PLANNING AND SCHEDULING USING MICROSOFT® PROJECT 2010

BY

PAUL EASTWOOD HARRIS
PLANNING AND SCHEDULING USING MICROSOFT® PROJECT 2010

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SUMMARY
The book was written so it may be used as:
- A training manual for a two-day training course, or
- A self-teach book, or

The screen shots for the book are mainly taken from Microsoft Project Professional 2010 but the book may also be used to learn Microsoft Office Project Standard 2010.

The book has been written to be used as the basis of a two-day training course and includes exercises for the students to complete at the end of each chapter. Unlike many training publications, this course book may then be used by the students as a reference book.

This publication is ideal for people who would like to quickly gain an understanding of how the software operates and how the software differs from Oracle Primavera Project Manager, P3, SureTrak and Asta Powerproject thus making it ideal for people who wish to convert from these products.

CUSTOMIZATION FOR TRAINING COURSES
Training organizations or companies that wish to conduct their own training may have the book tailored to suit their requirements. This may be achieved by removing, reordering or adding content to the book and by writing their own exercises. This book is available in both A4 spiral bound, which lies flat on the desk for training and/or self–teaching, and in B5 paperback as a reference manual. Please contact the author to discuss this service.

AUTHOR’S COMMENT
As a professional project planner and scheduler I have used a number of planning and scheduling software packages for the management of a range of project types and sizes.

The first books I published were user guides/training manuals for Primavera SureTrak and P3 users. These were well received by professional project managers and schedulers, so I decided to turn my attention to Microsoft Project 2000, 2002, 2003, 2007 and now Microsoft Office Project 2010. This book follows the same proven layout of my previous books. I trust this book will assist you in understanding how to use Microsoft Project on your projects. Please contact me if you have any comments on this book.

SPECIAL THANKS
I would like to thank Martin Vaughn for reviewing my draft book and making valuable comments that I have used to improve the quality of this publication.
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8 FORMATTING THE DISPLAY

This chapter covers the following topics, which are used to format the on-screen display which are also reflected in print preview and printouts:

<table>
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<tr>
<th>Topic</th>
<th>Menu Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inserting Columns</td>
<td>• Highlight a column and strike the Ins Key, or</td>
</tr>
<tr>
<td></td>
<td>• Select Format, Columns group, Insert Column, or</td>
</tr>
<tr>
<td></td>
<td>• Right-click and select Insert Column.</td>
</tr>
<tr>
<td>Deleting Columns</td>
<td>• Highlight a column and strike the Delete key, or</td>
</tr>
<tr>
<td></td>
<td>• Select Format, Columns group, Column Settings, Hide Column, or</td>
</tr>
<tr>
<td></td>
<td>• Right-click and select Hide Column.</td>
</tr>
<tr>
<td>Adjusting the Width and Moving Columns</td>
<td>• Grab the right header border line with the mouse and drag or resize.</td>
</tr>
<tr>
<td>Table – formatting the columns of data</td>
<td>• View, Data group, Tables, More tables… or</td>
</tr>
<tr>
<td></td>
<td>• Select a column and right-click to insert, or</td>
</tr>
<tr>
<td></td>
<td>• Right-click on a column header and select Field Settings.</td>
</tr>
<tr>
<td>Formatting One Column</td>
<td>• Right-click on the column title and select Field Settings.</td>
</tr>
<tr>
<td>Format Bars</td>
<td>• Open the Bar Styles form by clicking anywhere in the Gantt Chart area, or</td>
</tr>
<tr>
<td></td>
<td>• Format, Bar Styles group, or</td>
</tr>
<tr>
<td></td>
<td>• Format, Gantt Chart Styles group, or</td>
</tr>
<tr>
<td></td>
<td>• The Gantt Chart Wizard.</td>
</tr>
<tr>
<td>Formatting Time Units</td>
<td>• Select File, Options, Advanced, Default options for this project:</td>
</tr>
<tr>
<td>Row Height</td>
<td>• Drag one or more selected rows with the mouse, or</td>
</tr>
<tr>
<td></td>
<td>• Edit the Table, or</td>
</tr>
<tr>
<td></td>
<td>• Wrap Text command found on the Format, Columns group, Column Settings, Wrap Text which automatically adjusts the row height to fit the text into the available column width.</td>
</tr>
<tr>
<td>Timescale</td>
<td>• Zoom Slider at the bottom right-hand side of the screen, or</td>
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<tr>
<td></td>
<td>• Double-click on the timescale opening the Timescale form, or</td>
</tr>
<tr>
<td></td>
<td>• Use the Zoom buttons.</td>
</tr>
<tr>
<td>Gridlines</td>
<td>• Format, Format group, Gridlines, Gridlines…</td>
</tr>
<tr>
<td>Relationship Lines</td>
<td>• Format, Format group, Layout</td>
</tr>
<tr>
<td>Format Text Font</td>
<td>• Select the text to be formatted and right-click.</td>
</tr>
</tbody>
</table>

The formatting is applied to the current View only and is automatically saved as part of the View when another View is selected. Views are covered in more detail in the VIEWS AND DETAILS chapter.
8.1 Formatting the Columns

Microsoft Project has some column formatting functions which are intended to make it simple to add and format a new column.

