format file

Output Formats

Export files can be created in several popular formats:

Excel version 5 or 7 format (.XLS)
ASCII text with fields separated by commas (.CSV)
ASCII text with fields separated by tabs (.TXT)
HTML text for use on a web page (.HTM)
User-defined Separated Value (*.EXP)
You can also send the data from an export to the printer or the Report Viewer, where you can manipulate, reorganize, or reformat the data. See *Chapter 15: Reports* for more information on how to use the Report Viewer.

Column Separation Character Delimiter

The column separation character is inserted between each field in the export file. For example, data exported in CSV (Comma Separated Values) format might look like this:

21-110,102,3,START,0,19980101,N,65,25

If you choose the CSV format, the column separator is a comma. If you choose HTM, XLS or ASCII formats, the column separator is a tab. When using these formats, you cannot change the column separator or the text delimiter.

If you choose the User-defined separators (EXP) format, you can specify the column separator character to be used. You can choose any ASCII character to be the column separator except space. For example, if you enter * as the separator, the data would look like this:

21-110*102*3*START*0*19980101*N*65*25

Text Delimiter

The text delimiter character is inserted before and after each text field in the export file. For example, if you export with the text delimiter set to quotation marks, the record would look like this:

"21-110",102,3, "START,FINISH",0,19980101,N,65,25

The text delimiter is inserted by MPM in case there are delimiting characters used inside the text field (such as the comma inside "START,FINISH"). For example, if you enter * as the text delimiter (and comma as the column separator), you would see the following:

21-110,102,3,*START,FINISH*,0,19980101,N,65,25

You can choose most any ASCII character to be the text delimiter except space. You can only set the Text Delimiter if you choose the EXP format.

Output File

Once you have specified all the required options, enter the file name for the export file being created, and if necessary specify the location using the Browse **...** button. Then run the export. If you selected either the output format Printer or Report Viewer, , MPM sends the exported data directly to the printer or into the Report Viewer instead of creating an export file. In the Viewer, you can reorganize, reformat, analyze, or subtotal the data as desired.

Format File

Most of the exports require that you specify or create a format file. A format file is a map of the output data. For details, see topic *17.7 Using Format Files*.

Working with .XLS Files

Exporting data to .XLS files works well, allowing you to edit the files in Excel. However, after making edits in Excel, you must save the file in .CSV format if you wish to import the data back into MPM. You cannot import a .XLS file directly into MPM.

17.7 Using Format Files

The format file contains the order and selection of the fields you want to export. You must enter or specify a format file to use with your export. This is an important step if your export data needs to match outside data in a prescribed format. For example, you would use a format file if you plan to import the data into an external system or back into MPM.

Using Standard Format Files

MPM comes with a set of standard format files that describe the order and fields for the most frequently used exports. If you plan to export this data, make changes, and then import that data back into MPM, you must use the standard format file for the data.

Format file names have the extension .FMT. The standard format files are described below:

- ACTUAL.FMT is used for actuals data
- BCWP.FMT is used for BCWP data
- BE-MIL.FMT is used for milestone data being exporting to Deltek
- ESTIMATE.FMT is used for estimates data
- MILESTON.FMT is used for milestones data
- SCHEDULE.FMT is used for schedule data
- WBS.FMT is used for WBS data
- WEEKWBS.FMT is used for weekly WBS data
- WEEKEOC.FMT is used for weekly EOC data

Selecting a Format File

To select a format file:

1. Click the Format File Name criteria box on the Export Conditioning window.

The Criteria box will add two buttons, the Browse button and the Field Mapping button as shown in Figure A.
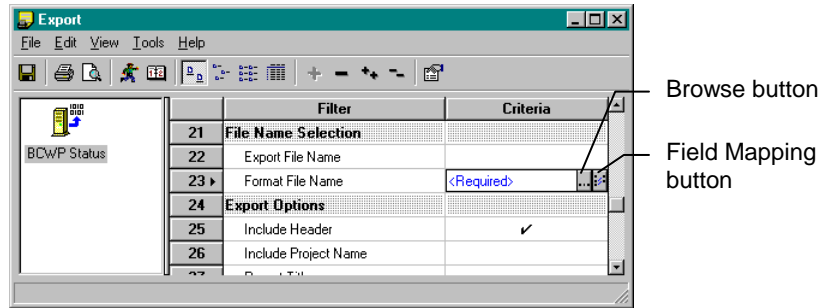

Figure A. *When you click the Format File Name criteria box, MPM adds the Browse and Field Mapping buttons.*

2. Click the Field Mapping button.

MPM displays the Format File Name dialog box where you can select a format file.

17.7 Using Format Files

17.7.1 Creating Format Files

To create or modify a format file, click the Field Mapping [icon] button. MPM displays the
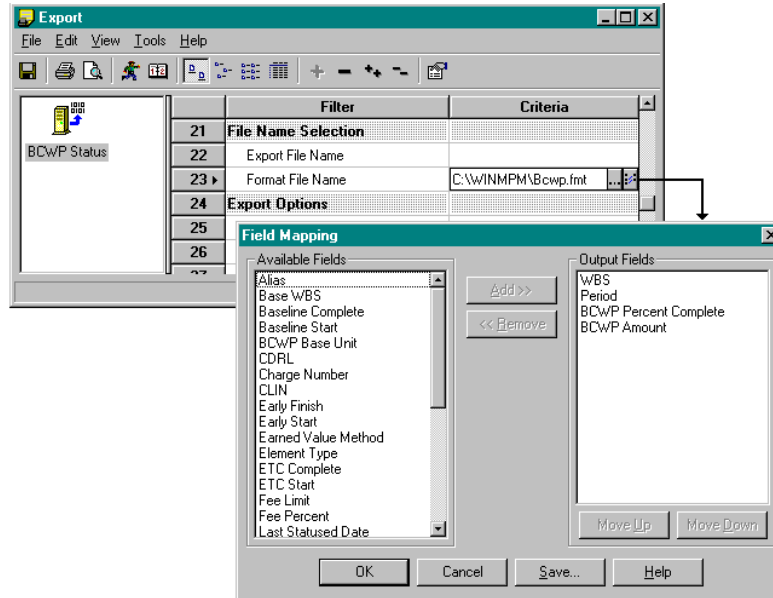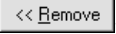Field Mapping dialog box. See Figure A.

Figure A. *Use the Field Mapping dialog box to create custom format
files.*

The format file is defined by the fields in the right list box labeled Output Fields. When you
first access this dialog, the format file is empty, waiting for you to tell MPM which fields
you want to export. The fields shown in the left list box labeled Available Fields are all the
fields from the data you want to export.

To add a field to the export, click the desired field and click the [Add >>] button, or double-
click the field, scrolling the left list box if necessary. MPM moves the field to the right list
and deletes it from the left. Add additional fields as desired in the order desired.

To take a field out of the export, click the field in the right box and click [<< Remove].

To change the order of the fields in the format file, click once on the field in the right list
and click Move Up or Move Down as many times as desired, until the field is in the desired
position.

Saving the Format File

If desired, you can save the format file for later or repeated use by clicking the Save button. MPM displays the Save Formatting dialog box shown in Figure B. Saving the file is not necessary to run the import; it is only necessary if you plan to reuse the format file at a later date.
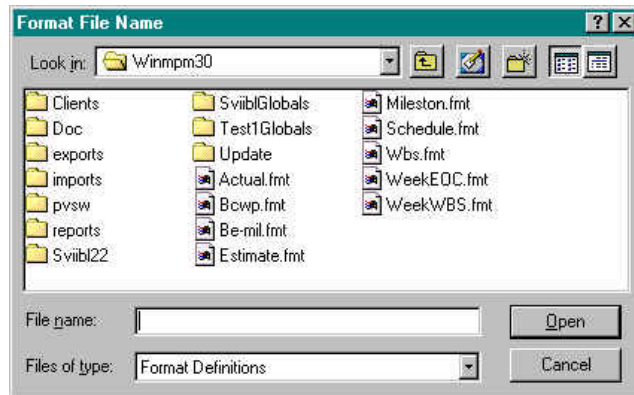
Figure B. *Saving the Format File Definition.*

Enter the desired the file name and click Save. You don't need to add the .FMT extension to the name; MPM adds the extension automatically. Then click OK on the Field Mapping dialog box.

The Export Conditioning window now contains the name of the saved format file you created. See Figure C.

MPM fills in the name of the Format File

Figure C. *The newly saved Format File name is filled in the Criteria.*

If you had chose not to save the format file, MPM fills in <Unnamed> as its name.

17.8 Batch Export Processing

Many MPM users perform the same set of exports every month as part of their monthly status processing. To set up a batch export process which performs several exports, you create a Batch Export file.
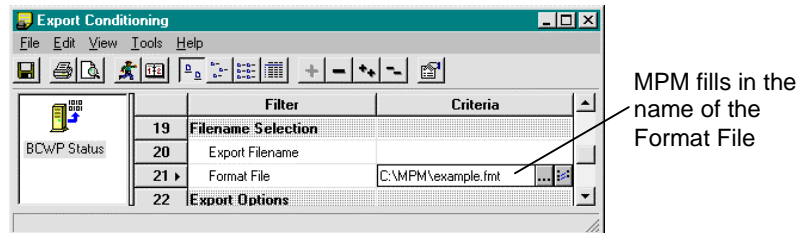
Creating a Batch Export File

There are two ways to create a Batch Export file:

On the Menu Manager with the Exports tab selected, double-click the icon for the first export to be performed. Inside the Export Conditioning window, click in the left window pane and choose **Add Export** on the **Edit** menu. **MPM** displays a list of all available exports. Double-click the next export to be added.
On the Menu Manager with the Exports tab selected, use the **Shift** and **Ctrl** keys to select more than one type of export. Double-click on the last icon selected.
Figure A shows a Batch Export file with two exports: Estimates by WBS and Actuals by WBS.

The icons in the left window pane show you the export(s) you have added to this Batch Export file. When you click on an icon in the left pane, the right pane shows the export conditioning for that export. In Figure A, Estimates by WBS is selected and the corresponding export conditioning fields are displayed. If you clicked the Actuals by WBS icon, the Actuals by WBS Export Conditioning fields would be displayed in the right pane.
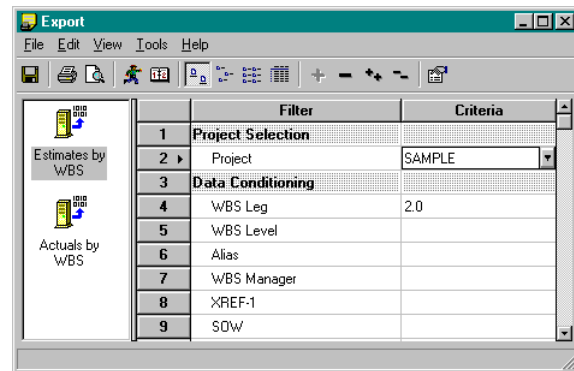

Figure A. *Creating a Batch Export File to process WBS Descriptive and Schedule Data.*

Enter the desired export conditions. To accept the selections and run the export, do one of the following:

Click the Run button ![run icon].
Choose **Run Export** on the **Tools** menu.
Press **Ctrl+R.**

To save the Export Conditioning data, do one of the following:

Click the Save button ![save icon].
Choose **Save** from the **File** menu.
Press **Ctrl+S.**
MPM prompts for the location and file name to be saved. The default location will be a directory called EXPORTS located under the DELTEKMPM directory. Saved exports are given the name *export*.MFE. Once you have saved an export, MPM adds a Saved Exports tab to the Menu Manager, where all saved exports can be accessed later.

Accessing Saved Conditioning

When you save your Batch Export file conditioning, MPM adds a tab to the Menu Manager next to Exports called Saved Exports the displays an icon for every saved Batch Export file you have created. In Figure B below, you can see several saved Batch Exports. To access any of the saved Batch Export files, click the appropriate icon.
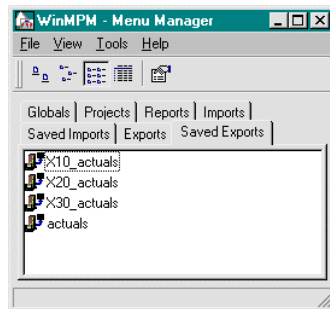
Figure B. *Viewing Batch Export Files on the Menu Manager.*

MPM displays the Export Conditioning window. Change any conditioning as desired, and run the export when ready.

Deleting Batch Exports

To delete a Batch Export from the Saved Exports tab, do one of the following:

- Right click on the export then select Delete Item.

- Select the export then choose Edit|Delete Item.

- Delete the corresponding .*MFE* file from the Exports folder in the DELTEKMPM directory.

  In Menu Manager, open the View menu and choose Refresh.

  MPM removes the batch export icon from the Saved Exports tab. If the batch export is the last icon on the tab, MPM also removes the Saved Exports tab.

17.9 Using Formulated Dates

In all export conditioning options that require a date, you can enter a date formula instead of entering an actual date. A date formula is a calculation based on the current date. If you have a standard set of exports that are run every month, using this feature will save you time because you can reuse the export conditioning without modifying the dates for the current period.

The current accounting period is substituted in any export conditioning criteria when you enter **=<CURRENT>**, based on your system date or the date you enter in Set Current Date on the Tools menu. To substitute other dates, modify the date formula by adding or subtracting d)ays, w)eeks, p)eriod, or y)ears.

When filling conditioning options that require a date (for example, 17-JUL-97), you can use d)ays or y)ears in your formula. For example, if today is July 17th, 1997:

> **=<CURRENT> + 3y**   would be calculated as July 18th, 2000
> **=<CURRENT> + 60d**   would be calculated as Sept 15th, 1997

When filling conditioning options that require a period (for example, JUL-97), you can use m)onths or p)eriods in your formula. For example, if the current period is JUL-97:

> **=<CURRENT> + 3p**   would be calculated as OCT-97
> **=<CURRENT> - 2m**   would be calculated as MAY-97

Once you enter a formulated date and move to another field on the Export Conditioning window, the date is calculated and displayed in brackets based on the current date as shown in Figure A.

Using formulated dates is extremely valuable when you save export conditioning for later batch processing, especially when a Batch Export file contains multiple reports. Each time you run the same report(s), the dates will be recalculated based on the current date without you having to re-enter the new dates.

Always be sure that the Current Date is set correctly before running the report. The current data is taken from the system date or the date you specify using Set Current Date under the Tools menu.
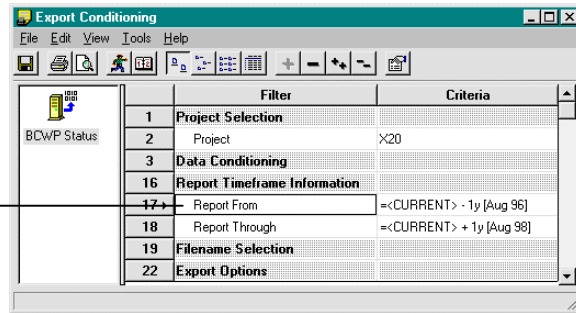
Entering a Formula for the Export Timeframe

Figure A. Setting the Report From and Through Dates using a formulated date based on the current period.

17.10 Conditioning Options for Specific Exports

The remaining topics in this chapter describe the conditioning options specific to each type of export, and the fields available for each export. The conditioning options common to many of the exports are described in two topics presented earlier in this chapter:

17.4 Global Export Conditioning Options

17.5 Project Export Conditioning Options

The exports described on the following pages are:

17.10.1 Actuals by WBS Exports

17.10.1 Actuals by WBS Exports

17.10.3 BCWP Status Exports

17.10.4 Burden Templates Exports

17.10.5 Distributed Projects Exports

17.10.6 EOC Rollups Exports

17.10.7 EOC Tables Exports

17.10.8 Estimates by WBS Exports

17.10.9 Fiscal Calendars Exports

17.10.10 Holiday Calendars Exports

17.10.11 Milestones Exports

17.10.12 Resources & Burdens Exports

17.10.13 Task Descriptions and Basis of Estimates Exports

17.10.14 WBS Data Exports

17.10.15 Weekly Data Exports

17.10 Conditioning Options for Specific Exports

17.10.1 Actuals by WBS Exports

You use the Actuals by WBS window to export actuals data. Access the Actual by WBS Export Conditioning window by selecting Actuals by WBS on the Exports tab. MPM displays the Actual by WBS Export Conditioning window shown in Figure A.
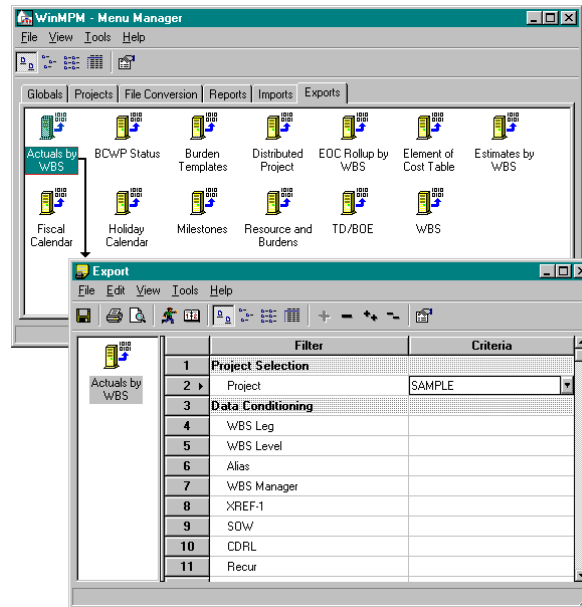

Figure A. *To export actuals, select Actuals by WBS on the Exports tab.*

Conditioning Options

When exporting actuals, all data conditioning options described in topic *17.4 Global Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

Resource Code, Resource Department, XREF-EST, EOC, COC — To select data assigned to any of these fields, click in the Criteria box and select from the drop-down list containing all possible values.
Actuals By — You can choose to export actuals by resource, element of cost, or both.

Format File Options

You can use the standard ACTUAL.FMT format file or create a custom file using the fields listed below. For information on creating custom format files, see topic *17.7.1 Creating Format Files*.

Actuals Fields

Resource (includes resource and/or
EOC codes depending on the value
in the Actuals By field)
Resource Department
Overtime Factor
XREF-EST
Period
Hour/Units (ACWP)
Prime (ACWP)
Overhead (ACWP)
Burdened (ACWP)
General and Administration (ACWP)
Total Cost (ACWP)
Cost of Money (ACWP)
Total Dollars (ACWP)
Fee (ACWP)
Total Price (ACWP)

WBS Fields

WBS (ID)	Baseline Start
Parent WBS	Baseline Complete
Alias	ETC Start
WBS Description	ETC Finish
Manager	Early Start
Xref-1	Early Finish
Xref-2	Late Start
Xref-3	Late Finish
Xref-4	Revision Letter Date
Xref-5	Schedule Reference Date
Xref-6	Last Statused Date
Xref-7	Total Float
Xref-8	EV Percent Complete
Xref-9	Recur/NonRecur
Xref-10	Fee Percent
Performing Department	Fee Limit
Responsible Department	Earned Value Method
Charge Number	BCWP Base Unit
Element Type	CLIN
	Base WBS

17.10 Conditioning Options for Specific Exports

17.10.2 Audit Trail Exports

You use the Audit Trail window to export Audit Trail data. Access the Audit Trail Export Conditioning window by selecting Audit Trail on the Exports tab. MPM displays the Audit Trail Export Conditioning window shown in Figure A.
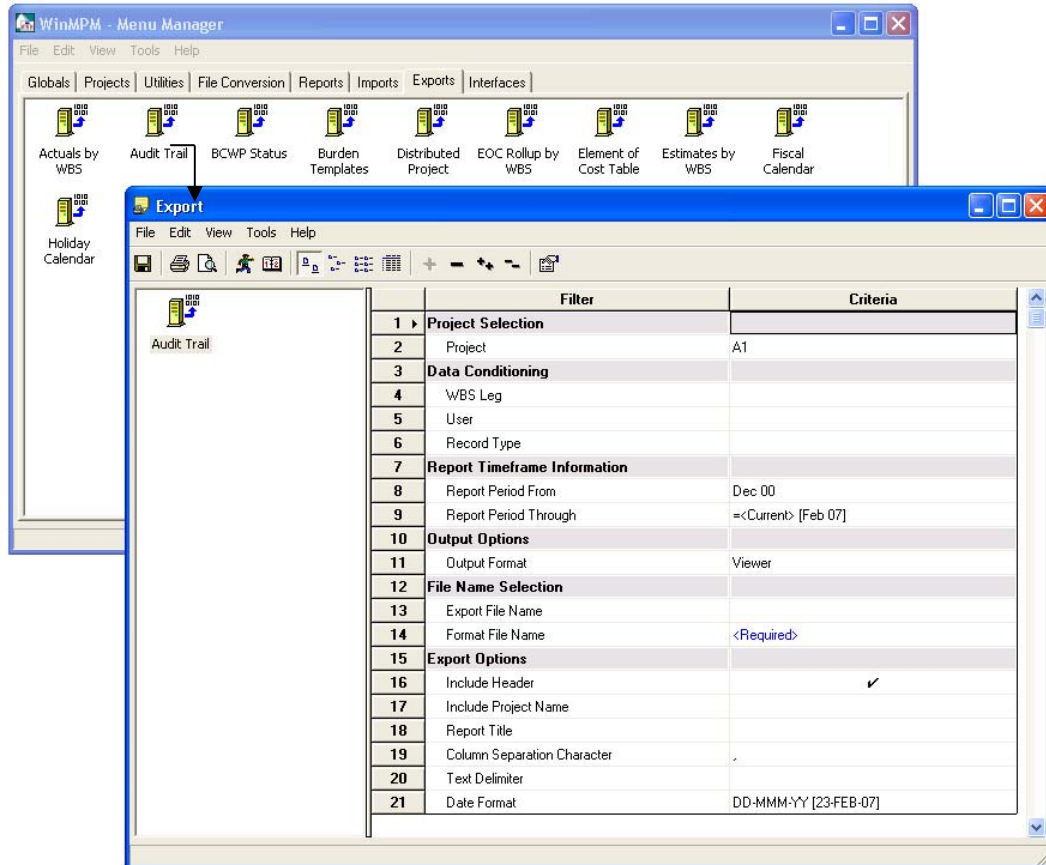

Figure A. To export audit trail information, select Audit Trail on the Exports tab.

Conditioning Options

When exporting audit trail information, all data conditioning options described in topic *17.5 Project Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

User, Record Type.

To select data assigned to any of these fields, click in the Criteria box and select from the drop-down list containing all possible values.

Format File Options

You can use the standard AUDIT.FMT format file or create a custom file using the fields listed below. For information on creating custom format files, see topic *17.7.1 Creating Format Files*.

<u>Audit Trail Fields</u>
After At Complete Dollars
After At Complete Hours
Before At Complete Dollars
Before At Complete Hours
Burden Template
Complete Date
Date
Delta Dollars
Delta Hours
Department
Description
Dollar Level
Estimate Type
Operation
Overtime
Rate Table
Record Type
Resource
Start Date
Time
User
WBS

17.10 Conditioning Options for Specific Exports

17.10.3 BCWP Status Exports

You use the BCWP Status window to export BCWP data. Access the BCWP Status Export Conditioning window by selecting BCWP Status on the Exports tab. MPM displays the BCWP Status Export Conditioning window shown in Figure A.
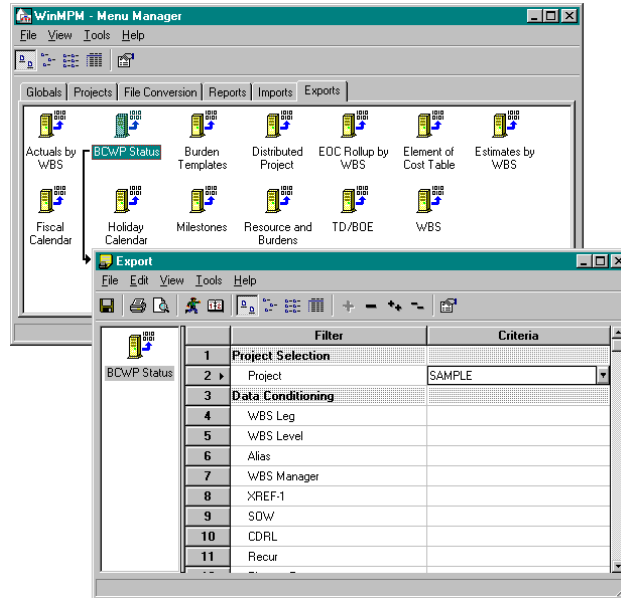

Figure A. *To export BCWP, select BCWP Status on the Exports tab.*

Conditioning Options

When exporting BCWP, all data conditioning options described in topic *17.5 Project Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

Display Percentages (optional)
Use this output option to choose whether to export percentages as decimal values (.5050) or as a percent (50.50).
Earned Value Method (optional)
To select data assigned to a particular EVM, click in the Criteria box and select from the drop-down list containing all possible EVMs.

Format File Options

You can use the standard BCWP.FMT format file or create a custom file using the fields listed below. For information on creating custom format files, see topic *17.7.1 Creating Format Files*.

BCWP Fields

Month-Year (in YYYYMM format)
Percent Complete
Total BCWP

WBS Fields

WBS (ID)	ETC Start
Parent WBS	ETC Finish
Alias	Early Start
WBS Description	Early Finish
Manager	Late Start
Xref-1	Late Finish
Xref-2	Revision Letter Date
Xref-3	Schedule Reference Date
Xref-4	Last Statused Date
Xref-5	Total Float
Xref-6	EV Percent Complete
Xref-7	Recur/NonRecur
Xref-8	Fee Percent
Xref-9	Fee Limit
Xref-10	Earned Value Method
Performing Department	BCWP Base Unit
Responsible Department	CLIN
Charge Number	Base WBS
Element Type	
Baseline Start	
Baseline Complete	

17.10 Conditioning Options for Specific Exports

17.10.4 Burden Templates Exports

You use the Burden Templates window to export burden templates data. Access the Burden Templates Export Conditioning window by selecting Burden Templates on the Exports tab. MPM displays the Burden Templates Export Conditioning window shown in Figure A.
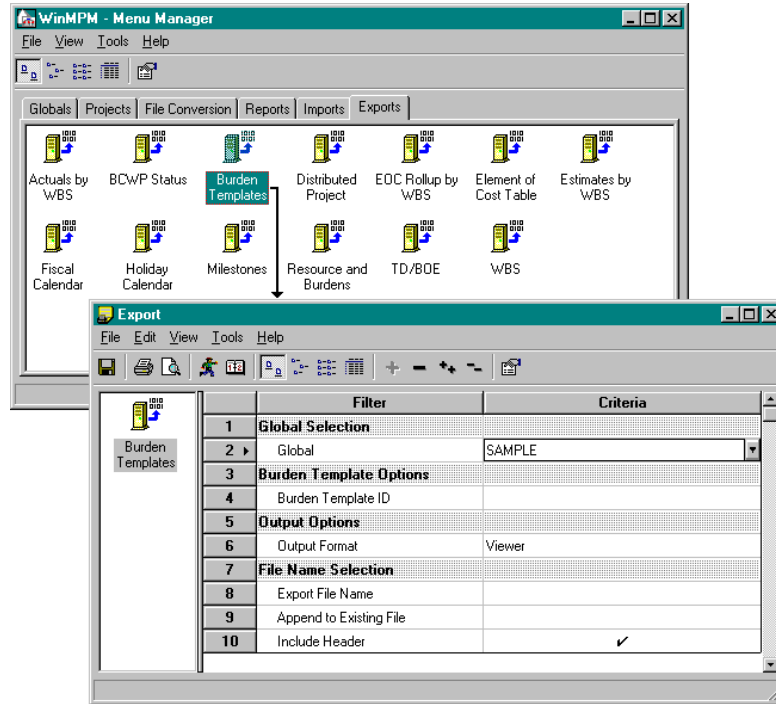

Figure A*. To export Burden Templates, select Burden Templates on the Exports tab.*

Conditioning Options

When exporting burden templates, all data conditioning options described in topic *17.4 Global Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

Burden Template ID (optional)
To select data assigned to a particular Burden Template ID, click in the Criteria box and select from the drop-down list containing all possible burden templates.

Format File Options

The fields in Global exports are fixed, and cannot be defined by the user.

17.10 Conditioning Options for Specific Exports

17.10.5 Distributed Projects Exports

You use the Distributed Projects window to export Distributed Projects data. Access the Distributed Projects Export Conditioning window by selecting Distributed Projects on the Exports tab. MPM displays the Distributed Projects Export Conditioning window shown in Figure A. For information on distributed projects, see C*hapter 19: Using Distributed Projects*.
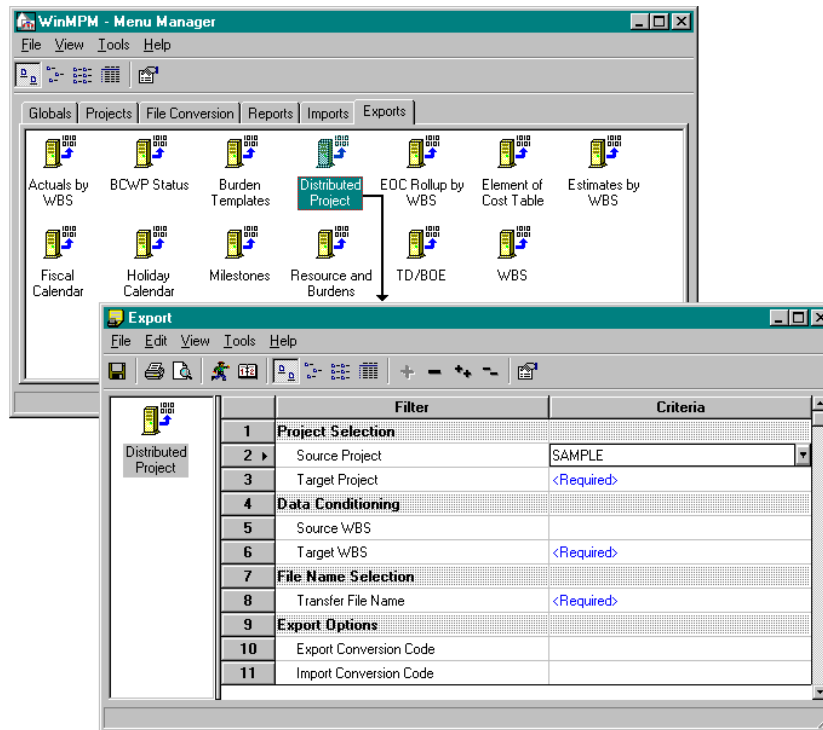

Figure A*. To export Distributed Projects, select Distributed Project on the Exports tab.*

Conditioning Options

When exporting Distributed Projects, the data conditioning options described in topic *17.4 Global Export Conditioning Options* are not available to condition the data being exported. You can only specify the following options:

- **Source Project** (required) — Use this option to select the Source, or subproject.

- **Target Project** (required) — Use this option to identify the Target, or superproject.

- **Source WBS** (optional) — Use this option to identify the WBS data to be exported from the Source.

- **Target WBS** (required) — Use this option to identify the WBS ID into which the data will be imported.

- **Transfer File Name** (required) — Enter the name of the file that will contain the exported data. All data in the transfer file will constitute one record. The transfer file name will be specified during the Distributed Data import process.

- **Export and Import Conversion Codes** — Use these options to specify currency conversion codes. Currency conversion codes are specified in Resources and Burdens under the Globals tab. For details, see topic *18.2 Consolidating Distributed Projects*. Please note that the Baseline Rate Table is used for Baseline, ETC and Actuals.

Format File Options

The fields in Distributed Projects exports are fixed, and cannot be defined by the user.

