

**PROJECT PLANNING & SCHEDULING**

**USING**

**PRIMAVERA® P6™**

**For all industries including Versions 4 to 6**

**Planning and Progressing Project Schedules**

**With and Without Roles and Resources**

**in an**

**Established Enterprise Environment**

**BY**

**PAUL EASTWOOD HARRIS**

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## **INTRODUCTION**

This book is an upgrade of the *Project Planning & Scheduling Using Primavera Version 5.0 for Engineering & Construction and Maintenance & Turnover* book and has been written to enable new users to learn the planning and scheduling functions of Primavera Versions 3.5 to 6.0. Version 6.1 was due to be released after this book was published but the prerelease notes indicated that none of the functions outlined in this book were to change and most changes were in the web access software and timesheeting.

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 book may be improved.

## **SUMMARY**

The book was written so it may be used as:

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

The screen shots for the book are taken from Primavera Version 6.0 but this book may be used to learn Primavera Version 3.5, 4.1, 5.0 or 6.0.

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

This publication is ideal for people who would like to quickly gain an understanding of how the software operates and 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 book tailored to suit their requirements. This may be achieved removing, reordering or adding content to the book 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 books 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 book follows the same proven layout of my previous books. I trust this book will assist you in understanding how to use Primavera Enterprise on your projects.

## **APPRECIATION**

I would like thank my daughter Samantha Harris, Andrew Dick and editor Susan Aaron for their assistance in the production of this publication.

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Planning and Scheduling Using Primavera® Version 5.0 For Engineering & Construction  
Planning and Scheduling Using Primavera® Version 5.0 For IT Project Office

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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:

Topic	Menu Command
<ul style="list-style-type: none"> <li>Formatting Columns</li> </ul>	Open the <b>Column</b> form: <ul style="list-style-type: none"> <li>Select <b>View, Columns...</b>, or</li> <li>Click on the  button.</li> </ul>
<ul style="list-style-type: none"> <li>Formatting Activity Bars</li> </ul>	Open the <b>Bar</b> form: <ul style="list-style-type: none"> <li>Select <b>View, Bars...</b>, or</li> <li>Click on the  button.</li> </ul>
<ul style="list-style-type: none"> <li>Format Gridlines</li> </ul>	<b>Bar Chart Gridlines</b> are formatted in the <b>View, Bar Chart Options...</b> form, <b>Sightlines</b> tab.
<ul style="list-style-type: none"> <li>Format Data Date</li> </ul>	The <b>Data Date</b> is formatted in the <b>Bar Chart Options...</b> form, <b>Data Date</b> tab.
<ul style="list-style-type: none"> <li>Formatting Row Height</li> </ul>	Open the <b>Table, Font and Row</b> form by: <ul style="list-style-type: none"> <li>Selecting <b>View, Table Font and Row...</b></li> </ul>
<ul style="list-style-type: none"> <li>Formatting Colors</li> </ul>	There are limited options for formatting colors: <ul style="list-style-type: none"> <li><b>Text</b> colors are formatted in the <b>Color</b> form accessed from the <b>Table, Font and Row</b> form which is opened by selecting <b>View, Table Font and Row...</b>,  button.</li> <li><b>Bar Colors</b> are covered in the <b>Formatting the Bars</b> paragraph of this chapter.</li> <li><b>Band</b> colors are selected as part of the formatting of the layout by selecting <b>View, Group and Sort...</b> or clicking on the  button.</li> </ul>
<ul style="list-style-type: none"> <li>Formatting Fonts</li> </ul>	There are limited options for formatting fonts: <ul style="list-style-type: none"> <li><b>Text</b> fonts are formatted in the <b>Font</b> form accessed from the <b>Table, Font and Row</b> form which is opened by selecting <b>View, Table Font and Row...</b>,  button.</li> <li><b>Notebook</b> entries may be edited when entered.</li> </ul>
<ul style="list-style-type: none"> <li>Format Timescale</li> </ul>	<ul style="list-style-type: none"> <li>Click on the  button, or</li> <li>Select <b>View, Timescale...</b>, or</li> <li>Right-click in the Bar Chart area and select <b>Timescale...</b></li> </ul>

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.

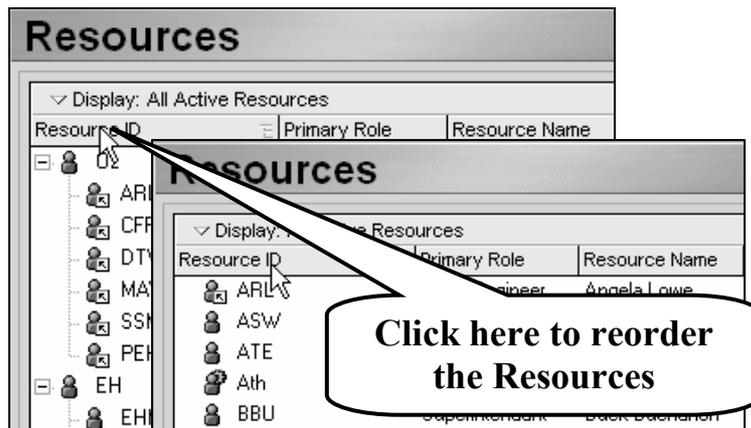
## 8.1 Formatting the Project Workspace

The formatting of the Project Workspace is very similar to the formatting of the Activity Workspace 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.

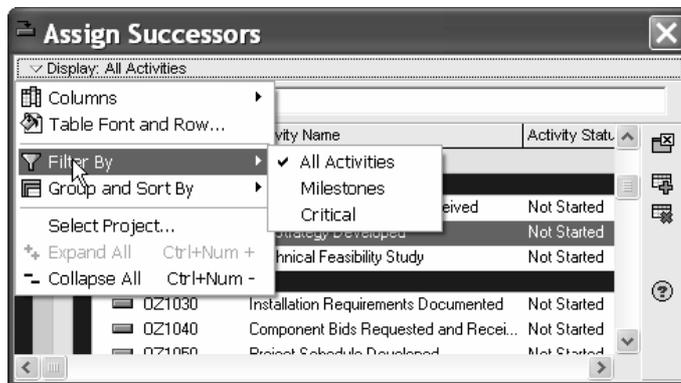
## 8.2 Understanding Forms

Unlike many software packages Primavera has sorting and filtering functions in most forms and the 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 Workspace take 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.

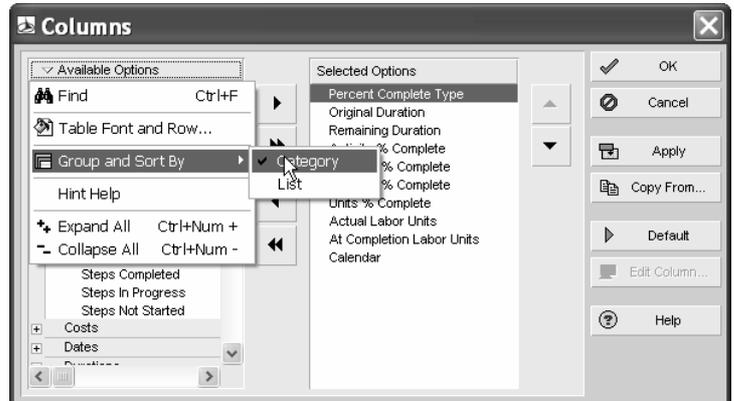


## 8.3 Formatting Columns

### 8.3.1 Selecting the Columns to be Displayed

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

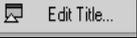
- Select **View, Columns...**, or
- Click on the  button, or
- Right-click to open a menu and select **Columns...**:

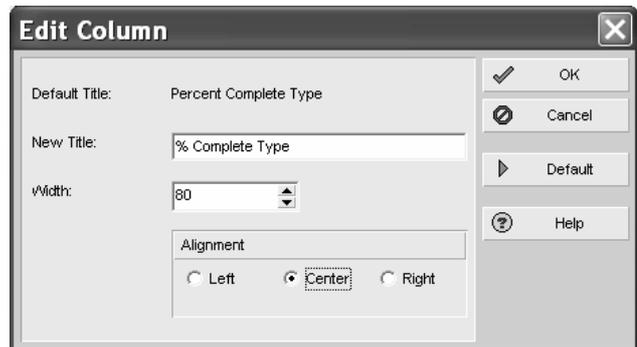


The **Column** form may be resized by dragging the edges.