There are two methods of formatting the columns:

- **Inserting, editing and deleting columns of data using the Column Definition form.**
- **Tables** – A table may be created or an existing table edited with required columns using the Table Definition form. You may set up the data columns in the way you want to see the information on the screen and in printouts. Therefore Tables may be created, edited and deleted and you may select which one is used to display the data with each View. One Table may be used with more than one View.

As time progresses with the option File, Options, Advanced, Automatically add new views, tables, filters, and groups to the global activated, a project that is created from the Blank Project will have many Views, Tables and Filters from old projects that may be irrelevant to the current project and it is suggested this be turned off.

8.1.1 Understanding Custom Fields

A Custom Field is a task or resource field that may be renamed and user defined data entered in columns. These fields may be formatted only to accept specific data such as dates, costs, durations or text. These are covered in more detail in the TABLE AND GROUPING TASKS chapter.

8.1.2 Inserting Columns

Insert a column by clicking on the column title where you require the new column. This will highlight the column. To insert a new column:

- Select Format, Columns group, Insert, Column… or
- Hit the Ins Key, or
- Right-click and select Insert Column…

Then select the column from the drop-down list. –

- You may immediately start typing, which will take you to the appropriate position in the list.
- In Microsoft Project 2010, when a column name that does not exist is typed into the header, then an existing Text column will be renamed with the new title. Therefore the inserted column is a renamed text Custom Field.

8.1.3 Format Columns Group

The Format, Columns group has the following functions:

- – Aligns the text to the left, center or right,
- – Wraps Text and increases the row height so all text is visible,
- – Column Settings has:
  - – Hide Column which hides a column but does not delete the data.
8.1.4 Deleting Columns
Delete a column by highlighting the column or by clicking on the title. Then:
- Select Field Settings, Data Type, Display Add New Column, this will result in the loss of data if a field is changed, say for example from Text to Cost.
- Display Add New Column is a function new to Microsoft Project 2010. A column may be permanently displayed on the right-hand side of the screen titled Add New Column and clicking on this column will open up a drop-down box for the selection of the data type. This option will display or hide this column.
- Insert Column inserts a new column.

8.1.5 Adjusting the Width of Columns
You may adjust the width of the column either manually or automatically.
- For manual adjustment, move the mouse pointer to the right vertical line of the column in the header. A mouse arrow will then appear and enable the column to be adjusted.

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
<td>3 days</td>
<td>1 Nov</td>
<td>3 Nov</td>
</tr>
<tr>
<td>Task 2</td>
<td>2 days</td>
<td>4 Nov</td>
<td>5 Nov</td>
</tr>
</tbody>
</table>
- For automatic adjustment, once again position the mouse pointer to the right vertical line of the column in the header and double left-click the mouse. The column width will automatically adjust to the best fit.

8.1.6 Moving Columns
Columns in a Table may be moved by clicking on the column header. The mouse pointer will change to a and the column may be dragged to a new location.
8.1.7 Formatting Columns Using the Table Function

- Select View, Data group, Tables, and select from the list of predefined Tables listed on the menu. Select the table you want to display:

- Select View, Data group, Tables, More Tables... to open the More Tables form:

- New... – To create a new Table.
- Edit... – To edit the highlighted Table.
- Copy... – To copy the highlighted Table.
- Organizer... – Opens the Organizer form which enables you to copy a Table from one opened project to another or to the Global Project.
- Apply – Applies the selected Table making it visible on the screen.
When you select New, Edit or Copy you will be presented with the Table Definition form:

- Click on the Show in menu box to display the Table in the View, Data group, Tables menu.
- The columns of data will be displayed on screen from left to right in the same order as the rows in the form.
- Highlight a row and then you may use the Cut Row, Copy Row, Paste Row or Delete Row buttons.
- The data to be displayed may be selected from the drop-down box in the Field Name column.
- Align Data and Width are used for formatting the data in the columns.
- The Microsoft Project Field Name may be replaced by typing your own title in the Title box.
- The Date format: drop-down box is used to change the format for this table only.

! This is a very useful function to ensure that other users of the project file see the intended date format and not their system default date format.

- Row Height: sets the default height of all the rows in this table. A row height may be changed by dragging the cell boundary line once a task has been created.
- Lock first column prevents the first column from scrolling and is useful when the first column contains the Task Name.
- Auto-adjust header row heights will automatically adjust header row heights to the width of the column.
- Show 'Add New Column' interface hides or displays the Add New Column column (new function to Microsoft Project 2010) on the right-hand side of the columns in all Views, used for adding new columns.

To save a table for use in all your new projects, copy the table to the Global.mpt template using File, Info, Organizer and select the Tables tab.

You may also copy a Table to another project or rename a Table using File, Info, Organizer and selecting the Tables tab.
Applying a Table to a View will permanently change the View unless the file is not saved. The Gantt Chart View has the Entry Table assigned by default.

8.2 Formatting Time Units

Select File, Options, Advanced, Default options for this project:

- The Display options for this project: always specifies the time units, for example day, dy or d.
- Uncheck the Add space before label check box to remove a space between the value and label in date columns which allows a narrower Duration column to be displayed.

