PROJECT PLANNING AND CONTROL

USING

PRIMAVERA CONTRACTOR® VERSION 6.1

Including Versions 4.1, 5.0 and 6.1

Planning and Progressing Project Schedules

With and Without Resources

BY

PAUL EASTWOOD HARRIS
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INTRODUCTION
This publication is an upgrade of the Project Planning and Scheduling Using Primavera Contractor Version 4.1 in a single project environment publication and has been written to enable new users to learn the planning and scheduling functions of Primavera Contractor Versions 4.1 to 6.1.

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 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 this publication are taken from Primavera Contractor Version 6.1 but this publication may be used to learn Primavera Contractor Version 4.1, 5.0 or 6.

The publication has been written to be used as the basis for a two-day training course and includes exercises for the students to complete at the end of each chapter. After the course this publication 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 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. This publication follows the same proven layout of my previous publications. I trust this publication will assist you in understanding how to use Primavera Contractor on your projects.

APPRECIATION
I would like thank my daughter Samantha Harris and editor Susan Aaron for their assistance in the production of this publication.
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For all industries including Versions 4 to 6

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Planning and Scheduling Using Primavera® Version 5.0 For Engineering and Construction
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8 FORMATTING THE DISPLAY

This chapter shows you how to set up the on-screen presentation so that the schedule will be easier to read and more consistent. This chapter covers the following display customizing topics:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Menu Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Formatting Columns</td>
<td>Open the <strong>Column</strong> form:</td>
</tr>
<tr>
<td></td>
<td>• Select <strong>View, Columns</strong>..., or</td>
</tr>
<tr>
<td></td>
<td>• Click on the button.</td>
</tr>
<tr>
<td>• Formatting Activity Bars</td>
<td>Open the <strong>Bar</strong> form:</td>
</tr>
<tr>
<td></td>
<td>• Select <strong>View, Bars</strong>..., or</td>
</tr>
<tr>
<td></td>
<td>• Click on the button.</td>
</tr>
<tr>
<td>• Format Gridlines</td>
<td><strong>Bar Chart Gridlines</strong> are formatted in the <strong>View, Bar Chart Options</strong>... form, <strong>Sightlines</strong> tab.</td>
</tr>
<tr>
<td>• Format Data Date</td>
<td>The <strong>Data Date</strong> is formatted in the <strong>Bar Chart Options</strong>... form, <strong>Data Date</strong> tab.</td>
</tr>
<tr>
<td>• Formatting Row Height</td>
<td>Open the <strong>Table, Font and Row</strong> form by:</td>
</tr>
<tr>
<td></td>
<td>• Selecting <strong>View, Table Font and Row</strong>....</td>
</tr>
<tr>
<td>• Formatting Colors</td>
<td>There are limited options for formatting colors:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Text</strong> colors are formatted in the <strong>Color</strong> form accessed from the <strong>Table, Font and Row</strong> form which is opened by selecting <strong>View, Table Font and Row</strong>..., or on the button.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Bar Colors</strong> are covered in the <strong>Formatting the Bars</strong> paragraph of this chapter.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Band</strong> colors are selected as part of the formatting of the layout by selecting <strong>View, Group and Sort</strong>... or clicking on the button.</td>
</tr>
<tr>
<td>• Formatting Fonts</td>
<td>There are limited options for formatting fonts:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Text</strong> fonts are formatted in the <strong>Font</strong> form accessed from the <strong>Table, Font and Row</strong> form which is opened by selecting <strong>View, Table Font and Row</strong>..., or on the button.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Notebook</strong> entries may be edited when entered.</td>
</tr>
<tr>
<td>• Format Timescale</td>
<td>• Click on the button, or</td>
</tr>
<tr>
<td></td>
<td>• Select <strong>View, Timescale</strong>..., or</td>
</tr>
<tr>
<td></td>
<td>• Right-click in the Bar Chart area and select <strong>Timescale</strong>....</td>
</tr>
</tbody>
</table>

The formatting is applied to the current **Layout** and is automatically saved as part of the Layout when another Layout is selected. Views are covered in the **Group, Sort and Layouts** chapter.
8.1 Understanding Forms

Unlike many software packages Primavera Contractor has sorting and filtering functions in most forms and the principals 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. This function works in other forms with a hierarchical structure.

