PLANNING AND CONTROL
USING
ORACLE® PRIMAVERA® P6
VERSIONS 8.1 TO 15.1 PPM PROFESSIONAL

Planning and Progressing Project Schedules
With and Without Roles and Resources
in an
Established Database

BY

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INTRODUCTION

This publication is an upgrade of the Project Planning & Control Using Primavera P6 Version 7 and has been written to enable new users to learn the planning and scheduling functions of Primavera Version 8.1 to 15.1. Please note there are no versions 9 to 14 and Oracle changed their naming convention with the release of 15.1 so the name is the same as the year of the release. Due to the changes in the menus in this release, it is not possible to make the book backward compatible to earlier versions of the software.

Many users will have prior experience with SureTrak, P3, Asta Powerproject or Microsoft Project and the author explains where there are differences in the products’ functionality.

The author would appreciate any constructive comments on how this publication may be improved.

SUMMARY

The publication may be used as:

- A training manual for a three-day training course, or
- A self-teach book, or

The screen shots for this publication are taken from Primavera Version 8.1 or 8.2 or 8.3 or 8.4 or 15.1.

One-, two-, or three-day training courses may be run using this publication and it includes exercises for the students to complete at the end of each chapter. After the course, students may use this publication as a reference book. Instructors’ PowerPoint presentations are available from Eastwood Harris web sites.

This publication is ideal for people who would like to quickly gain an understanding of how the software operates and explains how the software differs from Primavera P3, SureTrak and Microsoft Project, 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 this publication tailored to suit their requirements. This may be achieved removing, reordering or adding content to the publication and by writing their own exercises. Please contact the author to discuss this service.

AUTHOR’S COMMENT

As a project controls consultant I have used a number of planning and scheduling software packages for the management of a range of project types and sizes. The first publications I published were user guides/training manuals for Primavera SureTrak, P3 and Microsoft Project users. These were well received by professional project managers and schedulers, so I decided to turn my attention to Primavera Enterprise, which is now called Primavera P6. This publication follows the same proven layout of my previous publications. I trust this publication will assist you in understanding how to use Primavera P6 on your projects.

APPRECIATION

I would like thank Michael Jack for his assistance in writing this book.
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  - Select **View, Columns, Customize**, or  
  - Click on the **columns** icon. |
| Formatting Activity Bars      | Open the **Bar** form:  
  - Select **View, Bars, Options**, or  
  - Click on the **bars** icon. |
| Format Gridlines              | **Bar Chart Gridlines** are formatted in the **View, Bar, Options** form, **Sightlines** tab. |
| Format Data Date              | The **Data Date** is formatted in the **Bar Chart Options** form, **Data Date** tab. |
| Formatting Row Height         | Open the **Table, Font and Row** form by:  
  - Selecting **View, Table Font and Row**. |
| Formatting Colors             | There are limited options for formatting colors:  
  - **Text** colors are formatted in the **Color** form accessed from the **Table, Font and Row** form which is opened by selecting **View, Table Font and Row**, **font** icon.  
  - **Bar Colors** are covered in the Formatting the Bars paragraph of this chapter.  
  - **Band** colors are selected as part of the formatting of the layout by selecting **View, Group and Sort by** or clicking on the **band** icon. |
| Formatting Fonts              | There are limited options for formatting fonts:  
  - **Text** fonts are formatted in the **Font** form accessed from the **Table, Font and Row** form which is opened by selecting **View, Table Font and Row**, **font** icon.  
  - **Notebook** entries may be formatted when edited. |
| Format Timescale              |  
  - Click on the **timescale** icon, or  
  - Select **View, Timescale**, or  
  - Right-click in the Bar Chart area and select **Timescale**. |

The formatting is applied to the current **Layout** and this formatting may be automatically saved as part of the Layout when another Layout is selected; the system will prompt. Views are covered in the **Group, Sort and Layouts** chapter.

Beware of clicking the **Default** button in any form; this does not save your edits, but re-sets the form back to the Primavera defaults, destroying your hard work.
8.1 Formatting the Project Window

The formatting of the Project Window is very similar to the formatting of the Activities Window and will not be covered separately. Formatting, Filters and Layouts all work in the same way, except one is dealing with projects and not activities.

8.2 Understanding Forms

Unlike many software packages, Primavera has sorting and filtering functions in most forms and the principles are the same in most forms. This section will demonstrate some of the functions but you must be prepared to experiment with each form to see how they operate.

- Clicking in the Resource ID column of the Resources Window takes the formatting from hierarchical to alphabetical to reverse alphabetical and back to hierarchical. This function works in other forms with a hierarchical structure.

- The Assign Successors form has Filter By and Group and Sort By options that affect how data is grouped.

- The Assign Resource form has Columns, Filter By, and Group and Sort By options that affect what data is available.