To make the Duration column width narrow, Days: should be set to d and the Add space before label unchecked. The column header could also be edited to Dur to ensure the header is also narrow. This will provide more space for other data.

8.3 Formatting the Bars

Microsoft Project has several options for bar formatting:

- All the bars may be formatted to suit user definable parameters, or
- Individual bars may be formatted.

This section will cover the formatting of all the bars and the next section will cover formatting individual bars.

Most formatting only affects the current View.

All bars in the Gantt Chart may be formatted to suit your requirements for display by:

- Opening the Bar Styles form by double-clicking anywhere in the Gantt Chart area, or
- Format, Bar Styles group, or
- Format, Gantt Chart Styles group, or

- The Gantt Chart Wizard, which is a simple way to format bars.

Many of the formatting menu options are designed for a schedule created from a Microsoft Project 2010 template. Some menu options will not operate as expected if you have opened a project created in an earlier version of Microsoft Project. For example, the author found the baseline bar was placed on top of the current schedule bar using the Ribbon commands. Users may have to use the manual method of formatting bars by opening the bars form.
8.3.1 Formatting All Task Bars Using the Bar Styles Form

To format all the bars you must open the Bar Style form by:

- Double-click anywhere in the Gantt Chart area, but not on an existing bar, as this will open the Format Bar form for formatting an individual bar, or
- Select Format, Bar Styles group, Format, Bar:

The following notes are the main points for using this function. Detailed information is available in the Help facility by searching for “Bar styles dialog box.”

- Each bar listed in the table will be displayed on the bar chart.
- Bars may be deleted with the button, pasted using the button and new bars inserted using the button.
- The Name is the title you may assign to the bar and is displayed in the printout legend. To hide the bar on the legend precede the Name with an *. There are many bars with an * by them as default, as displayed in the picture above.
- The appearance of each bar is edited in the lower half of the form. The bar’s start point, middle and end points may have their color, shape, pattern, etc. formatted.
- When a new Milestone is created, the From and To must both be set to Task Finish.
- Show For … Tasks allows you to select which tasks are displayed, similar to a filter. More than one task type may be displayed by separating each type with a “,”. Bar types not required are prefixed with “Not.” For example, the Normal,Rolled Up,Split,Not Summary bar would not display a bar for a summary task. Should you leave this cell blank then all task types will be displayed in this format.

The bars may be placed on one of four rows numbered from 1 to 4, top to bottom. If multiple bars are placed on the same row then the bar at the top of the list will be drawn first and the ones lower down the list will be drawn over the top, thus potentially hiding the ones below in the list.
• From and To allow you to establish where the bars start and finish. The picture below shows how to format Total Float, Free Float and Negative Float. Unlike some other planning and scheduling software, the Negative Float is drawn from the Start Date of a task and not the Finish Date and therefore a separate bar is required for Negative and Positive Float.

The Negative Float bar is not automatically displayed by any Microsoft Project function, nor is it included in any View. This is one of the most important bars to show when a project finish date has been set using a constraint and this must always be manually created. You may wish to consider recording a macro to create the bar and this can be run when a negative float bar is required. Recording a macro is covered in para 23.15.

• The Text tab allows you to place text inside or around the bar:

It is not possible to format the font in the Bar Styles form. Select Format, Format group Text Styles to open the Text Styles form and select the bar text font.

To show Critical and Non-critical tasks, the bars should be formatted as shown below, with particular attention paid to the Show For … Tasks column. Non-critical Tasks are formatted as Normal, Non-critical and Critical Tasks as Normal, Critical.
8.3.2 Format Bar Styles Group Menu

Select the Format, Bar Styles group to view this group of commands:

- **Format** has two options:
  - **Bar** formats of one or more selected bars and is covered in the next section.
  - **Bar Styles** opens the Bar Styles form as discussed above to format all bars.

- The other buttons in the Format, Bar Styles groups will hide or display the bars as indicated, but these may not give the expected results with a project created in an earlier version of Microsoft Project.
  - **Critical Tasks** shades the Critical Tasks red.
  - **Slack** displays the Free Float and **NOT** Total Float bar.
  - **Late Tasks** displays tasks that are late compared to the **Status Date**.
  - **Baseline** displays the Baseline bar.
  - **Slippage** displays how much time the task is behind the Baseline.

Many of the formatting menu options are designed for a schedule created from a Microsoft Project 2010 template. Some menu options will not operate as expected if you have opened a project created in an earlier version of Microsoft Project. For example, the author found the baseline bar was placed on top of the current schedule bar using the Ribbon commands. Users may have to use the manual method of formatting bars by opening the bars form or using the Gantt Chart Wizard.

8.3.3 Gantt Chart Styles Group Menu

Select Format, Gantt Chart Styles group to see the option for coloring bars. This function is new to Microsoft Project 2010.

The button at the bottom right-hand side opens the Bar Styles form.