- The Assign Successors form has a Filter and Group and Sort By option which affect which data and how it is Grouped.

- The Assign Resource form has a Filter and Group and Sort By option which affect what data is available.
8.2 Formatting Columns

8.2.1 Selecting the Columns to be Displayed
The columns displayed on the screen are formatted through the **Columns** form which may be opened by:

- Select **View**, **Columns**..., or
- Click on the button, or
- Right-click to open a menu and select **Columns**...:

![Columns Form](image)

The **Column** form may be resized by dragging the edges.
- The available columns are displayed in the right 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 the **Available Options** to and from **Selected Options** using the and buttons.
- The button sets the columns back to the default column display.

8.2.2 Column Header Alignment
- Select **View**, **Columns**..., or
- Click on the button, then
- Select the **Edit Column** 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.
8.2.3 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 icon will then appear and enable the column to be adjusted by Right-clicking and dragging.

- From the Column form select the in earlier versions), to open the Edit Column Title form and enter the width of the column in pixels.

8.2.4 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 buttons, or
- Right-click the column title in a Window and drag the column.

8.3 Formatting the Bars
The bars in the Gantt Chart may be formatted to suit your requirements for display. Primavera Contractor 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.

8.3.1 Formatting Activity Bars
To format all the bars you must open the Bar form:

- Select View, Bars..., or
- Click on the button, 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 Add button and deleted by clicking on the Delete button.
- 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 Shift up and Shift down buttons 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.
  - Version 4.1 introduced User Defined Dates that may be used for formatting User Defined Bars Styles, see the first line on the bars form above.

It is recommended that you use the Primavera Contractor default bar display options displaying the Actual Work (this bar is displayed from the Start date to the Data Date), Remaining Work and Critical Remaining Work bars (these bars are displayed from the Data Date to the Finish date with the appropriate filter) 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.

- 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 and 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 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.

8.3.3 Bar Settings Tab

Grouping Band Settings
This sets the style for summary bars only, which may be displayed when the WBS Node is both summarized and not summarized.

• This would not normally be used when a Summary Bar has been defined as the result would be two summary bars.

• **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:

  ![Diagram](image)

  ➢ After summarizing:

  ![Diagram](image)

  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 Style** 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 too. 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 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.

![Bar Necking Example](image)

There is no Resource Bar available and Primavera Contractor will not neck on the resource calendar so when an activity is Resource Dependent and the resource is on a different calendar to the activity then the bar may neck when the resource is working or not necked when the resource is not working.

8.3.4 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 **Add** and **Delete** buttons 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.

![Bar Labels Options](image)

- 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.

8.3.5 Bar Chart Options Form
The Bar Chart Options form is displayed by clicking on the button from the Bars form or by selecting View, 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 button from the Bars form.

• The Collapsed Bar tab is to format the bars when a WBS band has been collapsed and displays a summarized bar.
• The Data Date tab is for formatting the Data Date, its style, color and size.
Primavera Contractor Version 5.1 introduced a new Sight Lines tab bar which now 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:

![Sight Lines Tab Bar](image)

8.4 Row Height

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 a ![icon] indicates a What-if project, ![icon] a Planned project and ![icon] an Active or Inactive project.
  - In the Activity Window ![icon] indicates a WBS Node, a blue ![icon] a complete activity, a blue and green ![icon] an in-progress activity and a green ![icon] an un-started activity.
  - In the Resources Window ![icon] indicates a Resource, ![icon] a resource assigned to an open project, ![icon] and ![icon] an unassigned and assigned Nonlabor Resource and ![icon] and ![icon] a unassigned and assigned Material Resource.
- 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 ![double arrow]; then drag the row with the mouse. These manually adjusted rows are not saved with a Layout.