- Ctrl+F will also allow you to search for Resources matching a specific criteria.
8.3 Formatting the Bars

The bars in the Gantt Chart may be formatted to suit your requirements for display. Primavera does not have the option to format individual bars but is able to assign a filter to a bar style so that a style is applied to activities that meet a filter definition.

At the time of writing this book the author had placed a layout on [www.primavera.com.au](http://www.primavera.com.au) or [www.eh.com.au](http://www.eh.com.au) under Technical Papers that has the bar formatting issues discussed below fixed. It is suggested that downloading this layout will save users a significant amount of formatting time.

8.3.1 Formatting Activity Bars

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

- Select View, Bars, or
- Click on the \(\bigcirc\) icon, or
- Right-click in the bars area and select Bars from the menu.

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 may be displayed on the bar chart by checking the box in the Display column.
- New bars may be added by clicking on the \(\bigoplus\) Add icon and deleted by clicking on the \(\bigotimes\) Delete icon.
- The bar at the top of the list is placed on the screen and then the one below drawn over the top of it, so it would be simple to hide one bar with a second. The \(\uparrow\) Shift up and \(\downarrow\) Shift down icons are used to move the bars up or down the list and therefore determine which bar is drawn on top of the next.
- The Name is the title assigned to the bar and may be displayed in the printout legend.
• The Timescale option is similar to the Show For .... Tasks option in the Microsoft Project Bar Styles form or the Data Item in the SureTrak Format Bars form, and enables the nomination of a predefined bar which is selected from the drop down box.

• Double-clicking on a cell in the Filter column opens the Filters form where you are able to select the filter/s which will determine which activities are displayed with the assigned bar format. Filters will be covered in detail in the Filters chapter.

• Negative Float is displayed in a similar way as in Microsoft Project and requires another bar in addition to the Positive Float bar with both the Timescale and Filter selected as Negative Float.

• The Float bar shows Total Float; there is no Free Float bar available, as in P3.

• The % Complete bar is linked to the Activity % Complete.

8.3.2 Formatting Bars Issues
There are a number of issues with the Primavera standard bar formatting that need to be understood so the user may display the activity bars logically:

Actual, Remaining Critical and Remaining Critical Bars
It is recommended that you use the Primavera default bar display options displaying the Actual Work (this bar is displayed from the Start date to the Date Date), Remaining Work and Critical Remaining Work bars (these bars are displayed from the Date Date to the Finish date with the appropriate filter). This is because the Early bar will not display actual progress as in other software packages. Please read the Understanding Dates section in the Tracking Progress chapter to understand how the dates are calculated that are used to draw each bar.

Total Float Bar
The Total Float Bar is called the Float Bar in the Bars form which is inconsistent terminology.

By default a Total Float bar is displayed on a completed task, but the Float value is set to "Null" (which is displayed as a blank). It is not logical to display a float bar when there is no float value:

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Name</th>
<th>Start</th>
<th>Finish</th>
<th>Total Float</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1C010</td>
<td>Activity A</td>
<td>29-Aug-14 08 A</td>
<td>30-Sep-14 17 A</td>
<td>5d</td>
</tr>
<tr>
<td>A1C020</td>
<td>Activity B</td>
<td>22-Sep-14 08 A</td>
<td>31-Oct-14 17 A</td>
<td>5d</td>
</tr>
<tr>
<td>A1C030</td>
<td>Activity C</td>
<td>03-Nov-14 08 A</td>
<td>28-Nov-14 17 A</td>
<td>5d</td>
</tr>
</tbody>
</table>
To prevent this from happening you should edit the total Float Bar Filter in the Bars form so it is only displayed for Not Started or In Progress activities:

<table>
<thead>
<tr>
<th>Display</th>
<th>Name</th>
<th>Timescale</th>
<th>User Start Date</th>
<th>User Finish Date</th>
<th>Filter</th>
<th>Preview</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>Float Bar</td>
<td>Float Bar</td>
<td></td>
<td></td>
<td>Not Started or In Progress</td>
<td></td>
</tr>
</tbody>
</table>

This is what it should look like now:

Free Float Bar
This may not be easily displayed.

A Baseline Bar is Displayed when NO Project Baseline set
A Baseline Bar is displayed when a Baseline has not been set. The Planned Dates are displayed as the Baseline Bar. Ensure you have a Baseline set before displaying a Baseline Bar.

Relationships displayed on Baseline Bars
By default the relationships are displayed on the Baseline Bar, which is not a normal method of displaying them:

To remove relationships on the Baseline Bar, move all the Baseline Bars and Baseline Milestones to the bottom of the Bars form:
Remaining Level of Effort and Actual Level of Effort Bars

These are by default hidden and when these Activity Types are used then the activity bar will disappear. You should check both these bars so they are always displayed.