See warning above.
8.3.4 Formatting Bars Using the Gantt Chart Wizard

The Gantt Chart Wizard is a popular function for people who used earlier versions of Microsoft Project. The wizard will overwrite any formatting you may have created. This is a straightforward method of formatting your bars and often this is the best method of formatting bars. It is very simple to use but will not display the Negative Float and Free Float bars. These will have to be added manually using the Bar Style form as described in the Bar Styles form section.

If the Gantt Chart Wizard button is not on your Microsoft Project default toolbars then this may be added to either the Quick Access Toolbar or the Ribbon.

The author found that projects formatted with the Gantt Chart Wizard and projects created in earlier versions of Microsoft Project will have formatting that is incompatible with the Microsoft Project 2010 Format, Bar Styles group buttons. The use of the Baseline button resulted in the Baseline bar covering the current schedule bar so only the Baseline bar was visible. To resolve this issue users should either use only Gantt Chart Wizard or only the new Microsoft Project 2010 Format, Bar Styles group buttons, but not both. This issue may be rectified with software updates.

8.4 Row Height

8.4.1 Setting Row Heights

Row heights may be adjusted to display text that would otherwise be truncated by a narrow column.

The row height may be set in the Table Definition form by selecting View, Data group Tables, More Tables…. From this view select the table in which you wish to edit the row height in and click on the button. Once the Table Definition form is open select the row height from the drop-down box next to Row height:

The row height of one or more columns may also be adjusted in a similar way to adjusting row heights in Excel, by clicking on the row and dragging with the mouse:

- Highlight one or more rows that need adjusting by dragging or Ctrl-clicking. If all the rows are to be adjusted, then click on the Select All button above row number 1, to highlight all the tasks.
- Then move the mouse pointer to the left-hand side of a horizontal row divider line. The pointer will change to a double-headed arrow . Click and hold with the left mouse button and drag the row or rows to the required height.

8.4.2 Wrap Text Command

Microsoft Project 2010 has introduced a Wrap Text command found on the Format, Columns group, Column Settings, which automatically adjusts the row height to fit the text into the available column width.
8.5 Format Fonts

There are two basic options for formatting fonts:

- Either individual cells may be selected by Ctrl-clicking or dragging with the mouse and formatted, or
- The fonts of tasks that meet preset criteria, such critical tasks may be formatted using the text Styles command.

8.5.1 Format Individual Cells Font Command

The Format, Font... function from Microsoft 2007 and earlier has been replaced with a right-click option and allows you to format any selected text in selected cells, rows or columns:

- Select the text to be formatted,
- Right-click and two toolbars are opened. The upper toolbar in the picture below has four buttons that may be used for formatting individual cells:

![Format Individual Cells Font Command](image)

8.5.2 Format Text Styles

The Format, Format group, Text Styles command opens the Text Styles form and allows you to select a text type from the Item to Change: drop-down box and apply formatting to the selected item:

![Format Text Styles](image)

Text may be formatted by using any of the styles listed below:

- **All**: This is all text including columns and rows,
8.6 Format Timescale

8.6.1 Zoom Slider

The Zoom Slider was introduced with Microsoft Project 2010 and replaced the View, Zoom... function. This may be found at the bottom right-hand side of the screen and provides a simple way of scaling the timescale in the Gantt Chart and all other time scaled views such as the Calendar, Usage and Network Diagram View.

This function works differently than other scheduling software in that it changes the scale and the displayed time units at the same time and may result in some undesirable time units being displayed.

Once this function is used, your original timescale date formatting will be lost and may only be recovered with undo as this function applies its own formatting such as date formats.

The author has found that more predictable results are achieved by using the traditional Zoom In and Zoom Out functions which may be added to the Quick Access Toolbar.

8.6.2 Ribbon Menu

There are some new commands available with Microsoft Project 2010 on the Ribbon:

- The Timescale: option is a quick method of selecting the Minor Timescale, the lower line in the Timescale,
- Zoom opens a self-explanatory menu,
- Entire Project zooms the timescale to fit the whole project Gantt Chart to fit in the available space,
- Selected Tasks zooms the timescale to fit the bars of selected tasks to fit in the available space,
8.6.3 Format Timescale Command

The **Timescale** form provides a number of options for timescale display, which is located above the Bar Chart, and the shading of **Nonworking** time.

To open the **Timescale** form:
- Double-click on the timescale, or
- Add the **Timescale** button to the Ribbon or Quick Access Toolbar.

There are many options here which are intuitive and will not be described in detail.

**Top Tier, Middle Tier and Bottom Tier Tab**
- These three timescales may have different scales. These are often set at “weeks and days” or “months and weeks.” By default, the Top Tier timescale has been disabled. You may enable the three tiers together by selecting Three Tiers (Top, Middle, Bottom) from the **Timescale options, Show**.
- The **Label** will affect how much space the timescale will occupy, so the selection of a long label will result in longer Task bars.
- **Tick lines** and **Scale separator** hide and display the lines between the text.
- **Size**: controls the horizontal scale of the timescale and in association with the **Label**: are the two main tools for scaling the horizontal axis in the Gantt Chart.
- Choose the **Use fiscal year** function to display the financial year and then select the **File, Options, Calendar** tab to choose the month in which the fiscal year starts.
- Should you wish to number the time periods, for example; **Week 1, Week 2**, etc., there are a number of sequential numbering options available at the bottom of the label list.
Nonworking Time Tab

The **Nonworking time** tab allows you to format how the nonworking time is displayed. You may select only one calendar. The nonworking time may be presented as shading behind the bars, in front of the bars or hidden.

