Milestones Professional 2010

User Manual

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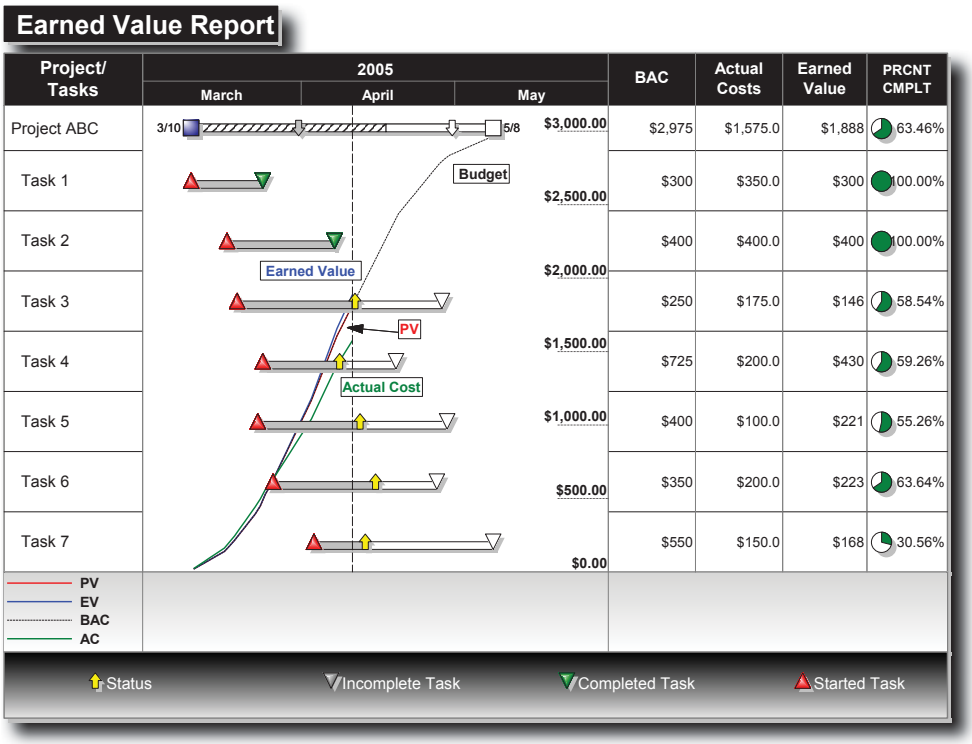
Chapter 1: Introduction

Easy yet Powerful Scheduling

Milestones Professional makes planning, organizing, communicating and tracking your projects fast and easy. Designed for anyone who spends time scheduling or managing projects, Milestones Professional makes fast work of your scheduling efforts.

Click-and-drag to build schedules

If you know how to use a mouse, then you can use Milestones Professional 2010. That's because Milestones Professional uses the same simple click-and-drag technique you're already familiar with. You can click-and-drag your way through even the most detailed projects in minutes!



Organize your schedule with outlining

Milestones Professional offers an easy-to-use outlining capability. Organize projects into tasks and sub-tasks. Use outline level shading to highlight various levels and text. A click of the mouse is all that's needed to "roll-up" lower level tasks into a summary bar. Display single summary bars based on lower level dates; display lower level symbols and bars at the summary level; and select individual symbols to appear on summary rows. *See Chapter 4 for more information*.

Outline Level	Task	2005					
		Jan	Feb	Mar	Apr	May	Jun
1	Project A						
2	Task A1						
2	Task A2						
3	SubTask						
3	SubTask						
1	Project B						
2	Task B1						
3	SubTask						
3	SubTask						
2	Task B2						

Work Breakdown Structure (WBS) and other task numbering

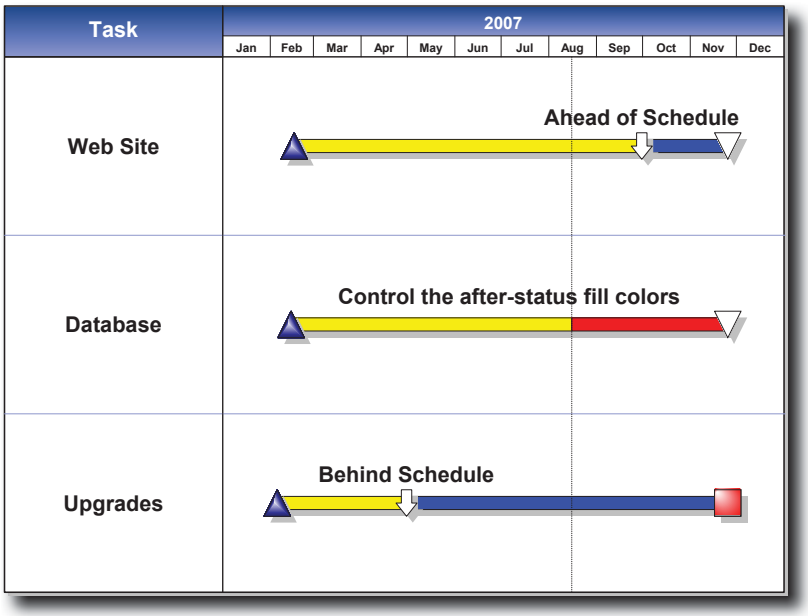
WBS numbering can be used in conjunction with outlining. With a WBS SmartColumn, the WBS numbers appear automatically based on the outline levels. *See Chapter 4 for more information*.

#	WBS	Outline Level	Description	2004					
				Jan	Feb	Mar	Apr	May	Jun
1	1	1	Project A						
2	1.1	2	Phase A						
3	1.1.1	3	Task A1						
4	1.1.2	3	Task A2						
5	1.1.3	3	Task A3						
6	1.2	2	Phase B						
7	1.2.1	3	Task B1						
8	1.2.2	3	Task B2						

Easily show progress

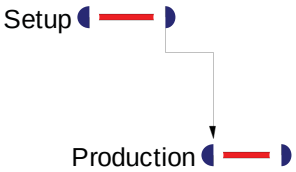
Fill bars and symbols to show activity progress. Choose a color for the progress up to the status date, and a different color after the status date.

Individual tasks can be adjusted to reflect whether they are on schedule, behind schedule, or ahead of schedule. *See Chapter 2 for more information.*



Dependencies

Easily create dependency relationships (predecessor/successor) between tasks. In the following example, Production cannot start until Setup is complete.



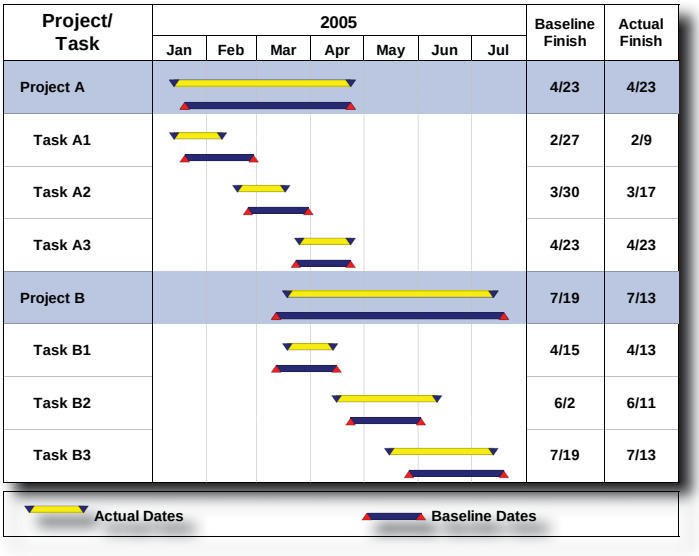
With dependency mode turned on, if the Setup end date is delayed, then the dependent task Production will shift by the same amount of time. *See Chapter 5 for more information.*

SmartColumns

Any column on your schedule can be set to a SmartColumn. SmartColumns automatically display information contained in your schedule or entered into the column, as well as make calculations, display stoplights and more. *See Chapter 15 for more information.*

Baseline scheduling

Baseline scheduling shows how the original schedule compares to the actual schedule. Quickly choose baseline symbology using the Baseline Setup Wizard. Then show, hide, highlight or lock-down the baseline information. *See Chapter 2 for more information.*



Symbol constraints

Any symbol can have a constraint which limits the symbol's movement or triggers a user-defined condition, such as displaying a reminder note or launching a hyperlink. Using the arrow tool, click once on a symbol within the schedule area and choose **Selection | Constraints**.

When the symbol is moved such that it does not conform to a date constraint that you have set, the symbol will be overlaid with a large exclamation point like the one shown below:

Holidays

You can make any day a holiday with the Milestones Professional Holiday Calendar. You also have the option to shade your company's holidays to show non-working days in a project. Holidays can be pulled from either a global holiday file or from a list embedded in the schedule. Choose **Dates | Date Range Tools | *Holidays (schedule*)** or ***Holidays (global)*** to get started.

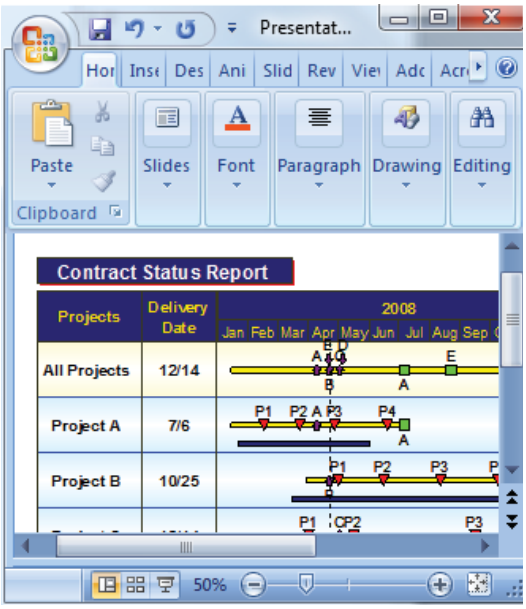
For more detailed information on constraints and holidays, refer to **Help | Help Files | *Help Topics***, Index keywords "constraint," and "holidays."

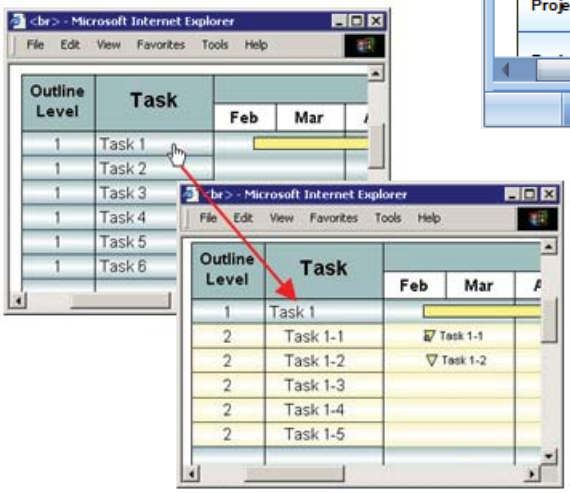
Powerful Publishing, Presentation and Distribution

Distribute your schedule

Milestones Professional offers many ways for you to distribute and present your schedules. *See Chapter 13 for more information*.

- Print your schedule to a variety of devices.
- Save to PDF.
- Easily publish any schedule to the Internet or company Intranet.
- Publish a complete hierarchy of schedules for Internet/Intranet use.
- Include your schedules in other documents, such as PowerPoint, Word, Excel, and other Windows documents.
- Download the free Milestones Professional Viewer.





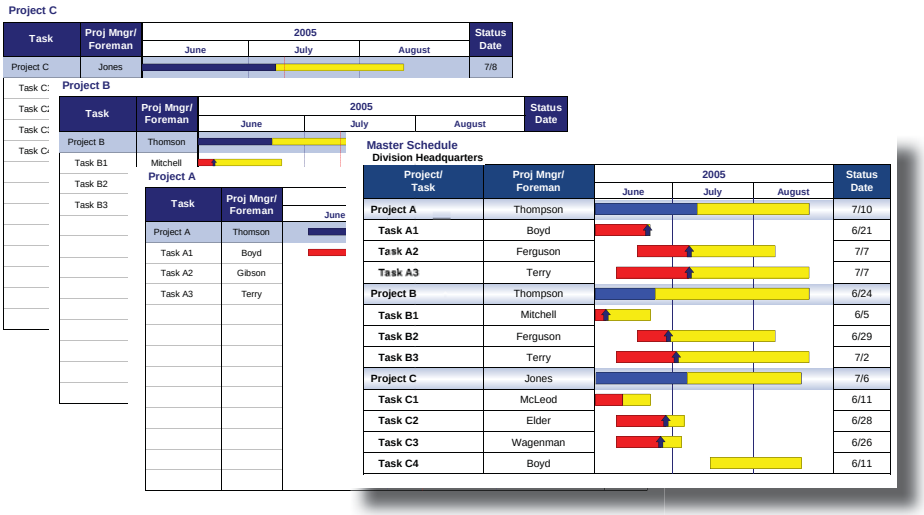
Presentation view

If you need to present a schedule or a set of schedules, you may want to try Milestones Professional's presentation view mode. If you have a list of schedules you want to present, set them up in a master schedule list before presenting. Presentation view supports both full screen viewing as well as a view with limited controls visible. Toggle through the different view options by going to **View | Viewing Options | Page View.**

Manage Multiple Projects with Ease

Master schedules

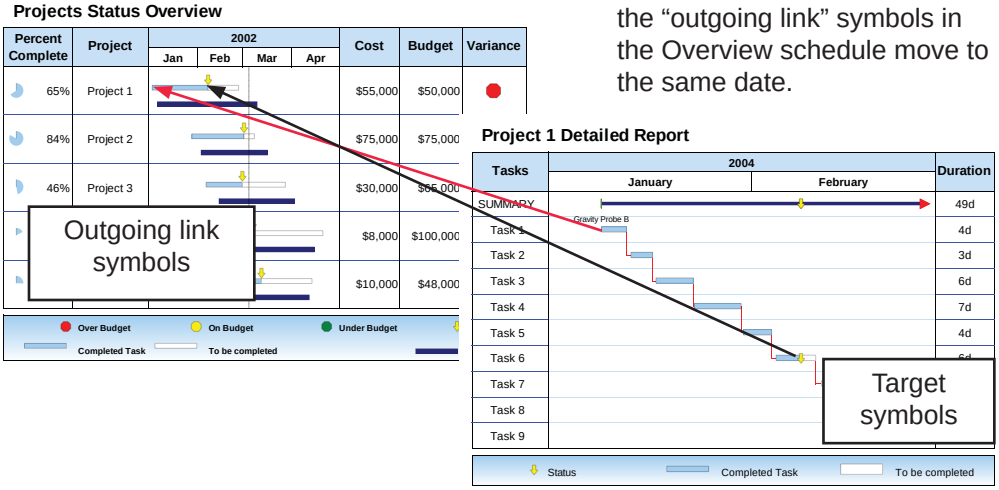
Merge two or more sub-schedules into a single master schedule to get a top-level view of multiple projects. Simply update the master schedule to see the latest sub-schedule information. *See Chapter 8 for more information.*



Symbol links between and within schedules

Another way to manage multiple projects is through symbol linking. Symbol linking lets you base the date of a symbol on a different symbol in another schedule or the same schedule. *See Chapter 9 for more information.*

When the "target" symbols move in the Detailed schedule, the "outgoing link" symbols in the Overview schedule move to the same date.



Hyperlinks: Attach files and web pages to symbols and tasks

Any symbol or task row on your schedule can have hyperlinks to other schedules, documents or Internet web pages. Once linked, you can open the objects with a click of your mouse. This lets you use a Milestones Professional schedule to manage your entire project world! *See Chapter 10 for more information.*

Organize Task Rows

Sorting tasks

In the **Tools** menu, choose **Sort Schedule** to rearrange schedule task rows based on symbol dates, selected columns, or multiple columns. Save settings to repeat similar sorts later.

Filtering tasks

With large schedules, you might want to see only a subset of the project steps. In the **Tools** menu, choose **Filter** to "sift out" task rows by:

- Date range
- Column Text Containing
- Numbers in column greater than
- Numbers in column less than
- Outline Level
- Task Number Range
- Symbol/Bar Type
- Some Symbols within Date Range
- All Symbols within Date Range
- Last Symbol within Date Range
- Numbers in Column in Range
- Symbol Type within Date Range

Find and replace text

Use **Edit | Find, Replace, Go to Page** to quickly make detailed text changes. Apply Find and Replace to column text, freeform text, symbol notes, and symbol text.

