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Deltek MPM™ 3.4

Globals Manual

March 25, 2011

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High-Level Contents

Contents

About this Manual

The *MPM Globals* manual describes how to create components called “globals” that are used across all projects. The components include:

- Global sets
- Calendars
- Elements of cost
- Burdens and burden templates
- Resources and rates
- Spread curves used to generate baseline estimates and estimates to complete
- Users and their access privileges

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 Projects Guide	This guide describes how to set up and manage projects in MPM, define Work Breakdown Structures, establish baselines, track project milestones, replan projects, and report and analyze data.
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
Creating and Maintaining Global Sets

1.1 Introduction to Global IDs

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

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

In MPM, you create global files that contain this information. A set of global files is defined by a global file ID, description, and path. After defining global files, you assign them to projects using the Project Maintenance window. The relationship is shown in Figure A.

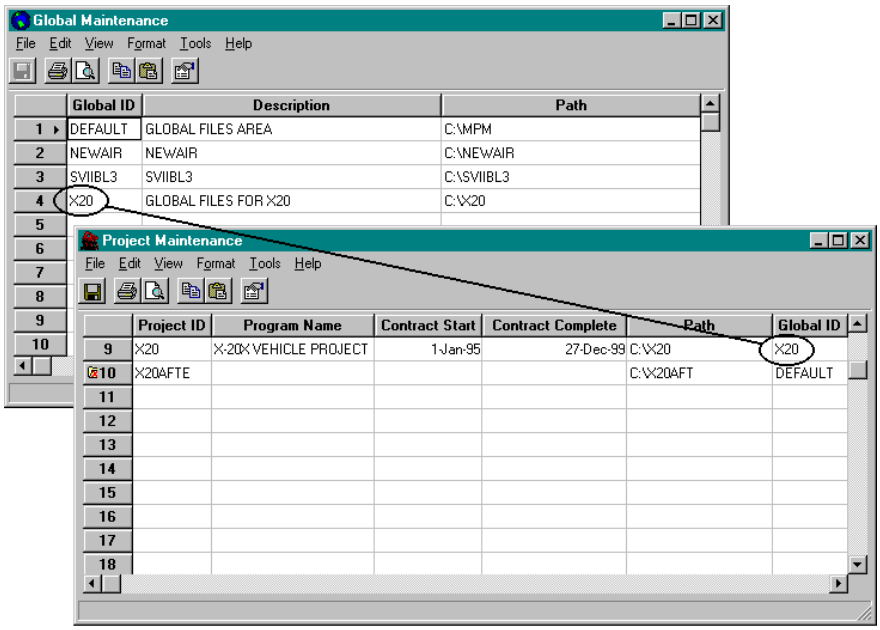


Figure A. *Global IDs are assigned to projects.*

Terminology: Global Set and Global ID

A *global set* is the group of files that defines calendars, rate tables, etc. Each global set is assigned a unique *global ID*. When you want to assign a global set to a project, you use the *global ID*. *Global set* is a term used in the commands under the Edit menu in Global Maintenance when the menu items affect the global files. For example, the command Delete Global Set will delete the row from the grid as well as all the global files located in the path specified for the global set.

Multiple Global Sets, Multiple Projects

You can create an unlimited number of global sets, and you can assign the same global ID 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. Each global set must reside in its own directory or path.

Default Global Set

MPM contains a Default global set that references a default calendar, but does not contain any other information. The Default global set is located in the same directory as the MPM executable. The Default global set cannot be moved or deleted.

Ensuring Consistency in Global Sets

Many MPM customers delegate global set creation to one individual, and give only that individual access to Global Maintenance. This helps to ensure consistency in the calendars, templates, etc. assigned to projects.

A global ID is assigned to a project at the time the project is created. The global ID is selected from a drop-down list. The user defining the project can select a global ID from this list without having access to Global Maintenance.

1.2 Accessing the Global Maintenance Window

To access the Global Maintenance window, click the Globals tab in Menu Manager and do one of the following:

- Double-click the Global Maintenance icon as shown in Figure A.
- Open the File|Globals menu and choose Global Maintenance.

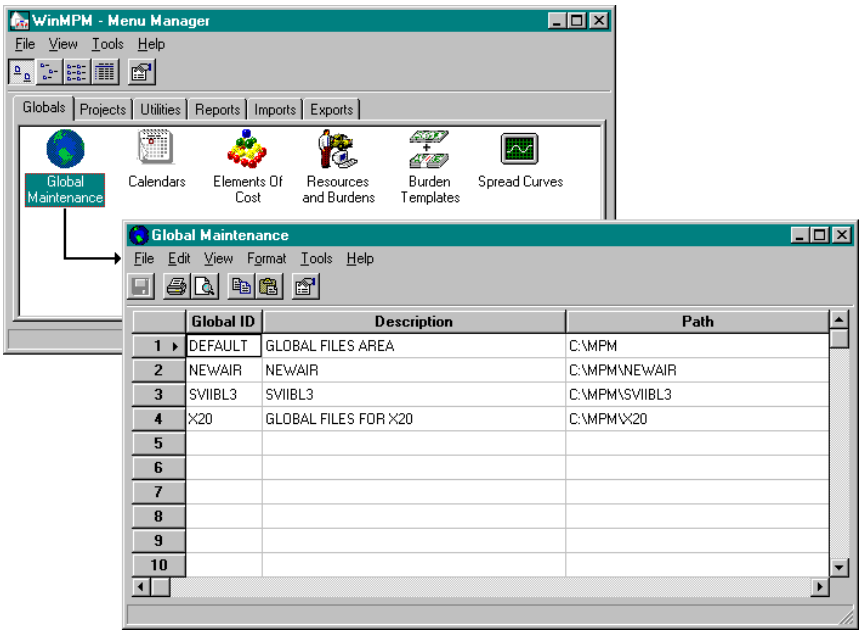


Figure A. *To access Global Maintenance, double-click the Global Maintenance icon.*

1.3 Orientation to the Global Maintenance Window

The Global Maintenance window is a grid with three columns. Each row with data represents a global set. The three columns uniquely identify each global set:

- Global ID (required)
- Description (optional)
- Path (required)

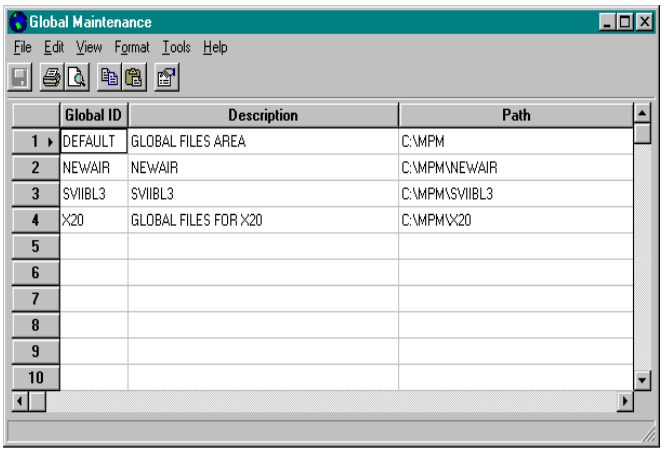


Figure A. *Global Maintenance window*

Windows Conventions

The Global Maintenance window conforms to the standard Windows conventions. You can size it, minimize and restore it. Use the horizontal and vertical scroll bars to pan across the display.

Order

When adding global sets, they are listed in the order in which they are added. When you access Global Maintenance again, the sets are sorted and displayed alphanumerically by global set.

Displaying and Hiding Columns

As with other MPM windows, you can display and hide columns using the Column Hide command under the Format menu.

Changing Column Widths

You can change the width of the columns by dragging the vertical line between the column headings, or by choosing Column Width from the Format menu. The latter gives you the option of using the Best Fit option to have MPM automatically adjust the width of the columns.

Printing and Previewing

As with other MPM windows, you can preview and print a tabular report of the Global Maintenance display using the Print Preview and Print commands under the File menu.

1.4 Creating a Global Set

When you create a global set, you specify a:

- Global ID name (required)
- Description (optional)
- Path (required)

The global IDs and paths must be unique for each global set. MPM checks for uniqueness and notifies you if you try to enter a duplicate ID or path.

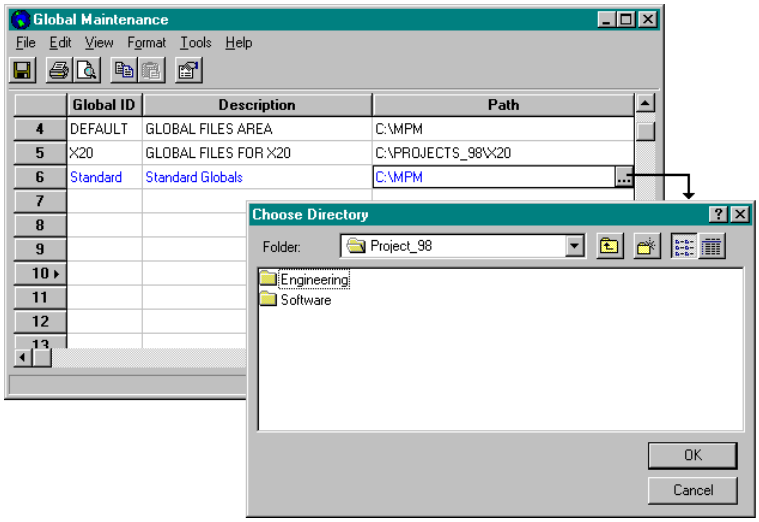


Figure A. *Global ID and Path are required fields.*

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 create a global set:

1. Place the cursor in the first empty Global ID field and enter a global ID.

   The ID must be unique and can be up to eight characters long. The name cannot contain spaces or special characters.

2. To accept the ID, press Tab.

   MPM moves the cursor to the Description field and enters the default path as shown in Figure A.

3. Enter a description.

   The description is optional. It can be up to 20 characters long, including blanks.

4. Enter a path by typing it in or clicking the button at the right end of the Path field.

   If you clicked on the button, MPM displays the Choose Directory dialog box shown in Figure A.

5. Select a folder and click OK.

6. To save the settings, do one of the following:

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

Inserting a Global Set

To insert a global set:

1. Select the row where you want to insert the global set and do one of the following:

   - Press the Insert key.
   - Open the Edit menu and select Insert Global Set.

   MPM inserts a blank row above the row you selected.

2. Enter the required information.

1.5 Maintaining Global Sets

You can copy, paste, and insert entire global sets. You can also copy and paste cells on the Global Maintenance grid. By copying and pasting a global set, you also copy and paste all the information in the global files (calendar, templates, etc.). This is an easy way to create a new global set that needs only minor modifications from an existing global set, or to create a quick backup of your global files.

Copying and Pasting Global Sets

To copy and paste a global set:

1. Select a row and do one of the following:
   - Click the Copy button  in the Toolbar.
   - From the Edit menu, choose Copy Global Set.
2. Select an empty row and do one of the following:
   - Click the Paste button  in the Toolbar.
   - From the Edit menu, choose Paste Global Set.

   MPM displays the dialog box shown in Figure A.

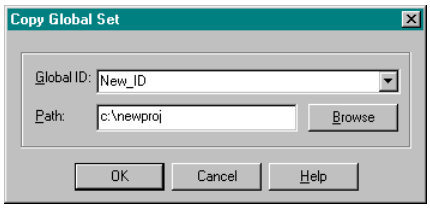


Figure A. *Enter a global ID and select a path.*

3. Enter a global ID.
4. Select a path, or type in a new path.
5. To accept the settings and close the dialog box, click OK.

Deleting Cells and Global Sets

You can delete cells and global sets. If you delete the contents of a required cell, MPM displays <Required> in the cell. You can delete one or more cells at a time, but you can delete only one global set at a time.

If you delete a global ID, MPM puts the row into edit mode and turns the text blue. You can delete a global ID only if it is not assigned to a project. You cannot delete the DEFAULT global ID.

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 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.

3. If required, confirm the delete by choosing Yes.

To delete a global set:

1. Select the global set by clicking the row number.

   MPM highlights the entire row.

2. To delete the global set, do one of the following:

   - From the Edit menu, choose Delete Global Set.
   - Press the Delete key.

   MPM will ask you to confirm the delete. If the global ID is assigned to one or more projects, you will not be able to delete it.

3. Confirm the delete by choosing Yes.

Sub-Topics

Details on maintaining global IDs are covered in the following sub-topics:

1.5 Maintaining Global Sets

1.5.1 Changing the Path for a Global Set

You can change the path for a global set 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 Global Set from xxx to yyy?
The original path does not exist, or no global files exist at the original path,	The current path 'X:\XXX\XXXX' for the 'XXX' Global Set does not exist; therefore, a move cannot be performed. Do you want to change the current path to the new path 'X:\XXXX\XXXX'?
Any global files are in use and not available for moving	The operation cannot be performed because the Global Set is currently in use.
Global ID is assigned to a project	The operation cannot be performed because the Global Set is in use by one or more Projects.
New 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 at the new path	Insufficient disk space at x:\yyyy\zzz. Space required: NN,NNN Space Available: N,NNN
Only a drive letter is entered for the new path	Root directory files are not supported. *(You cannot store global files in the root directory.)*
Drive specified is not available or invalid	Invalid disk drive. (*You may want to check the network mapping of the drive.)*
Directory entered is invalid	Invalid directory name. *(You must use DOS naming conventions.)*

To change the path for a global set, you must have the appropriate security rights.

Procedure

To change the path for a global set:

1. Enter the directory name in the Path field.
2. Save the change.

   If MPM successfully completes all the checks, it performs the change and moves all global files to the new path.

   If MPM encounters a problem, it displays one of the messages shown on the previous page.

1.5 Maintaining Global Sets

1.5.2 Recovering Global Sets

It is possible for one or more of the files that make up a global set 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.

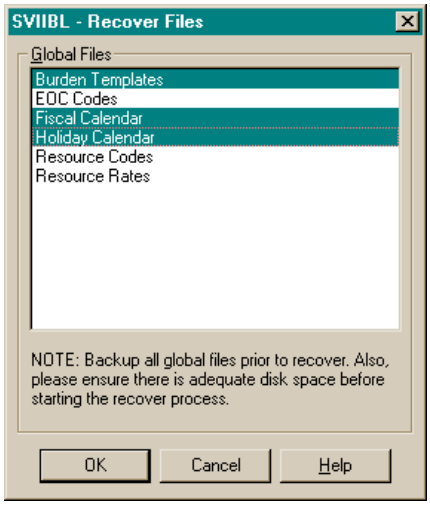


Figure A. *You can recover global files that have been corrupted.*

The files that can be recovered are:

- Burden Template
- EOC Codes
- Fiscal Calendar
- Holiday Calendar
- Resource Codes
- Resource Rates

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 global files:

1. Select the Global ID that is corrupted.
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 and click OK.

   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 of the global files included in the Global ID are unrecoverable, then all files in the Global ID must be restored from a full backup

1.6 Recovering System Files

The Recover Files command under the Tools menu can recover project and global files, however it cannot recover the following system files:

- PROJ.DAT (Project List)
- GLOBAL.DAT (Global List)
- MPMUSERS.DAT (User List)

To recover the system files, you must use the Recover System Files utility. The utility is independent of MPM and you run it from the Start|Run menu. The utility file is named MPM621.EXE and is located in the MPM program directory, usually DELTEKMPM.

Running the Utility

To run the Recover System Files utility:

1. From the Start|Run menu, run the MPM621.EXE file. The file should be located in the MPM program directory, usually DELTEKMPM.
2. Select the file you want to recover and click OK. A message is displayed indicating whether the recovery was successful.

2
Defining Calendars

2.1 Overview of Calendars

MPM's Calendar window is a visual tool for specifying fiscal synchronization, nonworking days (holidays), and Equivalent Person Month Hours for a global set. Using the Calendar window, you can view and edit an existing calendar, or establish a new calendar. Before defining a calendar, you must create the global set to which it will be assigned.

Accounting Calendar

For most project operations, MPM requires an accounting calendar. If you do not require customized fiscal months, your calendar can be the same as the standard calendar.

Synchronizing Fiscal Months

The fiscal calendar is used to synchronize calendar month planning to fiscal (accounting) months. Synchronizing fiscal months:

- Provides consistency of budget vs. actual cost comparisons. Budgets are planned for the same time period that actual costs are accumulated.
- Normalizes timephased estimate (budget) data to your fiscal months when automatic estimating and distribution features are used.

Starting days for fiscal months are marked with red boxes on the calendar.

Equivalent Person Month Hours

You can specify the actual number of working hours available in each fiscal month using the Equivalent Person Month Hours grid. Fill Right and Fill Down commands speed data entry in the grid.

Planning and Cost Collection Cycle

MPM provides for a fiscal month planning and cost collection cycle. This does not preclude detail planning, project statusing, or actual cost accumulation from occurring on a day-to-day basis or as frequently as desired.

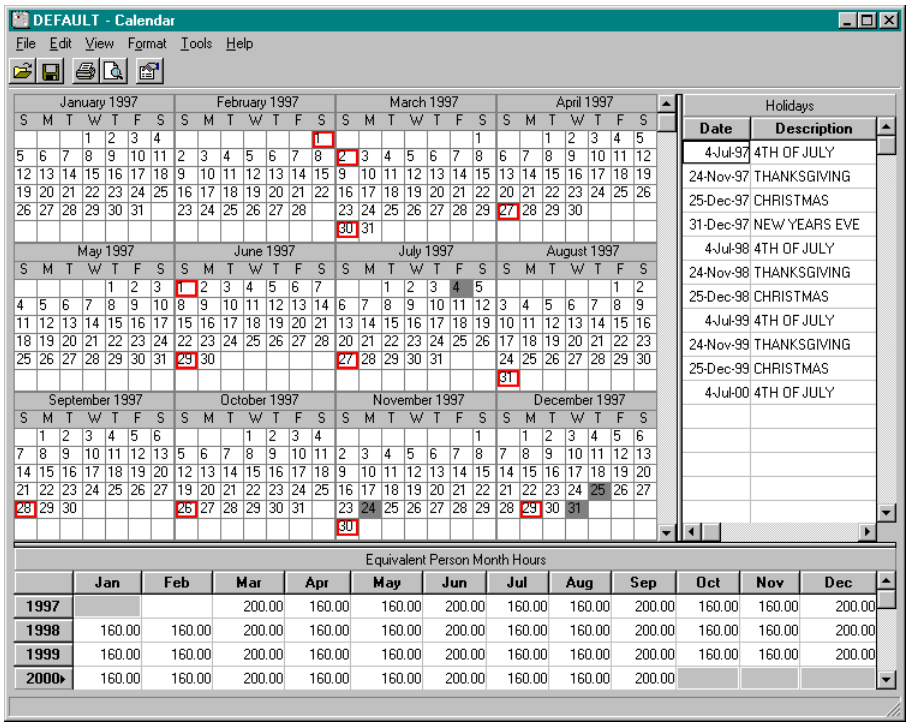


***Figure A**. MPM Calendar*

2.2 Accessing the Calendar Window

To access the Calendar window:

1. Choose the Calendar icon on the Globals tab of the Menu Manager.

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

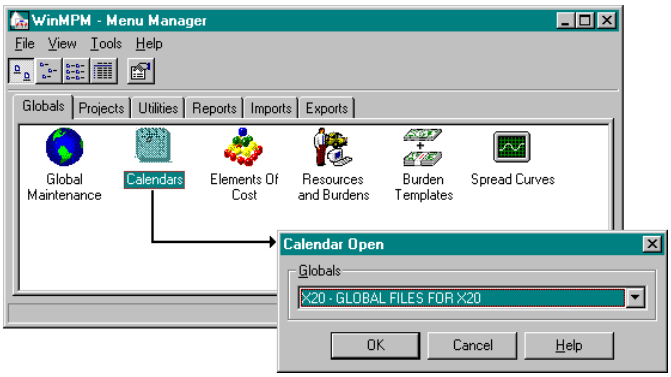


Figure A. *To access the calendar, choose the Calendar icon.*

2. Choose a Global File calendar you want to modify.

   You can also work with MPM's Default Calendar.

3. Click OK.

   MPM displays the Calendar window shown in Figure B.

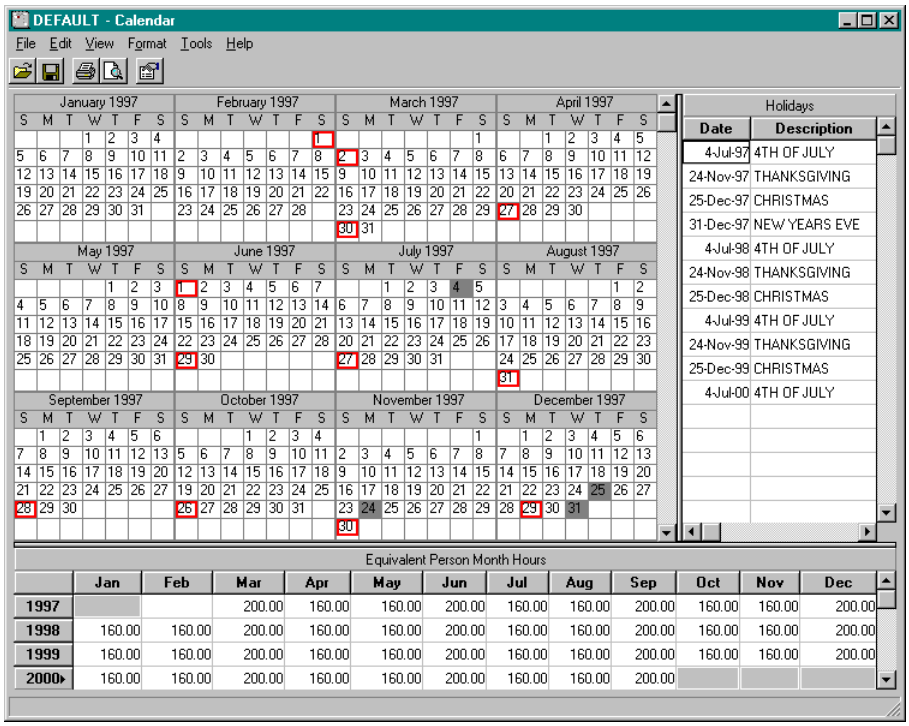


***Figure B**. MPM Calendar*

2.3 Orientation to the Calendar Window

The Calendar window includes a Fiscal calendar, Holiday list, and Equivalent Person Month Hours (EQPM Hours) grid. MPM uses these for reports, scheduling, and calculations. The Calendar supports up to a 50-year contract duration and up to 300 holidays.

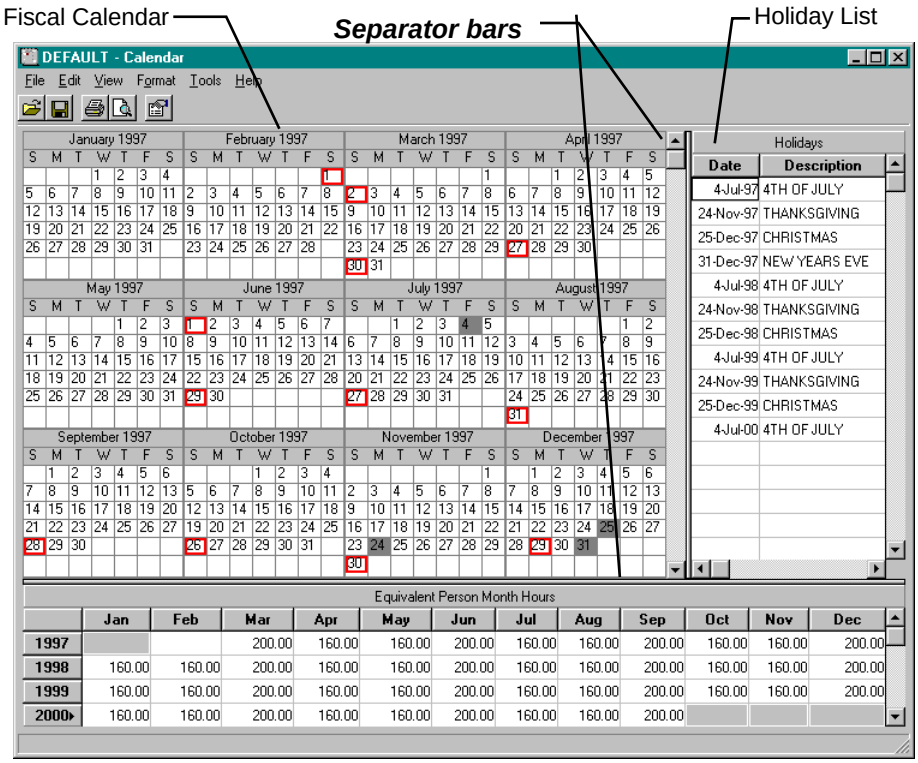


***Figure A**. The Calendar window is divided into a fiscal calendar, holiday list, and Equivalent Person Month Hours grid.*

Once the Calendar window is open, you can open additional calendars by selecting Open from the File menu.

The Fiscal Calendar Pane

Use the fiscal calendar pane to synchronize calendar month planning to fiscal (accounting) months. The fiscal calendar pane always displays 12 months regardless of the size of the pane. The calendar supports a 50 year contract duration. The start date of each fiscal month is outlined in red. Holiday dates are shaded gray.

The Holiday List

The Holiday list shows the holidays defined for the calendar. You can define up to 300 holidays for a calendar.

The EQPM Hours Grid

The Equivalent Person Month Hours grid specifies the number of work hours available in each month defined in the fiscal calendar. Fill right and fill down commands speed entry of hours in the grid.

Changing the Display

Use the separator bars between panes to show more or less of any pane in the Calendar window. Use the vertical and horizontal scroll bars to navigate to earlier or later dates.

Previewing and Printing

You can preview and print tabular reports of the Holiday list and EQPM Hours Grid using the Print Preview  and Print  buttons in the Toolbar. You can select holidays for printing and previewing. If you select one or more cells in the Equivalent Person Month Hours grid, MPM prints the entire row or rows represented by the selection. Print Preview is discussed at length in the *Getting Started* manual.

2.4 Creating, Changing, and Saving Calendars

When you create a new calendar for a global set, you define:

- Start and end dates for the calendar
- Holidays (optional)
- Equivalent Person Month Hours (optional)

Before you can create a calendar, you must have defined at least one global set. A calendar can be assigned to only one global set, and a global set can have only one calendar.

While you are setting up the calendar, you also choose settings in the Weekly Data Information section of the Calendar Setup dialog box. Although most organizations calculate earned value on a monthly basis, MPM enables you to post on a weekly basis. The Weekly Data Information settings affect the posting of weekly earned value data.

When you first open a new calendar, it defaults to the standard MPM calendar:

- Fiscal months begin on the first of the month.
- No holidays are specified.
- The Equivalent Person Month Hours are all zero.

We recommend that the calendar be defined to encompass a period beginning at least one year before the projected early start date and ending at least one year after the projected latest finish date to accommodate potential project schedule fluctuations.