By default this is set to the Standard Calendar for each view and does not change when the Project Default Calendar is changed.

Therefore if you change the Project Base calendar in the **Project Information** and you wish to see this new calendar in all views you will have to edit all the views.
8.6.4 Format Timescale Font

To format the Timescale font, the Format, Format group, Text Styles command opens the Text Styles form:

The timescale fonts may be formatted separately by selecting the appropriate line item under Item to Change:

A very tight timescale may be achieved by making the Bottom Timescale Tier a small font as displayed in the picture.

8.7 Format Gridlines

Gridlines are important to help divide the visual presentation of the Bar Chart. This example shows Middle Tier Gridlines every week and Bottom Tier Gridlines every day.

To format the Grid Line select Format, Format group, Gridlines, Gridlines... to open the Gridlines form:

- Select the gridline from the drop-down box under Line to change:
- Select color and type from under Normal.
- Date gridlines may be set to occur at intervals using the At interval option.

Some of the titles for the gridlines are not intuitive, so some interpretation is given below:
• For Data Column and Row dividing lines, use **Sheet Rows** and **Sheet Columns**.

• For Timescale and Column Titles, use **Horizontal** and **Title Vertical**.

• Gantt Chart area, including lines for **Project Start** and **Finish Date**, **Current** and **Status Date**, are clearly described.

• **Page Breaks** will only display manually-inserted breaks. You may need to add the Insert Page Break Button on the Quick Access Toolbar.

  The earlier Microsoft Project option **Manual page breaks** check box in the Print form seemed to have disappeared from Microsoft Project 2010.

Microsoft Project has two dates that may be used to identify the **Data Date**, the date that the data has been collected for updating a project schedule. These two dates are the **Status Date** and **Current Date** which are set in the **Project Information** form:

• By default Microsoft Project displays the **Current Date** as a dark dotted vertical line but this is reset to the computer's system date each time the project file is opened. It is suggested that this line be removed using the **Gridline** form and the **Current Date** is not used to identify the **Data Date** because the software changes it every time the schedule is opened.

• The **Status Date** never changes once set and therefore it is suggested that this line should be displayed as per the picture above.

  Many laser printers will not print light gray lines clearly, so it is often better to use dark gray or black Sight Lines for better output.

8.8 **Format Links, Dependencies, Relationships, or Logic Lines**

The Links, also known as Dependencies, Relationships, or Logic Lines, may be displayed or hidden by using the **Layout** form.

• Select **Format**, **Format group**, **Layout** to open the **Layout** form and click on one of the three radio buttons under **Links** to select the style you require:

  ![Layout Form](image)

  ➢ The color of the **Link** is inherited from the color of the predecessor task.
To display Critical Path on the relationship lines you will need to format the bars with a different color. This is often set to red.

The color of the successors’ relationship lines is adopted from the task bar color. Therefore, re-formatting critical bars with the Format Bar form will also re-format the color of the successors’ relationship lines and they may no longer display the Critical Path color on the Logic Lines. This will effectively mask the Critical Path and could provide misleading results.

The highest bar in the Bars form dictates the color of the relationship line and may not be the same as the color displayed in the Gantt Chart View.

Oracle Primavera products format the relationship separately from the bars and are able to identify the Critical, Driving and Non-Driving relationships, which is not possible with Microsoft Project.

8.9 Format Colors
Colors are formatted in a number of forms and there is no single form for formatting all colors:

- **Nonworking time** colors in the Gantt Chart are formatted in the Timescale form, double-click on the timescale.
- **Text** colors are formatted in the Text Styles and Font forms, found in the Format, Format groups, Text Style.
- **Gridline** colors are formatted in the Gridlines form, also found under the Format, Format group, Gridlines.
- **Hyperlink** colors are formatted under File, Options, Advanced, Display options for this project:
- **Timescale** colors are with the File, Options, General tab, User Interface Options, Color scheme: option.
- The **Logic Lines**, also known as Dependencies, Relationships, or Links, inherit their color from the predecessor’s bar color in the Gantt Chart view and may be formatted in the Network Diagram view by selecting Format, Format group, Layout.
8.10 Workshop 6 - Formatting the Bar Chart

Background
Management has received your draft report and requests some changes to the presentation.

Assignment
Format your schedule as follows:

1. Select View, Data group, Tables, More tables... and create a new Table titled Review by copying the Entry table.
2. Add the Task Calendar column between Start and Duration columns in the Table Definition form.
3. Align Data for the Task Calendar to the left,
4. Remove the Task Mode column,
5. Check the Show in menu option.
6. Click OK to close the form and apply the Table.
7. To make the Duration Column narrower, select from the File, Options, Advanced tab, Display options for this project: heading, select to display Days as “d” and uncheck Add space before label.
8. Right-click on the Duration column, select Field Settings to open the Field Settings form and enter a Title: of Dur and click Best Fit to produce a narrow column.
9. Add the Zoom In and Zoom Out buttons to the Quick Access Toolbar and test their function.