Bookmark task rows

Add a bookmark name to any task row and then jump to that task row by choosing the bookmark name from a list of bookmarks. *See Chapter 2 for more information.*

The task row which is "jumped to" will be highlighted. Especially helpful in large schedules, this feature allows you to quickly jump to specific schedule areas.

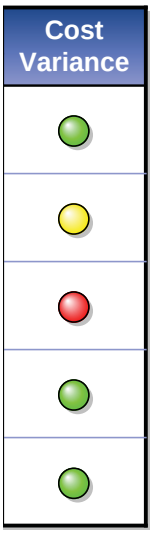
Bookmarked tasks can show indicators for easy identification.

To access bookmarks, right-click a task row and choose ***Bookmarks.***

Display Numbers and Project Status

Milestones Professional allows you to track and graph numbers, make calculations between columns, and display status stoplights for at-a-glance reporting.

Calculation/Indicator SmartColumns



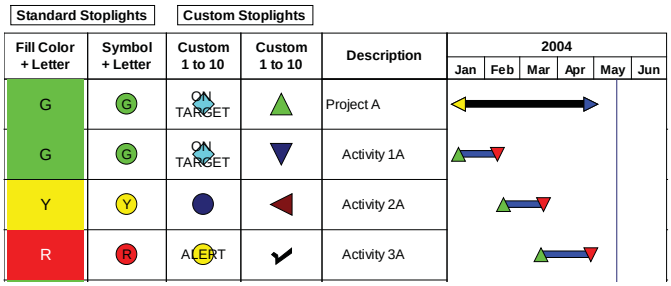
A Calculation/Indicator SmartColumn can display calculation results; symbols, text, dates, or colors based on those results; symbols, text, dates, or colors based on another column's values; or a combination of these choices, as well as convert calculation results to percentages with matching percent complete pies. *See Chapter 15 for more information.*

Quick and Easy Earned Value Reporting

Produce reports showing Earned Value, Planned Value, Actual Costs, CPI, SPI, EAC, and EVMS fields using user-entered values, calculated values, imported values from MS Project, or a combination of these options. *See Chapter 15 for more information.*

Stoplight SmartColumns

The Stoplight SmartColumn offers two easy-to-use methods for displaying stoplight symbols, text and colors based on user-entered numbers 1 to 4, or 1 to 10. *See Chapter 15 for more information.*

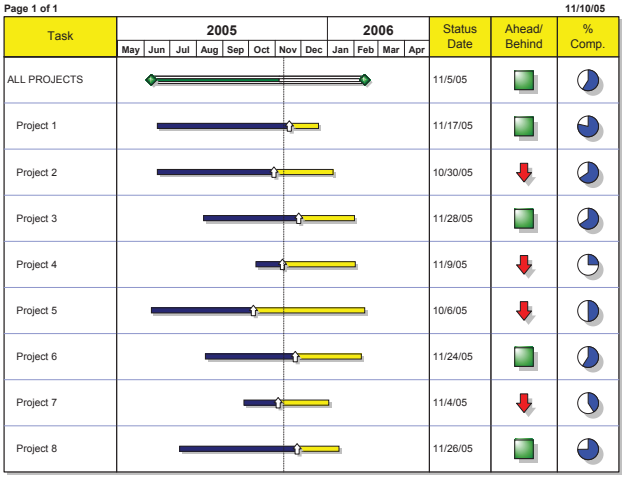


Values SmartColumns

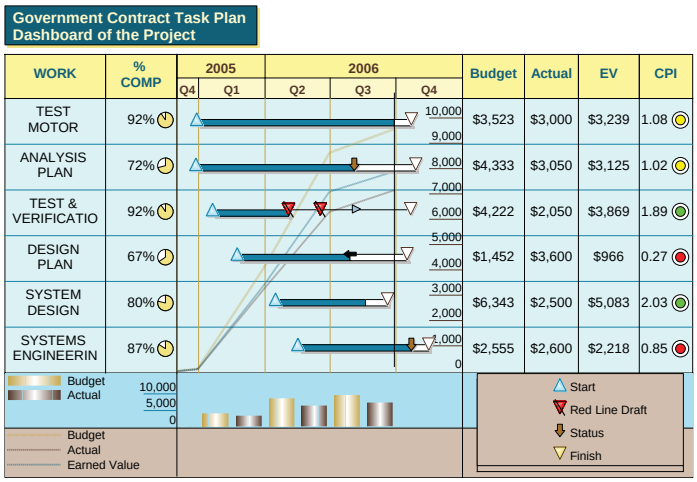
A Values SmartColumn contains user-entered values and can automatically total values from lower task levels to upper, summary levels. A symbol can also be displayed according to the value in each cell. *See Chapter 15 for more information.*

Percent complete pies and Fill-to-status

Percent Complete SmartColumns display the percentage, an optional percent complete pie, or just the percent complete pie symbol, as measured by the status symbol (here, the arrow symbol).



DataGraphs and ValueSets



In addition to having powerful scheduling and tracking capabilities, Milestones Professional can also display graphs relating to the schedule. *See Chapter 14 for more information.*

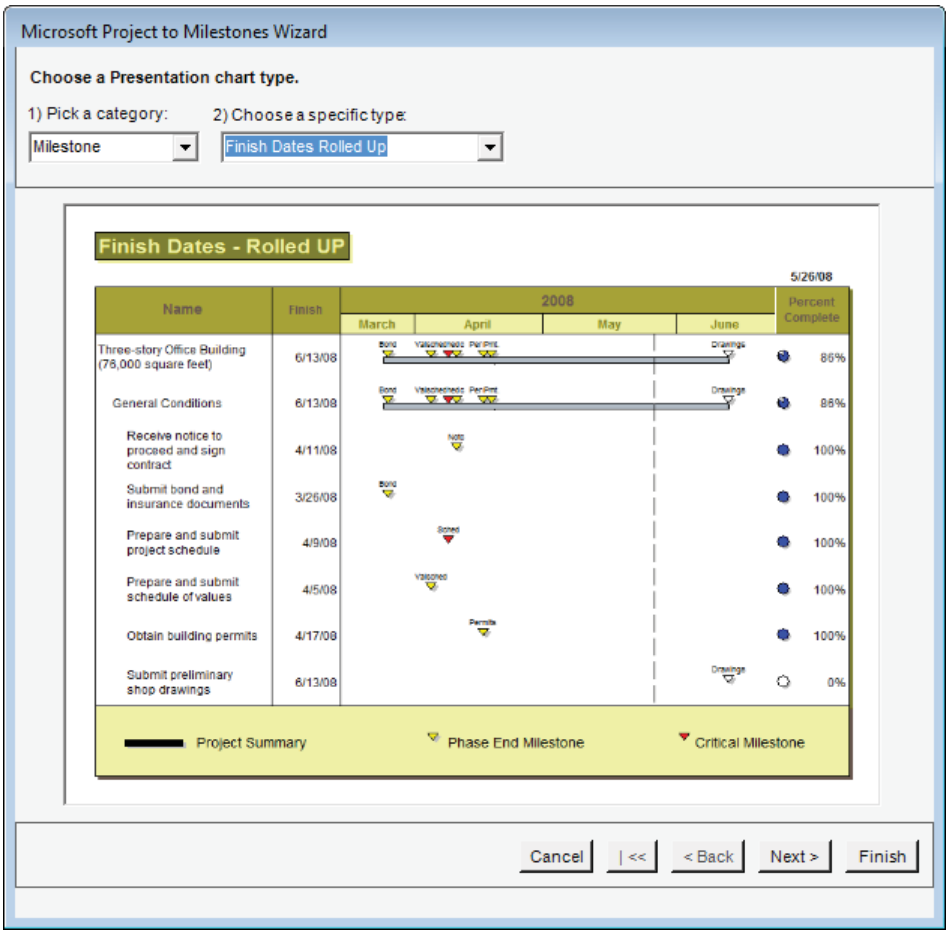
Resource allocation for effort-driven tasks

Control the effort of a resource assigned to a particular task by using a resource allocation percentage. The resource allocation value can be entered in the Resource Allocation Percent SmartColumn or in any cell on the appropriate task row.

Create Presentation Schedules from Project Files

Create Milestones Professional presentation schedules by importing Microsoft Project files when both Milestones Professional and MS Project are installed.Milestones Professional offers a direct interface to Microsoft Project, which makes it easy to generate chart formats beyond the standard formats offered by Project.

Select from built-in report formats or create your own presentation schedule format. The import wizard does all the work! *See Chapter 11 for more information.*



MPX, XML, CSV and TXT files

If Microsoft Project is not installed, then Milestones can open MPX, XML, CSV, and TXT files created from MS Project. Milestones Professional schedules can be exported to the MPX, XML, CSV and TXT formats and then opened in Microsoft Project and other applications.

Work with other Applications

Beyond the direct interface to Microsoft Project, Milestones Professional interacts with other applications such as MS Outlook and Excel.

For programmers, Milestones Professional supports a complete Automation interface for using Visual Basic, C++ and other programming languages to interchange data with Microsoft applications such as Access, Excel, Project, and more. The programming that makes use of this automation feature is user-created.

Many file formats supported

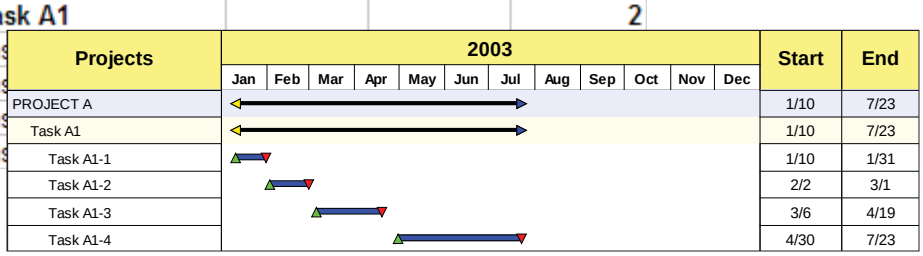
In addition to built-in interfaces for Microsoft Project, Milestones Professional offers a custom import capability. With the custom import feature, you can bring in information from other sources such as CSV and TXT files.

Turn a spreadsheet into a Milestones schedule

Getting schedule information into Milestones Professional from just about any other Windows software package is easy. Simply copy information from another application to the Windows clipboard, and then paste into Milestones Professional.

For example, you might have a spreadsheet like the Microsoft Excel spreadsheet shown here.

	A	B	C	D
1	Activity	Start	End	Hierarchy
2	PROJECT A			1
3	Task A1			2
4	Tas			
5	Tas			
6	Tas			
7	Tas			



See Chapter 11 for more information.

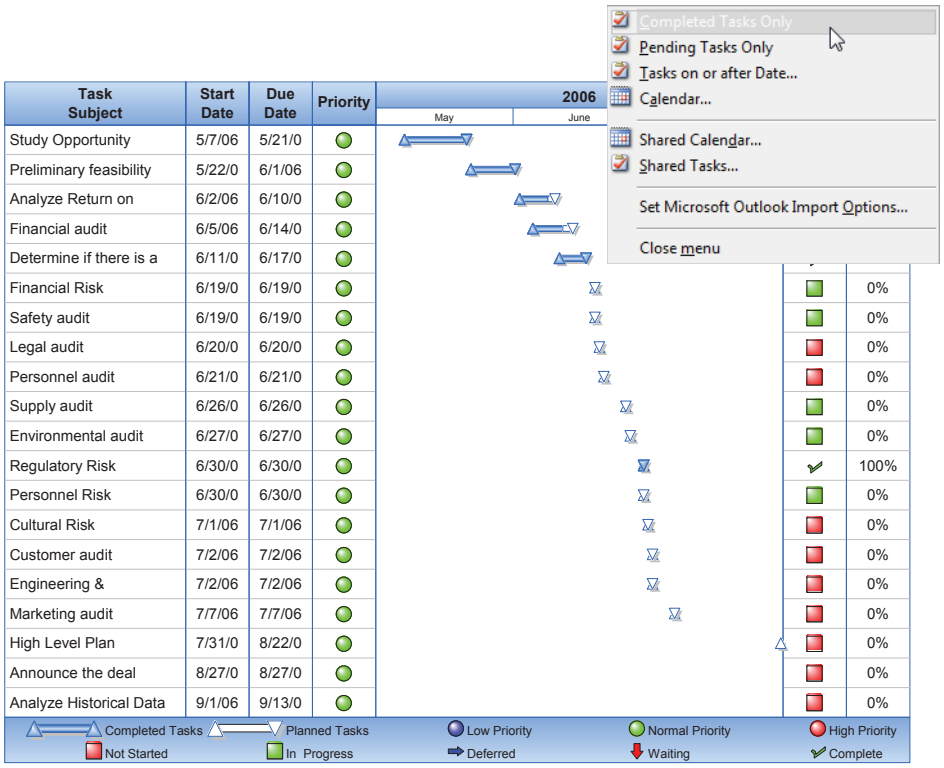
OLE Automation

Using OLE Automation, a programmer within your company can build automated systems that include scheduling. Sample programs which demonstrate the use of this powerful capability are available on the www.kidasa.com web site. These sample programs show how Milestones Professional can be linked to Microsoft Access, Visual Basic, and C++ applications.

For example, schedule data that is stored in a central repository (such as Access, Artemis, Project, Oracle, SQL, Excel, Word, and more) can be extracted in order to populate a Milestones Professional schedule for presentation purposes. Schedule automation insures the integrity of the database and the accuracy of the presentation schedule.

Microsoft Outlook Import/Export

Milestones is now capable of importing both Tasks and Calendar Appointments from MS Outlook. Choose the type of import and pick an Outlook folder, then Milestones will generate a schedule. *See Chapter 11 for more information.*

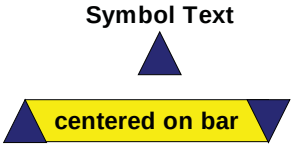


Extensive Text Entry and Graphics Options

Symbol text

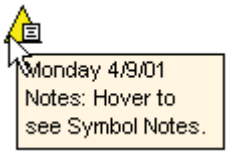
Enter up to three lines of symbol text. This text moves with the symbol. Position the text anywhere around the symbol or center it on the bar.

Automatically display the column text as text next to a symbol; or have the symbol text automatically display as column text.



Symbol notes

Enter up to 10,000 characters in the symbol notes field. This text is embedded in the symbol, and appears when the cursor hovers over the symbol. Optionally, a separate notes page prints with the schedule.



Freeform text

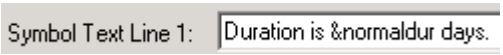
Type text anywhere on the schedule. Format the appearance of the text box. This text does not move with symbols or rows.

Column text

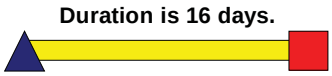
Use up to 20 columns to enter text, values, dates, and other schedule information.

Substitutable text strings

Enter "& commands" in the symbol text field to show duration values, column text, and more. Even include normal text with the "& command," as shown here…



…resulting in…

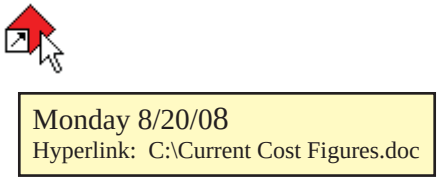


See Chapter 3 for more information.

Link other text documents

Hyperlink Word documents, Excel spreadsheets, web pages and more, to symbols or tasks on the schedule.

Hover over the symbol to see the hyperlinks, and right-click to launch. *See Chapter 10 for more information.*



Flexible Symbology

Toolboxes

The Milestones Professional toolbox contains 3 tools, 32 symbols, 16 horizontal bars, 8 vertical links, and 3 drawing tools to quickly build any schedule using the click-drag-and-drop method. There are two different formats for the toolbox. *See Chapter 2 for more details on toolboxes, the sidebar, symbol types, and horizontal bar types.*

Sidebar

The optional sidebar is an extra toolbar anchored to the left or right side of the Milestones window. The sidebar contains the toolbox and a user-defined list of shortcut buttons for a variety of activities. Right-click the sidebar to change its properties.