Baseline Bar Formatting

After you have moved all the baseline bars to the bottom:

- There is no Project Baseline Milestone; this will need to be added,
- The Project Baseline and Primary Baseline bars are both narrow yellow bars, the same as the Negative Float,
  - It is suggested you make them a different color and put them as thicker bars on the top and bottom of row 2,
  - Then change the Baseline Milestone colors to match,
  - Change the shape so one may be seen behind the other, and
  - Change the descriptions so they make sense,
- There are no Secondary Baseline or Tertiary Baseline Milestones. If you are not using these then delete the Secondary Baseline or Tertiary Baseline bars:

<table>
<thead>
<tr>
<th>Display Name</th>
<th>Time Scale</th>
<th>User S</th>
<th>User F</th>
<th>Color</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Baseline Bar</td>
<td>Project Baseline</td>
<td>Normal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Baseline Bar</td>
<td>Primary Baseline</td>
<td>Normal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Baseline Milestone</td>
<td>Project Baseline</td>
<td>Milestone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Baseline Milestone</td>
<td>Primary Baseline</td>
<td>Milestone</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bar Text

There is text on many bars and it is difficult to add or remove text from bars with the current configuration.

It is suggested that text be removed from all bars, except from the Current Bar Labels bar by:

- Clicking on the Bar Labels tab at the bottom,
- Clicking on one bar at a time and using the button at the bottom (NOT SIDE) of the screen to delete the text line,
- Changing the Current Bar Labels bar filter to read All Activities.

Now if you display the Current Bar Labels bar then text will be displayed on all bars and when this bar is hidden then all text will be removed from bars, thus making it simpler to add or remove bar text:
Creating a Summary Bar

It is not obvious how to create a Summary Bar:

- To create a new Summary Bar you will see that you may not select Summary from the filter drop down box,
- You must check the Bar Settings tab, Show bar for grouping bands to create a Summary Bar:

At the time of writing this book the author had placed a layout on www.primavera.com.au or www.eh.com.au under Technical Papers that has these bar formatting issues fixed. It is suggested that downloading this layout will save users a significant amount of formatting time.

8.3.3 Bar Style Tab

The appearance of each bar is edited in the lower half of the form. The bar’s start, middle, and end points may have their color, shape, pattern, etc., formatted.

The bars may be placed on one of three rows numbered from 1 to 3, from top to bottom, one bar above the other. If multiple bars are placed on the same row, 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.

8.3.4 Bar Settings Tab
Show bar when collapsed

- **Show bar when collapsed** option displays the detailed bars on a single line when the WBS Node has been summarized; see the two pictures following:
  
  - Before summarizing:

```
Before summarizing:
```

```
After summarizing:
```

This is similar to the Microsoft Project *Always roll up Gantt bars* option in the *Layout* form.

Show bar for grouping bands

This shows a summarized bar all the time and converts the filter automatically to “Summary” bars only.

When formatting the *Bar Settings* for Milestones it is important to take note of the checked boxes and Filter format. If the box *Show bar for grouping bands* is checked, Milestones will appear at the ends of Summary Bars and not in line with the actual activities they belong to. The filter in this case will read *Summary* and not *Milestone*.

Bar Necking Settings

Bar Necking displays a thinner bar during times of inactivity such as weekends and holidays and applies only to the Current Bar setting column in the *Bars* form:

- **Calendar nonwork time** necks the bar based on the activity’s calendar.
- **Activity nonwork intervals** necks the bar when Out of Sequence Progress options of Actual Dates or Retained Logic causes a break in the work. See the *Advanced Scheduling Options* paragraph.

There is no Resource Bar available and Primavera will not neck on the resource calendar. When an activity is Resource Dependent and the resource is on a calendar different from the activity, then the bar may neck when the resource is working or not neck when the resource is not working.
8.3.5 Bar Labels Tab
This tab enables the placement of text with a bar above, below, to the left, and to the right. The following pictures show how the start and finish dates are formatted and displayed on the bar chart:

- Select the bar that you wish to add the label to.
- Click on the and the icons at the bottom of the Bars form to add and delete a Label item.

- Select the Position and Label from the drop down boxes in the Bar Labels tab.

- The dates on the bar chart are adopted from the User Preferences and may not be formatted separately.

It is often useful to create a bar that only displays the text. This bar may be displayed or not displayed as required, which is much simpler than reformatting a bar to show text.