17.10 Conditioning Options for Specific Exports
17.10.6 EOC Rollups Exports

You use the EOC Rollups window to export EOC Rollup data. Access the EOC Rollups Export Conditioning window by selecting EOC Rollups on the Exports tab. MPM displays the EOC Rollups Export Conditioning window shown in Figure A.
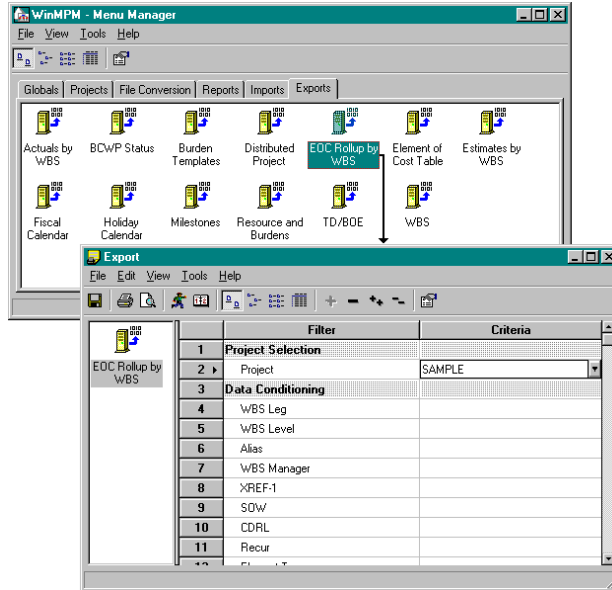

Figure A. *To export EOC Rollups, select EOC Rollups on the Exports tab.*

Conditioning Options

When exporting EOC Rollups, all data conditioning options described in topic *17.5 Project Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

Elements of Cost to Include
      Use this option to select the elements of cost you want included
      in the export. You can choose from the following:
      L – Labor, M – Material, O – Other Direct Costs, and S -
      Subcontractor
Display Percentages (optional)
Use this output option to choose whether to export percentages as decimal values (.5050) or as a percent (50.50).

Format File Options

You must create a custom format file using the fields listed below. For information on creating custom format files, see topic *17.7.1 Creating Format Files*.

EOC Rollups Fields		WBS Fields
EOC Code	ETC - Standard Hours	WBS (ID)
Month/Year (YYYYMM)	ETC - Hours/Units	Parent WBS
BCWS - Standard Hours	ETC - Prime	Alias
BCWS - Hours/Units	ETC - Overhead	WBS Description
BCWS - Prime	ETC - Total Burdened	Manager
BCWS - Overhead	ETC - Gen and Admin	Xref-1
BCWS - Total Burdened	ETC - Total Cost	Xref-2
BCWS - General and Administration	ETC - Cost of Money	Xref-3
BCWS - Total Cost	ETC - Total Dollars	Xref-4
BCWS - Cost of Money	ETC - Fee	Xref-5
BCWS - Total Dollars	ETC - Total Price	Xref-6
BCWS - Fee		Xref-7
BCWS - Total Price		Xref-8
BCWP - Standard Hours		Xref-9
BCWP - Hours/Units		Xref-10
BCWP - Prime		Performing Department
BCWP - Overhead		Responsible Department
BCWP - Total Burdened		Charge Number
BCWP - General and Administration		Element Type
BCWP - Total Cost		Baseline Start
BCWP - Cost of Money		Baseline Complete
BCWP - Total Dollars		ETC Start
ACWP - Standard Hours		ETC Finish
ACWP - Hours/Units		Early Start
ACWP - Prime		Early Finish
ACWP - Overhead		Late Start
ACWP - Total Burdened		Late Finish
ACWP - General and Administration		Revision Letter Date
ACWP - Total Cost		Schedule Reference Date
ACWP - Cost of Money		Last Statused Date
ACWP - Total Dollars		Total Float
ACWP - Fee		EV Percent Complete
ACWP - Total Price		Recur/NonRecur
		Fee Percent
		Fee Limit
		Earned Value Method
		BCWP Base Unit
		CLIN
		Base WBS

17.10 Conditioning Options for Specific Exports

17.10.7 EOC Tables Exports

You use the EOC Tables window to export EOC data. Access the EOC Tables Export Conditioning window by selecting EOC Tables on the Exports tab. MPM displays the EOC Tables Export Conditioning window shown in Figure A.
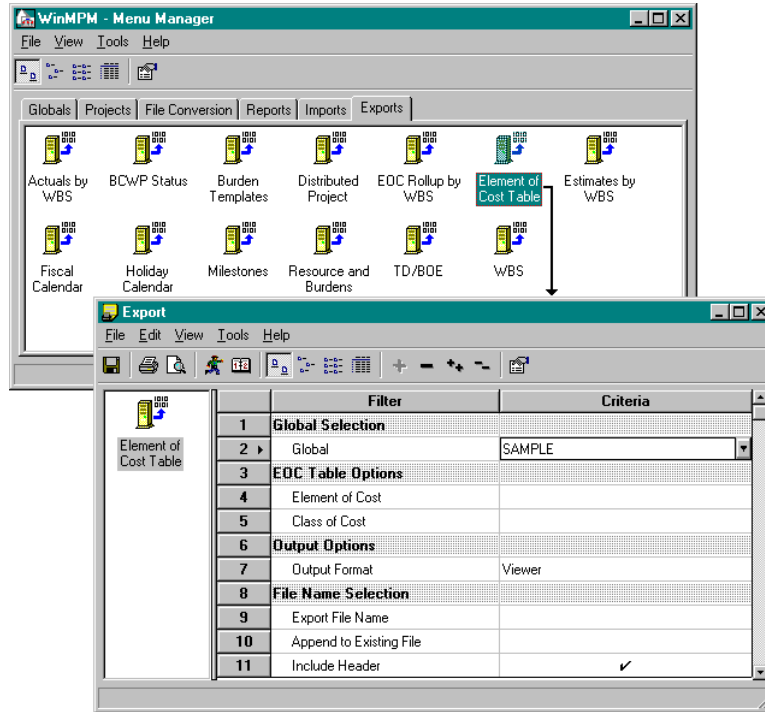

Figure A. *To export EOC Tables, select EOC Tables on the Exports tab.*

Conditioning Options

When exporting EOC Tables, all data conditioning options described in topic *17.4 Global Export Conditioning* are available to condition the data being exported. In addition, you can specify the following options:

Element of Cost (optional)
> To select data assigned to a particular EOC, click in the Criteria box and select from the drop-down list containing all possible EOCs.

Class of Cost (optional)
> To select data assigned to a particular EOC class code, click in the Criteria box and select from the drop-down list containing all possible EOC class codes.

Format File Options

The fields in EOC Tables exports are fixed, and cannot be defined by the user.

17.10 Conditioning Options for Specific Exports

17.10.8 Estimates by WBS Exports

You use the Estimates by WBS window to export Estimate data. Access the Estimates by WBS Export Conditioning window by selecting Estimates by WBS on the Exports tab. MPM displays the Estimates by WBS Export Conditioning window shown in Figure A.
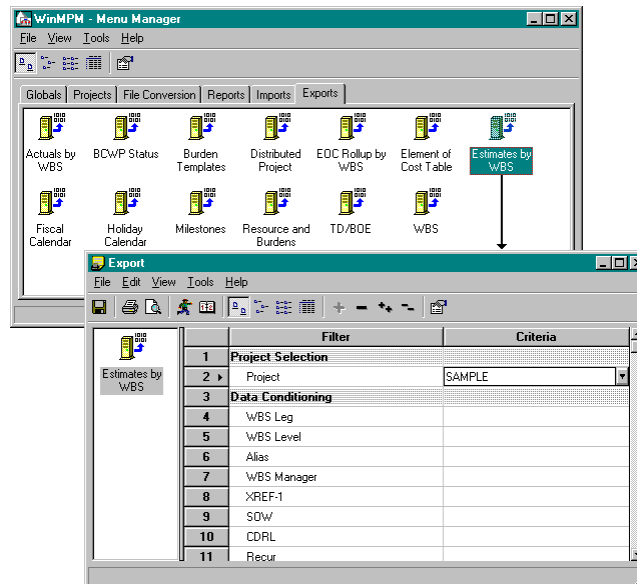

***Figure A**. To export Estimates, select Estimates by WBS on the Exports tab.*

Conditioning Options

When exporting estimates, all data conditioning options described in topic *17.5 Project Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

- **Resource Code, Resource Department, XREF-EST, EOC, COC** (optional) — To select estimate data to be exported using any of these fields, click in the Criteria box and select from the drop-down list containing all possible values.

- **Data Type** (required) — To export baseline estimates, select Baseline in this list box.
- **Display Percentages** (optional) — Use this output option to choose whether to export percentages as decimal values (.5050) or as a percent (50.50).

To export ETC estimates, select ETC in this list box.

Format File Options

You can use the standard ESTIMATES.FMT format file or create a custom file using the
fields listed below. For information on creating custom format files, see topic *17.7.1
Creating Format Files*.

Estimates Fields	WBS Fields	
Resource	WBS (ID)	ETC Start
Responsible Department	Parent WBS	ETC Finish
XREF-EST	Alias	Early Start
Overtime	WBS Description	Early Finish
Rate Table	Manager	Late Start
Burden Template	Xref-1	Late Finish
Estimate Start	Xref-2	Revision Letter Date
Estimate Complete	Xref-3	Schedule Reference Date
Estimate Type	Xref-4	Last Statused Date
Spread Curve	Xref-5	Total Float
Spread Amount	Xref-6	EV Percent Complete
Efficiency	Xref-7	Recur/NonRecur
Scrap and Rework	Xref-8	Fee Percent
Period	Xref-9	Fee Limit
Standard Hours	Xref-10	Earned Value Method
Hours/Units	Performing Department	BCWP Base Unit
EQP (Equiv. Person Hrs.)	Responsible Department	CLIN
Prime	Charge Number	Base WBS
Overhead	Element Type	
Total Burdened	Baseline Start	
Gen and Admin	Baseline Complete	
Total Cost		
Cost of Money		
Total Dollars		
Fee		
Total Price		
Estimate Type Value		

17.10 Conditioning Options for Specific Exports

17.10.9 Fiscal Calendars Exports

You use the Fiscal Calendars window to export fiscal calendars. Access the Fiscal Calendars Export Conditioning window by selecting Fiscal Calendars on the Exports tab. MPM displays the Fiscal Calendars Export Conditioning window shown in Figure A.
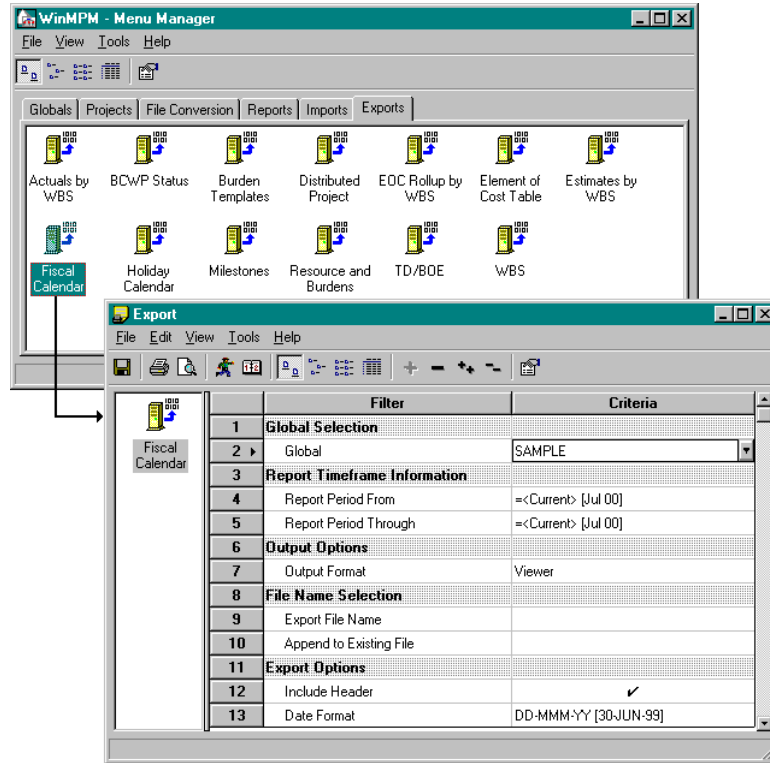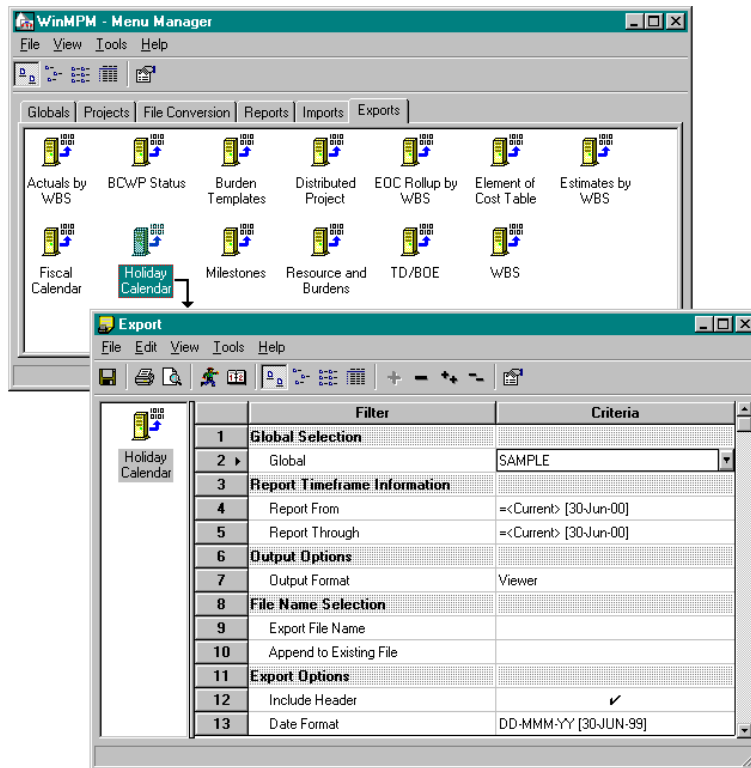

Figure A*. To export Fiscal Calendars, select Fiscal Calendars on the Exports tab.*

Conditioning Options

When exporting Fiscal Calendars, all data conditioning options described in topic *17.4 Global Export Conditioning* are available to condition the data being exported.

Format File Options

The fields in Fiscal Calendar exports are fixed and cannot be defined by the user.

17.10 Conditioning Options for Specific Exports

17.10.10 Holiday Calendars Exports

You use the Holiday Calendars window to export holiday calendars. Access the Holiday Calendars Export Conditioning window by selecting Holiday Calendars on the Exports tab. MPM displays the Holiday Calendars Export Conditioning window shown in Figure A.

Figure A. *To export Holiday Calendars, select Holiday Calendars on the Exports tab.*

Conditioning Options

When exporting Holiday Calendars, all data conditioning options described in topic *17.4 Global Export Conditioning* are available to condition the data being exported.

Format File Options

The fields in Holiday Calendar exports are fixed, and cannot be defined by the user.

17.10 Conditioning Options for Specific Exports

17.10.11 Milestones Exports

You use the Milestones window to export milestones data. Access the Milestones Export Conditioning window by selecting Milestones on the Exports tab. MPM displays the Milestones Export Conditioning window shown in Figure A.
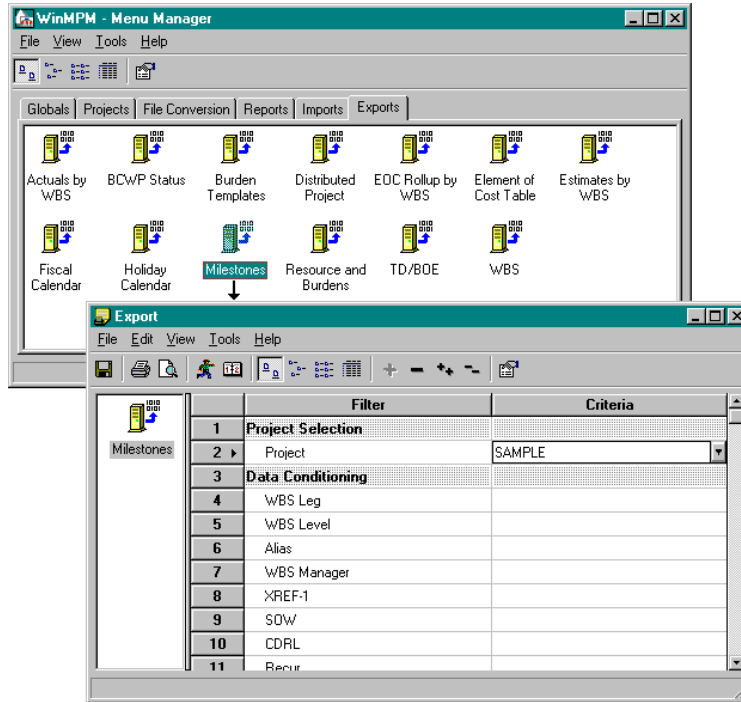
Figure A. *To export Milestones, select Milestones on the Exports tab.*

Conditioning Options

When exporting milestones, all data conditioning options described in topic *17.5 Project Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

Display Percentages (optional)
Use this output option to choose whether to export percentages as decimal values (.5050) or as a percent (50.50).

Format File Options

You can use the standard MILESTON.FMT format file or create a custom file using the
fields listed below. For information on creating custom format files, see topic *17.7.1
Creating Format Files*.

<u>**Milestone Fields**</u>	<u>**WBS Fields**</u>	
Milestone ID	WBS (ID)	ETC Start
Milestone Symbol	Parent WBS	ETC Finish
Milestone Description	Alias	Early Start
Weight	WBS Description	Early Finish
Schedule Date	Manager	Late Start
Forecast Date	Xref-1	Late Finish
Complete Y/N	Xref-2	Revision Letter Date
Milestone Weight Percent Complete	Xref-3	Schedule Reference Date
	Xref-4	Last Statused Date
	Xref-5	Total Float
	Xref-6	EV Percent Complete
	Xref-7	Recur/NonRecur
	Xref-8	Fee Percent
	Xref-9	Fee Limit
	Xref-10	Earned Value Method
	Performing Department	BCWP Base Unit
	Responsible Department	CLIN
	Charge Number	Base WBS
	Element Type	
	Baseline Start	
	Baseline Complete	

17.10 Conditioning Options for Specific Exports

17.10.12 Resources & Burdens Exports

Use the Resource and Burdens export window to export resource and burden rate information. To access the Resource and Burdens Export window, select Resources & Burdens on the Exports tab in Menu Manager. MPM displays the Resources & Burdens Export Conditioning window shown in Figure A.
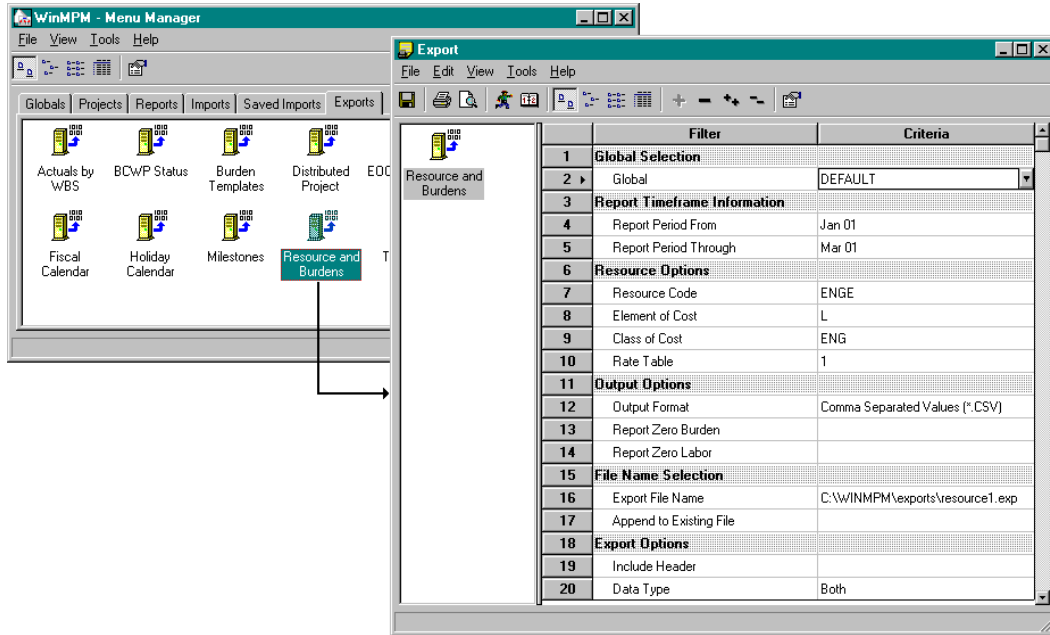

Figure A. To export Resources & Burdens, select Resources & Burdens on the Exports tab.

Conditioning Options

When exporting resources and burdens, all data conditioning options described in topic *17.4 Global Export Conditioning Options* are available. In addition, you can specify resource options and export options.

Resource Options

The Resource Options include: Resource Code, Resource Department, EOC, COC, Rate Table (optional). To assign a value to any of these options, click in the Criteria box and select from the drop-down list containing all possible values.

Export Options

There are two export options: Include Header and Data Type. *You must use these in the correct combination to create a valid export file.*

You can assign one of three values to the Data Type option: Descriptive Records Only, Rate Records Only, or Both.

If you choose Descriptive Records Only or Rate Records Only, you can include header data if you wish.
If you choose Both (descriptive and rate records), you must not include header data. If you include header data, the rate records will be formatted with an incorrect number of fields, and you will not be able to import the file back into MPM.
The table below summarized the valid export options.

	Include Header	
Data Type	**On**	**Off**
Descriptive Records Only	✔	✔
Rate Records Only	✔	✔
Both (descriptive and rate records)		✔

Table A. Valid Date Type and Include Header combinations

Format File Options

The fields in Resources and Burdens exports are fixed and cannot be defined by the user.

17.10 Conditioning Options for Specific Exports

17.10.13 Task Descriptions and Basis of Estimates Exports

You use the TD/BOE window to export WBS Task Descriptions (TDs) and Basis of Estimates (BOEs). Access the TD/BOE Export Conditioning window by selecting TD/BOE on the Exports tab. MPM displays the TD/BOE Export Conditioning window shown in Figure A.
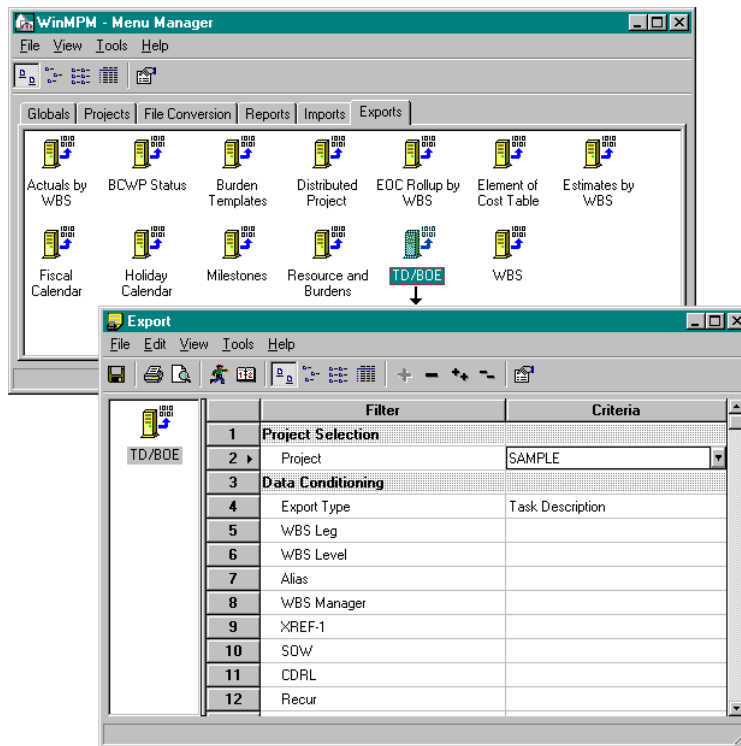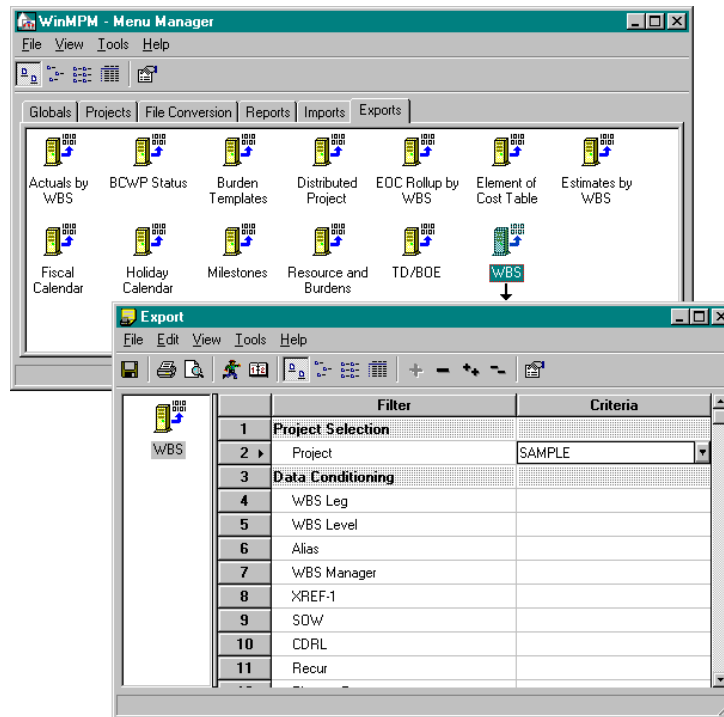

Figure A. To export Task Descriptions, select TD/BOE on the Exports tab.

Conditioning Options

When exporting Task Descriptions, all data conditioning options described in topic *17.4 Global Export Conditioning* are available to condition the data being exported. In addition, you can specify the following options:

Export Type (required)
To export Task Descriptions, select Task Descriptions in this list box.
To export Basis of Estimates, select Basis of Estimate in this list box.
Basis of Estimates By (required if exporting Basis of Estimates)
To export Resource BOEs, select Resource in this list box.
To export Summary BOEs, select Summary in this list box.
To export both types of BOEs, select Both in this list box.

Format File Options

The fields in Task Descriptions and BOE exports are fixed and cannot be defined by the user.

17.10 Conditioning Options for Specific Exports

17.10.14 WBS Data Exports

You use the WBS window to export WBS data. Access the WBS Export Conditioning window by selecting WBS on the Exports tab. MPM displays the WBS Export Conditioning window shown in Figure A.

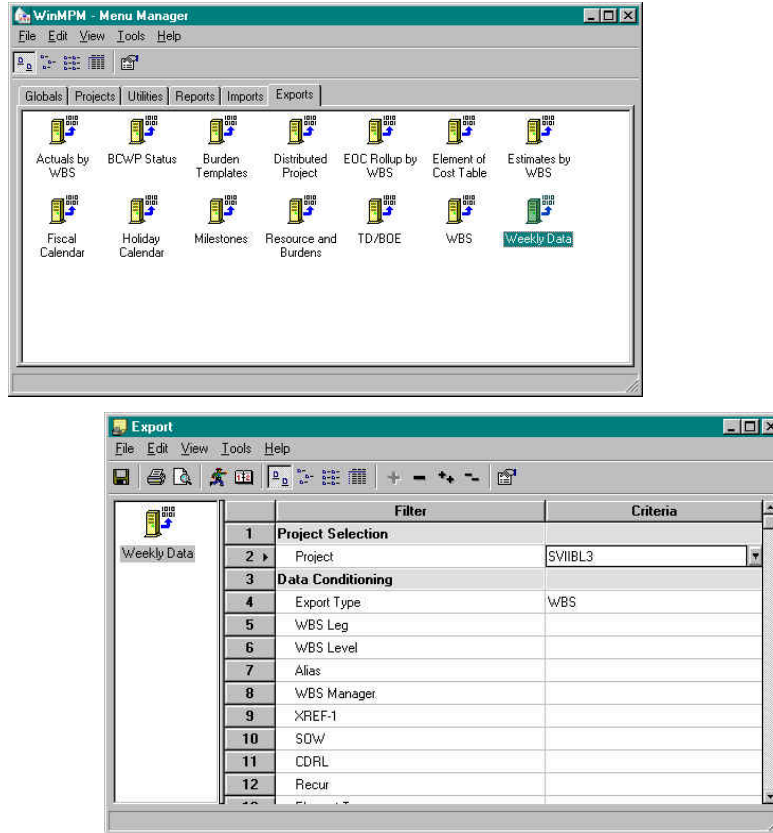**Figure A**. *To export WBS, select WBS on the Exports tab.*

Conditioning Options

When exporting WBS data, all data conditioning options described in topic *17.5 Project Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

Display Percentages (optional)
Use this output option to choose whether to export percentages as decimal values (.5050) or as a percent (50.50).

Format File Options

When creating a format file for exporting WBS data, the following fields are available:

<u>WBS Fields</u>

WBS (ID)	ETC Start
Parent WBS	ETC Finish
Alias	Early Start
WBS Description	Early Finish
Manager	Late Start
Xref-1	Late Finish
Xref-2	Revision Letter Date
Xref-3	Schedule Reference Date
Xref-4	Last Statused Date
Xref-5	Total Float
Xref-6	EV Percent Complete
Xref-7	Recur/NonRecur
Xref-8	Fee Percent
Xref-9	Fee Limit
Xref-10	Earned Value Method
Performing Department	BCWP Base Unit
Responsible Department	CLIN
Charge Number	Base WBS
Element Type	WBS Thresholds
Baseline Start	WNSTInt
Baseline Complete	

17.10 Conditioning Options for Specific Exports

17.10.15 Weekly Data Exports

You use the Weekly Data window to export weekly data. Access the Weekly Export Conditioning window by selecting Weekly Data on the Exports tab. MPM displays the Weekly Data Export Conditioning Window shown in Figure A.

***Figure A**. To export weekly data, select Weekly Data on the Exports tab.*

Conditioning Options

When exporting weekly data, all data conditioning options described in topic *17.5 Project Export Conditioning Options* are available to condition the data being exported. In addition, you can specify the following options:

Export Type (Required)

Use this option to specify either weekly WBS data or weekly EOC data for export.

Report From (Week Start) (Required)

Select the week start for the week you want to export from the list box. The dates in the list box begin with the first week of the three month window. Note that the "=<Current>" formula is not supported on weekly reports and exports.

Report Through (Week End) (Required)

Select the week end for the week you want to export from the list box. The dates in the list box begin with the end of first week of the three month window. Note that the "=<Current>" formula is not supported on weekly reports and exports.

Elements of Cost to Include (Required if exporting by EOC)

This option is offered only if you are exporting by EOC and is used to select which EOCs to include in the export.

LRE Option

Use this option if you want to include the latest revised estimate in the weekly data being exported. You may select either Cum ACWP + ETC or Cum ACWP through Gate Month + ETC.

Gate Month

The gate month defaults to the current month.

Display Percentages (Optional)

Use this output option to choose whether to export percentages as decimal values (.5050) or as a percent (50.50).

Format File Options

When exporting weekly data, you can use the standard format files or create a custom format file.

The standard format files, WEEKWBS.FMT and WEEKEOC.FMT, include the following fields:

WEEKWBS.FMT	WEEKEOC.FMT
WBS	WBS
Week End	Week End
BCWS Total Dollars WKLY	Element of Cost
BCWP Total Dollars WKLY	BCWS Total Dollars WKLY
ACWP Total Dollars WKLY	BCWP Total Dollars WKLY
ETC Total Dollars WKLY	ACWP Total Dollars WKLY
	ETC Total Dollars WKLY

You can create a custom file using the fields listed below. You may export up to a maximum of 250 fields in one batch. For information about creating custom files, see topic *17.7.1 Creating Format Files*.