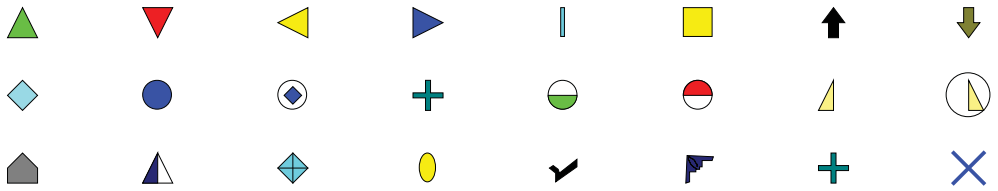
Symbol types

Any symbol in the Toolbox can be changed to any of four symbol types:

- *Normal* symbols track actual start dates, end dates, and independent milestones.
- *Baseline* symbols track baseline start, end, and duration.
- *Status* symbols track percent complete, used duration, remaining duration, status date, and amount ahead/behind schedule.
- *Comment* symbols are ignored for SmartColumn purposes.

Wide assortment of symbols

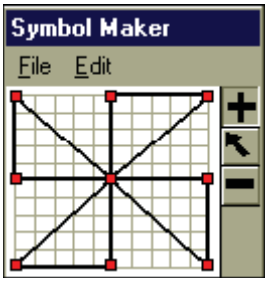
The flexibility and customizability of Milestones Professional symbology is second to none, with 130 symbol shapes filled with any color.



User-defined symbols

Not enough symbol shapes?

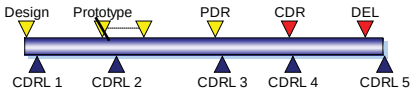
Milestones Professional has a built-in Symbol Maker in **Tools | Other Tools | *Create or Edit Custom Symbol*** that lets you design simple or multi-part shapes.



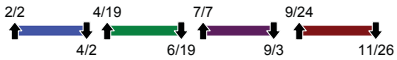
Multiple independent milestones

As many as 256 milestones can be added to any task row on your schedule. They can be stand-alone milestones or can represent a series of start and end dates.

You can have many milestones on a bar...



...or have many bars represent several sub-tasks, plus their start and end dates, on one row.

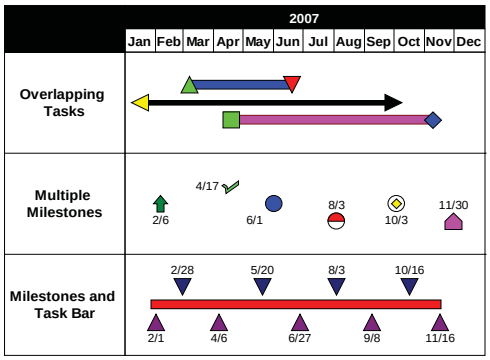


Variety of horizontal bar shapes

Like the symbols, the 40+ horizontal bar shapes and 15+ vertical link shapes are fully customizable. The horizontal bars can be filled with any single color or two colors faded together, as well as shadowed with any color.

Three-level symbol and bar positioning

Symbols can be positioned at an upper, middle, or lower level on one task row. The bars automatically follow the positioning of the symbols.



In the example to the right, an otherwise dense and cluttered schedule is distinct and clear with three symbol positions and a variety of symbol date and text positions.

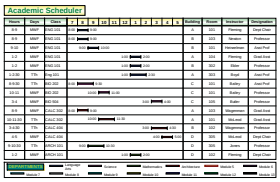
Further customize bars with the “Always on top” setting which controls which bar appears on the surface, as shown below:

Flexible Formatting

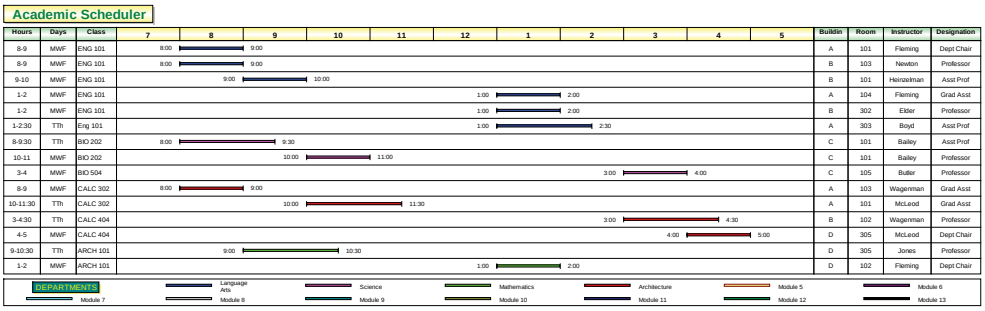
You completely control the size and format of your schedules, including the physical page size of the schedule, the number and width of the columns, the number and height of the rows, the size of the optional legend, margin sizes and more. *See Chapter 6 for more information.*

Physical sizing

It is possible to create schedules as small as a postage stamp...



...or wall size!



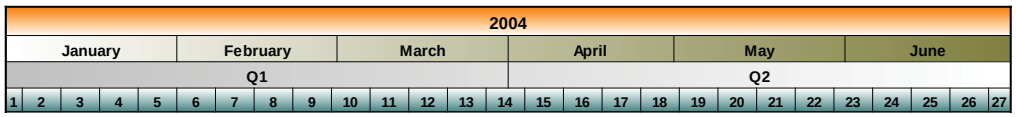
Academic Scheduler

Hours	Days	Class	7	8	9	10	11	12	1	2	3	4	5	Buildin	Room	Instructor	Designation
8-9	MWF	ENG 101	8:00	9:00										A	101	Fleming	Dept Chair
8-9	MWF	ENG 101	8:00	9:00										B	103	Newton	Professor
9-10	MWF	ENG 101		9:00	10:00									B	101	Heinzelman	Asst Prof
1-2	MWF	ENG 101							1:00	2:00				A	104	Fleming	Grad Asst
1-2	MWF	ENG 101							1:00	2:00				B	302	Elder	Professor
1-2:30	TTh	Eng 101							1:00	2:30				A	303	Boyd	Asst Prof
8-9:30	TTh	BIO 202	8:00	9:30										C	101	Bailey	Asst Prof
10-11	MWF	BIO 202			10:00	11:00								C	101	Bailey	Professor
3-4	MWF	BIO 504									3:00	4:00		C	105	Butler	Professor
8-9	MWF	CALC 302	8:00	9:00										A	103	Wagenman	Grad Asst
10-11:30	TTh	CALC 302			10:00	11:30								A	101	McLeod	Grad Asst
3-4:30	TTh	CALC 404									3:00	4:30		B	102	Wagenman	Professor
4-5	MWF	CALC 404										4:00	5:00	D	305	McLeod	Dept Chair
9-10:30	TTh	ARCH 101			9:00	10:30								D	305	Jones	Professor
1-2	MWF	ARCH 101							1:00	2:00				D	102	Fleming	Dept Chair

DEPARTMENTS: Language Arts; Science; Mathematics; Architecture; Module 5; Module 6; Module 7; Module 8; Module 9; Module 10; Module 11; Module 12; Module 13

Many time-scale options

Schedules can show standard time scales ranging from minutes to years, and custom, user-defined periods. Choose minutely, hourly, or daily for symbol placement; top and/or bottom of the schedule for date heading placement; and any period frequency.

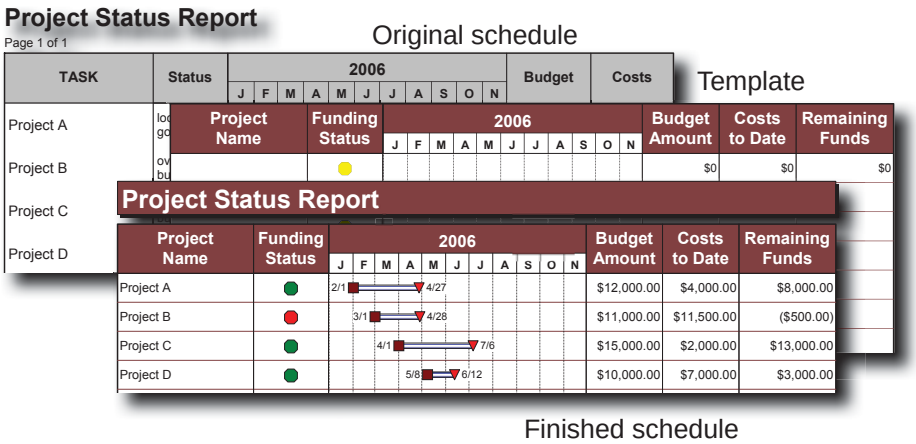


2004																										
January					February				March					April				May				June				
Q1														Q2												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Templates for instant formatting

Templates save time by preserving the customized toolbox, columns, column headings, page layout, indicator symbol conditions, and more.

Templates retain the formatting (the “look” of a chart) while charts preserve schedule details (task row entries, dates, column value entries, etc.). *See Chapter 12 for more information.*



Full international support

If English is not your language of choice, or if your preference is the metric measurement system, Milestones Professional can support you. It provides the capability to set up custom language templates for any language. ***International Number and Currency Settings*** can be found on the **Format** menu.

Milestones Professional also picks up your date format and measurement type choices directly from the Windows Control Panel Regional Settings.

ISO week numbering

Milestones Professional supports the International Standards Organization’s standards for week numbering. The ISO week number heading type is available in our list of date headings.

Custom page numbering

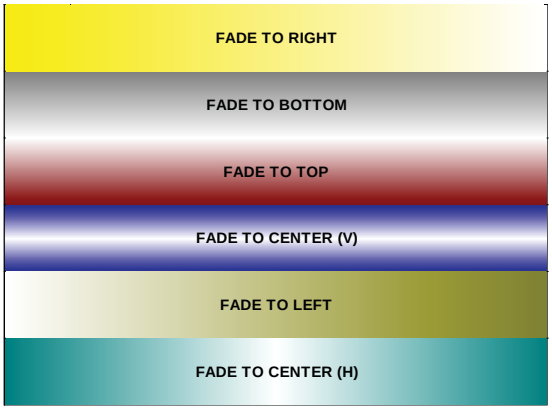
Customize the page number of a Milestones schedule to match the pagination of your report, and then insert the schedule as a part of the report. Click on the page number in your Milestones schedule to see all of the formatting options.

Gradient fill patterns

Gradient fills allow you to fade the background or fill color from one color to another.

These “special effects” can be chosen for many parts of your schedule, including bars, date headings, column headings, task shading, legends, DataGraphs, individual cells, and more.

See Chapter 12 for more information.



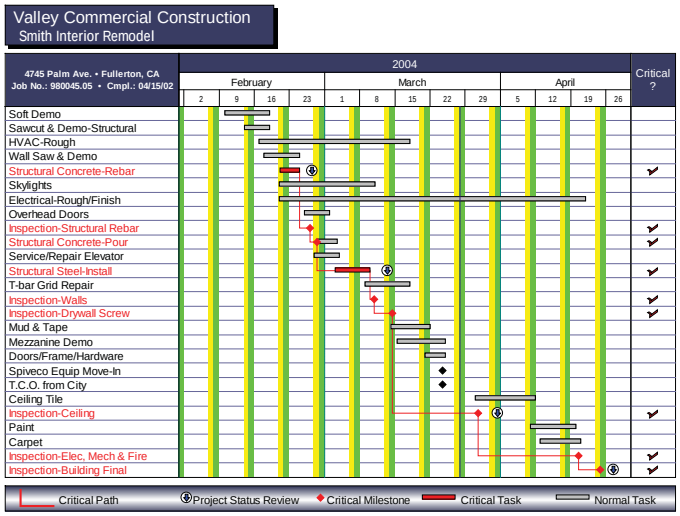
Weekend and holiday shading

Saturdays, Sundays, and holidays can be shaded, each in its own color. Customize the holiday calendar to match your company’s calendar or for a single schedule on the **Dates** menu.

Curtains

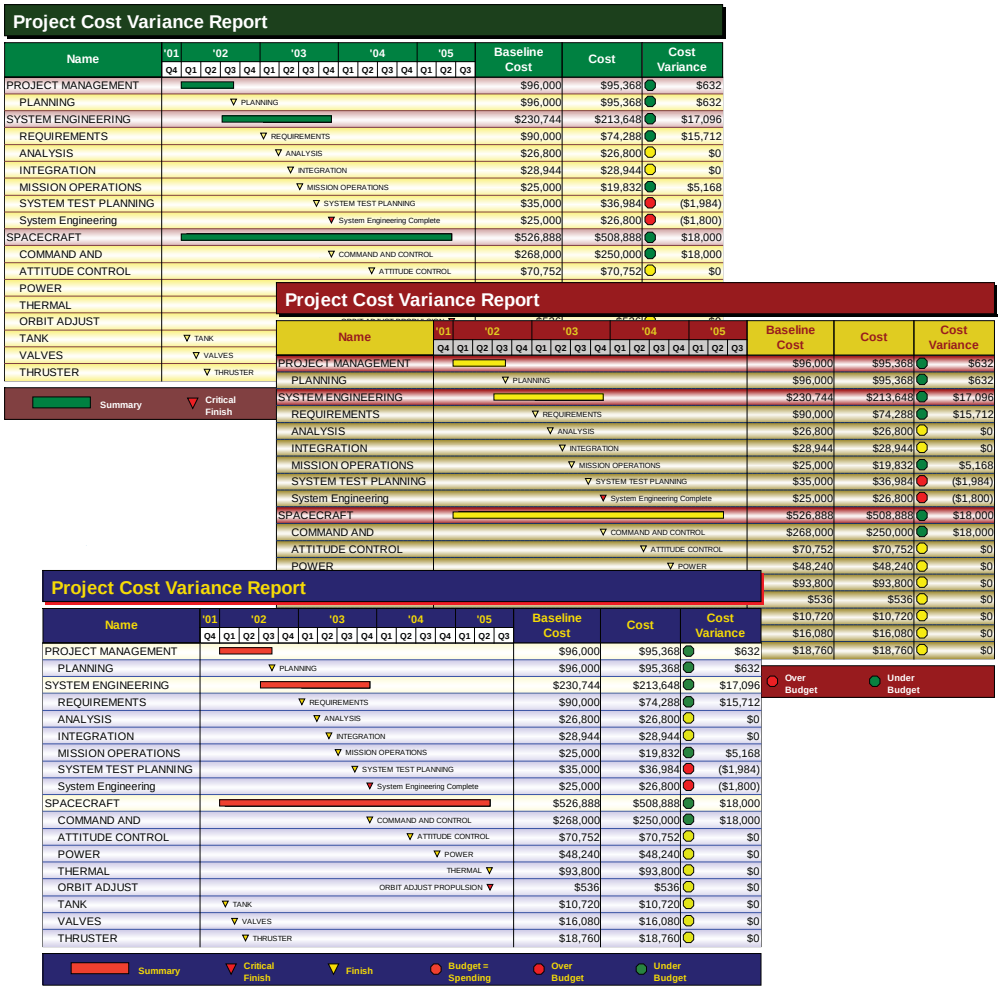
Curtains provide vertical shading for a date range or for several date ranges.