- The available columns are displayed in the right hand window and may be listed under **Categories** or as a single **List**.
- To select how the column titles are displayed, click on 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 hand **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.

### 8.3.2 Column Header Alignment

- Select **View, Columns...**, or
- Click on the  button, then
- Select the ,  (in Version 5.0) and earlier, option which opens the **Edit Column** form and allows 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.



### 8.3.3 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 & dragging.

Activity Name	Original Duration
Install Door and Window Frames	1d
Install Exterior Doors and Windows	2d
<b>ishes</b>	216d

- From the **Column** form select the  (  in Version 5.0) and earlier, to open the **Edit Column Title** form and enter the width of the column in pixels.

### 8.3.4 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 on the column title in a Workspace and drag the column.

## 8.4 Formatting the Bars

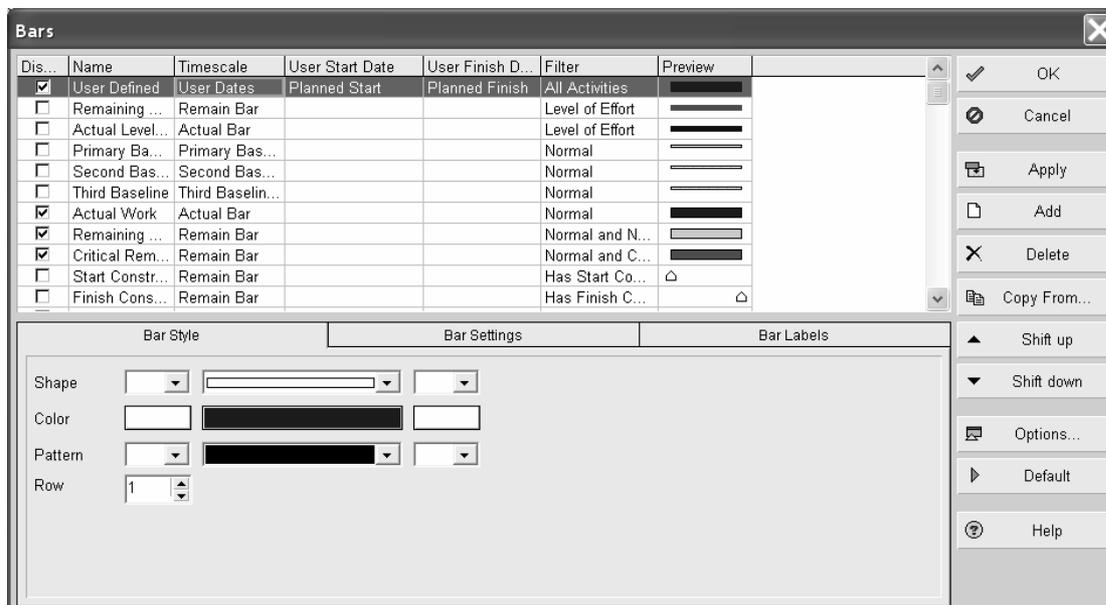
The bars in the Gantt Chart may be formatted to suit your requirements for display.

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.

### 8.4.1 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.



Dis...	Name	Timescale	User Start Date	User Finish D...	Filter	Preview
<input checked="" type="checkbox"/>	User Defined	User Dates	Planned Start	Planned Finish	All Activities	
<input type="checkbox"/>	Remaining ...	Remain Bar			Level of Effort	
<input type="checkbox"/>	Actual Level...	Actual Bar			Level of Effort	
<input type="checkbox"/>	Primary Ba...	Primary Bas...			Normal	
<input type="checkbox"/>	Second Bas...	Second Bas...			Normal	
<input type="checkbox"/>	Third Baseline	Third Baselin...			Normal	
<input checked="" type="checkbox"/>	Actual Work	Actual Bar			Normal	
<input checked="" type="checkbox"/>	Remaining ...	Remain Bar			Normal and N...	
<input checked="" type="checkbox"/>	Critical Rem...	Remain Bar			Normal and C...	
<input type="checkbox"/>	Start Constr...	Remain Bar			Has Start Co...	
<input type="checkbox"/>	Finish Cons...	Remain Bar			Has Finish C...	

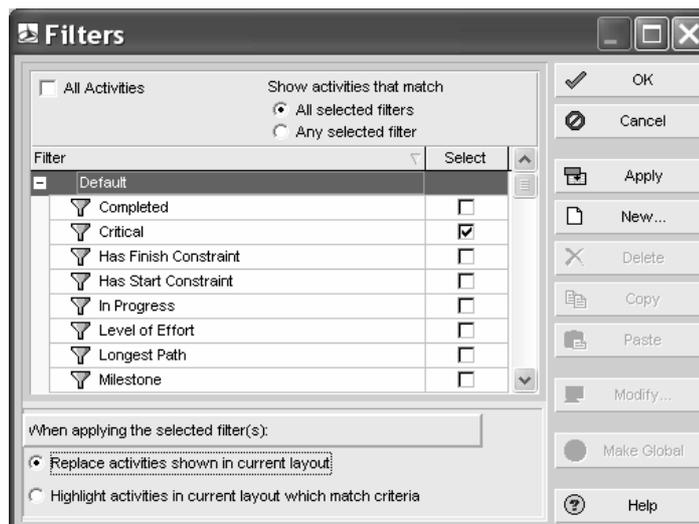
The following notes are the main points for using this function. Detailed information is available in the help facility by searching for “Bar styles dialog box.”

- 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  button and deleted by clicking on the  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  and  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 allows 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 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**.

### 8.4.2 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.

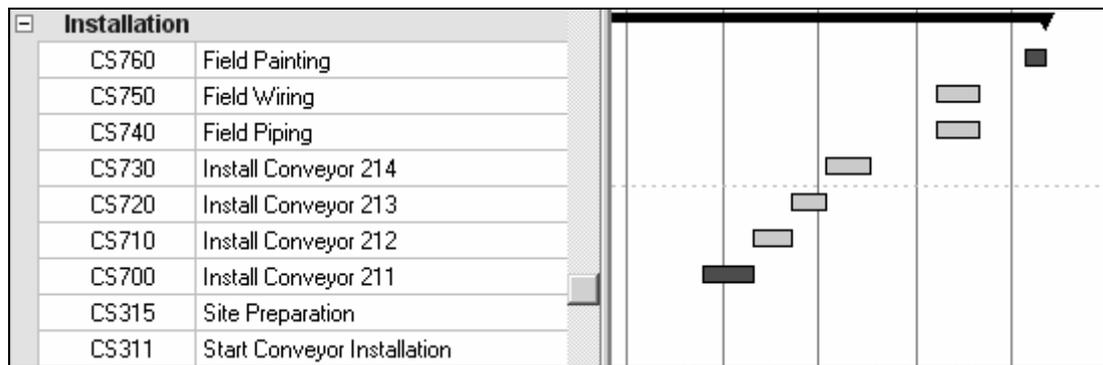
The bars may be placed on one of three rows numbered from 1 to 3, from top to bottom one bar above the other. If multiple bars are placed on the same row, the bar at the top of the list will be drawn first and the ones lower down the list will be drawn over the top.