- Each Notebook Topic may be displayed on a bar one at a time by selecting the topic in the Bar Labels tab. After the box containing the label is displayed on the screen it may be adjusted in size by dragging.
8.3.6 Bar Chart Options Form

- The Bar Chart Options form is displayed by:
  - Clicking on the icon from the Bars form, or
  - By selecting View, Bar, , or
  - Right-clicking in the Gantt Chart area and selecting Bar Chart Options…:

- The General tab has a variety of options for formatting the bar chart which are mainly self-explanatory.
  - Show Relationships has the same result as clicking on the icon and displays the relationships.
  - Show Legend displays a legend on the bar chart in the Activities View; see the following picture:

- The default size of the box displaying a Notebook topic may be set in the Bar Chart Options form, General tab, which is displayed by clicking on the icon from the Bars form.
- The Collapsed Bar tab formats the bars when a WBS band has been collapsed and displays a summarized bar.
- The Data Date tab formats the Data Date, its style, color and size.
- Primavera Version 5.0 introduced the Sight Lines tab which enables the specification of both Major and Minor vertical and horizontal Sight Lines, which brings this functionality up to match P3, SureTrak and Microsoft Project.
- Primavera P6 Version 7 introduced the Progress Line Display on the Gantt Chart which is covered in detail in the next paragraph.
8.4 Progress Line Display on the Gantt Chart

A progress line displays how far ahead or behind activities are in relation to the Baseline. Either the Project Baseline or the Primary User Baseline may be used and there are four options:

- Difference between the Baseline Start Date and Activity Start Date,
- Difference between the Baseline Finish Date and Activity Finish Date,
- Connecting the progress points based on the Activity % Complete,
- Connecting the progress points based on the Activity Remaining Duration.

There are several main components of displaying a Progress Line in P6:

- First the progress line is formatted using the View, Bar, Options, form, Progress Line tab, which may also be opened by right-clicking in the Gantt Chart area:

![Bar Chart Options](image)

- Selecting View, Progress Line to hide or display the Progress Line.
- If you use either of the options of Percent Complete or Remaining Duration then you must display the appropriate Baseline Bar that has been selected as the Baseline to use for calculating Progress Line:

The picture below shows the option highlighted above of Percent Complete:
8.5 Formatting Columns

8.5.1 Selecting the Columns to be Displayed

The columns are formatted through the Columns form which may be opened by:

- Select View, Columns, Customize, or
- Click on the icon, Customize, or
- Right-click in the Columns to open a menu and select Columns:

The Column form may be resized by dragging the edges:

- The available columns are displayed in the left window and may be listed under Categories or as a single List.
- To select how the column titles are displayed, click the Available Options drop down box and then select Group and Sort By to choose either List or Categories, as per the picture above.
- The columns to be displayed are listed in the right Selected Options Window and are copied from Available Options to and from Selected Options using:
  - The icons , or
  - Dragging,
  - Double-clicking.
- The Default icon sets the columns back to the Primavera default column display.

8.5.2 Column Header Alignment

- Select View, Columns, Customize, or
- Click on the icon, Customize, then
- Select the option which opens the Edit Column form and enables a user definable column title to be created in the New Title: cell and the Column Title Alignment to be set to Left, Center, or Right.
8.5.3 Adjusting the Width of Columns
You may adjust the width of the column in two ways:

- By dragging the column title separator: move the mouse pointer to the nearest vertical line of the column. A mouse pointer will then appear and enable the column to be adjusted by click, hold and dragging.

- From the Column form select to open the Edit Column form and enter the width of the column in pixels.

8.5.4 Setting the Order of the Columns from Left to Right on the Screen
The order of the columns on the screen, from left to right, is the same as the order in the Columns form Selected Options Window from top to bottom. The order of the columns may be altered:

- Highlight the column in the Columns form Selected Options Window and use the and icons, or
- Click and hold the column title in a window and drag the column.

8.6 Row Height and Show Icon
Row heights may be adjusted to display text that would otherwise be truncated by a narrow column.

- The height of all rows may be formatted by selecting View, Table Font and Row to open the Table, Font and Row form. The options in this form are self-explanatory.
- The Show Icons option will display a different icon in front of the Activity and WBS.
  - In the Projects Window indicates a What-if project, a Unopened project, and an Opened project.
  - In the Activities Window indicates a WBS Node, a blue a complete activity, a blue and green an in-progress activity, and a green an un-started activity.

- The height of a single row may be manually adjusted in a similar way to adjusting row heights in Excel: click the row; the pointer will change to a double-headed arrow ; then drag the row with the mouse. These manually adjusted rows are not saved with a Layout.
8.7 Format Timescale

8.7.1 Moving and Rescaling the Timescale
To display hidden parts of the schedule the timescale may be grabbed and moved by placing the cursor in the top half of the Timescale. The cursor will turn into a ;; left-click and drag left or right. The timescale may be rescaled, therefore increasing or decreasing the length of the bars and displaying more or less of the schedule, by placing the cursor in the bottom half of the Timescale. The cursor will turn into a ;; click, hold and drag left to make the bars shorter and right to make the bars longer.

When there are no bars in view when you are viewing a time ahead or behind the activity dates, you may double-click in the Gantt Chart area to bring them back into view.

8.7.2 Format Timescale Command
The Timescale form provides a number of options for the display of the timescale, which is located above the Bar Chart. To open the Timescale form:

- Click on the icon, or
- Select View, Timescale, or
- Right-click in the Bar Chart area and select Timescale.