Repeat curtains at specified intervals, use more than 25 fill patterns, hide curtains, and more. Create curtains by going to **Format | Vertical Shading | *Curtains...***



Color themes

Apply a color theme to a new or existing schedule for instant color formatting. Choose from more than 40 color themes or create your own. *See Chapter 12 for more information.*



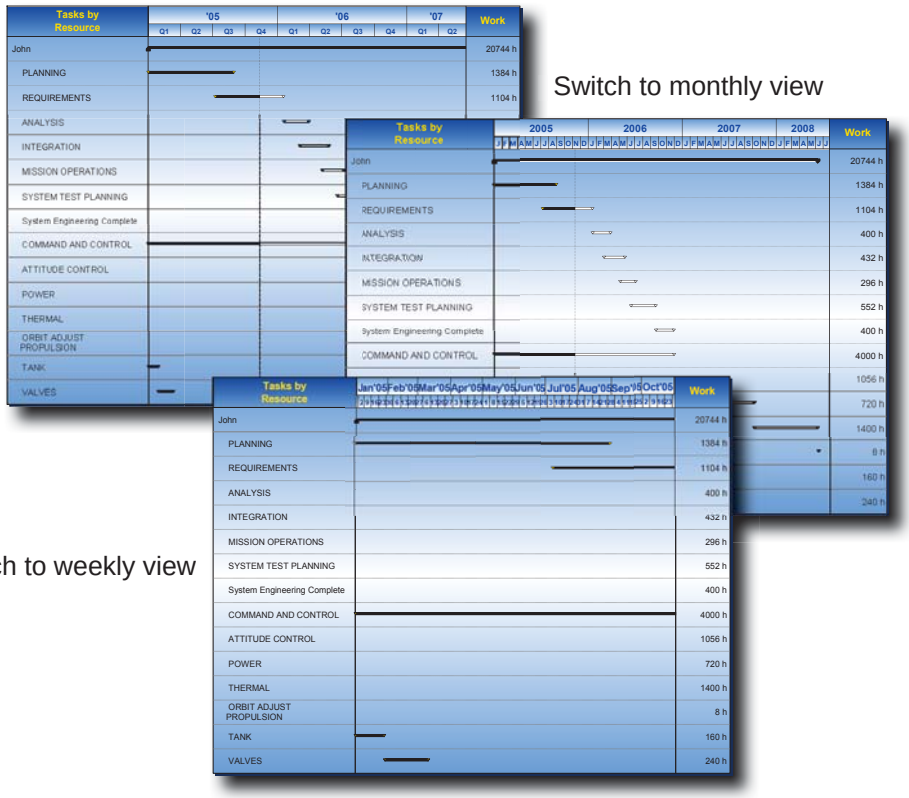
Change view formats

Milestones Professional offers many view modes in addition to the standard Gantt chart view. All of the following view modes can be found in **View | Viewing Options**. *See Chapter 2 for more information.*

Expand or contract the time period viewed

Instantly switch the time period displayed in the date headings to a daily, weekly, monthly, quarterly, or yearly view. Simply right-click the date heading and select a view, including your original view.

Original view



Switch to monthly view

Switch to weekly view

Gantt roll-up views

Switch between three different Gantt chart views, including the normal Gantt view, a roll-up of single task bars, and a roll-up of lower level symbols and bars.

Gantt – Normal View displays the default Gantt chart view.

Gantt – Rolled-Up to Single Bar displays one summary bar for each outline level 1 summary task.

Gantt – Rolled-Up to Multiple Bars displays lower-level task bars and milestones as rolled-up to outline level 1 summary tasks.

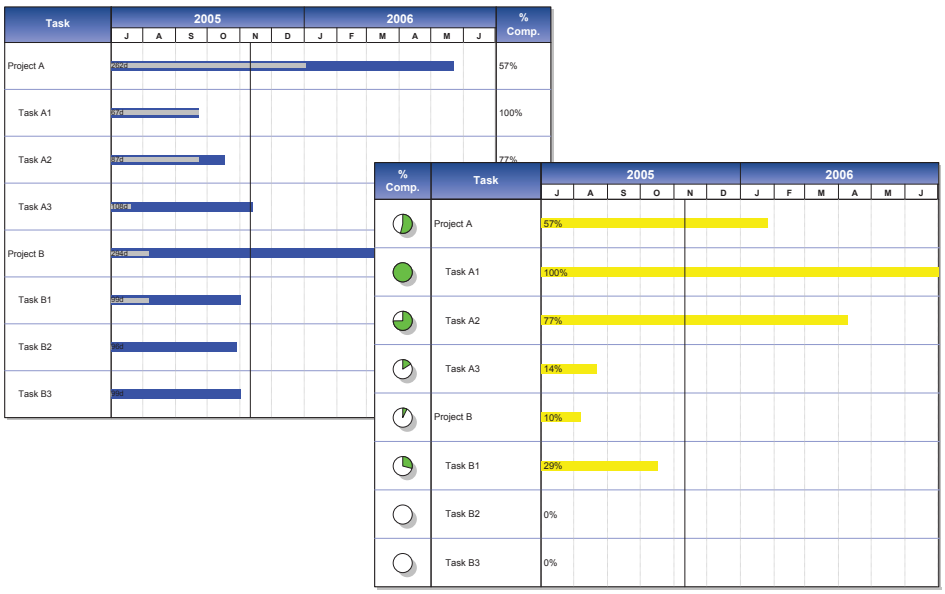
Duration View and Percent Complete View

The Duration View mode replaces the Gantt bars and milestones with bar graphs indicating each task's duration.

In the Duration View below, a bar's length corresponds to a task's duration value. The gray fill indicates the completed portion.

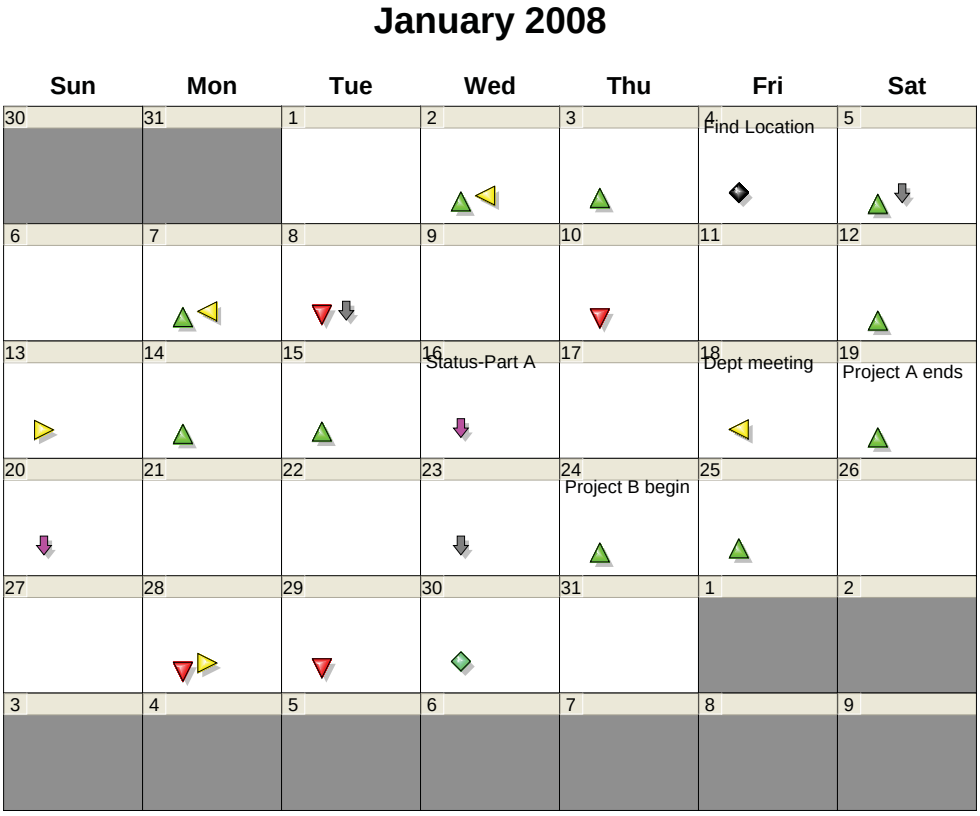
The Percent Complete view mode replaces the Gantt bars and milestones with bar graphs indicating each task's percent complete.

Each task displays a red bar (by default—in this example, yellow is used) indicating its percent complete. A bar's length corresponds to a task's percent complete value in relation to the date heading length. That is, a task which is 50% complete will display a red bar which traverses half of the date heading's length. Change the color of the percent complete and duration bars in **Tools | Program Options | *General.***



Calendar view

A monthly calendar view of important events can be generated for any schedule. The schedule title, symbols, and symbol text are displayed.



Date heading scroll buttons

Use toolbar scroll buttons: found on the **Dates** menu to scroll through your schedule by any number of days so that you have a “sliding” time window. For example, set the number of “days to scroll by” to 30 to scroll a month at a time; or to 7 to scroll a week at a time. Set the number of days in **Dates | Start and End Dates | More Settings... |** ***Page by Page Date Overrides...***

View schedule thumbnails

Instead of the generic Milestones file icon, view thumbnail images of saved Milestones schedules when viewing file lists in Windows Explorer’s Thumbnails View mode.

This features works with Windows 2000, XP and later. By default this save option is on. You can toggle this option on and off in **Tools | Program Options | Files and Automation |** ***Save Thumnail image when saving this file.***

Chapter 2: The Basics

This chapter contains valuable information concerning the basics of Milestones Professional- the layout of the screen, essential terminology, and some of the fundamental operations of the program.

More extensive and interactive documentation on these topics can be found in the **Help** menu under **Help Files |** ***Help Topics.***

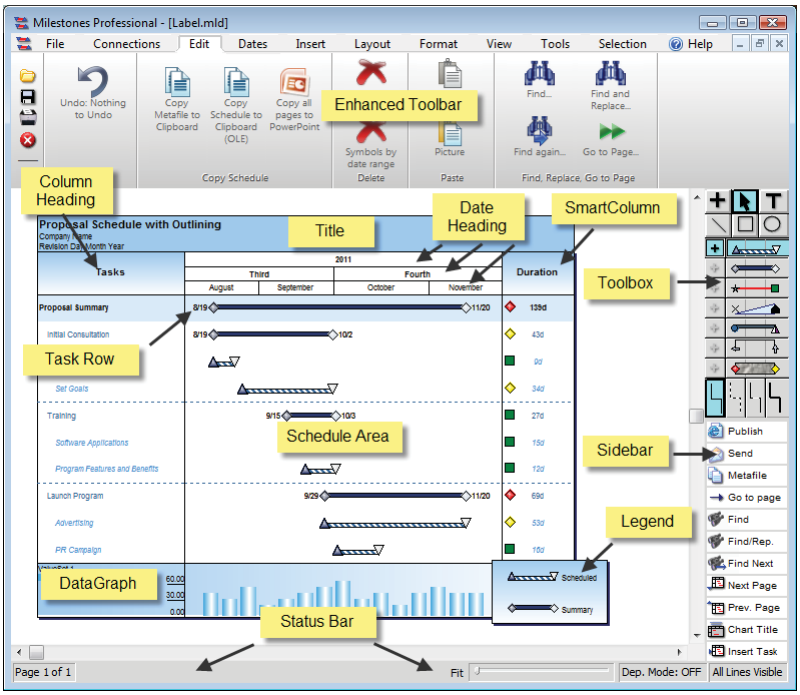
In this chapter you will learn about the following functions:

- The Milestones Professional Window
- Sidebar – contains the toolbox and extra shortcut buttons
- Toolboxes – The Combo Toolbox and the Standard Toolbox
- Toolbox “tools”
- Add symbols and bars using the toolboxes.
- Add vertical links
- Change the date of a symbol (move a symbol)
- Delete symbols, bars, and vertical links from the schedule
- Add text to the schedule – column text, symbol text and notes, freeform text.
- Symbol text SmartColumn
- Customize a symbol in the toolbox
- Customize a horizontal bar in the toolbox
- Customize a vertical link in the toolbox
- Columns, column headings and task rows
- Insert or edit a SmartColumn
- Schedule date range
- Date headings
- Current date and status lines
- Bookmark task rows
- Add graphics
- Keyboard shortcuts
- Right-click menus
- Schedule Setup Wizard
- Save a schedule
- Baseline Scheduling
- View mode options

If you are a new user, the best way to learn how to use Milestones Professional is to go through each of the Tutorials located in the toolbar under **Help | Help Files |** ***Tutorials***. These tutorials are designed to get you up and running smoothly.

The Milestones Professional Window

While using Milestones Professional, you will see a screen similar to the one below:

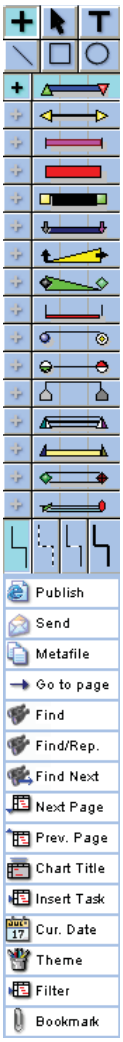


- The **Enhanced Toolbar** is used to access frequently used options.
- Add a **Column Heading** to give your column definition.
- The schedule **Title** can be used to provide your project title.
- Choose from dozens of **Date heading** styles from minutes, years, or custom entries.
- The **SmartColumns** automatically fill according to schedule data or entered data
- Enter task bars and milestones into a **Task Row**.
- The **Schedule Area** is where task bars, milestones, and vertical links can be added.
- The **Sidebar** contains the **Toolbox** and a user-defined list of Shortcut buttons for a variety of common activities. The **Toolbox** provides the tools you need to build your schedule- including symbols, horizontal bars, and vertical links.
- The **Legend** contains user-entered definitions for bars and symbols.
- Values such as budget, cost, or manhours can be graphed in the **DataGraph** area.
- The **Status Bar** provides useful feedback to you while you work with your schedule.

Sidebar

The optional sidebar is an extra toolbar anchored to the left or right side of the Milestones window. The sidebar contains the toolbox and a user-defined list of shortcut buttons for a variety of activities including moving from page to page, creating web pages, filtering, applying a color theme, creating a master schedule, and much more.

Sidebar options



Under the **Tools** menu in the **Customize** section, choose ***Sidebar Options*** to make changes to the sidebar. Changes to the **Sidebar Options** dialog box apply to all schedules.

Choose ***Show Sidebar on left***, ***Show Sidebar on right***, or ***Do not show Sidebar*** (in which case the toolbox becomes free-floating). *You must close and restart Milestones for these changes to take effect.*

Choose to ***Remove*** shortcut buttons from the list of **Current Sidebar icons**, and ***Add*** buttons from the list of **Available Sidebar icons**.

If you cannot see all of the sidebar shortcut icons you selected, note that the number of visible sidebar icons is determined by the toolbox size, screen resolution, and Milestones window size. The fewer rows of symbols, bars, and links in the toolbox, the more sidebar shortcut icons are visible. A screen resolution of 1280x1024 will show more sidebar shortcut icons than a screen resolution of 800x600. Also, a maximized Milestones window will display more sidebar shortcut icons than a minimized window.

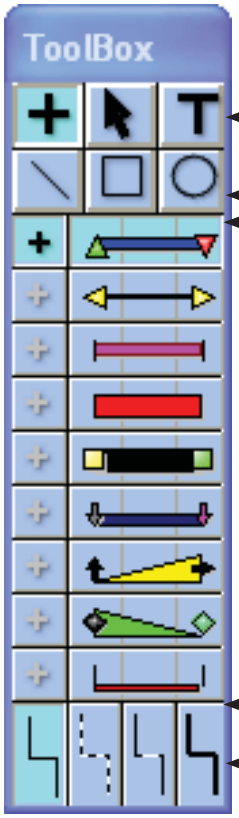
Toolboxes

Milestones Professional offers two types of customizable toolboxes. Both types contain the same schedule building-blocks for creating gantt bars, milestones, and task dependencies. Toolbox settings are unique to each schedule.

To choose where the toolbox is displayed within the schedule, right-click the toolbox and choose ***Sidebar Options***. Choose to show the sidebar on the left or right side of the schedule; otherwise, the toolbox will be free-floating.

Combo Toolbox

With the Combo Toolbox, it's easy to add task bars in one step—simply click a small plus, then click-and-drag in the schedule area to add a symbol, horizontal bar, and symbol in one continuous mouse action.

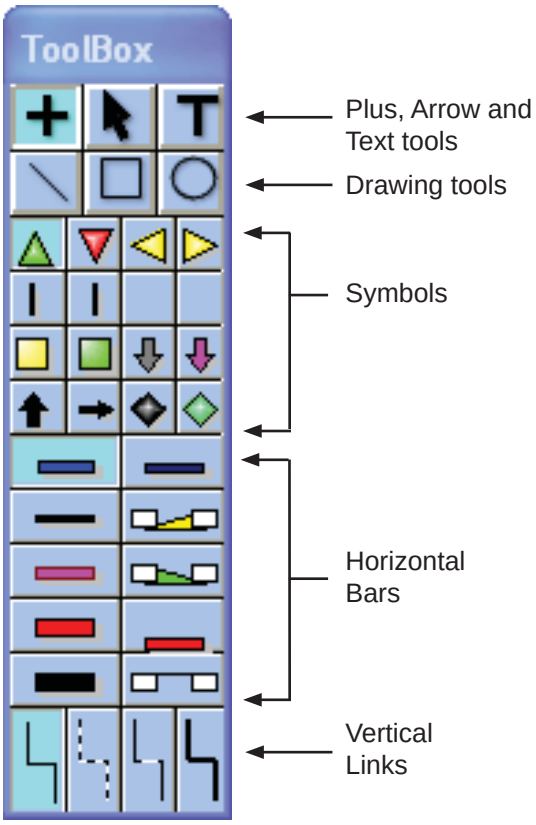


About the Combo Toolbox:

- Double-click a symbol or bar in the toolbox to change its shape, color, and other properties.
- Each of your schedules can have a different toolbox, customized with different symbols and bars.
- A Combo Toolbox can have up to 16 rows of symbol/bar/symbol combinations (32 symbols and 16 bars), and 8 vertical links.
- Right-click the toolbox and choose ***Toolbox Properties*** to change its size.
- You can set-up a default toolbox that will appear every time you create a new schedule. Do this by saving a "template" called Default.mtp.
- Hide the toolbox by removing the check from the **View | Optional Items | *Toolbox*** option. You can also right-click the toolbox and choose ***Hide Toolbox***. *The toolbox will only hide if it is free-floating*.