### 8.4.3 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 below:
  - 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.

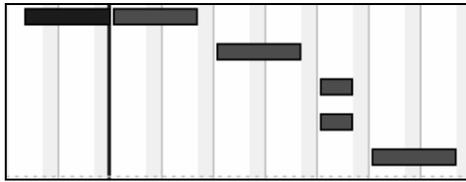


When formatting the **Bar Style** for Milestones it is important to take note of the checked boxes and Filter format. If the box **Show bar for grouping bands** is checked, Milestones will appear at the ends of Summary Bars and not in line with the actual activities they belong to. The filter in this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

Un-necked bars



Necked bars



- **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 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.

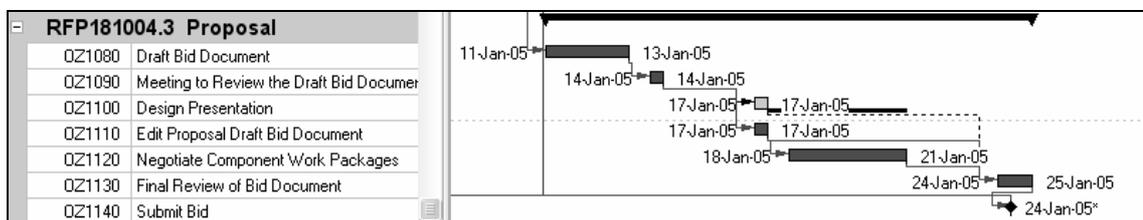
### 8.4.4 Bar Labels Tab

This tab allows the placement of text with a bar, above, below, to the left and to the right. The pictures below 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  buttons at the bottom of the **Bars** form to add and delete a **Label** item.

Bar Style		Bar Settings		Bar Labels	
Position	Label				
Right	Actual Finish				
Left					
Right					
Top-Left					
Top-Center					
Bottom-Left					
Bottom-Right					
Bottom-Center					
Center					

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

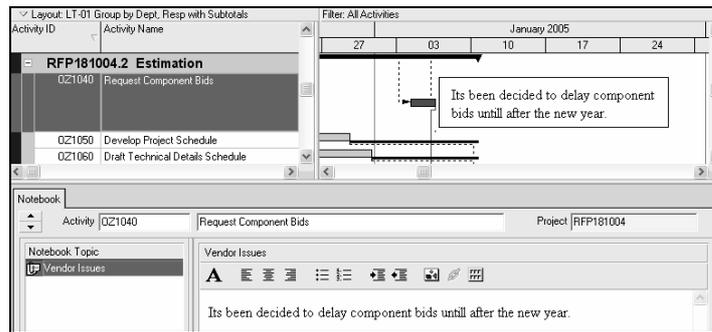


- The dates on the bar chart are adopted from the **User Preferences** and may not be formatted separately.



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.

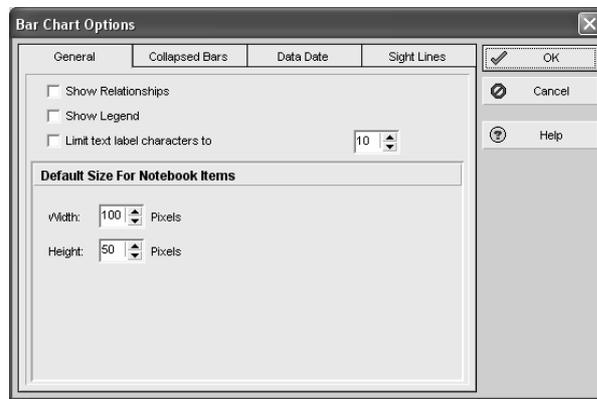
- Each **Notebook Topic** may be displayed on a bar one at a time by selecting the topic in the **Bar Labels** tab. After the box containing the label is displayed on the screen it may be adjusted in size by dragging.



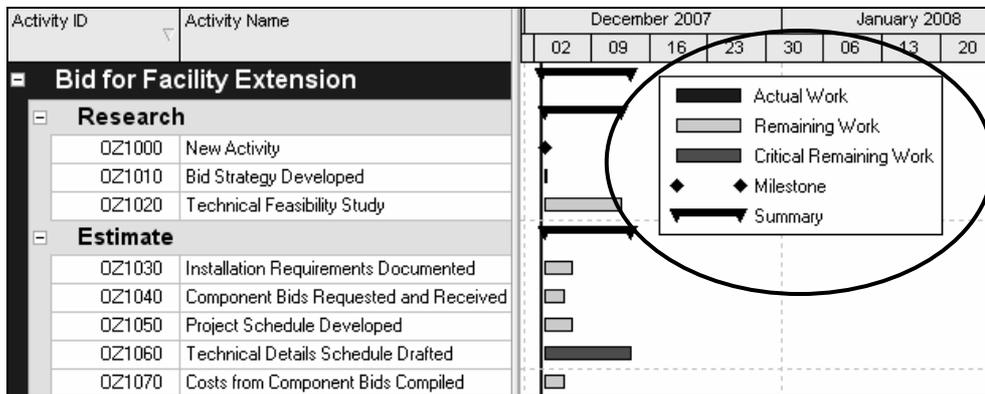
### 8.4.5 Bar Chart Options Form

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.

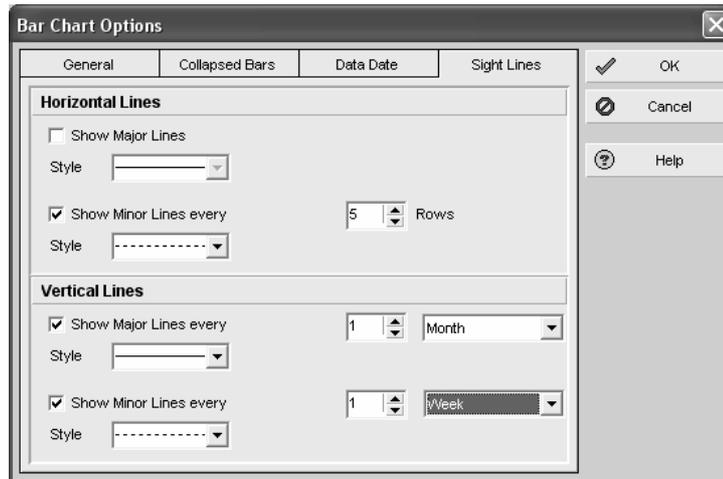


- **Show Relationships** has the same result as clicking on the  icon and displays the relationships.
- **Show Legend** Displays a legend on the bar chart in the Activities view, see below:



- 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.