The options available in the Timescale form are:

- **Timescale Format** has the options of:
  - Two lines, or
  - Three lines

- **Font and Color**
  - The icon opens the Edit, Font and Color form which enables the timescale and column headers font and color to be changed.
  - By clicking on the icon all changes will be reversed.
Date Format

- **Type**
  - **Calendar** displays a normal calendar.
  - **Fiscal Year** displays the fiscal year in the year line. The Fiscal Year Start Month is set in the **Settings** tab of the **Project Details** form in the **Projects Window**.
  - **Week of the Year** displays the week of the year starting from “1” for the first week in January and is often termed **Manufacturing Week**.

- **Date Interval** sets the timescale and has the options in the picture to the right:
  - The **Week/Day 1** displays the days like this:
    - Mar 03
    - Mar 10
    - Mar 17
    - NTWTFSS
    - NTWTFSS
  - The **Week/Day 2** displays the days like this:
    - Mar 10
    - Mon-Tue-Wed-Thur-Fri-Sat-Sun
    - Mon-Tue-Wed-Thur-Fri-Sat-Sun

- The **Date Interval** may also be adjusted by clicking on the or the , which moves the timescale setting up and down the list shown above.

- **Shift Calendar** breaks the day into time intervals to suit the shift intervals when the **Day/Shift** option has been selected.

- **Show Ordinal Dates** displays the timescale to be counted by the unit selected in the **Date Interval**. This is useful for displaying a schedule when the start of the project is unknown. Ordinal dates display the timescale by counting in the selected units starting from a user definable start date. This option works in a similar way to the P3 function where the ordinal start date may be selected. When 3 lines are displayed the ordinal dates and calendar dates may be displayed.
8.7.3 Nonwork Period Shading in Timescale
The nonwork period shading behind the bars is set by the database Default Calendar and is selected by:
- In the Professional Version selecting Enterprise, Calendars... and checking a calendar in the Default Column, and
- In the Optional Client this is set through the Web under Administer, Enterprise Data.

8.8 Inserting Attachments – Text Boxes and Curtain

8.8.1 Adding and Deleting a Text Box
A text box may be inserted in a bar chart area:
- Select the Activity which the new Text Box is to be associated with, either
- Right-click in the Bar Chart to open the menu, select Attachments, Text.
Or:
- Select View, Attachments, Text, and
- The Text Attachment form will be displayed.

Then:
- Type in the text and format the font by clicking on the icon.
- A Text Box may be repositioned by clicking on the text and using the cursor to drag the corners and sides.

To delete a Text Box, position the cursor over the text box until it transforms into a + then click and you may now hit the Delete key.

⚠️ The author found in his load of P6 Version 8.2 that it was not possible to delete a Text Box, only the text inside a Text Box to make the comment disappear. This was fixed in Version 8.3.
8.8.2 Adding and Deleting a Curtain

Primavera Version 5.0 introduced a function allowing the placing of multiple curtains on the Gantt Chart which may be all hidden or displayed. A Curtain, used to highlight periods of time over part of the bar chart, may be displayed in a similar way to P3 and SureTrak.

Select View, Attachments to display the Curtain menu or right-click a bar and select Attachments, Curtain:

- **Add Curtain** opens the Curtain Attachment form used to create a curtain,
- **Show All** shows all the curtains,
- **Hide All** hides all the curtains, and
- Double Clicking on a curtain in the Gantt Chart also opens the Curtain Attachment form where individual curtains may be deleted or hidden.

- Using the **Start Date** and **Finish Date** boxes, or
- Grabbing the left or right edge of the Curtain in the Bar Chart (the cursor will change to a ) and dragging the start or finish date, or
- Grabbing the Curtain in the center (the cursor will change to a ) and dragging the whole Curtain.

A curtain is deleted by double clicking on the curtain to open the Curtain Attachment form and clicking on the button.
8.9 Format Fonts and Font Colors
The format font options are:

- The Activity Data fonts are formatted in the Table, Font and Row form (displayed in the paragraph above) by selecting View, Table Font and Row.
  - Clicking on the Font icon will open the font form where normal Windows functions are available.
  - Clicking on the Color icon will enable the selection of a color for the text.

- The Notebook Topics may be formatted using the formatting features above where the Notebook items are entered in the lower pane.
- Some forms may have the fonts for displaying data edited when there is a menu on the top left side with the Table Font and Row menu item.

- The text in a Text Box that has been inserted onto the Bar Chart may be formatted when the box is created.

8.10 Format Colors
These are the main options for formatting colors:

- Band colors in layouts are formatted in the Group and Sort form by clicking on the icon or selecting View, Group and Sort by.
- Text colors are covered in the Format Font and Colors paragraph.
- Bar Colors are covered in the Formatting the Bars paragraph.
- Timescale and Column Headers are covered in the Format Timescale Command paragraph.
- Sight Lines (Gridline) colors may not be formatted.
- The Progress Line color is selected in the Bar Chart Options form, Progress Line tab.
- The Data Date is formatted in the Bar Options form, Data Date tab.