Standard Toolbox

The Standard Toolbox makes it easy to add symbols and bars in separate steps.



About the Standard Toolbox:

- Double-click a symbol or bar in the toolbox to change its shape, color, and other properties.
- Each of your schedules can have a different toolbox, customized with different symbols and bars.
- A Standard Toolbox can have up to 32 symbols, 16 horizontal bars, and 8 vertical links.
- Right-click the toolbox and choose ***Toolbox Properties*** to change its size.
- You can set up a default toolbox that will appear every time you create a new schedule. Do this by saving a “template” called Default.mtp.
- Hide the toolbox by removing the check from the **View | Optional Items | *Toolbox*** option. You can also right-click the toolbox and choose ***Hide Toolbox***. *The toolbox will only hide if it is free-floating*.

Toolbox “tools”

On the first two lines of the toolbox, you will find six buttons or “tools.” These are described in the following table:

Tool	**Use this tool to:**
Plus Tool	Add symbols; connect symbols; add horizontal bars and vertical links.
Arrow Tool	Change the date of a symbol; move graphics and freeform text; select an object.
Text Tool	Add or edit text.
Line Tool	Draw lines and arrows on your chart. (Not recommended for drawing links or dependencies between symbols.)
Box Tool	Draw squares and rectangles on your chart.
Circle Tool	Draw circles and ellipses on your chart.

The (Plus) tool, the (Arrow) tool, and the (Text) tool are the three main tools you will use for your scheduling activities.

Add Symbols and Bars using the Toolboxes

Horizontal bars show the time span of a task for an activity in your project. A symbol must be on each end of the horizontal bar. Symbols can also be added individually, independent of a bar.

Which toolbox should you use?

Using the Combo Toolbox, you can add a task bar with start and end symbols in one click-drag-and-drop movement of the mouse.

Using the Standard Toolbox, you must first add a symbol, and then add the bar and another symbol to the end of the bar.

Both toolboxes allow you to add single symbols, a symbol and bar to an existing symbol, or a bar between two existing symbols.

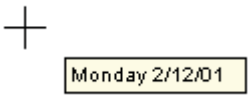
Add a task bar with start and end symbols using the Combo Toolbox

1. In the toolbox, click once on the small plus next to the symbol/bar/symbol combination you want to add. (All clicks are with the left mouse button.)

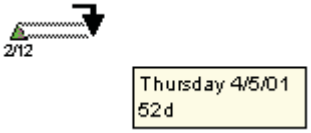
   

   When you click in the toolbox, notice that the selection is sunken and highlighted.

2. Move the cursor to a task row in the schedule area under the date heading. Notice that the date is displayed next to the “crosshairs” cursor. This feature is part of the Milestones tooltips and can be toggled off and on in the **Tools | Program Options | *Help*** menu.

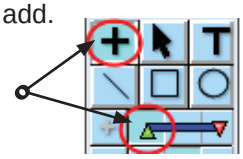
   

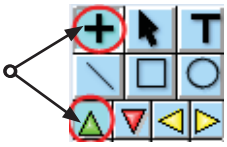
3. Next, click and hold the mouse at the start date, drag to the right, and release at the task’s end date. Here, the end date is displayed next to the cursor, as well as the duration. This information can also be found at the bottom left of the Milestones window in the status bar.

Add a single symbol using the Combo or Standard Toolbox

1. In the toolbox, click once on the big Plus tool, then once on the symbol you want to add.

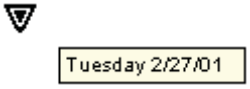
   Combo 

   Standard 

   When you click in the toolbox, notice that the selection is sunken and highlighted.

2. Move the cursor to a task row in the schedule area. Notice that the cursor is a “crosshairs” cursor.

3. Next, click and hold the mouse, drag to the right or left, then release at the date you want. The date is displayed next to the cursor as you drag, looking for the correct date. By default this tooltips feature is on but can be toggled off in the **Tools | Program Options | Help** menu.



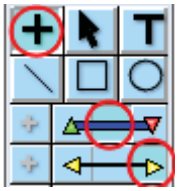
Add a bar and symbol to an existing symbol using the Combo or Standard Toolbox

Use this method when you already have a starting symbol on the schedule and want to add an ending symbol with a bar between start and end.

1. Click once on the big Plus tool in the toolbox.

2. In the toolbox, click once on the bar that you want to add.

   When you click in the toolbox, notice that the selection is sunken and highlighted.



3. In the toolbox, click once on the symbol that you want to add.

4. On the schedule, position your cursor directly on top of the start symbol. Click (and hold the mouse button) on the start symbol and drag to the right. Release the mouse button on the end date.

Add a bar between two existing symbols using the Combo or Standard Toolbox

1. In the toolbox, click once on the big Plus tool.

2. On the schedule, click once on the first (leftmost) symbol you want to connect.

3. In the toolbox, click once on the horizontal bar you want to add.

4. On the schedule, click once on the second symbol—the two symbols will then be connected.

OR...

1. In the toolbox, click once on the big Arrow tool.

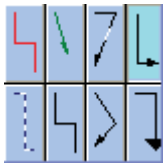
2. On the schedule, click once on the first (leftmost) symbol you want to connect.

3. Hold the SHIFT button down on your keyboard and click once on the second symbol you want to add. The two symbols should now be highlighted.

4. In the **Selection** tab, choose Connect Connect from the left side of the menu. The two symbols will then be connected.

Vertical Links

Vertical links are used to show a relationship or predecessor/successor link between schedule activities. The toolbox provides up to eight vertical links for use on the schedule.



Change the shape, line pattern, color, and other properties by double-clicking on a vertical link in the toolbox. Choose from more than 15 link shapes.

Up to five vertical links can originate from a single symbol on the schedule.

Add a vertical link using the Combo or Standard Toolbox

1. In the toolbox, click once on the big Plus tool. *All clicks are single, left mouse clicks.*

2. On the schedule, click once on the symbol where the vertical link will originate.

3. In the toolbox, click once on the vertical link you want to add.

4. On the schedule, click once on the symbol (on a different task row) where the vertical link will end. The two symbols will then be connected.

For more on vertical links and task dependencies, see Chapter 5.

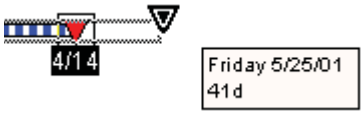
Move an Existing Symbol on your Schedule

Once a symbol is placed on the schedule, several methods are available for moving the symbol to a different date.

Change a symbol's date using the mouse

1. In the toolbox, select the arrow tool.

2. On the schedule, click on the symbol and drag it to a new date. Release the mouse button.

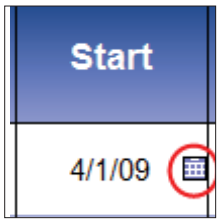


Add a symbol or change the symbol's date with a date SmartColumn

If your schedule has a date SmartColumn, manually type a date or use the date selection calendar to enter a new date or change an existing date in the column cell.

A new date (where none existed before) results in a symbol appearing on the schedule. Changing a date moves the existing start or end symbol. When using this method, dependent symbols will not move.

Insert a date SmartColumn by selecting **Insert** | **Rows**, **Columns | New Column |** ***Dates...*** and choose from **Start Date**, **End Date**, **Status Date**, **Baseline Start**, and **Baseline End**.



Display calendar icons in date SmartColumns by clicking any column heading. This will display the **Selection** menu. Choose **Current Object |** ***Switch to Column***. Then choose **Date SmartColumn Display Settings |** ***Show calendar icons***.

Other methods to change a symbol's date

1. Select the tool from the toolbox.

2. Click on the symbol you wish to change. This will display the **Selection** menu.

3. Choose **Selection | Current Object: Symbol |** . Select the calendar icon to change the date.

-or-

1. Click .
2. Single-click on the symbol.
3. Hold the **Shift** key while using the left and right arrow keys on the keyboard.

-or-

1. Click .
2. Single-click on the symbol.
3. Choose **Ctrl**+**E** on the keyboard.
4. Key a new date in the dialog box that appears.

Highlight changed symbols

Use the Highlight Changed Symbols feature to track symbols that have been changed since the last reset.

1. Before making changes to symbol dates, choose **Tools | Reports | Symbol | *Highlight Changed Symbols Reset***.
2. Make changes to symbol dates and insert new symbols.
3. Choose **Tools | Reports | Symbol | *Highlight Changed Symbols (since last reset).*** Changed and newly inserted symbols will be highlighted in orange. Choose ***Highlight Changed Symbols Reset*** to remove the highlight.

Delete Symbols, Bars, and Links from your Schedule

Delete a symbol

1. In the toolbox, select the arrow tool.
2. On the schedule, click on the symbol and press the Delete key on your keyboard.

Delete a horizontal bar

1. In the toolbox, select the arrow tool.
2. On the schedule, right-click on the symbol from which the horizontal bar starts.
3. Choose ***Clear Horizontal Bars***.

Delete a vertical link

1. In the toolbox, select the arrow tool.
2. On the schedule, right-click on the symbol from which the vertical link starts.
3. Choose ***Clear Vertical Links***.

Add Text to your Schedule

Include text in these areas of your Milestones schedule: column text, symbol text, symbol notes, and freeform text.

Add text to a column

Create a column to display text by choosing **Insert | Rows, Columns | New Column | *Text***.

1. Select the Text tool in the toolbox.
2. Click once in a column cell.
3. Once you see the flashing cursor, you can begin typing. Use the arrow keys on the keyboard to move from column cell to cell.

Add text to a symbol

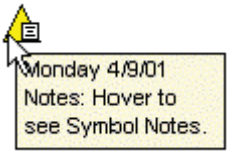
Symbol text is displayed adjacent to a symbol and moves with the symbol.

1. Select the tool in the toolbox. On the schedule, click once on the symbol that will contain the symbol text.
2. Select the **Text** tab in the toolbar and enter up to three lines of symbol text. Press the **Apply Text Changes** button. Apply Text Changes

Add a note to a symbol

Enter up to 10,000 characters in the symbol notes field. This text is embedded in the symbol, and appears when the cursor hovers over the symbol. Optionally, print symbol notes with the schedule. View notes under **Tools** | **Reports** | **Symbol |*Symbol Notes***.

1. Select the tool in the toolbox. On the schedule, click once on the symbol that will contain the notes.
2. Select the **Notes** tab in the toolbar and enter the text. Press the **Apply Text Changes** button. For longer text in the notes field, make sure ***Expanded Symbol Hover information display*** is checked under **Tools | Program Options | *Help***.



Add freeform text

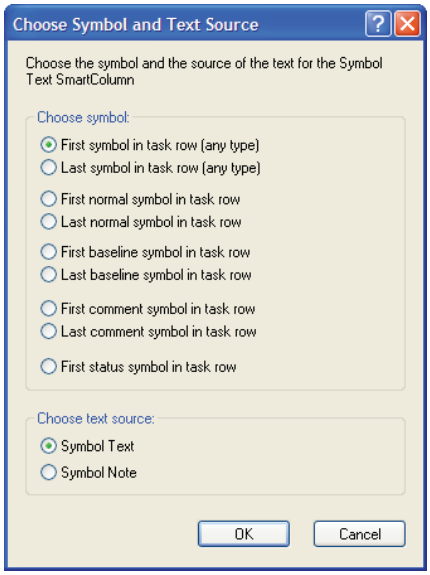
Freeform text is text that is not associated with symbols, task rows, columns, or any other specific area of the schedule. Therefore, it does not move when those areas move.

1. Select the Text tool in the toolbox.
2. Click once somewhere inside or outside of the schedule, but not on an object. Once you see the flashing cursor, you can begin typing.

Add a SmartColumn which displays symbol text or notes

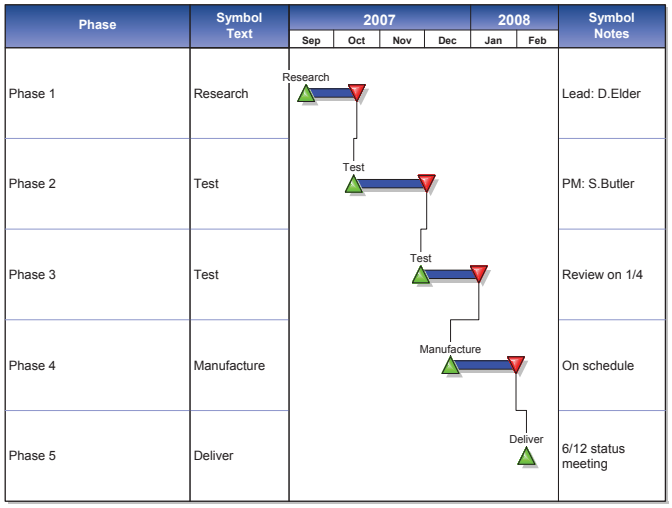
The Symbol Text SmartColumn displays, within the column cell, either the symbol text or symbol notes from a selected symbol type on all task rows.

1. Choose **Insert | Rows, Columns | New Column | *Symbol Text***.
2. Under ***Choose symbol***, select the symbol source as the first or last symbol on a task row and the type of symbol.
   - The "first" symbol has the earliest date on the task row.
   - The "last" symbol has the latest date on the task row.
   - Choose “(any type)” on the task row, or a specific symbol type.
3. Under ***Choose text source***, select the symbol field whose text should appear in the column.
   - ***Symbol Text***: The text from all three lines of symbol text will appear in the column.
   - ***Symbol Note***: The text found in the symbol notes field will display in the column.
4. Choose **OK**.



In this example, the text attached to the start symbols automatically displays in the “Symbol Text” column.

The notes embedded in the start symbols automatically display in the “Symbol Notes” column.

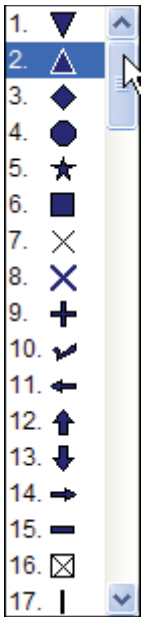


Customize a Symbol in the Toolbox

Any symbol in the toolbox can be changed to another shape, color, or size. A variety of other attributes can also be applied. Double-click a symbol in the toolbox to make changes.

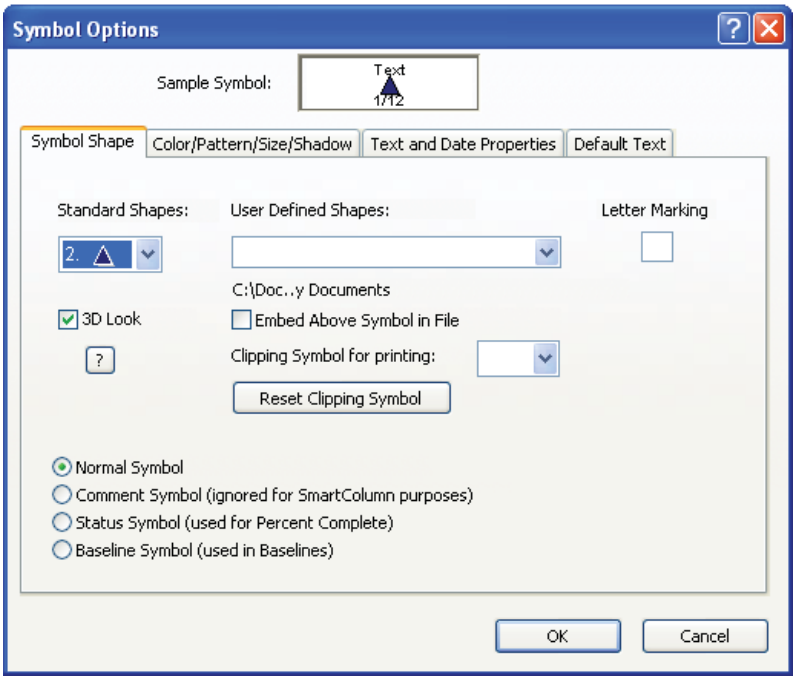
When a symbol in the toolbox is changed, all occurrences of that symbol on the schedule also change. Most overrides for symbols on the schedule will revert to these new changes, unless you choose otherwise.