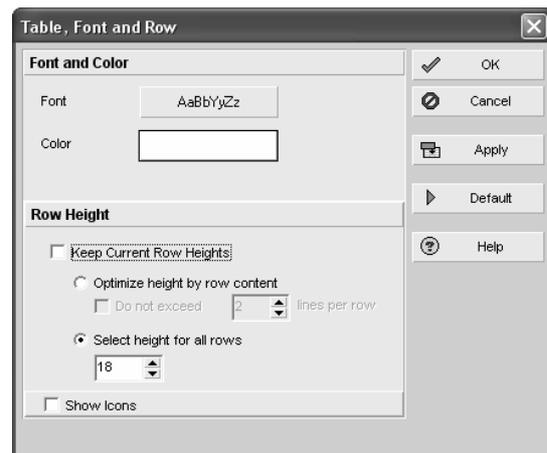
- Primavera Version 5.0 introduced a new **Sight Lines** tab bar which now allows the specification of both Major and Minor vertical and horizontal Sight Lines, which brings this functionality up to match P3, SureTrak and Microsoft Project:



## 8.5 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.



BA840	Rough-In Plumbing/...	1d	1d
BA810	Set Mechanical and Electrical Equipment	15d	0d
<b>Exterior Finishes</b>		153d	17d
BA800	Building Enclosed	0d	0d

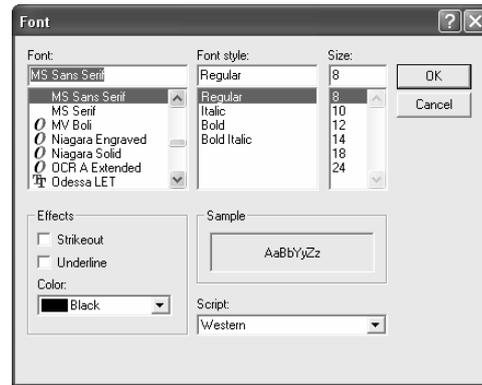
- In the **Projects Workspace** a  indicates a **What-if** project, a  a **Planned** project and a  an **Active** or **Inactive** project.
  - In the **Activity Workspace** a  indicates a WBS Node, a blue  a complete activity, a blue and green  an in-progress activity and a green  an un-started activity.
  - In the **Resources Workspace** a  indicates a Resource, a  a resource assigned to an open project, a  and a  an unassigned and assigned **Nonlabor Resource** and a  and a  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 on 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.

## 8.6 Format Fonts and Font Colors

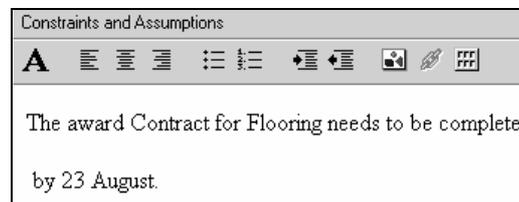
The format font options are:

- 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 , the **Font** button, will open the font form where normal Windows functions are available.
- Clicking on the **Color** button will allow 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 hand side with the **Table Font and Row...** menu item.

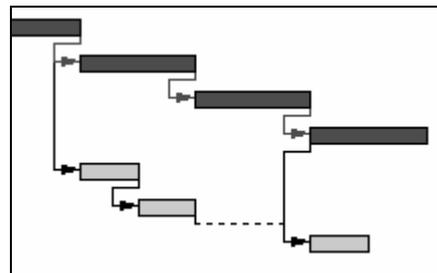


- The text in a **Text Box** that has been inserted onto the Bar Chart may be formatted when the box is created.

## 8.7 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.



## 8.8 Format Timescale

### 8.8.1 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.

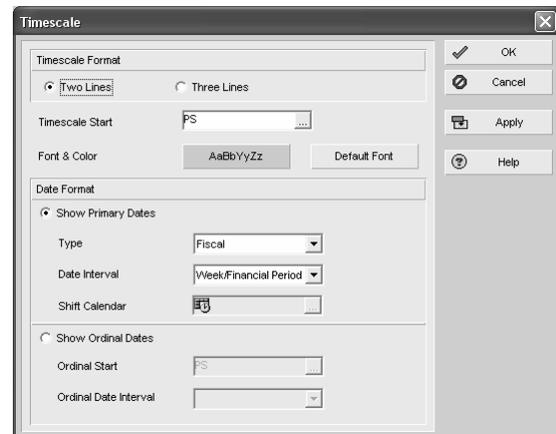
The timescale may be rescaled, therefore increasing or decreasing the length of the bars and displaying more or less of the schedule by placing the cursor in the bottom half of the Timescale, the cursor will turn into a , right-click, and drag left to make the bars shorter and right to make the bars 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.

### 8.8.2 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 in Primavera Version 6.0** now allows in the timescale

- Two Lines, or
- Three lines

January 2008					February 2008				March 2008		
30	06	13	20	27	03	10	17	24	02	09	16

2008												
January					February				March			
30	06	13	20	27	03	10	17	24	02	09	16	23

- **Font & 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:

Sep 27					Oct 04								
M	T	W	T	F	S	S	M	T	W	T	F	S	S



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

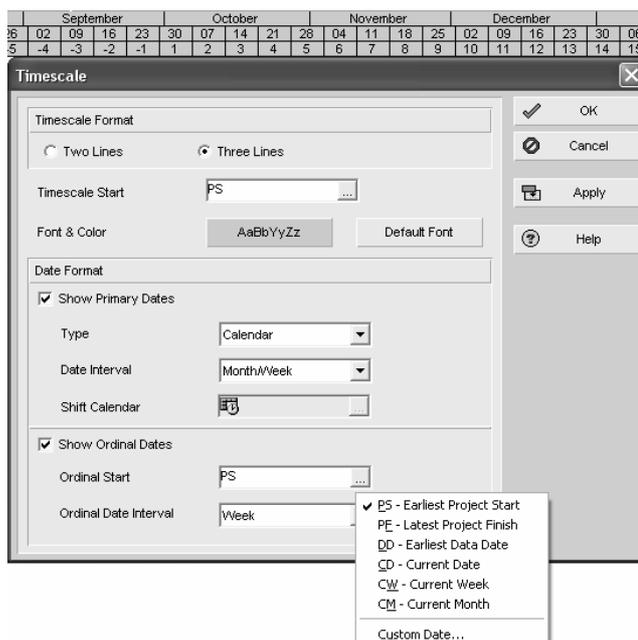
Sep 27						
Mon	Tue	Wed	Thr	Fri	Sat	Sun

- 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.

- **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 Details** form in the **Projects Workspace**.
- **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 displayed

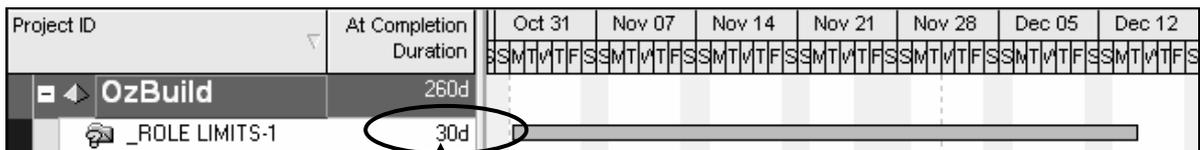




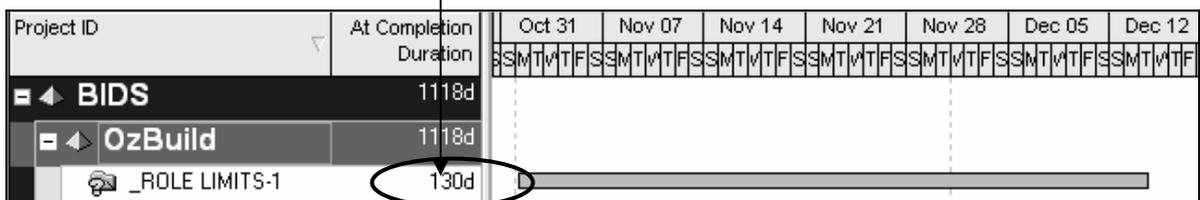
**Fiscal Year:** When the scale was set to Month/Week on the author's system the Fiscal Year did not display in accordance with date formatting settings. When the scale was set to Week and Days, the Date were displayed in US format (MM/DD/YYYY) which is not correct for countries that use the DD/MM/YYYY format.