Weekly Data Information

- **Use Whole Weeks:** If the project calendar uses a fiscal month calendar or a 4-4-5 calendar, the first day of the fiscal month does not necessarily begin on the first day of the calendar month or end on the last day of the calendar month. However, a week will always consist of seven days and begin on the same day of the week and end on the same day of the week. For example, using a fiscal calendar, Week 1 of January might start on Sunday, December 30th and end on Saturday, January 5th and it consists of seven days. All succeeding fiscal weeks will begin on Sunday and end on Saturday. Also, the month fiscal end will be on a Saturday.
- **Use Partial Weeks:** If the project uses calendar months, a month always begins on the first day of the month and ends on the last day of the month. With this type of calendar, you can have partial weeks. The week start day is selected and all weeks begin on that day. For example, if the week start day is Sunday and the first day of the calendar month is on Wednesday, Week 1 will consist of Wednesday through Saturday, a partial week of four days. Week 2 then begins on Sunday and goes through Saturday, a week of seven days. With this method, there can be partial weeks

at the beginning and end of the month, depending upon which day of the week the first day of the month occurs.

- **Week Starts On:** If your project calendar uses partial weeks, then it is necessary to specify a start day of the week. All weeks begin on the same day.
- **Hours per Day:** It is necessary to specify the number of hours in your normal work day only if your project is using the resource work calendar.

Creating a Calendar

To create a calendar for a global set:

1. If the Calendar window is not open, select the Calendar icon from the Globals tab in the Menu Manager window.

   If the Calendar window is already open, do one of the following:

   - Click the Open button  in the Toolbar.
   - From the File menu, choose Open.

   Whichever procedure you used above, MPM displays the Calendar Open dialog box shown in Figure A.

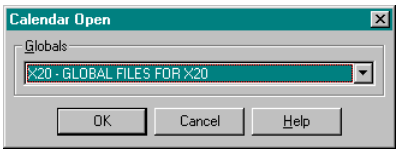


Figure A. *Select a global set.*

2. Select a global set from the drop-down list box and click OK.

   MPM closes the dialog box and displays the Calendar window. If this is the first time you have accessed the calendar, MPM displays the Calendar Setup dialog box shown in Figure B.

3. Enter the first and last fiscal months for the project. The valid date formats are:

   - mmmyy (may96)
   - mmmyyyy (jan1999)
   - mm/yyyy (01/2001)
   - yymmm (96may)
   - mm-yy (01-00)

4. Select whole weeks or partial weeks for the project.

5. If partial weeks are selected for the project, select a start day for the week from the list box.

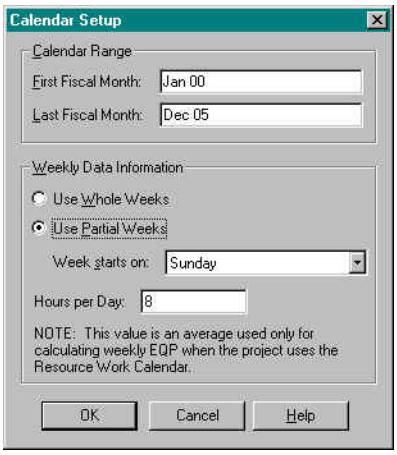


Figure B. *Enter the calendar range and weekly data information.*

6. If the project is using the Resource Work Calendar, enter the hours per day of the workday. If the project is using the EQP Calendar, this value is calculated at processing time based on the Equivalent Person Month Hours entered.

7. To accept the settings and close the dialog box, click OK.

   The calendar displays dates ranging from one month prior to the first fiscal month (with no fiscal red square in that month) through the last fiscal month you specify.

Changing the Start and End Dates

To change the start and end dates for a calendar:

1. From the File menu, select Setup.

   MPM displays the Calendar Setup dialog box shown in Figure B.

2. Make the changes and click OK.

   The calendar displays the calendar range of one month prior to the first fiscal month (with no fiscal start red square in that month) through the last fiscal month you specified.

Saving Calendar Information

When you close the Calendar window, MPM prompts you to confirm the save. To save the current calendar while you are working, open the File menu and select Save.

After creating a calendar you can:

- Establish Fiscal Months
- Establish Holidays
- Establish EQPM hours

These topics are covered in the subtopics that follow.

2.4 Creating, Changing, and Saving Calendars

2.4.1 Establishing Fiscal Months

Fiscal months are defined for accounting purposes. They are often used to even out the number of days included in each quarter of the year. For example, many companies are on 4-4-5 quarters where the three months in each quarter have 4 weeks, 4 weeks, and 5 weeks. You define the beginning of each fiscal month by dragging the red squares to the appropriate dates. In Figure A, several fiscal start dates are highlighted.

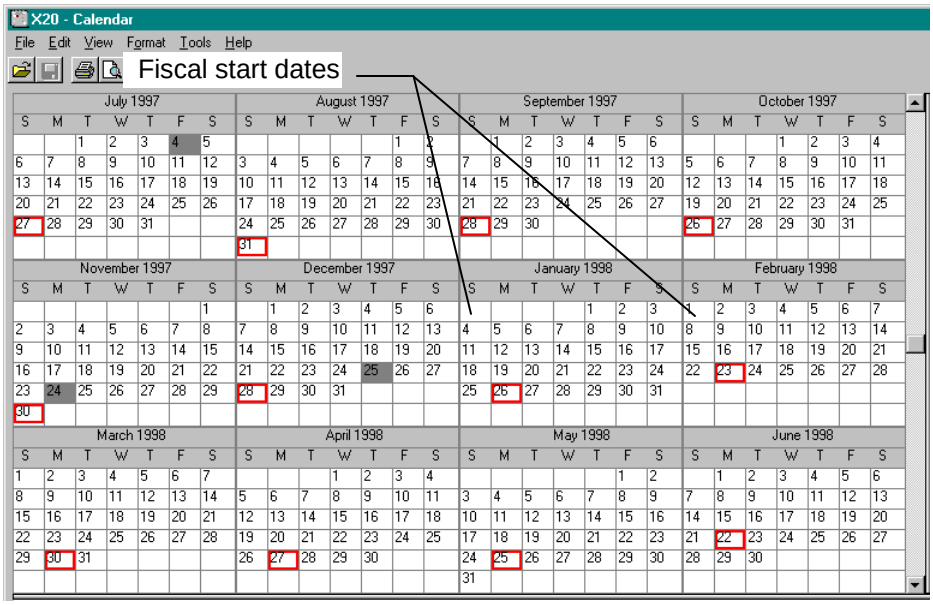


***Figure A**. Red squares around dates indicate fiscal month starts.*

Procedure

To set a start date for a fiscal month, select a red box and drag it to the appropriate date.

Fiscal Month Restrictions

You cannot have less than two weeks or more than eight weeks in a month. If you attempt to enter a date closer than two weeks to the previous month's fiscal start, or farther than eight weeks from the previous month's fiscal start, MPM gives an error message. However, there can be two fiscal start dates in a calendar month, depending on the way your calendar is set up. You can tell which month a red square refers to by placing the mouse pointer over the red square to display the pop-up label.

Last Fiscal Start Date

The last fiscal start date identified by a red square serves as both the start date and end date of the last fiscal month. This creates an empty month marking the end date for the calendar.

2.4 Creating, Changing, and Saving Calendars

2.4.2 Identifying Holidays

Holidays are indicated on the fiscal calendar by gray squares, and listed in the Holidays pane. You can schedule and identify up to 300 holidays on a calendar.

Holidays are automatically sorted by date in the Holiday list regardless of the order in which they were entered.

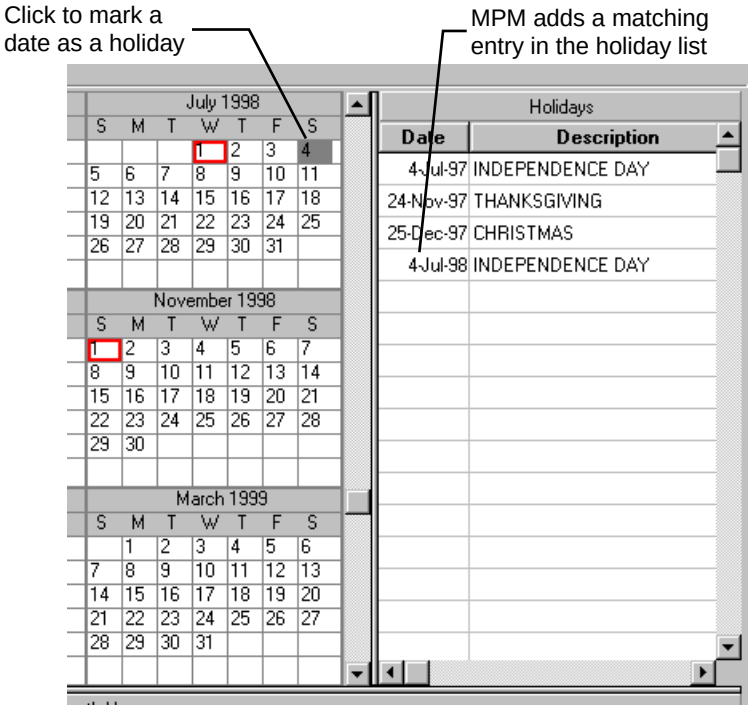


***Figure A**. Click to mark a date as a holiday.*

Procedure

To establish a holiday:

1. Do one of the following:
   - Click on a date in the Fiscal calendar.

     MPM shades the area around the date indicating that it is a holiday, and adds a matching entry in the Date column of the Holidays list.
   - Enter a date directly in the Date field of the Holiday grid.
2. If desired, enter a description in the Holiday grid.
3. To save the calendar, click the Save button  in the Toolbar.

Deleting Holidays

To delete a holiday, do one of the following:

- Click on the holiday's grayed date in the Fiscal Calendar.
- Click on the date in Holiday grid and press the Delete key.

Both actions return the date to the normal color and remove it from the Holiday list in the Holiday grid.

2.4 Creating, Changing, and Saving Calendars

2.4.3 Entering Equivalent Person Month Hours

You use the Equivalent Person Month Hours grid to enter the number of person hours in each month. MPM's calculation of equivalent persons and person months during estimating and on reports is affected by whether you enter values in these cells or leave them blank.

Equivalent Person Month Hours

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1996	160.00	160.00	200.00	160.00	160.00	200.00	160.00	160.00	200.00	160.00	16
1997	160.00	160.00	200.00	160.00	160.00	200.00	160.00	160.00	200.00	160.00	16
1998	160.00	160.00	200.00	160.00	160.00	200.00	160.00	160.00	200.00	160.00	16
1999	160.00	160.00									

***Figure A**. Equivalent Person Month Hours grid*

Format

Values entered in these cells may range from zero through 9999.99. You can format the number of decimal places displayed using the options under the Format menu. The selected format displays a ✓ next to the number example.

Choosing a Method for Calculating Equivalent Persons

MPM can calculate equivalent persons using the data you enter in the Equivalent Person Month Hours grid, or a default formula.

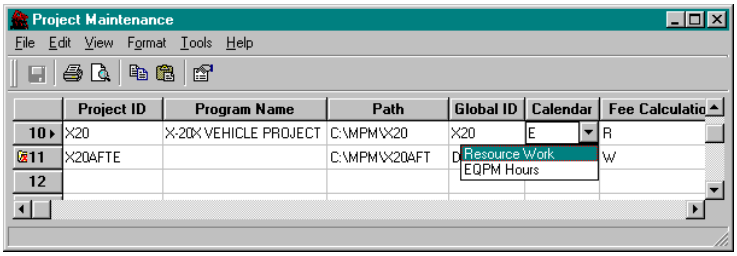


***Figure B.** MPM can calculate equivalent persons using the data you enter in the Equivalent Person Month Hours grid, or a default formula.*

If your company requires that you use a specific company standard to calculate equivalent person month hours, enter the data in the Equivalent Person Month Hours grid for each fiscal month and choose EQPM Hours from the Calendar column in the Project Maintenance window shown in Figure A.

If you want MPM to use its default formula to calculate equivalent person months, choose Resource Work from the Calendar column in the Project Maintenance window. When you

choose this option, MPM ignores values entered in the Equivalent Person Month Hours grid during the estimating phase of your project. MPM's calculation is based upon the Resource Work Calendar (i.e., the number of hours per day and days per week for the resource), Holiday calendar, and Fiscal calendar defined in the Resources and Burdens window.

Person Months Used in Reports

If you want person-month calculations included in the Manpower Detail, Manpower Summary, and CPR Format 4 reports, you must input EQPM hours for each month on the Fiscal Calendar. MPM calculates Equivalent Person Month Hours for these reports based on the equivalent person hours entered on the Fiscal Calendar.

The Calendar selection (Resource Work or EQPM Hours) in the Project Maintenance window has no impact on the report calculations. If all months in the calendar are zero, Equivalent Person Month Hours are not shown when you generate Resource Detail, Manpower Summary, and CPR Format 4 Reports.

Using Fill Down and Fill Right to Enter EQPMs

You can easily populate the EQPM Hours Grid by filling down and right. To use the Fill feature:

1. Enter the number of hours in the top or left cell of the area to be filled.
2. Select the cells to be filled down or right by dragging the mouse from the first to the last cell in the series.
3. From the Edit menu, select Fill Down or Fill Right to fill the number across a row or down a column.

Deleting EQPM Information

To delete EQPM hours, select a cell or cells and do one of the following:

- Press the Delete key.
- From the Edit menu, choose Delete Cell(s).

2.5 Recommended Reports

There are several standard MPM reports that you can use to review calendar information. The reports are listed below. For information on the reports, see the *MPM Standard Reports* manual.

- Accounting Calendar
- Resource Detail
- Manpower Summary
- CPR Format 4 Reports

3
Defining Elements of Cost

3.1 Introduction to Elements of Cost

Elements of cost is one of four components that define the pricing structure (estimating/ budgeting/burdening) of your company. The four components are:

- Elements of cost (EOC) including classes of cost (COC)
- Burden and fee codes, descriptions, and rates
- Burden templates
- Resource codes, descriptions, and rates

How the four elements relate is shown in Figure A.

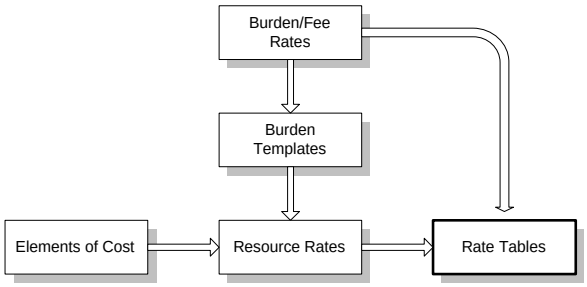


Figure A. *The combination of the four components is used to build rate tables.*

EOC and COC Categories

MPM supports up to 13 categories of EOCs. Three categories are predefined:

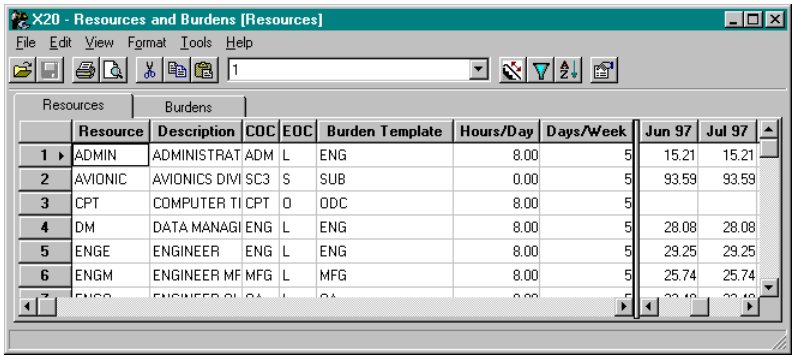
- Labor
- Material
- Other Direct Costs

You can define your own EOCs, and delete the predefined EOCs if they do not meet your needs. A fourth EOC added by many MPM users is Subcontractor. You can use this EOC to track subcontractor costs.

You can define up to 13 COCs for each EOC. For the Labor EOC, you might add COCs such as Administration, Engineering, and Manufacturing. You could also add COCs for each subcontractor.

Where EOCs and COCs are Used

EOCs and COCs are assigned to resources using the Resources tab on the Resources and Burdens window shown in Figure B.



	Resource	Description	COC	EOC	Burden Template	Hours/Day	Days/Week	Jun 97	Jul 97
1	ADMIN	ADMINISTRAT	ADM	L	ENG	8.00	5	15.21	15.21
2	AVIONIC	AVIONICS DIVI	SC3	S	SUB	0.00	5	93.59	93.59
3	CPT	COMPUTER TI	CPT	O	ODC	8.00	5		
4	DM	DATA MANAGI	ENG	L	ENG	8.00	5	28.08	28.08
5	ENGE	ENGINEER	ENG	L	ENG	8.00	5	29.25	29.25
6	ENGM	ENGINEER MF	MFG	L	MFG	8.00	5	25.74	25.74

Figure B. *EOCs and COCs are assigned to resources.*

Impact of Save Confirmations Option on Procedures

As the name implies, the Save Confirmations option (Options command under the Tools menu) will prompt you for each change you make to an EOC or COC. If you are entering a large number of EOCs and COCs, you may want to turn this option off to speed data entry.

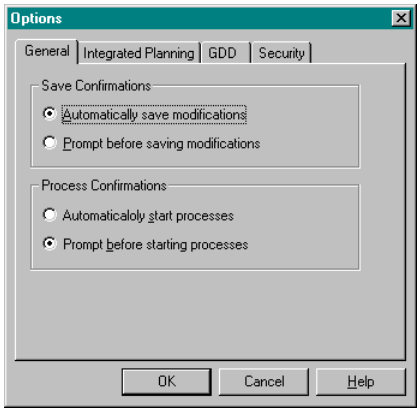


Figure C. *Confirmation options*

Special Guidelines

Whenever you make changes to an EOC after estimating, you must run the Rebuild Rollup function to ensure that the rollup data and the detail data are in sync.

3.2 Accessing the Elements of Cost Window

To access the Elements of Cost window:

1. Do one of the following:
   - Choose the Elements of Cost icon on the Globals tab of the Menu Manager.
   - From the File menu, select Globals|Elements of Cost.

   MPM displays the Elements of Cost Open dialog box shown in Figure A.

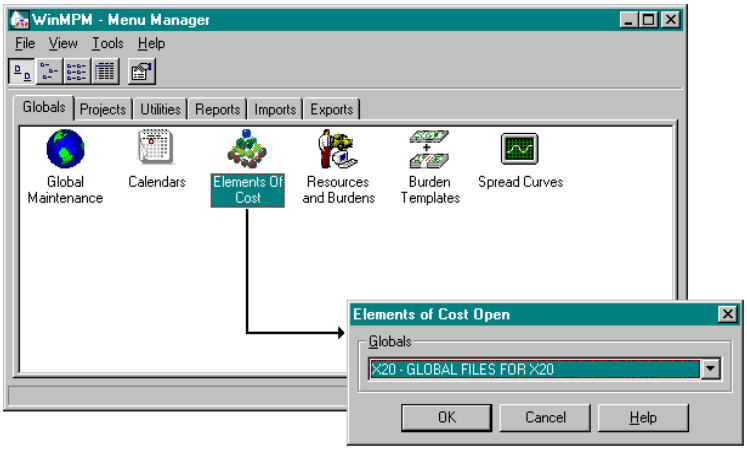


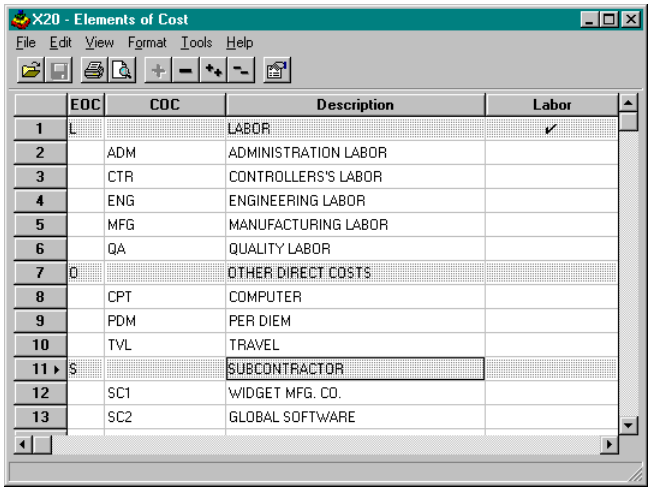
Figure A. *To access the Elements of Cost window, double-click the Elements of Cost icon.*

2. Choose a global set from the drop-down list box.

   You can also work with MPM's Default global set.

3. Click OK.

   MPM displays the EOC window shown in Figure B.



	EOC	COC	Description	Labor
1	L		LABOR	✔
2		ADM	ADMINISTRATION LABOR	
3		CTR	CONTROLLERS'S LABOR	
4		ENG	ENGINEERING LABOR	
5		MFG	MANUFACTURING LABOR	
6		QA	QUALITY LABOR	
7	O		OTHER DIRECT COSTS	
8		CPT	COMPUTER	
9		PDM	PER DIEM	
10		TVL	TRAVEL	
11	S		SUBCONTRACTOR	
12		SC1	WIDGET MFG. CO.	
13		SC2	GLOBAL SOFTWARE	

Figure B. *The Elements of Cost window*

3.3 Orientation to the EOC Window

The Element of Cost (EOC) window displays information about the elements of cost (EOCs) and classes of cost (COCs). The entries are listed alphabetically by EOC code.

The EOCs are displayed in rows with a gray background. The COCs assigned to an EOC are displayed in the rows beneath the EOC. The COCs have a white background.

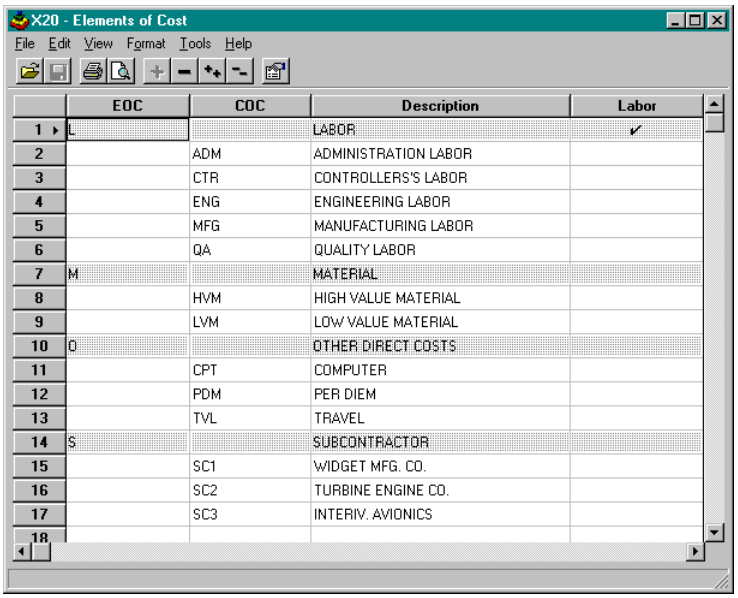


Figure A. *The Elements of Cost window*

Standard Windows Features

The Elements of Cost window has the standard Windows features. You can:

- Size, minimize, and restore the window.
- Scroll the display using the horizontal and vertical scroll bars.
- Change the width of the columns by clicking and dragging the dividers between the headings.

Display and Hide Columns

You can display and hide the columns using the Column Hide feature under the Format menu.

Changing the Width of the Columns

You can change the width of the columns manually by dragging the vertical line between the column headings, or by using the Column Width command under the Format menu. The Best Fit option in the Column Width dialog box automatically sizes the columns.

Hiding and Displaying COCs

You can hide and display all COCs, or the COCs for a specific EOC. To hide and display the COCs, use the Toolbar buttons or the commands under the Tools menu. The buttons and commands are described below.

Button	Command	Description
	Show COC(s)	Shows COCs for all selected EOCs
	Hide COC(s)	Hides COCs for all selected EOCs
	Show All COCs	Shows all COCs regardless of selection
	Hide All COCs	Hides all COCs regardless of selection

Printing and Previewing

As with other MPM windows, you can preview and print a tabular report of the Elements of Cost window using the Print Preview and Print commands under the File menu.

For a complete explanation of the print and preview features, see the *Getting Started* manual.

3.4 Adding an EOC

MPM supports up to 13 categories of elements of cost (EOCs). Three categories are predefined:

- Labor (L)
- Material (M)
- Other Direct Costs (O)

You can define your own EOCs, and delete the predefined EOCs if they do not meet your needs. MPM lists the EOCs in alphabetical order. You should put some thought into the EOCs you add. After an EOC has been assigned to one or more resources and included in estimates, it is difficult to remove.

You can designate an EOC as Labor by placing a check mark in the Labor column. If a Labor EOC is assigned to a resource, the values will be reported in hours. All other resources are reported as units.

When you add or change an EOC, MPM puts the EOC and all of its COCs in edit mode and turns the text blue.

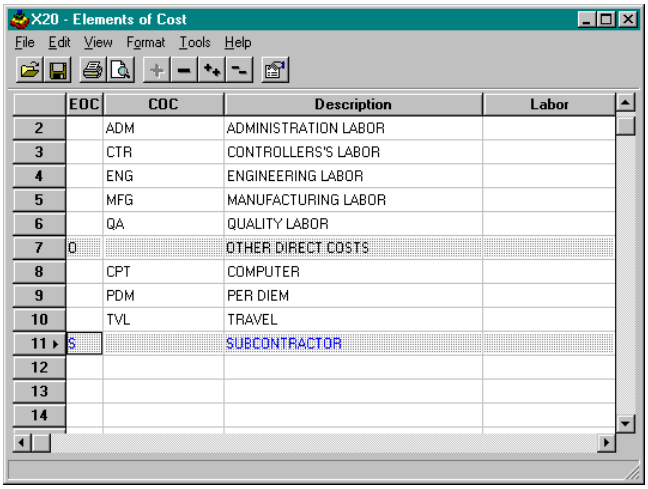


Figure A. *To add an EOC, type a letter for the EOC code in the first empty row.*

Procedure

To add an EOC:

1. Place the cursor in the EOC field below the last COC element as shown in Figure A.
2. Enter a single character to represent the EOC.

   EOC codes are restricted to a single character.
3. Tab to the Description field and enter a description.

   The description can be up to 20 characters long. This field is optional.
4. If the EOC represents labor, place a check mark in the Labor field by doing one of the following:

   - With the cursor in the field, press the space bar.
   - Position the mouse over the field and click the mouse button.

   If you do not correctly identify the Labor EOCs, a number of reports will display incorrect Labor values.
5. To save the new EOC, do one of the following:

   - Click on another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

   If the Save Confirmation option is on, you will be prompted to confirm the save. Otherwise, MPM immediately executes the save.

3.5 Adding COCs

After adding an EOC, you can define up to 13 classes of cost (COCs) for the EOC. COCs provide more detail in the MPM reports, and can be used as a criteria for exporting data. COCs are optional.

You designate COCs using three-letter codes. COC descriptions are optional. COCs are displayed under their EOC. The COC rows have a white background. The EOC rows have a gray background.