See Chapter 3 for more details about symbol formatting.



Choose from these symbol formatting options:

- Shape, letter marking on symbol, user-defined symbol
- "3D Look" for highlights and shadows
- Type: Normal, Comment, Status, Baseline
- Fill color/pattern, outline color/pattern, symbol mark/color
- After-status color for “incomplete” tasks
- Override size
- Shadow
- Symbol text and date position and background
- Symbol position: upper, middle, or lower part of the task row
- Default symbol text

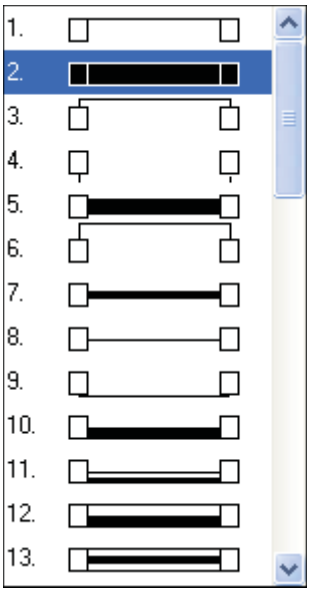


Customize a Horizontal Bar in the Toolbox

Any horizontal bar in the toolbox can be changed to another shape, color, and pattern. A variety of other attributes can also be applied. Double-click a horizontal bar in the toolbox to make changes.

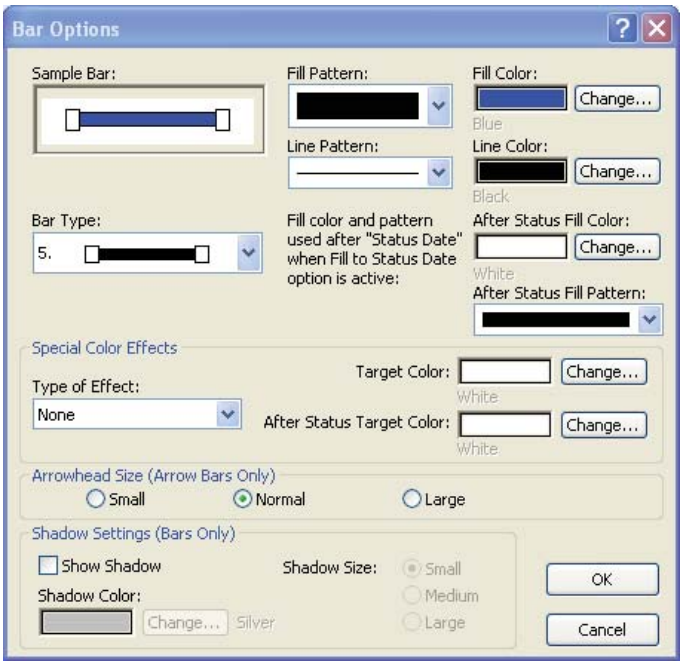
When a bar in the toolbox is changed, all occurrences of that bar on the schedule also change.

See Chapter 3 for more details about horizontal bar formatting.



Choose from these bar formatting options:

- Bar type
- Fill pattern and color
- Line pattern and color
- After-status color for “incomplete” tasks
- After-status line pattern
- Fading from a fill color to a target color
- Arrow size, where applicable
- Shadow



Customize a Vertical Link in the Toolbox

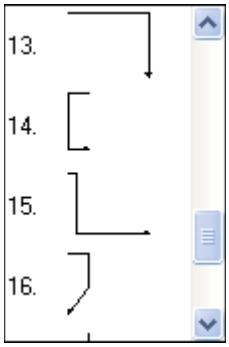
Any vertical link in the toolbox can be changed to another shape, color, or line pattern. A variety of other attributes can also be applied. Double-click a vertical link in the toolbox to make changes.

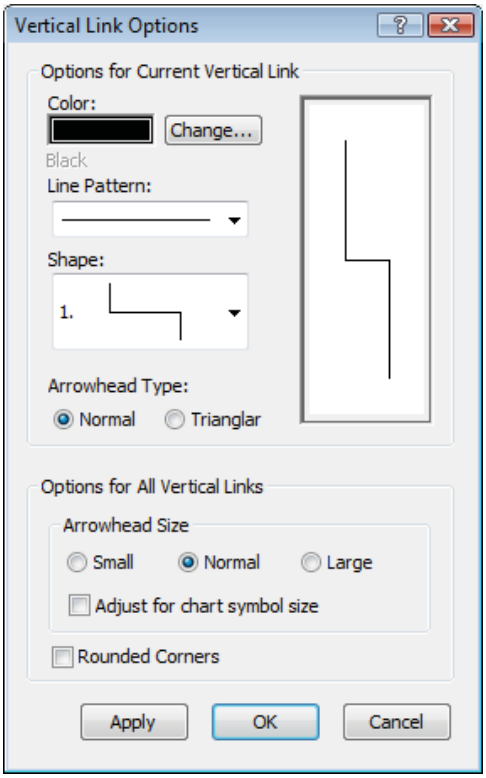
When a link in the toolbox is changed, all occurrences of that link on the schedule also change.

See Chapter 3 for more details about vertical link formatting.

Choose from these link formatting options:

- Shape
- Color
- Line pattern
- Arrow size, where applicable
- Set size relative to symbol size
- Rounded corners





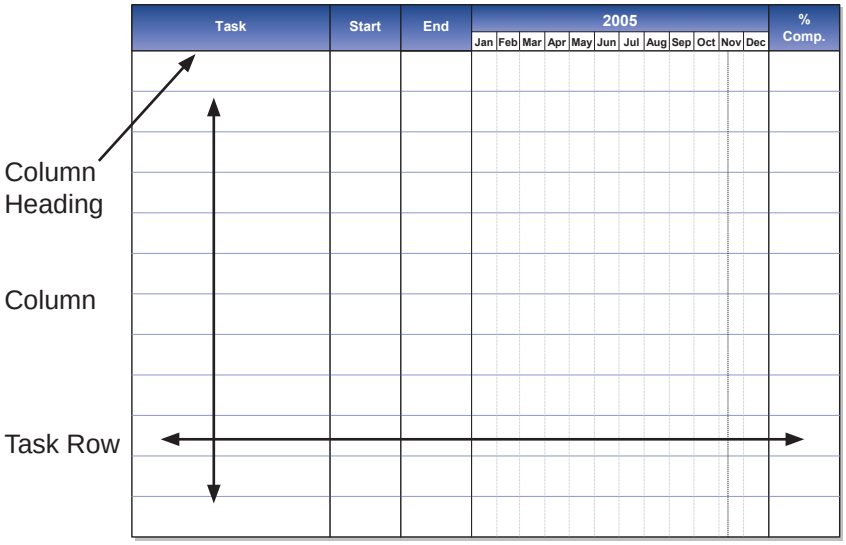
Columns, Column Headings and Task Rows

Display as many as ten columns on the left side of the schedule and ten columns on the right side of the schedule. Columns can easily be inserted, deleted, moved or resized.

The column heading contains many formatting controls, including the column and column heading formats, and SmartColumn settings.

See Chapters 6 and 12 for complete coverage of formatting columns and rows.

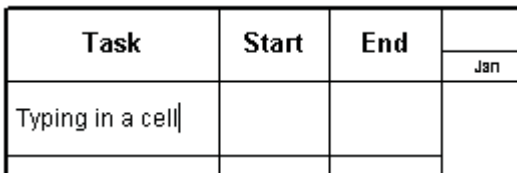
Display 2 to 300 task rows per schedule page. Row heights can be adjusted individually. This option can be toggled on an off in **Tools | Program Options | Edit |** ☑ ***Allow Task Row Height Adjustments***.



Enter text in a task row's column cell

1. Select the T tool in the toolbox.

2. Click within one of the cells in the column area and begin typing.



Move between column cells

Press the arrow keys ← → ↓ ↑ on your keyboard to move between columns and cells.

Change the column heading properties

Click once on the column heading section (the upper cell of the column). This will display the **Selection** menu in the toolbar.

1. Under the **Column Heading Text** section, enter up to 2 lines for the column name. Click ***Apply Text Changes***.

2. ☑ ***Apply Changes to all column headings*** to format all column headings like this one.

3. Set the column heading text alignment and text highlights in the **Column Heading Text Display Settings** section.

4. Choose a ***Background Color*** and optional ***Background Target Color***.

5. Choose a ***Special Effects*** setting to fade from the column heading Color to Target Color.

6. Select a font size for the column heading text.

Change the column properties

Column properties options control the column's background color, text font size, currency display, decimals, outlining indentation amount and more.

1. Click once on the column heading. This will display the **Selection** menu.
2. Choose **Current Object: Column Heading | *Switch to Column***.

   - In the **Column Type and Format** section -

3. Choose column ***Text Style, Text Size, and Alignment.***
4. If the column will contain numbers, choose to display the column numbers as ***Currency*** and set the number of ***Decimals Places*** to display.
5. For outlining purposes, enter a value in inches to ***Indent per Outline Level*** for the column text.

   - In the **Column Background** section -

6. Change the ***Background Color*** for the column.
7. Choose ***Background Color Special Effects*** for the fade setting (fades from *Background Color* to *Background Target Color*).
8. Choose a ***Background Target Color*** that the ***Background Color*** will fade into.

Add or edit a column or SmartColumn

Schedule columns are used to display text or specialized information (SmartColumn).

SmartColumns automatically fill according to schedule data or entered data. For example, the Duration SmartColumn calculates the length of time between the first symbol and last symbol for each task row.

A Text column displays user-entered text, such as project activities, notes, resource names, and more.

To add a column, choose **Insert | Rows, Columns | New Column** and choose from the following SmartColumns:

- Calculation/Indicator
- Dates-
  - Start Date
  - End Date
  - Status
  - Baseline Start
  - Baseline End
- Date from Symbol Automation Tag
- Duration:
  - Used Duration
  - Remaining Duration
  - Time Ahead/Behind
  - Baseline Duration
- Earned Value...
- Microsoft Office Project Column
- Outline Level
- Percent Complete
- Resource Allocation Percent
- Stoplight
- Symbol Count
- Symbol Text
- Task Number
- Text
- WBS Number
- Values
- ValueSet

To change an existing column to another column type, click the column heading once, choose ***Switch to Column*** from **Current Object: Column Heading** section, then use the drop-down menu in the **Column Type and Format** section to change the SmartColumn Definition.

To edit an existing SmartColumn's properties, click the column heading once, choose ***Switch to Column*****,** then click **Column Type and Format | *Properties***.

» If the column is a Date SmartColumn, additional properties can be found in the **Date SmartColumn Display Settings** section of the same menu. Choose to ***Show Time as 24 Hours; Hide Year; Hide Month, Day, and Year; Hide Time; Show calendar icons***; or ***Use Custom Date Format***.

See Chapter 15 for more information about SmartColumns.

Set the Project Start and End Dates

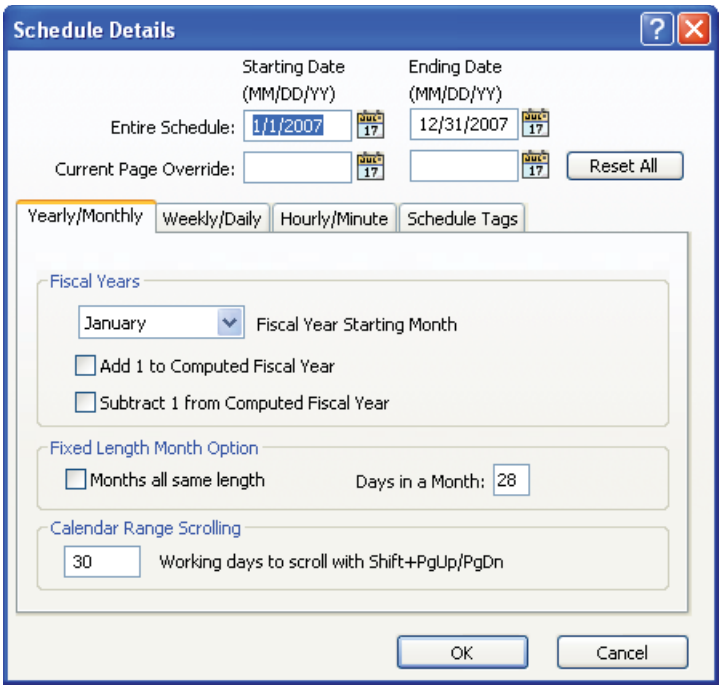
The project start and end dates control the visible date range that appears in the Milestones window.

1. Choose **Dates** | **Start and End Dates** from the toolbar.
2. Under ***Displayed Start Date***, enter a date. Press the apply button .
   - Click the for a date selection calendar.
3. Under ***Displayed End Date***, enter a date. Press the apply button

You can still add symbols and bars outside of this range by scrolling forward and backwards with the Shift+PgUp and Shift+PgDown keys or in **Date** | **Date Range Tools** | ***Shift displayed range backward*** / ***Shift displayed range forward***.

Change the amount of days by which the scroll buttons move through the calendar by going to **Dates | Start and End Dates | More Settings... | Yearly/Monthly | Calendar Range Scrolling |** ***Working days to scroll with Shift+PgUp/PgDn.***

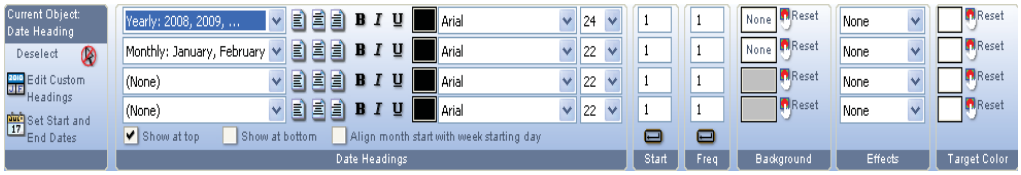
By clicking on **Dates | Start and End Dates | More Settings** More Settings..., you'll find other Schedule Details options, including a place to change fiscal year formatting, shade weekends, and allow hourly detail.



The Date Headings

Display up to four date heading levels with formats ranging from minutes to years to custom entries.

1. To change the date heading display, click once on the date heading within the schedule. This will display the **Selection** menu. Optionally, choose **Dates | Date Headings |** ***Date Headings Full Dialog***.



2. For each level, choose from more than 35 Heading Types (yearly, monthly, etc.).

3. Align each heading's text.

4. Choose a **Start** number for the heading.

   - This feature is useful to start a schedule on a specific number that does not relate directly to the dates on the schedule. For example, if your schedule starts in January, you can use a start number of 5 to show that January is the 5th month since the start of the contract.

2005					
Jan	Feb	Mar	Apr	May	Jun
5	6	7	8	9	10

5. Choose a **Frequency** for the heading.

   - For example, in a yearly heading of a project whose start date is 1/1/2002, with a frequency of 2, the yearly heading would be 2002, 2004, 2006, etc.

7. Choose to display the date headings at the top and/or bottom of the schedule.

8. Add a custom heading under **Selection | Current Object: Date Heading |** ***Edit Custom Headings***.

See Chapter 6 for more information on date headings, including custom headings.

Current Date, Current Date Line, and Status Line

Display the current date and current date line

The current date, as set by your computer's clock or an override date, can be displayed above the upper right corner of the schedule (by default). The current date line is drawn vertically down the schedule area at the appropriate date heading location.