WBS Fields		
Alias	Fee Percent	WBS Description
Base WBS	Last Statused Date	WBS Percent Complete
Baseline Complete	Late Finish	XREF-1
Baseline Start	Late Start	XREF-2
BCWP Base Unit	Manager	XREF-3
Charge Number	Parent WBS	XREF-4
CLIN	Performing Dept	XREF-5
Early Finish	Recur/NonRecur	XREF-6
Early Start	Responsible Dept	XREF-7
Earned Value Method	Revision Letter Date	XREF-8
Element Type	Schedule Reference Date	XREF-9
ETC Complete	Responsible Dept	XREF-10
ETC Start	Total Float	
Fee Limit	WBS	

Weekly Data Fields		
ACWP Cost of Money CUM	BAC Cost of Money	BCWP Cost of Money CUM
ACWP Cost of Money MTD	BAC EQP	BCWP Cost of Money MTD
ACWP Cost of Money WKLY	BAC Fee	BCWP Cost of Money WKLY
ACWP EQP CUM	BAC Gen and Admin	BCWP EQP CUM
ACWP EQP MTD	BAC Hours/Units	BCWP EQP MTD
ACWP EQP WKLY	BAC Overhead	BCWP EQP WKLY
ACWP Fee CUM	BAC Prime	BCWP Gen and Admin CUM
ACWP Fee MTD	BAC Standard Hours	BCWP Gen and Admin MTD
ACWP Fee WKLY	BAC Total Burdened	BCWP Gen and Admin WKLY
ACWP Gen and Admin CUM	BAC Total Cost	BCWP Hours/Units CUM
ACWP Gen and Admin MTD	BAC Total Dollars	BCWP Hours/Units MTD
ACWP Gen and Admin WKLY	BAC Total Price	BCWP Hours/Units WKLY
ACWP Hours/Units CUM		BCWP Overhead CUM
ACWP Hours/Units MTD		BCWP Overhead MTD
ACWP Hours/Units WKLY		BCWP Overhead WKLY
ACWP Overhead CUM		BCWP Prime CUM
ACWP Overhead MTD		BCWP Prime MTD
ACWP Overhead WKLY		BCWP Prime WKLY
ACWP Prime CUM		BCWP Standard Hours CUM
ACWP Prime MTD		BCWP Standard Hours MTD
ACWP Prime WKLY		BCWP Standard Hours WKLY
ACWP Standard Hours CUM		BCWP Total Burdened CUM
ACWP Standard Hours MTD		BCWP Total Burdened MTD
ACWP Standard Hours WKLY		BCWP Total Burdened WKLY
ACWP Total Burdened CUM		BCWP Total Cost CUM
ACWP Total Burdened MTD		BCWP Total Cost MTD
ACWP Total Burdened WKLY		BCWP Total Cost WKLY
ACWP Total Cost CUM		BCWP Total Dollars CUM
ACWP Total Cost MTD		BCWP Total Dollars MTD
ACWP Total Cost WKLY		BCWP Total Dollars WKLY
ACWP Total Dollars CUM		BCWP Total Price CUM
ACWP Total Dollars MTD		BCWP Total Price MTD
ACWP Total Dollars WKLY		BCWP Total Price WKLY
ACWP Total Price CUM		
ACWP Total Price MTD		
ACWP Total Price WKLY		

Weekly Data Fields, Continued		
BCWS Cost of Money CUM	BV (S-A) Cost of Money CUM	CPI Cost of Money CUM
BCWS Cost of Money MTD	BV (S-A) Cost of Money MTD	CPI Cost of Money MTD
BCWS Cost of Money WKLY	BV (S-A) Cost of Money WKLY	CPI Cost of Money WKLY
BCWS EQP CUM	BV (S-A) EQP CUM	CPI EQP CUM
BCWS EQP MTD	BV (S-A) EQP MTD	CPI EQP MTD
BCWS EQP WKLY	BV (S-A) EQP WKLY	CPI EQP WKLY
BCWS Fee CUM	BV (S-A) Fee CUM	CPI Gen and Admin CUM
BCWS Fee MTD	BV (S-A) Fee MTD	CPI Gen and Admin MTD
BCWS Fee WKLY	BV (S-A) Fee WKLY	CPI Gen and Admin WKLY
BCWS Gen and Admin CUM	BV (S-A) Gen and Admin CUM	CPI Hours/Units CUM
BCWS Gen and Admin MTD	BV (S-A) Gen and Admin MTD	CPI Hours/Units MTD
BCWS Gen and Admin WKLY	BV (S-A) Gen and Admin WKLY	CPI Hours/Units WKLY
BCWS Hours/Units CUM	BV (S-A) Hours/Units CUM	CPI Overhead CUM
BCWS Hours/Units MTD	BV (S-A) Hours/Units MTD	CPI Overhead MTD
BCWS Hours/Units WKLY	BV (S-A) Hours/Units WKLY	CPI Overhead WKLY
BCWS Overhead CUM	BV (S-A) Overhead CUM	CPI Prime CUM
BCWS Overhead MTD	BV (S-A) Overhead MTD	CPI Prime MTD
BCWS Overhead WKLY	BV (S-A) Overhead WKLY	CPI Prime WKLY
BCWS Prime CUM	BV (S-A) Prime CUM	CPI Standard Hours CUM
BCWS Prime MTD	BV (S-A) Prime MTD	CPI Standard Hours MTD
BCWS Prime WKLY	BV (S-A) Prime WKLY	CPI Standard Hours WKLY
BCWS Standard Hours CUM	BV (S-A) Standard Hours CUM	CPI Total Burdened CUM
BCWS Standard Hours MTD	BV (S-A) Standard Hours MTD	CPI Total Burdened MTD
BCWS Standard Hours WKLY	BV (S-A) Standard Hours WKLY	CPI Total Burdened WKLY
BCWS Total Burdened CUM	BV (S-A) Total Burdened CUM	CPI Total Cost CUM
BCWS Total Burdened MTD	BV (S-A) Total Burdened MTD	CPI Total Cost MTD
BCWS Total Burdened WKLY	BV (S-A) Total Burdened WKLY	CPI Total Cost WKLY
BCWS Total Cost CUM	BV (S-A) Total Cost CUM	CPI Total Dollars CUM
BCWS Total Cost MTD	BV (S-A) Total Cost MTD	CPI Total Dollars MTD
BCWS Total Cost WKLY	BV (S-A) Total Cost WKLY	CPI Total Dollars WKLY
BCWS Total Dollars CUM	BV (S-A) Total Dollars CUM	CPI Total Price CUM
BCWS Total Dollars MTD	BV (S-A) Total Dollars MTD	CPI Total Price MTD
BCWS Total Dollars WKLY	BV (S-A) Total Dollars WKLY	CPI Total Price WKLY
BCWS Total Price CUM	BV (S-A) Total Price CUM	
BCWS Total Price MTD	BV (S-A) Total Price MTD	
BCWS Total Price WKLY	BV (S-A) Total Price WKLY	

Weekly Data Fields, Continued		
CV (P-A) Cost of Money CUM	EAC Cost of Money	ETC Cost of Money CUM
CV (P-A) Cost of Money MTD	EAC EQP	ETC Cost of Money MTD
CV (P-A) Cost of Money WKLY	EAC Fee	ETC Cost of Money WKLY
CV (P-A) EQP CUM	EAC Gen and Admin	ETC EQP CUM
CV (P-A) EQP MTD	EAC Hours/Units	ETC EQP MTD
CV (P-A) EQP WKLY	EAC Overhead	ETC EQP WKLY
CV (P-A) Gen and Admin CUM	EAC Prime	ETC Fee CUM
CV (P-A) Gen and Admin MTD	EAC Standard Hours	ETC Fee MTD
CV (P-A) Gen and Admin WKLY	EAC Total Burdened	ETC Fee WKLY
CV (P-A) Hours/Units CUM	EAC Total Cost	ETC Gen and Admin CUM
CV (P-A) Hours/Units MTD	EAC Total Dollars	ETC Gen and Admin MTD
CV (P-A) Hours/Units WKLY	EAC Total Price	ETC Gen and Admin WKLY
CV (P-A) Overhead CUM		ETC Hours/Units CUM
CV (P-A) Overhead MTD		ETC Hours/Units MTD
CV (P-A) Overhead WKLY		ETC Hours/Units WKLY
CV (P-A) Prime CUM		ETC Overhead CUM
CV (P-A) Prime MTD		ETC Overhead MTD
CV (P-A) Prime WKLY		ETC Overhead WKLY
CV (P-A) Standard Hours CUM		ETC Prime CUM
CV (P-A) Standard Hours MTD		ETC Prime MTD
CV (P-A) Standard Hours WKLY		ETC Prime WKLY
CV (P-A) Total Burdened CUM		ETC Standard Hours CUM
CV (P-A) Total Burdened MTD		ETC Standard Hours MTD
CV (P-A) Total Burdened WKLY		ETC Standard Hours WKLY
CV (P-A) Total Cost CUM		ETC Total Burdened CUM
CV (P-A) Total Cost MTD		ETC Total Burdened MTD
CV (P-A) Total Cost WKLY		ETC Total Burdened WKLY
CV (P-A) Total Dollars CUM		ETC Total Cost CUM
CV (P-A) Total Dollars MTD		ETC Total Cost MTD
CV (P-A) Total Dollars WKLY		ETC Total Cost WKLY
CV (P-A) Total Price CUM		ETC Total Dollars CUM
CV (P-A) Total Price MTD		ETC Total Dollars MTD
CV (P-A) Total Price WKLY		ETC Total Dollars WKLY
		ETC Total Price CUM
		ETC Total Price MTD
		ETC Total Price WKLY

Weekly Data Fields, Continued		
SPI Cost of Money CUM	SV (P-S) Cost of Money CUM	TCPI Cost of Money
SPI Cost of Money MTD	SV (P-S) Cost of Money MTD	TCPI EQP
SPI Cost of Money WKLY	SV (P-S) Cost of Money WKLY	TCPI Fee
SPI EQP CUM	SV (P-S) EQP CUM	TCPI Gen and Admin
SPI EQP MTD	SV (P-S) EQP MTD	TCPI Hours/Units
SPI EQP WKLY	SV (P-S) EQP WKLY	TCPI Overhead
SPI Gen and Admin CUM	SV (P-S) Gen and Admin CUM	TCPI Prime
SPI Gen and Admin MTD	SV (P-S) Gen and Admin MTD	TCPI Standard Hours
SPI Gen and Admin WKLY	SV (P-S) Gen and Admin WKLY	TCPI Total Burdened
SPI Hours/Units CUM	SV (P-S) Hours/Units CUM	TCPI Total Cost
SPI Hours/Units MTD	SV (P-S) Hours/Units MTD	TCPI Total Dollars
SPI Hours/Units WKLY	SV (P-S) Hours/Units WKLY	TCPI Total Price
SPI Overhead CUM	SV (P-S) Overhead CUM	
SPI Overhead MTD	SV (P-S) Overhead MTD	
SPI Overhead WKLY	SV (P-S) Overhead WKLY	VAC (BAC-EAC) Cost of Money
SPI Prime CUM	SV (P-S) Prime CUM	VAC (BAC-EAC) EQP
SPI Prime MTD	SV (P-S) Prime MTD	VAC (BAC-EAC) Fee
SPI Prime WKLY	SV (P-S) Prime WKLY	VAC (BAC-EAC) Gen and Admin
SPI Standard Hours CUM	SV (P-S) Standard Hours CUM	VAC (BAC-EAC) Hours/Units
SPI Standard Hours MTD	SV (P-S) Standard Hours MTD	VAC (BAC-EAC) Overhead
SPI Standard Hours WKLY	SV (P-S) Standard Hours WKLY	VAC (BAC-EAC) Prime
SPI Total Burdened CUM	SV (P-S) Total Burdened CUM	VAC (BAC-EAC) Standard Hours
SPI Total Burdened MTD	SV (P-S) Total Burdened MTD	VAC (BAC-EAC) Total Burdened
SPI Total Burdened WKLY	SV (P-S) Total Burdened WKLY	VAC (BAC-EAC) Total Cost
SPI Total Cost CUM	SV (P-S) Total Cost CUM	VAC (BAC-EAC) Total Dollars
SPI Total Cost MTD	SV (P-S) Total Cost MTD	VAC (BAC-EAC) Total Price
SPI Total Cost WKLY	SV (P-S) Total Cost WKLY	
SPI Total Dollars CUM	SV (P-S) Total Dollars CUM	
SPI Total Dollars MTD	SV (P-S) Total Dollars MTD	
SPI Total Dollars WKLY	SV (P-S) Total Dollars WKLY	
SPI Total Price CUM	SV (P-S) Total Price CUM	
SPI Total Price MTD	SV (P-S) Total Price MTD	
SPI Total Price WKLY	SV (P-S) Total Price WKLY	

18
MSP Link

18.1 Introduction to the MSP Link

The MSP Link is a powerful interface between Microsoft Office Project (hereafter referred to as MSP) and MPM, Micro-Frame Program Manager. It provides you with an easy to use method for linking MSP data into MPM. This is an integrated applet within MPM's main menu, from the Interface tab. It allows MPM users to easily select the MSP file and begin file generation and validation processing.

In MPM, all planning is done at the WBS ID level. With MSP, you can plan activities, milestones, and resource estimates at a lower level than the WBS ID. Through use of the built-in interface you can then easily integrate the MSP detail data into the WBS level in MPM. This interface supports both types of integration: one task in MSP mapped to one WBS in MPM and also many tasks in MSP mapped to one WBS in MPM.

The MSP Link enables you to transfer data from MSP to MPM in the following manner:

- First, you create your project and plan activities, milestone, and resource assignments using MSP in the usual way.

- When your data is set and ready to transfer to MPM, you set up mapping within MPM's MSP Interface for all of the types of information you are planning to transfer. Five interface types are available:

  o **WBS Description**: This is used to create WBS elements in MPM, by mapping WBS type data from MSP into the WBS Tree in MPM.

  o **WBS Schedule**: This interface is used to map dates from MSP tasks to MPM WBS tasks. This interface will also allow you to move resource estimates in MPM according to the new dates that are brought over from MSP. (This interface cannot be used with the Estimate interface.)

  o **Estimates**: This interface is used to map MSP resource assignments and bring them in as WBS level estimates in MPM. You may choose to use resource assignments from any of the plans in MSP (i.e. Work, Baseline, Baseline 1, etc.). This interface cannot be used with the WBS Schedule interface.

  o **BCWP**: This interface allows you to map earned value percent complete status from MSP tasks to MPM tasks

- o **Milestones**: This interface allows you to create MPM milestones from milestones and/or tasks in MSP. You may also update status and revise milestone information using this interface.

- Once the mapping process has been completed, select Generate and Validate; select the MSP file and the applicable data conditioning. MPM will then process the data, generate the import file, and create a validation report.

- Once you have reviewed the validation report and are happy with the results on the report, you select the Import option and the generated file will then be transferred into MPM.

When these steps are completed, the MSP data is completely integrated into an MPM project.

Note: Before running the interface, the projects need to be set up in MPM.

Note: Please see the Installation Guide for the list of supported MS Project versions.

18.2 Accessing the MSP Link

The MSP Link can be accessed by selecting the Interfaces tab of the MPM Menu Manager, then double-clicking on the MSP Link icon (*see Figure A*).
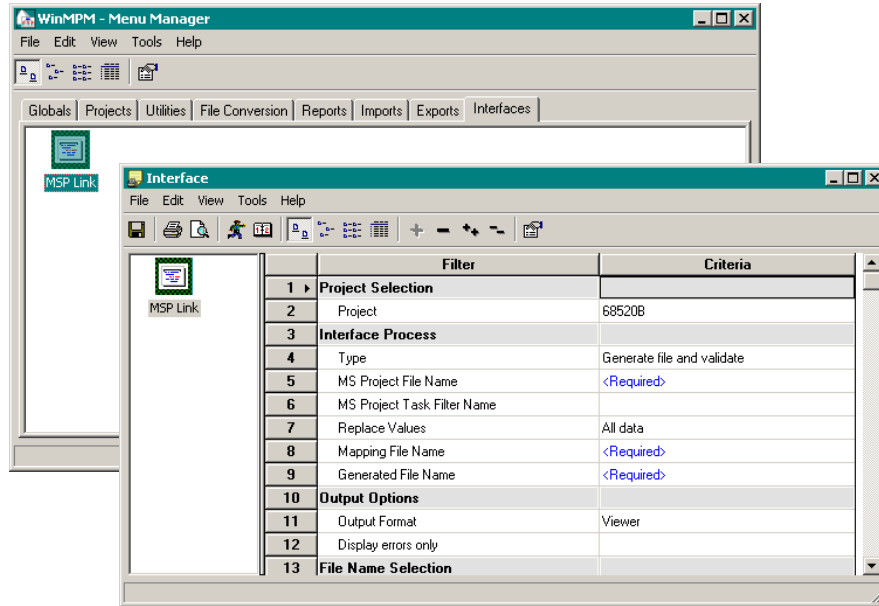
Figure A. *Select the MSP Link icon on the Interfaces tab of the MPM Menu Manager.*

18.3 Orientation to the MSP Link

The MSP Link is used to transfer data from MSP into MPM. A toolbar gives you quick access to common tasks. The Interface window displays the information about the MSP Link.
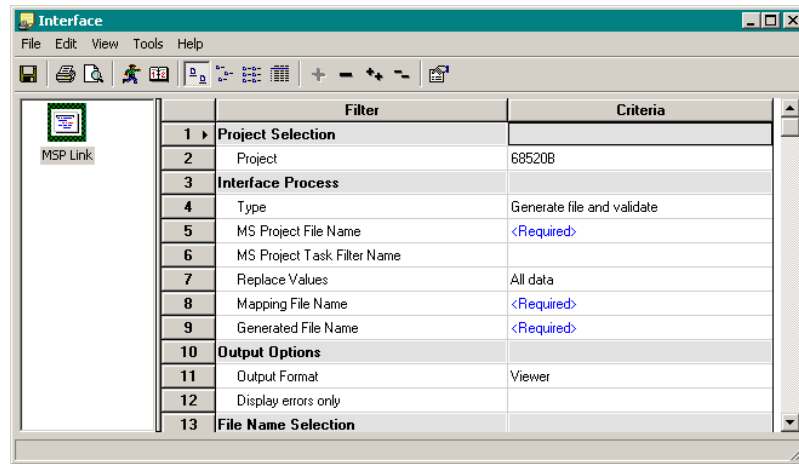
Figure A. *The MSP Link window.*

MSP Link Window

The left pane of the window displays the icon(s) for the interface, and the right pane displays the conditioning information. The right pane is divided into two columns. The Filter column shows the interface condition fields to be specified. The Criteria column contains the list boxes, check mark boxes, or text entry boxes in which you enter the criteria for the condition. The rows are grouped into categories; category headings are shown in gray for reference.

Previewing and Printing

You can preview and print the conditioning data using the options on the File menu. Print and Preview only show the conditioning which you have entered on the grid. They do not display the results of running the interface.

Saving the Interface Conditioning

To save the interface conditioning data, do one of the following:

- Click the Save button .

- Choose Save from the File menu, or press Ctrl+S.

MPM prompts for the location and file name to be saved. See section *18.6 Batch Processing* for details on using saved conditioning.

18.3 Orientations to the MSP Link

18.3.1 Interface Conditioning Options

These are all of the available fields displayed in the Interface window. The displayed fields change depending on the Type field setting (Generate file and validate, Generate file, Import). Category headings are shown in gray for easy reference. Fields which are required display <Required> in the cell. These fields must be filled.

Filter	Criteria
Project Selection	
Project	Drop down list of projects
Interface Process	
Type	▪ Generate file and validate ▪ Generate file ▪ Import
MS Project File Name	<Required>
MS Project Task Filter Name	51 character data entry field
Replace Values	▪ All data ▪ Changed data only
Mapping File Name	<Required>
Generated File Name	<Required>
Output Options	
Output Format	▪ Printer ▪ Viewer ▪ Comma Separated Values (*.CSV) ▪ Excel 95 (*.XLS) ▪ Excel 97-2000 (*.XLS) ▪ Tab Separated Values (*.TXT) ▪ HTML (*.HTM)
Display errors only	Check mark option ✔
File Name Selection	
Output File Name	<Required> when Output Format set to File Type.
Append to Existing File	Check mark option ✔
WBS Descriptive	Check mark option ✔
WBS Schedule	Check mark option ✔
Time Now Date	<Date> Defaults to current date
Shift Baseline Resources	Check mark option ✔

Shift ETC Resources	Check mark option ☑
Shift Milestones - Schedule Dates	Check mark option ☑
Shift Milestones - Forecast Dates	Check mark option ☑
EOC Reprice Conditioning	
▪ L-LABOR ▪ M-MATERIAL ▪ O-OTHER DIRECT COSTS	▪ Hours ▪ EQP ▪ Prime Dollars ▪ Total Burdened ▪ Total Cost ▪ Total Dollars ▪ Total Price ▪ Original Estimate Type
Time-phased Estimates	Check mark option ☑
Estimates to Import	▪ Baseline ▪ ETC ▪ Baseline and ETC
Autospread Estimates	Check mark option ☑
Estimates to Import	▪ Baseline ▪ ETC ▪ Baseline and ETC
BCWP	Check mark option ☑
Fiscal Status As Of Date	<Date>
Milestones	Check mark option ☑
Identify Milestones by	▪ ID ▪ Description ▪ Symbol/Description/Schedule Date
Update BCWP Status	Check mark option ☑
Fiscal Status As Of Date	<Date>

Project Selection

- **Project** - Displays a drop down list of projects that the user has been granted access to. It will not display any projects where the "suspend user" has been checked in Project Maintenance. It defaults to the first project in the list if there is no previously selected project.

Interface Processes

- **Type**

- **Generate file and validate**: This process first analyzes the data coming from MSP to see if it is valid prior to processing. It creates a generated file that contains project data to be imported. It also creates a validation report listing all warnings and errors based on comparing MPM data to the generated file. See section *18.5.1 Generate File and Validate, Generate File* for further details.

- **Generate file**: This process creates a generated file that contains project data to be imported. See section *18.5.1 Generate File and Validate, Generate File* for further details.

- **Import**: This process imports the data from the generated file into MPM and generates a processing report listing all warnings and errors. See section *18.5.2 Import* for further details.

- **MS Project File Name** - This is a required field when Type field is set to either Generate file and validate or Generate file. Click on the Browse button ⌹ to find the mpp file that you wish to use. This field is not available when Type field is set to Import as the interface process uses the generated file.

- **MS Project Task Filter Name** - Use this optional field to enter the name of an MSP task filter. When a task filter is used, MPM will apply that filter to the MSP file prior to the interface process starting. Only that subset of data will be looked at and used by the interface process. Valid filters from MSP are those that can be found under Project\Filtered For\More Filters with Task selected. This filter list is also available in the MSP Organizer under the Filter Tab. This option may only be used for task filters. This field is not available when Type field is set to Import as the interface process uses the generated file.

- **Replace Values** - This field is not available when Type field is set to Import.

- **All data**: This selection will update all mapped field data between MSP and MPM.

- **Changed data only**: This selection will update data in any mapped field that has changed between MSP and MPM. With this selection, only the changed data is written to the generated file. Any validation will only be run on the changed data fields.

- **Mapping File Name** - This is a required field when Type field is set to either Generate file and validate or Generate file. Select the Browse button ⊡ to access a previously saved mapping file. Select the Mappings button ⊞ to create a new mapping file. See section *18.4 MSP Link Mappings* for further information on mapping. This field is not available when Type field is set to Import as the interface process uses the generated file.

- **Generated File Name** - This is a required field. The file type is .gen. It is the input file when Type field is set to Import and the output file when Type field is set to Generate file and validate or Generate file. Select the Browse button ⊡ to find and overwrite an existing file, or create a new filename.

Output Options

- **Output Format** - This option is applicable to the validation report when the Type field is set to Generate file and validate, and to the processing report when the Type field is set to Import. When the drop down arrow is selected, there is the option to select a printer, viewer, or a file type. This option is not available when the Type field is set to Generate file.

- **Display errors only** - This option is only applicable when the Type field is set to generate file and validate. When this field is checked, the validation report displays only error messages and does not display any warning messages.

File Name Selection

- **Output File Name** - This is a required field when the Output Format is set to any other option other than the Viewer or Printer. Select the Browse button ⊡ to find and overwrite an existing file, or create a new filename.

- **Append to Existing File** - This option is enabled when the Output option is set to any other option other than Viewer or Printer. This field is only applicable to batch processing when it appends the validation reports or the processing reports together. See section *18.6 Batch Processing* for further details.

WBS Descriptive

Use the WBS Descriptive option to create new WBS elements or update or build onto an existing WBS leg by importing new WBS elements. WBS elements created by the interface will have Start and Complete dates which default to their parent dates. This interface cannot be used to change a parent ID for an existing child.

If your WBS is currently empty, all of the mapped fields are added to the generated file. If a WBS ID already exists in your WBS, all mapped fields except for the parent WBS ID will be updated. Any existing fields not included in the import will not be changed.

Any Fee Limit Amount values imported are assigned to the specific WBS element; however, those fields in children of the specified WBS are not modified.

CLIN, Recurring/Nonrecurring and/or Fee % values imported are assigned to the specific WBS element and all of its children.

WBS Schedule

These fields are only available if the WBS Schedule row is checked, if the Type field is set to Import, and if Estimates is de-selected. The WBS Schedule enables you to:

- Summarize tasks or activities by assigning them to the same WBS ID.

- Create a many-to-one relationship between networked activities and a WBS ID. When a many-to-one correspondence exists, the WBS Schedule Interface looks at all the networked activities. It finds the earliest early and late start and the latest early and late finish.

Use the WBS Schedule option to update Baseline, ETC, Early and Late dates, depending on what fields are mapped.

- **Time Now Date** - Specifies the point in time where updating dates and shifting resources begins. If dates are being updated for WBS elements with no estimates (no shift required), only those WBS elements that start after Time Now are updated. If dates are being updated for WBS elements with estimates and resources are also being shifted, only those estimates that start after Time Now are shifted. If this field is left blank, then all dates are updated.

  Note: MPM will not update WBS elements which have already started, or if they contain Actuals or BCWP data.

- **Shift Baseline Resources** - If a WBS element contains Baseline estimates, click the Shift Baseline Resources check mark box to shift baseline resource estimates from

their planned start to the new start date. Because the completion of a WBS element is determined by the length of its estimates, only the start date will be set equal to the imported/early/late start date; the duration of the estimate will be maintained

- **Shift ETC Resources** - If a WBS element contains ETC estimates, click the Shift ETC Resources check mark box to shift ETC resource estimates from their planned start to the new start date. Because the completion of a WBS element is determined by the length of its estimates, only the start date will be set equal to the imported/early/late start date; the duration of the estimate will be maintained

- **Shift Milestones-Schedule Dates** - This option is only available if you selected Shift Baseline or ETC Resources.

    o If you select Shift Baseline Resources and Shift Milestones, the milestone dates are shifted the same number of days that the baseline has been shifted.

    o If you select Shift ETC Resources and Shift Milestones, the milestone dates are shifted the same number of days that the ETC has been shifted.

    o If you select both Shift Baseline and ETC Resources and Shift Milestones, the milestone dates are shifted the same number of days that the baseline has been shifted.

- **Shift Milestones-Forecast Dates** - This option is only available if you selected Shift Baseline or ETC Resources.

    o If you select Shift Baseline Resources and Shift Milestones, the milestone dates are shifted the same number of days that the baseline has been shifted.

    o If you select Shift ETC Resources and Shift Milestones, the milestone dates are shifted the same number of days that the ETC has been shifted.

    o If you select both Shift Baseline and ETC Resources and Shift Milestones, the milestone dates are shifted the same number of days that the baseline has been shifted.

- **EOC Reprice Conditioning** - This option is only available if you selected Shift Baseline or ETC Resources. If you elect to shift resources, MPM must reprice after it shifts the estimates. All EOC's stored in the EOC table are displayed. For each EOC, one of the following values must be maintained for repricing: Hours, EQP, Prime Dollars, Total Burdened, Total Cost, Total Dollars, Total Price and Original Estimate Type. The value that you enter for each EOC is held constant by MPM.

Estimates

These options can only be selected if WBS Schedule is de-selected. This interface allows you to import monthly and/or autospread estimate values into MPM. This interface allows you to:

- Summarize all tasks where the WBS ID, Resource Code, Resource Department and Overtime fields are the same to one estimate.

- Do resource loading in MSP and establish estimates in MPM.

- Enter a total estimate value per task in MSP and have MPM spread the value for you over a specified start and finish date.

- Estimate Summarization — If WBS ID, Resource Name, Resource Department and Overtime are the same then we add resource assignments together . If any one of these four fields are unique then it is a treated as a new estimate.

A task in MSP needs to have a Resource assigned to it in order for it to be added to the generated import file.

- **Time-phased Estimates** - this option is used when you have a resource loaded schedule and have made resource assignments on your MSP tasks. It allows you to duplicate the time-phasing of your resource spreads from MSP schedule to MPM.

  o The MSP Link process will pull the resource assignment detailed data (from the .mpp file), accumulate it into the right fiscal bucket (according to the calendar in MPM), and generate the import file.

  o If this option is selected then the WBS Schedule option will be disabled.

  o Replace Values is always complete. (updates and adds only).

- **Autospread Estimates** - this option is used when you have scheduled tasks that have a lump sum value and resource assigned to them. The lump sum can be mapped to MPM as the estimate value with a spread curve. MPM will spread the lump sum value according to the task start and complete dates and spread curve that are mapped.

  Autospread Estimate Data Summarization

  o If there are several same WBS IDs with the same Resource Code, Resource Dept, Overtime field combinations and if the estimate type is all one type, then the lump sum value is added.

- o If summarization has different estimate types, then no records will be produced. It will be reported on the validation report.

- o If summarization has different spread curves then the spread curve identified on the first existence is used.

- o If summarization has different dates, then the earliest start date and the latest completion date from the set of tasks become the estimate start and complete.

- o If the autospread value is at the task level then there can only be one resource. If there is more than one resource, then everything is put onto the first resource. This is then noted in the Validation Report.

BCWP

This interface allows you to export BCWP (earned value percentage complete) from MSP tasks into MPM.

- ▪ **Fiscal Status As Of Date** - This row is not available when Type field is set to Import. Enter the date for the fiscal month for which BCWP is to be statused.

We suggest that you do not mix Work with Material budgets for the purpose of this calculation, i.e.: the tasks are either all Work or all Material but not a mixture of both.

MSP Link BCWP Summarization

Summarize all tasks where the WBS ID is the same and the EV% Complete Task Flag exists.

- ■ The Cumulative Percent Complete will be calculated based on the mapped Task BAC of all summarized tasks. If WBS Schedule or Estimates is imported with BCWP, then %Complete cannot be calculated because BAC may have changed.

- ■ The Cumulative BCWP Amount will be the total from all summarized tasks.

Milestones

Use the Milestones option to import new milestones for a WBS element or update existing milestones. The Milestones fields are only available if the Milestones row is checked. These fields allow you to:

- ▪ Set up networked activities and determine which completion points are milestones when establishing the project baseline.

- ▪ Establish a direct correlation between scheduled events and milestones.

- ▪ Interface milestones to the WBS ID in MPM.

- Status activities in MSP to determine milestone progress in MPM.

- Interface completed MSP milestones as milestone status in MPM.

Note:

- We can only auto-weight Milestones if the budget exists at the same level as the 'Milestone' tasks.

- If Milestone Weight is mapped to a task work field, then the BCWP Base Unit should be set to Hours for labor tasks and Prime for non-labor tasks in order for the weight to be calculated.

- If mapping Milestone weights to a user-defined field, we suggest entering Hours for labor tasks and Prime for non-labor tasks in order for the milestone to be weighted correctly.

The Milestones option uses the Task Identifier (Milestone Flag) Field to find all tasks that are identified as milestones. Earned value methods can be established in MPM on a WBS ID prior to importing tasks identified as milestones in MSP. If you are importing WBS Descriptive with Milestones, you can establish the EVM in the WBS in MSP by mapping EVM in the WBS Descriptive Import.

- **Identify Milestones by** -. This option determines the method for matching the milestones in the interface generated file (or with MSP if the process type is Generate.) with the milestones in your MPM project. Matching during Generate is done when checking if the data has been changed. There are three methods to choose from:

- **ID:** This method matches milestones by their Milestone ID. The first milestone encountered in the project with the same ID as the ID in MSP is updated to the generated file for import. If that exact Milestone ID is not found, the data is added as a new milestone. If the interface generated file includes a WBS ID with a Milestone ID that exists on another WBS, the milestone is added to the WBS ID specified in the interface generated file and removed from the WBS ID where it previously existed. When using this option for matching, the Milestone ID field is a required field in the interface generated file.