Continued Over...
10. Double-click on the timescale; format the Middle Tier Timescale with Units: of Months with Label: of Jan ‘09 and Count: of 1 month, then format the Bottom Tier Timescale with Units: of Weeks with Label: of 26,2,…, Size: of 150% and Count: of 1 Week.

11. Select Format, Format group, Gridlines, Gridlines… and format the Gridlines with Middle Tier Columns to dotted black lines and Bottom Tier Columns to dashed black lines.

12. Click on the Format, Bar Styles, Critical Tasks to display the Critical bar.

13. Double-click in the bar chart area to open the Bar Styles form, click on the Text tab and scroll through one bar at a time and remove all text from the all the bars. Ensure you highlight the text before deleting, if you make an error use the Undo key.

14. Add a new bar titled Task Name which does not display a bar and displays the Task Name to the right of the bar, as per the picture below. If you wish to remove the Task Name from the bars then you now only need to delete the one bar.

15. Check your result with the example shown below.

16. Save your OzBuild Bid project.
12 FILTERS
This chapter covers the use of Filters to select which tasks are displayed on the screen and in printouts.

12.1 Understanding Filters
Microsoft Project has the ability to display tasks that meet specific criteria. You may want to see only the incomplete tasks, or the work scheduled for the next couple of months, or the tasks that are in-progress, assigned a specific resource, responsibility, phase, discipline, system or belong to a physical area of a project.

Microsoft Project defaults to displaying all tasks. It has a number of predefined filters available that you may use or edit and you may also create one or more of your own.

There are Task filters that apply to Task views and Resource filters that apply to Resource views. Both types are created and applied in the same way. In this chapter we will focus on Task Filters but resource Filters are created in a similar way.

There are two types of filters:
• The first is where you select a Filter which exists or has been created using the Filters form.
• The second is to create an AutoFilter which is very similar to the Excel AutoFilter (Drop-down filter) function which is based on the selected column.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Menu Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply a Filter</td>
<td>Select View, Data group, Filter: drop-down box, Select a filter from the list, or Select More Filters… for a complete list of filters.</td>
</tr>
<tr>
<td>Create or modify a Filter</td>
<td>Select View, Data group, Filter: drop-down box, More Filters… to open the More Filter form.</td>
</tr>
<tr>
<td>Turn on AutoFilter</td>
<td>Select View, Data group, Filter: drop-down box, Display AutoFilter.</td>
</tr>
<tr>
<td>Apply an AutoFilter</td>
<td>Click on the button in the column headers.</td>
</tr>
</tbody>
</table>
12.2 Understanding the Filter Menu

The Filter menu is opened from the View, Data group, Filter: drop-down box, or you may put a Filter menu item on your Quick Access Toolbar. This may not display a complete list of available filters, as this list displays only filters selected to be displayed in the Filter Definition form and more may be available when selecting the More Filters… option.

- **Custom** filters are those that the user has created or were created as part of a template.
- **Built-In** filters are those that exist as part of the Microsoft Project Global.mpt which is used to create a project when no template has been used.
- **Clear Filter** will remove all filters, both Filters and AutoFilters, and display all tasks.
- **New Filter** will open the Filter Definition form, allowing the creation of a new filter.
- **More Filters…** opens the More Filters form which will list all the filters available to the current project. Only filters with the Show in menu check box checked in the Filter Definition form are displayed in the menu above.
- **Display AutoFilter** turns on and off the ability to use AutoFilters and hides or displays the arrow in the column headers which in turn enables or disables the AutoFilter function:

![AutoFilter example]

- **Show Related Summary Rows** will display any related and hidden Summary Rows as a result of applying a filter.
12.3 Applying an Existing Filter

To apply a filter:

- Select **View**, **Data** group, **Filter**: and select a filter from the drop-down list.
- Select **View**, **Data** group, **Filter**, **More Filters**... to open the **More Filters** form.

The **More Filters** form displays all filters available in a project: some of these may not be displayed in the Filter menu.

- The two radio buttons at the top of the form allow you to select filters that operate either on a **Task** view or on a **Resource** view.
  - **Task** filters will operate using most task data such as dates, durations, text columns, number columns, outline and WBS.
  - **Resource** filters will operate on resource criteria only and not the task criteria.
- Select the required filter from the list, and
- Select either:
  - **Highlight** to shows all tasks but highlights the tasks that meet the criteria, or
  - **Apply** to display only the tasks that meet the criteria.
12.4 Creating and Modifying Filters

New filters are created from the More Filters form. This may be opened by selecting View, Data group, Filters: More Filters ...

- Click on Organizer... to open the Organizer form where you may copy a filter to and from another open project, rename or delete a filter.

- Click on:
  - New... to create a new filter, or
  - Edit... to edit an existing filter, or
  - Copy... to copy an existing filter.
• The **Filter Definition** form will be displayed. The one-line example below will only display critical tasks.