![Table, Font and Row Form](image)
8.5 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 button, will open the font form where normal Windows functions are available.
  - Clicking on the Color button will enable the selection of a color for the background of both the Bar Chart and the Columns area.

- 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.

8.6 Format Colors

There are the main options for formatting colors:

- Band colors in layouts are formatted in the Group and Sort form by clicking on the button or selecting View, Group and Sort…

- Text colors were covered in the Format Font and Colors paragraph.

- Bar Colors were covered in the Formatting the Bars paragraph.

- Timescale and Column Headers see the Format Timescale Command paragraph.

- Gridline colors may not be formatted.

- 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, and
  - Dotted Black for Non-driving.
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 right-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 , right-click, 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 button, 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 button opens the Edit Font and Color form which enables the timescale and column headers font and color to be changed.
  - By clicking on the button all changes will be reversed.
• **Date Interval** sets the timescale and has the options in the picture to the right:

  - The **Week/Day 1** displays the Days like this:

    | Week/Day 1 | Week/Day 2 |
    |------------|------------|
    | Sep 27     | Oct 04     |
    | Mon | Wed | Fri | Sat | Sun | Mon | Wed | Fri | Sat | Sun |

  - The **Week/Day 2** displays the Days like this:

  - 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.

• **Date Format**
  - **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 Properties** form.
  - **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**.
  - **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 time scale 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 Non Work Period Shading in Timescale
The non work period shading behind the bars is set by the database Default Calendar and is selected by selecting Enterprise, Calendars and checking a calendar in the Default Column. The At Completion Duration of 30d is calculated from the user database Default Calendar.

The problem is when the default calendar is swapped to a 24hr/day 7days/week there is no Non Work Period Shading but the duration of a project that is 44 elapsed days is now displayed as 130days.

8.8 Inserting Attachments - Text Boxes and Curtain

8.8.1 Adding 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,
- Type in the text and format the font by clicking on the button.
- A Text Box may be repositioned by clicking on the text and using the curser to drag the corners and sides.
8.8.2 Adding a Curtain

Primavera Contractor Version 5.1 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
- 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 centre (the cursor will change to a )** and dragging the whole Curtain.

![Curtain Attachment](image)
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:

1. Depending on the default settings your Gantt Chart view may differ from that shown, e.g., there may be no summary bars.
2. Apply the Classic WBS Layout by selecting View, Layout, Open.
3. Add a Calendar and Activity Type columns, from the General section of the Columns form, to the right of the Activity Name by clicking on the button to open the Columns form.
4. Adjust the column widths by dragging the column headers divider lines.
5. Press the F9 key and click the button which will schedule the project and calculate the float.
6. Open the Bars form by clicking on the button:
   a. Hide and display the Float Bar (Total Float bar) then leave the bar displayed.
   b. Remove all text from all bars in the Bars form by selecting the Bar Labels tab and checking each bar one at a time.
   c. Delete the ‘Current Bar Labels’ bar if it exists.
   d. Create a new bar titled ‘Activity Name’, make the Timescale to be Current, Filter to be All Activities which does not display a bar and shows the Activity Name to the right.
   e. Then display and hide this new bar. When displayed there should be the Activity Name by each activity in the Bar Chart and when hidden there should be no Activity Name or any other data on the bar chart.
7. Row Height:
   a. Change the Row Height to 30 points by selecting View, Table Font and Row. …
   b. Decrease the width of the Activity Name column by dragging and see the text wrap.
   c. Now check the Optimize height by row content box, not exceeding 1 line per row.
   d. Now change the setting to 18 point height for all rows. This will allow the Baseline bar to be seen.
8. Format Timescale to Year and Month, then Week and Day 1, 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, Bar Chart Options… and select the Sight Lines tab.
10. Expand and contract the timescale and adjust it so that all the descriptions and bars are visible.
13 GROUP, SORT AND LAYOUTS

Group and Sort enables data such as activities in the Activity Window and WBS Nodes in the WBS Window and many other data items to be sorted and organized under other parameters such as Dates and Resources or user-defined Activity Codes. This function is similar to Organize in P3 and SureTrak and Grouping in Microsoft Project and Asta Powerproject.