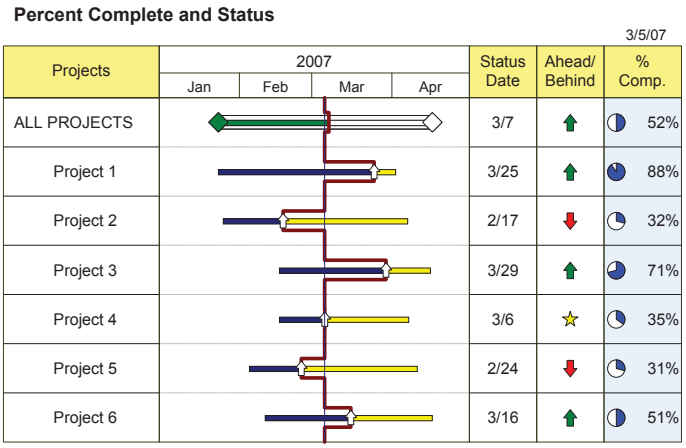
1. Choose **Dates** | **Current Date** from the toolbar.
2. ☑ **Display Date** to show the current date.
3. ☑ **Display Date Line** to show the date line.
4. To access other Date Line properties, choose ***More Current Date Options***, In the **Date Line** section, choose the line type, thickness, and color. Extend the date line into the datagraph or place the line behind the horizontal bars in the schedule area.

Display and format the status line

Show at-a-glance ahead/behind status with the status line. The status line extends vertically along the current date line and bulges to the left or right according to each task row's status date.

1. Choose **Dates** | **Current Date**.
2. ☑ **Display Status Line**.
3. To access other Status Line properties, choose ***More Current Date Options***. In the **Status Line** section, choose the line thickness and color.
4. To make sure the status line displays bulges correctly, make sure the options ***Symbols: Fill to Status Date*** or ***Bars: Fill to Status Date*** are checked under **Dates | Date Related Settings**.

Percent Complete and Status



Bookmark Task Rows

Add a bookmark name to any task row and then jump to that task row by choosing the bookmark name from a list of bookmarks. Especially helpful in large schedules, this feature allows the user to quickly jump to specific schedule areas.

Bookmark a task row

1. In the toolbox, click the arrow tool .
2. Right-click once on the task row to be bookmarked.
3. Choose **Bookmarks** in the right-click menu.
4. Select **Create a new Bookmark**.
5. **Key a Name**: The text in the text column closest to the schedule area on the left will display as the default bookmark text. The bookmark name is limited to 29 characters.
6. Click **Create a Bookmark Now** to bookmark the task row.

Display Bookmark icons

Show Bookmark indicator on task row display to show the icon. The icon will be displayed in the column directly to the left of the schedule area on the bookmarked task row.

Jump to a bookmarked task row

1. Right-click any task row and choose **Bookmarks**.
2. Select **Jump to a Bookmark or Delete a Bookmark**.
3. Under **Select Bookmark**, choose from the list of bookmark names.
4. Click **Jump to a Bookmark Now**.

Delete one or more bookmarks

1. Right- click any task row and choose **Bookmarks**.
2. Select **Jump to a Bookmark or Delete a Bookmark**.
3. Under **Select Bookmark**, choose a bookmark name to be deleted.
4. Choose **Delete Selected Bookmark Now** or **Delete all Bookmarks Now**
5. Choose **OK / Leave** to exit the dialog box.

The **Current Task line** number or **Task line of Bookmark** number indicates the row location of the selected task. Numbering is 1-based, begins with the top-most task row, and includes any hidden tasks.

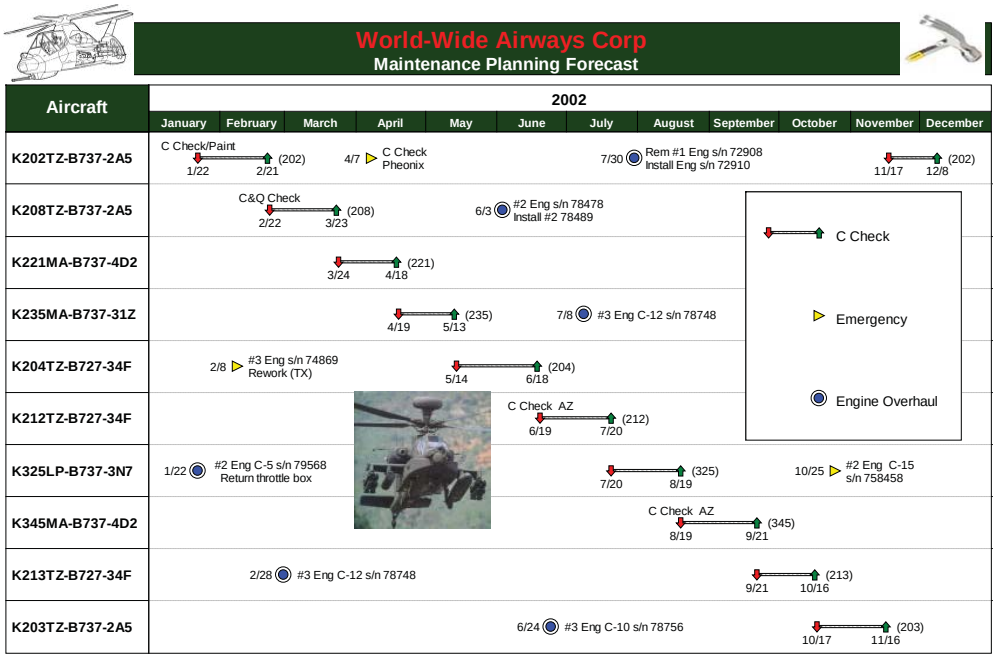
Add Graphics to the Schedule

You can paste graphics anywhere on your schedule.

1. Copy the image (e.g. by right-clicking on an image and choosing “copy”).
2. In Milestones, choose **Edit** | **Paste | *Picture***.
3. The Paste Picture cursor appears: .
4. Move the cursor to the appropriate location, and then click to paste the image.

-or-

1. Choose **Insert** | **Picture, Legend | *Picture from file***.
2. Browse to the graphics file, select it, and choose **Open**.
3. The Paste Picture cursor appears: .
4. Move the cursor to the appropriate location, and then click to paste the image.



To resize the graphic, click once on it, hold down the **Shift** key, click-and-hold on a corner of the graphic, and drag to make it larger or smaller. (The Shift key keeps it in proportion.)

Keyboard Shortcuts

Keyboard shortcuts are useful when editing a schedule. The following is an abbreviated list of function and key combination shortcuts. For complete shortcut documentation, consult the ***Help Topics*** available under **Help | Help Files |** ***Help Topics***. Index keyword: “shortcuts.”

Pressing this key…	**Causes this action…**
Escape key	Halts current activity when possible.
Tab (or Shift + Tab)	Indents (or outdents) one outline level if the ***Use Tab key for Outlining*** option is selected – See **Tools	Program Options |** ***Edit*** menu.
F1	Starts Help. If in dialog box, displays context help for selected control.
F8	Continuous View (toggle).
F9	Redraws the current schedule**.**
F11	Switches between ***Fit in Window*** view and current Zoom setting.
F12	Toggles through the first six tools in the toolbox**.**
Alt+F12	Select horizontal bar in toolbox
Alt+Shift+Right Arrow	Indents (promotes) a task by one outline level.
Alt+Shift+Left Arrow	Outdents (demotes) a task by one outline level.
Ctrl+F12	Select next vertical link in toolbox
Ctrl+Spacebar	Select next column
Ctrl+W	Change vertical link coming from selected symbol to type currently selected in toolbox
Alt+Spacebar	Select next task row
Ctrl+Alt+Spacebar	Select next column heading
Ctrl+Shift+Spacebar	Select next Date heading
Alt+Shift+F7	Displays a screen which enables you to selectively reset symbol settings for all symbols.
Ctrl+Alt+*(on number pad)	Show all task rows.
Shift+F10	Display right-click menu for selected item

Pressing this key…	Causes this action…
Shift F12	Select next symbol in toolbox. If an entire row in the Combo toolbox is highlighted, then Shift+F12 highlights the next row.
Shift+Right Arrow	When a symbol is selected, changes date forward by one minute, hour, day or week (depending upon the setting in **Tools | Program Options | Dates** menu.)
Shift+Left Arrow	When a symbol is selected, changes date back by one minute, hour, day or week (depending upon the setting in ***Tools | Program Options | Dates*** menu.)
Page Down	Moves to the next page on your schedule
Page Up	Moves to the previous page
Ctrl+Home	Moves to the first page
Ctrl+E	Edits currently selected item
Ctrl+F	View Full-screen toggle
Ctrl+End	Moves to the last page
Ctrl+L	Select next left cell (if a task row or cell is currently selected). Selection will only move on one side of the schedule.
Ctrl+M	Change selected symbol to type currently selected in toolbox
Ctrl+N	Start new schedule
Ctrl+O	Open file
Ctrl+R	Select next right cell (if a task row or cell is currently selected). Selection will only move on one side of the schedule.
Ctrl+U	Change selected horizontal bar to type currently selected in toolbox
Ctrl+Alt+G	Switch to Calendar View
Ctrl+Alt+S	Start Symbol Maker Program
Ctrl+Z	Undo

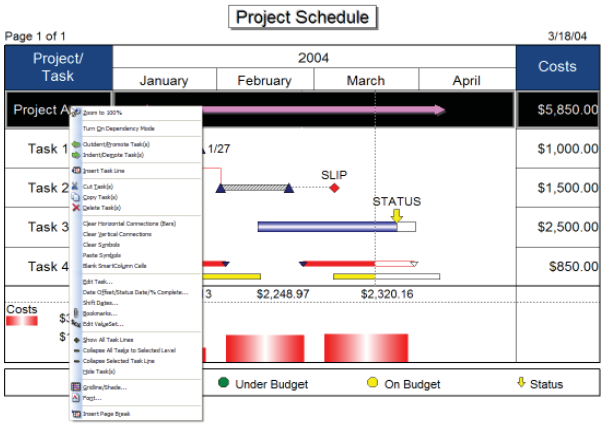
Right-Click "Context Sensitive" Menus

A right-click on any part of the schedule will display a shortcut menu with a list of options.

Right-click a column heading to hide it, show all column, access column properties and more.

Right-click the toolbox to change its properties, access the sidebar options, and more.

Below are the detailed options for two right-click areas:



Right-click on a task row's column cell to access these functions:

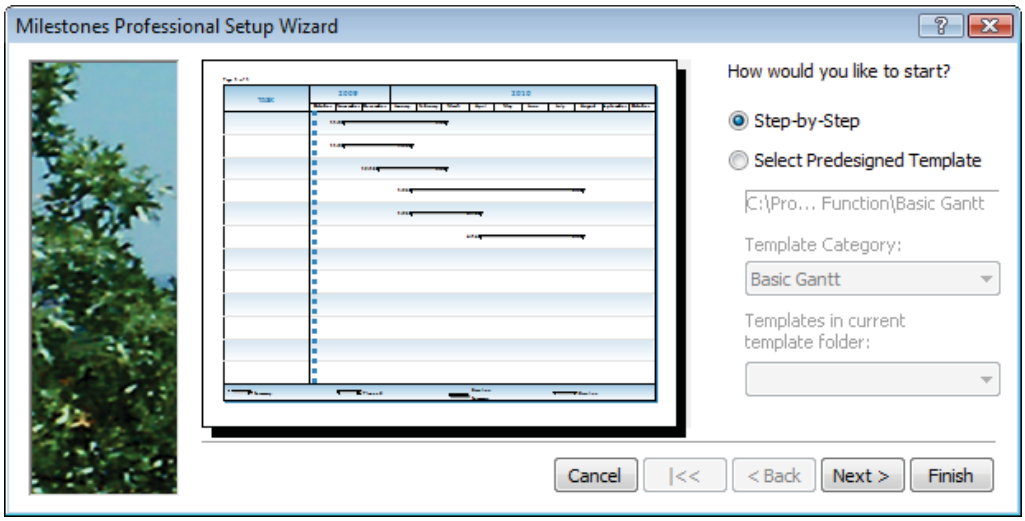
- Zoom
- Turn Dependency Mode On/Off
- Increase/Decrease Outline Level
- Insert/Cut/Copy/Delete task row
- Link to active MS Project task with Unique ID
- Cut/Copy/Paste cell text
- Clear symbols/bars/links
- Blank SmartColumn cells' entries
- Edit task information
- Date Offset/Status Date/% Complete
- Shift Dates
- Bookmarks
- Edit task's ValueSets
- Expand, collapse, hide tasks
- Edit Font/Gridlines/Shading
- Insert page break

Right-click a symbol on the schedule to access these functions:

- Zoom
- Turn Dependency Mode On/Off
- Copy Symbol/Bar for Paste
- Delete
- Clear Horizontal Bars
- Font
- Select Task
- Schedule Recurring Task
- Link to Active MS Project Task
- Link to Active MS Project Task (type of date) with (type of identifier)
- Schedule Recurring Task
- Access symbol properties
- Select this symbol in the toolbox
- Highlight/Dehighlight Dependent Symbols

Schedule Setup Wizard

To launch the **Milestones Professional Setup Wizard**, choose **File | Files and Templates: Open and Save Options | *Wizard***. This wizard will walk you through the setup of your schedule step-by-step or guide you through using a pre-designed template. Follow the Wizard's prompts to successfully complete the desired layout for your new schedule.



Choose the ***Select Predesigned Template*** option to select from a wide variety of templates that are pre-formatted. Templates are organized by industry, such as engineering, software, and technology, or by common usage, such as baseline scheduling, earned value reports, and stoplight schedules.

Select a **Template Category** and then a specific template.

See Chapter 12 for more details.

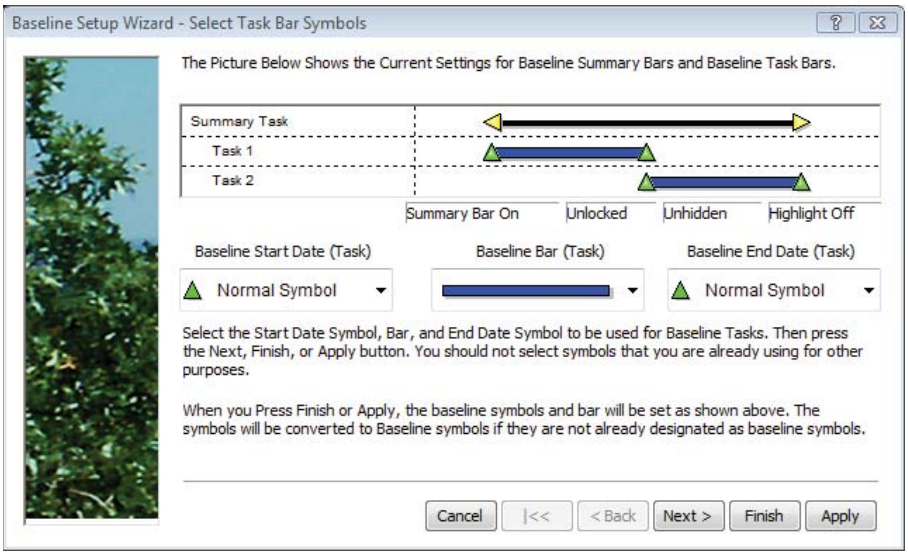
Save a Schedule

Save Milestones schedules under the same name, a new name, or in the previous version's format. Choose **File | Files and Templates: Open and Save Options | Save** or **Save As | *Chart***.

For faster saving or opening across a network, choose **Tools | Program Options | Files and Automation** and check ***Two Stage File Saves...*** and ***Two Stage File Reads...***

Baseline Scheduling

Baseline scheduling is a great way to show how your original schedule compares to the actual schedule. Using the Baseline Setup Wizard, you can establish your baseline symbology for the task rows and summary rows. To access the **Baseline Setup Wizard**, choose **View | Baseline | *Baseline Setup*** This wizard will walk you through the setup of your baseline symbology as well as other baseline formatting options.



Baseline SmartColumns

There are three SmartColumn options designed to display baseline data. The Baseline Start Date column and the Baseline End Date column will show the date of the first and last baseline symbols found on the task row. To add a Baseline Start Date or Baseline End Date SmartColumn, go to **Insert | Rows, Columns | New Column | *Dates...***

You can also insert a Baseline Duration SmartColumn. This column will show the total working time represented by the baseline symbols on a task row. Go to **Insert | Rows, Columns | New Column | *Duration...***

For more on Duration Smartcolumns, see Chapter 15.

Other Baseline Formatting Options

Choose to show baseline symbols, lock baseline symbols, highlight baseline symbols, or hide summary baseline symbols as optional baseline formatting options. Choose **View | Baseline** to select any or all of these options.