- **Description:** This method matches milestones by their WBS ID and Milestone Description. The first milestone encountered within the WBS ID specified with the same description as one found in MSP is updated to the generated file for import. If that exact description is not found, the data is added as a new milestone. If the Milestone ID is blank or contains a duplicate of an existing Milestone ID, MPM generates a new unique ID for the milestone contained in the interface generated file. Milestone Description must be mapped if this is selected.

- **Symbol/Description/Schedule Date:** This method matches milestones by their WBS ID, Symbol, Milestone Description and Schedule Date. The first milestone encountered within the given WBS with the same symbol, description and schedule date is added to the interface generated file for import. If that exact combination of symbol, description and schedule date is not found, the data will be added as a new milestone. If the Milestone ID is blank or contains a duplicate of an existing Milestone ID, MPM generates a new unique ID for the milestone contained in the interface generated file. Milestone Symbol, Description and Scheduled Date must be mapped if this is selected.

- **Update BCWP Status** – To update BCWP status (recalculate percent complete) place a check mark in the Update BCWP Status field. MPM will re-evaluate the status of all the milestones on the WBS element and calculate a new cumulative percent complete to be stored in the designated fiscal As Of Date field for the WBS. Statused milestones are put into the Milestone Status section of the generated file and future milestones are put into the Milestones section. If the Update BCWP Status field is not checked, the new milestone status will be imported but BCWP will not reflect the new status. These milestones are put into the Milestones section of the generated file.

- **Fiscal Status As Of Date** - If you elected to update BCWP status, enter the date for the fiscal month for which BCWP is to be statused. If you elected not to update BCWP status, this field is ignored.

18.4 MSP Link Mappings

The mapping process is used to designate which MSP fields are assigned to each of the MPM fields displayed in the MSP Link Mappings dialog box.

When the interface pulls data from MSP into MPM, all data in the MSP field is transferred to the assigned MPM field.

For example, if you need to pull in scheduled dates, you might map (assign) MSP's WBS field to the MPM WBS ID field. When you use the interface, all data residing in MSP's WBS field for the tasks you specify would appear in MPM's WBS ID field.

The mapping definitions that you create can be saved to be used as default mappings for future imports as well as for generating files and validation.

The MSP Link Mappings dialog box is accessed from the Mapping File Name line of the Interface window. You can create a new mappings definition or open a previously saved mappings definition.

18.4 MSP Link Mappings

18.4.1 Creating a New Mappings Definition

To create a new Mappings definition:

1. From the Interface window, select the Mappings ![icon] button.

The MSP Link Mappings dialog opens (*See Figure A*).
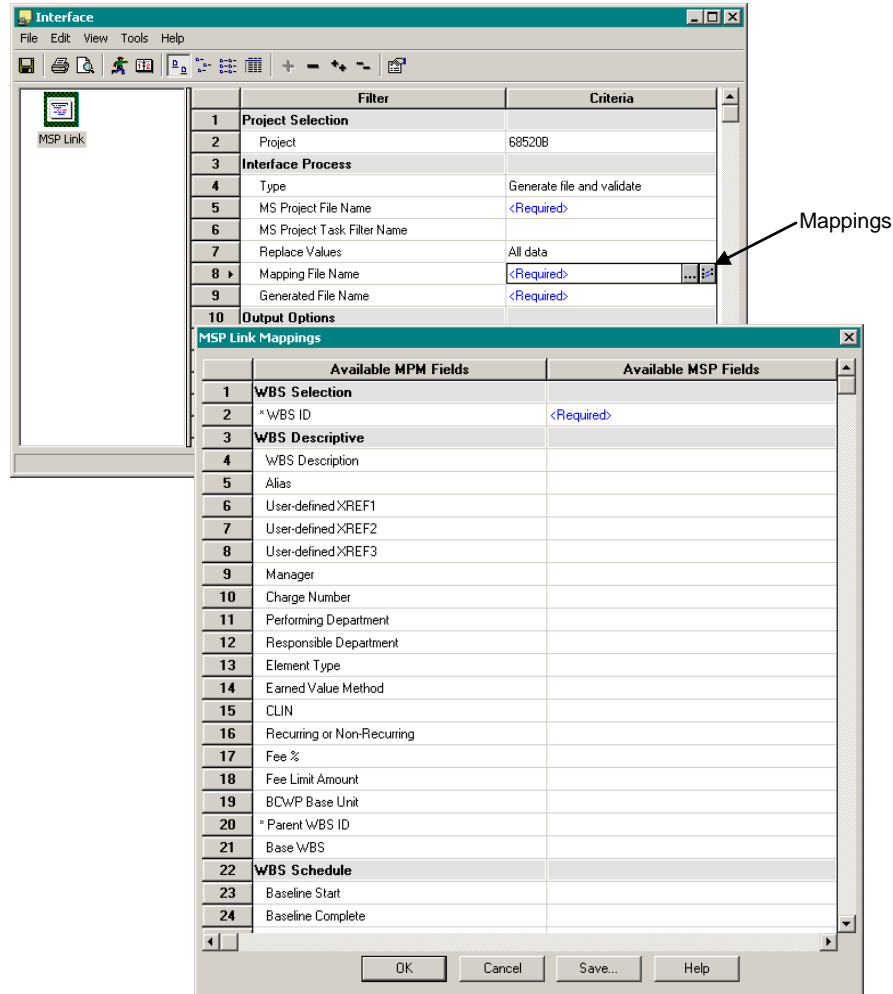
Figure A. *Select the Mappings button to open the MSP Link Mappings dialog.*

2. Map the Available MPM fields to the Available MSP fields. See section *18.4.4 Mappings Field Descriptions* for further field description details.

3. Select Save to save the mappings configuration.

    The Save Mappings Definition dialog opens (*See Figure B*).
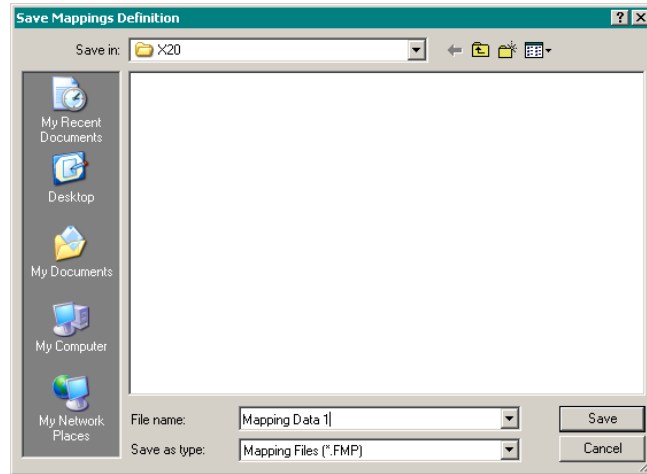
Figure B. Save your Mappings configuration.

4. Navigate to the correct folder and type in a file name. You don't need to add the .FMT extension to the name; MPM adds the extension automatically.

5. Click Save.

    The file saves and you return to the Interface screen. The Mapping File Name field changes from <Required> to the name of the file that you have just saved.

18.4 MSP Link Mappings

18.4.2 Opening a Saved Mappings Definition

To open a previously saved mappings definition:

1. From the Interface window, select the Browse button ⊡.

The Mapping File Name dialog opens (*See Figure A*).
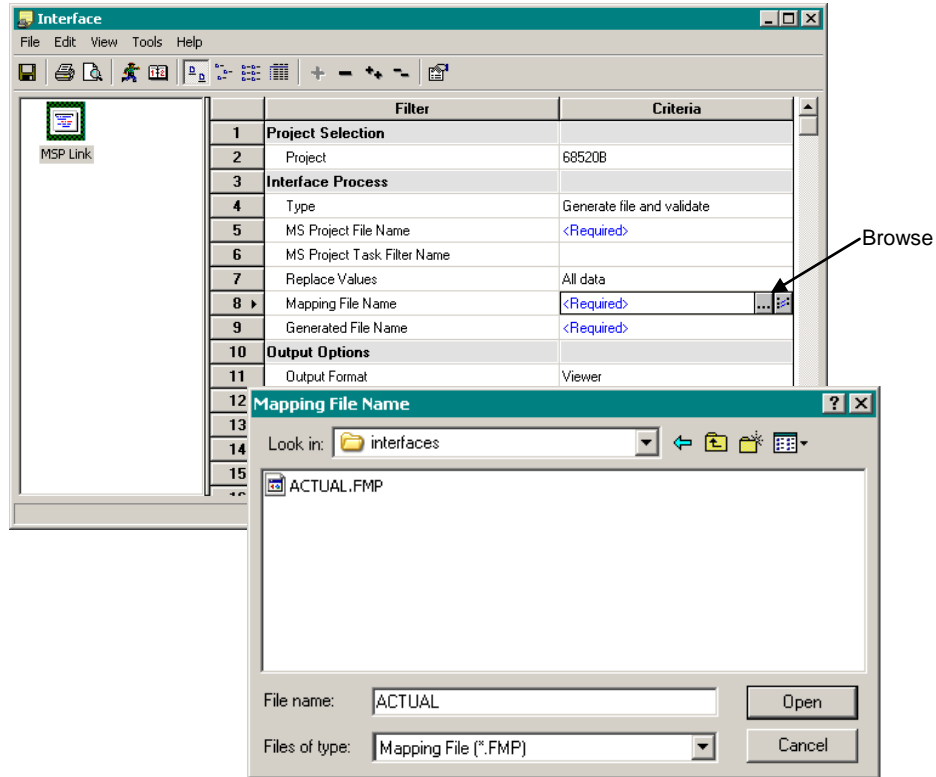
Figure A. *Select the Browse button to open a saved Mappings file.*

2. Navigate to the correct folder and select the saved .FMP mappings file.

3. Click Open to open the saved file.

The mapping fields populate with the saved definition information and the Mapping File Name field changes from <Required> to the name of the file that you have just opened.

18.4 MSP Link Mappings

18.4.3 Editing a Saved Mappings Definition

To edit a previously saved mappings definition:

1. Follow the steps in section *18.4.2 Opening a Saved Mappings Definition* to open a previously saved mappings file.

2. Select the Mappings button to open the MSP Link Mappings dialog (*See Figure A*).

The MSP Link Mappings window opens populated with the saved mappings file data.
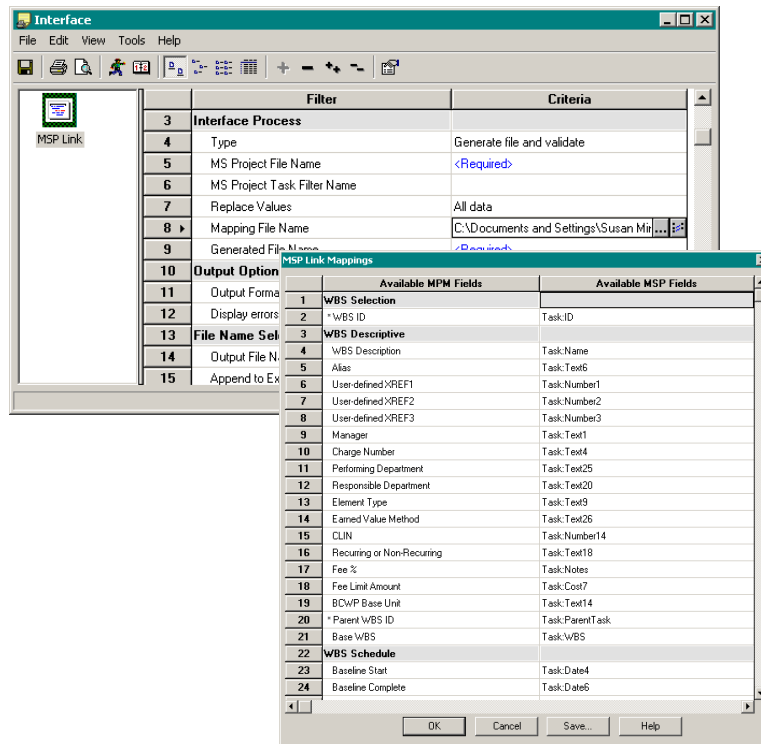
Figure A. *The MSP Link Mappings window.*

3. Edit fields as needed.

4. Save the file in one of the following ways:

- Select OK to overwrite the existing file. The data is saved and you are returned to the Interface Window.

- Select Save to open the Save Mappings Definition dialog. You can then navigate to the correct folder and save under a new file name, or overwrite the existing file.

18.4 MSP Link Mappings

18.4.4 Mappings Field Descriptions

The MSP Link Mappings dialog contains a grid with two columns:

- Available MPM Fields - This column consists of all mappable MPM fields. The rows in this column are read only.

- Available MSP Fields – The rows in this column consist of drop down pick lists. Each pick list contains the fields that can be mapped to the corresponding MPM field.

The WBS ID field defaults to <Required> and is a required field in every mapping file. All other fields that are required for the import are prefixed with a "*."

Besides WBS ID, all other field mappings are only required for the imports that will be selected.

Field Level Summary

The following grid is a field level summary of the available MSP field levels for each Available MPM field (Task, Resource or Assignment). Required fields are marked with an *.

Available MPM Fields	Field Level
WBS Selection	
*WBS ID	Task
WBS Descriptive	
WBS Description	Task
Alias	Task
User-defined XREF1	Task
User-defined XREF2	Task
User-defined XREF3	Task
User-defined XREF4	Task
User-defined XREF5	Task
User-defined XREF6	Task
User-defined XREF7	Task
User-defined XREF8	Task
User-defined XREF9	Task
User-defined XREF10	Task
Manager	Task
Charge Number	Task
Performing Department	Task
Responsible Department	Task
Element Type	Task
Earned Value Method	Task

CLIN	Task
Recurring or non-recurring	Task
Fee %	Task
Fee Limit Amount	Task
BCWP Base Unit	Task
*Parent WBS ID	Task
Base WBS	Task
WBS Schedule	
Baseline Start	Task
Baseline Complete	Task
ETC Start	Task
ETC Complete	Task
Early Start	Task
Early Finish	Task
Late Start	Task
Late Finish	Task
Estimates	
*Resource Code	Task Resource Assignment
Resource Department	Task Resource Assignment
XREF-EST	Task Resource Assignment
Overtime Factor	Resource Assignment
Rate Table	Task Resource Assignment
Burden Template	Task Resource Assignment
Estimate Identifier	Task
Time-phased Estimates	
Time-phased Labor	Assignment
Time-phased Material	Assignment

Autospread Estimates	
Autospread Labor	Task Assignment
Autospread Material	Task Assignment
Spread Curve	Task Resource
Estimate Type	Task Resource
*Estimate Start	Task
*Estimate Complete	Task
BCWP	
*EV %Complete Task Flag	Task
Task BAC	Task
Cumulative Percent Complete	Task
Cumulative BCWP Amount	Task
Milestones	
Milestone Flag	Task
Milestone ID	Task
Milestone Symbol	Task
Milestone Description	Task
Milestone Weight	Task
Scheduled Date	Task
Forecast Date	Task
Milestone Complete Flag	Task
Percent Complete	Task

Detailed Field Level Descriptions

The grid below provides a detailed list of all available MPM Fields, the MSP Field Level (Task, Resource, or Assignment) and the Available MSP Fields for each MPM field.

	Available MPM Fields	**Field Level**	**Available MSP Fields**
WBS Selection			
	*WBS ID	Task	ID, Name, Number1 – Number20, Text1 – Text30, Unique ID, WBS
WBS Descriptive			
	WBS Description	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	Alias	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF1	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF2	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF3	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF4	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF5	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF6	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF7	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS

WBS Descriptive (continued)			
	User-defined XREF8	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF9	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	User-defined XREF10	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 – Text30, Unique ID, WBS
	Manager	Task	Contact, Name, Notes, Number1 – Number20, ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Summary, Text1 – Text30
	Charge Number	Task	ID, Name, Notes, Number1 – Number20, Summary, Text1 – Text30, Unique ID, WBS
	Performing Department	Task	Contact, ID, Name, Notes, Number1 – Number20, ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Text1 – Text30
	Responsible Department	Task	Contact, ID, Name, Notes, Number1 – Number20, ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Text1 – Text30

WBS Descriptive (continued)			
	Element Type	Task	Name, Notes, Text1 – Text30
	Earned Value Method Use the following codes: 1: 0/100 2: 25/75 3: 40/60 4: 50/50 5: % Complete 6: LOE 7: Earned Standards 8: Milestone Weights 9: BCWP A: Apportioned P: Milestone Weights with % Complete K: Key Event	Task	Name, Notes, Text1 – Text30
	CLIN	Task	ID, Notes, Number1 – Number20, Text1 – Text30
	Recurring or non-recurring ■ If mapped to any Text or Notes field, and if that field is populated (with any value), then it will be imported as a recurring field. ■ If mapped to any Text or Notes field and the field is not populated (i.e., it is left blank), it will be imported as a non-recurring field.	Task	EffortDriven, Estimated, Flag1 – Flag20, Marked, Notes, Recurring, Rollup, Text1 – Text30
	Fee %	Task	Notes, Number1 – Number20, Text1 – Text30
	Fee Limit Amount	Task	Cost, Cost1 – Cost10, Notes, Number1 – Number20, Text1 – Text30

WBS Descriptive (continued)			

	BCWP Base Unit
	Use the following codes:
	    H: Hours/Units
	    P: Prime
	    B: Total Burdened
	    C: Total Cost
	    D: Total Dollars
		Task	Notes, Text1 - Text30

	*Parent WBS ID (enter * if top level)	Task	Text1 - Text30
	Base WBS; used if EVM is apportioned	Task	ID, Name, Notes, Number1 - Number20, Text1 - Text30, UniqueID, WBS
WBS Schedule			
	Baseline Start	Task	ActualStart, BaselineStart, Baseline1Start - Baseline10Start, ConstraintDate, Created, Date1 - Date10, EarlyStart, LateStart, PreleveledStart, Resume, Start, Start1 - Startt10
	Baseline Complete	Task	ActualFinish, BaselineFinish, Baseline1Finish - Baseline10Finish, ConstraintDate, Date1 - Date10, Deadline, EarlyFinish, Finish, Finish1 - Finish10, LateFinish, PreleveledFinish, Stop
	ETC Start	Task	ActualStart, BaselineStart, Baseline1Start - Baseline10Start, ConstraintDate, Created, Date1 - Date10, EarlyStart, LateStart, PreleveledStart, Resume, Start, Start1 - Start10
	ETC Complete	Task	ActualFinish, BaselineFinish, Baseline1Finish - Baseline10Finish, ConstraintDate, Date1 - Date10, Deadline, EarlyFinish, Finish, Finish1 - Finish10, LateFinish, PreleveledFinish, Stop

WBS Schedule (continued)			
	Early Start	Task	ActualStart, BaselineStart, Baseline1Start - Baseline10Start, ConstraintDate, Created, Date1 - Date10, EarlyStart, LateStart, PreleveledStart, Resume, Start, Start1 - Start10
	Early Finish	Task	ActualFinish, BaselineFinish, Baseline1Finish - Baseline10Finish, ConstraintDate, Date1 - Date10, Deadline, EarlyFinish, Finish, Finish1 - Finish10, LateFinish, PreleveledFinish, Stop
	Late Start	Task	ActualStart, BaselineStart, Baseline1Start - Baseline10Start, ConstraintDate, Created, Date1 - Date10, EarlyStart, LateStart, PreleveledStart, Resume, Start, Start1 - Start10
	Late Finish	Task	ActualFinish, BaselineFinish, Baseline1Finish - Baseline10Finish, ConstraintDate, Date1 - Date10, Deadline, EarlyFinish, Finish, Finish1 - Finish10, LateFinish, PreleveledFinish, Stop
Estimates			
	*Resource Code	Task	ID, Name, Notes, Number1 - Number20, ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Text1 - Text30
		Resource	Group, ID, Initials, Notes, Number1 - Number20, Text1 - Text30
		Assignment	Notes, Number1 - Number20, Text1 - Text30
	Resource Department	Task	ID, Name, Notes, Number1 - Number20, ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Text1 - Text30

Estimates (Continued)			
		Resource	Code, Group, ID, Initials, Notes, Number1 - Number20, Text1 - Text30
		Assignment	Notes, Number1 - Number20, Text1 - Text30
	XREF-EST	Task	ID, Name, Notes, Number1 – Number20, ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Text1 – Text30
		Resource	Group, Initials, Notes, Number1 - Number20, OvertimeRate, Text1 - Text30, Type
		Assignment	Notes, Number1 - Number20, Text1 - Text30
	Overtime Factor	Resource	Group, Initials, Notes, Number1 - Number20, OvertimeRate, Text1 - Text30, Type
		Assignment	Notes, Number1 - Number20, Text1 - Text30
	Rate Table	Task	ID, Name, Notes, Number1 - Number20, ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Text1 - Text30
		Resource	Group, ID Initials, Notes, Number1 - Number20, Text1 - Text30
		Assignment	Notes, Number1 - Number20, Text1 - Text30
	Burden Template	Task	ID, Name, Notes, Number1 - Number20, ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Text1 - Text30
		Resource	Group, ID, Initials, Notes, Number1 - Number20, Text1 - Text30
		Assignment	Notes, Number1 - Number20, Text1 - Text30
	Estimate Identifier ■ Note: Required when using both time-phased and autospread.	Task	Contact, ID, Name, Notes, Number1 – Number20, Priority, Text1 - Text30, WBS

Time-phased Estimates			
	Time-phased Labor	Assignment	BaselineWork, Baseline1Work - Baseline10Work, Work
	Time-phased Material	Assignment	BaselineCost, BaselineWork, Baseline1Cost – Baseline10Cost, Baseline1Work - Baseline10Work, Cost, Work
Autospread Estimates			
	Autospread Labor	Task	ActualCost, ActualOvertimeCost, ActualOvertimeWork, ActualWork, ACWP, AssignmentUnits, BaselineCost, BaselineWork, Baseline1Cost - Baseline10Cost, Baseline1Work - Baseline10Work BCWP, BCWS, Cost, Cost1 - Cost10, CostRateTable, EAC, FixedCost, FixedCostAccrual, Number1 - Number20, OvertimeCost, OvertimeWork, RegularWork, RemainingCost, RemainingDuration, RemainingOvertimeCost, RemainingOvertimeWork, RemainingWork, Text1 - Text30, Work,
		Assignment	ActualCost, ActualOvertimeCost, ActualOvertimeWork, ActualWork, ACWP, BaselineCost, BaselineWork, Baseline1Cost - Baseline10Cost, Baseline1Work - Baseline10Work BCWP, BCWS, Cost, Cost1 - Cost10, CostRateTable, FixedMaterialAssignment, Number1 - Number20, OvertimeCost, OvertimeWork, RegularWork, RemainingCost, RemainingOvertimeCost, RemainingOvertimeWork, RemainingWork, Text1 - Text30, Units, Work,

Autospread Estimates Continued			
	Autospread Material	Task	ActualCost, ActualOvertimeCost, ActualOvertimeWork, ActualWork, ACWP, AssignmentUnits, BaselineCost, BaselineWork, Baseline1Cost - Baseline10Cost, Baseline1Work - Baseline10Work BCWP, BCWS, Cost, Cost1 - Cost10, CostRateTable, EAC, FixedCost, FixedCostAccrual, Number1 - Number20, OvertimeCost, OvertimeWork, RegularWork, RemainingCost, RemainingDuration, RemainingOvertimeCost, RemainingOvertimeWork, RemainingWork, Text1 - Text30, Work
		Assignment	ActualCost, ActualOvertimeCost, ActualOvertimeWork, ActualWork, ACWP, BaselineCost, BaselineWork, Baseline1Cost - Baseline10Cost, Baseline1Work - Baseline10Work BCWP, BCWS, Cost, Cost1 - Cost10, CostRateTable, FixedMaterialAssignment, Number1 - Number20, OvertimeCost, OvertimeWork, RegularWork, RemainingCost, RemainingOvertimeCost, RemainingOvertimeWork, RemainingWork, Text1 - Text30, Units, Work

Autospread Estimates Continued			

	Spread Curve
	▪ Note: If no mapping default to linear. If mapped field is blank default to 1.
	▪ The numeric value for each type of spread curve is:
	  o Linear 1
	  o Bell Curve 2
	  o Front Load #1 3
	  o Front Load #2 4
	  o Back Load #1 5
	  o Back Load #2 6
	  o Double Peak 7
	  o Early Peak 8
	  o Late Peak 9
	  o Trapezoid 10
		Task	ID, Name, Notes, Number1 - Number20, , ResourceGroup, ResourceInitials, ResourceNames, ResourcePhonetics, Text1 - Text30, Unique ID, WBS

		Resource	Cost, Cost1 - Cost10, Group, ID, Initials, Notes, Number1 - Number20, Text1 - Text30
		Assignment	Cost, Cost1 - Cost10, Notes, Number1 - Number20, Text1 - Text30
	Estimate Type Note: If blank then we will use today's defaults labor is B (hours) and material is C (prime).	Task	Text1 - Text30
		Resource	Text1 - Text30
	*Estimate Start	Task	ActualStart, BaselineStart, Baseline1Start - Baseline10Start, ConstraintDate, Created, Date1 - Date10, EarlyStart, LateStart, PreleveledStart, Resume, Start, Start1 - Start10

Autospread Estimates Continued			
	*Estimate Complete	Task	ActualFinish, BaselineFinish, Baseline1Finish -Baseline10Finish, ConstraintDate, Date1 - Date10, Deadline, EarlyFinish, Finish, Finish1 - Finish10, LateFinish, PreleveledFinish, Stop
BCWP			
	*EV %Complete Task Flag **Note:** - If this field is blank in MSP, it will be ignored and will not be added to the generated file. - If mapped to a Flag field, then No is ignored and Yes is used. - If mapped to a numeric field, then value <>0 is used. - If mapped to a Text field, and any value is in the text field, then it is used. - If flagged, then MPM looks at the task for BCWP information.	Task	Flag1 - Flag20, Marked, Milestone, Name, Notes, Number1 - Number20, Text1 - Text30, UniqueID, WBS
	Task BAC **Note:** - This is a required field if Cum Percent Complete is mapped only if you have multiple tasks for the same WBS ID. - We recommend that this field is mapped to the same field used for Estimates Time-phased Resource Plan.	Task	BaselineWork, Baseline1Work - Baseline10Work, Work

BCWP			
	Cumulative Percent Complete **Note:** Cum Percent Complete and/or BCWP Amount must be mapped if importing BCWP.	Task	BCWP, Number1 - Number20, PercentComplete, PercentWorkComplete, PhysicalPercentComplete, Text1 - Text30
	Cumulative BCWP **Note:** Cum Percent Complete and/or BCWP Amount must be mapped if importing Milestone Flag.	Task	BCWP, Cost, Cost1 - Cost10, Number1 - Number20, Text1 - Text30
Milestones			
	Milestone Flag **Note:** ▪ If this field is blank in MSP, it will be ignored and will not be added to the generated file. ▪ If mapped to a Flag field, then No is ignored and Yes is used. ▪ If mapped to a numeric field, then value <>0 is a milestone. ▪ If mapped to a Text field, and any value is in the text field, then it is used. ▪ We recommend that this field is mapped to the same field used for Milestone ID. ▪ If flagged, then MPM looks at the task for Milestone information.	Task	Flag1 - Flag20, ID, Marked, Milestone, Name, Notes, Number1 - Number20, Text1 - Text30, UniqueID, WBS

Milestones (continued)			
	Milestone ID **Note:** This is a required field if identifying milestones by ID.	Task	ID, Name, Notes, Number1 - Number20, Text1 - Text30, Unique ID
	Milestone Symbol **Note:** This is a required field if identifying milestones by Symbol/Description/Scheduled Date.	Task	Name, Notes, Number1 – Number20, Text1 - Text30
	Milestone Description **Note:** This is a required field if identifying milestones by Symbol/Description/Scheduled Date OR Description.	Task	EarnedValueMethod, ID, Name, Notes, Number1 - Number20, ParentTask, Priority, Summary, Text1 - Text30, UniqueID, WBS
	Milestone Weight **Note:** - If the Milestone Weight field is mapped to a task work field, then the weight will be calculated based on the work values. - For import, only hours or cost can be used to weight milestones. Both cannot be imported at the same time. - If Milestone Weight is mapped to a task work field, then the BCWP Base Unit should be set to Hours for labor tasks and Prime for non-labor tasks in order for the weight to be calculated. - If mapping Milestone weights to a user-defined field, we suggest entering Hours for labor tasks and Prime for non-labor tasks in order for the milestone to be weighted correctly	Task	BaselineWork, Baseline1Work - Baseline10Work, Cost, Cost1 - Cost10, Number1 - Number20, Priority, Text1 - Text30, Work

Milestones (continued)			
	Scheduled Date **Note:** This is a required field if identifying milestones by Symbol/Description/Scheduled Date.	Task	ActualFinish, ActualStart, BaselineFinish, BaselineStart, Baseline1Finish - Baseline10Finish, Baseline1Start - Baseline10Start, ConstraintDate, Date1 - Date10, EarlyFinish, EarlyStart, Finish, LateFinish, LateStart, Start
	Forecast Date	Task	ActualFinish, ActualStart, BaselineFinish, BaselineStart, Baseline1Finish - Baseline10Finish, Baseline1Start - Baseline10Start, ConstraintDate, Date1 - Date10, EarlyFinish, EarlyStart, Finish, LateFinish, LateStart, Start
	Milestone Complete Flag ▪ If mapped, and any value is in the Text field, then Milestone is imported as complete.	Task	Flag1 - Flag20, Marked, Text1 - Text30
	Percent Complete	Task	BCWP, Number1 - Number20, PercentComplete, PercentWorkComplete, PhysicalPercentComplete, Text1 - Text30

* Required Field

18.5 The MSP Link Processes

There are three types of interface processes:

- **Generate file and validate** - This process creates a generated file based on the selected import data and analyses the data coming from MSP to see if it is valid. A Validation Report is generated, listing any errors and warnings.

- **Generate file** - This process creates a generated file based on the selected import data without performing any validation on the data that would come in if you were to perform an import.