Layouts is a function in which the formatting of parameters such as the Group and Sort, Columns and Bars is saved and reapplied later. This function is similar to Layouts in P3 and SureTrak or Views in Asta Power Project and Microsoft Project. A Layout may be edited, saved or reapplied at a later date and may have a Filter associated with it. Layouts contain the formatting for all options of both the top and bottom pane.

Although Group and Sort is available in many forms, Layouts are only available in a few places including the following Windows:

- WBS
- Activities
- Resources Assignments

This chapter will concentrate on how Group and Sort and Layouts are applied in the Activity Window but the same principals apply to the other Windows. This chapter covers the following topics:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Notes on the Function</th>
</tr>
</thead>
</table>
| • Reformat the Grouping and Sorting of activities by opening the Group and Sort form: | • Click on the button,  
• Right click and select the Group and Sort… item, or  
• Select View, Group and Sort…. |
| • Create or edit a Layout | Select either:  
• From the menu View, Layout, Save As…, or  
• From the Layout bar Layout, Save As…. |

The Layout bar location is indicated in the following picture:
13.1 Group and Sort Activities

The Group and Sort function has been used in this publication to group activities under WBS bands.

To Group and Sort activities open the Group and Sort form by:
- Clicking the button, or
- Selecting View, Group and Sort….

13.1.1 Display Options

Show Group Totals

Show Group Totals is a new function in Primavera Contractor Version 6 which when unchecked hides the summary data in the bands, which prevents the truncating of Band titles.

**Summary Data Displayed**

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Original Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Total Float</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid for Fac</td>
<td>13d</td>
<td>08-Dec-03 A</td>
<td>22-Jan-10</td>
<td>0d</td>
</tr>
<tr>
<td>Research</td>
<td>31d</td>
<td>08-Dec-03 A</td>
<td>21-Dec-09</td>
<td>6d</td>
</tr>
<tr>
<td>OZ1000</td>
<td>0d</td>
<td>08-Dec-03 A</td>
<td>09-Dec-03 A</td>
<td></td>
</tr>
<tr>
<td>OZ1010</td>
<td>1d</td>
<td>08-Dec-03 A</td>
<td>09-Dec-03 A</td>
<td>2d</td>
</tr>
<tr>
<td>OZ1020</td>
<td>6d</td>
<td>09-Dec-03 A</td>
<td>21-Dec-03</td>
<td>2d</td>
</tr>
<tr>
<td>Estimate</td>
<td>52d</td>
<td>22-Dec-03</td>
<td>08-Jan-10</td>
<td>3d</td>
</tr>
<tr>
<td>OZ1070</td>
<td>2d</td>
<td>07-Jan-10</td>
<td>08-Jan-10</td>
<td>0d</td>
</tr>
</tbody>
</table>

**Summary Data Hidden**

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Original Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Total Float</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid for Facility Extension</td>
<td>13d</td>
<td>08-Dec-03 A</td>
<td>22-Jan-10</td>
<td>0d</td>
</tr>
<tr>
<td>Research</td>
<td>31d</td>
<td>08-Dec-03 A</td>
<td>21-Dec-09</td>
<td>6d</td>
</tr>
<tr>
<td>OZ1000</td>
<td>0d</td>
<td>08-Dec-03 A</td>
<td>09-Dec-03 A</td>
<td></td>
</tr>
<tr>
<td>OZ1010</td>
<td>1d</td>
<td>08-Dec-03 A</td>
<td>09-Dec-03 A</td>
<td>2d</td>
</tr>
<tr>
<td>OZ1020</td>
<td>6d</td>
<td>09-Dec-03 A</td>
<td>21-Dec-03</td>
<td>2d</td>
</tr>
<tr>
<td>Estimate</td>
<td>52d</td>
<td>22-Dec-03</td>
<td>08-Jan-10</td>
<td>3d</td>
</tr>
<tr>
<td>OZ1070</td>
<td>2d</td>
<td>07-Jan-10</td>
<td>06-Jan-10</td>
<td>0d</td>
</tr>
</tbody>
</table>

This may be the best option to use when you have a database with multiple calendars that have different hours per day and the WBS Summary Durations are not displaying the correct value. They may now be hidden when incorrect.
Show Grand Totals

Show Grand Totals is the same as inserting a Project band in P3, or SureTrak with Organize, or displaying a Project summary task in Microsoft Project.