### 8.8.3 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**.



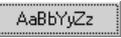
The problem is when the default calendar is swapped to a 24hr/day 7days/week there is no Non Work Period Shading but the duration of a project that is 44 elapsed days is now displayed as 130days.

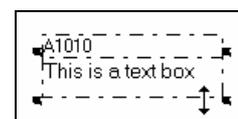
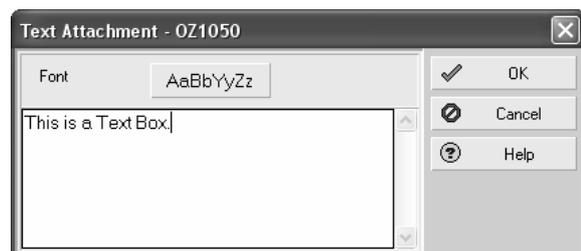


## 8.9 Inserting Attachments - Text Boxes and Curtain

### 8.9.1 Adding a Text Box

A text box may be inserted in a bar chart area:

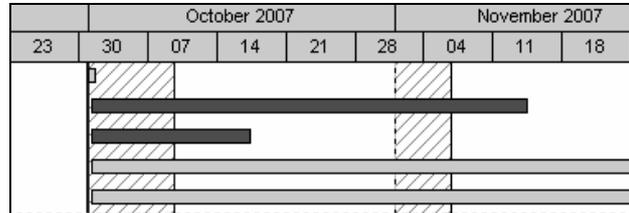
- Select the Activity which the new Text Box is to be associated with, either
- Right-click in the Bar Chart to open the menu, select **Attachments, Text** or
- Select **View, Attachments, Text** and
- The **Text Attachment** form will be displayed,
- Type in the text and format the font by clicking on the  button.
- A **Text Box** may be repositioned by clicking on the text and using the cursor to drag the corners and sides.



### 8.9.2 Adding 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 on 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**

Display curtain attachment

Start Date: 01-Oct-07

Finish Date: 07-Oct-07

Color: [Color Selection Box]

Fill pattern: [Fill Pattern Selection Box]

Buttons: OK, Cancel, Help, Delete

### 13 GROUP, SORT AND LAYOUTS

**Group & Sort** allows data such as activities in the **Activity Workspace**, WBS Nodes in the **WBS Workspace**, projects in the **Project Workspace** and many other data items to be sorted and organized under other parameters such as **Dates** and **Resources** or user-defined **Activity** and **Project 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 & 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.

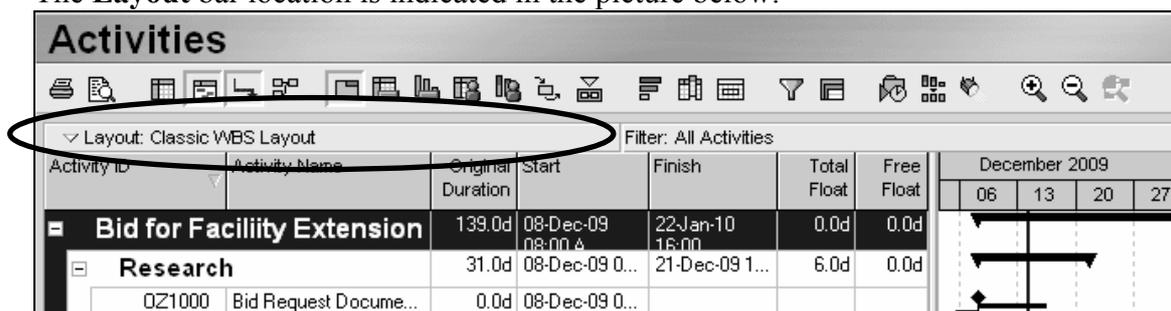
Although Group and Sort is available in many forms, Layouts are only available in a few places including the following Workspaces:

- Projects
- WBS
- Activities
- Resources
- Tracking

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

Topic	Notes on the Function
<ul style="list-style-type: none"> <li>• Reformat the Grouping and Sorting of activities by opening the <b>Group and Sort</b> form:</li> </ul>	<ul style="list-style-type: none"> <li>• Click on the  button, or</li> <li>• Select <b>View, Group and Sort....</b></li> </ul>
<ul style="list-style-type: none"> <li>• Group and Sort Projects at Enterprise Level</li> </ul>	Projects may be Grouped and Sorted at Enterprise level in a similar method to activities in a project.
<ul style="list-style-type: none"> <li>• Create or edit a Layout</li> </ul>	Select either: <ul style="list-style-type: none"> <li>• From the menu <b>View, Layout, Save As...</b>, or</li> <li>• From the <b>Layout</b> bar <b>Layout, Save As....</b></li> </ul>

The **Layout** bar location is indicated in the picture below:



### 13.1 Group and Sort Activities

The **Group & Sort** function has been used in this book 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 Version 6.0 which when unchecked hides the summary data in the bands, which prevents the truncating of Band titles.

##### Summary Data Displayed

Activity ID	Original Duration	Start	Finish	Total Float
<b>Bid for Fac</b>	139d	08-Dec-09 A	22-Jan-10	0d
<b>Research</b>	31d	08-Dec-09 A	21-Dec-09	6d
OZ1000	0d	08-Dec-09 A		
OZ1010	1d	08-Dec-09 A	08-Dec-09 A	
OZ1020	8d	09-Dec-09 A	21-Dec-09	2d
<b>Estimate</b>	52d	22-Dec-09	08-Jan-10	3d
OZ1070	2d	07-Jan-10	08-Jan-10	0d

##### Summary Data Hidden

Activity ID	Original Duration	Start	Finish	Total Float
<b>Bid for Facility Extension</b>				
<b>Research</b>				
OZ1000	0d	08-Dec-09 A		
OZ1010	1d	08-Dec-09 A	08-Dec-09 A	
OZ1020	8d	09-Dec-09 A	21-Dec-09	2d
<b>Estimate</b>				
OZ1070	2d	07-Jan-10	08-Jan-10	0d



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, or when multiple projects have been opened to calculate all the projects' values.