- **Import** - This process imports the data into MPM from the generated file and creates a Processing Report listing any warnings and errors.
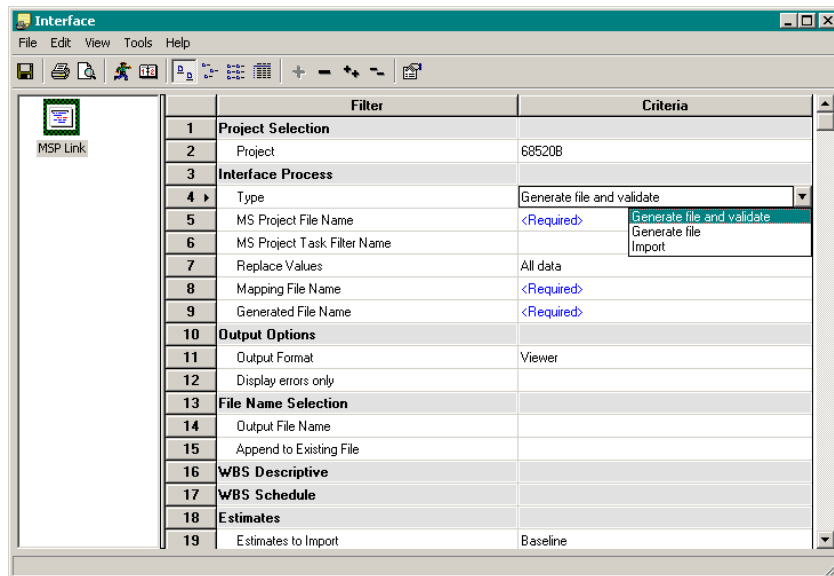
Figure A. *Three types of interface processes*

18.5 The MSP Link Processes

18.5.1 Generate File and Validate, Generate File

The only difference between the Generate file and validate and the Generate file processes is that the Generate file and validate option validates the incoming data.
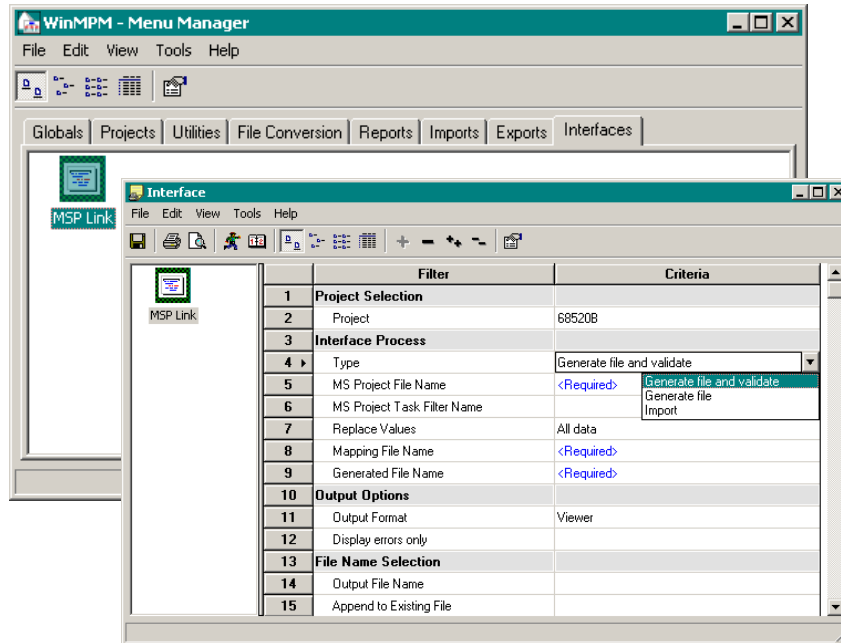
Figure A. *Select the Type option*

Notes

■ You will need Microsoft Office Project installed on your machine in order to run a Generate file and validate or Generate file process.

■ The .mpp must be saved before running the interface, or changes will be lost.

■ Regardless of why you are running generate/validate (i.e. WBS Descriptive, WBS Schedule Estimates, BCWP, Milestones), if records/rows in MSP are hidden, those hidden records will not be processed. They must be unhidden and saved prior to running generate/validate.

- If both autospread and time-phased will be used within one .mpp file, then the estimate identifier field must be mapped at task level because having both time-phased and autospread within one task is not supported.

- If MSP is open when the process starts, you will see some of the processing in MSP (for example, cells being highlighted) during the process. Once the process is complete, the interface closes MSP.

- MSP Link does not support embedded or linked projects. These must be brought in separately.

MSP 2000 Note

If you are using MSP Link with MSP 2000 and your .mpp contains a macro, the interface process is halted and an MSP dialog is displayed asking the user whether to enable or disable the macro. You may select either the Enable or Disable button and the process will continue.

To prevent this dialog from being displayed, complete the following steps:

1. Go to Tools | Macro | Security to display the Security dialog.

2. Select the Security Level tab.

3. Select one of the following:

   - **High** — so no unsigned macros are allowed to run.

   - **Low** — so that all macros are allowed.

4. Click OK to save changes and close the Security dialog box.

Procedure

You will need Microsoft Project installed on your machine in order to run a Generate file and validate or Generate file process.

1. From the Menu Manager window, select the Interfaces tab and click on the MSP Link icon (*See Figure A*).

2. Select a project from the drop-down list.

3. Under Interface Process, select either Generate file and validate, or Generate file from the Type drop-down list as shown in Figure A.

4. Fill in all other necessary fields. See *18.3.1. Interface Conditioning Options* for field descriptions.

5. Under the Interface Process section, click on the Mapping File Name Criteria field.

    a. Select the Mappings ![icon] button to create a new mappings file (See section *18.4.1. Creating a New Mappings Definition* for further details), or

    b. Select the Browse button ![icon] to open an existing mappings file (See section *18.4.2. Opening a Saved Mappings Definition* and section *18.4.3 Editing a Saved Mappings Definition* for further details).

6. Once all the conditioning options and mappings fields are completed, click on the running man ![icon], or select Tools/Run Interface to start the process.

The .mpp must be saved before running the interface, or changes will be lost.

Initial Information Check

An initial information check is performed. If any of these checks are found to be invalid, the error messages are displayed in the viewer for the Generate file process, or in the Output Format that is indicated in the conditioning options for the Generate file and validate or Import processes. The process is then discontinued.

- Generate file and validate, Generate file processes:

  o Is Microsoft Project (MSP) installed on the computer?
  o Is the MSP Task Filter Name valid?
  o Is at least one import selected?
  o Is the MSP file valid?
  o Is the mappings file valid?
  o Does the mappings file contain mappings for all of the selected import types?
  o Does the mappings file contain mappings for all required fields?
  o Is BCWP selected to be imported? If so, then the mappings file should have either Cumulative Percent Complete or Cumulative BCWP Amount mapped
  o Is Cumulative Percent Complete mapped and do you have multiple tasks for the same WBS ID? If so, then Task BAC must also be mapped.
  o Is Milestones selected?
    - Is Identify Milestones By set to ID? If so, there needs to be a mapping for Milestones ID.
    - Is Identify Milestones By set to Description? If so, there needs to be a mapping for Milestones Description.
    - Is Identify Milestones By set to Symbol/Description/Schedule Date? If so, there needs to be a mapping for Milestones Symbol/Description/Schedule Date.
  o Is Time-phased Estimates or Autospread Estimates selected?
    - Is either time-phased labor or time-phased material mapped? One or the other has to be mapped.
    - Is either autospread labor or autospread material mapped? One or the other has to be mapped.

The initial information check is now complete and the Generate File process continues:

- The MSP Filter is applied to the data (if applicable).

- The data is processed according to the mapped fields' criteria. If a mapped field is invalid, an error message is written to the Validation Report.

- The Interface checks to see if tasks need to be summarized to a WBS element. Tasks are summarized if their unique identifier is the same. For example, in WBS Schedule, tasks with the same WBS ID will be summarized by taking the earliest Start date and latest End date of all tasks.

- Generate File and Validate only - The data coming in from MSP is validated and any errors and inconsistencies are written to the Validation Report.

  o   If Generate File was selected, no data validation occurs.

- The Replace Values conditioning option is checked to see if all data or only changed data should be imported:

  o   If Replace Values is set to All data, all MPM mapped field data is replaced by the imported MSP data.

  o   If Replace Values is set to Changed data only, only mapped field data that has changed between MSP and MPM, when compared against MPM, will be written to the generated file and imported into MPM.

- A generated file (.gen) is created and saved to the location specified in the Generated File Name line of the MSP Link.

- A Validation Report is created and can be viewed in the format selected in the Output Format conditioning option.

18.5 The MSP Link Processes

18.5.2 Import

The Import process imports the data from the generated file into MPM.

Note: You do not need Microsoft Office Project installed on your machine in order to run an Import process.

Procedure

1. From the Menu Manager window, select the Interfaces tab and click on the MSP Link icon (*See Figure A*).

2. Select a project from the drop-down list.

3. Under Interface Process, select the Import option from the Type drop-down list as shown in Figure A.
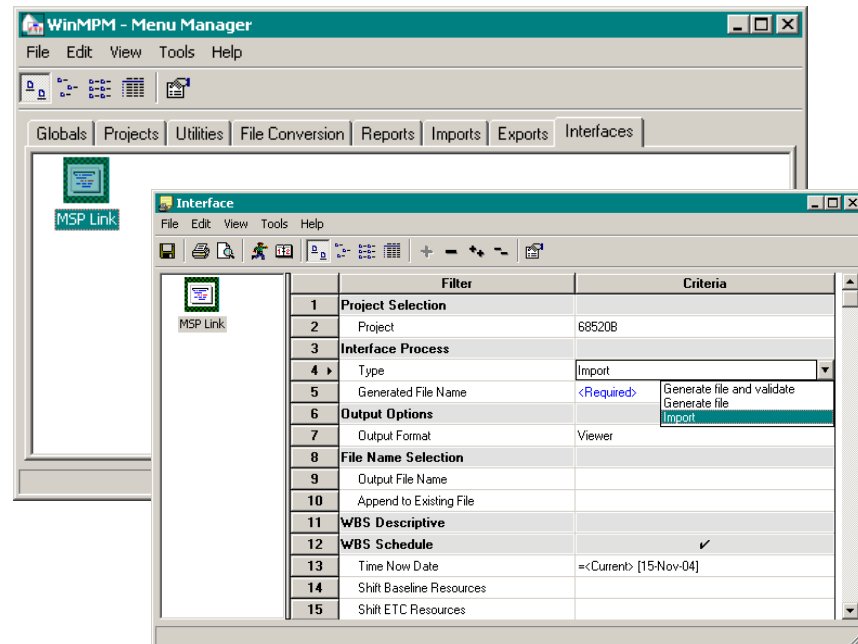
Figure A. *Select the Import option*

4. Fill in all other necessary fields. See *18.3.1. Interface Conditioning Options* for further details.

5. Click on the running man or select Tools/Run Interface to start the Import process.

6. The interface performs an initial import information check:

    ■ Import process:

        o   Is at least one import selected?
        o   Is the generated file a valid file?
        o   Is the project file name in the generated file the same as the project name in the interface criteria?
        o   Does data exist in the generated file for all selected imports?

The data from the generated file is imported into MPM and a Processing Report is created and can be viewed in the format selected in the Output Format conditioning option.

18.6 Batch Processing

Many MPM users perform the same set of interfaces every month as part of their monthly status processing. To set up a batch session which performs several processes, you will need to create several interfaces.

Setting up a Batch Interface

1. Using your mouse, click anywhere in the left pane of the Interface window to make that area active.

2. Select Edit\Add Interface, or right mouse click in the left pane and select Add Interface (*See Figure A.*).
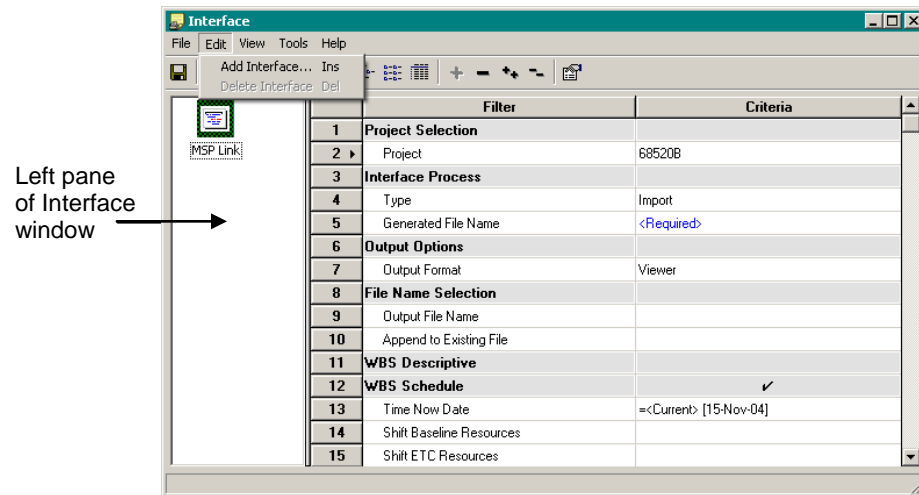
Figure A. *Select Edit|Add Interface*

3. The Add Interface dialog displays (*See Figure B.*)
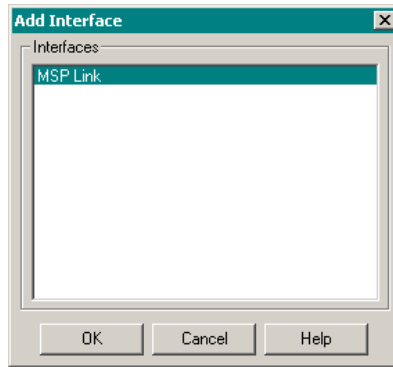
Figure B. *Select MSP Link*

4.   Select MSP Link and click on OK.

A new MSP Link Interface is added to the left pane of the Interface window.

5.   Select conditioning and mapping options for this new Interface.

6.   Repeat steps 1 through 4 to add additional interfaces.

7.   Click on the running man [running man icon] or select Tools/Run Interface to start the Batch process.

The MSP Link begins with the first interface listed. If any invalid criteria are found during the Initial Information check (see section *18.5.1. Generate File and Validate, Generate File* for further information), the error messages are displayed in the Output Format that is indicated in the conditioning options, and the entire batch process is discontinued.

If errors are found during the data validation process, the errors will be written to the validation report and the process will continue.

The Batch processing will always run through the entire list of Interfaces, starting with the top interface.

18.6 Batch Processing

18.6.1 Saving an MSP Link Interface

To save a new interface:

1. After setting up a new batch interface, select File\Save to save your new interface.

2. A Save Conditioning File dialog displays (See Figure C).

MPM prompts for the location and file name to be saved. The default location is a directory called INTERFACES located under the DELTEKMPM directory. Saved interfaces are given the name *interface*.MFN.

Once you have saved an interface in the INTERFACES folder, MPM adds a Saved Interfaces tab to the Menu Manager (see Figure D), where all saved interfaces can be accessed later.

Figure C. Saving an Interface

3. Click the Save button to save your new interface.

4. In order to see your saved interface on the Saved Interfaces tab, click F5 (Refresh) or close and reopen MPM.

Note: You will not be able to see your new interface on the Saved Interfaces tab if it has been saved to any folder other than the INTERFACES folder.
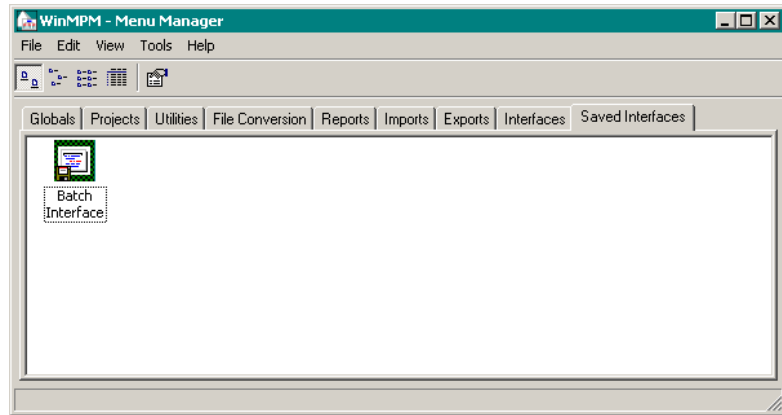
Figure D. *Saved Interfaces Tab*

18.6 Batch Processing

18.6.2 Editing an MSP Link Interface

To edit criteria in an interface:

1. Click on the MSP link that you want to edit.

2. Edit the criteria and mapping data as needed.

3. Select File\Save (Ctrl + S) to save the new settings.

18.6 Batch Processing

18.6.3 Deleting an MSP Link Interface

To delete an interface from the left pane of the Interface Window:

1. Click on the MSP link that you want to delete.

2. Select Edit|Delete Interface, press your Delete key, or right mouse click and select Delete Interface (*See Figure E*).
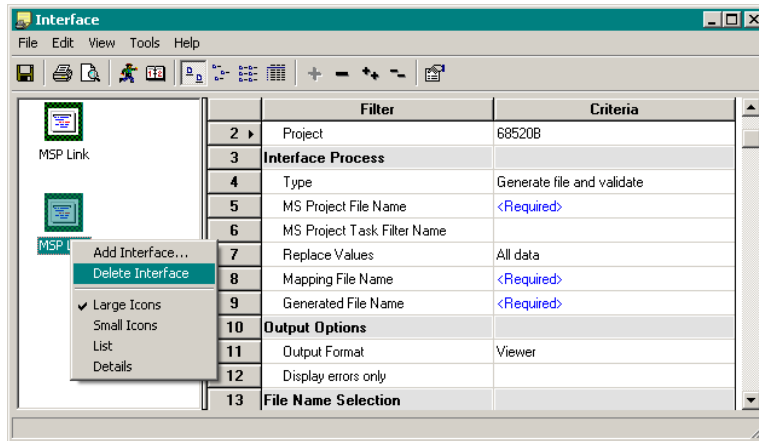
Figure E. *Right Mouse Click to Delete Interface*

19

Using Distributed Projects

19.1 Introduction to Distributed Projects

Distributed Projects is a special feature of MPM which links several projects together. You can distribute portions of large programs to *subprojects*, which you can then status individually and later merge together into the parent *superproject*. See Figure A.
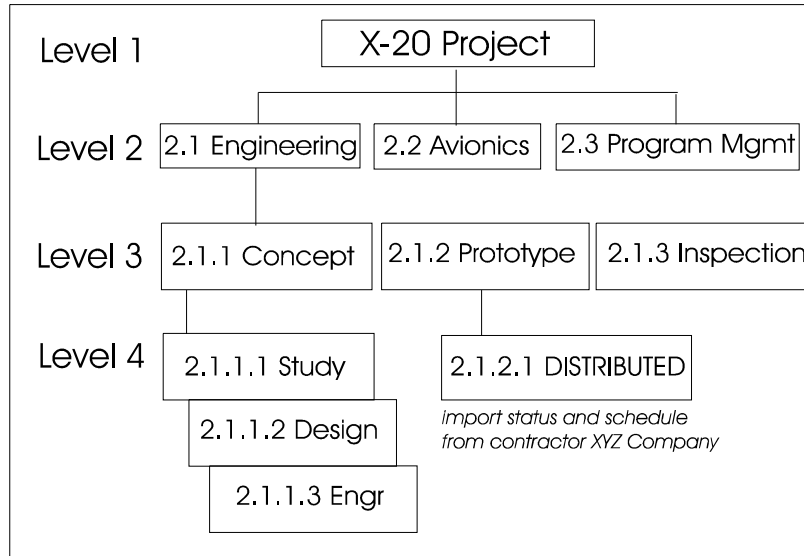
Figure A. The Super Project's WBS Tree Showing the Subproject

Using Distributed Projects allows you to consolidate multiple independent projects into a corporate hierarchy, which can be of significant benefit in a large environment. You can also use Distributed Projects to automatically compute international currency conversions during the data consolidation process.

Create your superproject and subprojects as two separate projects. To link projects together, edit the WBS Tree in the superproject. In the lowest level WBS element, enter the word DISTRIBUTED (always in upper case) in the Xref-1 field. It does not matter what numbering sequence you use in either project. Any alphanumeric numbering sequence in the subproject is supported. They are linked by the Xref-1 field.

In Figure A, WBS ID 2.1.2.1 would be in Project X-20 and would have DISTRIBUTED in its Xref-1 field.

Once a WBS element is marked as DISTRIBUTED, no lower level WBS elements may be added below it. Also, MPM will not accept resource estimates for DISTRIBUTED WBS elements.

Importing and Exporting Distributed Project Data

To roll up the data from the subprojects into the superproject, you must have complete access granted to all projects affected. Follow these steps:

1. Export Distributed Data from the first subproject. See *Chapter 17: Exporting Data* for complete details.

2. Repeat Step 1 for all additional subprojects.

3. Run the Analyze Distributed Import File Report on the new export file. This report analyzes the data before importing it to the superproject. See topic *19.4 Recommended Distributed Projects Reports* for details.

4. Import Distributed Data. See *Chapter 16: Importing Data* for complete details.

When you enter the name of the Distributed Project transfer file, MPM displays an additional button ![button] which allows you to check the information in the transfer file.

Transfer File Name   C:\MPM\Junk.xfr

MPM displays a dialog box with the following information: Source Project, Source WBS, Target Project, Target WBS, Export Conversion Code, and Import Conversion Code.

Batch Processing of Distributed Projects

These imports and exports may be saved and rerun on a periodic basis. See *Chapter 16: Importing Data* and *Chapter 17: Exporting Data* for details on batch imports and exports.

Rollup Processing of Distributed Data

The superproject receives the rolled up data at the EOC level. Imported data from the subproject resides only in the super project's rollup records, not in the detail records, and contains summarized data only. Therefore, reports generated from the detail records (Resource Detail, Manpower Detail, etc.) will <u>not</u> include the detail data from the subprojects. Reports generated from rollup records (summary reports such as recaps, government reports, etc.) <u>will</u> contain subproject data. Distributed elements may not be replanned. In addition, the Utilities ignore distributed elements.

Only summarized project data is consolidated. That includes BCWS, BCWP, ACWP and ETC data by element of cost (labor, material, etc.), milestones and time analysis dates including early start/complete, late start/complete and scheduled start/complete.

19.2 Consolidating Distributed Projects

Building a Transfer File

To build a transfer file containing distributed data for export into another project:

1. On the Menu Manager with the Export tab selected, choose the Export Distributed Project icon. MPM displays the Export Distributed Project Conditioning window.

2. In the Source Project field, select the name of the subproject to be exported.

3. In the Target Project field, select the name of the superproject to be imported into. The Target project name will be validated when you run the import.

4. To export only one WBS leg, enter the WBS ID in the Source WBS field.

5. Enter the WBS ID into which data will be imported in the Target WBS field. The WBS ID is checked later to ensure that the consolidation happens within the correct WBS element. The target WBS must be the lowest WBS element in the target leg and must have the word DISTRIBUTED entered in the Xref-1 Field.

6. Enter the name and location of the export file to be created in the Export File field.

7. If desired, specify any Conversion Codes (see below).

8. Click the Run button ![icon] or choose Run Export on the Tools menu

The transfer file may contain summarized EOC data for an entire subproject or just one leg of a WBS. The Distributed Project transfer file is a proprietary format and cannot be created using a text editor. For complete details, see *Chapter 17: Exporting Data*.

Currency Conversion Codes

To apply time-phased factors when importing or exporting international currency, use these optional fields. You can set up export and import conversion rates for as many different international currencies as needed.

You must establish the export/import conversion codes in the Resources and Burdens in your Global file prior to building your transfer file. Data is entered in the same manner and with the same constraints as other resource codes. See *Chapter 5: Defining Resources and Burdens* in the *Globals* manual for details. For example, if $100 = 200 deutsche marks (DM), the export conversion rate would be 2.00 and the import conversion rate would be .50. Please note that the Baseline Rate Table is used for Baseline, ETC and Actuals.

Setting Up Export Conversion Codes

1. From the Menu Manager, click the Globals tab and select Resources and Burdens.

2. Enter data in the following fields in the Resources and Burdens window:

- Resource Code: DOL2DM
- Description: DOLLARS TO MARKS
- Rate: 2.00

3. Repeat the rate for the duration of your calendar or contract. You may use the automatic rate escalation feature just as with any other resource rate.

4. Save this data as part of your Resources and Burdens.

5. Enter **DOL2DM** in the Export Conversion Code field whenever you want to convert dollars to DMs using this conversion rate.

Setting Up Import Conversion Codes

1. From the Menu Manager, click the Globals tab and select Resources and Burdens.

2. Enter data in the following fields in the Resources and Burdens window:

- Resource Code: DM2DOL
- Description: MARKS TO DOLLARS
- Rate: .50

3. Repeat the rate for the duration of your calendar or contract. You may use the automatic rate escalation feature just as with any other resource rate.

4. Save this data in the Resources window.

5. Enter **DM2DOL** in the Import Conversion Code field whenever you want to convert DMs to dollars using this conversion rate.

19.3 Running the Analyze Distributed Import File Report

The Analyze Distributed Import File report is an analysis report of your Distributed Import file, which you generate in the Distributed Project Export window (see *Chapter 17: Exports* for details). You use the Analyze Distributed Import File report to check the export file of your subproject you create, before you run the import to your superproject. This analysis report will detect any potential problems with the data.

Conditioning Window

Access the Analyze Distributed Import File Conditioning Window by selecting Analyze Distributed Import File on the Reports tab. MPM displays the Analyze Distributed Import File Report Conditioning Window shown in Figure A.
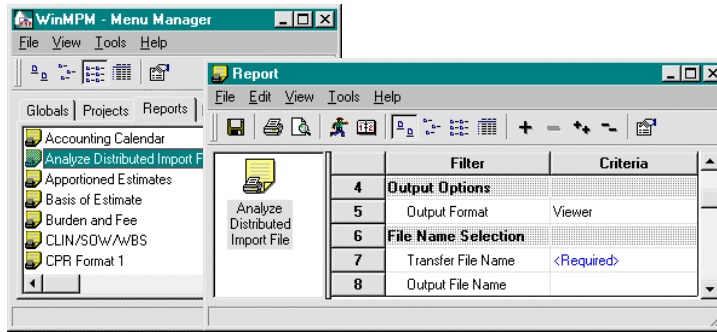
Figure A. Selecting the Analyze Distributed Import File Report.

The Analyze Distributed Import File Report has output options for sending the results of the analysis to different destinations.

Required Entries

To generate this report, you must identify the name of the Import File to be analyzed (Transfer File Name)**.**

Optional Entries

You can output the results of the analysis directly to the Printer, send it to the Report Viewer (see *Chapter 15: Reports* for instructions on using the Report Viewer), or save it in several formats (comma- or tab-delimited TEXT, Excel format .XLS, or HTML format .HTM). If you choose to save it in one of the file formats, specify the file name and location to be created in the Output File option.

Running the Analysis

To start the analysis processing and reporting, click the Run button ![run button] or choose Run Report on the Tools menu

Validation Processing

MPM analyzes your Import File for any problems. The Target Project is compared to the data in the Import File, and MPM attempts to link the Distributed WBS elements.

When you exported your Distributed Project to create the Import File, the Source Project and Target Project you identified in the Export Conditioning window are stored in the Import File. You do not need to identify the Source or Target when running the Analysis report or the Import Distributed Project, because MPM knows which projects to use.

> It does not matter what project you are currently editing when importing Distributed Project data. The Target Project identified when exporting is always used.

19.4 Recommended Distributed Projects Reports

There are several standard MPM reports which you can use to check your Distributed Project data and see its coordination with other data.

- Analyze Distributed Import File Report
  Shows the distributed data in the transfer file, and analyzes the content. We recommend you run this report before running the import, to verify your data. See below for details.
- WBS Indented Report
  Shows the WBS in outline (indented) format. Use conditioning to show particular WBS leg(s) which include DISTRIBUTED elements.
- WBS Hierarchy
  Shows the WBS in tabular format. Use conditioning to show particular WBS leg(s) which include DISTRIBUTED elements.

19.5 Distributed Project Conversion Utility (DPCU)

Introduction

Distributed Project Conversion Utility (DPCU) provides the capability for Prime Contractors to apply their internal burdens to a "Subcontractor's" data or another "Division's" data created in MPM via the Distributed Project function.

The DPCU combines and converts Element of Cost (EOC) data residing in Distributed Project transfer files (.xfr) into resource detail data. This allows the Prime Contractor to import the data, which in turn allows the Prime Contractor to utilize their Resource Library for the purpose of burdening the imported data.

Note: Microsoft Office access is required to run DPCU.

Conversion Process

BCWS, ETC and ACWP

The data within the Transfer Files (.xfr) is first summarized at the Total Price level (through Fee) and then converted to Total Prime (unburdened) dollars in the files created for importing. This will ensure burden costs (Overhead, G&A, Cost of Money and Fee) within the Transfer Files (.xfr) will not be co-mingled with those of the Prime Contractor's. The Prime Dollars then become the pricing base for the application of the Prime Contractor's burdens during importing.

For the converted BCWS and ETC data, the Prime Contractor will be required to import monthly estimate data.

For the converted ACWP data, the Prime Contractor will be required to import Actuals - using the Auto Burdening import option.

BCWP

For BCWP, the process for converting data works somewhat different. Within MPM, Fee is not calculated for BCWP. Therefore, DPCU must compute Fee for the BCWP data within the Transfer File (.xfr) in order to arrive at the Total Price level. This is done to be consistent with the BCWS, ETC and ACWP data types. The formula DPCU uses to compute Total Price BCWP is as follows:

{[Total Dollars BCWP/Total Dollars BAC] x Fee BAC} + Total Dollars BCWP

This calculation ensures that the amount of Fee "earned" is based on the percent complete of the Source WBS Leg (or Project Level) that is being "Distributed". The computed values are then used for the basis of import. However, the BCWP import file does not categorize values in terms of "Prime" vs. "Total Dollars" vs. "Total Price" etc… Therefore, it is incumbent upon the Prime Contractor to assign a BCWP Base Unit of "Prime Dollars" for the WBS that is to be receiving the converted Distributed data. After the BCWP values are imported, the Prime Contractor's burdening structure is used to burden the BCWP Prime Dollars up through Total Dollars.

DPCU Guidelines

Project Setup Guidelines

Prior to importing, the following guidelines must be implemented in the Project (s) and WBS (s) receiving the data for the following data types:

BCWP

1. You must assign Earned Value Method #9 (BCWP Entry) for all WBS (s) receiving the BCWP data. The BCWP import file will include cumulative monthly values and will be imported as BCWP amounts.

2. You must select Prime Dollars as the BCWP base. This and assigning Earned Value Methods are done within the Integrated Planning Screen - Milestones tab.

3. You must Calculate BCWP after the import. This is done within the Project Maintenance screen.

ACWP

1. You must assign a Rate Table ID to be used for the burdening of Actuals. Remember that the Actuals import file is for Auto Burdening, meaning that it does not include any of the following values: Overhead, G&A, Cost of Money or Fee. The rate table must first be created in the Resource Library of the Global File ID that is being used by the Project receiving the data. After creation, identify the Rate Table ID within the Project Maintenance screen.

2. The WBS element must have a value (any value) in the charge number field in order for MPM to allow Actuals to be accepted for the WBS. You enter this value (any value) within the Work Breakdown Structure screen.

BCWS/ETC/ACWP

1. You must identify the Resource Code ID that is to be used for the converted Distributed Project data. Enter that code in one of the twelve following fields from within the Work Breakdown Structure screen: Alias, Manager, Xref-1-10.

The Resource Code ID may not exceed 10 alpha-numeric characters, or have any embedded blanks.

2. The Resource Code ID identified in number 1 above, must exist in the Resource Library of the Global File ID being used by the Project receiving the imported data.

3. Do NOT enter the word DISTRIBUTED under the Xref-1 field, which is normally required only when processing standard (unconverted) Distributed Project transfer files. If this identifier is mistakenly entered, the imported data will be rejected during the import process.

Data Comparison

If you wish to compare the data residing in the converted transfer files with the data currently residing in the WBS Element, it is recommended that you import the file into a copy of the Project. Not only is this recommended as a standard back-up procedure for preserving your current contract position, it allows you to run the Project Comparison reports from within MPM. These reports compare the data of two like Projects side by side and display the variances between them. This would allow you to analyze the "before" and "after" positions before actually updating the master Project.

Database Performance

DPCU uses a Microsoft Access database to store the retrieved data from the Transfer Files (.xfr) for further data manipulation and calculations.