This displays a Summary band for the project and adds up all the costs and hours for a project, displays the earliest and latest dates and a summary duration for the whole project. This feature is very useful when the project is not organized by WBS and therefore has no project total line.

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Name</th>
<th>Original Duration</th>
<th>Original Labor Cost</th>
<th>Remaining Labor Cost</th>
<th>Start</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td>37</td>
<td>$3,220</td>
<td>$45,520</td>
<td>03-Dec-07 A</td>
<td>22-Jan-08</td>
</tr>
<tr>
<td>021000</td>
<td>Bid Request Document Received</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>03-Dec-07 A</td>
<td></td>
</tr>
<tr>
<td>021010</td>
<td>Bid Strategy Developed</td>
<td>1</td>
<td>$1,300</td>
<td>0</td>
<td>03-Dec-07 A</td>
<td></td>
</tr>
<tr>
<td>021150</td>
<td>New Activity</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>03-Dec-07 A</td>
<td></td>
</tr>
<tr>
<td>021020</td>
<td>Technical Feasibility Study</td>
<td>8</td>
<td>$1,520</td>
<td>$4,800</td>
<td>04-Oct-07 A</td>
<td>17-Dec-07</td>
</tr>
<tr>
<td>021030</td>
<td>Installation Requirements Documented</td>
<td>4</td>
<td>$0</td>
<td>$5,120</td>
<td>06-Oct-07 A</td>
<td>21-Dec-07</td>
</tr>
<tr>
<td>021060</td>
<td>Technical Details Schedule Drafted</td>
<td>3</td>
<td>$0</td>
<td>$5,360</td>
<td>16-Oct-07 A</td>
<td>02-Jan-08</td>
</tr>
<tr>
<td>021050</td>
<td>Project Schedule Developed</td>
<td>4</td>
<td>$0</td>
<td>$2,880</td>
<td>22-Oct-07 A</td>
<td>28-Dec-07</td>
</tr>
<tr>
<td>021040</td>
<td>Component Bid Requested and Received</td>
<td>3</td>
<td>$0</td>
<td>$3,840</td>
<td>02-Jan-08</td>
<td>04-Jan-08</td>
</tr>
<tr>
<td>021070</td>
<td>Costs from Component Bids Completed</td>
<td>2</td>
<td>$0</td>
<td>$1,280</td>
<td>07-Jan-08</td>
<td>08-Jan-08</td>
</tr>
<tr>
<td>021080</td>
<td>Bid Document Drafted</td>
<td>3</td>
<td>$0</td>
<td>$6,720</td>
<td>08-Jan-08</td>
<td>11-Jan-08</td>
</tr>
</tbody>
</table>

Show Summaries Only

Show Summaries Only hides all the activities and displays only the WBS or Codes that have been used to summarize the activities:

Shrink Vertical Grouping Bands

Shrink vertical grouping bands is new to Primavera Contractor Version 6.1 and narrows the Vertical Bands on the left of the screen. This is useful in projects with a number of levels in the WBS as this provides more usable screen space and paper width for printing.

Option Unchecked

Option Checked
13.1.2 Group By
The Group By box has several options:

- **Group By and Indent**
  When a hierarchical code such as a WBS and the **Indent** is selected, the subsequent bands are completed by the software and there are no other banding options available. The WBS is then displayed hierarchically:

When a hierarchical code such as a WBS is selected and the **Indent** is **NOT** selected on a line then the subsequent bands are **NOT** completed by the software and other bands may be selected. The WBS is not displayed hierarchically:

- **To Level**
  The **To Level** option decides how many levels of the hierarchical code structure such as the WBS will be displayed. All activities are displayed under the lowest level of WBS, as chosen from the **To Level** drop down box.