- The Relationship Lines, also known as Dependencies, Logic, or Links, may not be formatted and are displayed with the following characteristics:
  - Solid Red for Critical,
  - Solid Black for Driving,
  - Dotted Black for Non-driving, and
  - Blue when selected and may be deleted.
8.11 Line Numbers
Version 8.2 introduced a Microsoft Project style Line Numbers. Select View, Line Number to display or hide the Line Number.

This is a very useful feature for reviewing a schedule to ensure that everyone in a meeting is looking at the same activity.

But as in Microsoft Project this is an order and the number will change if the schedule is reordered.
8.12 Workshop 6 – Formatting the Bar Chart

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

Assignment
Format your schedule as follows but depending on the default settings your Gantt Chart View may differ from that shown, e.g., there may be no summary bars:

1. You will not have to complete the Step 3 of this workshop if you have internet access and are able to download a layout from www.primavera.com.au.
2. Download a layout:
   • Import the Layout as a Project Layout by selecting View, Layout, Open.
   • Do not save your Layout.
   • Select , select the layout from your desktop, and import it:
     - Select to apply the layout.
     - Open the Bars form and review the settings.
     - Close the Bars form.
     - Now move to Step 4, DO NOT COMPLETE Step 3.

continued…
3. Format Bars, if you are unable to download the www.primavera.com_Layout.plf layout then:

- To format the bars open the Bars form,
- Click on the [Default] button to set the bars to the Primavera default settings,
- Edit the Float Bar Filter (Total Float bar) so it only shows float for Not Started or In Progress activities. Ensure you select the Any selected filter in the Filters form:

<table>
<thead>
<tr>
<th>Display</th>
<th>Name</th>
<th>Timescale</th>
<th>User Start Date</th>
<th>User Finish Date</th>
<th>Filter</th>
<th>Preview</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Float Bar</td>
<td>Float Bar</td>
<td></td>
<td></td>
<td>Not Started or In Progress</td>
<td></td>
</tr>
</tbody>
</table>

- Delete the Secondary Baseline & Tertiary Baseline bars,
- Move the Baseline bars and Baseline Milestones to the bottom of the Bars form to remove relationships on the Baseline bars,
- Add missing Project Baseline Milestone and format the Baseline bars per the picture below making them different colors:

- Remove all text from all bars, except from the Current Bar Labels bar, by:
  - Clicking on the Bar Labels tab at the bottom,
  - Clicking on one bar at a time and using the [Delete] button at the bottom (NOT SIDE) of the screen to delete the text line,
  - Change the Current Bar Labels bar filter to read All Activities and do not display.
4. Display the following bars:
   - Remaining Level of Effort
   - Actual Level of Effort
   - Actual Work
   - Remaining Work
   - Remaining Critical Work
   - Milestones
   - % Complete
   - Summary Bar
   - Float Bar (Total Float)
   - Negative Float Bar

5. Adding Columns:
   - Add Calendar and Activity Type columns, from the General section of the Columns form, to the right of the Activity Name column.
   - Adjust the column widths to a best fit by dragging the column header divider lines.
   - Display the Total Float column if not displayed.

6. Press the F9 key and click the Schedule button which will schedule the project and calculate the float.

7. Adjusting Row Heights:
   - Change the Row Height to 30 points by selecting View, Table Font and Row and apply,
   - Now check the Optimize height by row content box, not exceeding 1 line per row and apply,
   - Now change the setting to 18 point height for all rows and apply.
   - Click on OK to close the form.

8. Format Timescale to Year and Month, then Week and Day (two options), then Month and Week by using the buttons.

9. Format the Vertical lines with a solid Major line every month and a Minor line every week by selecting View, Bars and clicking on the Options button and selecting the Sight Lines tab, or right-clicking in the Gantt Chart area and selecting Bar Chart Options... and selecting the Sight Lines tab.

10. Expand and contract the timescale and adjust it so that all the bars are visible.
    
    continued...
11. See below for the expected results:

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Name</th>
<th>Calendar</th>
<th>Activity Type</th>
<th>Original Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Total Float</th>
</tr>
</thead>
<tbody>
<tr>
<td>C0T100</td>
<td>Approve to Bid</td>
<td>5d</td>
<td>Task Dependent</td>
<td>06 Dec 2015</td>
<td>07 Dec 2015</td>
<td>11 Dec 2015</td>
<td>5d</td>
</tr>
<tr>
<td>C0T101</td>
<td>Define Installation Plan</td>
<td>4d</td>
<td>Task Dependent</td>
<td>02 Dec 2015</td>
<td>07 Dec 2015</td>
<td>10 Dec 2015</td>
<td>4d</td>
</tr>
<tr>
<td>C0T103</td>
<td>Identify Supplier Company</td>
<td>6d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>03 Dec 2015</td>
<td>6d</td>
</tr>
<tr>
<td>C0T104</td>
<td>Validate Technical Specification</td>
<td>6d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>03 Dec 2015</td>
<td>6d</td>
</tr>
</tbody>
</table>