Activity ID	Activity Name	Original Duration	Actual Labor Cost	Remaining Labor Cost	Start	Finish
<b>Total</b>		37	\$3,220	\$45,920	03-Dec-07 A	22-Jan-08
OZ1000	Bid Request Document Received	0	\$0	\$0	03-Dec-07 A	
OZ1010	Bid Strategy Developed	1	\$1,300	\$0	03-Dec-07 A	03-Dec-07 A
OZ1150	New Activity	1	\$0	\$0	03-Dec-07 A	03-Dec-07 A
OZ1020	Technical Feasibility Study	8	\$1,920	\$4,800	04-Dec-07 A	17-Dec-07
OZ1030	Installation Requirements Documented	4	\$0	\$5,120	18-Dec-07	21-Dec-07
OZ1060	Technical Details Schedule Drafted	9	\$0	\$9,360	18-Dec-07	02-Jan-08
OZ1050	Project Schedule Developed	4	\$0	\$2,880	22-Dec-07	28-Dec-07
OZ1040	Component Bids Requested and Received	3	\$0	\$3,840	02-Jan-08*	04-Jan-08
OZ1070	Costs from Component Bids Compiled	2	\$0	\$1,280	07-Jan-08	08-Jan-08
OZ1080	Bid Document Drafted	3	\$0	\$6,720	09-Jan-08	11-Jan-08

**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:

Activity ID	Activity Name	Early Start	Early Finish	BL Budgeted Labor Cost	2003								
					Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
<b>1-5 OzBuild Bid</b>		01-Dec-03	29-Jan-04	\$22,830									
<b>1-5.1 Research</b>		01-Dec-03	17-Dec-03	\$6,640									
<b>1-5.2 Estimation</b>		12-Dec-03	15-Jan-04	\$8,150									
<b>1-5.3 Proposal</b>		15-Jan-04	29-Jan-04	\$8,040									

**Shrink Vertical Grouping Bands**

**Shrink vertical grouping bands** is new to Primavera Version 6.0 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**

Activity ID	Activity Name	Original Duration
<b>Bid for Facility Extension</b>		
<b>Research</b>		
OZ1000	Bid Request Docume...	0.0d
OZ1010	Bid Strategy Developed	1.0d
OZ1020	Technical Feasibility S...	8.0d
<b>Estimate</b>		

**Option Checked**

Activity ID	Activity Name	Original Duration
<b>Bid for Facility Extension</b>		
<b>Research</b>		
OZ1000	Bid Request Docume...	0.0d
OZ1010	Bid Strategy Developed	1.0d
OZ1020	Technical Feasibility S...	8.0d
<b>Estimate</b>		

### 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:

Group By	Indent	To Level	Group Interval	Font & Color
WBS level 1	<input checked="" type="checkbox"/>	All		12 Arial
WBS level 2				11 Arial
WBS level 3				9 Arial
WBS level 4				8 Arial

Activity ID	Activity Name	Early Start	Early Finish
Bid for Facility Ext...		06-Dec-04	24-Jan-05
Research		06-Dec-04	21-Dec-04
OZ1010	Bid Strategy M...	06-Dec-04	06-Dec-04
OZ1020	Investigate Te...	07-Dec-04	16-Dec-04
OZ1030	Document Inst...	17-Dec-04	21-Dec-04
OZ1000	Bid Request D...	06-Dec-04	
Estimation		17-Dec-04	10-Jan-05
OZ1040	Request Comp...	04-Jan-05	06-Jan-05

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:

Group By	Indent	To Level	Group Interval	Font & Color
Early Start			Week	12 Arial
WBS	<input type="checkbox"/>	All		11 Arial
Resources				9 Arial
				8 Arial

Activity ID	Activity Name	Early Start	Early Finish
01-Dec-03		01-Dec-03	11-Dec-03
Research		01-Dec-03	11-Dec-03
Sales Engineer, System Engin...		01-Dec-03	01-Dec-03
A1010	Bid Strategy Meeting	01-Dec-03	01-Dec-03
System Engineer		02-Dec-03	11-Dec-03
A1020	Investigate Techni...	02-Dec-03	11-Dec-03
08-Dec-03		12-Dec-03	15-Jan-04
Research		12-Dec-03	17-Dec-03
Sales Engineer, System Engin...		12-Dec-03	17-Dec-03
A1030	Document Installati...	12-Dec-03	17-Dec-03

- **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.

Group By				
Group By	Indent	To Level	Group Interval	Font & Color
WBS	<input type="checkbox"/>	2		12 Arial
		All		11 Arial
		1		9 Arial
		2		8 Arial

This option allows other banding below the select level which is not permitted with the **All** option.

Group By				
Group By	Indent	To Level	Group Interval	Font & Color
WBS	<input type="checkbox"/>	2		12 Arial
Resources				11 Arial
				9 Arial
				8 Arial

- **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 allows the selection of the time interval used to group activities:

Group By	Indent	To Level	Group Interval	Font & Color
Early Start				12 Arial
			<none>	11 Arial
			Year	9 Arial
			Quarter	8 Arial
			Month	8 Arial
			Week	8 Arial
			Day	8 Arial

Activity ID	Activity Name	Early Start	Early Finish
<b>01-Dec-03</b>			
A1010	Bid Strategy Meeting	01-Dec-03	01-Dec-03
A1020	Investigate Techni...	02-Dec-03	11-Dec-03
<b>08-Dec-03</b>			
A1030	Document Installati...	12-Dec-03	17-Dec-03
A1060	Draft Technical De...	12-Dec-03	15-Jan-04
<b>15-Dec-03</b>			
A1050	Develop Project Sc...	18-Dec-03	08-Jan-04

- **Font and Color**

Double-click on 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

Activity ID	Original Duration	Start	Finish	Total Float
<b>Project: REF101206 Bid for Facility Extension</b>				
<b>WBS: REF101206.1 Research</b>				
QZ1000	0d	07-Dec-09		4d
QZ1010	1d	07-Dec-09	07-Dec-09	4d
QZ1020	8d	08-Dec-09	17-Dec-09	4d
<b>WBS: REF101206.2 Estimate</b>				
QZ1070	2d	07-Jan-10	08-Jan-10	0d

With only Description Checked

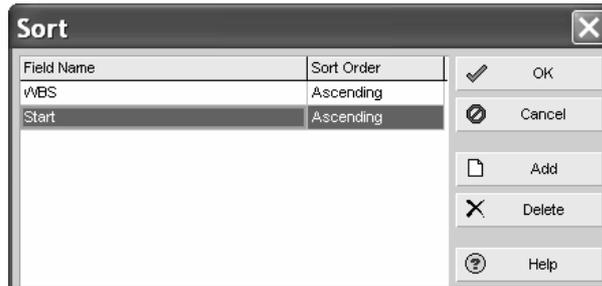
Activity ID	Original Duration	Start
<b>Bid for Facility Extension</b>		
<b>Research</b>		
QZ1000	0d	07-Dec-09
QZ1010	1d	07-Dec-09
QZ1020	8d	08-Dec-09
<b>Estimate</b>		
QZ1070	2d	07-Jan-10

**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.

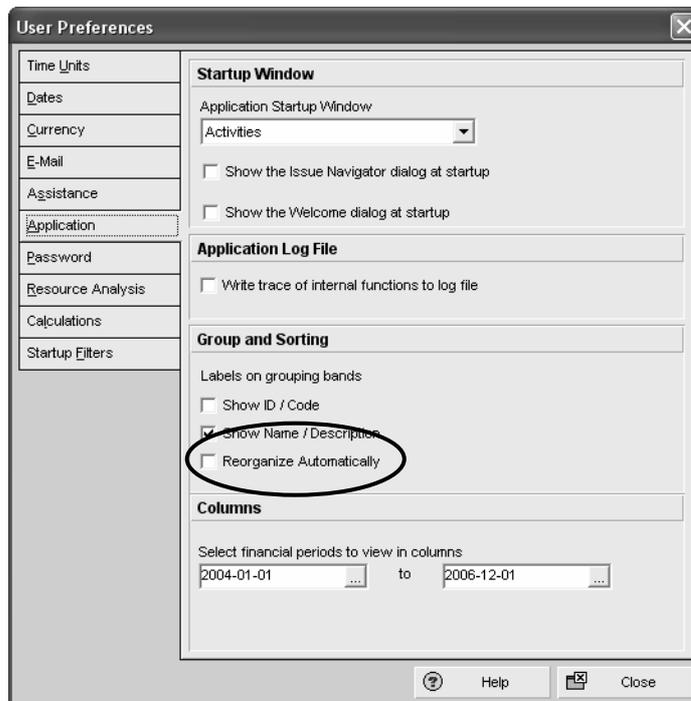
**NOTE:** This order may be easily overridden by clicking on the column titles to reorder activities and therefore the use of this option is problematic as clicking on the column header is very simple and will override options set here.