This option enables other banding below the select level which is not permitted with the **All** option.
Group Interval
This option is available with some fields such as Total Float, where the interval may be typed in, and Date fields, where a drop down box enables the selection of the time interval used to group activities:

<table>
<thead>
<tr>
<th>Group By</th>
<th>Latest Start</th>
<th>To Level</th>
<th>Group Interval</th>
<th>Font &amp; Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Start</td>
<td></td>
<td></td>
<td>11 Arial</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Name</th>
<th>Early Start</th>
<th>Early Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-Dec-03</td>
<td>Bid Strategy Meeting</td>
<td>01-Dec-03</td>
<td>01-Dec-03</td>
</tr>
<tr>
<td>A1010</td>
<td>Investigation Techn.</td>
<td>02-Dec-03</td>
<td>11-Dec-03</td>
</tr>
<tr>
<td>A1020</td>
<td>Exit Dec 03</td>
<td>12-Dec-03</td>
<td>19-Jan-04</td>
</tr>
<tr>
<td>A1000</td>
<td>Document Design</td>
<td>12-Dec-03</td>
<td>17-Dec-03</td>
</tr>
<tr>
<td>A1030</td>
<td>Draft Technical Dta</td>
<td>12-Dec-03</td>
<td>17-Dec-03</td>
</tr>
<tr>
<td>A1050</td>
<td>Develop Project Sec</td>
<td>19-Dec-03</td>
<td>06-Jan-04</td>
</tr>
</tbody>
</table>

Font and Color
Double-click these boxes to open the Edit Font and Color form to change the font and color of each band.

13.1.3 Group By Options

Sort Banding Alphabetically
When a hierarchical code is selected, the bands are sorted by the Code Value. If this box is checked, the bands will be sorted alphabetically by the Code Description.

Hide if empty
Check this box is used to hide bands that:
- Have not been assigned an activity, or
- When activities have been filtered out and only the bands remains.

This function is useful when you have filtered on a couple of activities and the screen is filled with blank bands. This will remove all the blank bands.

Show Title, Show ID / Code and Show Name / Description
These options format the display of the band title. It is not possible to uncheck all the options as there then would not be a title in the band. The options change depending on the data displayed in the band:

With all options checked

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Name</th>
<th>Original Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project: REF Bid for...</td>
<td></td>
<td>33d</td>
</tr>
<tr>
<td>WBS: REF.1 Research</td>
<td></td>
<td>9d</td>
</tr>
<tr>
<td>OZ1000 Bid Request Doc...</td>
<td></td>
<td>0d</td>
</tr>
<tr>
<td>OZ1010 Bid Strategy Dev...</td>
<td></td>
<td>1d</td>
</tr>
<tr>
<td>OZ1020 Technical Feasibility...</td>
<td></td>
<td>0d</td>
</tr>
<tr>
<td>WBS: REF.2 Estimate</td>
<td></td>
<td>14d</td>
</tr>
<tr>
<td>OZ1030 Installation Requirement...</td>
<td></td>
<td>4d</td>
</tr>
</tbody>
</table>

With only Description Checked

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Name</th>
<th>Original Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid for Facility Extension...</td>
<td></td>
<td>33d</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td>9d</td>
</tr>
<tr>
<td>OZ1000 Bid Request Doc...</td>
<td></td>
<td>0d</td>
</tr>
<tr>
<td>OZ1010 Bid Strategy Dev...</td>
<td></td>
<td>1d</td>
</tr>
<tr>
<td>OZ1020 Technical Feasibility...</td>
<td></td>
<td>0d</td>
</tr>
<tr>
<td>Estimate</td>
<td></td>
<td>14d</td>
</tr>
<tr>
<td>OZ1030 Installation Requirement...</td>
<td></td>
<td>4d</td>
</tr>
</tbody>
</table>

NOTE. These options are set for each band individually.
### 13.1.4 Sorting

The **Sort** button opens the **Sort** form where the order of the activities in each band may be specified.