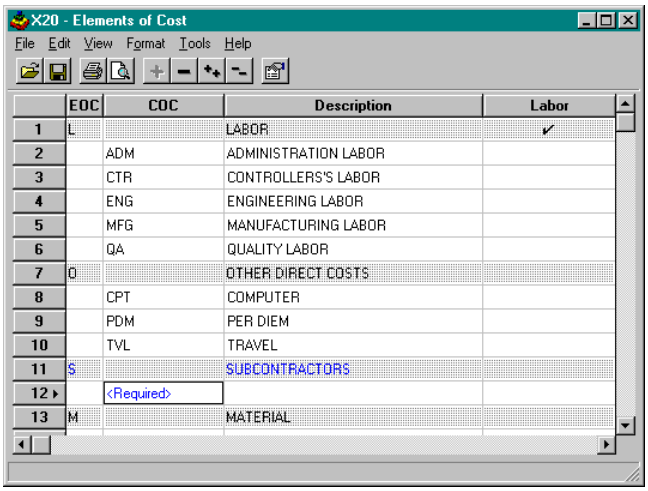


Figure A. *You can define up to 13 Classes of Cost (COCs) for each EOC.*

Procedure

To enter COCs for an EOC:

1. Select the EOC.
2. Do one of the following:
   - Press the Insert key.
   - From the Edit menu, select Insert COC.

   MPM displays the word <Required> in the COC field as shown in Figure A.
3. Enter up to a three-letter code for the COC.

   The code must be unique across all EOCs in all global sets.

4. Enter a description.

   The description can be up to 20 characters long and can include blanks. This field is optional.

5. Leave the Labor column blank. This column is only active for EOCs.

6. Save the COC by doing one of the following:

   - Click on another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

   If the Save Confirmation option is on, you will be prompted to confirm the save. Otherwise, MPM immediately executes the save.

3.6 Maintaining EOCs and COCs

You can edit an entry in the EOC grid by clicking the appropriate field and typing in the new information.

You can delete EOCs and COCs. When you delete an EOC, MPM removes all COCs associated with the EOC. When you delete a COC, the EOC is not removed.

You can delete individual cells in the EOC grid, or you can delete entire rows.

Editing EOC and COC Information

To edit EOC and COC information:

1. Click the field you want to edit.
2. Type in the new information.
3. Save the EOC and COC information by doing one of the following:
   - Click on another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

Before Deleting EOCs

When you delete an EOC, all COCs under the EOC are deleted as well. If an EOC has been assigned to one or more resources, and the resources have been used in estimates, you must do the following before deleting the EOC.

1. Check all projects to see if the EOC has been assigned to one or more of the WBS elements.

   To check the projects, use the MPM Actuals application on the Projects tab in Menu Manager. Make sure EOC is selected as the starting view.
2. If the EOC you wish to delete has been assigned to a WBS element, assign a different EOC to that element.
3. Check to see if the EOC has been assigned to one or more resources.

   To check the resources, use the MPM Resources and Burdens application on the Globals tab in Menu Manager. Make sure EOC is selected as the starting view.
4. If the EOC has been assigned to one or more resources, you must do all of the following:
   a. Assign a different EOC to the resources.

b. For any project using the resource, reprice the entire Baseline and Estimate to Complete (ETC).

c. For any project that has Budget Cost of Work Performed (BCWP), recalculate the BCWP.

Deleting EOCs

Please read the section titled *Before Deleting EOCs* on the previous page before beginning this procedure. To delete an EOC:

1. Select the EOC row by clicking on the row number in the left column.

   You can select more than one EOC by dragging down the row number column.

2. Do one of the following:

   - Press the Delete key.
   - From the Edit menu, select Delete EOC(s).

   MPM asks you to confirm the delete.

3. To confirm the delete, click Yes.

Deleting COCs

If a COC is assigned to a resource or project, you must assign a different COC to the resource or project before deleting it. To assign a different COC, go to the Resources and Burdens application in Globals.

To delete a COC:

1. Select the COC row by clicking on the row number in the left column.

   You can select more than one COC by dragging down the row number column.

2. Do one of the following:

   - Press the Delete key.
   - From the Edit menu, select Delete EOC(s).

   MPM asks you to confirm the delete.

3. To confirm the delete, click Yes.

3.7 Recommended Reports

There is a standard MPM report that you can use to review Element of Cost information called Element of Cost/Class. For information on the report, see the *MPM Standard Reports* manual.

4
Defining Burdens

4.1 Introduction to Defining Burdens

Resources are divided into two main categories:

- Direct costs that are applied to only one specific WBS element
- Indirect costs that can be applied to more than one resource on a pro rata basis

In MPM, you use the Burdens application to specify the indirect costs, or burdens. You can specify four types of burden costs:

- Overhead (OH)
- General & Administrative (G&A)
- Cost of Money (COM)
- Fee (profit)

You use the burdens to build burden templates (see Figure A), then assign the burden templates to resources. When a resource is used, the burden template assigned to the resource determines how the burdens are applied. For example, an engineer will have a basic hourly rate based on the engineer's annual salary. But the engineer will also have a burden rate based on Overhead, General & Administrative, and Cost of Money.

The burden rates can be adjusted for each month of a project. The burden rates are stored in tables. You can define as many different rate tables for a project as required.

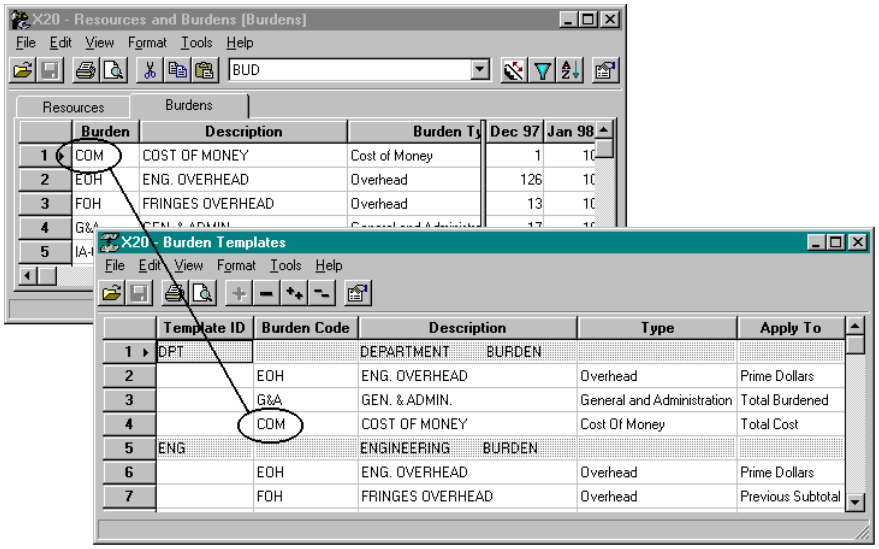


Figure A. *After you define a burden, you can add it to a burden template.*

How Burdens Are Related to Other Pricing Elements

Burdens are one of the four components that define the pricing structure (estimating/budgeting/burdening) of your company. The four components are:

- Elements of cost (EOC) including classes of cost (COC)
- Burdens and fee codes, descriptions, and rates
- Burden templates
- Resource codes, descriptions, and rates

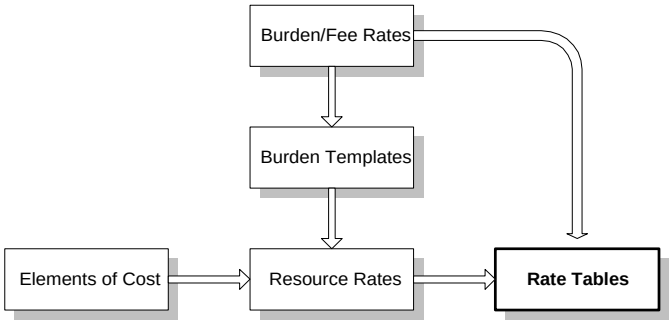


Figure B. *The combination of the four components is used to build rate tables.*

4.2 Accessing the Resources and Burdens Window

You work with burdens using the Burdens view (tab) in the Resources and Burdens window. When you access the Resources and Burdens window, you must select a global ID, a starting rate table and the starting view. You can also filter the items downloaded by resource, Class of Cost (COC), and Element of Cost (EOC). You can open multiple Resources and Burden windows, but each must represent a different global set.

Filtering the Display

You can apply filters to resources when you access a global ID. The filters tell MPM which resources to load. If you want to change the resources loaded, you must close and reopen the global ID.

After you have opened the resources window for a global ID, you can further filter the resources displayed using the filter options available from the Tools menu.

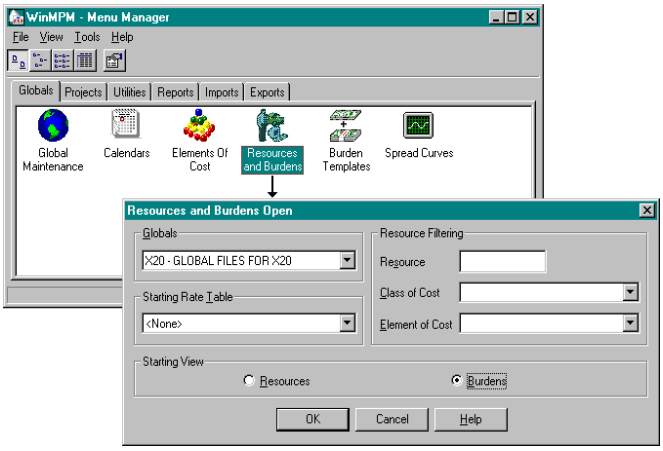


Figure A. *To access Burdens, double-click the Resources and Burdens icon.*

Procedure

To access the Resources and Burdens window:

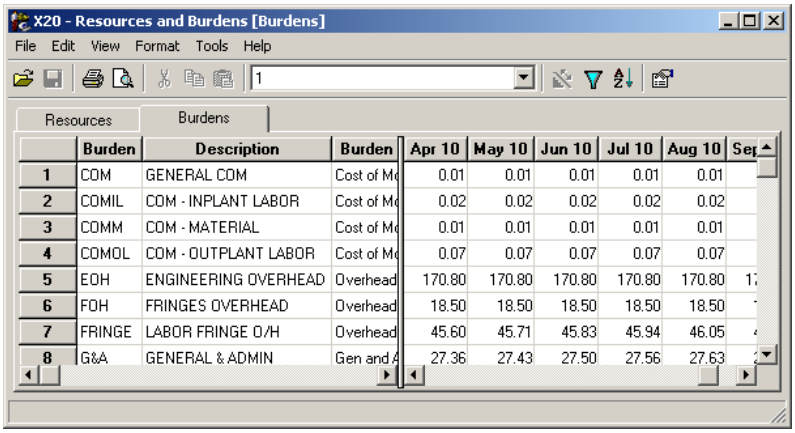
1. From the Menu Manager window, do one of the following:
   - Double-click the Resources and Burdens icon.
   - From the File menu, select Globals|Resources and Burdens.

   MPM displays the Resources and Burdens Open dialog box shown in Figure A.

2. Select a global ID from the drop-down list box.
3. Select a starting rate table from the drop-down list box.

   If you do not want to display the rate table figures initially, or if a rate table does not yet exist, select the <None> option.
4. Ignore the Resource Filtering fields. They affect only the items displayed in the Resources tab of the Resources and Burdens window. For information on the Resources tab, see *Chapter 6: Defining Resources.*
5. Select Burdens as the starting view.
6. To accept the selections and open the Burdens window, click OK.

   MPM displays the Resources and Burdens window shown in Figure B.

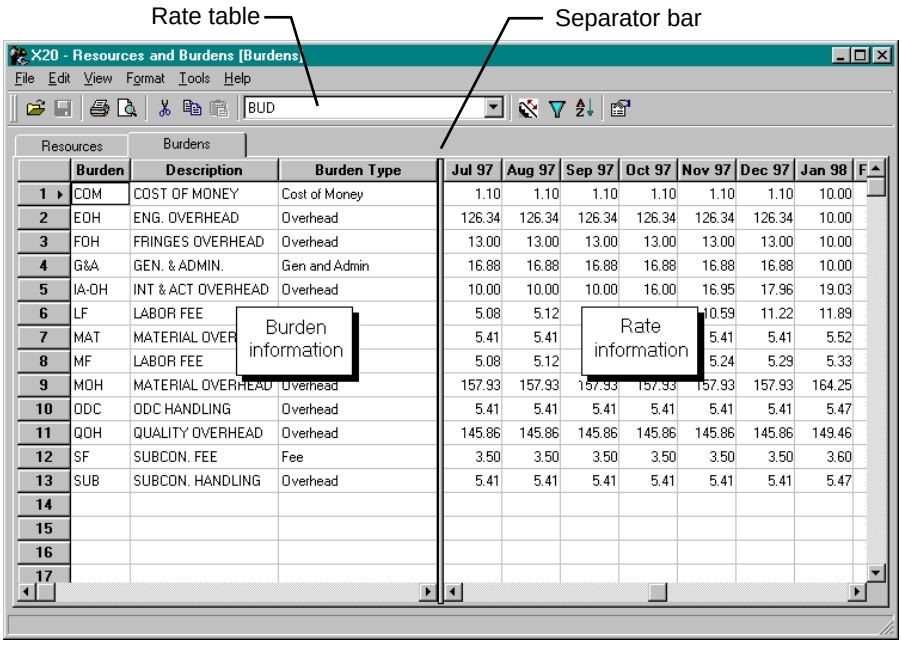


	Burden	Description	Burden	Apr 10	May 10	Jun 10	Jul 10	Aug 10	Sep
1	COM	GENERAL COM	Cost of M	0.01	0.01	0.01	0.01	0.01	
2	COMIL	COM - INPLANT LABOR	Cost of M	0.02	0.02	0.02	0.02	0.02	
3	COMM	COM - MATERIAL	Cost of M	0.01	0.01	0.01	0.01	0.01	
4	COMOL	COM - OUTPLANT LABOR	Cost of M	0.07	0.07	0.07	0.07	0.07	
5	EOH	ENGINEERING OVERHEAD	Overhead	170.80	170.80	170.80	170.80	170.80	17
6	FOH	FRINGES OVERHEAD	Overhead	18.50	18.50	18.50	18.50	18.50	
7	FRINGE	LABOR FRINGE O/H	Overhead	45.60	45.71	45.83	45.94	46.05	
8	G&A	GENERAL & ADMIN	Gen and A	27.36	27.43	27.50	27.56	27.63	

Figure B. *The Resources and Burdens window*

4.3 Orientation to the Resources and Burdens Window

The Resources and Burdens window displays information about the resources and burdens defined for a global ID. To select one of the two views, click either the Resources or Burdens tab. In the Burdens view, each row represents a burden. The burdens are initially listed alphabetically by burden code. The left pane displays burden information, the right pane displays rate information.



	Burden	Description	Burden Type	Jul 97	Aug 97	Sep 97	Oct 97	Nov 97	Dec 97	Jan 98
1	COM	COST OF MONEY	Cost of Money	1.10	1.10	1.10	1.10	1.10	1.10	10.00
2	EOH	ENG. OVERHEAD	Overhead	126.34	126.34	126.34	126.34	126.34	126.34	10.00
3	FOH	FRINGES OVERHEAD	Overhead	13.00	13.00	13.00	13.00	13.00	13.00	10.00
4	G&A	GEN. & ADMIN.	Gen and Admin	16.88	16.88	16.88	16.88	16.88	16.88	10.00
5	IA-OH	INT & ACT OVERHEAD	Overhead	10.00	10.00	10.00	16.00	16.95	17.96	19.03
6	LF	LABOR FEE		5.08	5.12			10.59	11.22	11.89
7	MAT	MATERIAL OVER		5.41	5.41			5.41	5.41	5.52
8	MF	LABOR FEE		5.08	5.12			5.24	5.29	5.33
9	MOH	MATERIAL OVERHEAD	Overhead	157.93	157.93	157.93	157.93	157.93	157.93	164.25
10	ODC	ODC HANDLING	Overhead	5.41	5.41	5.41	5.41	5.41	5.41	5.47
11	QOH	QUALITY OVERHEAD	Overhead	145.86	145.86	145.86	145.86	145.86	145.86	149.46
12	SF	SUBCON. FEE	Fee	3.50	3.50	3.50	3.50	3.50	3.50	3.60
13	SUB	SUBCON. HANDLING	Overhead	5.41	5.41	5.41	5.41	5.41	5.41	5.47
14										
15										
16										
17										

Figure A. *The Resources and Burdens window displays burden information on the left and rate information on the right.*

Standard Windows Features

The Resources and Burdens window has the standard Windows features. You can:

- Size, minimize, and restore the window.
- Scroll the display using the horizontal and vertical scroll bars.
- Change the width of the columns by clicking on the dividers in the headings and dragging.
- Hide columns using the Column Hide feature under the Tools menu.
- Change the size of the descriptive and rate panes by dragging the separator bar.

Printing and Previewing

You can preview and print tabular reports listing the burden information using the Print and Print Preview buttons in the Toolbar.

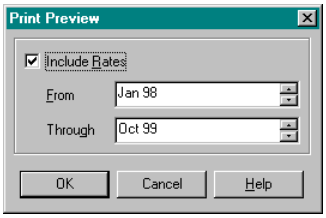


Figure B. *Print Preview options.*

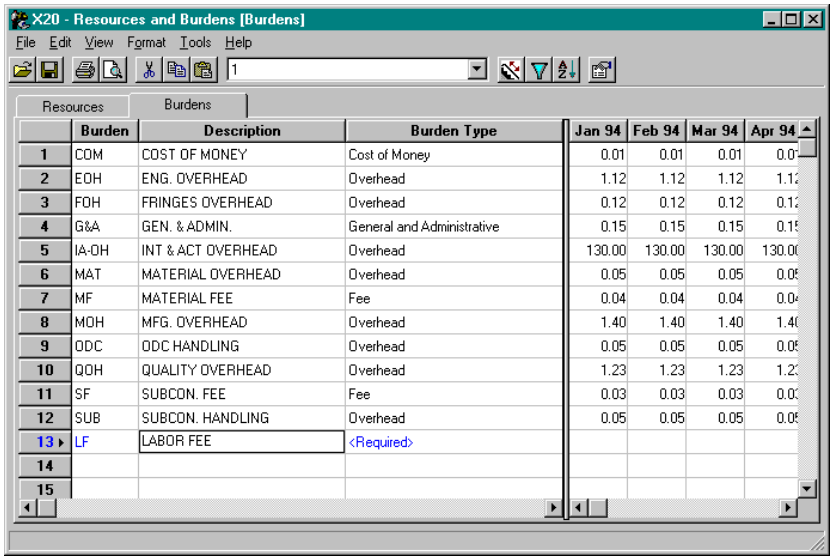
When you print or preview a burden report, you can use the Print Preview dialog box shown in Figure B to specify if rates are to be included in the report, and the range of dates to include. If you select one or more rows in the grid, MPM prints only those rows.

4.4 Creating and Inserting New Burden Codes

You can define an unlimited number of burden codes for each global set. You must assign each burden code to one of four burden types:

- Overhead (OH)
- General & Administrative (G&A)
- Cost of Money (COM)
- Fee (profit)

After entering the descriptive information for a burden code, you enter the rate table information. Entering rate table information is described in the next topic.



	Burden	Description	Burden Type	Jan 94	Feb 94	Mar 94	Apr 94
1	COM	COST OF MONEY	Cost of Money	0.01	0.01	0.01	0.0
2	EOH	ENG. OVERHEAD	Overhead	1.12	1.12	1.12	1.1
3	FOH	FRINGES OVERHEAD	Overhead	0.12	0.12	0.12	0.1
4	G&A	GEN. & ADMIN.	General and Administrative	0.15	0.15	0.15	0.1
5	IA-OH	INT & ACT OVERHEAD	Overhead	130.00	130.00	130.00	130.0
6	MAT	MATERIAL OVERHEAD	Overhead	0.05	0.05	0.05	0.0
7	MF	MATERIAL FEE	Fee	0.04	0.04	0.04	0.0
8	MOH	MFG. OVERHEAD	Overhead	1.40	1.40	1.40	1.4
9	ODC	ODC HANDLING	Overhead	0.05	0.05	0.05	0.0
10	QOH	QUALITY OVERHEAD	Overhead	1.23	1.23	1.23	1.2
11	SF	SUBCON. FEE	Fee	0.03	0.03	0.03	0.0
12	SUB	SUBCON. HANDLING	Overhead	0.05	0.05	0.05	0.0
13	LF	LABOR FEE	<Required>				
14							
15							

Figure A. *You can define an unlimited number of burden codes for each global set.*

Creating a New Burden Code

To create a new burden code:

1. Select the first empty Burden field and enter a burden code.

   The code can be up to 10 characters long. When sorting, the sort function is case sensitive, so you should standardize on how you use upper and lower case letters.

2. Enter a description.

   The description can be up to 20 characters long. This field is optional.

3. Select a burden type from the drop-down list box.

4. To save the burden code, do one of the following:

   - Click on another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

   If the Save Confirmation option is on, you will be prompted to confirm the save. Otherwise, MPM immediately executes the save without a prompt.

Inserting a New Burden Code

You can insert a new burden above an existing burden code.

To insert a new burden code:

1. Select an existing burden code and do one of the following:

   - Press the Insert key.
   - From the Edit menu, choose Insert Burden.

   MPM inserts a new row above the existing code and highlights the text in blue.

2. Enter the required information as described above.

4.5 Entering Rate Table Information

After entering the burden descriptive information, you enter the rate information in the right pane of the Resources and Burdens window. The rates are stored in a rate table that you identify. You can define any number of rate tables and assign them to one or more global IDs.

The dates displayed in the rate pane are based on the dates defined for the global set you selected when you opened the Resources and Burdens window. Rates are displayed in expanded form. For example, 15% is displayed as 15.00.

Defining a New Rate Table

To define a new rate table:

1. From the File menu, select New Rate Table.

   MPM displays the New Rate Table dialog box shown in Figure A.

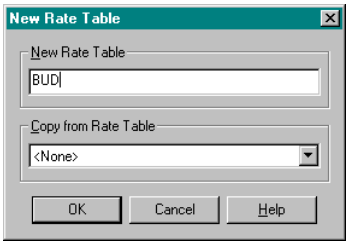


Figure A. *Creating a new rate table*

2. Enter up to a three-character code for the rate table.
3. To copy rates from an existing rate table, select the rate table to copy from in the Copy drop-down list box.
4. To create the table and close the dialog box, click OK.

   MPM creates the new table, fills in rate values if you copied rates, and displays the name of the new rate table in the Rate Table field in the Toolbar.

Deleting a Rate Table

Use caution when deleting rate tables. MPM does not prevent you from deleting a rate table that is being used by one or more projects. Before deleting a rate table, you should check to see if it is assigned to resources or burdens in your projects.

To delete a rate table:

1. From the File menu, select Delete Rate Table.

   MPM displays the Delete Rate Table dialog box shown in Figure B.

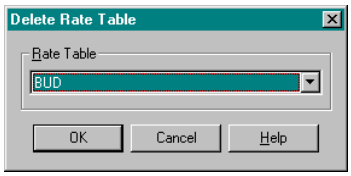


Figure B. *Deleting a rate table*

2. Select the rate table from the drop-down list box and click OK.

   MPM displays the confirmation dialog box shown in Figure C.

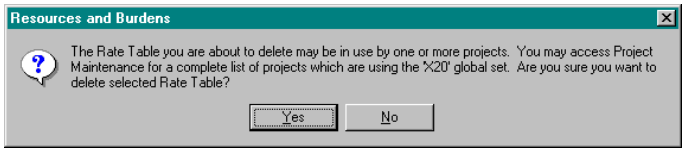


Figure C. *You must confirm deleting a rate table.*

3. To confirm the delete, choose Yes.

Entering Rates

There are several ways you can enter rates in the cells:

- Manually by selecting a cell and typing in a rate
- Enter an initial rate in a cell and use the Fill Right function to copy the rate
- Enter an initial rate in a cell and use the Escalate Rate function to fill the selected cells

The different methods are described in the sub-topics that follow.

4.5 Entering Rate Table Information

4.5.1 Entering Rates Manually and with Fill Right

You can enter rates in each cell manually for a burden, or you can enter the first rate and use the Fill Right function to fill in the remaining cells.

You cannot fill down on the Burden Rate grid.

Entering Rates Manually

To enter rates manually:

1. Place the cursor in the appropriate cell and type in a rate.

   Enter rates as a whole number. For example, enter 15% as 15.

2. To save the entry, do one of the following:

   - Click on another row.
   - From the File menu, select Save.
   - Press Ctrl+S.

   If the Save Confirmations option is on, MPM displays the dialog box shown in Figure A. To confirm the save, click Yes.

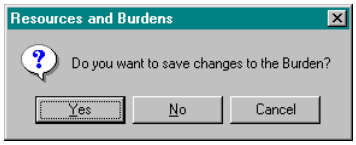


Figure A. *Confirm the entry.*

Entering Rates with the Fill Right Function

You can use the Fill Right function to replicate a rate across one or more months for one or more burdens.

Oct 97	Nov 97	Dec 97	Jan 98	Feb 98	Mar 98	Apr 98	May 98	Jun 98	Jul 98
16.88	16.88	16.88	17.39	17.39	17.39	17.39	17.39	17.39	17.39
16.00									
5.20									
5.41	5.41	5.41	5.52	5.52	5.52	5.52	5.52	5.52	5.52

Figure B. *You can fill right one or more cells.*

To enter rates using the Fill Right function:

1. Enter the rate(s) to be duplicated in the appropriate cell(s) in the rate table.
2. Select the rate(s) and all adjacent cells you want to fill.
3. Do one of the following:
   - Press Ctrl-R.
   - From the Edit menu, select Fill Right.

   MPM fills the selected cells with the contents of the first cell. If only one row was selected, MPM leaves the row in edit mode with the text highlighted blue. To exit edit mode, press the Escape key.

4.5 Entering Rate Table Information

4.5.2 Entering Rates with the Escalate Rates Function

On projects that last longer than a year, it is likely that burden rates will increase over the life of a project due to inflation and other factors. The Escalation Rate function in MPM can automatically calculate rate escalation across any specific time period. You can also de-escalate rates by entering a negative annual percent.

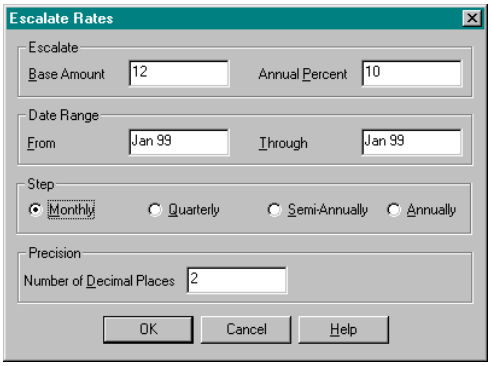
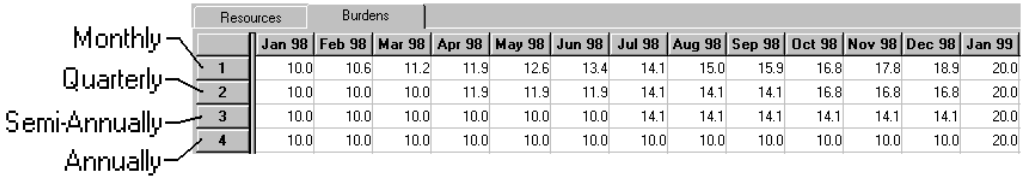


Figure A. *You can use the Escalate Rates feature to enter escalated rates.*

Effects of Step Settings

When you escalate rates, you can specify if MPM should escalate the rates in monthly, quarterly, semi-annually, or annual steps. Monthly causes the rates to change each month, Quarterly causes the rates to change every three months, etc. The months are figured from the month entered in the From field in the Escalate Rates dialog box. Figure B illustrates the result of using the four different step options. In each case, the base amount was 10 and the annual percent was 100.