**Delivery Plan**

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Name</th>
<th>Calendar</th>
<th>Activity Type</th>
<th>Original Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Total Float</th>
</tr>
</thead>
<tbody>
<tr>
<td>C0T105</td>
<td>Document Delivery Method</td>
<td>4d</td>
<td>Task Dependent</td>
<td>06 Dec 2015</td>
<td>07 Dec 2015</td>
<td>10 Dec 2015</td>
<td>4d</td>
</tr>
<tr>
<td>C0T106</td>
<td>Obtain Quotes from Suppliers</td>
<td>6d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>10 Dec 2015</td>
<td>6d</td>
</tr>
<tr>
<td>C0T107</td>
<td>Calculate the Bid Estimate</td>
<td>6d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>03 Dec 2015</td>
<td>6d</td>
</tr>
<tr>
<td>C0T108</td>
<td>Create the Project Schedule</td>
<td>6d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>03 Dec 2015</td>
<td>6d</td>
</tr>
<tr>
<td>C0T109</td>
<td>Review the Delivery Plan</td>
<td>7d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>03 Dec 2015</td>
<td>7d</td>
</tr>
</tbody>
</table>

**Bid Document**

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Name</th>
<th>Calendar</th>
<th>Activity Type</th>
<th>Original Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Total Float</th>
</tr>
</thead>
<tbody>
<tr>
<td>C0T110</td>
<td>Create Draft of Bid Document</td>
<td>2d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>10 Dec 2015</td>
<td>2d</td>
</tr>
<tr>
<td>C0T111</td>
<td>Review Bid Document</td>
<td>4d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>10 Dec 2015</td>
<td>4d</td>
</tr>
<tr>
<td>C0T112</td>
<td>Finalize and Submit Bid</td>
<td>6d</td>
<td>Task Dependent</td>
<td>07 Dec 2015</td>
<td>07 Dec 2015</td>
<td>03 Dec 2015</td>
<td>6d</td>
</tr>
</tbody>
</table>

12. Check the following:

- Click on Activity ID to make sure they are ordered correctly,
- The dates and times of all activities should start and finish at the same time of the day,
- Activity OZ1060 bar should be red as it is the Critical activity representing the shortest duration that the project may be completed,
- All other activities should have Float.
13 FILTERS
This chapter covers the ability of Primavera to control which activities are displayed, both on the
screen and in printouts, by using Filters.

13.1 Understanding Filters
Primavera has an ability to display activities that meet specific criteria. You may want to see only the
incomplete activities, or the work scheduled for the next couple of months or weeks, or the activities
that are in-progress.

Primavera defaults to displaying all activities. There are a number of pre-defined filters available that
you may use or edit. You may also create one or more of your own.

A filter may be applied to display or to highlight only those activities that meet a criteria.

There are four types of filters:

- **Default** filters which are supplied with the system and may not be edited or deleted but may be
copied and then edited or modified and are often used in conjunction with the display of bars.
- **Global** filters which are made available to anyone working in the database, and
- **User Defined** filters which are defined by a user and available only to that user unless it is made
into a **Global** filter,
- **Layout** filters which make the filter only available when the current layout is applied. **NOTE:** If the
current layout is a **Project** layout then this effectively makes the **Layout** filter a project filter.

The following types of filters are not available:

- Drop down or Auto filters as in Excel and Microsoft Project.
- Interactive filters as available in SureTrak and Microsoft Project. This is when a filter is applied
and the user is offered choices from a drop down list. The lack of this function may result in an
excessive quantity of filters being created or the user continually editing frequently used filters.

On the other hand, P6 does allow multiple filters to be applied at the same time.

There are no dedicated project filters (except by creating a Layout filter) available in
Primavera, so you might consider placing the project name or number at the start of
a filter name so you may identify which filters belong to which projects. This is
especially helpful when you have a number of **User Filters** or there are a number of
**Global Filters**.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Menu Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>To apply, edit, create, or delete a filter</td>
<td>Click on the <strong>Y</strong> icon, or</td>
</tr>
<tr>
<td>open the Filters form.</td>
<td>Select View, Filter By..., Customize, or</td>
</tr>
<tr>
<td></td>
<td>Right-click in the columns area and select Filters....</td>
</tr>
</tbody>
</table>
13.2 Applying a Filter

13.2.1 Filters Form
Filters are applied from the Filters form which may be opened by:

- Clicking on the icon, or
- Selecting View, Filters..., Customize... or
- Right-clicking in the columns area and selecting Filters...
- NOTE: If the All Activities check box is not checked then there is a filter applied.

13.2.2 Applying a Single Filter
A single filter is applied by:

- Checking the Select check box beside one filter, and
- Clicking on the icon to apply the filter and not close the form. If the result is undesirable another option may be selected, or
- Clicking on to apply the filter and close the form.