**NOTE:** This order may be easily overridden by clicking on the column titles to reorder activities and therefore the use of this option is problematic as clicking on the column header is very simple and will override options set here.

### 13.1.5 Reorganize Automatically

This function titled Reorganize Automatically is similar to the P3 and SureTrak function but applies to all Layouts, not just the selected Layout. Select **Edit, User Preferences…** to open the **User Preferences** form and click the **Application** tab.

When the **Reorganize Automatically** box is checked, all views will reorganize automatically when data fields are changed that are used in the layout such as Grouping and Sorting.

It is often better to disable **Reorganize Automatically** when data is being edited that is used in the grouping of data in a Layout which will prevent the activities moving to their new position in the Layout until all data has been edited.

To reorganize a view, select **Tools, Reorganize Now** or **Shift+F2**.

The other Group and Sort options in the **Application** tab apply to views that do not have a Group and Sort form such as the predecessor and successor form.
13.2 Understanding Layouts

A standard load of Primavera Contractor is supplied with a number of predefined Layouts for some of the Windows which are defined by default as Global Layouts and any user on the system may apply these. These layouts may be copied and shared with other users or be available to the current user in a similar way as filters.

Primavera Contractor Version 6.1 introduced Project Layouts for the Activity Window. Project Layouts are only available when a project is open and may be exported with a project and therefore minimizes the need for Global Layouts.

Layouts are not exported with an XER file but may be exported using a PLF file. Therefore to send a person a complete projects schedule you may need to include the layout as a PLF file.

13.2.1 Applying an Existing Layout

Layouts may be applied from the Open Layout form by:

- Selecting the Open option from the Layout Options bar:

![Layout Options bar](image)

- Or, by selecting View, Layout, Open....

When a Layout has been edited by changing any parameter, such as column formatting, a form will be displayed allowing the confirmation of the changes that have been made to the layout.

The Open Layout form will be displayed and an alternative layout may be selected from the list. The list will have two headings after a project layout has been created, Global and Project:

- Click on the button to apply the layout. This will leave the form open but allow the effect to be viewed, or
- Click on the Open button to apply the layout and close the form:

![Open Layout form](image)

Click on the button at the top to reorder the Layouts.
13.2.2 Creating a New Layout
A new layout may be created by saving an existing layout with a new name and editing it.

To create a new Layout:
- Apply the layout that closely matches the requirements of the new layout and apply.
- Select either:
  - From the menu View, Layout, Save As…, or
  - From the Layout Options bar Layout, Save As…:
- Type in a new Layout Name and
- In the Available to box select All Users to make the Layout a Global Layout or Select Project to restrict the use of the Layout to the specific project.
- Click on the button.

This layout may now be edited and the edits saved by selecting:
  - From the menu View, Layout, Save, or
  - From the Layout bar Layout, Save.

13.2.3 Layout Types
A layout is comprised of a Top Pane and a Bottom Pane. Each Pane may be assigned a Layout Type. The following is a list of the Layout Types and the panes they may be applied to the Activity Window:

<table>
<thead>
<tr>
<th>Layout Name</th>
<th>Available in Top Pane</th>
<th>Available in Bottom Pane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gantt Chart</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Activity Details</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Activity Table</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Activity Network</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Trace Logic</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Activity Usage Profile</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Resource Usage Spreadsheet</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Resource Usage Profile</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Activity Usage Spreadsheet</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

NOTE: The available layouts vary depending on the Window open. This chapter will predominately discuss the Activity Window but experimentation will show the options available in the other Windows.
13.2.4 Changing Activity Layout Types in Panes
The **Activities Toolbar** has icons for the display options in the top and bottom pane:

- ![icons](image1)
- ![icons](image2)

are the top pane buttons, and

- ![icons](image3)
- ![icons](image4)

are the bottom pane buttons.

To change a **Layout Type** in a pane select from the menu:

- **View, Show on Top**, or

- **View, Show on Bottom**.

Then select the Layout Type required from the list.