Performance may be improved by routinely compacting the database. Refer to the following Microsoft Knowledgebase article for further information:

http://support.microsoft.com/kb/288631

Opening DPCU

To open DPCU from the Menu Manager:

1. Select the Utilities tab.

2. Choose the Distributed Project Conversion Utility icon.

The Main Menu (below) appears. See below for detailed explanations of the Main Menu Options.
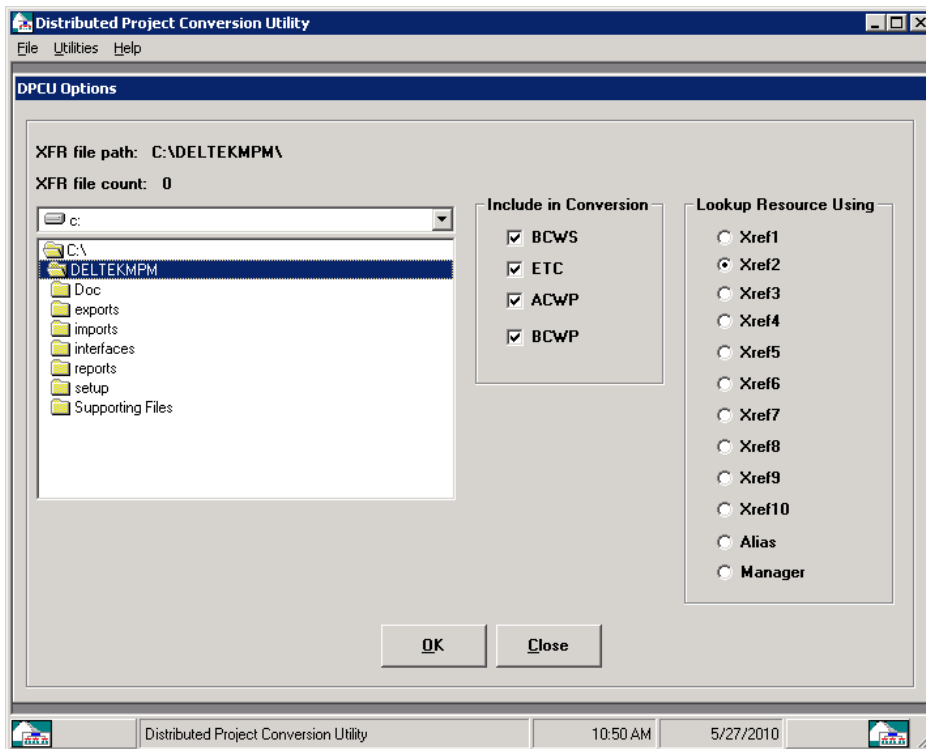
Main Menu Options

XFR File Path:

Using the Drive drop down list and the Directory drop down list, identify the Drive and Subdirectory that contains the Transfer Files (.XFR).

Note: It is recommended that the Transfer Files to be converted be placed in a dedicated directory. Otherwise, all Transfer Files (.XFR) residing in the directory selected will be converted.

XFR File Count:

This indicates the number of Transfer Files that DPCU found in the Drive/Directory selected.

Include in Conversion:

Click inside the box and place a check for the data you wish to be extracted from the Transfer Files (.XFR) and converted into data import files.

Lookup Resource Using:

DPCU must use a Resource Code for the import file(s) it will create (except for BCWP). You instruct DPCU where to find that Resource Code by indicating the appropriate field. The five fields from which to choose are all located in the Work Breakdown Structure screen within MPM. Only the Target WBS(s) that will be receiving the data need to have the Resource Code identified.

Note: Be sure that the Resource Code value entered in the selected field does not exceed 10 characters in length and that the value entered is a valid Resource Code in the Targeted Project's Resource Library.

Process Status

After selecting the Main Menu Options and clicking the OK button, DPCU displays a Process Status window similar to below. Details of this Status window can be found below.

The status window indicates the Status of the conversion process for each Transfer File. Once completed, the following files will be created in the same directory as your Transfer Files.

- *Target Project Name.S* (import file for the BCWS data)

- *Target Project Name.E* (import file for the ETC data)

- *Target Project Name.A* (import file for the Actuals data)

- *Target Project Name.P* (import file for the BCWP data)

For example, when the "Subcontractor" or other "Division" creates the Transfer Files, they must identify a Target Project name (for example, the Prime Contractor's Project). Assume the project name is DIST (as shown in the status above). When the Prime Contractor initiates the DPCU, and selects all four data categories to be converted, the following files would be created:

- DIST.S

- DIST.E

- DIST.A

- DIST.E

When multiple Transfer Files exist for the same project, DPCU will convert and combine all like data types into the same import file, such that the Prime Contractor will never have to import more than four files into one project. An example of this would be if the Prime Contractor had multiple Subcontractors on the same contract, each required to create and submit a Distributed Project Transfer file(s) to the Prime Contractor. Rather than converting and creating a separate BCWS Import file for each Transfer File, DPCU simply appends the converted BCWS data records into the same "filename.S".

Note: Make sure the "Target WBS(s)" exist in the Target Project or you will the import file will fail during the import process.

DPCU Log File

DPCU does four different validations during the conversion process. They are:

- Does the Target Project exist?

- Does the Target WBS exist?

- Does the Target WBS have a Resource identified in the WBS Lookup field indicated?

- Does the Target WBS have a value in the Charge Number field?

At the end of the conversion process, a log file will be generated. If any of the above validations are not met, then the log file will indicate which validations were not met and for which XFR file.

The log file can be viewed two different ways:

1. If there were validations not met during the conversion process, DPCU will indicate so when the conversion process is complete.

2   The other way to view the log file is from the Utilities Tool Bar. Under Utilities, select "View Log File."

Importing Converted Data

You can select to import the converted files using the Standard single file import (for BCWS, ETC, Actuals and BCWP) or you can create a Batch Import that will import all files that exist in the Batch Import job. For details on how to create a Batch Import, see *Chapter 16, Importing Data*.

The Estimate Import type should be used for the BCWS and ETC monthly data import. (*projectname.S* and *projectname.E*).

- Make sure the Target Project's calendar has the full time span of the data being imported

- Import BCWS before importing BCWP

The Actuals Import type should be used for the Actuals data import (*projectname.A*).

- Make sure the "Target WBS(s)" have a value in the Charge Number field in the Work Breakdown Structure.

- Remember to select the option "Autoburden" on Row 10 of the Actual Import Conditioning screen.

The BCWP Import type should be used for the BCWP data import (*projectname.P*).

- Make sure the "Target WBS(s)" have the Earned Value Method "BCWP Entry" assigned.

- Import BCWS before importing BCWP.

- Remember to Calculate BCWP after the import is complete. This is done in the Project Maintenance screen.

Appendix A: Glossary

Actual Cost of Work Performed (ACWP)	An applied hour and/or dollar amount as procedurally defined by a contractor's management system and used for performance measurement. In MPM these can be manually input, or imported from external accounting systems. (See *Actuals/Actual Cost*.)
Actuals/Actual Cost	A cost incurred or booked as defined by Generally Accepted Accounting Principals (GAAP) and further defined as a cash or accrual method in audited/unaudited financial statements and government disclosure statement. For labor, hour and dollar amounts, usually equals labor ACWP; for other elements of cost (particularly material), there may be a timing difference between actual costs and ACWP. Actuals do not include unallowable cost in government contracting. (see *Actual Cost of Work Performed*).
ACWP	See *Actual Cost of Work Performed.*
Algorithm	A set of logical steps for solving a problem or accomplishing some end result.
Alphanumeric	Consisting of letters and/or numbers.
Apportioned Effort	Effort that by itself is not readily divisible into short span work packages, but which is related in direct proportion to some other measured effort.
At Complete Variance	The difference between the Budget at Completion (BAC) and Estimate at Complete (EAC). This represents a forecast of budget overrun or underrun.

Baseline/Baseline Estimate	The estimate or budget of time, resources, hours and dollars required to complete a task or group of tasks.
Batch	A compilation of multiple processes performed all at once; for example, Batch Reports, Batch Imports, and Batch Exports.
BCWP	See *Budgeted Cost of Work Performed*.
BCWS	See *Budgeted Cost of Work Scheduled*.
BI (Business Intelligence) Tool	A type of application software designed to report, analyze and present data. The tools generally read data that have been previously stored, often, though not necessarily, in a data warehouse or data mart.
Budgeted Cost of Work Performed (BCWP)	The hours, as applicable, and dollar amounts which have been budgeted, for completed work packages and/or completed portions of work packages.
Budgeted Cost of Work Scheduled (BCWS)	The hours and/or dollar amounts which have been budgeted for all work necessary to complete a project.
Burden	Indirect costs (such as overhead and general & administrative expense) which are allocated to a project's base amounts. Each direct (or prime) cost category (labor, materials, etc.) is allocated its <u>burden</u> (or proportionate share) of the indirect costs.
Burdened Dollars	Prime (or direct) dollar amount plus overhead dollar amount.
Charge Number	An in-house accounting system identifier used to record actual costs. In performance measurement systems, one or more charge numbers are assigned to the control account and/or work package. MPM allows only one Charge Number per WBS element.

Child/Children	A WBS element belonging to or subsidiary to another WBS element which is at a higher level in the WBS hierarchy.
Class of Cost	A class of cost (COC) is a subcategory of an element of cost (EOC). You can have up to 13 COCs for each EOC.
CLIN	See *Contract Line Item Number*.
COC	See *Class of Cost*
COM	See *Cost of Money*.
Conditioning Screen	A screen displayed on your monitor where you define various categories of data to appear on reports or exports and/or make selections from options listed on the screen.
Contract Line Item Number (CLIN)	The number used to identify a specific contract deliverable.
Conventions	The manner in which concepts are described in the MPM documentation.
Control Account	A management control point at which budgets, earned value, estimates and actual costs are accumulated and computed for variance analysis. The Control Account is a natural control point for cost/schedule planning and control since it represents the work assigned to one responsible organization on one Contract Work Breakdown Structure element.
Cost of Money (COM)	The cost of investing capital in equipment and facilities which are necessary to perform a given contract. Depending upon contract terms, COM can been treated as 1) non-fee bearing cost; 2) not as a cost; or 3) part of fee.

Cost of Performance Index (CPI)	The ratio of work accomplished (BCWP) to the actual cost of work performed (ACWP) expressed by the formula:

$$\frac{\text{(Monthly/Cumulative) BCWP}}{\text{(Monthly/Cumulative) ACWP}}$$

MPM uses only cumulative values for CPI calculations.

Cost Performance Report (CPR)	A report which shows the cost and schedule performance status of a contract; periodic submittal required under DoDI 5000.2 (Encl. 2), usually monthly.
Cost/Schedule Control Systems Criteria (C/SCSC)	DoD established characteristics that a contractor's internal management system must possess to insure effective planning and control of contract work and costs. The government instruction is DoDI 7000.2
Cost/Variance	The difference between BCWP and ACWP.
CPI	See *Cost Performance Index*.
CPR	See *Cost Performance Report*.
C/SCSC	See *Cost/Schedule Control Systems Criteria*.
C/SSR	See *Cost/Schedule Status Report*.
CSV	Column Separated Value
Cursor	The marker on the monitor screen indicating where the next character input will appear.
Default	The setting or value for various functions or fields which MPM will use unless you change it.

Dimension	A data element that categorizes each item in a data set into overlapping regions. It provides a means to "slice and dice" data in a data warehouse. Dimensions also provide structured labeling information to otherwise unordered numeric means. The primary function of dimensions is threefold: to provide filtering, grouping and labeling.
Direct Costs	The prime cost of labor or materials which is directly related to a specific WBS element and is chargeable directly to the contract.
Discrete Milestone	A milestone having a definite, scheduled time and budget for occurrence signaling an event.
Distributed Project	A portion of a project distributed outside the host processing unit for maintenance and control.
Dollars:	
Prime	Direct cost of each resource or amount chargeable for each resource.
Overhead	Overhead amount allocated to the prime (base/direct) hours/dollars.
Total Burdened	Prime + Overhead
Total Cost	Prime + Overhead + G&A
Total Dollars	Prime + Overhead + G&A + COM
Total Price	Total Dollars + Fee
DW (Data Warehouse)	A central repository for project and global data from any and all corporate locations. The consolidated data can be used for analysis and reporting.
EAC	See *Estimate at Completion*.
Earned Value	The value of work completed to date; also known as BCWP. The total budget for completed work packages plus a pro rata share of the budget for work packages only partially completed.

Earned Value Method (EVM)	A quantitative method used to calculate BCWP; MPM provides many methods of calculating earned value which are defined in the *MPM Projects* manual.
Element/WBS Element	A discrete portion of a Work Breakdown Structure (WBS); an identifiable product, set of data, or service. In MPM all tasks from the contract level to the lowest finite level require a WBS identifier.
Element of Cost	Definitions vary dependent upon the accounting structure but normally include categories of labor, material, other direct costs, and subcontractor.

Element Type	The WBS identifier element type.
	    C: Control Account
	    W: Work Package
	    P: Planning Package
	    O: Other

Equivalent Person Month	One person working normal hours/days exclusive of holidays, normally expressed in hours per month. In MPM it is defined by the resource work calendar or fiscal calendar hours per month.
Estimate at Completion (EAC)	The actual cost of all incurred cost to date plus the anticipated cost of remaining work. Also known the Latest Revised Estimate (LRE).
Estimate to Complete (ETC)	The total estimated cost of all remaining work necessary to complete the total project.
Estimate the WBS	The process of estimating resources requirements for a specific WBS ID.
ETC	See *Estimate to Complete*.

EVM	See *Earned Value Method*.
Export	Any data originating within MPM that is transferred to an outside system.
Fiscal Month/Year	A period of time or calendar unit used for accounting purposes which may or may not coincide with the standard Gregorian calendar.
Float	The number of calendar units between the early start and late start of an activity.
Functional Organization	An organization or group of organizations with a common operational orientation (for example, Design, Engineering, Quality Assurance).
G&A	See *General & Administrative*.
Gantt Chart	A scheduling tool showing the time span of each activity or WBS as a horizontal line, the ends of which correspond to the start and finish of the activity or WBS as indicated by a date line on the chart. (Also known as a bar chart.)
General & Administrative	Expenses incurred in the management and administration of a company and allocated in whole or part to a contact.
Hour	A labor unit of time.
IEAC	See *Independent Estimate at Complete*.
Import	Any data brought into MPM from a source outside MPM.
Independent Estimate at Complete (IEAC)	The formula used in MPM for IEAC is BAC/CPI. This EAC formula assumes the project will continue to perform at the same efficiency rate through the completion of the contract.

Indirect Cost   Burden (usually overhead and G&A) allocated to an
                         accounting base and charged to contract effort.

Input   Anything you communicate to your computer by any
                         method (i.e., typed from the keyboard, copied from
                         another drive or retrieved from a floppy diskette).

Input Screen	A screen displayed on your monitor into which you type raw data.
Inventory Account/Charge Numbers	An accounting record (normally a charge number) used to hold or suspend actual costs until applied (or input) to the performance measurement system as ACWP. See *Actuals/Actual Costs*.
Label	A word, phrase or other text that identifies a particular field of a report or chart.
Latest Revised Estimate (LRE)	The actual cost of all incurred cost to date plus the anticipated cost of remaining work. Also known as Estimate-At-Complete (EAC).
Level of Effort (LOE)	Effort of a general supportive nature. It is activity which cannot be associated with a measured task or milestone and is controllable by time-phased budgets established for that purpose. For LOE activity, BCWP = BCWS.
LOE	See *Level of Effort*.
LRE	See *Latest Revised Estimate*.
Management Reserve	An amount of the total allocated budget withheld for management control purposes rather than designated for the accomplishment of a specific task or set of tasks. It is not a part of the Performance Measure Baseline, but is included in the total Contract Budget Base. Management cannot be a negative value.
Man Hour	A labor unit of time.

Material Burden/Material Overhead	Material indirect costs allocated to a material base.
Measure	Data that can be examined or analyzed, such as sales or cost data. You can select and display the data in a measure. Measures can be stored as variables or relations, or measures can be calculated by means of formulas. These are derived from the records in the fact table and therefore consist of numeric facts.
Menu	The screen display of options available for your selection.
Milestone	A discrete point or event for measurement/assessment of work package accomplished. (Also called an interim milestone.)
Milestone Weight	A numerical factor assigned to a milestone for a portion of a task to express its relative budget value to the total budget value for the task.
MPM DW (Data Warehouse)	A central repository for project and global data from any and all corporate locations. The consolidated data can be used for analysis and reporting.
Nonrecurring Cost	Expenditures against specific tasks that would not occur on a repetitive basis in any given program. Examples are such items as preliminary design effort, qualification testing, initial tooling and planning, etc.
OBS	See *Organization Breakdown Structure*.
ODC	See *Other Direct Costs*.
OLTP	On-Line Transaction Processing is a class of program that facilitates and manages transaction-oriented applications.
Organization Breakdown Structure (OBS)	A hierarchical structure depicting an organization and used as a framework for assigning and managing work responsibilities. Can also be used to summarize data by

department, responsible person, functional categories, natural work groups, matrix organization, project organizations, etc.

Original Duration   The length of time a particular activity will require to complete, from start to finish; usually expressed in work days.

Other Direct Costs (ODC)	A group of certain accounting elements which can be isolated to specific tasks, other than labor and material.
Overhead	Indirect costs which, because they are incurred for common or joint objectives, are not readily subject to treatment as direct costs. Indirect costs are planned and applied as a rate against a direct cost base.
Overhead Dollars	Overhead amount allocated to the prime (base/direct) hours/dollars.
PAR	See *Problem Analysis Report*.
Parent	A higher level WBS element owning other elements as subsidiaries at a lower level in the WBS hierarchical tree structure.
Performing Organization	(See Responsible Organization for comparison). The OBS departments which expend resources to accomplish a WBS task, usually work package elements.
Planning Package	A logical aggregation of far term work within a control account that can be identified and budgeted but is not yet defined into work packages. Planning packages are identified during the initial baseline planning to establish the time phasing of the major activities within a control account and the quantity of the resources required for their performance. Planning Packages are planned into work packages consistent with the rolling wave concept prior to the performance of the work.
Price Variance	Difference between the earned price of a purchase item and its actual cost. Price variance is derived by subtracting (earned quantity X actual cost) from (earned quantity X planned cost).

Prime Dollars   The dollar amount chargeable for the resource itself before
                                    adding overhead and G&A; that is, direct cost.

Problem Analysis Report   A report used for analyzing cost or schedule variances to
(PAR)   determine cause, effect and action necessary for
                                    correction; usually generated by the responsible manager.

Purchased Parts   Parts or small sub-assemblies purchased from an outside
                                    source, usually outside of the prime contractor's
                                    manufacturing capability.

Real Time   A term used to indicate computer methodology wherein
                                    data is updated and summarized at the time of input as
                                    opposed to methods where data is input and then at some
                                    later time is processed and updated.

Recurring Costs   Expenses for specific tasks that occur repeatedly during
                                    the life of the project.

Replanning   A change in the original plan for accomplishing
                                    authorized contractual requirements.

Reprice   The process of recalculating estimated (or budget) based
                                    upon different resource rates and/or overhead/G&A rates
                                    and/or COM rates in the Resources and Burdens windows.

Request for Proposal   A document requesting a bid for a specified body of work;
(RFP)   it also outlines the fee arrangement, the scope of the work,
                                    time for performance and reporting requirements.

Resource   The most elemental level of a bidding or costing category
                                    used to establish the requirements for a task.

Responsible Organization	(See Performing Organization for comparison) A defined department/unit within an organization structure (OBS) which is assigned responsibility for accomplishing specific tasks and to which one or more control accounts are assigned.
RFP	See *Request for Proposal*.
Schedule Variance	The difference between BCWP and BCWS (BCWP – BCWS).
Schedule of Performance Index (SPI)	The ratio of work accomplished (BCWP) to the actual cost of work scheduled (BCWS) expressed by the formula:

$$\frac{\text{(Monthly/Cumulative) BCWP}}{\text{(Monthly/Cumulative) BCWS}}$$

MPM uses only cumulative values for SPI calculations.

Scrap & Rework Factor	The allowance for material and labor deficiencies not meeting product specification.
SOW	See *Statement of Work*.
Spread Curve	Numeric distribution pattern used in an automatic spread of a resource.
Standard Hour	Industrial Engineering Standard Hour; a quantitative measurement of work content.
Statement of Work (SOW)	A document which outlines the work required to complete a given project; prepared by the customer.
Time Now	The calendar date conditioned by the user; used on many time-oriented graphic reports.

To Complete Performance Index (TCPI)	The projected value to be earned for every measurable unit to be expended in the future.
	$$TCPI = \frac{BAC - Cum\ BCWP}{BAC - Cum\ ACWP}$$
Total Cost Dollars	Prime dollar amount plus overhead dollar amount plus G&A dollar amount.
Total Dollars	Prime dollars plus overhead amounts plus G&A plus cost of money.
Undistributed Budget	That portion of the contract budget not yet assigned to a specific WBS element.
Unit of Measure	A single quantity regarded as a whole and adopted as a standard of measurement; may be hours, dollars, months, etc.
VAC	See *Variance at Completion*.
Value	The quantity or percentage contributed by a single unit of measure to the whole.
Variance	Deviation from as established amount.
Variance at Completion	The formula used in MPM for VAC is BAC - LRE.
Weight/Milestone Weight	A numerical factor assigned to a particular milestone or portion of a task to express its relative amount to the whole task.
WBS	See *Work Breakdown Structure*.

WBS Element	A portion of a work breakdown structure; it may be an identifiable product, a set of data, or a service.
What If Analysis	The process of analyzing possible alternative plans in terms of budget, manpower and resource amounts required for the completion of a project.
Work Breakdown Structure	A hierarchical tree, usually product oriented, that organizes, defines and graphically displays the hardware, software, services and other work tasks necessary to complete a project.
Work Package (WP)	A detailed task representing a unit of work at the levels where the work will be performed, having scheduled start and completion dates and a budget.
XREF	Optional fields provided as additional identifiers that can be used for reporting, exporting, or onscreen filtering.

Appendix B: Error Messages

Many of the MPM error messages are self-explanatory. However, there are other messages that we felt could use additional explanation. Those messages are included in this appendix.

- The messages are listed alphabetically.

- The messages are displayed in **bold** type, followed by their explanations.

- Variables that appear in the messages are displayed in italics.

A Global File ID already exists for this path.

There are six global files for each Global File ID. The names of these six files remain the same regardless of the fact that you assign them a Global File ID. For this reason, each global file ID must exist in a unique directory. Enter a unique path and this error message will no longer appear.

A user cannot be assigned rights to more than 100 WBS Legs. *xxx* WBS Legs have been selected for this user.

This restriction applies when you select specific WBS legs (elements) for a user. The restriction does not apply if you assign the user access to an entire project. If you need to assign specific WBS legs, you may be able to assign a parent rather than its individual children, decreasing the number of WBSs assigned.

Access to the system is restricted because there are more users in the system than the number specified in the license. Please contact your system administrator.

When the License Type is Named User and a non-SYSADMIN user logs in, the number of users logged onto the system is now higher than the number of users specified in the license.

Access to the system is restricted to non-SYSADMIN users because there are more users in the system than the number specified in the license. Please delete excess users.

When the License Type is Named User and a SYSADMIN user logs in, the number of users logged into the system is now higher than the number of users specified in the license.

All references to the User ID(s) in all projects will be deleted. Are you sure you want to delete the selected User(s)?

Users can be referenced in the Suspended By field in Project Maintenance. If you delete a user, his name will be removed from this field.

An EOC cannot have more than 13 COCs.

An Element of Cost (EOC) cannot have more than 13 Classes of Cost. This is a limit imposed by MPM. There is no workaround.

Another user has changed one or more Log(s) in the selection. The modification(s) from the other user will now be displayed.

Another user is editing the same data in the same window and has saved his changes. Your changes will be lost and the other user's changes will be displayed instead. You can re-enter your edits and save them. This will overwrite the other user's changes. However, you should determine who the other user is before doing any more editing.

Another user has changed one or more Resource(s)/Burden(s) in the selection. The modification(s) from the other user will now be displayed.

Another user is editing the same data in the same window and has saved his changes. Your changes will be lost and the other user's changes will be displayed instead. You can re-enter your edits and save them. This will overwrite the other user's changes. However, you should determine who the other user is before doing any more editing.

Another user has changed this *xxxx*. The modification from the other user will now be displayed.

Another user is editing the same data in the same window and has saved his changes. Your changes will be lost and the other user's changes will be displayed instead. You can re-enter your edits and save them. This will overwrite the other user's changes. However, you should determine who the other user is before doing any more editing.

Another user has created an identical actual. The actual from the other user will now be displayed.

Another user is editing the same data in the same window and has saved his changes. Your changes will be lost and the other user's changes will be displayed instead. You can re-enter your edits and save them. This will overwrite the other user's changes. However, you should determine who the other user is before doing any more editing.

Another user has created an identical CLIN. The CLIN from the other user will now be displayed.

Another user is editing the same data in the same window and has saved his changes. Your changes will be lost and the other user's changes will be displayed instead. You can re-enter your edits and save them. This will overwrite the other user's changes. However, you should determine who the other user is before doing any more editing.

Another user has created this *xxxx*.

Another user is working in the same window and has used the same name you are trying to enter. Use a different name for the object.

Another user has deleted one or more Log(s) in the selection. The Log(s) will now be removed.

Another user has deleted the same data in the same window and has saved his changes. Your changes will be lost and the record will be removed from your grid. You can add the record back in again if you wish. However, you should contact the other user before doing any more editing.

Another user has deleted one or more Resource(s)/Burden(s) in the selection. The Resource(s)/Burden(s) will now be removed.

Another user has deleted the same data in the same window and has saved his changes. Your changes will be lost and the record will be removed from your grid. You can add the record back in again if you wish. However, you should contact the other user before doing any more editing.

Another user has deleted this *xxxx*. This *xxxx* will now be removed.

Another user has deleted the same data in the same window and has saved his changes. Your changes will be lost and the record will be removed from your grid. You can add the record back in again if you wish. However, you should contact the other user before doing any more editing.

Another user has deleted this User. This User and any associated Project(s) will now be removed.

Another user has deleted the user. Your changes will be lost and the record will be removed from your grid. You can add the user back in again if you wish. However, you should contact the other user before doing any more editing.

Another user has deleted this User's access to this Project. This Project will now be removed.

Another user has deleted a project listed under the user. Your changes will be lost and the project will be removed from your grid. You can add the project back in again if you wish. However, you should contact the other user before doing any more editing.

Another user has deleted this WBS element. This WBS element and any actuals belonging to it will now be removed.

Another user has deleted the WBS. Your changes will be lost and the WBS will be removed from your grid. You can add the WBS and actuals back in again if you wish. However, you should contact the other user before doing any more editing.

Any WBSs or estimates using the department(s) should be updated. Are you sure you want to delete the selected department(s) and children?

A department is assigned to a WBS as a performing or responsible department. If you delete a department, you should go into the WBS window and assign a new department to the elements using the old department.

Apportioned ETC estimate *(WBS, resource code, resource department, overtime)* already exists under base estimate (*WBS, resource code, resource department, overtime*). Do you want to move it to a new base estimate (*WBS, resource code, resource department, overtime*)?

If you choose Yes, MPM updates the ETC apportioned link and the apportioned estimate based on the new base. If you choose No, MPM does not create or modify any ETC apportioned estimate.

Burden Code *xxx* already exists for this Burden Template.

You have typed in a burden code that already exists for the burden template. Instead of typing in an entry, try selecting a burden code from the drop-down list box in the Burden Code field.

Cannot move or delete the DEFAULT Global Set.

The Default global set ships with MPM and cannot be moved or deleted.

CLIN *xxx* already exists.

You have typed in a CLIN that already exists for the WBS. Instead of typing in an entry, try selecting a CLIN from the drop-down list box in the CLIN field.

COC *xxx* already exists.

You have typed in a COC that already exists for the EOC. Instead of typing in an entry, try selecting a COC from the drop-down list box in the COC field.

Current and Rename To cannot be the same for all three values.

At least one of the fields (Resource Code, Resource Department, or Overtime) in the Rename group box must be different from the matching fields in the Current group box.

Current Resource Code, Resource Department, and Overtime cannot be conditioned to "ALL" at the same time.

One of the above must be set to something other than "ALL" in order to clear this error.

Curve ID *xxx* already exists.

You have typed in a curve ID that already exists. Instead of typing in an entry, try selecting an ID from the drop-down list box in the field.

Data on the clipboard is not the same size and shape as the selected area.

When you cut and paste more than one cell in a grid, you can select the entire destination area, or only the cell in the upper left corner of the destination area. If you select the entire destination area, the source and destination areas must match exactly in height and width.

Data records from the following files cannot be recovered: *filename*, *filename*. Files may have to be recovered from backup.

MPM could not recover the files listed in this message. You will need to recover the files using the latest backup. Be sure to have your System Administrator run Recover on the recovered copy of your backup to ensure that the problem does not exist in the backup.

Database is Busy!
File: *drive:\directory\filename*

Another user is performing an action that accesses the database. Try the operation again in a few minutes. Note the numeric value that follows this error message for further troubleshooting.

Database is Busy!
File: *drive:\directory\projectname***T.HED**

Another user is performing an action that accesses the database. Try the operation again in a few minutes. Note the numeric value that follows this error message for further troubleshooting.

DD-MMM-YY **is not within calendar range of** *DD-MMM-YY* **through** *DD-MMM-YY***.**

The date you have entered falls outside the fiscal calendar established for the project. To check the fiscal calendar dates, select Calendars from the Globals tab in the MPM Menu Manager.

Department *xxxx* **not found.**

You have typed in a parent department that does not exist. Instead of typing in an entry, try selecting a parent department from the drop-down list box in the Parent field.

Department(s) beginning with *xx* **not found.**

You used a wild card (*) in the Department field, and no departments were found that begin with the characters you entered before the wild card. Enter different characters or select a department from the drop-down list box in the Department field.

Do you also want to change the children's Burden Template IDs which match the parent's original Burden Template ID?

If one or more of the children of the parent have the same burden template, you can change the parent's and children's burden templates at this same time by choosing Yes.

<ERROR!!!>. A report will be created showing the error(s). Do you want to continue adjusting other estimates.

This message is displayed when MPM encounters an error in the data used in the adjustment. You can stop the processing, check the report, attempt to correct the error,

then rerun the adjustment. Or you can continue with the processing. If you are adjusting by WBS ID, you can rerun the adjustment from the point where the error occurred.

<ERROR!!!>. A report will be created showing the error(s). Do you want to continue repricing other estimates.

This message is displayed when MPM encounters an error in the data used in the reprice. You can stop the processing, check the report, attempt to correct the error, then rerun the repricing. Or you can continue with the processing. If you are repricing by WBS ID, you can rerun the repricing from the point where the error occurred.

Error: 30 - Not a Btrieve File
File: *drive:\directory\filename*

The file format is one that Btrieve does not recognize, or a data or program file may be corrupted.

<ERROR!!!>. You must correct the error and restart the date shift process.

Check to see if a date has been shifted outside the calendar range.

<ERROR!!!>. You must correct the error and restart the rename process.

Check the syntax for the renaming, or check to see if the character limit has been exceeded.

Estimate (*WBS, resource code, resource department and overtime*) already exists.

You have typed in an estimate that already exists. Instead of typing in an entry, try selecting an entry from the drop-down list box in the field.

ETC estimate (*WBS, resource code, resource department and overtime*) already exists.

You have typed in an estimate that already exists. Instead of typing in an entry, try selecting an entry from the drop-down list box in the field.

Global ID is not valid.

You have typed in a global ID that does not exist. Instead of typing in an entry, try selecting an entry from the drop-down list box in the field.

Global ID *xxxx* already exists.

You have typed in a global ID that already exists. Try a different name.

Insufficient disk space at *drive:\directory*
Space Required: *xx,xxx*
Space Available: *x,xxx*

The path you have specified does not contain enough disk space. Select a different path or increase the disk space.

MMM-YY is not within calendar range of *MMM-YY* through *MMM-YY*.

The date you have entered falls outside the fiscal calendar established for the project. To check the fiscal calendar dates, select Calendars from the Globals tab in the MPM Menu Manager.

MPM cannot have more than 300 users.

You are limited to defining up to 300 users. If you need to have more than 300 users, contact your Deltek representative about purchasing an additional copy of MPM. If you use a named user license key when installing MPM, and your users.dat file contains more users than your named user license allows, an error message displays when starting MPM. The sysadmin will need to delete extra users from the user list.

No filtering has been applied to the Resources view. Download of data may take a few minutes. Do you wish to continue?

If you are working with a large project, you should consider entering values for one or more of the Resource Filtering fields. This will limit the data you view to what you need to work with and speed up the download

Non-numeric characters have been entered, therefore, OT will not be calculated. This message will not be displayed again in this session.

When you enter non-numeric characters in this field, MPM assumes you are using the field as a way to distinguish between different estimates. For information on using the Overtime field to indicate different estimates, see topic *7.3.2 Using the Overtime Field* in the *MPM Projects* manual.

One or more of the selected estimates exist in ETC as apportioned estimates and cannot be deleted.

You cannot delete apportioned estimates. Apportioned estimates are indicated by a percent sign (%) in front of the resource code for the estimate.

One or more user/project record(s) in the selection is used as either a WBS or Functional Security Equivalence and could not be deleted.