	Jan 98	Feb 98	Mar 98	Apr 98	May 98	Jun 98	Jul 98	Aug 98	Sep 98	Oct 98	Nov 98	Dec 98	Jan 99
1	10.0	10.6	11.2	11.9	12.6	13.4	14.1	15.0	15.9	16.8	17.8	18.9	20.0
2	10.0	10.0	10.0	11.9	11.9	11.9	14.1	14.1	14.1	16.8	16.8	16.8	20.0
3	10.0	10.0	10.0	10.0	10.0	10.0	14.1	14.1	14.1	14.1	14.1	14.1	20.0
4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0

Figure B. *Effects of different step settings on escalated rates.*

Procedure

To escalate rates:

1. Select an entire row by clicking the row number in the first column, or select a range of cells.

   You can escalate values for only one burden at a time. The dates of the first and last cells selected will be entered automatically in the From and Through fields in the Escalate Rates dialog box.

2. Display the Escalate Rates dialog box by doing one of the following:

   - Click the Escalate Rates button  in the Toolbar.
   - From the Tools menu, select Escalate Rates.
   - Press Ctrl+E.

3. Enter the base amount as you want it to appear in the cell.

   This value will be entered in the cell identified in the From field of the dialog box.

4. Enter the annual percent.

   Enter this amount as a whole number. For example, enter 15% as 15, not .15. If you enter an annual percent of zero, MPM will fill the same base amount in all cells. The result is the same as using the Fill Right feature.

5. If necessary, change the dates specified in the From and Through fields.

6. Select the step for incrementing the rates: Monthly, Quarterly, Semi-Annually, or Annually.

7. Enter a Precision of 1 to 8.

   This represents the number of decimal places used to calculate the escalated rate, not the number of decimals displayed in the grid.

8. To execute the escalation, click OK.

   MPM calculates the values and fills in the grid.

4.6 Maintaining Burden Codes

You can edit an entry in the description and rate panes or completely replace it. You can copy and paste the Description, Burden Type fields, and the rate information from one burden code to another. The Copy|Paste functions can be used within one global ID, or across different global IDs.

You can delete burdens. If the burden is assigned to one or more burden templates, MPM displays a warning message asking you to confirm the delete. When you delete a burden, it is removed from all burden templates as well.

Editing Burden Information

To edit burden information:

1. How you begin depends on whether you want to replace the contents of a cell or edit the contents:
   - To *replace* the information in a cell, click the cell.
   - To *edit* the information in a cell, double-click the cell.
2. Type in the new information.
3. To save the information, do one of the following:
   - Click on another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

   If the Save Confirmation option is on, you will be prompted to confirm the save. Otherwise, MPM immediately executes the save without a prompt.

Copying and Pasting Burden Information

You can copy and paste any range of cells. However, the range of cells you highlight for pasting must match the range of cells you highlighted for copying.

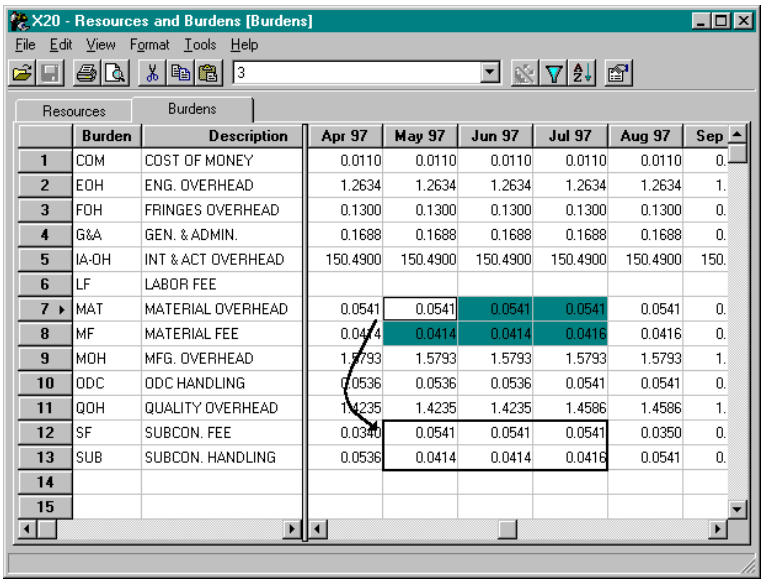


Figure A. *You can copy and paste ranges of cells.*

Deleting Burdens

Use caution when deleting burdens. You can delete burdens even if they are used in one or more projects. To delete a burden from the Resources and Burdens window:

1. Select the burden row by clicking on the row number in the left column.

   You can select more than one burden by dragging down the row number column.

2. Do one of the following:

   - Press the Delete key.
   - From the Edit menu, select Delete Burden(s).

   MPM displays the warning message shown in Figure B.

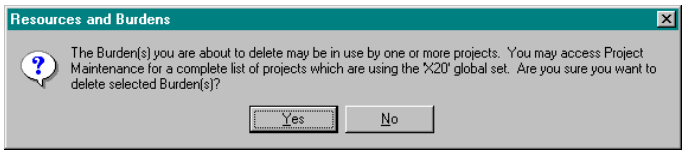


Figure B. *Confirm the delete.*

3. To confirm the deletion, choose Yes.

4.7 Changing the Display

You can change the display using the standard MPM controls. The controls are described briefly in this topic. For more information, see the *Getting Started* manual.

Filtering the Display

You can filter the burdens displayed by specifying a text string. The text string can be applied to any combination of the fields. To display all burden codes, select the All Data option from the Tools|Filter menu.

To filter the display:

1. Do one of the following:
   - Click the Filter button  in the Toolbar and choose an option from the dialog box displayed.
   - From the Tools menu, select the Filter command and select an option from the submenu.

   MPM displays the Filter dialog box shown in Figure A.

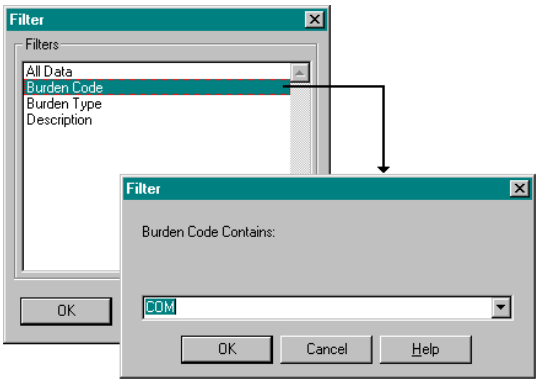


Figure A. *Enter a text string for the filter.*

2. Enter a text string that will be used as the filter criteria.

   MPM ignores upper and lower case letters when it searches for the text string. It also must find the entire string.

Sorting the Display

Initially MPM lists the burdens in alphabetical order by Burden code. It sorts the list each time you open the Resources and Burdens window, incorporating any new burdens you may have added.

You can sort the burdens using the Sort command under the Tools menu. You can use up to three criteria in a sort, each ascending or descending. MPM saves the last sort criteria. To return the list to its default order, choose the Reset button in the Sort dialog box.

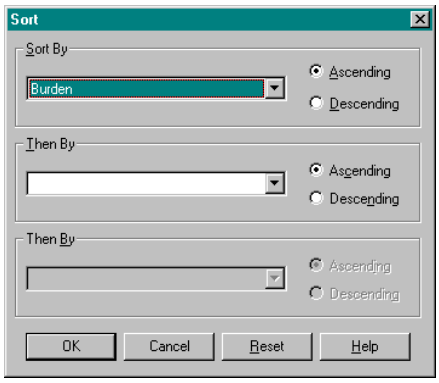


Figure B. *Sorting burdens.*

Changing the Width of the Columns

You can change the width of the columns manually by dragging the vertical line between the column headings, or by using the Column Width command under the Format menu. The latter also gives you access to the Best Fit option that automatically adjusts the width of the column to fit the largest entry in the column.

Formatting the Data

You can select the number of decimal places displayed in the rate grid by choosing an option from the Format menu. You can choose between zero and eight decimal places. MPM performs calculations using eight decimal places regardless of the number of decimal places you set for display.

Hiding and Displaying Columns

You can hide and display the columns in the descriptive pane of the Resources and Burdens window using the Column Hide feature under the Format menu. To select or deselect an item in the Column Hide dialog box, click or Shift+Click the desired column.

5
Defining Burden Templates

5.1 Introduction to Defining Burden Templates

Burden templates are used to group the indirect costs you defined in the burden codes into a single entity that makes up the burdening structure for a given resource or department. You can assign up to 10 burden codes to each burden template. Burden codes can specify four types of burden costs:

- Overhead (OH)
- General & Administrative (Gen and Admin)
- Cost of Money (COM)
- Fee (profit)

After defining a burden template, you can assign the template to one or more resources. Any change you make to a burden template is automatically propagated to all resources using the burden template. However, the values being generated from the burden template are not updated until the WBS estimate using the template is updated by saving or exporting and importing. Values are also updated by running reprice on the baseline, ETC, or actuals for that WBS estimate.

If all resources in a department use the same burdening structure, you can assign a burden template at the department level rather than at the individual resource level using the Organizational Breakdown Structure (OBS) window in MPM. For information on assigning templates to a department, see *Chapter 3: Creating the Organizational Breakdown Structure (OBS)* in the *MPM Projects* manual.

How Burden Templates Relate to Other Pricing Elements

Burden templates are one of four components that define the pricing structure (estimating/ budgeting) of your company. The four components are:

- Elements of cost (EOC) including classes of cost (COC)
- Burdens, fee codes, descriptions, and rates
- Burden templates
- Resource codes, descriptions, and rates

The relationship between the four elements is shown in Figure A.

Burdens templates are made up of one or more burdens. After you create a burden template, you can assign it to one or more resources. This process is shown in Figure B.

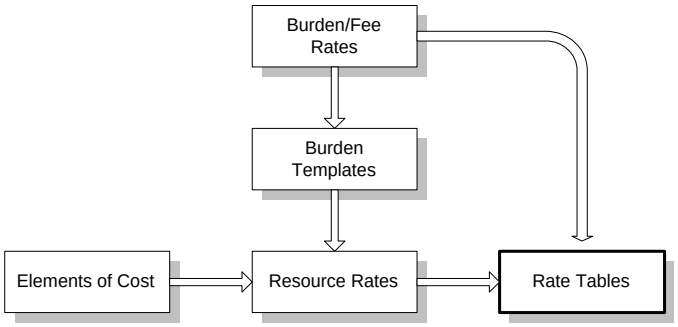


***Figure A**. The combination of the four components is used to build rate tables.*

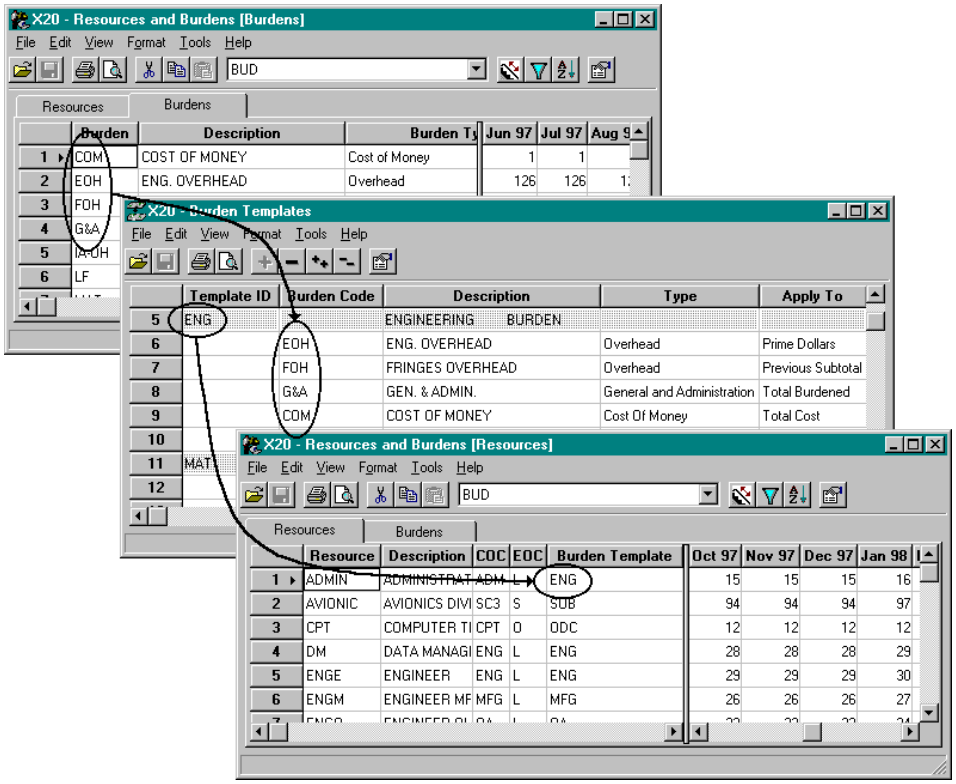


***Figure B.** Burden templates include one or more burdens. In turn, burden templates are assigned to resources.*

5.2 Accessing the Burdens Templates Window

When you access the Burden Templates window, you select a global ID. You can open multiple Burden Templates windows, but each must represent a different global ID.

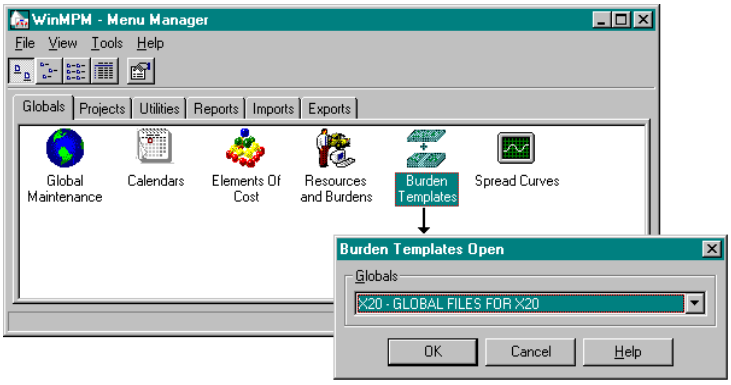


Figure A. *To access the Burden Templates window, double-click the Burden Templates icon in Menu Manager.*

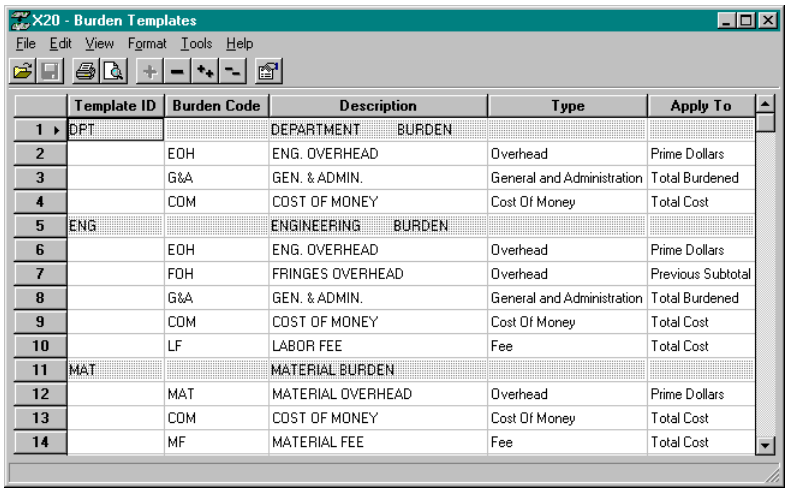
Procedure

To access the Burden Templates window:

1. From the Menu Manager window, do one of the following:
   - Double-click the Burden Templates icon.
   - From the File menu, select Globals|Burden Templates.

   MPM displays the Burden Templates Open dialog box shown in Figure A.
2. Select a global ID from the drop-down list box.
3. To accept the selection and open the Burden Templates window, click OK.

   MPM displays the Burden Templates window shown in Figure B.

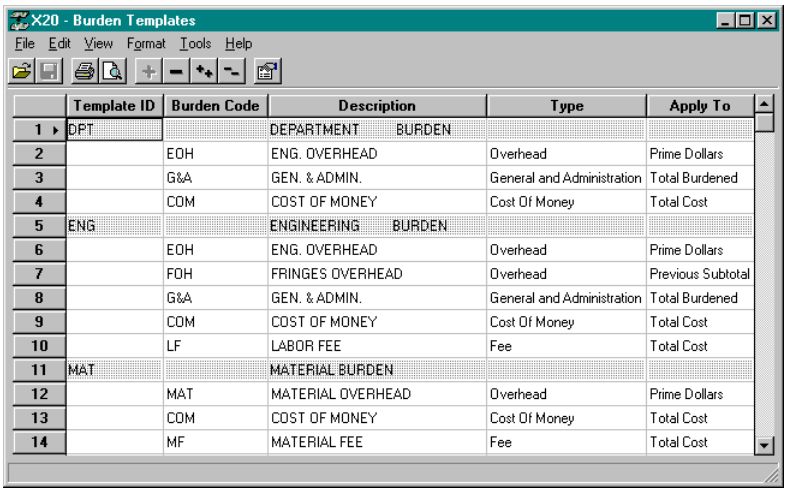


	Template ID	Burden Code	Description	Type	Apply To
1	DPT		DEPARTMENT BURDEN		
2		EOH	ENG. OVERHEAD	Overhead	Prime Dollars
3		G&A	GEN. & ADMIN.	General and Administration	Total Burdened
4		COM	COST OF MONEY	Cost Of Money	Total Cost
5	ENG		ENGINEERING BURDEN		
6		EOH	ENG. OVERHEAD	Overhead	Prime Dollars
7		FOH	FRINGES OVERHEAD	Overhead	Previous Subtotal
8		G&A	GEN. & ADMIN.	General and Administration	Total Burdened
9		COM	COST OF MONEY	Cost Of Money	Total Cost
10		LF	LABOR FEE	Fee	Total Cost
11	MAT		MATERIAL BURDEN		
12		MAT	MATERIAL OVERHEAD	Overhead	Prime Dollars
13		COM	COST OF MONEY	Cost Of Money	Total Cost
14		MF	MATERIAL FEE	Fee	Total Cost

Figure B. *The Burden Templates window*

5.3 Orientation to the Burden Templates Window

The Burden Templates window displays information about the burden templates defined for a global ID. Each template row is highlighted with a gray background. The burden codes assigned to each template are displayed in the rows below the template ID.



	Template ID	Burden Code	Description	Type	Apply To
1	DPT		DEPARTMENT BURDEN		
2		EOH	ENG. OVERHEAD	Overhead	Prime Dollars
3		G&A	GEN. & ADMIN.	General and Administration	Total Burdened
4		COM	COST OF MONEY	Cost Of Money	Total Cost
5	ENG		ENGINEERING BURDEN		
6		EOH	ENG. OVERHEAD	Overhead	Prime Dollars
7		FOH	FRINGES OVERHEAD	Overhead	Previous Subtotal
8		G&A	GEN. & ADMIN.	General and Administration	Total Burdened
9		COM	COST OF MONEY	Cost Of Money	Total Cost
10		LF	LABOR FEE	Fee	Total Cost
11	MAT		MATERIAL BURDEN		
12		MAT	MATERIAL OVERHEAD	Overhead	Prime Dollars
13		COM	COST OF MONEY	Cost Of Money	Total Cost
14		MF	MATERIAL FEE	Fee	Total Cost

Figure A. *Burden templates are highlighted in gray. Burden codes are nested under each template.*

Why the Burden Code Order is Important

Templates and the burden codes under each template are listed in the order you enter them. MPM applies burdens against a resource in the same order as they are listed in a template, so the order of the burdens is important.

Standard Windows Features

The Burden Templates window has the standard Windows features. You can:

- Size, minimize, and restore the window.
- Scroll the display using the horizontal and vertical scroll bars.
- Change the width of the columns by clicking on the dividers in the headings and dragging.

Display and Hide Columns

You can display and hide the columns using the Column Hide feature under the Tools menu.

Changing the Width of the Columns

You can change the width of the columns manually by dragging the border between the column headings, or by using the Column Width command under the View menu. The Best Fit option in the Column Width dialog box automatically sizes the columns.

Hiding and Displaying Burden Codes

You can hide and display all burden codes, or the burden codes for a specific template. To hide and display the burden codes, you can use the Toolbar buttons, or the commands under the Tools menu. The buttons and commands are described below.

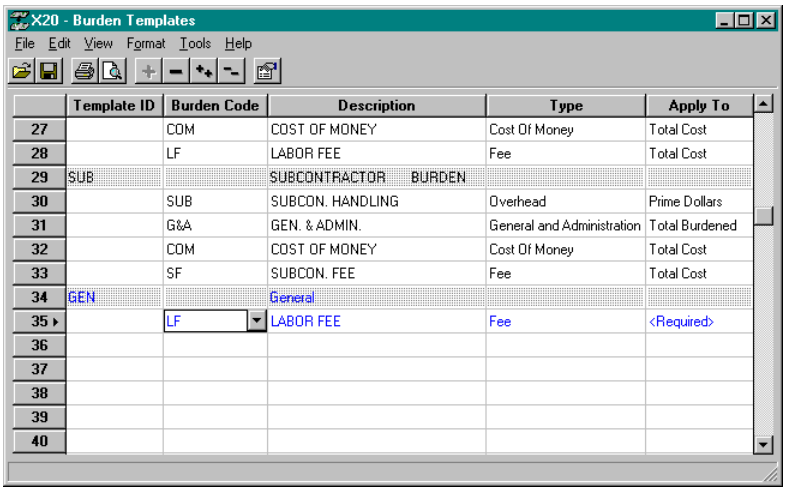
Button	Command	Description
	Show Burden Code(s)	Shows burden codes for all selected templates
	Hide Burden Code(s)	Hides burden codes for all selected templates
	Show All Burden Codes	Shows all burden codes regardless of selection
	Hide All Burden Codes	Hides all burden codes regardless of selection

Printing and Previewing

You can preview and print tabular reports of the burden template information using the Print  and Print Preview  buttons in the Toolbar. Print Preview is discussed at length in the *Getting Started* manual.

5.4 Creating a Burden Template

A burden template consists of a template ID and one or more assigned burden codes. You can define as many templates as you need, and each template can be assigned up to ten burden codes.



	Template ID	Burden Code	Description	Type	Apply To
27		COM	COST OF MONEY	Cost Of Money	Total Cost
28		LF	LABOR FEE	Fee	Total Cost
29	SUB		SUBCONTRACTOR BURDEN		
30		SUB	SUBCON. HANDLING	Overhead	Prime Dollars
31		G&A	GEN. & ADMIN.	General and Administration	Total Burdened
32		COM	COST OF MONEY	Cost Of Money	Total Cost
33		SF	SUBCON. FEE	Fee	Total Cost
34	GEN		General		
35		LF	LABOR FEE	Fee	<Required>
36					
37					
38					
39					
40					

Figure A. *You assign one or more burden codes to a template ID.*

Calculating Fee by WBS Element or Resource

In MPM, you have the option of calculating fee (profit) by WBS element or by resource. You make this choice when you define a project in the Project Maintenance window shown in Figure B. You can select Resource or WBS from the Fee Calculation field.

If you elect to calculate fee by resource, MPM calculates fees based on the rate tables defined for resources and, by extension, the burdens assigned to the resources (see Figure B). To calculate fee by resource, you must include Fee burden code(s) in a burden template. In Figure A, a Labor Fee burden code is being added to the General burden template.

If you elect to calculate fee by WBS, MPM calculates fees based on the Fee % assigned to the WBS elements as shown in Figure B. You should not include Fee burden codes in a burden template used to calculate fee by WBS.

Whenever possible, you should calculate fees by WBS. This gives you the ability to define different fee structures for each project.

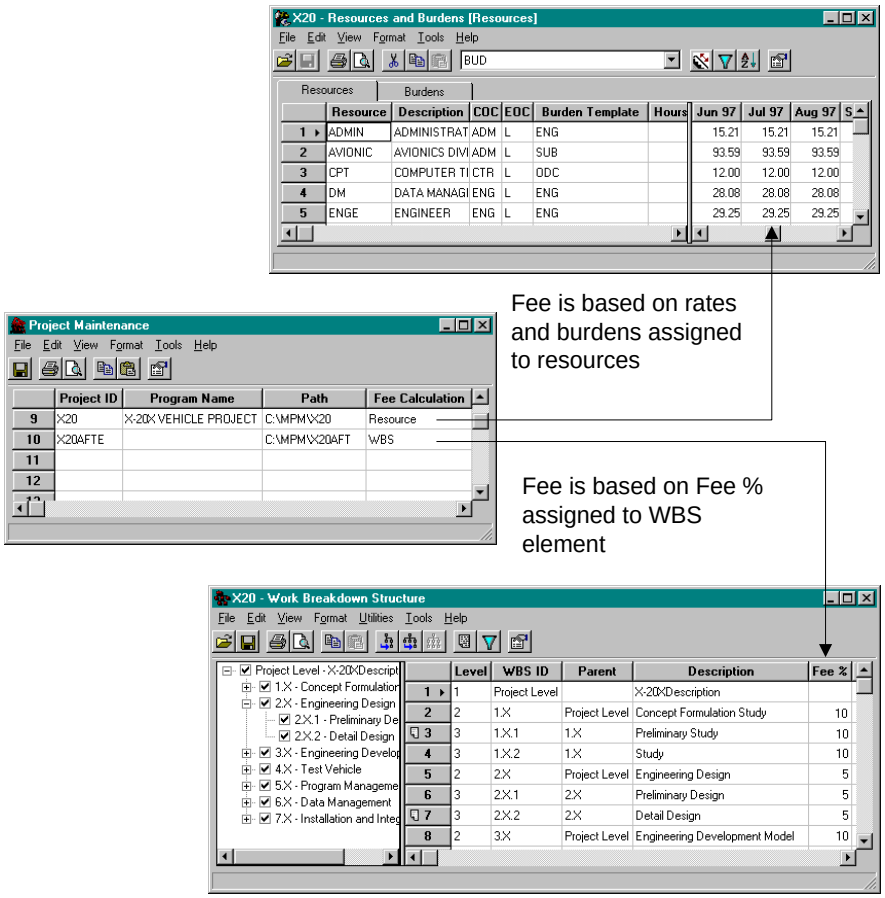


Figure B. *You have the option of calculating fee (profit) by resource or WBS element.*

Sub-Topics

Detailed information on creating burden templates is presented in the following sub-topics:

5.4.1 Procedure for Creating a New Burden Template
5.4.2 Burden Template Example and Terminology
5.4.3 Burden Code Order Affects Calculation

5.4 Creating a Burden Template

5.4.1 Procedure for Creating a New Burden Template

The procedure for creating a burden template is described below.