**NOTE:** There are more options here than on the **Activity Toolbar**.

13.2.5 Activity Window Layout Panes
Each Layout Type has a number of options and the formatting of these has been discussed in earlier chapters.

**Gantt Chart**
The Gantt Chart has two sides:

- The left side where the columns are displayed may be formatted with the **Columns, Sorting** and **Grouping** functions.
- The right side may be formatted using the **Timescale, Bars** and **Gridlines** functions.

**Activity Details**
These may be displayed at any time in the Bottom Pane with any of the tabs hidden or displayed.
Activity Table
This layout is the same as the left side of the Gantt Chart and has no Bars and Timescale on the right side.

Activity Network
Like the Gantt Chart it has two panes:

- The **left** pane displays the WBS:
  - This side may not be formatted except by adjusting the width of the columns.
  - The selection of a WBS Node acts like a filter and will only display activities that are associated with the selected WBS Node and lower level member WBS Nodes. This enables the relationships between activities within one WBS Node to be checked.

- The **right** pane displays the activity data in boxes and is organized under headings:
  - The Activity Boxes may be formatted as described in the Network View chapter.
  - The activities may be Grouped which is covered in the Grouping section of this chapter.

Trace Logic
The Trace Logic options allow the selection of the number of predecessor and successor levels.

This is achieved by displaying the Activity Table in the top view and selecting View, Show on Bottom, Trace Logic.

To select the number of levels of predecessors to be displayed you are required to open the Trace Logic Options form. The form is then opened by either:

- Right-clicking in the lower pane and selecting Trace Logic Options.... or
- Selecting View, Bottom Layout Options....

Formatting Trace Logic and Activity Network
Formatting of these boxes in both of these panes is linked to the formatting in the Activity Network. The boxes are formatted by right-clicking in the right screen of the Activity Network form and selecting Activity Network Options....

Resource Analysis Panes
The Activity Usage Profile, Resource Usage Spreadsheet, Resource Usage Profile, Activity Usage Spreadsheet views display resource information and will be discussed in the Resource Optimization chapters.
13.2.6 WBS Window Panes
The WBS Window has three options for the top pane:

- ![Table without bars](image)
- ![Table with bars](image)
- ![Chart view](image)

- shows a table without bars,
- shows a table with bars and
- displays a chart view of the WBS and the boxes may also be formatted by right-clicking and selecting **Chart Box Template**:

![Chart Box Template](image)

13.3 Copying a Layout To and From Another Database
A layout from any Window may be copied to another database by using the Import and Export functions from the Open Layout form. The layout is saved in a Primavera Layout File (*.PLF) format as a stand-alone file and is then imported into another database.
WORKSHOP 11

Organizing Your Data

Background

Having completed the schedule, you may report the information with different Layouts.

Assignment

Display your project in the following formats, noting the different ways you may represent the same data.

1. Ensure you have applied the all Activity Filter, use the button to open the Filter form.
2. Hide and display the relationships, use the button.
3. Display the Activity Network, use the button.
4. Zoom in, out and best fit using the buttons.
5. Scroll up and down or click the WBS Nodes on the left side of the screen. You will notice that only the Activities associated with the highlighted WBS are displayed.
6. Display the Activity Table by clicking on the button.
7. Hide and display the Bottom pane by clicking on the button.
8. With the bottom pane displayed click the to show the Trace Logic form; experiment with the form.
9. Right-click in the Trace Logic form, select Trace Logic Options… and change the number of Predecessor and Successor Levels displaying 1, 2 and 3 levels and note the change in the layout. Click on the predecessors and successors in each option.
10. Click on the button to display the Activity Details form.

continued……
11. Create a new layout titled **OzBuild Workshop 11 - Without Float**, make it available to only yourself, displaying the columns and formatting the bars as per the following picture:

12. Save this layout

13. Make a copy of it titled **OzBuild Workshop 11 - With Float**, make it available to only yourself, displaying the columns and formatting the bars as per the following picture showing **Total Float** and **Negative Float**:

14. Save this layout.