WBS and Functional Equivalent Users are generi*c* user entries that are assigned a set of access privileges. The Equivalent Users are then assigned to other users, giving those users the same access privileges as the Equivalent Users. Before you can delete an Equivalent User, you must delete all references to the user. For information on Equivalent Users, see *Restricting Access Using Equivalent Users*.

Please alert your System Administrator to contact Deltek support within the next *xx* days for a software extension.

The license agreement on your software is about to expire. If the license expires, you will no longer be able to log in to MPM. Contact MPM Customer support for an extension.

Project *projectname* has been suspended by *username* on *DD-MMM-YY*. Project *projectname* has been suspended by *username* on *DD-MMM-YY HH:MM*.

A System Administrator or Project Administrator has turned off access to the project. This is usually done when maintenance is being performed on the project. Check with the individual named in the message to see when the project will be available.

Resource Code *x*, Resource Department *x* and O/T *x* not found.

You have typed an entry in one or more of the fields that is not in the database. Instead of typing in an entry, try selecting an entry from the drop-down list box in these fields.

<Required> fields still exist which must be entered before record can be saved.

In each window, there are one or more fields that you must complete before you can save the entry. The text <Required> is displayed in these fields. If the required field is not currently visible in the window, scroll the window horizontally.

Root directory files are not supported.

You cannot store global ID files in a root directory (for example, C:\ ). Enter a path that includes at least one directory. For example: C:\PROJECTS.

Save ETC as well as Baseline?

MPM displays this message when you have selected the Prompt for ETC Save option in the Integrated Planning window. If you choose Yes, MPM makes an identical entry in the ETC view and links the two values. For information on setting this option, see topic *7.3.1 Saving Estimates* in the *MPM Projects* manual.

The key you entered does not fit the lock.

The key you entered is not registered. Contact Deltek MPM Support to check on the correct key.

The maximum number of users are already logged into WinMPM.

Wait a few minutes and try again. If the problem persists, contact your System Administrator.

The Rate Table you are about to delete may be in use by one or more projects. You may access Project Maintenance for a complete list of projects which are using the *xxxxxxx* global set. Are you sure you want to delete this Rate Table?

Rate tables are assigned to resources and burdens. They are part of a global set. If you delete a rate table, you should assign a new rate table to each resource and burden that used the deleted table.

The Resource(s)/Burden(s) you are about to delete may be in use by one or more projects. You may access Project Maintenance for a complete list of projects which are using the *xxxxxxx* global set. Are you sure you want to delete selected Resource(s)/Burden(s)?

After you delete the selected Resource(s)/Burden(s), you can reprice the project for the WBS IDs affected to see the impact.

The User List file (MPMUSERS.DAT) could not be found in *drive:\directory*

The MPMUSERS.DAT file stores the user ID and password for each user. Have your System Administrator check to see if the file has accidentally been moved or corrupted. If

the file has been corrupted, the System Administrator will need to restore the file from backup.

The *xxxxxxx* global files are already open. OK to reload data?

If you choose Yes, then all data is refreshed and the cell focus is returned to Column 1 Row 1 of the grid. You will lose any unsaved changes.

If you choose No, the data is left alone and the focus is returned to where it was when you selected File|Open.

The *xxxxxxx* project is already open. OK to reload data?

If you choose Yes, then all data is refreshed and the cell focus is returned to Column 1 Row 1 of the grid. You will lose any unsaved changes.

If you choose No, the data is left alone and the focus is returned to where it was when you selected File|Open.

The *xxxxxxx* global files are already open. OK to reload data?

If you choose **Yes**, then all data is refreshed and the cell focus is returned to Column 1 Row 1 of the grid. You will lose any unsaved changes.

If you choose No, the data is left alone and the focus is returned to where it was when you selected File|Open.

The *xxxxxxx* global files could not be found in *drive:\directory\subdirectory*

This message is displayed when MPM cannot find one or more of the six global files (RATE.LIB**,** TEMPLATE.LIB**,** EOCCODES.LIB**,** RESOURCE.LIB**,** CALENDAR.HOL**,** or CALENDAR.FSC) in the specified location. Check the path. If the path is correct, the files may have been accidentally deleted. Check with your System Administrator about getting the files restored from the most recent backup.

The *xxxxxxx* Project WBS file could not be found in *drive:\directory\subdirectory***. Press OK and select the directory containing this file.**

MPM expects to find the file in the same directory as the MPM executable file. Check with your System Administrator or Project Administrator for the location of the file.

The calendar for global set *xxxxxxxx* does not exist. Would you like to copy the calendar from another global set?

This message is displayed when the CALENDAR.FSC file does not exist, or contains no records. If you choose Yes, MPM brings up the Copy Calendar dialog box where you can select a calendar from another Global set. If you choose No, MPM creates the CALENDAR.FSC and CALENDAR.HOL files and brings up the Setup dialog.

The CLIN(s) will be removed from any WBSs using it. Are you sure you want to delete the selected CLIN(s)?

CLIN(s) can be assigned to WBS elements in the Work Breakdown Structure window. If you delete a CLIN, the CLIN will be removed from the WBS elements. This will impact CLIN reports. You should assign new CLIN(s) to the WBS elements.

The COC(s) you are about to delete may be in use by one or more resources. You may access Resources & Burdens to edit the resource(s) using the COC(s). Are you sure you want to delete the COC(s)?

After deleting the COC(s), go to the Resources tab in the Resources & Burdens window and assign new COC(s) to the resources.

The EOC(s) you are about to delete may be in use by one or more resources or projects. Are you sure you want to delete the selected EOC(s)?

After deleting the EOC(s), go to the Resources tab in the Resources & Burdens window and assign new EOC(s) to the resources.

The number of allowable users has been exceeded and access shall be restricted. Please delete excess users. Your license allows <Number of users specified in the license> users.

This message displays when the License Type is Named User and the Security window is closed while the total number of users exceeds the User Limit specified by the license.

The number of allowable users has been exceeded. Your license allows *<Number of users specified in the license>* users.

When the License Type is Named User and another user is added, the number of users exceeds the User Limit specified in the license.

The OBS for project *projectname* does not exist. Would you like to copy the OBS from another project?

This message is displayed when an OBS does not exist for a project, or only the top level record exists. To build a new OBS, choose No. If you want to base the new OBS on an existing OBS, choose Yes.

The operation cannot be completed because the Global Set is currently in use.

One or more of the global files associated with the global set is being edited. The files are: CALENDAR.FSC, CALENDAR.HOL, EOCCODES.LIB, RATE.LIB, RESOURCE.LIB, TEMPLATE.LIB. Wait a few minutes and try the operation again.

The operation cannot be completed because the Global Set is in use by one or more Project(s).

Before you can perform the operation, you will have to assign a different global ID to the project(s) using the Project Maintenance window.

The operation cannot be performed because there are users currently accessing Project *projectname*.

Wait a few minutes and try the operation again. If the problem persists, contact your System Administrator for assistance. To find out who is accessing the project, check the MPMLOG.

The Template(s) you are about to delete may be in use by one or more resources, OBS departments, or projects. Are you sure you want to delete the selected Template(s)?

Deleting the burden templates will impact the calculated values. You should check all resources, OBS departments, and projects to see where the template is used and assign a different template.

There are Global Files existing in this directory. Do you want to overwrite them?

Check the path you entered. If the path is correct, and you want to overwrite the existing global files in the directory, choose Yes. To cancel the operation , choose No.

There are no projects to which you have been granted access.

Check with the project or System Administrator. They can assign projects to you.

There is insufficient disk space to recover these files:

File	Size
drive:\directory\filename	*x,xxx*
drive:\directory\filename	*x,xxx*
drive:\directory\filename	*x,xxx*

Space Required: *xx,xxx*
Space Available: *x,xxx*

Check with your System Administrator about increasing the available disk space.

This actual (Resource Code, Resource Department and OT) already exists for this WBS element.

You have typed an entry in the field that already exists. Type in a different entry.

This actual has been changed by another user. The modification from the other user will now be displayed.

Another user has edited the actual you are editing. Your changes will be lost and the actual created by the other user will be displayed on your grid. You can change the actual again if you wish. However, you should contact the other user before doing any more editing.

This CLIN has been changed by another user. The modification from the other user will now be displayed.

Another user has edited the CLIN you are editing. Your changes will be lost and the CLIN created by the other user will be displayed on your grid. You can change the CLIN again if you wish. However, you should contact the other user before doing any more editing.

This estimate already exists in ETC as an apportioned estimate and cannot be overwritten.

To change an apportioned estimate, you must change the base estimate from which it is calculated. To accept the estimate in the Baseline view, choose **OK**.

This User is currently identified as a Feature or WBS Security Equivalence for another User ID.

A user ID that is referenced as a Feature Equivalence cannot be assigned an authorization level other than User.

This User is currently logged in from another machine.

This error message displays when the License Type is Named User and a user that logs in to the system is already logged in from another machine.

User ID or Password not valid.

Ask your System Administrator to check your user ID and password. If necessary, the System Administrator can reset your password to "PASSWORD."

WBS must have a charge number in order to enter actuals.

To assign a charge number to a WBS element, go the WBS window.

Would you like to copy the Global Set from another Global ID?

No global files exist at the path you specified. If you would like to base the new global set on existing files, choose Yes. If you want to build the files from scratch, choose No.

x is not a valid Critical Float Threshold value.

You have typed in a value that is not valid. Try selecting a value from the drop down list box. This will ensure a valid entry.

x is not a valid Cost Element.

You have typed in a value that is not valid. Try selecting a value from the drop down list box. This will ensure a valid entry.

drive:\directory\filename does not exist.

The path and file you have specified does not exist. If available, use the Browse function in the dialog box to locate the file.

username is already logged into the system. Do you wish to continue?

If you continue, the user will be logged out and then back into the system.

You can only apply Fee or COM to Total Cost.

Only Fee and Cost of Money (COM) can be applied to Total Cost. If the burden code is Fee or COM, you must select Total Cost in the Apply To column.

You cannot apply Overhead to Total Burdened.

If the burden code is Overhead, you cannot select Total Burdened in the Apply To column.

You do not have access to this WBS Leg.
– or --
You do not have access to WBS leg *xxx*.

Check with your project or System Administrator about getting access to the WBS leg.

You must first create a fiscal calendar.

You have attempted to perform an action that requires a fiscal calendar. A fiscal calendar identifies the start of each accounting month. Check with your Project Administrator. To create a fiscal calendar, select the Calendar icon from the Globals window.

Appendix C: Summary of System Specifications

The table below summarizes the system specifications. For additional information, check Appendix D: File Formats, or call Deltek MPM Support.

Function	Limitations
All imports	Cannot import data after year 2050
Security	300 users
Fiscal calendar	50 years; fiscal month cannot be less than two weeks nor more than eight weeks in length
Holiday calendar	300 holidays
Element of Cost	13 EOCs; 13 Classes of Cost per EOC
Burden templates	Limited by disk space available. Each template can have up to 10 burden codes.
Burden rates	Unlimited
WBS tree	Unlimited
Task description	One per WBS ID. 100 lines of text per task description.
OBS	498 children per department.
Estimates	10 years. 100 per WBS ID, 72 months duration per estimate. Baseline + ETC cannot exceed 144 months.
Spread curves	1,000 spread curves (10 default, 990 user-defined).
Resource Basis of Estimate	One per estimate. 100 lines of text per Resource BOE.
Summary Basis of Estimate	100 lines of text per Summary BOE.
Plan milestones	99 Milestone IDs per WBS element.
Program log	9,999 log entries
Responsibility Assignment Report	Will report a maximum of 500 OBS elements.

Function	Limitations
C/SSR & CPR Format 1	Maximum of 250 elements at Level 2 and 250 elements of depth in WBS.
CPR Format 2	Will report a maximum of 500 OBS elements.
Project Comparison Report	Maximum of 300 WBS children
All reports	Report Timeframe Max: 10 years in Month mode, 30 years in Quarter mode, 99 years in Year mode.
1861 report	1,000 total Resources/Departments that use burden templates.
DD1921	Maximum 50 elements at Level 2.

Appendix D: MPM File Formats

D.1 Introduction to File Formats

Your MPM software includes a mechanism that allows its licensed software users direct read access to proprietary data files. This Read Access feature is designed to provide you with an easy method for extracting data from the MPM database without using a third party report writer.

The MPM file formats are to be used for read-only access. You are urged not to attempt write access. Writing directly to the MPM proprietary files is strictly forbidden and will constitute a violation of your Software License Agreement and Maintenance Agreement.

The MPM file formats may change from time to time. Although it is not anticipated that file formats will change with every release, Deltek reserves the right to do so. Therefore, any programs you choose to develop that access these file formats may need to be modified when Deltek releases a new version of the MPM software.

Data Storage Formats

Data is stored in MPM system files in the following formats:

Character	Stored in ASCII characters (string).
Integer	Stored as two-byte binary numbers ranging from-32768 to 32767.
Long	Stored as four-byte binary numbers ranging from -2,147,483,648 to 2,147,483,647.
Single	Stored as four-byte IEEE (Institute of Electrical and Electronic Engineers) format floating point numbers; accurate to seven digits.
Double	Stored as eight-byte IEEE format floating point numbers; accurate to 15 digits.
System Use	Data in fields designated System Use on the following tables could be any of the above. These fields are used internally by the MPM system.

In order to work with the MPM file formats, you must have a prerequisite knowledge of database access methodology. Deltek Customer Support does not provide instruction in this regard.

To access MPM data files, you must have an SQL tool or report writer capable of accessing Btrieve files.

If you are a programmer and would like to write applications and/or reports, you must have the following:

- A Btrieve programmer's manual and software. (Contact your software vendor or Novell Inc. for purchase information.)
- A compiler (Basic, C, Pascal, Cobol, etc.)

D.2 Global File Formats

Accessing Resource and Burden Rates:

In MPM all resource rates and burden rates are stored in the RATE.LIB file. This file contains all rate tables, resource rates and burden rates for a specific Global File ID.

For example, assume you need to print a report that shows rates for Resource Code ENGR from Rate Table 001 from January 1991 through December 1992. To do this, you must complete the following steps:

1. Open the RATE.LIB File.

2. Build the RATE record key:

    - Segment 1 = Resource Code (ENGR)
    - Segment 2 = Rate Table ID (001)
    - Segment 3 = Fiscal Year (1991)

3. Perform a GET GREATER THAN OR EQUAL operation on the RATE.LIB File using Key 0.

4. DO UNTIL Resource Code <> ENGR or Rate Table ID <> 001 or Fiscal Year > 1992.

    For Month = 1 to 12:
    If Fiscal Year plus Month > December 1992 THEN exit
    [Print rate of month
    Perform a GET NEXT operation on the RATE.LIB File]

5. Close the RATE.LIB File.

D.2 Global File Formats
D.2.1 Element of Cost File Format

MPM Global File Name: EOCCODES.LIB

File Type: Btrieve

Record Length: 387 Bytes

Keys: 1

Field	Type *	Length	Description
EOC	C	1	Element of cost code
Description	C	20	Element of cost description
EOC Classes	C	3*13	Class of cost codes (1 - 13)
System Use		6	System use
EOC Class Descriptions	C	20*13	Class of cost descriptions (1 - 13)
System Use		40	System use
EOC Hours/Units Flag	C	1	Hours/units flag (H or U)
System Use		20	System use

*   C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one key. This key contains no duplicates.

- Key 0 = Element of Cost

D.2 Global File Formats
D.2.2 Fiscal Calendar File Format

MPM Global File Name: CALENDAR.FSC

File Type: Btrieve

Record Length: 21 Bytes

Keys: 2

Field	Type *	Length	Description
Fiscal Start	L	4	Fiscal start date (YYYYMMDD)
Fiscal Label	C	5	Fiscal label (MMMYY)
Fiscal Period	L	4	Fiscal period (YYYYMM)
Equivalent People	D	8	Equivalent people

*   C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains two keys. These keys contain no duplicates.

- Key 0 = Fiscal Start
- Key 1 = Fiscal Period

D.2 Global File Formats
D.2.3 Global File Format

MPM Global File Name: GLOBAL.DAT

File Type: Btrieve

Record Length: 280 Bytes

Keys: 2

Field	Type *	Length	Description
Global ID	C	8	Global ID
Description	C	20	Description
Path	C	242	Path where global files attached to this Global ID reside
Release Number	C	2	First character = major release number; second character = minor release number
Week Type	C	1	Type of week; used for posting weekly data. Select (W)hole Weeks or (P)artial Weeks
Start Day of Week	C	1	Start day of week; used for posting weekly data 1 = Monday 4 = Thursday 6 = Saturday 2 = Tuesday 5 = Friday 7 = Sunday 3 = Wednesday
Hours per Day	S	4	Number of hours in a normal workday; used for posting weekly data
System Use		2	System use

 * C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains two keys. These keys contain no duplicates.

- Key 0:
  Segment 1 = Global ID
- Key 1:
  Segment 1 = Path

D.2 Global File Formats
D.2.4 Holiday Calendar File Format

MPM Global File Name: CALENDAR.HOL

File Type: Btrieve

Record Length: 24 Bytes

Keys: 1

Field	Type *	Length	Description
Holiday Date	L	4	Holiday date (YYYYMMDD)
Holiday Description	C	20	Holiday description

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one key. This key contains no duplicates.

- Key 0 = Holiday Date

D.2   Global File Formats

D.2.5   Rate Library File Format

MPM Global File Name: RATE.LIB

File Type: Btrieve

Record Length: 128 Bytes

Keys: 2

Field	Type *	Length	Description
Burden or Resource Code	C	10	Burden code or resource code
Rate Table ID	C	20	Rate table identification
Fiscal Year	I	2	Fiscal year (YYYY)
Rate	D	8*12	Rate for calendar year (months 1 thru 12)

 * C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains two segmented keys. Key 1 contains duplicates.

- Key 0:

  Segment 1 = Burden/Resource Code

  Segment 2 = Rate Table ID

  Segment 3 = Fiscal Year
- Key 1:

  Segment 1 = Rate Table ID

D.2 Global File Formats
D.2.6 Resource Library File Format

MPM Global File Name: RESOURCE.LIB

File Type: Btrieve

Record Length: 68 Bytes

Keys: 1

Field	Type *	Length	Description
Code	C	10	Burden or resource code
Type	C	1	Resource type: (R)esource
			Burden type: (O)verhead, (G)&A, (C)ost of money, or (F)ee
Description	C	20	Resource or burden description
Template ID	C	20	Resource burden template identification; not applicable to burden codes
Resource Class	C	3	Resource class of cost; not applicable to burden codes
EOC Code	C	1	Resource element of cost; not applicable to burden codes
Hours Per Day	C	4	Hours per day; not applicable to burden codes
Days Per Week	C	1	Days per week; not applicable to burden codes
System Use		8	System use

 *   C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one key. This key contains no duplicates.

- Key 0 = Burden/Resource Code

D.2 Global File Formats

D.2.7 Burden Template Library File Format

MPM Global File Name: TEMPLATE.LIB

File Type: Btrieve

Record Length: 175 Bytes

Keys: 1

Field	Type *	Length	Description
Burden Template ID	C	20	Burden template identification
Burden Description 1	C	20	Burden template description 1
Burden Description 2	C	20	Burden template description 2
System Use		3	System use
Burden Codes	C	10*10	Burden Codes (1 - 10)
Apply To Codes	C	1*10	Apply to codes (1 - 10)
System Use		2	System use

* C = Character D = Double S = Single I = Integer L = Long

Keys

This file contains one key. This key contains no duplicates.

- Key 0 = Burden Template ID

D.3 Project File Formats

Accessing Estimates

The estimate data structure is made up of three files: the Resource Rollup Header File (*projectname*U.RRH), the Resource Rollup Detail File (*projectname*W.RRD) and the Weekly File (*projectname*F.WRD).

The Resource Rollup Header File contains all header information for each estimate or summary (i.e., WBS Key, Resource Code, Resource Department, EOC, COC, etc.). Four types of records (as indicated by the (D)etail, (S)ummary, (E)OC, or (W)eekly flag) exist in this file:

- **Detail Records**: These records contain data for each WBS estimate by Resource Code, Resource Department, XREF-EST and Overtime Factor.
- **Summary Records**: These records contain the rolled up data by Resource Code, Resource Department, XREF-EST and Overtime Factor of all estimates in the WBS' children, grandchildren etc. These records are updated only if the Summary Rollup Processing Flag is set to On Mode.
- **EOC Records**: These records contain the summary values by EOC of all estimates at and below the specified WBS ID. These records are updated only if the EOC Rollup Processing Flag is set to On Mode.
- **Weekly Records**: These records contain data by week for each WBS estimate by Resource Code, Resource Department and Overtime Factor.

The Resource Rollup Detail File contains BCWS, ACWP, BCWP and ETC data in yearly records. Using the Link Field in the RRH File, corresponding data can be accessed in the RRD file.

The Weekly File contains BCWS, ACWP, BCWP and ETC data in weekly records. Using the Link Field in the RRH File, corresponding data can be accessed in the WRD file.

D.3 Project File Formats
D.3.1 Audit Trail Documentation File Format

MPM Project File Name: *projectname*G.Atx

File Type: Btrieve

Record Length: 784

Description: This file is used to document the text table that lists the changes done in a tabular format.

Field	Type *	Length	Description
Audit Trail Record Link	L	4	Link to Audit Trail Record
Description	C	780	User provided Estimate change Description

  * C = Character   D = Double   S = Single   I = Integer   L = Long

D.3 Project File Formats
D.3.2 Audit Trail File Format

MPM Project File Name: *projectname*C.Aud

File Type: Btrieve

Record Length: 232

Description: This file is used to store the audit log for every estimate change that occurs. It tracks the information by WBS, by Resource or by Resource Dept. It also tracks who made what changes to which data in the system.

Field	Type *	Length	Description
RecNum	L	4	Record Number
User ID	C	9	User ID
Date Modified	C	8	Date Modified (YYMMDD). (Value is padded with two blanks at the beginning)
Time Modified	C	12	Time Modified (HH:MM:SS)
System Use		1	System Use
Operation Type	I	2	Operation Type – 0 – Audit Trail On 1 – Audit Delete 2 – Integrated Planning Edit 3 – Integrated Planning Add 4 – Integrated Planning Delete 5 – Apportioned Estimate Edit 6 – Apportioned Estimate Add 7 – Apportioned Estimate Delete 8 – Import Estimate 9 – Import WBS Schedule 10 – Import Distributed Project 11 – Reprice 12 – Estimate Adjust 13 – Project Date Shift 14 – Estimate Rename 15 – Project Replan 16 – Delete Project Data 17 – Base Estimate Edit 18 – Base Estimate Delete 19 – Audit Trail Off

Field	Type *	Length	Description
Record Type	I	2	Record Type – 0 – Baseline 1 - ETC 99 - Audit
WBSId	C	40	Estimate WBSID
Resource Code	C	10	Estimate Resource Code
Resource Dept	C	10	Estimate Resource Dept
Overtime	C	20	Estimate Overtime
Start Date	C	8	Estimate Start Date (YYMMDD) (Value is padded with two blanks at the beginning)
End Date	C	8	Estimate End Date (YYMMDD) (Value is padded with two blanks at the beginning)
Rate Table	C	20	Estimate Rate Table
BurdenTemplate	C	20	Estimate Burden Template
Estimate Type	I	2	Estimate Type – 0 – Std Hours 1 – Hours 2 – Units 3 – EQP 4 – Prime 5 – Total Burden 6 – Total Cost 7 – Total Dollars 8 – Total Price
Before At Complete Hours	D	8	Before At Complete Hours
Before At Complete Dollars	D	8	Before At Complete Dollars
After At Complete Hours	D	8	After At Complete Hours
After At Complete Dollars	D	8	After At Complete Dollars
Delta Hours	D	8	Delta Hours (Before – After)
Delta Dollars	D	8	Delta Dollars (Before – After)

Field	Type *	Length	Description
Dollar Type	I	2	Dollar Type – 0 – Prime 1 – Total Burden 2 – Total Cost 3 – Total Dollars 4 – Total Price
System Use		2	System Use
Audit Description Record Link	L	4	Link to Audit Trail Description table

* C = Character   D = Double   S = Single   I = Integer   L = Long

D.3 Project File Formats
D.3.3 Basis of Estimate File Format

MPM Project File Name: *projectname*E.BOE

File Type: Btrieve

Record Length: 826 Bytes

Keys: 1

Field	Type *	Length	Description
WBS Key	L	4	Unique WBS key
Resource Dept	C	10	Resource department
Resource Code	C	10	Resource code
Overtime Factor	C	20	Overtime factor
BOE Sequence	C	2	Basis of estimate record sequence (01-10). Record sequence field – for each BOE there is a record for every 10 lines of text the record sequence field identifies the records 1-10 for each BOE.
BOE Text	C	780	Basis of estimate text; this field contains 10 lines of 78 characters associated with this BOE.

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one segmented key. This key contains no duplicates.

- Key 0:

  Segment 1 = WBS Key
  Segment 2 = Resource Department
  Segment 3 = Resource Code
  Segment 4 = Overtime Factor
  Segment 5 = BOE sequence

D.3 Project File Formats
D.3.4 BCWP File Format

MPM Project File Name: *projectname*I.BWP

File Type: Btrieve

Record Length: 28 Bytes

Keys: 1

Field	Type *	Length	Description
WBS Key	L	4	WBS element to which the BCWP applies
Month/Year	L	6	BCWP for the month and year (YYYYMM)
Percent Complete	D	8	BCWP percent complete as of the month and year specified
Total BCWP	D	8	Cumulative BCWP dollars as of the month and year specified
System Use		2	System Use

 * C = Character   D = Double   S = Single   L = Long Integer

Keys

This file contains one segmented key. This key contains no duplicates.

- Key 0:

  Segment 1 = WBS Key
  Segment 2 = Month/Year

D.3 Project File Formats
D.3.5 CLIN File Format

MPM Project File Name: *projectname*R.CLN

File Type: Btrieve

Record Length: 255 Bytes

Keys: None

Field	Type *	Length	Description
System Use		1	System use
ID	C	8	CLIN identification
Description	C	40	CLIN description
Qty	C	8	Quantity to be contracted
Reference	C	5	Reference code
Element	C	6	Element code
1411 Flag	C	1	Include on SF1411 flag
1921 Flag	C	1	Include on DD1921 flag
System Use		185	System use

    *   C = Character   D = Double   S = Single   I = Integer   L = Long

D.3 Project File Formats
D.3.6 Distributed Transfer File Format

MPM Project File Name: *filename*.XFR

File Type: Random

Record Length: 1,675 Bytes

Keys:

WBS RECORD

Field	Type *	Length	Description
Record Type	C	1	WBS record type (W)
Source Project	C	20	From project name
Target Project	C	20	To project name
Source WBS ID	C	40	From WBS ID
Target WBS ID	C	40	To WBS ID
Early Start Date	L	4	WBS early start date (YYYYMMDD)
Early End Date	L	4	WBS early finish date (YYYYMMDD)
Sched Start Date	L	4	WBS scheduled start date (YYYYMMDD)
Sched End Date	L	4	WBS scheduled finish date (YYYYMMDD)
Late Start Date	L	4	WBS late start date (YYYYMMDD)
Late End Date	L	4	WBS late finish date (YYYYMMDD)
ETC Start Date	L	4	WBS ETC start date (YYYYMMDD)
ETC End Date	L	4	WBS ETC finish date (YYYYMMDD)
Conversion Factor (Export)	C	10	Export conversion factor (optional)
Conversion Factor (Import)	C	10	Import conversion factor (optional)
System Use		1502	System use

MILESTONE RECORD

Field	Type *	Length	Description
Record Type	C	1	Milestone Record type (M)
WBS Key	L	4	WBS unique key
Milestone ID	C	10	Milestone identifier
System Use		2	System Use
Milestone Symbol	C	1	Milestone symbol used (1-9, A or B)
Milestone Description	C	40	Milestone description
Milestone Weight	C	8	Milestone weight
Milestone Schedule Date	L	4	Milestone schedule date (YYYYMMDD)
Milestone Forecast Date	L	4	Milestone forecast date (YYYYMMDD)
Milestone Complete Flag	C	1	Milestone complete flag (Y or N)
Milestone Percent Complete	C	3	Milestone percent complete (1-100)
System Use		1556	System use

DISTRIBUTED ROLLUP RECORD

Field	Type *	Length	Description
Transfer Type	C	1	Distributed transfer type I

Record Type	C	1	Record type:
			  BCW(S) BCW(P)
			  (A)CWP (E)TC

Year	I	2	Year for the record
Detail Subrecords		107*15	See description of detail sub-record below

* C = Character   D = Double   S = Single   I = Integer   L = Long

Detail Subrecord

Field	Type *	Length	Description
Cost Element	C	1	Cost element: (S)td hours (G)&A (H)rs/units (O)verhead (E)quiv people (F)ee (P)rime (C)ost of money
Burden Code	C	10	Burden Code
Monthly Values	D	8*12	Monthly values (January through December)

* C = Character   D = Double   S = Single   I = Integer   L = Long

D.3 Project File Formats
D.3.7 Header File Format

MPM Project File Name: *projectname*T.HED

File Type: Btrieve

Record Length: 84 Bytes

Keys: 1

Field	Type *	Length	Description
Header Key	I	2	Header key value (see table of header key values below)
Header Text	C	80	Header text
Header Length	I	2	Header length

  * C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one segmented key. This key contains no duplicates.