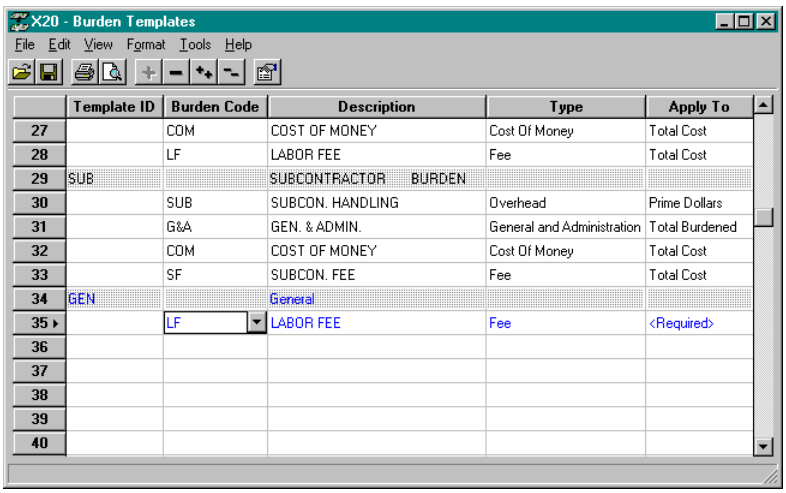


Figure A. *You assign one or more burden codes to a template ID.*

Creating a New Template ID

To create a new burden template ID:

1. Select the first blank row on the Burden Templates grid with a blank Template ID field.
2. Enter a template ID.

   The ID can be up to 20 characters long.
3. Enter a description for the burden template.

   The description can be up to 40 characters long.

Adding Burden Codes

To add a burden code to a burden template:

1. Do one of the following:
   - Select a blank Burden Code field under the Template ID.
   - Select the Template ID and choose Insert Burden Code from the Edit menu.

- Select an existing burden code and choose Insert Burden Code from the Edit menu. MPM will insert a blank line before the selected burden code.

2. Select a burden code from the Burden Code drop-down list box.

   MPM automatically fills in the Description and Type fields with information from the burden code definition you created in Resources and Burdens.

3. Select a burden rate from the Apply To drop-down list box.

   The options are described in the table below.

Option	Description
Hours/Units	Used only when overhead rate is expressed as a dollar rate per hour and not as a percent.
Prime Dollars	Dollar per hour rate for labor, material, and other direct costs.
Previous Subtotal	Applies percent to the last value totaled excluding COM and Fee. Example: prime dollars + overhead = subtotal. Percent would be applied to the subtotal.
Previous Previous Subtotal	Applies percent to the next to last value totaled excluding COM and Fee *(See example after point 4).*
Previous Burden Amount	Applies percent to the last calculated burden amount.
Previous Previous Burden Amount	Applies percent to the next to last calculated burden amount *(See example after point 4).*
Total Burdened	Applies percent to total burdened amount (prime + overhead). Excludes COM and G&A, and will only apply to the previous overhead. If you have more than one overhead, apply the Previous Burden Amount option above before applying this option.
Total Cost	Applies percent to COM and Fee calculations only. May not be used for burden types.

4. Save the burden template by doing one of the following:

   - Click on another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

   If the Save Confirmation option is on, you will be prompted to confirm the save. Otherwise, MPM immediately saves the changes without prompting you.

Example: Previous Previous Burden and Previous Previous Subtotal

The below example depicts the calculations that would be performed for Previous Previous Burden and Previous Previous Subtotal. Prime is $10 and all OH burden rates are 150%.

Burden	Applied Against	Calculation	Burden Amount
OH1	Prime Dollars	$10.00 x 150%	$15.00
OH2	Previous Burden Amount	$15.00 x 150%	$22.50
OH3	Previous Previous Burden Amount	$15.00 x 150%	$22.50
OH4	Previous Subtotal	$70.00 x 150%	$105.00 (10+15+22.50+22.50)
OH5	Previous Previous Subtotal	$70.00 x 150%	$105.00 (10+15+22.50+22.50)
		Total burden:	$270.00

- OH3 Previous Previous Burden Amount will use the OH1 value.
  - So Previous Burden Amount is $15.00 * 150% = $22.50
- OH5 Previous Previous Subtotal will be total of Prime + OH1 + OH2 + OH3.
  - So Previous Previous Subtotal is $70.00 * 150% = $105.00

5.4 Creating a Burden Template

5.4.2 Burden Template Example and Terminology

MPM applies burdens against a resource in the same order as they are listed in the template. This means the order of the burden codes affects the result.

In the example below, we create a burden template for an engineering resource using a basic rate of $10.00 (prime dollars) and the burden template described below.

Burden Template

Assume the burden template has the following entries:

Burden Code	Description	Rate
OH1	Overhead #1	150%
G&A	General & Administrative	15%
COM1	Cost of Money #1	3%
FEE1	Fee #1	10%

Calculations

Based on the order of the burden codes in the template, MPM performs the following calculations. Basic formulas are displayed in **bold** type.

Step	Calculation
1	**Resource rate x Hours = Prime (given at $10.00)** **Overhead rate x Prime = Overhead (given at 150%)** Prime + (Overhead) = Total Burdened Prime + (Overhead rate x Prime) = Total Burdened $10.00 + (150% x $10) = $25
2	**G&A rate x Total Burden = G&A (given at 15%)** Total Burdened + (G&A) = Total Cost Total Burdened + (G&A rate x Total Burdened) = Total Cost $25 + (15% x $25) = $28.75

Step	Calculation
3	**COM rate x Total Cost = COM (given at 3%)** Total Cost + (COM) = Total Dollars Total Cost + (COM rate x Total Cost) = Total Dollars $28.75 + (3% x $28.75) = $29.61
4	**Fee rate x Total Cost = Fee (given at 10%)** Total Dollars + (Fee) = Total Price Total Dollars + (Fee rate x Total Cost) = Total Price $29.61 + (10% x $28.75) = $32.49

Terminology Used in Burden Codes

Standard Hour	Industrial Engineering Standard Hour
Hour	Equivalent terms: resource hour, man hour
Prime dollars	The direct cost of each resource. Equivalent terms: direct dollars, prime + personal burden, direct + related payroll expense. (Resource rate x Hours)
Overhead dollars	Costs incurred in the operation of a business which cannot be directly related to the individual products or services being produced.
Gen & Admin (General & Administrative)	Expenses incurred in the management and administration of a company and allocated in whole or in part to a contract.
Total Burdened dollars	Prime dollars + Overhead dollars. Equivalent terms: G&A base amount, inventory cost.
Total Cost dollars	Total Burdened dollars + G&A dollars.
COM (Cost of Money)	A form of indirect cost incurred by investing capital in facilities employed on government contracts.
Total Dollars	Total Cost dollars + Cost of Money dollars.
Fee	A payment for professional services.
Total Price	Total Dollars + fee.

5.4 Creating a Burden Template

5.4.3 Burden Code Order Affects Calculation

Templates and the burden codes under each template are listed in the order you enter them. MPM applies burdens against a resource in the same order as they are listed in a template, so the order of the burdens is important. The order affects the total dollar amount chargeable against a resource.

In examples A and B below, the same burdens are applied against a resource but in two different sequences. In the examples, Prime Dollars = $10.00 and all burdens = 150%.

Example A: Correct Sequence

Burden	Applied Against	Calculation	Burden Amount
OH1	Prime Dollars	$10.00 x 150%	$15.00
OH2	Previous Burden Amount	$15.00 x 150%	$22.50
OH3	Prime Dollars	$10.00 x 150%	$15.00
OH4	Previous Subtotal (Prime $ + all burdens)	$52.50 x 150%	$78.75
		Total burden:	$131.25

Example B: Incorrect Sequence

Burden	Applied Against	Calculation	Burden Amount
OH4	Previous Total	$10.00 x 150%	$15.00
OH2	Previous Burden Amount	$15.00 x 150%	$22.50
OH1	Prime Dollars	$10.00 x 150%	$15.00
OH4	Prime Dollars	$10.00 x 150%	$15.00
		Total burden:	$67.50

5.5 Deleting Burden Codes and Templates

You can delete burden codes and burden templates. MPM does not prevent you from deleting a burden template that is assigned to a resource, OBS department, or project. When you delete a template, MPM displays a warning message asking you to confirm the delete.

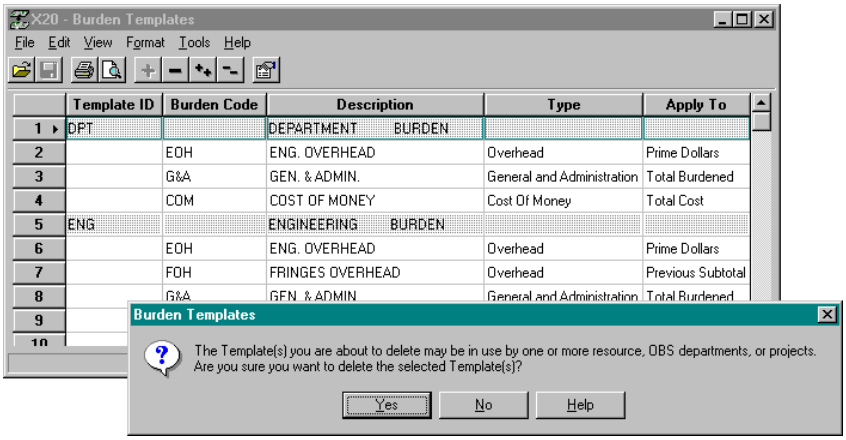


Figure A. *You can delete burden codes and templates.*

Deleting Burden Codes

To delete one or more burden codes:

1. Select the burden code(s) you want to delete.

   To delete more than one burden code, drag the cursor across the row numbers.

2. Do one of the following:

   - Press the Delete key.
   - From the Edit menu, select Delete Burden Code(s).

   If the confirmation option is on, MPM asks you to confirm the delete.

3. To confirm the delete, choose Yes.

Deleting a Burden Template

To delete a burden template:

1. Select the burden template(s) you want to delete.

   To select more than one template, drag the cursor across the row numbers.

2. Do one of the following:

   - Press the Delete key.
   - From the Edit menu, select Delete Burden Code(s).

   MPM displays the warning message shown in Figure A. If you delete a template that is assigned to a resource, OBS department, etc., you will need to assign a new template.

3. To confirm the delete, choose Yes.

5.6 Recommended Reports

The Burden Template Report is a standard MPM report that you can use to review burden template information. For information on the report, see the *MPM Standard Reports* manual.

6
Defining Resources

6.1 Introduction to Defining Resources

Resources are divided into two main categories:

- Direct costs that are applied to only one specific WBS element
- Indirect costs that can be applied to more than one resource on a pro rata basis

In MPM, you use the Resources application to specify the direct costs. You provide descriptive information about a resource, then assign rates to the resource over the life of the project. You can use the Escalate Rate function in MPM to automatically calculate escalated rates.

You assign resources to estimates to calculate the cost of a project. If you make a change to the resource definition, the change ripples through all estimates where the resource has been assigned.

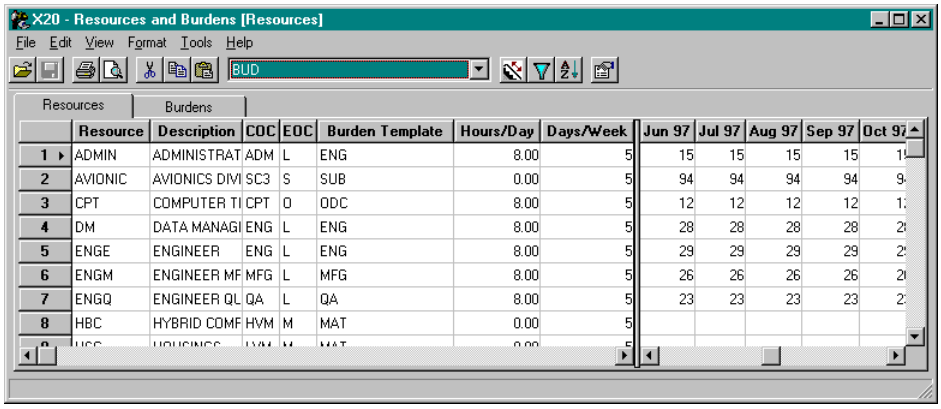


Figure A. *Resources specify direct costs.*

How Resources Are Related to Other Pricing Elements

Resources are one of four components that define the pricing structure (estimating/budgeting) of your company. The four components:

- Elements of cost (EOC) and classes of cost (COC)
- Burdens
- Burden templates
- Resource codes, descriptions, and rates

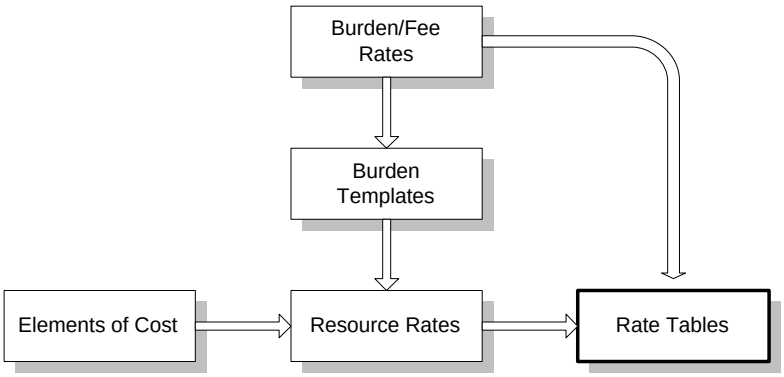


Figure B. *The combination of the four components is used to build rate tables.*

6.2 Accessing the Resources and Burdens Window

When you access the Resources window, you select the global ID, a starting rate table, and the starting view. You can also filter the items downloaded by resource, Class of Cost (COC), and Element of Cost (EOC). You can open multiple Resource windows, but each must represent a different global set.

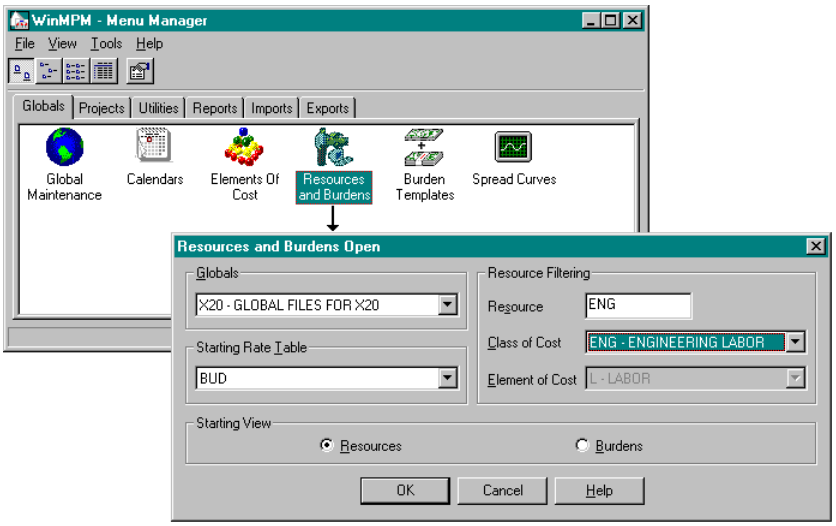


Figure A. *To access Resources, double-click the Resources and Burdens icon.*

Filtering the Display

You can apply filters to resources when you access a global ID. The filters tell MPM which resources to load. If you want to change the resources loaded, you must close and reopen the global ID.

After you have opened the resources display for a global ID, you can further filter the resources displayed using the filter options available from the Tools menu.

Procedure

To access the Resources window:

1. From the Menu Manager window, do one of the following:
   - Double-click the Resources and Burdens icon.
   - From the File menu, select Globals|Resources and Burdens.

   MPM displays the Resources and Burdens Open dialog box shown in Figure A.

2. Select a Globals set from the drop-down list box.
3. Select a starting rate table from the drop-down list box.

   If you do not want to display the rate table figures initially, or if a rate table does not yet exist, select the <None> option.
4. To filter the display, do one or more of the following:
   - Enter a resource code in the Resource field.

     This field is case sensitive, so be specific when using upper and lower case letters.
   - Select a class of cost (COC) or element of cost (EOC), but not both.

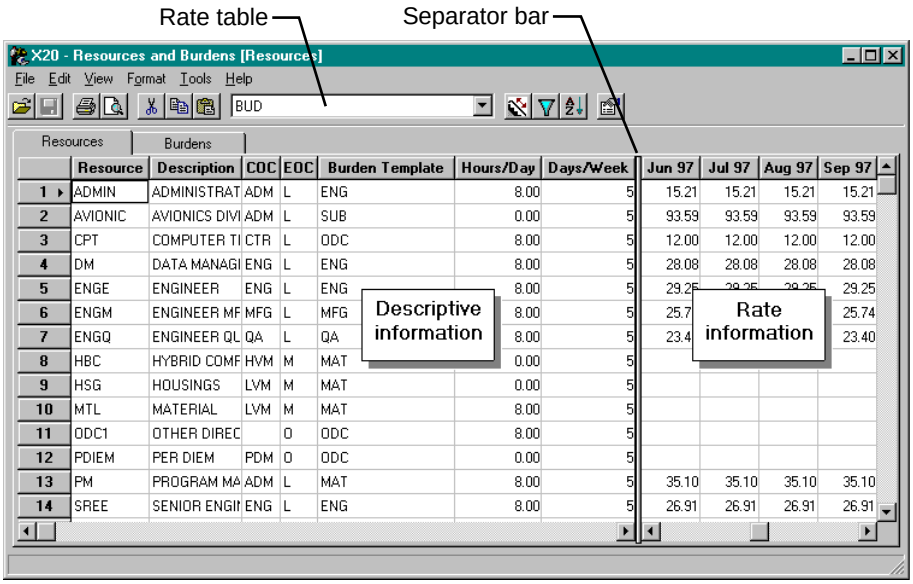
     If you select a COC, MPM automatically fills in the corresponding EOC. You can select an EOC without selecting a COC.

     If you select <Empty> for a COC, MPM searches for resources that do not have a COC specified.

   The filter selections are additive. To be loaded, resources must meet all filter criteria you specify.
5. Select Resources as the starting view.
6. To accept the selections and open the Resources window, click OK.

6.3 Orientation to the Resources Window

The Resources window displays information about the resources defined for a global set. The left pane displays descriptive information, the right pane displays rate information. Initially, the entries are listed alphabetically by the Resource code displayed in the first column.



	Resource	Description	COC	EOC	Burden Template	Hours/Day	Days/Week	Jun 97	Jul 97	Aug 97	Sep 97
1	ADMIN	ADMINISTRAT	ADM	L	ENG	8.00	5	15.21	15.21	15.21	15.21
2	AVIONIC	AVIONICS DIVI	ADM	L	SUB	0.00	5	93.59	93.59	93.59	93.59
3	CPT	COMPUTER TI	CTR	L	ODC	8.00	5	12.00	12.00	12.00	12.00
4	DM	DATA MANAGI	ENG	L	ENG	8.00	5	28.08	28.08	28.08	28.08
5	ENGE	ENGINEER	ENG	L	ENG	8.00	5	29.25	29.25	29.25	29.25
6	ENGM	ENGINEER MF	MFG	L	MFG	8.00	5	25.7			25.74
7	ENGQ	ENGINEER QL	QA	L	QA	8.00	5	23.4			23.40
8	HBC	HYBRID COMF	HVM	M	MAT	0.00	5				
9	HSG	HOUSINGS	LVM	M	MAT	0.00	5				
10	MTL	MATERIAL	LVM	M	MAT	8.00	5				
11	ODC1	OTHER DIREC		O	ODC	8.00	5				
12	PDIEM	PER DIEM	PDM	O	ODC	0.00	5				
13	PM	PROGRAM MA	ADM	L	MAT	8.00	5	35.10	35.10	35.10	35.10
14	SREE	SENIOR ENGI	ENG	L	ENG	8.00	5	26.91	26.91	26.91	26.91

Figure A. *The Resources window displays descriptive and rate information.*

The Resources window has the standard Windows features. You can:

- Size, minimize, and restore the window.
- Scroll the display using the horizontal and vertical scroll bars.
- Change the width of the columns by clicking on the dividers between the headings and dragging.
- Hide and display columns using the Column Hide feature under the Tools menu.
- Change the size of the descriptive and rate panes by dragging the separator bar.

Going to Start of Data

In projects that span several years, you can locate the first data entry for a resource by doing one of the following:

- Press Ctrl-G.
- From the Edit menu, select Go to Resource Start.

Printing and Previewing

You can preview and print tabular reports of the resource information using the Print and Print Preview buttons in the Toolbar.

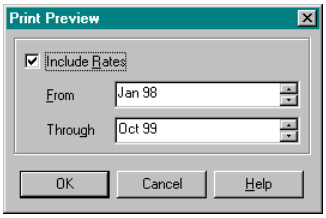


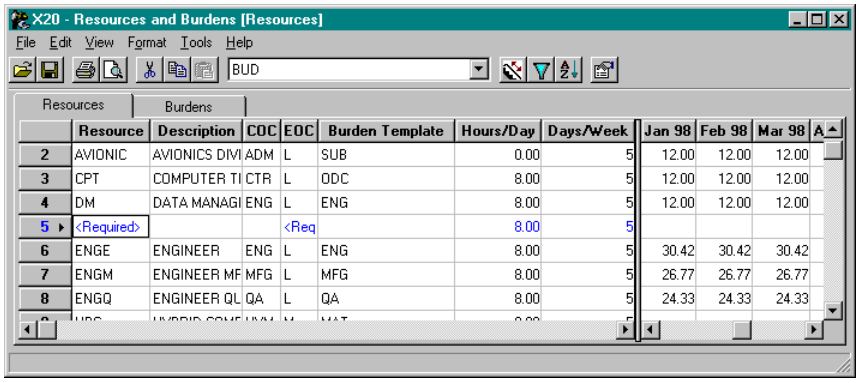
Figure B. *Print Preview options.*

When you print or preview a resource report, you can use the Print Preview dialog box shown in Figure B to specify if rates are included in the report, and the range of dates included. If you select one or more rows in the grid, MPM prints only those rows. Print Preview is discussed at length in the *Getting Started* manual.

6.4 Creating a New Resource

When you create a new resource, you specify its class of cost (COC) or element of cost (EOC), a burden template, the number of hours the resource works a day, and the number of days the resource works a week. If the resource is not labor, you can set the Hours/Day and Days/Week field to zero. You can define an unlimited number of resources for each global set.

After entering the descriptive information for a resource, you enter the rate table information. Entering rate table information is described in the next topic.



	Resource	Description	COC	EOC	Burden Template	Hours/Day	Days/Week	Jan 98	Feb 98	Mar 98
2	AVIONIC	AVIONICS DIVI	ADM	L	SUB	0.00	5	12.00	12.00	12.00
3	CPT	COMPUTER TI	CTR	L	ODC	8.00	5	12.00	12.00	12.00
4	DM	DATA MANAGI	ENG	L	ENG	8.00	5	12.00	12.00	12.00
5	<Required>			<Req		8.00	5			
6	ENGE	ENGINEER	ENG	L	ENG	8.00	5	30.42	30.42	30.42
7	ENGM	ENGINEER MF	MFG	L	MFG	8.00	5	26.77	26.77	26.77
8	ENGQ	ENGINEER QL	QA	L	QA	8.00	5	24.33	24.33	24.33

Figure A. *You can insert a new resource anywhere in the grid.*

Procedure

To create a new resource:

1. To initiate the process, do one of the following:
   - Select the first blank Resource field.
   - From the Edit menu, choose Insert Resource.
   - Press the Insert key.
2. Enter a resource code in the Resource field.

   The code can be up to 10 characters long. When sorting, the sort function is case sensitive, so you should standardize on how you use upper and lower case letters.
3. Enter a description.

   The description can be up to 20 characters long. This field is optional.

4. Select a COC or EOC from the drop-down lists.

   If you select a COC, MPM automatically fills in the corresponding EOC.

5. Select a burden template from the drop-down list box in the Burden Template field as shown in Figure B.

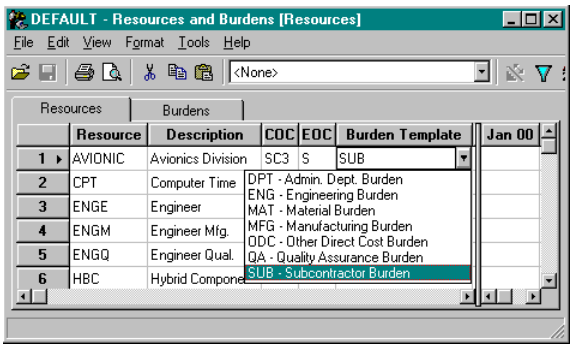


Figure B. *Selecting a burden template*

6. If the resource is labor, enter the number of hours a day the resource is available.

   The number must be between one and 24.

7. If the resource is labor, enter the number of days a week the resource is available.

   The number must be between one and seven.

8. To save the resource, do one of the following:

   - Click on another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

   If the Save Confirmation option is on, you will be prompted to confirm the save. Otherwise, MPM immediately executes the save without a prompt.

6.5 Entering Rate Table Information

After entering the descriptive information for a resource, enter the rate information using the right pane of the Resources window. The rates are stored in a rate table that you identify. You can define any number of rate tables and assign them to one or more global sets. Before you can enter rate table information, you must have created a rate table that you select from the Rate Table field in the Toolbar. To create and delete rate tables, see sub-topic *6.5.1 Defining and Deleting Rate Tables.*

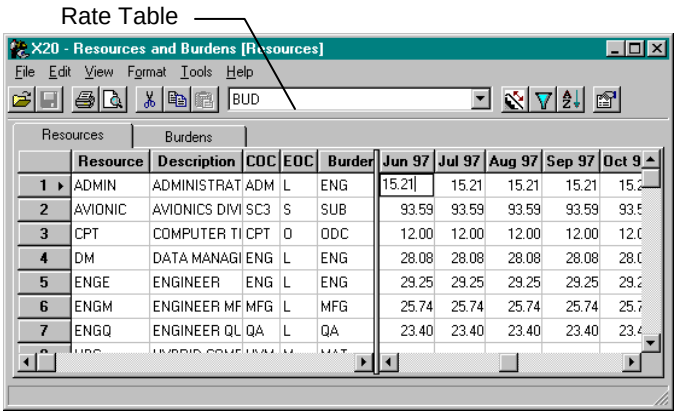


Figure A. *Before you can enter rates, you must select a rate table from the Rate Table field in the Toolbar.*

Dates

The dates displayed in the rate pane are based on the dates defined for the global set you selected when you opened the Resources window. Rates are expressed as dollars and cents using decimal notation.

Entering Rates

There are several ways you can enter rates in the cells:

- Selecting a cell and typing in a rate
- Entering an initial rate in a cell and using the Fill Right function
- Entering an initial rate in a cell and using the Escalate Rate function

The different methods for entering rates are described in the following sub-topics:

6.5 Entering Rate Table Information

6.5.1 Defining and Deleting Rate Tables

Before you can enter rate table information for resources, you must have created one or more rate tables. The rate table information is stored in the tables. After creating the rate tables, you can select them from the Rate Table field in the Toolbar.