![Filter Definition form](image)

- The filter may be edited in the **Filter Definition** form to display or highlight the required tasks.
- Checking the **Show in menu** box will place the **Filter** in the menu.
- Checking **Show related summary rows** will display any associated Summary tasks.
- Select **OK** to return to the **More Filters** form.

*It is useful to place a space at the start of the filter name when creating a new filter as this will place the filter you have just created at the top of the **More Filters** form list.*
12.5 Defining Filter Criteria

The filter criteria are determined by four columns of information in the Filter Definition form:

- **And/Or** functions when you have two or more lines of data in the Filter Definition form to operate on.
- **Field Name** defines the data field you want to operate on.
- **Test** sets the criteria such as “Greater Than” or “Less Than” or “Equals.”
- **Value(s)** is/are a date, number, Yes/No or text for the Test field to operate on. If more than one value is to be considered, for example when a Test is “Between,” the two values are separated by a comma “,”. The example below is a filter that will only display detail tasks that will start between 1 Jan ’12 and 20 Jan ’12.

This chapter will not cover all the aspects of filter definitions but will cover the major principles, so you may experiment when you require a filter.

There are a number of predefined filters with a standard Microsoft Project installation. You should inspect these to gain an understanding of how filters are constructed and applied.

12.5.1 Simple Filters, Operator and Wild Cards

A simple Filter contains one line of data, therefore the And/Or function is not used. These are the most common filters and meet most common filtering requirements.

These filters are used for purposes such as displaying tasks which:

- Are not started, complete, or in-progress tasks.
- Have a Start or Finish before or after a particular date.
- Contain specific text.
- Are within a range of dates.
There are some operands you should be aware of:

- Some fields may have “Yes” or “No” entered in the **Value(s)**. The task fields that may be filtered using a “Yes” or “No” include:
  - Summary – Indicates if the task is a summary or detail task,
  - Critical – Indicates if the task is critical when the Total Slack is less than or equal to the value entered in the **Calculation** tab or the **Options** form,
  - Milestones and
  - Effort-Driven.

The filter below will select all tasks that are Milestones:

You may replace a single character with a “?” and a filter searching for a Task Name only containing “b?t” will display words like “bat”, “bit” and “but”.

You may replace a group of characters with an “*”. Thus, a filter searching for a word in a Task Name containing “b*t” will display words like “blot”, “blight” and “but”.

**NOTE:** For the Wildcard function to operate the **equals Test** must be used. This function does not work with other operands and in this mode works as a **contains** operand.

- **NA** allows the selection of a blank value. The filter below displays tasks without either a Baseline Start or Baseline Finish date:
- A **Calculated Filter** compares one value with another. The **Value(s)** field is selected from the drop-down box. The example below will display those tasks that are scheduled to start later than the Baseline start:

![Filter Definition in Workshop 10.mpp](image)

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Total Slack</th>
</tr>
</thead>
<tbody>
<tr>
<td>OzBuild Initiation</td>
<td>30d</td>
<td>5 Dec '11</td>
<td>26 Jan '12</td>
<td>6d</td>
</tr>
</tbody>
</table>

12.5.2 **And/Or Filters**

The **And/Or** function allows a search for tasks which meet more than one criteria by using the **And/Or** option:

- The filter below displays tasks with Slack less than 8 days **And** contain the word “Bid”:

![Filter Definition in Workshop 10.mpp](image)

- The filter below is similar to the one above but displays tasks with Slack less than 5 days **Or** contain the word “Bid”. It displays many more tasks:

![Filter Definition in Workshop 10.mpp](image)
12.5.3 Multiple And/Or

Multiple And/Or statements are possible by placing a line with only an And/Or statement. The filter below selects tasks that have a Baseline Finish and are scheduled to finish late or are not completing their work quickly enough, shown as the Budgeted Cost of Work Performed (Earned Value) is less than the Budgeted Cost of Work Scheduled (Planned Value):

![Filter Definition in "12 Filters.mpp"](image)

12.5.4 Interactive Filter

These filters allow you to enter the Value(s) of the filtered field after applying the filter. The filter is tailored each time it is applied via a user-prompt. The filter below will ask you to enter a word in the task name.

For this function to operate properly, the text in the Value(s) field must commence with a double quotation mark “and end with a double quotation and question mark”?:

![Filter Definition in "Workshopp 12.mpp"](image)

After the filter is applied, you will be presented with the Interactive Filter form to enter the required text:
12.6 AutoFilters

This function has been greatly enhanced in Microsoft project 2010. Microsoft Project AutoFilters are similar to the Excel AutoFilter function and allow you to select the filter criteria from drop-down menus in the column headers. This function allows both Grouping and Sorting of tasks, which will be covered in the TABLES AND GROUPING TASKS chapter.

To create an AutoFilter based on one parameter:

- Turn on the AutoFilter function by selecting View, Data group, Filter: drop-down box, Display AutoFilter.

- The column headers will display the button in the column header. Click on this button in one of the columns to display a drop-down box:

- Select the required criteria from the check box list, or

- Click on the Filters heading, as displayed above, to open up a second set of selections, which in turn will provide many more options which will open the Custom AutoFilter form:
- Select the parameters you want to operate on from the four drop-down boxes and check the **And** or **Or** radio button.