When applying the selected filter(s):

- Only activities that comply to the filter criteria will be displayed when the Replace activities shown in the current layout button is checked.
- These activities will be highlighted in the Select Activity color when the Highlight activities in current layout which match criteria button is checked.

13.2.3 Applying a Combination Filter
A combination filter has two or more filters selected and has two options under Show activities that match:

- All selected filters where an activity to be displayed or highlighted has to match the criteria of ALL the filters, or
- Any selected filters where an activity to be displayed or highlighted has to match the criteria of ONLY ONE filter.

In many places in the software there will be an option of either clicking on the icon or the icon:

- The icon applies the format yet leaves the form open.
- The icon applies the format and closes the form.
13.3 Creating and Modifying a Filter

13.3.1 Creating a New Filter
Filters may be created from the Filters form by:

- Clicking on the New... icon in the Filter form and create a new filter, or
- Copying an existing filter using the Copy and Paste icons and then editing the new filter.

New filters will be created in the User Defined filter area at the bottom of the list.

There are a large number of options available to create a filter and from the following examples you should be able to experiment and add your own filters. To modify an existing filter, select it from the Filters form and click the Modify icon.

13.3.2 One Parameter Filter
The following example is a filter to display incomplete activities:

- Parameter is used to select any of the available database fields:
- Select one of the options from the Is drop down box:
- The parameter selected in the Is box determines if:
  - Only one Value is required, which is entered into the Value field, or
  - A range is required and two values are to be entered; then the Value and High Value are entered.

equals
is not equal to
is less than
is less than or equals
is greater than
is greater than or equals
is within range of
is not within range of
The following example is a filter to display in-progress activities using the **is not within range of** and **Value** and **High Value** options:

![Filter Example 1](image1)

And this example uses the **equals** parameter and only the **Value** field is completed:

![Filter Example 2](image2)

### 13.3.3 Two Parameter Filter

The following example is a filter to display all critical path activities and activities assigned the PM resource:

![Filter Example 3](image3)

- The drop down box under **Parameter** has two options:
  - **(All of the following)**. This is used when an activity must meet all of the parameters selected below.
  - **(Any of the following)**. This is used when an activity must meet any of the parameters selected below.

When the first parameter is changed to **All of the following** the **Display all rows** option changes to an **AND**. Therefore with the filter below there would normally be fewer activities displayed as the activities have to be critical and assigned the resource PM:

![Filter Example 4](image4)
13.3.4 Multiple Parameter Filter
The following example is a filter to display incomplete activities on the critical path with resources PEH and SEH:

- In this example, *(All of the following)* was selected from the *Parameters* drop down box which enables a nesting effect of filter parameters.
- This function is similar to the filter levels in P3.

13.3.5 Editing and Organizing Filter Parameters
Lines in a filter are added, copied, pasted, and deleted using the appropriate icons in the *Filters* form.

The arrows allow the filter lines to be moved up and down and indented to the left and outdented to the right in a similar way to indenting and outdenting tasks in Microsoft Project.

A filter may be optimized to delete the redundant filter lines using the *Optimize* command:

13.3.6 Understanding Resource Filters

**NOTE: THIS IS A VERY IMPORTANT POINT FOR RESOURCE FILTERING**
When filtering on resources the filter must use the option of *contains* in the *is* column and not *equals*, as in the picture above, otherwise when an activity has been assigned more than one resource, then the activity will not be selected with a filter using the *equals* parameter.
13.4 Workshop 11 – Filters

Background
Management has asked for reports on activities to suit their requirements.

Assignment
Ensure your OzBuild Bid project is open.

1. Apply the OzBuild Workshop 10 – With Float layout.
2. They would like to see all the critical activities.
   - Ensure a column showing the Total Float is displayed, and
   - Apply the Critical activities filter.
   You will see only activities that are on the critical path and their associated summary activities.

3. Open the Group and Sort form and check the Hide if empty box and notice the Technical Specification band is hidden.
4. Management would like to see all the activities with float less than or equal to 7 days:
   - Create a new filter titled: Float Less Than or Equal to 7 Days, and
   - Add the condition to display a total float of less than 7 days.
   - Close the Filter form,
   - Click on the All Activities check box to ensure all activities are displayed,
   - Apply the new filter,
   - You should find that activities with 8 days' float are hidden:

continued…
5. They would like to see all the activities that are critical or contain the word “Bid”.
   - Copy the Critical filter,
   - Edit the filter title to read: Critical or Contains “Bid”
   - Edit the top line to read (Any of the following),
   - Add the condition: Or Name (Activity Name) contains Bid, and
   - Apply the filter.

6. Now change the (Any of the following) option to (All of the following) and see the effect.

7. There should be fewer activities as it is now displaying activities that meet both conditions.

8. Now apply the All Activities filter to display all the activities.