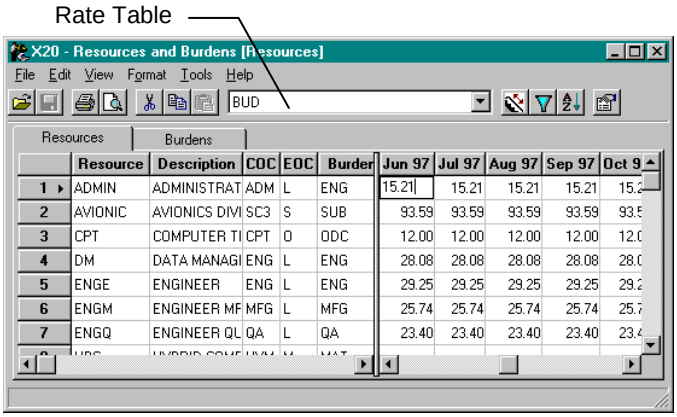


Figure A. *Before you can enter rates, you must select a rate table from the Rate Table field in the Toolbar.*

Defining a New Rate Table

To define a new rate table:

1. From the File menu, select New Rate Table.

   MPM displays the New Rate Table dialog box shown in Figure B.

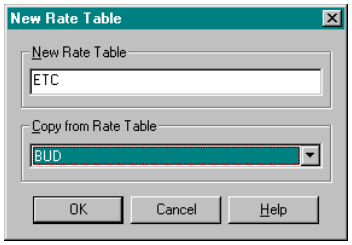


Figure B. *Creating a new rate table*

2. Enter up to a three character name for the rate table.

3. To base the new rate table on an existing table, select the existing table from the Copy drop-down list box.
4. To create the table, click OK.

Deleting a Rate Table

You should use caution when deleting a rate table. MPM does not check to see if the rate table is currently being used by a project. If you delete the rate table that is displayed in the Rate Table field in the Toolbar of the Resources and Burdens windows, MPM changes the filter to <None>.

To delete a rate table:

1. From the File menu, choose Delete Rate Table.

   MPM displays the Delete Rate Table dialog box shown in Figure C.

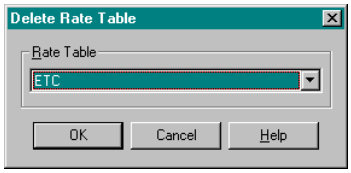


Figure C. *Select a table to delete.*

2. Select the table you want to delete.

   MPM displays the warning message shown in Figure D.

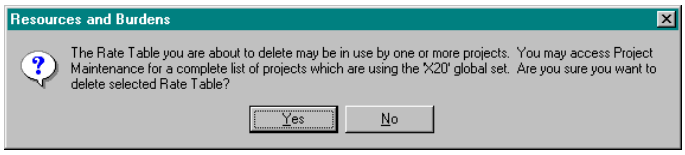


Figure D. *Use caution when deleting a rate table.*

3. To confirm the delete, choose Yes.

6.5 Entering Rate Table Information

6.5.2 Entering Rates Manually and with Fill Right

You can enter rates in each cell manually for a resource, or you can enter the first rate and use the Fill Right function to fill in the remaining cells.

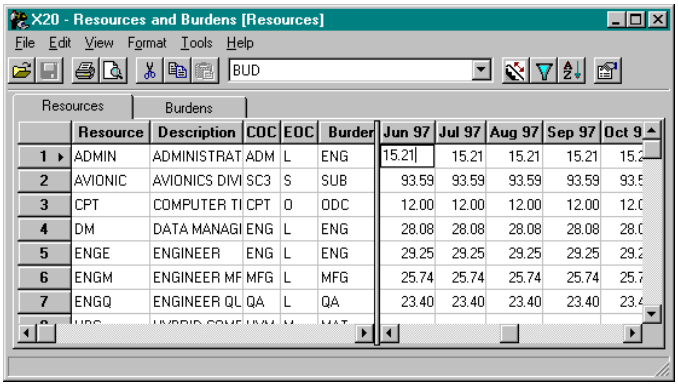


Figure A. *Enter rates in dollars and cents.*

Entering Rates Manually

To enter rates manually:

1. Select a rate table from the Rate Table field in the Toolbar.
2. Place the cursor in a cell and type in a rate.

   Enter rates as dollars and cents in decimal notation.
3. To save the entry, do one of the following:
   - Click on another row.
   - From the File menu, select Save.
   - Press Ctrl+S.

   If the Save Confirmations option is on, MPM displays a dialog box asking you to confirm the save. Otherwise, MPM saves the entry immediately.

Entering Rates with the Fill Right Function

You can use the Fill Right function to replicate a rate across part or all months for a resource. You can Fill Right for more than one resource at a time. You cannot fill down in the rate grid.

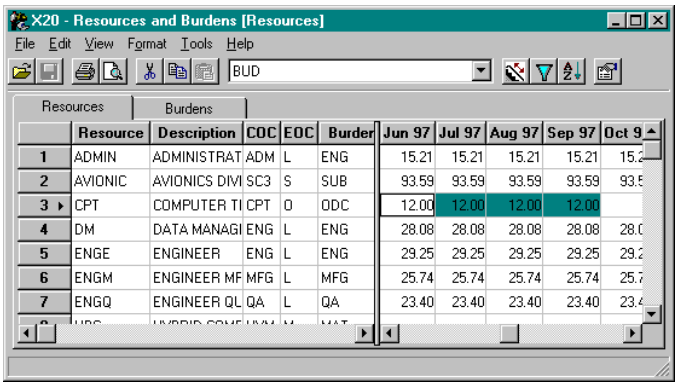


Figure B. *You can use the Fill Right feature to enter rates.*

To enter rates using the Fill Right function:

1. Select a rate table from the Rate Table field in the Toolbar.
2. Select the cell(s) with the value(s) you want to replicate and the target cells.
3. Do one of the following:
   - Press Ctrl+R.
   - From the Edit menu, select Fill Right.

   MPM enters the values. If you filled right for only one row, MPM leaves the row in edit mode, highlighted in blue. If you filled right for more than one row, MPM returns the cursor to the upper left cell of the selection area.

6.5 Entering Rate Table Information

6.5.3 Entering Rates with the Escalate Rates Function

On projects that last longer than a year, it is likely that resource rates will increase over the life of a project due to inflation and other factors. The Escalation Rate function in MPM can automatically calculate rate escalation across any specific time period. You can also de-escalate rates by entering a negative annual percent.

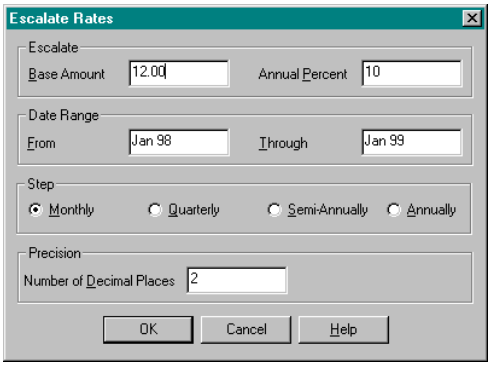
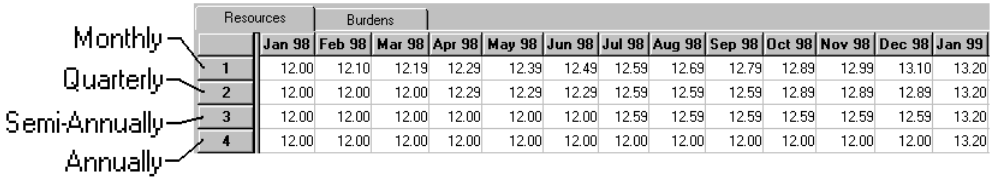


Figure A. *You can use the Escalate Rates feature to enter rates.*

Effects of Step Settings

When you escalate rates, you can specify if MPM should escalate the rates in monthly, quarterly, semi-annually, or annual steps. Monthly causes the rates to change each month, Quarterly causes the rates to change every three months, etc. The months are counted off starting with the month entered in the From field in the Escalate Rates dialog box. Figure B illustrates the result of using the four different step options. In each case, the base amount is 12 and the annual percent is 10.



	Jan 98	Feb 98	Mar 98	Apr 98	May 98	Jun 98	Jul 98	Aug 98	Sep 98	Oct 98	Nov 98	Dec 98	Jan 99
1	12.00	12.10	12.19	12.29	12.39	12.49	12.59	12.69	12.79	12.89	12.99	13.10	13.20
2	12.00	12.00	12.00	12.29	12.29	12.29	12.59	12.59	12.59	12.89	12.89	12.89	13.20
3	12.00	12.00	12.00	12.00	12.00	12.00	12.59	12.59	12.59	12.59	12.59	12.59	13.20
4	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	13.20

Figure B. *Effects of different step settings on rates.*

Procedure

To escalate rates:

1. If you want, select an entire row by clicking the row number in the first column, or select a range of cells.

   You can escalate values for only one resource at a time.

2. Display the Escalate Rates dialog box by doing one of the following:

   - Click the Escalate Rates button  in the Toolbar.
   - From the Tools menu, select Escalate Rates.
   - Press Ctrl+E.

   If you selected cells, the dates of the first and last cells selected will automatically be filled in for the From and Through fields.

3. Enter the base amount as you want it to appear in the grid.

   This value will be entered in the date (column) designated in the From field in the dialog box. Enter only numbers.

4. Enter the annual percent.

   Enter this amount as a whole number. For example, enter 15% as 15, not .15. If you enter an annual percent of **zero**, MPM will fill the same base amount in all cells. This has the same effect as using the Fill Right feature.

5. If necessary, change the dates specified in the From and Through fields.

6. Select the step for incrementing the rates: Monthly, Quarterly, Semi-Annually, or Annually.

7. Enter a Precision of 1 to 8.

   This represents the number of decimal places used to calculate the escalated rate. It does not affect the number of decimal places used to display the rates in the grid.

8. To execute the escalation, click OK.

6.6 Maintaining Resources

You can edit an entry in the description and rate panes by clicking the appropriate field or cell and typing in the new information. You can copy and paste the description fields and the rate information from one resource to another. The copy/paste functions can be use within one global set, or across different global sets.

You can delete resources. If the resource is assigned to one or more estimates, MPM displays a warning message asking you to confirm the delete.

Editing Resource Information

To edit resource information:

1. Click the field or cell you want to edit.
2. Type in the new information.
3. To save the information, do one of the following:
   - Click on another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

   If the Save Confirmation option is on, you will be prompted to confirm the save. Otherwise, MPM immediately executes the save without a prompt.

Copying and Pasting Resource Information

You can copy and paste any range of cells. However, the configuration of the copy and paste ranges of cells must match exactly.

Deleting Resources

Use caution when deleting resources. You can delete resources even if they are used in one or more projects. To delete a resource from the Resources window:

1. Select a resource row by clicking on the row number in the left column.

   You can select more than one resource by dragging down the row number column.

2. Do one of the following:
   - Press the Delete key.
   - From the Edit menu, select Delete Resource(s).

   MPM displays the warning message shown in Figure A.

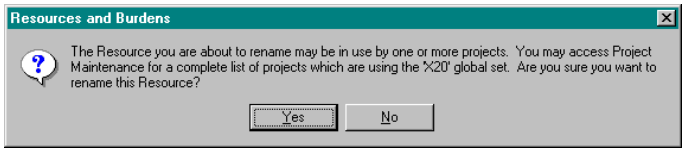


Figure A. *Confirm the delete.*

3. To confirm the delete, choose Yes.

6.7 Changing the Display

You can change the display using the standard MPM controls. The controls are described briefly in this topic. For more information, see the *Getting Started* manual.

Changing the Width of the Columns

You can change the width of the columns manually by dragging the borders between the column headings, or by using the Column Width command under the Format menu. The latter also gives you access to the Best Fit option that automatically adjusts the width of the column.

Formatting the Data

You can select the number of decimal places displayed in the rate grid by choosing an option from the Format menu. You can choose between zero and eight decimal places. MPM retains eight decimal place accuracy for calculations regardless of the number of decimal places displayed.

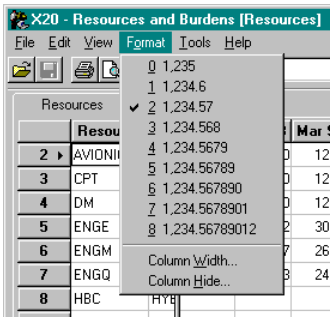


Figure A. *Data format*

Hiding and Displaying Columns

You can hide and display the columns in the descriptive pane of the Resources window using the Column Hide feature under the Format menu. To select or deselect and item in the Column Hide dialog box, click or Shift+Click the desired column.

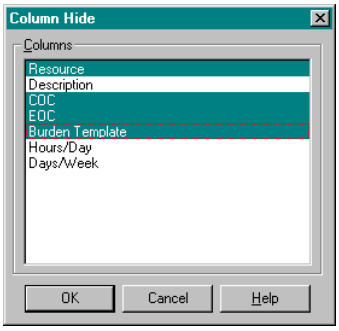


Figure B. *Hiding columns*

Filtering the Display

You can filter the resources displayed by specifying a text string. The text string can be applied to any combination of the fields. To display all resource codes, select the All Data option from the Tools|Filter menu.

To filter the display:

1. Do one of the following:
   - Click the Filter button  in the Toolbar and choose an option from the dialog box displayed.

- From the Tools menu, select the Filter command and select an option from the sub-menu.

MPM displays the Filter dialog box shown in Figure C.

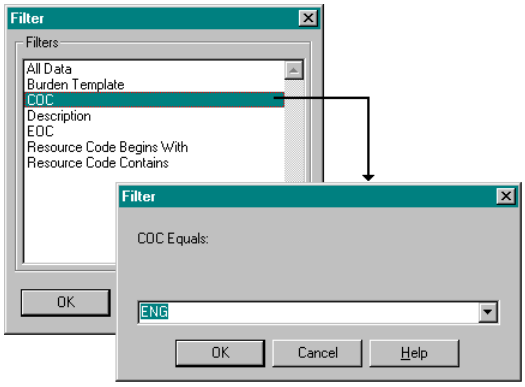


Figure C. *Enter a text string for the filter.*

2. Enter a text string that will be used as the filter criteria.

MPM ignores upper and lower case letters when it searches for the text string. It also must find the entire string.

Sorting the Display

Initially MPM lists the resources in alphabetical order by resource code. It sorts the list each time you open the Resources and Burdens application, incorporating any new resources you may have added.

You can sort the resources using the Sort command under the Tools menu. You can use up to three criteria in a sort, each ascending or descending. MPM saves the last sort criteria you specify. To return the list to its default order, choose the Reset button in the Sort dialog box.

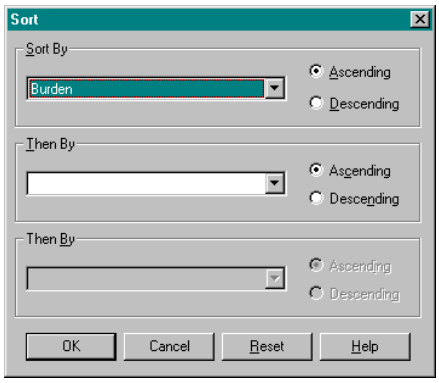


Figure D. *Sorting burdens.*

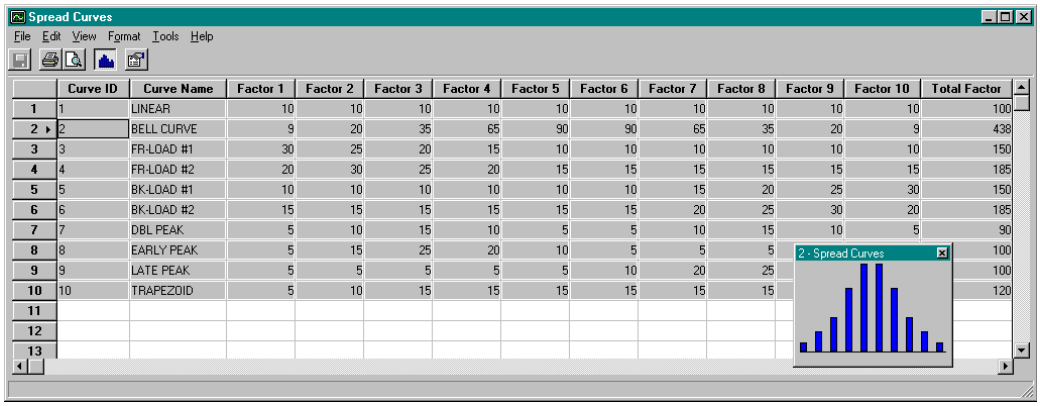
6.8 Recommended Reports

The Resources and Burdens report is a standard MPM report that you can use to review resource information. For detailed information on the report, see the *MPM Standard Reports* manual.

7
Defining Spread Curves

7.1 Introduction to Defining Spread Curves

The Autospread function in MPM's Integrated Planning quickly and easily distributes a resource estimate over a task duration. Simply select a range of dates and choose a spread curve. Spread curves can be used to enter baseline estimates and estimates to complete (ETCs) in Integrated Planning.



	Curve ID	Curve Name	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Total Factor
1	1	LINEAR	10	10	10	10	10	10	10	10	10	10	100
2	2	BELL CURVE	9	20	35	65	90	90	65	35	20	9	438
3	3	FR-LOAD #1	30	25	20	15	10	10	10	10	10	10	150
4	4	FR-LOAD #2	20	30	25	20	15	15	15	15	15	15	185
5	5	BK-LOAD #1	10	10	10	10	10	10	15	20	25	30	150
6	6	BK-LOAD #2	15	15	15	15	15	15	20	25	30	20	185
7	7	DBL PEAK	5	10	15	10	5	5	10	15	10	5	90
8	8	EARLY PEAK	5	15	25	20	10	5	5	5			100
9	9	LATE PEAK	5	5	5	5	5	10	20	25			100
10	10	TRAPEZOID	5	10	15	15	15	15	15	15			120
11													
12													
13													

Figure A. *MPM has 10 predefined spread curves.*

Ten Data Points Define Spread Curves

Spread curves are defined by a sequence of 10 data points or factors. Each factor represents a relative weight. The total of all factors can add up to 100, but this is not a requirement.

Predefined Spread Curves

MPM has predefined the 10 most commonly used spread curves. The predefined curves cannot be changed or deleted, however they can serve as a foundation for creating custom curves.

Custom Spread Curves

If one of the 10 predefined spread curves does not meet your needs, you can define custom curves. You create a custom spread curve by entering a curve ID and the 10 factors that define the curve.

Spread Curve Graphs

You can display a thumbnail graph of a spread curve by clicking the Spread Curve Graph button  in the Toolbar. The Bell Curve graph is shown in Figure A.

Accessing the Spread Curves Window

To access the Spread Curves window:

1. From the Menu Manager window, do one of the following:
   - Double-click the Spread Curves icon.
   - From the File menu, select Globals|Spread Curves.

   MPM displays the Spread Curves window.

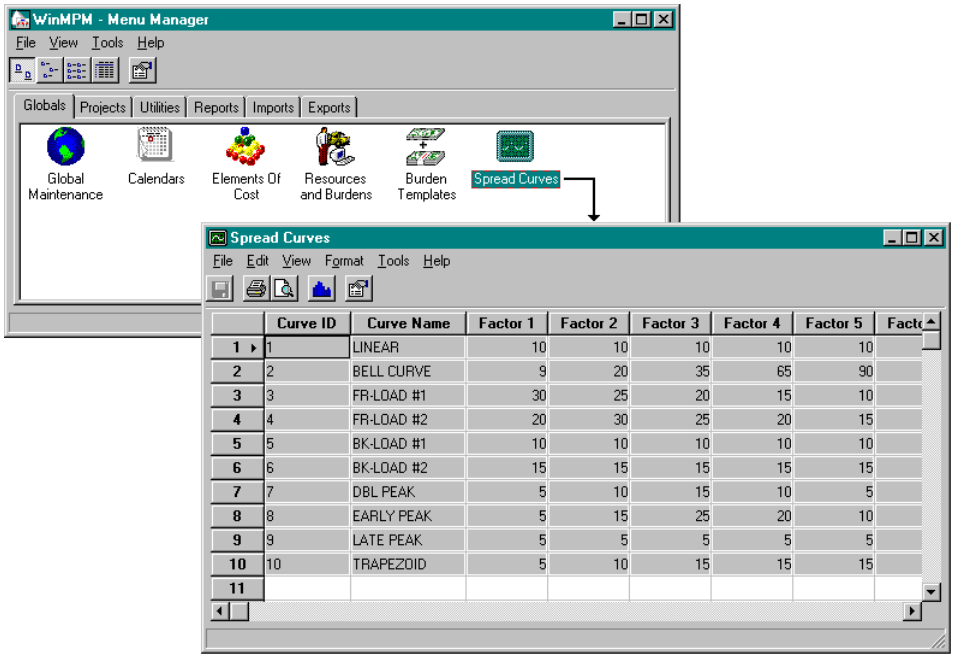
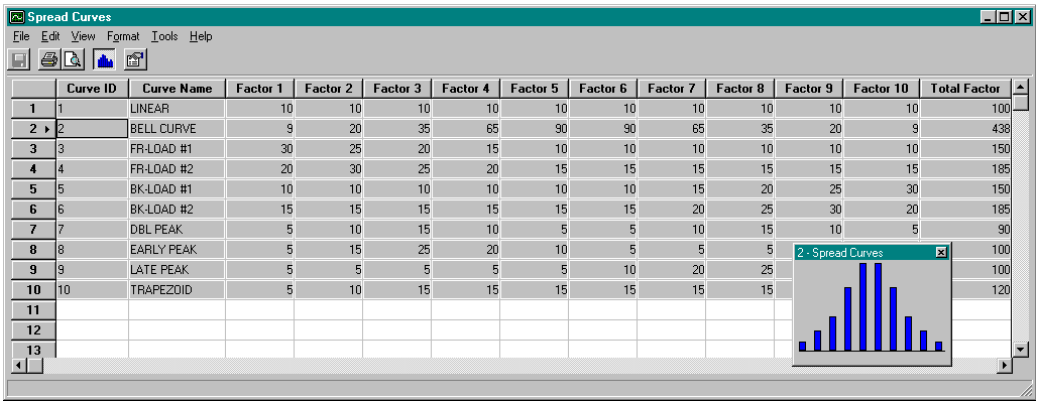


Figure B. *To access the Spread Curves window, double-click the Spread Curves icon on the Globals tab in Menu Manager.*

7.2 Orientation to the Spread Curves Window

The Spread Curves window displays in a grid the data used to generate each curve. Each curve is defined by 10 data points labeled Factor 1 through Factor 10 on the grid. The Total Factor field is read-only and displays the total for Factors 1 through 10.



	Curve ID	Curve Name	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Total Factor
1	1	LINEAR	10	10	10	10	10	10	10	10	10	10	100
2	2	BELL CURVE	9	20	35	65	90	90	65	35	20	9	438
3	3	FR-LOAD #1	30	25	20	15	10	10	10	10	10	10	150
4	4	FR-LOAD #2	20	30	25	20	15	15	15	15	15	15	185
5	5	BK-LOAD #1	10	10	10	10	10	10	15	20	25	30	150
6	6	BK-LOAD #2	15	15	15	15	15	15	20	25	30	20	185
7	7	DBL PEAK	5	10	15	10	5	5	10	15	10	5	90
8	8	EARLY PEAK	5	15	25	20	10	5	5	5			100
9	9	LATE PEAK	5	5	5	5	5	10	20	25			100
10	10	TRAPEZOID	5	10	15	15	15	15	15	15			120
11													
12													
13													

Figure A. *Each row represents a spread curve.*

Predefined Spread Curves

The first 10 rows represent the predefined spread curves. You cannot edit or copy these rows. They are always displayed at the top of the grid with a gray background.

You should take a few minutes to familiarize yourself with the 10 curves by reviewing the factors and graphs.

You can view the graph of a spread curve by selecting a row and doing one of the following:

- Click the Spread Curve button  in the Toolbar.
- From the View menu, select Spread Curve Graph.

Standard Windows Features

The Spread Curves window has the standard Windows features. You can:

- Size, minimize, and restore the window.
- Scroll the display using the horizontal and vertical scroll bars (pop-up locators).
- Change the width of the columns by clicking and dragging the dividers between the headings.
- Hide and display columns using the Column Hide feature under the Tools menu.

Order

Initially, spread curves are displayed in the order you enter them on the grid. Each time you open the Spread Curve window, MPM sorts the spread curves alphanumerically on the Curve ID field.

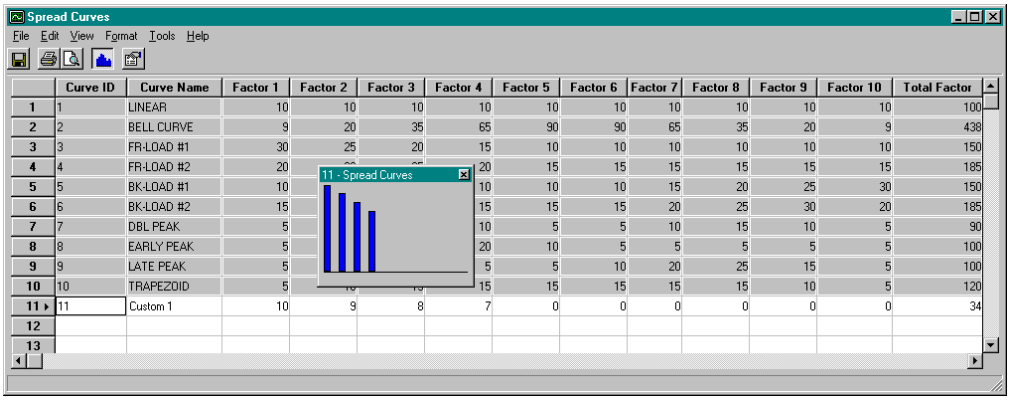
Previewing and Printing

As with other MPM windows, you can preview and print a tabular report of the Spread Curve display using the Print and Print Preview buttons  in the Toolbar or the Print Preview and Print commands under the File menu. For a complete explanation of the print and preview features, see the *Getting Started* manual.

7.3 Creating a Custom Spread Curve

You create a custom spread curve by entering the 10 data points that shape the curve. The data points are proportional to one another, and can total more than 100. For a spread curve definition to be valid, it must have at least one non-zero factor.

You can delete custom spread curves, but not the predefined spread curves. The fact that a spread curve has been applied to an estimate does not prevent the spread curve from being deleted. The spread curve is applied to data, but is not associated with the data after the calculations are complete.



	Curve ID	Curve Name	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Total Factor
1	1	LINEAR	10	10	10	10	10	10	10	10	10	10	100
2	2	BELL CURVE	9	20	35	65	90	90	65	35	20	9	438
3	3	FR-LOAD #1	30	25	20	15	10	10	10	10	10	10	150
4	4	FR-LOAD #2	20			20	15	15	15	15	15	15	185
5	5	BK-LOAD #1	10			10	10	10	15	20	25	30	150
6	6	BK-LOAD #2	15			15	15	15	20	25	30	20	185
7	7	DBL PEAK	5			10	5	5	10	15	10	5	90
8	8	EARLY PEAK	5			20	10	5	5	5	5	5	100
9	9	LATE PEAK	5			5	5	10	20	25	15	5	100
10	10	TRAPEZOID	5			15	15	15	15	15	10	5	120
11	11	Custom 1	10	9	8	7	0	0	0	0	0	0	34
12													
13													

Figure A. *You can create a custom curve.*

As you create a curve, you may find it useful to display the spread curve graph as shown in Figure A. The graph is updated automatically as you enter and change the factors. In Figure A, only the first four factors have been entered. This is reflected in the graph.