- To save a drop-down filter as a normal filter, click on the **Save...** button, which opens the **Filter Definition** form.

- You may now select another column and create a filter based on two parameters to reduce the number of tasks displayed.

- After an AutoFilter has been applied the indicator in the column heading changes to a ![Start](Start.png)

  **AutoFilters always select the associated summary tasks of any selected detail tasks.**
12.7 Workshop 10 - Filters

Background
Management has asked for some reports to suit their unique requirements.

Assignment
1. They would like to see all the critical tasks.
   - Add the Filter button, found under View, Data group, to the Quick Access Toolbar.
   - Apply the Critical tasks filter, found under View, Data group Filter button.
   - You will see only tasks that are on the Critical Path and their associated Summary tasks.

2. They would like to see all the tasks with float less than 8 days:
   - Create a new filter titled Float Less Than 8 Days.
   - Use the Filter button, or the View, Filter, More Filters... to open the Filters form.
   - If you place a space at the start of the Filter name the filter will be placed at the top of the list and make it easier to find filters you have created.
   - Create a criteria to display a Total Slack of less than 8 days,
   - Show the Summary tasks by checking Show related summary rows box,
   - Show the filter in the menu, and
   - Apply the filter.
   You should see that extra tasks with float less than 8 days are now displayed.

3. They would like to see all the tasks with float less than, or equal to 8 days, OR contains the word “Bid.”
   - Copy the Float Less Than 8 Days filter,
   - Assign a title to the filter: Float Less Than 8 Days or Contains “Bid”,
   - Add the condition: Or Name (Task Name) contains Bid,
   - Show in the menu, and
   - Apply the filter.
   You should find that one extra task is now shown.

4. Copy the filter, title it Float Less Than 8 Days and Contains “Bid” and change the condition to And to see the difference between Or and And options.

5. We now wish to create an AutoFilter that displays all the tasks containing the word “document”.
   - Apply the (No Filter) option, which is the same as the All Tasks option used in other forms.
   - Add the Display Auto Filter button to the Quick Access Toolbar and use this to ensure the Auto Filters are activated and each column header has a down arrow as per this picture:

        Task Name

   - Click on the down arrow in the Task Name header,
   - Select Filters, Custom... to open the Custom Auto Filter form,
   - Create a Custom Auto filter to contain tasks containing the word “document”.

6. Now apply the (No Filter) or the All Tasks Filter to remove the AutoFilter.
7. Save your OzBuild Bid project.
Answers to Workshop 10

After applying the Critical Filter:

Creating the **Float Less Than 8 Days** Filter:

After applying the **Float Less Than 8 Days or Contains “Bid”** Filter:

Creating an AutoFilter that displays Task Names containing **document**:
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ChangeAide is a software tool designed to assist project managers using the “Product-based planning” technique defined as part of the PRINCE2™ Project Management Method. Project data may be simply imported and exported to Microsoft Project.

BACKGROUND

The PRINCE™ approach to project management is used by about 30,000 qualified project managers in the UK, but up until now there has been a desperate shortage of easy-to-use software tools to help those managers using the vitally important "Product Based Planning" technique, which is at the heart of what makes PRINCE2™ so effective.

ChangeAide addresses the need to support project managers by automating the key elements of the ‘Product Based Planning’ technique and may be used with the PMBOK® planning processes.

FEATURES

ChangeAide has an intuitive "click, drag and type" graphical user interface, which project managers can use to easily create and maintain all the important diagrams and text required in the Planning process supporting the PMBOK and PRINCE2™.

Each ChangeAide project has its own:

Please visit the following site to download the full example project:
www.eh.com.au

Work Breakdown Structure (WBS) or the PRINCE2™ Product Breakdown Structure (PBS) diagram;

Product Descriptions (PD) for each product/deliverable on the PBS/WBS;
Features Continued…

Product Flow Diagram (PFD)/ Network Diagram for all the products identified on the PBS/WBS;

Project Tasks to structure the work needed;

Project Daily Log;

Product Description reports and Project Task reports; and

Stage PBSs and PFDs as the project progresses.

Status Pictures to indicate status of the project.

Many potential errors are automatically prevented because these are all consistently merged into a single "PBP container".

Documents can be exported in various formats, including DHTML, PDF, Excel, Word.

Most importantly, ChangeAide will create project plans for instant export into MS Project!

BENEFITS OF ChangeAide

Reduces the amount of project manager time needed to create and maintain consistent Product Based Plans.

Provides interactive tracking of all these project elements and the relationships between them, thus reducing time to find information within the plan.

Includes help files and integrated tutorials to show how to use the toolset.

Provides example projects to demonstrate an integrated view of a Product Based Plan.

Provides valuable support in learning and applying the underlying PRINCE2™ methods.

Eases the creation of plans for Microsoft Project.

Provides a Visual Status mechanism to highlight incomplete products in ongoing projects.

PRODUCT ENVIRONMENT

ChangeAide can be installed on windows based PCs running Windows 2000 or later as a standalone Microsoft .Net Framework application

AVAILABILITY

ChangeAide is available through Eastwood Harris Pty Ltd at www.eh.com.au, download your trial version now.