Field Name	Sort Order
WBS	Ascending
Start	Ascending

### 13.1.5 Reorganize Automatically

Primavera Version 4.1 introduced a function titled Reorganize Automatically, which 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 on the **Application** tab.



**User Preferences**

**Application**

**Startup Window**

Application Startup Window: Activities

Show the Issue Navigator dialog at startup

Show the Welcome dialog at startup

**Application Log File**

Write trace of internal functions to log file

**Group and Sorting**

Labels on grouping bands

Show ID / Code

Show Name / Description

Reorganize Automatically

**Columns**

Select financial periods to view in columns

2004-01-01 to 2006-12-01

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.

### 13.1.6 Group and Sort Projects at Enterprise Level

Projects in the **Projects Workspace** may be Grouped and Sorted in a similar way to the Grouping and Sorting of activities.

When a database is opened, the projects are by default displayed under the Enterprise Project Structure (EPS) in the Projects Workspace.

The projects may be Grouped and Sorted under a number of different headings by:

- Selecting **Layout: Projects, Group and Sort By**, or
- Right-clicking in the columns area and selecting **Group and Sort ...**, or
- Selecting **View, Group and Sort By**.

Then selecting the option from the drop down list.

The **Customize...** option will open the projects Group the Sort form which operates in a similar way to the Activities Group and Sort form.



## 13.2 Understanding Layouts

A standard load of Primavera is supplied with a number of predefined Layouts for some of the Workspaces 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 Version 6.0 introduced Project Layouts for the Activity Workspace. 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.

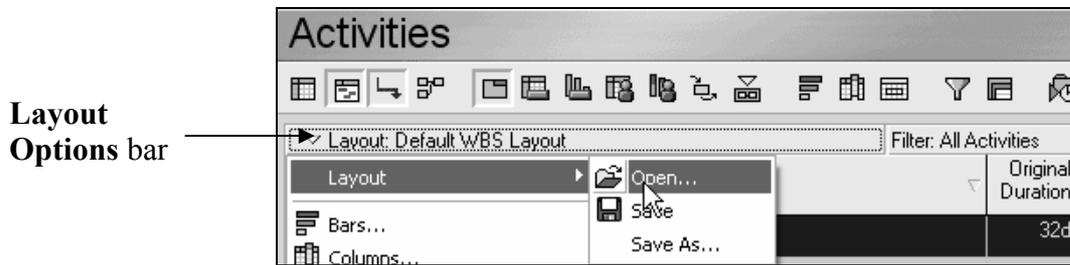


Layouts are not exported with an XER file in Version 5.0 and earlier but may be exported using a PLF file. Therefore to send a person a complete projects schedule you may need to include the layout as a PLF file.

### 13.2.1 Applying an Existing Layout

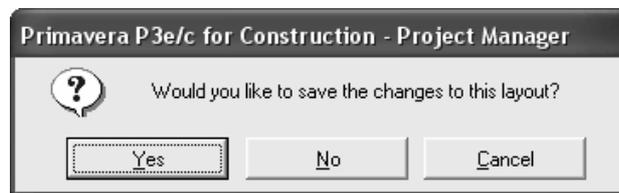
Layouts may be applied from the **Open Layout** form by:

- Selecting the **Open** option from the **Layout Options** bar:

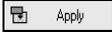


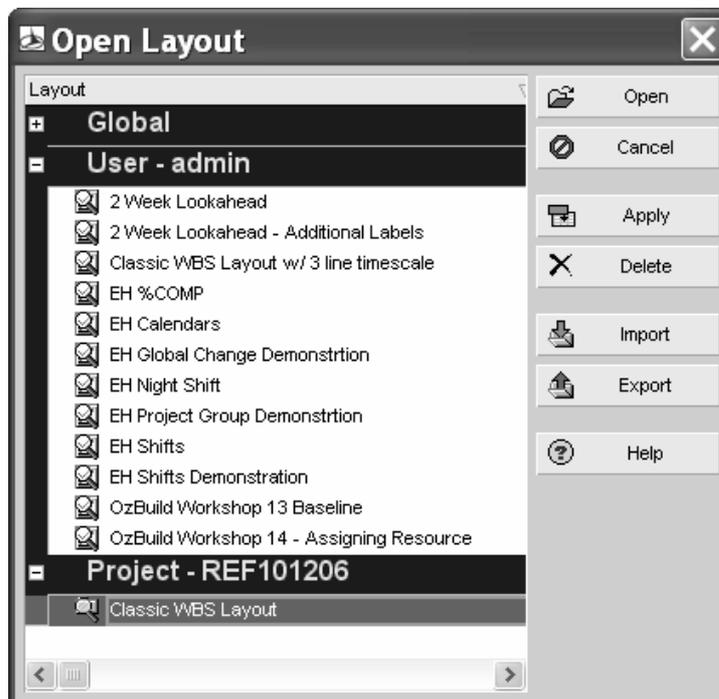
- Or, by selecting **View, Layout, Open....**

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 three headings once a project layout has been created, **Global**, **User** and **Project**:

- Click on the  **Apply** 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:



Clicking on  **Layout** button to reorder the Layouts.

### 13.2.2 Creating a New Layout

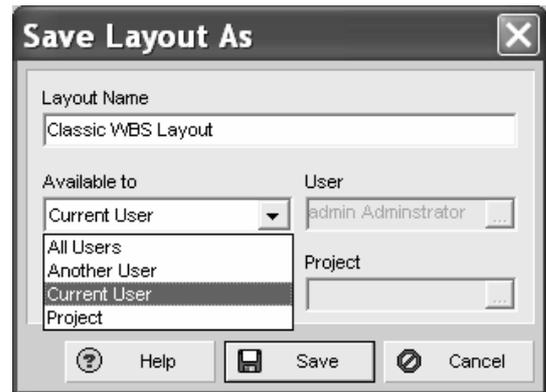
A new layout may be created by saving an existing layout with a new name and editing it.

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
- Select who, or which projects you wish the layout to be available to, P6 only.
- Click on the  **Save** 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 Workspace**:

Layout Name	Available in Top Pane	Available in Bottom Pane
• Gantt Chart	Yes	Yes
• Activity Details		Yes
• Activity Table	Yes	Yes
• Activity Network	Yes	
• Trace Logic		Yes
• Activity Usage Profile		Yes
• Resource Usage Spreadsheet		Yes
• Resource Usage Profile		Yes
• Activity Usage Spreadsheet	Yes	Yes

**NOTE:** The available layouts vary depending on the Workspace open. This chapter will predominately discuss the Activity Workspace but experimentation will show the options available in the other Workspaces.

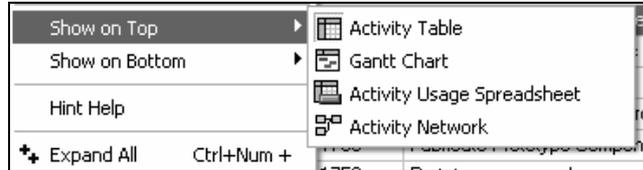
### 13.2.4 Changing Activity Layout Types in Panes

The **Activities Toolbar** has icons for the display options in the top and bottom pane:

-  are the top pane buttons, and
-  are the bottom pane buttons.