Procedure

To create a custom spread curve:

1. Place the cursor in the first blank Curve ID field and enter a unique three character ID for the curve.

   The characters can be letters or numbers.

2. Enter a name for the curve.

   The name can be up to 10 characters long. This field is optional. However, in Integrated Planning the name is displayed along with a visual representation of the curve, so we recommend entering a name.

3. Enter Factors 1 through 10.

Each factor must be a whole number between zero and 99.

Saving Spread Curve Data

MPM saves the data for all spread curves at the same time. If you close the Spread Curves window without saving, you will be prompted to save the data. To save the data, do one of the following:

- Click the Save button  in the Toolbar.
- From the File menu, select Save.
- Press Ctrl+S.

Inserting a Spread Curve

You can insert a spread curve between two custom spread curves, but not between the predefined curves. To insert a spread curve:

1. Place the cursor on the row where you want to insert the new spread curve and do one of the following:
   - Press the Insert key.
   - From the Edit menu, choose Insert Spread Curves.

   MPM inserts a blank row before the selected row, and enters <Required> in the Curve ID field.
2. Enter the information for the spread curve.

Deleting a Spread Curve

You can delete one or more spread curves at the same time. To delete a spread curve:

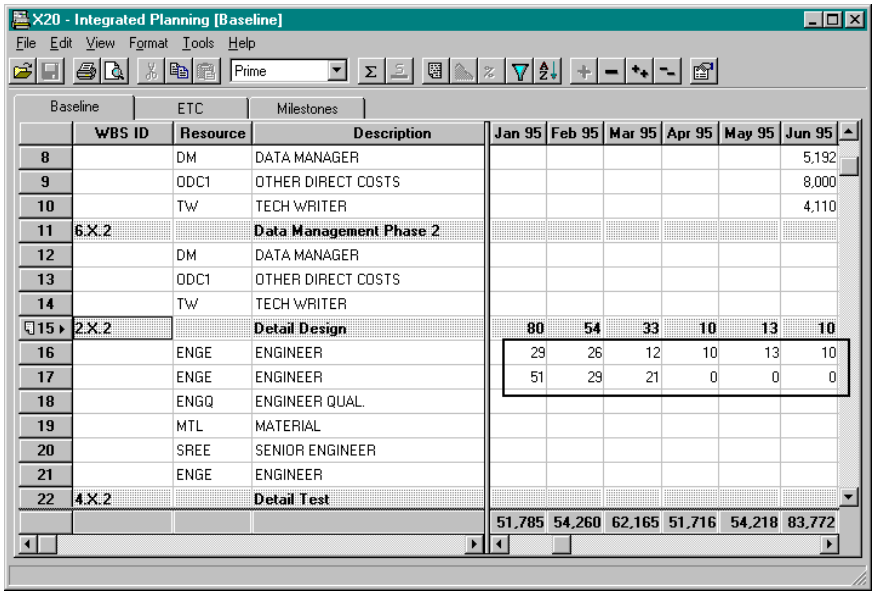
1. Select the spread curve or curves(s). To select more than one spread curve, drag the cursor down the row number column.
2. Do one of the following:
   - Press the Delete key.
   - From the Edit menu, choose Delete Spread Curves.

   MPM prompts you to confirm the delete.
3. To confirm the delete, choose Yes.

7.4 Impact of Task Duration on Spread Curves

The duration of a task being estimated determines how much of the task will be allocated to each month when MPM applies a spread curve. The curves are sensitive to the number of days in each month. As a result, the same spread curve applied to the same amount of work spread over two different time periods can produce two different curves.

Figure A illustrates this point. An amount of work equal to 100 units was spread over six months and three months. The Front Load #1 spread curve shown in Figure B was applied in both cases. The resulting graphs of the highlighted data in Figure A are shown in Figure C.



	WBS ID	Resource	Description	Jan 95	Feb 95	Mar 95	Apr 95	May 95	Jun 95
8		DM	DATA MANAGER						5,192
9		ODC1	OTHER DIRECT COSTS						8,000
10		TW	TECH WRITER						4,110
11	6.X.2		**Data Management Phase 2**						
12		DM	DATA MANAGER						
13		ODC1	OTHER DIRECT COSTS						
14		TW	TECH WRITER						
15	2.X.2		**Detail Design**	**80**	**54**	**33**	**10**	**13**	**10**
16		ENGE	ENGINEER	29	26	12	10	13	10
17		ENGE	ENGINEER	51	29	21	0	0	0
18		ENGQ	ENGINEER QUAL.						
19		MTL	MATERIAL						
20		SREE	SENIOR ENGINEER						
21		ENGE	ENGINEER						
22	4.X.2		**Detail Test**						
				51,785	**54,260**	**62,165**	**51,716**	**54,218**	**83,772**

Figure A. *The same spread curve applied to two different time spans can produce different curves.*

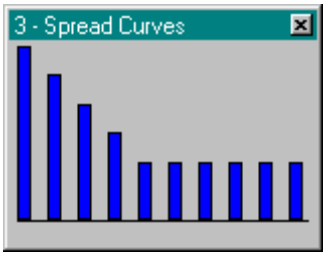


Figure B. *Front Load #1 Spread Curve.*

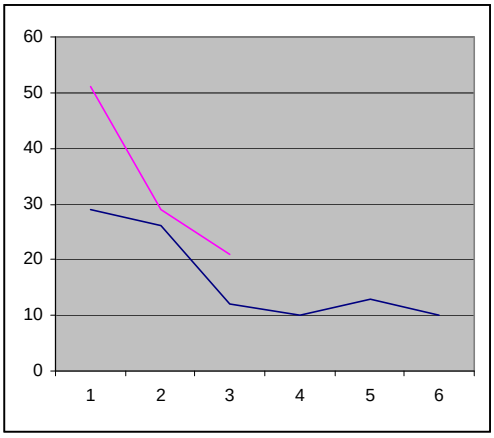


Figure C. *A graph of the highlighted numbers in Figure A.*

7.5 Recommended Reports

The Spread Curve Report is a standard MPM report that you can use to review spread curve information. For detailed information on the report, see the *MPM Standard Reports* manual.

8
Controlling Security Access to MPM

8.1 Introduction to Security Access

Use MPM's security features to control user access to:

- Applications within the product
- Editing features for each project
- WBS elements for each project

You can customize access for each user, or use the Equivalent User feature to assign the same access privileges to many users with a single selection from a drop-down list box.

Application Access

You can control access to the following applications in MPM:

- **Globals**. Users with Globals privileges have access to all applications on the Globals tab in the Menu Manager. If users do not have access to Globals, the Globals tab will not be displayed in Menu Manager. Also, all report, import, and export icons related to Globals will be removed.
- **Report Edit**. Users with Report Edit privileges can modify reports. Without this access, users can run the reports to which they have been granted access, but not modify them in the report viewer.
- **Spread Curve**. Users 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 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 within each project.

WBS Leg Access

A user's access to a project can be restricted to one or more legs of the WBS hierarchy.

Authorization Levels

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

- **System Administrator**. A user with system administrator authorization has access to all applications, projects, edit features, and globals.

- **Project Administrator**. A user with project administrator authorization has access to all features of assigned projects. Project administrators can also add user to, and delete users from, projects they administer.
- **User**. A user with user authorization has 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.

Feature Equiv

Using the Feature and WBS Equiv fields allows you to assign the access rights of one user to one or many other users. Instead of having to repeat the steps for setting up users with the same access rights, you can set one user up with generic or standard rights to a project then select that User's ID in the Feature Equiv and WBS Equiv field.

Passwords

Passwords control access to the MPM application. When you create a user, the user is automatically assigned a default password of PASSWORD. The first time the user logs into MPM using the password of PASSWORD, they will receive a prompt requesting them to change their password. If the user forgets his password, the SYSADMIN, and only the SYSADMIN, can reset the password to PASSWORD using the Reset Password command under the Tools menu in the Security window. A user other than the SYSADMIN, even though he is assigned the System Admin authority level, cannot reset passwords.

The password for the SYSADMIN user cannot be easily reset. If the system administrator changes the default SYSADMIN password, and forgets the new password, you can reset the SYSADMIN password to the default password by deleting the MPMUSERS.DAT file. However, this deletes all user information from the MPM database. If the SYSADMIN password has been lost, contact Deltek Customer Care for assistance.

When changing the default password, you must enter the old password in upper case letters. You can enter new passwords in upper and/or lower case letters.

Password Expiration

The System Administrator has the ability to:

- specify the number of days before the password expires
- specify the number of changes allowed before password reuse
- specify the minimum password length
- set the number of login attempts and number of days before a User ID becomes invalid

For a new user, or for a user who has had their password reset by the SYSADMIN, the password will need to be changed on their first login regardless of the expiration setting.

8.2 Accessing the Security Window

You access the Security window from the Globals tab in the Menu Manager window.

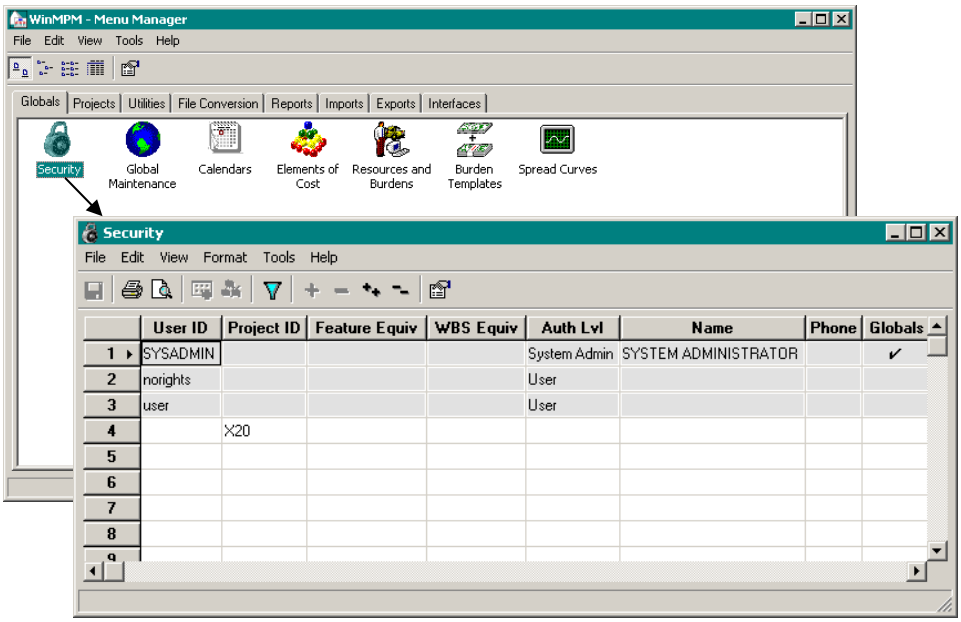


Figure A. *To access the Security window, double-click the Security icon on the Globals tab in the Menu Manager window.*

Procedure

To access the Security window:

1. From the Menu Manager window, select the Globals tab.
2. From the Globals tab, do one of the following:
   - Double-click the Security icon.
   - From the File menu, select Globals|Security.

   MPM displays the Security Open dialog shown in Figure B.

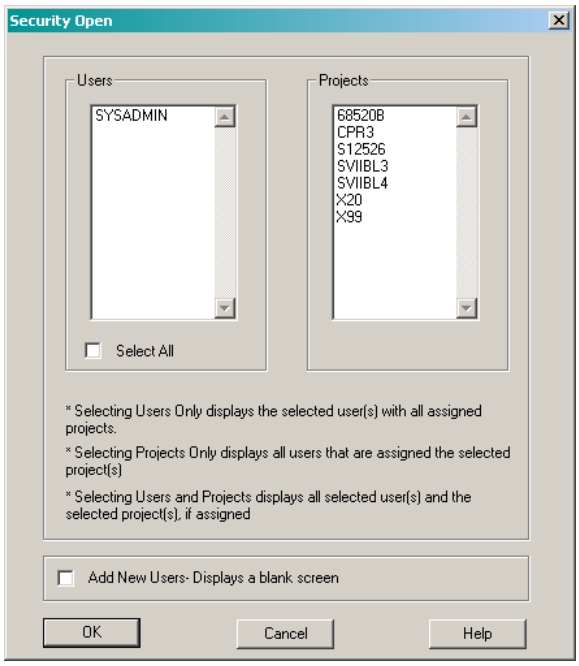


Figure B. *The Security Open Dialog.*

3. Use the pick lists in the Security Open dialog to open the subset of security data you need to work with.

   To select non-contiguous names/projects, select the first entry, then hold down the Ctrl key and select the other names/projects that you want.

   To select a contiguous list of names/projects, select the first entry, then hold down the Shift key and select the last name/project that you want.

   - Users Pick List:
     - If you don't make any selection, then all data is downloaded.
     - If one or more names are selected then just those names and their associated projects are downloaded.

- Projects Pick List
  - If you don't make any selection, then all data is downloaded.
  - If one or more projects are selected, then just those projects and the corresponding users that have access to those projects are downloaded.
- Select All - Place a check in this box if you wish to select all users.
- Add New Users - Place a check in this box if you want to open a blank security screen so that you can add new users.

  Note: If you have a Named User license, the number of users that can be added into the system is specified in your MPM License.

  See *MPM Installation: MPM License Types* in the MPM Installation Guide for a detailed explanation of each license type.

Standard Windows Features

The Security window has the standard Windows features. You can:

- Size, minimize, and restore the window.
- Scroll the display using the horizontal and vertical scroll bars.

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

User and Project Rows

In the Security window, users are displayed in rows with gray backgrounds. Projects assigned to each user are displayed in rows under the user. The project rows have white backgrounds.

Authorization Level Determines Users and Projects Listed

Your authorization level determines what users and projects are listed in the Security window. If your authorization level is System Administrator, all users and projects are listed.

If your authorization level is Project Administrator, only users with Project Administrator and User authorization levels are listed. System administrators are not listed. Under each user, only projects you have access to are displayed, regardless of the user's access.

Previewing and Printing

As with other MPM windows, you can preview and print a tabular report of the Security display using the Print and Print Preview buttons  in the Toolbar or the Print and Print Preview commands under the File menu. For a complete explanation of the print and preview features, see the *Getting Started* manual.

8.3 Security Field Descriptions

The fields in the Security window apply to either the user rows or project rows. User rows have a gray background. Project rows have a white background. The fields are described below. The abbreviation *n/a* indicates a field is not active for a row.

Field	In a User Row	In a Project Row
User #	A sequential number assigned by MPM. When you first open the view, this field is hidden. This is a read-only field.	n/a
User ID	A unique name you assign to each user. The name can be up to eight characters. Required.	n/a
Project ID	n/a	The drop-down list box in this field lists all projects defined in MPM. You use the field to assign users access to projects. Required.
Feature Equiv	n/a	The drop-down list box in this field lists all users with an authorization of **User** currently assigned to the same project. You use this field to assign a set of project features associated with another user. Optional.
WBS Equiv	n/a	The drop-down list box in this field lists all users with an authorization of **User** currently assigned to the same project. You use this field to assign access to a set of WBS elements associated with another user. Optional.
Auth Lvl	Used to select the authorization level for a user: System Administrator, Project Administrator, or User. Required.	n/a

Field	User Row Description	Project Row Description
Name	Used to enter the name of the user. This is a free form field up to 20 characters. Optional.	n/a
Phone	Used to enter the phone number of the user. This is a free form field up to 15 characters. Optional.	n/a
Globals	When checked, this field gives the user access to the applications located on the Globals tab in the Menu Manager window. Optional.	n/a
Report Edit	When checked, the user can edit reports in the Report Viewer. Optional.	n/a
Spread Curves	When checked, the user can create custom spread curves to be applied to baseline estimates and ETCs. Optional.	n/a
OLAP Process	When checked, the user will have access to OLAP cube processing.	n/a
Last Changed	n/a	Displays the date the security information for the project was last changed. This is a read-only field.
Changed by	n/a	Displays the name of the user that last changed the security information for a project. This is a read-only field.

8.4 Setting the Security Options

When you add a project under a user, you can give the user access to any combination of project editing features within MPM. You can do this manually after you have added a project by selecting Project Features from the Tools menu. MPM displays the Project Features dialog box shown in Figure A where you can make your selections. Or you can have MPM automatically display the Project Features dialog box every time you add a project.

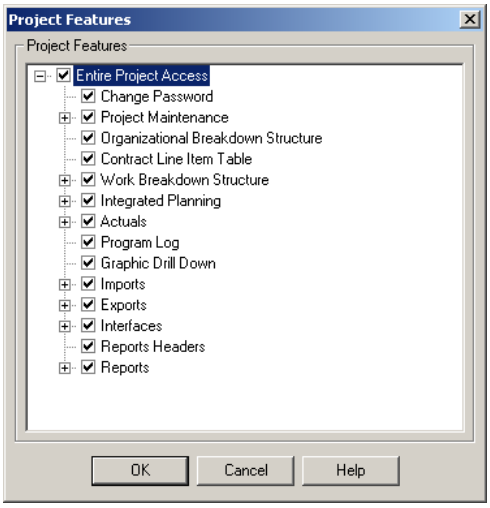


Figure A. *Project Features.*

Procedure

To have MPM automatically display the Project Features dialog box (See Figure B):

1. From the Security window, open the Tools menu and select Options. MPM displays the Options dialog box shown in Figure B.
2. Select the Security tab.
3. Select the Automatic option. If you select the Manual option, MPM will not display the Project Features dialog box. You will need to open the dialog box manually.
4. To save the setting and close the dialog box, choose OK.

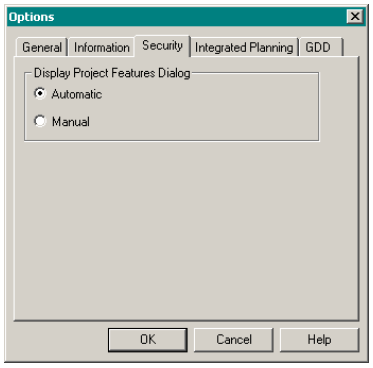


Figure B. *Project Features dialog box*

8.4 Setting the Security Options

8.4.1 Password/Login Settings

The System Administrator has the ability to set all passwords to expire after a certain number of days, after which all users have to reset their MPM passwords.

Procedure

1. From the Security window, open the Tools menu and select Password/Login Settings.

   MPM displays the Password/Login Settings dialog box shown in Figure A.

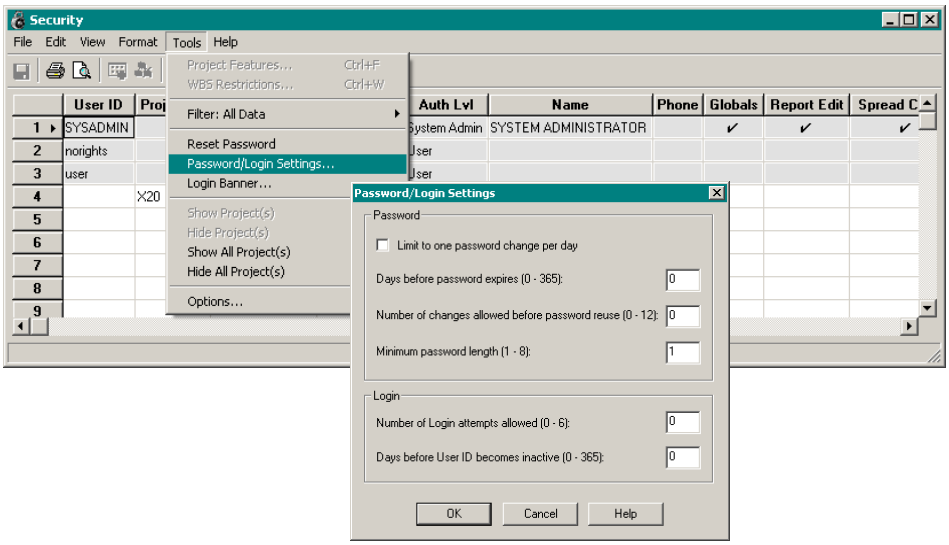


Figure A. *Password/Login Settings dialog box.*

2. The following fields can be set:

   - **Limit to one password change per day**. If left unchecked, a user may change their password as often as they wish within any given day. When this option is checked, a user may only change their password once in any given day.
   - The **Days before password expires** box defaults to zero, which means that the function is inactive (i.e., there is no password expiration set). Type in any number between 1 and 365 to indicate how many days should elapse before the password will expire.

- The elapsed time occurs from when the user's password was last changed. The expiration interval resets the moment the password is reset by the user.
- For a new user, or for a user who has had their password reset by the System Administrator, the password will need to be changed on their first login regardless of the expiration setting.
- When a password expires, a dialog box will appear giving notice to the user that it is time to change their password. If the user selects No, they are logged out of MPM. If the user selects Yes, the Change Password dialog box opens (see Figure B).

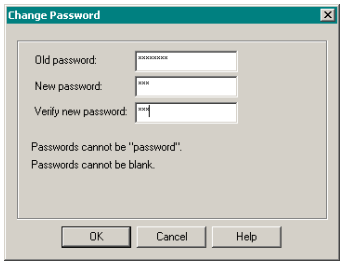


Figure B. *Change Password dialog box.*

- **Number of changes allowed before password reuse (0-12)**. If left as zero, a user may change from their current password to a new password and then back to the previous password whenever a password change is required. If set to a number between 1 and 12, a user will need to use a new password each time they change for X number of times before reverting back to one of their previous passwords.
- **Minimum password length** is the minimum length a password can be. A password length of 1-8 characters can be set. The default is 1.
- **Number of Login attempts allowed (1-8)** defaults to zero which means that there is no limit to the number of times a user may try to log in.

Examples where the number of login attempts is set to three:

- **Case 1**: A user tries to log in three times with an incorrect user id. On the fourth attempt, an error message displays and the user is directed back to the Menu Manager without a login. To refresh the system, the user exits MPM and reopens it to create a new session.
- **Case 2**: A user tries to log in three times with a correct user id but an incorrect password. On the fourth attempt, an error message displays directing the user to contact the System Administrator. The System Administrator will need to reset the user's password before the user is able to log in again. As soon as the user logs in correctly, the Login Retries is reset to zero.

- **Days before User ID becomes inactive (0-365).** This is the total number of days since the last login before a user's account becomes inactive. The default is zero which means that a User ID will never become inactive. When a User ID does becomes inactive, the user will not be able to login at all. The System Administrator will need to reset the user's password before the user can log in again. (See *Section 8.6 "Changing Passwords"*).

8.4 Setting the Security Options

8.4.2 Setting the Login Banner

The System Administrator has the ability to display a text banner prior to allowing a user into the main MPM screen. This banner could be used to display information such as copyright or security notices, conditions and responsibilities of using the software, or global announcements.

Once enabled, the banner will display every time the user logs in. Selecting OK will take the user to the main MPM screen. Selecting Cancel will close MPM and return the user to their desktop.

Procedure

1. From the Security window, open the Tools menu and select Login Banner.
2. Check the Enable Login Banner box to activate the banner.
3. Type a text title into the Title Bar Label field. This field allows a maximum of 36 characters.
4. Type your banner information into the Banner Description field. This field is limited to 100 lines with 78 characters per line.

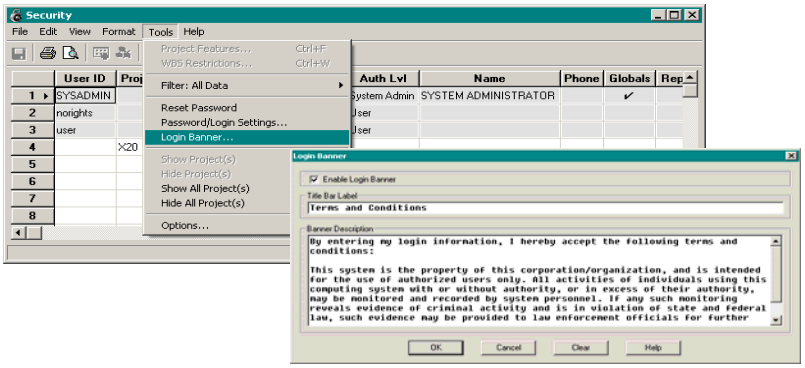


Figure A. *Login Banner title bar and description fields.*

5. The next time you log into MPM, you will see the banner directly after entering your password and before you get to the Menu Manager (See Figure B).

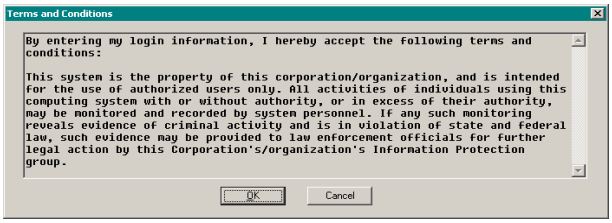


Figure B. *Example of Login Banner view on startup.*

8.5 Adding a User

In the Security window, each user is represented by a row with a gray background. You can add up to 300 users. When you add users to MPM, you can give them access to features that apply to all projects. After adding a user, you can assign the user access rights to individual projects. Assigning projects to a user is described in section *8.7. Giving Users Access to Projects*.

Note: The number of users that can be added into the system is specified in your MPM License.

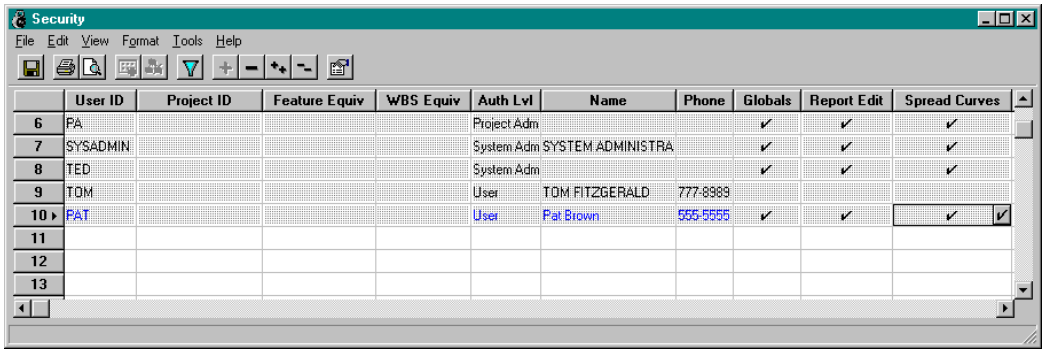


Figure A. *Each user is represented by a row with a gray background.*

Procedure

To add a user:

1. Place the cursor in the User ID field in the first blank row.
2. Enter a User ID.

   The User ID can be up to eight characters. Do not include spaces.
3. Select an Authorization level:

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

4. (Optional) If you wish, enter the user's name and phone number.

   These are both free-form fields.

5. Check the functional areas of MPM that you want the user to have access to:

   - **Globals**. A user with Globals privileges has access to all applications on the Globals tab in the Menu Manager window. 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 data displayed in a report. Without this access, users can run reports they have access to, but not modify them in the Report Viewer.
   - **Spread Curve**. A user with Spread Curve privileges can create custom spread curves. Users without this access can apply spread curves to baseline estimates and ETCs to which they have been granted access, but cannot create custom spread curves.
   - **OLAP Process.** A user with OLAP Process privileges can process OLAP cubes.