- Key 0:

    Segment 1 = Header Key

KEY VALUE	Type	Length	Description
CPR FORMATS 1 & 2:			
100	String	18	Contract Name
101	String	21	Contractor Name
102	String	18	Contract Number
103	String	7	Contract Type
104	String	18	Program Name
105	String	1	R&D Prod (R or P)
106	String	18	Program Number
107	String	24	Location
108	String	6	From
109	String	6	To

KEY VALUE	Type	Length	Description
110	String	16	Approval Name
111	String	16	Title
112	String	6	Date
113	String	1	G&A Add/Non-Add (A or N)
114	String	8	Security Class
115	String	1	Format 1
116	String	1	Format 2O
117	String	1	Format 2L
118	String	8	Quantity
119	String	4	Target Profit %
120	String	4	Target Fee
121	Double		Target Price Override
122	Double		Estimated Price Override
123	String	6	Share Ratio
124	String	8	Contract Ceiling
125	String	8	Estimate Ceiling
126	Double		Negotiated Cost
127	Double		Negotiated Cost Override
128	String	7	Distributed Filter Flags
129	Double		Target Profit Amount Override
130	String	1	MEAC Best Case Option
131	String	1	MEAC Worst Case Option
132	String	1	MEAC Most Likely Option
133	String	5	MEAC Gate Month
134	String	5	Cum Through Month
135	String	1	MEAC Option (C/SSR)
201	Double		Authorized Unpriced

KEY VALUE	Type	Length	Description
202	Double		Authorized Unpriced Override
203	Double		Management Reserve
204	Double		Management Reserve Override
205	Double		Management Reserve LRE
206	Double		Management Reserve LRE Override
207	Double		Monthly COM BCWS
208	Double		Monthly COM BCWP
209	Double		Monthly COM ACWP
210	Double		Cumulative COM BCWS
211	Double		Cumulative COM BCWP
212	Double		Cumulative COM ACWP
213	Double		Undistributed Budget – Format 1
214	Double		Undistributed Budget Override – Format 1
215	Double		Undistributed Budget LRE – Format 1
216	Double		Undistributed Budget LRE Override – Format 1
217	Double		Undistributed Budget – Format 2
218	Double		Undistributed Budget Override – Format 2
219	Double		Undistributed Budget LRE – Format 2
220	Double		Undistributed Budget LRE Override – Format 2
221	Double		Original Contract Target
222	Double		Negotiated Contract Change
223	Double		Negotiated Contract Change Override
224	Double		Current Target Cost
225	Double		Current Target Override
226	Double		Contract Budget Base
227	Double		Contract Budget Base Override
228	Double		Total Allocated Budget
229	Double		LRE COM At Complete

KEY VALUE	Type	Length	Description
230	Double		Budget COM At Completion
231	Double		Contract Baseline Log COM Balance
240	Double		MEAC Best Case Computed
241	Double		MEAC Worst Case Computed
242	Double		MEAC Most Likely Computed
243	Double		MEAC Best Case Override
244	Double		MEAC Worst Case Override
245	Double		MEAC Best Case Override
246	Double		MEAC Computed (C/SSR)
247	Double		MEAC Override (C/SSR)
CPR FORMATS 3 & 4:			
301	Double		Total Allocated Budget Override
302	String	6	Contract Start Date (YYMMDD)
303	String	6	Contract Definition Date (YYMMDD)
304	String	6	Last Item Completion Date (YYMMDD)
305	String	6	Contract Completion Date (YYMMDD)
306	String	6	Estimated Completion Date (YYMMDD)
307	String	5	Monthly Variance Threshold – Percent
308	String	8	Monthly Variance Threshold – Dollar
309	String	5	Cumulative Variance Threshold – Percent
310	String	8	Cumulative Variance Threshold – Dollar
311	String	5	Estimate At Completion Variance Threshold – Percent
312	String	8	Estimate At Completion Variance Threshold – Dollar
313	String	8	Management Reserve Monthly Amount
314	String	45	Management Reserve Log Line Numbers
315	String	8	Baseline Change Monthly Amount
316	String	45	Program Baseline Log Line Numbers

KEY VALUE	Type	Length	Description
317	String	5	Format ¾ Specific Periods (Y, S, Q or M)
318	Double		Target Cost
319	String	1	Network Processor Fixed Turnaround Flag (E or F)
320	String	6	Network Processor Fixed Turnaround End Date (YYMMDD)
321	String	1	Lag Days Per Week
CPR FORMAT 3 & NASA:			
401	Double		Previous Month Cumulative BCWS
402	Double		Previous Month Undistributed Budget
403	Double		Previous Month At Completion
404	String	4	Starting Month (YYMM)
405	Double	+ 7	BCWS for First Seven Months
412	String	21	NASA Installation
413	String	24	Location of Installation
414	String	18	Latest Amendment Number
415	Double		NASA Contract Cost
416	Double		NASA Contract Fee
417	Double		NASA Fund Limitation
418	Double		Amounts Billed to NASA
419	Double		Total Payments Received
420	String	2	NASA 533-M Report Detail Periods
501	Double	+ 30	BCWS Amounts
601	Double	+ 30	BCWS Amounts
COST OF MONEY OVERRIDE:			
701	String	6	Overhead 1
702	String	8	Overhead 1 COM
703	String	6	Overhead 2
704	String	8	Overhead 2 COM

KEY VALUE	Type	Length	Description
705	String	6	Overhead 3
706	String	8	Overhead 3 COM
707	String	6	Overhead 4
708	String	8	Overhead 4 COM
709	String	6	Overhead 5
710	String	8	Overhead 5 COM
711	String	8	Material COM
712	String	8	G&A COM
713	String	8	Total cost COM
714	String	5	L C COM
715	String	8	Current Period BCWS Computed
716	String	8	Current Period BCWP Computed
717	String	8	Current Period ACWP Computed
718	String	8	Cumulative BCWS Computed
719	String	8	Cumulative BCWP Computed
720	String	8	Cumulative ACWP Computed
721	String	8	At Complete Budget Computed
722	String	8	At Complete LRE Computed
PROJECT INITIATION:			
801	String	40	Company Name
802	String	40	Program Name
803	String	20	Proposal Number
804	String	20	Contract Number
805	String	20	Internal ID
806	String	5	Program Type
807	String	5	Contract Type
808	String	20	Program Manager

KEY VALUE	Type	Length	Description
809	String	12	Program Manager's Telephone Number
810	String	20	Proposal Manager
811	String	12	Proposal Manager's Telephone Number
812	String	20	Baseline Rate Table ID
813	String	20	ETC Rate Table ID
814	String	1	Calendar Type (R, W or E)
815	String	7	Xref-1 Label
816	String	7	Xref-2 Label
817	String	7	Xref-3 Label
818	String	1	Fee Application (W or R)
819	String	20	ACWP Rate Table ID
820	String	1	Burden Template Override
821	String	1	Rate Table Override
822	String	7	Xref-4 Label
823	String	7	Xref-5 Label
824	String	7	Xref-6 Label
825	String	7	Xref-7 Label
826	String	7	Xref-8 Label
827	String	7	Xref-9 Label
828	String	7	Xref-10 Label
3001	String	80	Project Description
3002	String	80	Project Description
3003	String	80	Project Description
3004	String	80	Project Description
3005	String	80	Project Description
3006	String	50	Project Description
SF 1411 HEADER:			
901	String	22	Solicitation/Contract Number

KEY VALUE	Type	Length	Description
902	String	33	Offeror Address 1
903	String	33	Offeror Address 2
904	String	33	Offeror Address 3
905	String	33	Offeror Address 4
906	String	25	Offeror Contact 1
907	String	25	Offeror Contact 2
908	String	17	Contact Telephone Number
1001	String	60	Place/Period of Performance 1
1002	String	60	Place/Period of Performance 2
1003	String	37	Contract Administrator's Office 1
1004	String	37	Contract Administrator's Office 2
1005	String	37	Contract Administrator's Office 3
1101	String	37	Contract Administrator's Office 4
1102	String	37	Audit Office 1
1103	String	37	Audit Office 2
1104	String	37	Audit Office 3
1105	String	37	Audit Office 4
1106	String	2	Type of Contract Action
1107	String	20	Contract Action Description
1108	String	1	Type of Contract
1109	String	20	Type of Contract Description
1201	String	11	Proposed Cost
1202	String	11	Proposed Profit/Fee
1203	String	11	Proposed Total
1204	String	1	Use of Government Property (Y or N)
1205	String	20	Government Property Description 1
1206	String	20	Government Property Description 2

KEY VALUE	Type	Length	Description
1207	String	1	Government Financing (Y or N)
1208	String	1	Type of Government Financing (A, P or G)
1209	String	1	Any Contracts Awarded (Y or N)
1210	String	30	Awarded Contract Description 1
1211	String	30	Awarded Contract Description 2
1212	String	30	Awarded Contract Description 3
1213	String	30	Awarded Contract Description 4
1214	String	1	Proposal/Contract Consistent (Y or N)
1215	String	30	Proposal/Contract Consistent Description 1
1301	String	30	Proposal/Contract Consistent Description 2
1302	String	30	Proposal/Contract Consistent Description 3
1303	String	30	Proposal/Contract Consistent Description 4
1304	String	1	Subject to CASB Regulations (Y or N)
1305	String	1	Submitted a CASB Disclosure Statement (Y or N)
1306	String	1	Compliance with Standards (Y or N)
1307	String	1	Consistent with Practices (Y or N)
1308	String	35	Name and Title 1
1309	String	35	Name and Title 2
1310	String	35	Firm Name 1
1311	String	35	Firm Name 2
1312	String	6	Date of Submission
DD1921 AND ROLLUP TOGGLE INFORMATION:			
1401	String	21	Contractor
1402	String	24	Location
1403	String	18	Program Name
1404	Double		Target Profit
1405	Double		Contract Price
1406	Double		Contract Ceiling

KEY VALUE	Type	Length	Description
1407	String	7	Contract Type
1408	String	16	Contact Name
1409	String	15	Customer Name
1410	String	1	Contract/RFP/Program Estimate (C, R or P)
1411	String	1	R&D/Production Contract (R or P)
1412	String	1	Multiple Year Contract (Y or N)
1413	String	1	Prime/Subcontractor (P or S)
1414	String	6	Fiscal Year Funded
1415	String	1	EOC Rollup Toggle Switch
1416	String	10	EOC Rollup Turned Off Date
1417	String	8	EOC Rollup Turned Off Time
1418	String	8	EOC Rollup Turned Off User Name
1419	String	1	Pending Transactions (Y or N)
1420	String	1	Summary Rollup Toggle Switch
1421	String	10	Summary Rollup Turned Off Date
1422	String	8	Summary Rollup Turned Off Time
1423	String	8	Summary Rollup Turned Off User Name
DD 1861:			
1601	String	4	S Date
1602	String	4	F Date
1603	String	7	Land Percent
1604	String	7	Building Percent
1605	String	7	Equipment Percent
1606	String	7	Treasury Rate
1607	String	7	RFP/Contract PIIN No
1701	Double		Adj Sched
1702	Double		Adj Cost

KEY VALUE	Type	Length	Description
1703	Double		Tot Sched
1704	Double		Tot Cost
1705	Double		At Complete BAC
1706	Double		At Complete LRE

D.3 Project File Formats
D.3.8 Milestone File Format

MPM Project File Name: *projectname*A.MIL

File Type: Btrieve

Record Length: 90 Bytes

Keys: 2

Field	Type *	Length	Description
System Use		6	System use
Milestone ID	C	10	Milestone identification
System Use		2	System Use
Milestone Symbol	C	1	Milestone symbol
Milestone Description	C	40	Milestone description
Milestone Weight	C	8	Milestone weight
Milestone Schedule Date	L	4	Schedule date
Milestone Forecast Date	L	4	Forecast date
Milestone Complete Flag	C	1	Milestone complete flag (Y or N)
Milestone Weight Pct Compl	C	3	Weight percent complete (0-100)
WBS Key	L	4	WBS Key
System Use		7	System use

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains two keys. These keys contain no duplicates.

- Key 0:

    Segment 1 = WBS Key

    Segment 2 = Schedule Date

- Key 1:

    Segment 1 = Milestone ID

D.3 Project File Formats

D.3.9 Organization Breakdown Structure (OBS) File Format

MPM Project File Name: *projectname*B.OBS

File Type: Btrieve

Record Length: 92 Bytes

Keys: 3

Field	Type *	Length	Description
OBS Department ID	C	10	Department identification
Performing parent	C	10	Parent for OBS department identification (Performing)
Responsible parent	C	10	Parent for OBS department identification (Responsible)
Department ID desc	C	20	Department identification description
Department Manager	C	20	Department manager
Burden Template ID	C	20	Burden template ID for department
System Use		2	System use

  * C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains three keys. These keys contain no duplicates.

- Key 0 = OBS Department ID
- Key 1:

  Segment 1 = Performing Parent
  Segment 2 = OBS Department ID

- Key 2:

  Segment 1 = Responsible Parent
  Segment 2 = OBS Department ID

D.3 Project File Formats
D.3.10 Program Log File Format

MPM Project File Name: *projectname*Q.LOG

File Type: Btrieve

Record Length: 250 Bytes

Keys: 1

Field	Type *	Length	Description
Log Record ID	I	2	Log entry number
Transaction Date	C	6	Transaction date (YYMMDD)
Change Reference	C	10	Customer change reference
Internal Reference	C	10	Internal reference
Negotiated Contract Change	D	8	Negotiated contract change
Authorized Unpriced Amount	D	8	Authorized unpriced amount
G&A	D	8	General and administrative amount
COM	D	8	Cost of money amount
Management Reserve	D	8	Management reserve amount
Prime Dollars	D	8	Prime dollars amount
Undistributed Budget	D	8	Undistributed budget amount
System Use		2	System use
Total Overhead	D	8	Total overhead
Undistributed budget Desc	C	60	Undistributed budget description
Mgmt Reserve Budget Desc	C	60	Management reserve budget description
Total Burden	D	8	Total burden amount
Total Cost	D	8	Total cost amount
Total Dollars	D	8	Total dollars amount
System Use		12	System use

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

Each Record Number correlates to a specific Log Entry Number (Log Entry Number = Record Number).

Log Entry Number 1 is Project Totals.

This file contains one key. This key contains no duplicates.

- Key 0:

  Segment 1 = Log Entry Number

D.3 Project File Formats
D.3.11 Project File Format

MPM File Name: PROJ.DAT

File Type: Btrieve

Record Length: 984 Bytes

Keys: 5

This file is used to store both the Project Names and Users attached to each project. There are two record types:

> **Project Records**: These records store the project related data.

> **User Records**: These records store the user information related to each project.

Project Record Type:

Field	Type *	Length	Description
User ID	C	8	User ID
Project ID	C	20	Project ID
System Use		16	System Use
Path	C	242	Subdirectory where the project attached to this Project ID resides
System Use	C	118	System Use
Project Notes	C	450	Long description of the project. Note: Same as the Project Description key value in the Header file format (.HED file)
System Use	C	82	System Use
Global ID	C	8	Global File ID of the global files used for the project
Description	C	40	Description of the project Note: Same as the Program Name field in the Header file format (.HED file)

User Record Type:

Field	Type *	Length	Description
User ID	C	8	User ID

Field	Type *	Length	Description
Project ID	C	20	Project ID
Date Modified	C	8	The date the User ID record was last modified (YYYYMMDD)
Modified By	C	8	User ID of the individual who made the last modification
System Use	C	360	System Use
Project Notes	C	450	Long description of the project. Note: Same as the Project Description key value in the Header file format (.HED file)
System Use	C	66	System Use
Functional Equivalence	C	8	Functional Security Equivalence ID
WBS Security Equivalence	C	8	WBS Security Equivalence
Global ID	C	8	Global File ID of the global files used for the project
Description	C	40	Description of the project Note: Same as the Program Name field in the Header file format (.HED file)

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains five keys. These keys contain no duplicates.

- Key 0:

  Segment 1 = User ID*
  Segment 2 = Project ID

- Key 1:

  Segment 1 = Project ID
  Segment 2 = User ID

- Key 2:

  Segment 1 = Functional Equivalence
  Segment 2 = Project ID

- Key 3:

  Segment 1 = WBS Security Equivalence
  Segment 2 = Project ID

- Key 4:

  Segment 1 = Global ID
  Segment 2 = Project ID

* In order to access a specific project record, you must populate the User ID segment with "********" and the Project ID segment with the project name if you are using Key 0 to access the project record.

D.3 Project File Formats

D.3.12 Resource Rollup (Detail) And File Format

MPM Project File Name: *projectname*W.RRD

File Type: Btrieve

Record Length: 1,612 Bytes

Keys: 1

Field	Type *	Length	Description
Header Link	L	4	Link to header record in RRH file

Record Type	C	1	Record type:
			  BCW(S) BCW(P)
			  (A)CWP (E)TC

Year	I	2	Year for the record
Detail Subrecords		107*15	See description of detail subrecord below

 *   C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one segmented key. This key contains no duplicates.

- Key 0:

     Segment 1 = Header Link
     Segment 2 = Record Type
     Segment 3 = Year

Detail Subrecord

Field	Type *	Length	Description
Cost Element	C	1	Cost element: (S)td hours (G)&A (H)rs/units (O)verhead (E)quiv people (F)ee (P)rime (C)ost of money
Burden Code	C	10	Burden Code
Monthly Values	D	8*12	Monthly values (January through December)

 *   C = Character   D = Double   S = Single   I = Integer   L = Long

D.3 Project File Formats
D.3.13 Resource Rollup Header File Format

MPM Project File Name: *projectname*U.RRH

File Type: Btrieve

Record Length: 242 Bytes

Keys: 4

Field	Type *	Length	Description
WBS Key	L	4	WBS key
Element of Cost	C	1	Element of cost code
Class of Cost	C	3	Class of cost code
Resource Code	C	10	Resource code
Resource Dept	C	10	Resource department (for burdening template)
Overtime Factor	C	20	Overtime factor
Detail/Summary/EOC/ Weekly Flag	C	1	Detail/summary/EOC/Weekly flag (D, S, E or W)
BCWS Start Date	L	4	Baseline start date
BCWS End Date	L	4	Baseline end date
ETC Start Date	L	4	ETC start date
ETC End Date	L	4	ETC end date
BCWS Estimate Type	C	1	
ETC Estimate Type	C	1	
BCWS Spread Curve	C	3	
ETC Spread Curve	C	3	
BCWS Spread Curve Amount	D	8	
ETC Spread Curve Amount	D	8	
BCWS Efficiency Percent	I	2	
ETC Efficiency	I	2	

Field	Type *	Length	Description
Percent			
BCWS Scrap & Rework Percent	I	2	
ETC Scrap & Rework Percent	I	2	
Detail Record Link	L	4	Link to detail records
System Use		1	System use
BCWS Apport Est Flag	C	1	BCWS apportion estimate flag
BCWS Apport Est Link	L	4	BCWS apportion estimate link
BCWS Apport Est Pct	D	8	BCWS apportion estimate percent
BCWS Burd Temp	C	20	BCWS burden template
ETC Apport Est Flag	C	1	ETC apportion estimate flag
ETC App Est Link	L	4	ETC apportion estimate link
ETC App Est Pct	D	8	ETC apportion estimate percent
ETC Burd Temp	C	20	ETC burden template
SrateTbl	C	20	BCWS rate table
ErateTbl	C	20	ETC rate table
System Use	C	14	System use
XREF-EST	C	20	XREF Estimate (optional field)

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains four keys. Key 0 and Key 3 do not contain duplicates.

- Key 0:

    Segment 1 = WBS Key (Long)
    Segment 2 = Resource Code
    Segment 3 = Resource Department
    Segment 4 = Overtime Factor
    Segment 5 = Detail/Summary/EOC Flag

    Segment 6 = XREF-EST

- Key 1:

  Segment 1 = WBS Key (Long)
  Segment 2 = Element of Cost Code
  Segment 3 = Class of Cost Code
  Segment 4 = Resource Code

- Key 2:

  Segment 1 = Resource Department
  Segment 2 = Element of Cost Code
  Segment 3 = Class of Cost Code
  Segment 4 = Resource Code

- Key 3:

  Segment 1 = Detail Record Link

D.3 Project File Formats
D.3.14 User WBS Restrictions File Format

MPM Project File Name: *projectname*N.USR

File Type: Btrieve

Record Length: 48 Bytes

Keys: 1

Field	Type *	Length	Description
User ID	C	8	User ID
WBS ID	C	40	WBS ID

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one segmented key. This key contains no duplicates.

- Key 0:

    Segment 1 = User ID
    Segment 2 = WBS ID

D.3 Project File Formats
D.3.15 Weekly File Format

MPM Project File Name: *projectname*F.WRD

File Type: Btrieve

Record Length: 18 Bytes

Keys: 1

Field	Type *	Length	Description
Header Link	L	4	Link to header record in RRH file.
Record Type	C	1	Record Type: BCW(S), BCW(P), (A)CWP, (E)TC.
Date	L	4	Week Date (starting date) in YYYYMMDD format (for example, 20021231)
Cost Element	C	1	Cost Element: (S)td Hours, (H)ours/Units, (E)quiv People, (P)rime, (G)&A, (O)verhead, (F)ee, (C)ost of Money.
Value	D	8	Weekly value.

 * C = Character   D = Double   S = Single   L = Long Integer

Keys

This file contains one segmented key. This key contains no duplicates.

- Key 0:

    Segment 1 = Header Link
    Segment 2 = Record Type
    Segment 3 = Cost Element
    Segment 4 = Date

D.3 Project File Formats
D.3.16 Work Breakdown Structure (WBS) File Format

File Name: *projectname*P.WBS

File Type: Btrieve

Record Length: 619 Bytes

Keys: 4

Field	Type *	Length	Description
System Use		1	System use
ID	C	40	WBS identification
Description	C	100	WBS description
System Use		2	System use
Xref Field 1	C	20	WBS cross-reference 1
Xref Field 2	C	20	WBS cross-reference 2
Xref Field 3	C	20	WBS cross-reference 3
Xref Field 4	C	20	WBS cross-reference 4
Xref Field 5	C	20	WBS cross-reference 5
Xref Field 6	C	20	WBS cross-reference 6
Xref Field 7	C	20	WBS cross-reference 7
Xref Field 8	C	20	WBS cross-reference 8
Xref Field 9	C	20	WBS cross-reference 9
Xref Field 10	C	20	WBS cross-reference 10
System Use		4	System use
Charge Number	C	20	Accounting charge number
Earned Value Code	C	1	WBS earned value method (1-9, P or K)
Performing Dept	C	10	WBS performing department
Responsible Dept	C	10	WBS responsible department
Network Flag	C	1	Critical path flag for network processor * = On critical path

Field	Type *	Length	Description
Alias ID	C	20	Alternate WBS alias name
CLIN	C	8	WBS contract line item reference label
Manager	C	20	WBS manager reference field
System Use		1	System use
System Use		2	System use
System Use		2	System use
WBS Element Type	C	1	C = Control account W = Work Package P = Planning Package O = Other Package
Early Start Date	L	4	Early start date (YYYYMMDD)
Early Finish Date	L	4	Early finish date (YYYYMMDD)
Scheduled Start	L	4	Scheduled start date (YYYYMMDD)
Scheduled End	L	4	Scheduled end date (YYYYMMDD)
Late Start Date	L	4	Late start date (YYYYMMDD)
Late Finish Date	L	4	Late finish date (YYYYMMDD)
Last AS OF Date	L	4	Last AS OF date (YYYYMMDD)
System Use		6	System use
System Use		1	System use
System Use		2	System use
System Use		1	System use
System Use		2	System use
Tech Pct Complete	I	2	Technical percent complete. Used in NASA 533-P Report.
ETC Start Date	L	4	Estimate to complete start date (YYYYMMDD)
ETC End Date	L	4	Estimate to complete end date (YYYYMMDD)

Field	Type *	Length	Description
System Use		8	System use
Parent ID	C	40	WBS parent identification
Revision Letter Date	L	4	Revision letter date (YYYYMMDD)
Scheduled Ref Date	L	4	Scheduled reference date (YYYYMMDD)
Recurring Flag	C	1	Recurring/Non-recurring flag (R or N)
Fee Percentage	S	4	WBS fee percentage
Fee Limit Amount	D	8	WBS fee limit amount
System Use		1	System use
System Use		1	System use
BCWP Flag	S	1	BGWP Flag
System Use		6	System use
System Use		1	System use
BCWP Base	C	1	WBS BCWP Base in: H = Hours/Units P = Prime B = Total Burdened C = Total Cost D = Total Dollars
WBS Key	L	4	WBS unique key
Parent	L	4	Parent's WBS key
System Use		4	System use
System Use		4	System use
Sequence	L	4	Value identifying the relationship of a WBS to its siblings (i.e., sort order).
WBS Level	I	2	WBS level
System Use		4	System use
Apport Base ID	L	4	Apportioned base WBS key
System Use		16	System use

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains four keys. Only Key 3 may contain duplicates.

- Key 0:

  Segment 1 = WBS ID
- Key 1:

  Segment 1 = WBS Key
- Key 2:

  Segment 1 = Parent
  Segment 2 = Sequence
- Key 3:

  Segment 1 = CLIN

D.3 Project File Formats
D.3.17 WBS Task Description File Format

MPM Project File Name: *projectname*D.WTD

File Type: Btrieve

Record Length: 806 Bytes

Keys: 1

Field	Type *	Length	Description
WBS Key	L	4	WBS element to which the task description is attached
Sequence	C	2	Task description record sequence (01-10). Record sequence field - for each task description there is a record for every 10 lines of text the record sequence field identifies the records 1-10 for each task description.
System Use		20	System use
Task Text	C	780	This field contains 10 lines of 78 characters of text associated with task description

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one segmented key. This key contains no duplicates.

- Key 0:

    Segment 1 = WBS Key
    Segment 2 = Sequence Field

D.3 Project File Formats
D.3.18 WBS Thresholds File Format

MPM Project File Name: *projectname*X.WTH

File Type: Btrieve

Record Length: 171 Bytes

Keys: 1

Field	Type *	Length	Description
LinkToWbsTable	I	4	Links to the WbsIntKey field in the WBS table. This shows the relationship to a node in WBS table.
CPFSVValue	D	8	Current Period, Schedule Variance, Favorable Value.
CPFSVPercentage	D	12	Current Period, Schedule Variance, Favorable Percentage
CPUFSVValue	D	8	Current Period, Schedule Variance, Unfavorable Value
CPUFSVPercentage	D	8	Current Period, Schedule Variance, Unfavorable Percentage
CFSVValue	D	8	Cumulative, Schedule Variance, Favorable Value
CFSVPercentage	D	8	Cumulative, Schedule Variance, Favorable Percentage
CUFSVValue	D	8	Cumulative, Schedule Variance, Unfavorable Value
CUFSVPercentage	D	8	Cumulative, Schedule Variance, Unfavorable Percentage
CPFCVValue	D	8	Current Period, Cost Variance, Favorable Value
CPFCVPercentage	D	8	Current Period, Cost Variance, Favorable Percentage
CPUFCVValue	D	8	Current Period, Cost Variance, Unfavorable Value
CPUFCVPercentage	D	8	Current Period, Cost Variance, Unfavorable Percentage
CFCVValue	D	8	Cumulative, Cost Variance, Favorable Value

Field	Type *	Length	Description
CFCVPercentage	D	8	Cumulative, Cost Variance, Favorable Percentage
CUFCVValue	D	8	Cumulative, Cost Variance, Unfavorable Value
CUFCVPercentage	D	8	Cumulative, Cost Variance, Unfavorable Percentage
ACFValue	D	8	At Complete, Favorable Value
ACFPercentage	D	8	At Complete, Favorable Percentage
ACUFValue	D	8	At Complete, Unfavorable Value
ACUFPercentage	D	8	At Complete, Unfavorable Percentage
CLogic	S	1	Comparison Logic
CUnits	S	1	Units (Hours or Dollars)
ThresholdLevel	S	1	Flag indicating whether Threshold is set at Project Level

* C = Character   D = Double   S = Single   I = Integer   L = Long

Keys

This file contains one key. This key contains no duplicates.

- Key 0:

    Segment 1 = LinkToWbsTable

Appendix E: Data Utilities

Data Dictionary File Utility

If you need to generate data dictionary files from a project, you can use the Data Dictionary File utility. You run the utility from the Windows Start menu. The executable file is name MPMDDF.EXE.

The utility generates three data dictionary files:

- FILE.DDF
- FIELD.DDF
- INDEX.DDF

The utility generates the same three files each time it is run. If you want to create a set of files for more than one project, you must move the data dictionary files out of the DELTEKMPM folder each time you run the executable. The DDF files contain definitions for the following files:

Project File	File Name
Audit Trail Documentation	*projname*G.ATX
Audit Trail	*projname*C.AUD
Basis of Estimate	*projname*E.BOE
BCWP	*projname*I.BWP
CLIN	*projname*R.CLN
Flattened Resource Detail Monthly	*projname*.RRM
Flattened Resource Detail Yearly	*projname*.RRY
Milestones	*projname*A.MIL.
OBS	*projname*B.OBS
Program Log	*projname*Q.LOG
Project Header	*projname*T.HED
Resource Rollup Detail	*projname*W.RRD
Resource Rollup Header	*projname*U.RRH
Task Description	*projname*D.WTD
WBS	*projname*P.WBS
WBS Restrictions	*projname*N.USR
WBS Thresholds	*projname*X.WTH
Weekly	*projname*F.WRD

Global Files	File Name
Burden Templates	TEMPLATE.LIB
Element of Cost Coded	EOCCODES.LIB
Fiscal Calendar	CALENDAR.FSC
Holiday Calendar	CALENDAR.HOL
Resource Rates Library	RATE.LIB
Resource Descriptions Library	RESOURCE.LIB
System Files	**File Name**
Global File IDs	GLOBAL.DAT
Project File Names	PROJ.DAT

Procedure

To run the Data Dictionary File utility:

1. Run MPMDDF.EXE from the MPM Executable folder.

2. Click **Ok**.

   The MPM Data Dictionary File Utility dialog box displays.
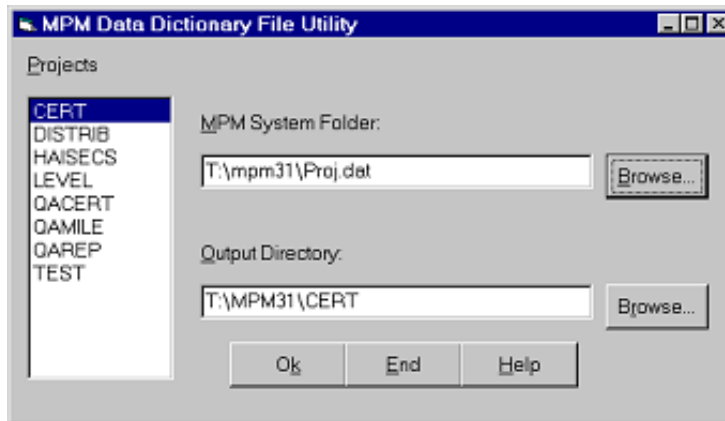
3. In the Projects column, highlight the project you want to use to create the data dictionary files.

4. The Output Directory defaults to the project file location for the selected project. You may optionally choose a different output directory for the .DDF files.

Flatten File Utility

When you run this program, it creates a resource rollup project file in the project directory. The file is called *projname*.RRM or *projname*.RRY depending on whether you select the monthly or yearly option. The file is a copy of the .RRD file that is easier to read with report writers. The files can be used to create custom reports instead of using the .RRD file.

The .RRM and/or .RRY files will contain the contents of the .RRD file that existed at the time the files were created. If changes are made to the project, you should rerun the utility.

Procedure

To run the utility:

1. On the Windows task bar click Start and then choose Run.

2. On the Run dialog, type MPMRRF.EXE in the Open box.

3. Click OK and the Flatten File Utility dialog is displayed.
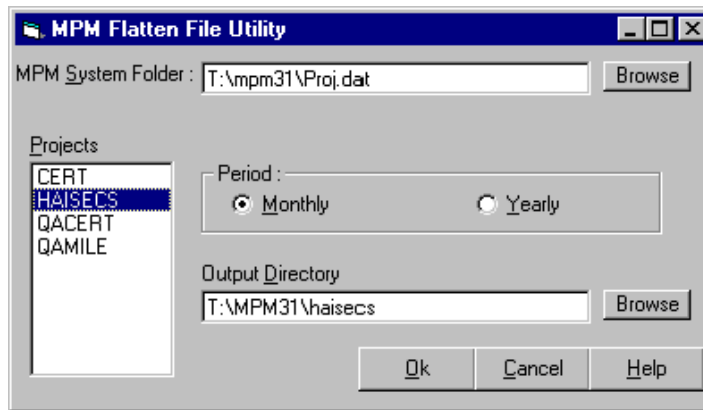
4. In the Projects column, highlight the project you want to use to create the resource rollup project file.

5. Choose whether you would like to create monthly or yearly data.

6. The Output Directory defaults to the project file location for the selected project. You may optionally choose a different output directory for the file.

Resource Rollup Monthly File Format

File Name: *projectname.*RRM

File Type: Btrieve

Record Length: 28 bytes

Keys: 1

Field	Type*	Length	Description
Header Link	Long	4	Link to header record in RRH file
Value Type	Character	1	Value type: BCW(S) BCW(P) (A)CWP (E)TC
Cost Element	Character	1	Cost element: (S)td hours (H)rs/units (E)quiv men (P)rime (G) & A (O)verhead (F)ee (C)ost of money
Burden Code	Character	10	Burden Code
Year and Month	Integer	4	Year and month
Monthly Values	Double	8	Monthly values

This file contains one segmented key. This key contains no duplicates.

Key 0:

Segment 1 = Header Link
Segment 2 = Value Type
Segment 3 = Cost Element
Segment 4 = Burden Code
Segment 5 = Year and Month

Resource Rollup Yearly File Format

File Name: *projectname*.RRY

File Type: Btrieve

Record Length: 114 bytes

Keys: 1

Field	Type*	Length	Description
Header Link	Long	4	Link to header record in RRH file
Value Type	Character	1	Value type: BCW(S) BCW(P) (A)CWP (E)TC
Cost Element	Character	1	Cost element: (S)td hours (H)rs/units (E)quiv men (P)rime (G) & A (O)verhead (F)ee (C)ost of money
Burden Code	Character	10	Burden Code
Year	Integer	2	Year
Monthly Values	Double	8*12	Monthly values

This file contains one segmented key. This key contains no duplicates.

   Key 0:

Segment 1 = Header Link
Segment 2 = Value Type
Segment 3 = Cost Element
Segment 4 = Burden Code
Segment 5 = Year

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