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

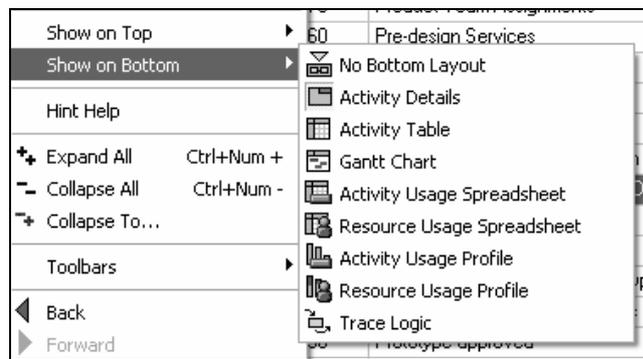
- **View, Show on Top,** or



- **View, Show on Bottom.**

Then select the **Layout Type** required from the list.

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



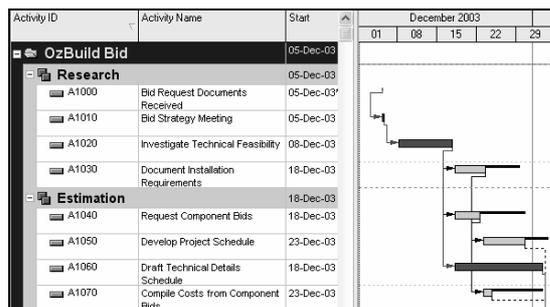
### 13.2.5 Activity Workspace Layout Panes

Each **Layout Type** has a number of options and the formatting of these has been discussed in earlier chapters.

#### Gantt Chart

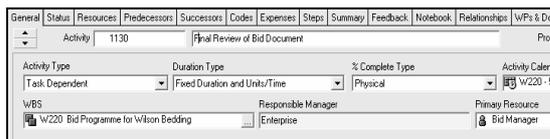
The **Gantt Chart** has two sides:

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

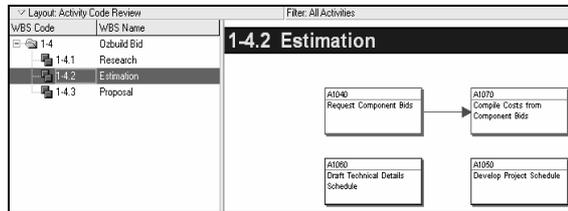
This layout is the same as the left hand side of the Gantt Chart and has no Bars and Timescale on the right hand side.

Activity ID	Activity Name	PHAS - Phase	RESP - Responsibility	DEPT - Department
<b>Project: W220 Bid Programme for Wilson Bedding</b>				
1000	Bid Request Documents Received	R	CFP	SLS
1010	Bid Strategy Meeting	R	DTW	FRCH
1020	Investigate Technical Feasibility	R	SSM	IT
1030	Document Installation Requirements	E	SSM	IT
1040	Request Component Tenders	E	ARL	FRCH

### Activity Network

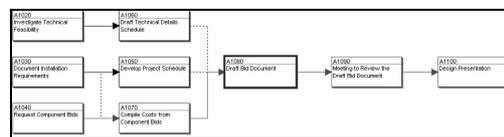
Like the Gantt Chart it has two panes:

- The **left hand** 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 allows the relationships between activities within one WBS Node to be checked.
- The **right hand** 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 hand screen of the **Activity Network** form and selecting **Activity Network Options....**

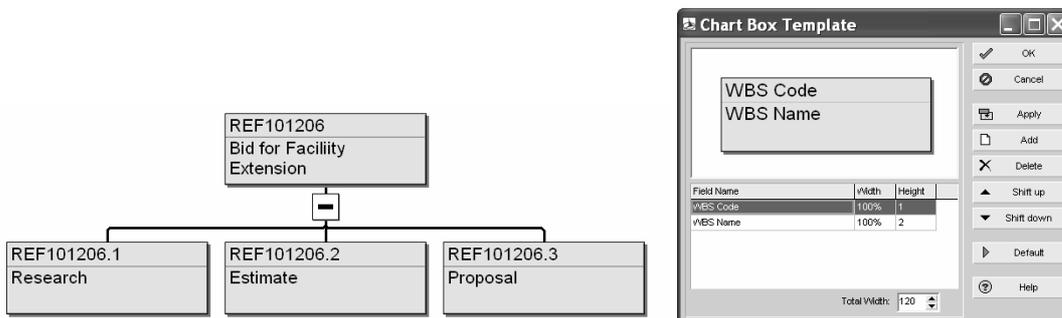
## Resource Analysis Panes

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 and Projects Workspace Panes

The WBS and Projects Workspace has three options for the top pane:

-  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**:



## 13.3 Copying a Layout To and From Another Database

A layout from any **Workspace** 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.

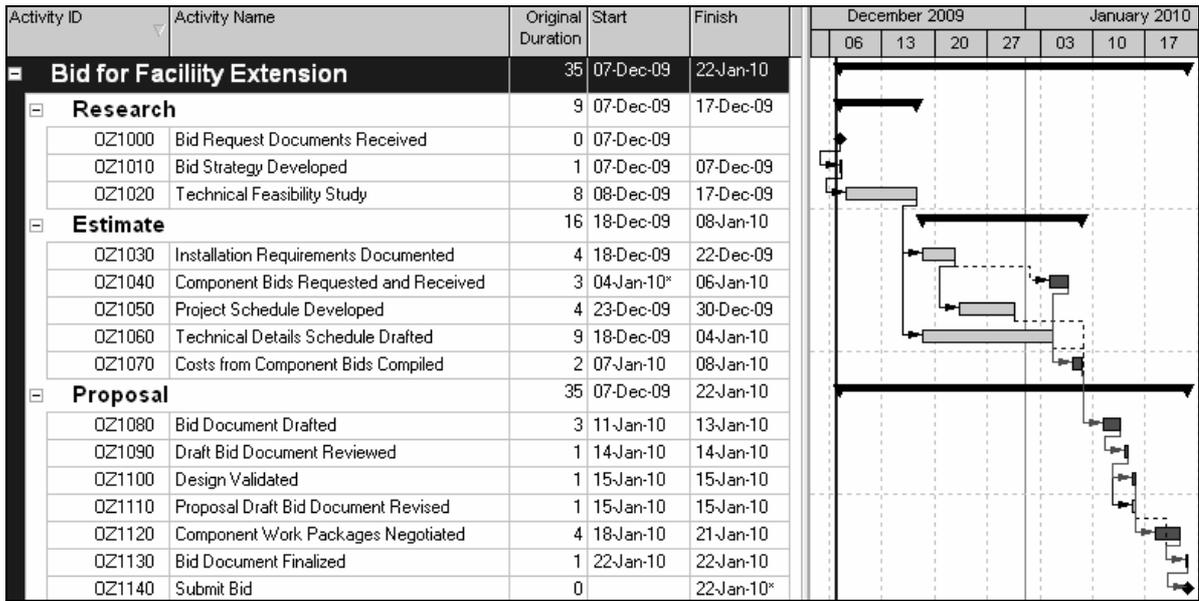
#### **Assignment**

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 on the **WBS** Nodes on the left hand 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 on 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 below:



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 below showing **Total Float** and **Negative Float**:
14. Save this layout.