   If you assigned the user a System Administrator authorization level, all three functional areas are automatically checked.

6. Save the user information by doing one of the following:

   - Select another row.
   - From the File menu, choose Save.
   - Press Ctrl+S.

8.6 Changing and Resetting a Password

Changing a Password

When you create a new user, MPM automatically assigns the user a default password of PASSWORD. For a new user, or for a user who has had their password reset by the SYSADMIN, the password will have to be changed on their first login regardless of the expiration setting. Only the user can change his or her password.

To change a password:

1. From the Menu Manager window, click Tools » Change Password.
2. Enter your old password.
3. Enter your new password.
4. Enter your new password again to verify that you entered it correctly.
5. To confirm the change, choose Yes.

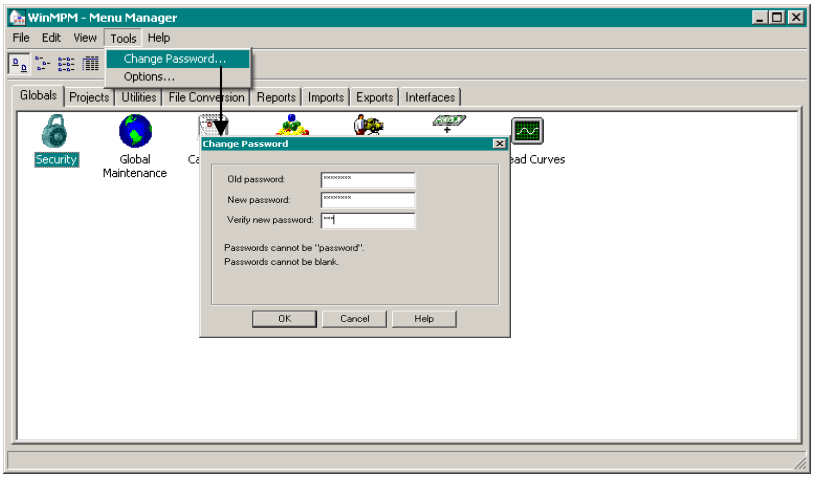


Figure A. *Users can change their passwords.*

Resetting a User's Password

If a user forgets his password, the SYSADMIN, and only the SYSADMIN, can reset the password to PASSWORD. A user other than the SYSADMIN, even though he is assigned the System Admin authority level, cannot reset passwords.

To reset a user's password to PASSWORD:

1. From the Tools menu in the Security window, select Reset Password.

   MPM asks you to confirm the reset.

2. To confirm the reset, choose Yes.

Note: The number of changes allowed before a user may reuse the same password is set by the SYSADMIN in the Password|Login Settings dialog box.

8.7 Giving Users Access to Projects

After you have added a user to the Security grid, you can assign one or more projects to the user. By default, when you assign a project to a user, the user has access to all features and WBS elements associated with the project. However, you can control the user's access to every MPM feature that can be applied to a project, and to every WBS element in a project.

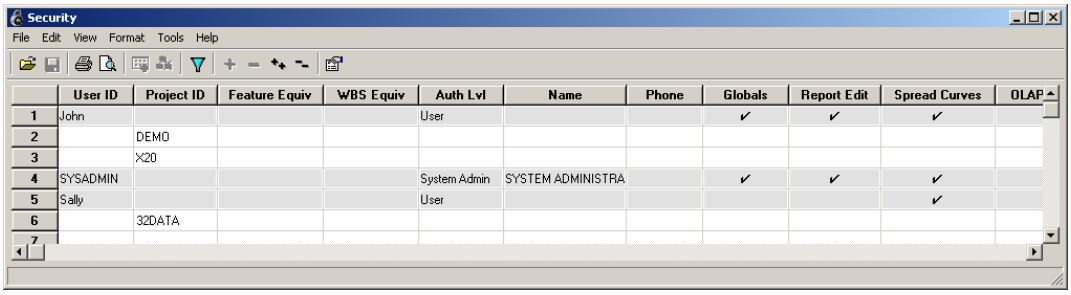


Figure A. *After you have added a user to the Security grid, you can assign one or more projects to the user.*

System administrators automatically have access to all projects and, therefore, you cannot assign projects to a system administrator.

Equivalent Users

If many users will have the same access privileges to a project, you can create Equivalent Users that define access to features and WBS elements. You can then assign the Equivalent User Rights to others using the Feature Equiv and WBS Equiv fields.

Sub-Topics

This topic covers the basic steps required to assign a project to a user. Information on restricting access to features and WBS elements is covered in the following sub-topics:

8.7.1 Restricting Access to Project Features

8.7.2 Restricting Access to WBS Elements

Using Equivalent Users to assign access privileges is described in topic *8.7.3 Restricting Access Using Equivalent Users*.

Procedure

To give a user access to a project:

1. Select a user and do one of the following:
   - Press the Insert key.
   - From the Edit menu, select Insert Project.

   MPM inserts a blank row below the user row and displays <Required> in the Project ID field.
2. Select a project from the drop-down list.

   If the Automatic Project Features option is set, MPM displays the Project Features dialog box. For information on restricting project features, see topic *8.7.1 Restricting Access to Project Features*.

   For now, click the OK button. This gives the user access to all privileges.
3. To save the project entry, do one of the following:
   - Click on another row.
   - Press Ctrl+S.
   - From the File menu, choose Save.

8.7 Giving Users Access to Projects

8.7.1 Restricting Access to Project Features

When you first assign a project to a user, the user has access to all project features. As a result, the user can perform all operations on a project such as editing WBS information and changing estimates. You can restrict a user's access to any part of a project, and consequently limit what he is able to view and change.

You restrict access to the project features using the Project Features dialog box shown in Figure A, or by assigning a Feature Equivalent user to the project. For information on using Feature Equivalent users, see topic *8.7.3 Restricting Access Using Equivalent Users*.

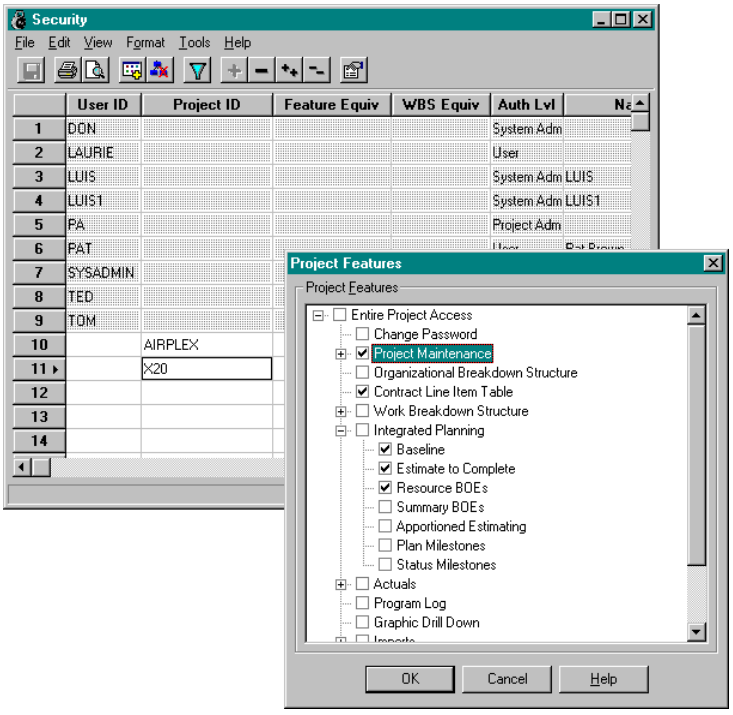


Figure A. *You can restrict access to all features for each project.*

Procedure

To restrict a user's access to project features:

1. Select a project and do one of the following:
   - Click the Project Features button  in the Toolbar.
   - From the Tools menu, select Project Features.

   MPM displays the Project Features dialog box shown in Figure A.
2. Select the features you want the user to have access to.

   The Project Features dialog box works in the same way as other hierarchy dialog boxes in MPM.
   - Items preceded by a ⊞ sign can be expanded by clicking on the ⊞ sign.
   - Items preceded by a ⊟ sign can be collapsed by clicking on the ⊟ sign.
   - Only items with check marks are selected.
   - If a collapsed item is selected, its children are included in the selection.
   - If an expanded item is selected, its children are not automatically included. They must be selected individually.

   If you do not select any items in the Project Features dialog box, the user will have access to all features.
3. To save the selections, choose OK.

8.7 Giving Users Access to Projects

8.7.2 Restricting Access to WBS Elements

When you first assign a project to a user, the user has access to all WBS elements in the project. In large projects, this may represent a large amount of information that can take some time to display and process. To speed processing, you can limit a user's view of the WBS structure to only the elements he needs to see.

You can restrict access to the WBS elements using the WBS Restrictions dialog box shown in Figure A, or by assigning a WBS Equivalent User to the project. For information on using WBS Equivalent Users, see topic *8.7.3 Restricting Access Using Equivalent Users*.

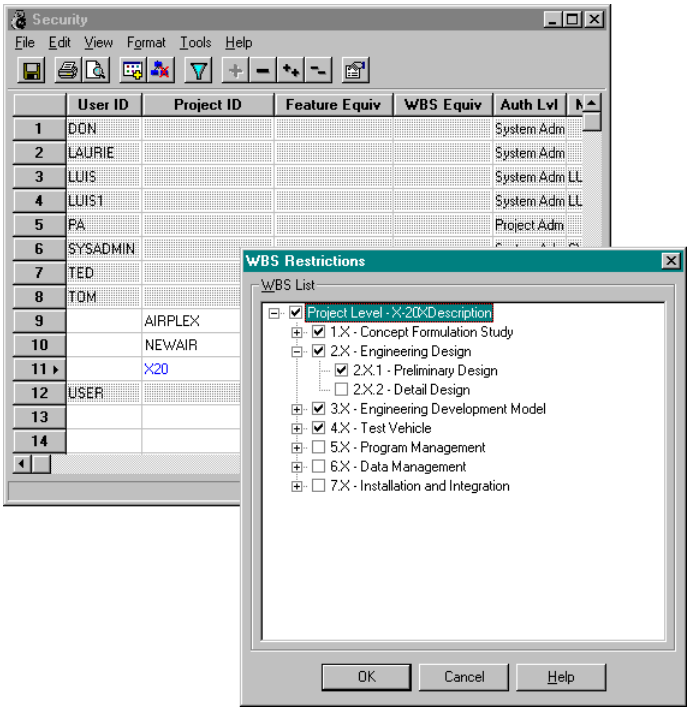


Figure A. *You can restrict access to WBS elements.*

Procedure

To limit access to WBS elements:

1. Select a project and do one of the following:
   - Click the WBS Restrictions button  in the Toolbar.
   - From the Tools menu, select WBS Restrictions.

   MPM displays the WBS Restrictions dialog box shown in Figure A.
2. Select the WBS elements you want the user to have access to.

   The WBS Restrictions dialog box works in the same way as other hierarchy dialog boxes in MPM.
   - Items preceded by a ⊞ sign can be expanded by clicking on the ⊞ sign.
   - Items preceded by a ⊟ sign can be collapsed by clicking on the ⊟ sign.
   - Only items with check marks are selected.
   - If a collapsed item is selected, its children are included in the selection.
   - If an expanded item is selected, its children are not automatically included. They must be selected individually.

   If you do not select any items in the WBS Restrictions dialog box, the user will have access to all WBS elements.
3. To save the selections, choose OK.

8.7 Giving Users Access to Projects

8.7.3 Restricting Access Using Equivalent Users

If you want to give the same access privileges to a number of users, you can use Equivalent Users to speed the process. After you assign project features and WBS elements to a user, you can select the user in the Feature Equiv and WBS Equiv fields. The target user then shares the same access privileges as the Equivalent user.

An Equivalent User is no different than any other user. You create them the same way and assign access privileges the same way. However, an Equivalent User must be assigned a User authorization level. Generally, an Equivalent User's distinguishing feature is its name. For example, you might use the name of a project or department.

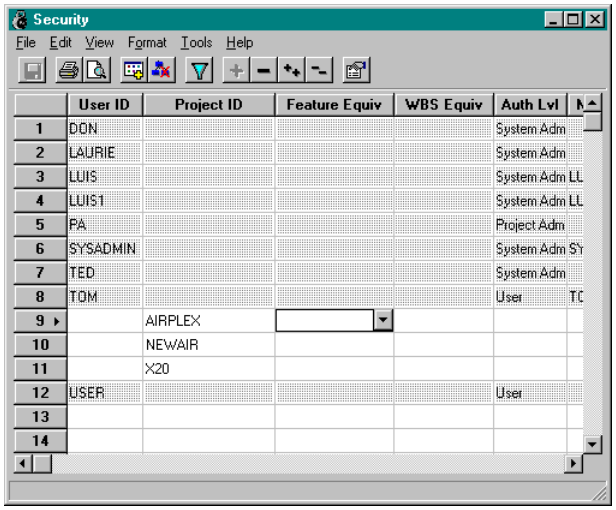


Figure A. *Assigning Feature and WBS equivalents is a fast way to restrict user access.*

Special Guidelines

- When you assign a Feature or WBS Equivalent to a project, it overrides any other access restrictions.

Using Feature Equivalents

To apply a Feature Equivalent to a project:

1. Select the project.
2. From the Feature Equivalent drop-down list box, select a user.

   Only users currently assigned to the same project with an authorization level of User will be listed.

Using WBS Equivalents

To apply a WBS Equivalent to a project:

1. Select the project.
2. From the WBS Equivalent drop-down list box, select a user.

   Note only users currently assigned to the same project with an authorization level of User will be listed.

8.8 Maintaining Security Assignments

As a system administrator or project administrator, you may be responsible for updating project information, deleting projects and users, and resetting passwords. Your authorization level will determine the extent of your maintenance privileges.

Deleting Projects

Both system and project administrators can delete projects.

If you are a system administrator, you can delete projects assigned to any project administrator or user. If you are a project administrator, you can delete only projects to which you have been granted access. Deleting a project removes a user's access to that project.

To delete a project:

1. Select the project row by clicking on the row number.

   You can select more than one user by dragging down the row numbers.

2. Do one of the following:

   - Press the Delete key.
   - From the Edit menu, select Delete Project(s).

   MPM prompts you to confirm the delete.

3. To confirm the delete, choose Yes.

Deleting Users

Only system administrators can delete users. When you delete a user, MPM deletes the projects listed under the user. You cannot delete a user if the user is currently logged in to MPM, or if the user is being used as an Equivalent User. The default SYSADMIN user cannot be deleted.

To delete a user:

1. Select the user row by clicking on the row number.

   You can select more than one project by dragging down the row numbers.

2. Do one of the following:
   - Press the Delete key.
   - From the Edit menu, select Delete User(s).

   MPM prompts you to confirm the delete.
3. To confirm the delete, choose Yes.

Deleting Cells

You can delete one or more cells in a row.

To delete cell(s):

1. Select the cells by dragging across them with the mouse.
2. Do one of the following:
   - Press the Delete key.
   - From the Edit menu, select Delete Cell(s).

   If prompted, confirm the delete.

8.9 Changing the Security Window Display

There are a number of different ways you can change the display.

Filtering the Display

You can filter the users and projects displayed by specifying a text string. The text string can be applied to any combination of the fields. To display all users and projects, select the All Data option from the Tools|Filter menu.

To filter the display:

1. Do one of the following:
   - Click the Filter button  in the Toolbar and choose an option from the dialog box displayed.
   - From the Tools menu, select the Filter command and select an option from the submenu.

   MPM displays the Filter dialog box shown in Figure A.

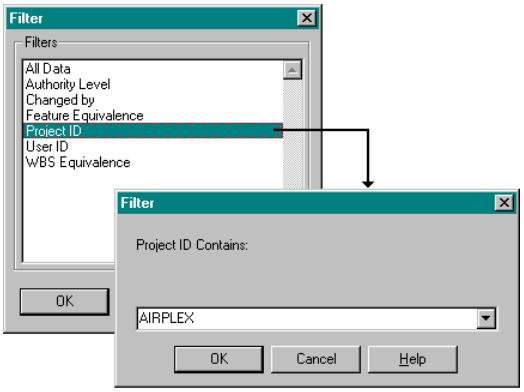


Figure A. *Enter a text string for the filter.*

2. Enter a text string that will be used as the filter criteria and click OK.

   MPM ignores upper and lower case letters when it searches for the text string. It must find the entire string.

Display and Hide Columns

You can display and hide the columns using the Column Hide feature under the Format menu.

Changing the Width of the Columns

You can change the width of the columns manually by dragging the vertical bar between the column headings, or by using the Column Width command under the Format menu. The Best Fit option in the Column Width dialog box automatically sizes the columns. For information on these features, see the *Getting Started* manual.

Hiding and Displaying Projects

You can hide and display all projects, or the projects for a specific user. To hide and display the projects, you can use the Toolbar buttons, or the commands under the Tools menu. The buttons and commands are described below.

Button	Command	Description
	Show Project(s)	Shows projects for all selected users
	Hide Project(s)	Hides project(s) for all selected users
	Show All Projects	Shows all projects regardless of selection
	Hide All Projects	Hides all projects regardless of selection

Printing and Previewing

As with other MPM windows, you can preview and print a tabular report of the Security window using the Print Preview and Print commands under the File menu.

For a complete explanation of the print and preview features, see the *Getting Started* manual.

9
Maintaining the MPM Software

9.1 Introduction to Maintaining the MPM Software

Your company may be using MPM to track major projects costing millions of dollars. It is important that you maintain the software and consistently back up the data. MPM provides several tools to assist you including:

- A data recovery tool
- A report that lets you check the validity of summary data
- File version number control

Each of these is described in the following topics:

9.2 Backing Up MPM Project Data

You should arrange a systematic backup procedure for MPM project data. We recommend daily and weekly backups.

Even though your organization may have a system-wide backup procedure that is administered by a LAN or system administrator, individual users should always maintain a backup of their current project data.

Deltek recommends that you keep one full backup onsite and one full backup offsite.

All MPM users should be logged out of MPM during a backup session to ensure all files are backed up. If a backup is performed while some files are open, those files will be excluded from the backup.

Backups are especially important when running functions such as Project Date Shift, Estimate Adjust, and Estimating. If you should have a failure part way through these operations, the database would be corrupted and you would have to restore the data from a backup.

See *Backing Up MPM Files* in the *MPM Getting Started Guide* for more information on backing up project, global, system and user files.

9.3 Recovering Data

MPM provides a data file recovery feature that can repair files whose indexes become corrupt. If the data file recovery feature does not fix the problem, you will need to restore all project files from a backup. Regardless of the recovery process, be sure all users are logged off MPM before beginning the recovery.

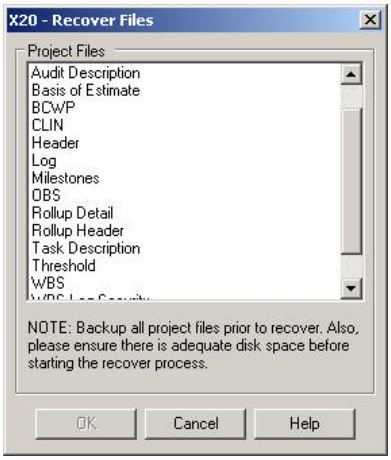


Figure A. *You can recover one or more files whose indexes have become corrupted.*

What Happens During a Recovery

When you run the Recover Files function, MPM creates a temporary file for each file you select as follows:

Recoverable Project Data Files

Apportioned Estimates	*projname*Z.APP
Audit Trail Documentation	*projname*G.ATX
Audit Trail Description	*projname*C.AUD
Basis of Estimate	*projname*E.BOE
BCWP	*projname*I.BWP
CLIN	*projname*R.CLN
Header	*projname*T.HED
Log	*projname*Q.LOG
Milestones	*projname*A.MIL
OBS	*projname*B.OBS
Rollup Header	*projname*U.RRH
Rollup Detail	*projname*W.RRD
Task Description	*projname*D.WTD
WBS Thresholds	*projname*X.WTH
WBS	*projname*P.WBS
WBS Leg Security	*projname*N.USR
Weekly Data	*projname*F.WRD

Global Files

Burden Templates	TEMPLATE.LIB
EOC Codes	EOCCODES.LIB
Fiscal Calendar	CALENDAR.FSC
Holiday Calendar	CALENDAR.HOL
Resource Codes	RESOURCE.LIB
Resource Rates	RATE.LIB

During the recovery process, MPM first copies your designated files to a temporary file MPM*.TMP). The original file is retained intact while the temporary file is updated.

If for any reason the processing is aborted without completing, you can correct the error condition (for example, lack of disk space) and begin the recovery again. If the recovery is successful, MPM copies the temporary file back to the original file and then deletes the temporary file. MPM does this for each file.

To recover corrupted Project or Global data files:

1. From the Menu Manager window:
    a. **Project data files** — select the Projects tab and open the Project Maintenance window.
    b. **Global data files** — select the Globals tab and open the Global Maintenance window.
2. From the Tools menu, select Recover Files.

    MPM displays the Recover Files dialog box.
3. Select the file(s) you want to recover from the File selection list box.

    To select more than one file, use the Shift+Click and Ctrl+Click combinations.
4. To begin the recovery process, choose OK.

Recovering System Files

The Recover Files command under the Tools menu can recover project and global files only. It cannot recover the following system files:

- PROJ.DAT (Project List)
- GLOBAL.DAT (Global List)
- MPMUSERS.DAT (User List)

To recover the system files, you must use the Recover System Files utility (i.e., the MPM621.EXE file). The utility is independent of MPM and you run it from the Start|Run menu. Before you begin the recovery process, be sure to back up the system files and ensure that you have enough disk space available for the recovered files.

1. Click the Start button and select Run.
2. In the Open box, type the drive, directory, and filename of the Recover System Files utility (for example, C:\DeltekMPM\MPM621.EXE).

   MPM displays the Recover System Files dialog box (See Figure A).

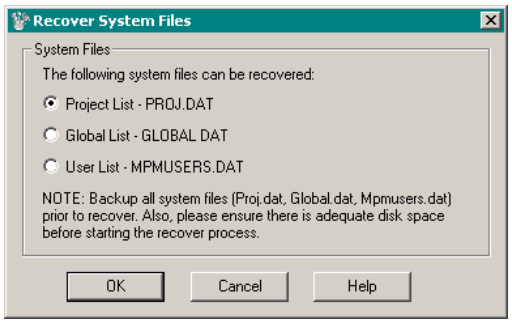


Figure A. *Recovery System Files.*

3. Click the Option button for the file you want to recover. You can recover only one file at a time.
4. To start the recovery process, click OK.

Upon completion of the recovery process, a message is displayed indicating whether the recovery was successful or unsuccessful.

- If the recovery is successful, the message indicates the location of the recovered file.
- If the recovery is unsuccessful, the message indicates the reason for the failure (for example, file locked, file corrupted, lack of disk space).

Repeat this process for each system file you wish to recover.

9.4 Comparing Detail Data

There is a report that lets you compare detail data with EOC rollup and Summary rollup data. The report helps you verify that all estimate and actuals data for a project are in sync.

When you run the report, MPM compares BCWS, ACWP, and ETC values stored in the detail records with the values stored in the EOC or Summary rollup records.

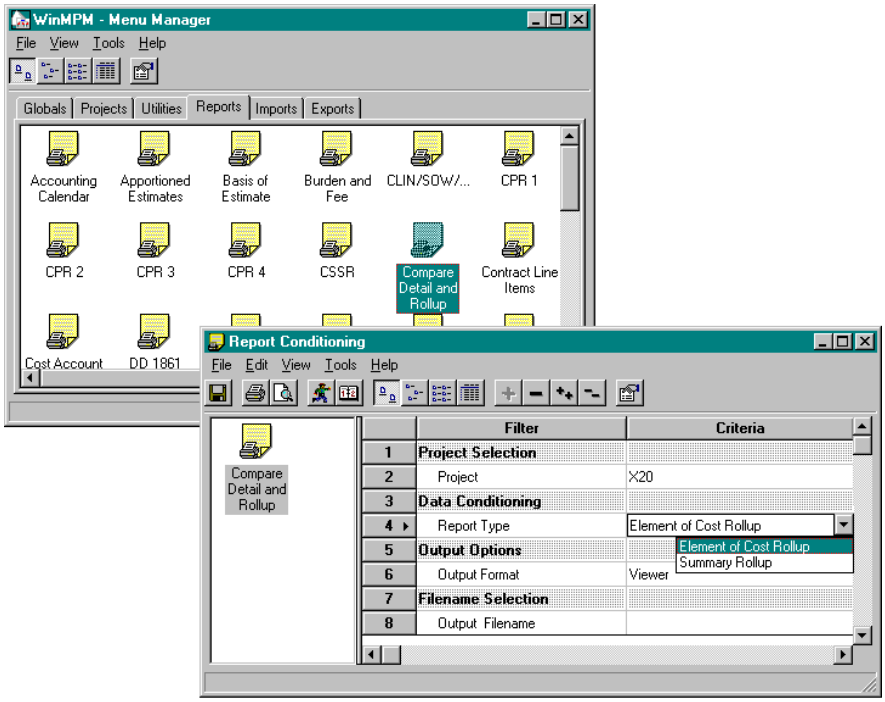


Figure A. *You can choose to run the Compare Detail and Rollup report against EOCs or summaries.*

Procedure

The procedure for running the report is described briefly below. For a more complete discussion of using report conditioning, see *Chapter 15: Reports* in the *MPM Projects* manual.

1. Select the Report tab in the Menu Manager window.
2. Select the Compare Detail and Rollup report.

   MPM displays the Report Conditioning dialog box shown in Figure A.
3. Select a project.
4. Select the report type, either Element of Cost Rollup or Summary Rollup.
5. Select the output format.
6. Select the output file name if appropriate.
7. To run the report, click the Run button  in the Toolbar.

9.5 Checking File Version Numbers

As you download updated files, you may want to check the dates on the files and the version numbers. You can do this directly from the Menu Manager window using the Details view shown in Figure A.

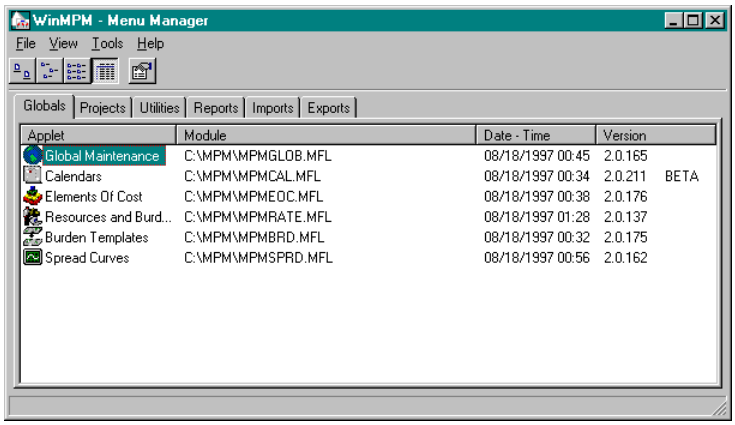


Figure A. *The Details view of the Menu Manager window shows you date, time, and version information about each file.*

To switch to the Details view, do one of the following:

- Click the Details button  in the Toolbar.
- From the View menu, select Details.

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