Viewing Options, Page View

In the **View** menu, the **Viewing Options** section enables you to select additional views, including different chart types and page views.

Continuous view

Continuous view allows you to scroll through the list of tasks (vertically) and scroll the timescale forwards and backwards (horizontally). In Continuous view, the columns are locked-down, while scroll buttons allow for moving the timescale and task rows in view.

Choose **View** | **Viewing Options | Page View |** ***Continuous*** or press **F8** to toggle Continuous view mode.

Use the PageUp and PageDown keys to scroll a specified number of task rows, from 1 to 40, as set under **Tools** | **Program Options** | **Edit**. Enter a value next to ***Lines to Scroll for PgUp/PgDn in Continuous View***.

Full Screen view

Full Screen mode displays your schedule at the largest size possible for your monitor, by eliminating the toolbar and menus. The sidebar and/or toolbox are available if needed, but can be hidden.

Choose **View** | **Viewing Options | Page View |** ***Full Screen*** or press **Ctrl+F** to toggle the Full Screen view.

To exit Full Screen view, press Ctrl+F or the Esc key.

Presentation view mode

Use the Presentation view mode to present one or a series of separate Milestones schedules as a “slide show” with a full screen option and schedule manipulation controls.

Before using Presentation Mode, change your **File | Printing |** ***Printing Options*** setting to ***Scale to Fit Selected Paper Size***. This ensures that the schedule pages will be scaled to fit the screen. If you will be presenting multiple schedules in this view, create a master schedule list in **File | Master Update |** ***Master Schedule***.

Choose **View** | **Viewing Options | Page View** | ***Presentation Mode*** to display the Presentation view.

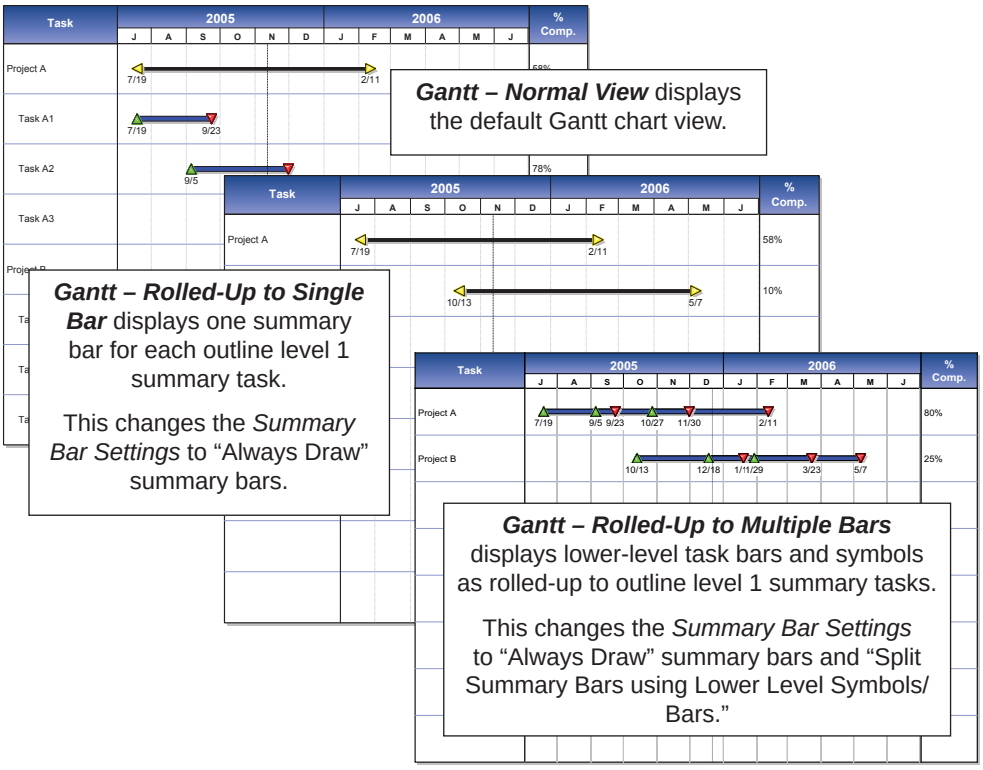
Use the left and right mouse buttons to zoom in and zoom out, respectively. Use the arrows keys to pan around the schedule.

Press the Esc key to exit Presentation view mode. *See Chapter 13 for more details*.

Viewing Options, Chart Type

Gantt views

A Milestones schedule can be toggled between three Gantt chart view modes. To switch from one Gantt view to another choose **View | Viewing Options | Chart Type**.



Gantt - Calendar View

You can show any schedule in Calendar View. Choose View | Viewing Options | Chart Type | ***Gantt - Calendar View***.

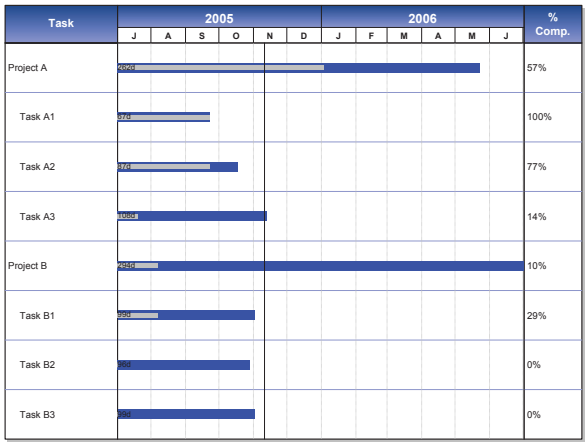
Milestones and symbol text in the schedule area are displayed in ***Calendar View***.

If a single task row has been selected prior to entering Calendar View, then the bars as well as the symbols on the row will be shown in the Calendar View.

If no rows are selected then all symbols will be shown (horizontal bars are not displayed due to space limitations). Any free-form text entered in Gantt view will not be shown. Any text entered in Calendar View will be shown just in Calendar View.

If two or more task rows are selected, only symbols from those task rows will be displayed in Calendar View. If some task rows are hidden, then only visible task rows' symbols will be displayed. Use the PageUp and PageDown keys to scroll from month to month.

Gantt - Duration View



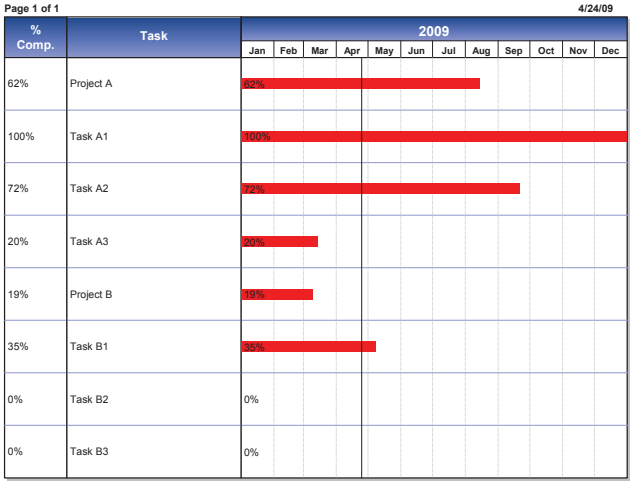
The ***Duration View*** mode replaces the Gantt bars and milestones with bar graphs indicating each task's duration.

A bar's length corresponds to a task's duration value. The gray fill indicates the completed portion. The longest duration uses the full width of the schedule area.

To display the Duration View, choose **View** | **Viewing Options | Chart Type |** ***Gantt - Duration View.*** The default bar color is red but can be changed to another color under **Tools | Program Options | General**.

The duration values and duration bars are based on the settings found in **Layout | Other |** ***Duration Settings***.

Gantt - Percent Complete



The Percent Complete view mode replaces the Gantt bars and symbols with bar graphs indicating each task's percent complete.

Each task displays a bar indicating its percent complete. A bar's length corresponds to a task's percent complete value in relation to the date heading length. That is, a task which is 50% complete will display a bar which traverses half of the date heading's length.

The percent complete bars do not represent start and stop dates. The summary percent complete bar ignores any overriding status symbol placed on the summary row.

To display the Percent Complete view, choose **View** | **Viewing Options | Chart Type |** ***Percent Complete***.

Chapter 3: Customizing the Toolbox and Sidebar

The toolbox contains the building blocks of your schedule: symbols, horizontal bars, and vertical links. Any of these symbols and bars can be changed to a different shape, size, type, color, or pattern.

All of the toolbox settings are unique to the current schedule. Thus, if you make a toolbox change in one schedule, it does not affect any of your other schedules.

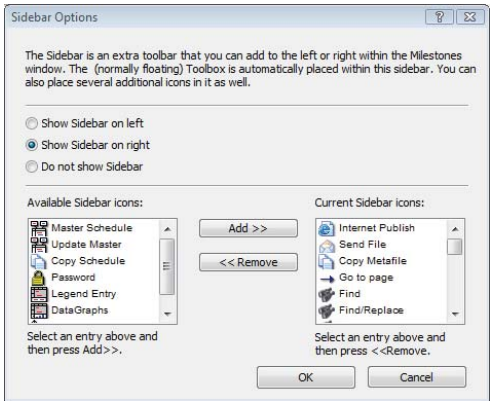
» You can copy and paste the toolbox into other schedules or save the file as a personal template so that all toolbox settings are retained for future use. To copy the toolbox, right click and choose ***Copy Toolbox***. *See Chapter 12 for more information on templates*.

If the sidebar option is selected, the toolbox automatically appears within the sidebar.

Sidebar

The optional sidebar is an extra toolbar anchored to the left or right side of the Milestones window. The sidebar contains the toolbox and a user-defined list of shortcut buttons for a variety of activities.

Changes made in the **Sidebar Options** dialog box apply to all schedules.



Display the sidebar

1. Choose **Tools** | **Customize** | ***Sidebar Options***.
2. Select either ***Show Sidebar on left*** or ***Show Sidebar on right***.
3. You must close and restart Milestones for this change to take effect.

Remove the sidebar

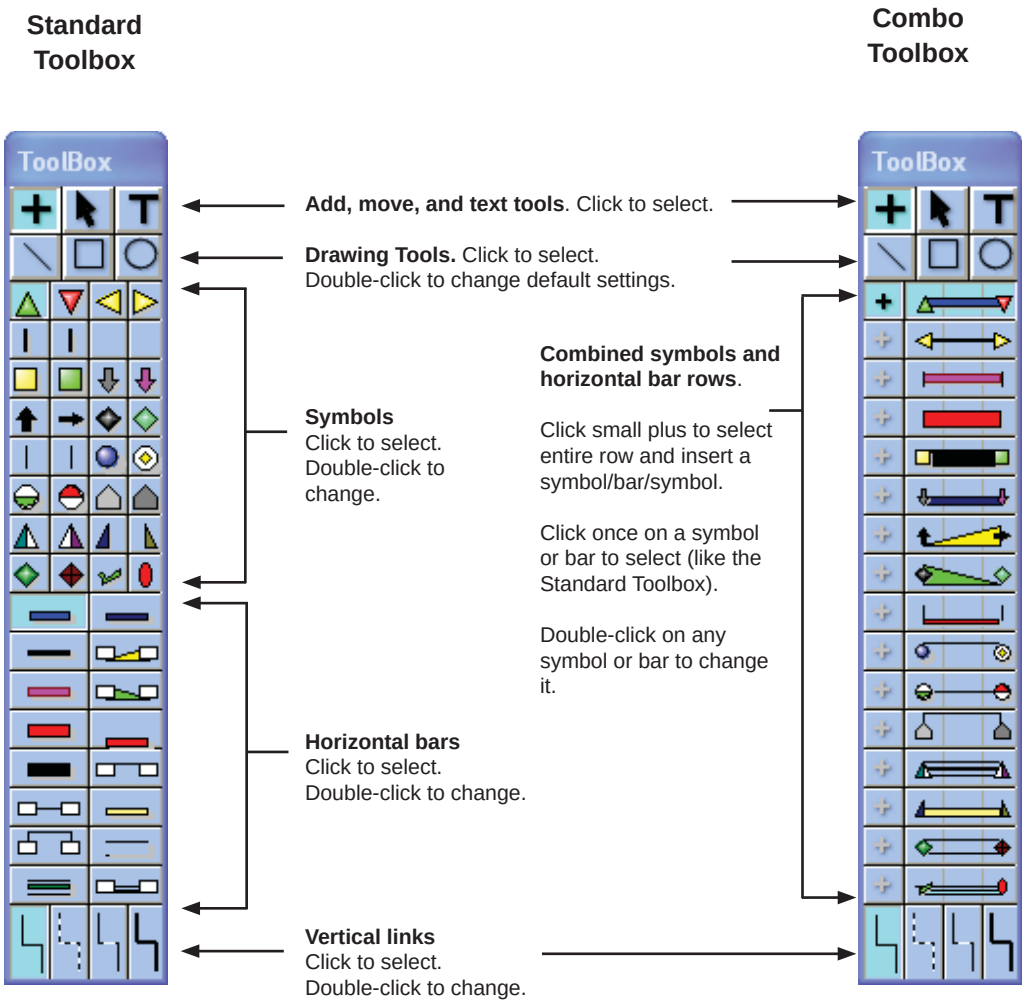
1. Choose **Tools** | **Customize** | ***Sidebar Options***.
2. Select ***Do not show Sidebar***. This will make the toolbox free-floating.
3. You must close and restart Milestones for these changes to take effect.

Add and remove selected sidebar icons

1. Choose **Tools** | **Customize** | ***Sidebar Options***.
2. Add sidebar icons: Select from the list of **Available Sidebar icons** and then click ***Add>>***.
3. Remove sidebar icons: Select from the list of **Current Sidebar icons** and then click ***<<Remove***.

Combo and Standard Toolboxes

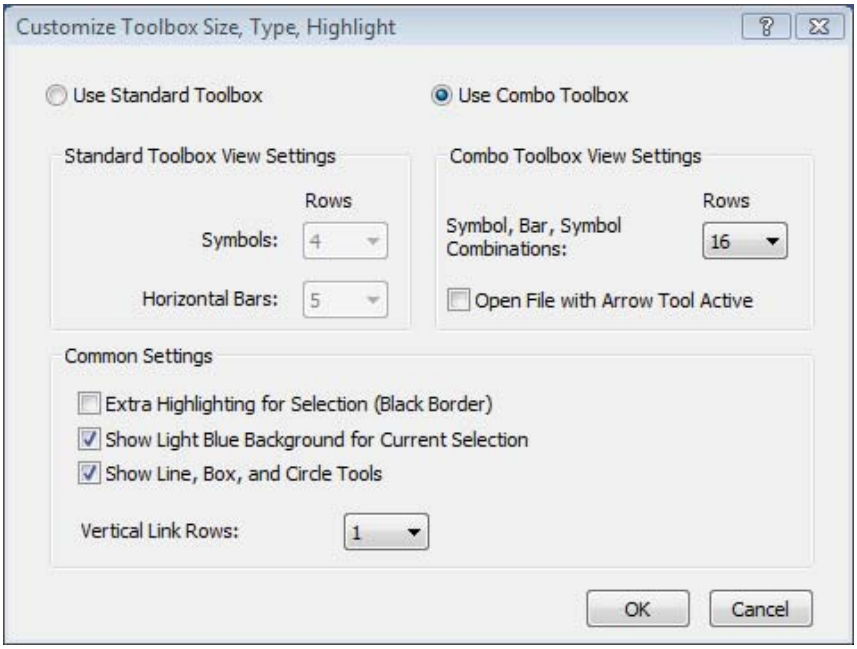
There are two versions of the toolbox. The Standard Toolbox groups the symbols and bars separately, while the Combo Toolbox combines two symbols and one horizontal bar on each row for symbol/bar/symbol combinations. The Plus tool, Arrow tool, Text tool, drawing tool, and vertical link sections are the same:



Set Toolbox Size and Type

Since the toolbox can take up a significant amount of screen space, you can customize it to remove rows of tools, symbols, and bars that you do not need for the schedule you are working on.

1. Right-click the toolbox and choose ***Toolbox Properties***.



2. Choose ***Use Standard Toolbox*** or ***Use Combo Toolbox***.
3. For the Standard Toolbox, select the number of symbols and horizontal bars that should display. For the Combo Toolbox, select the number of symbol/bar/symbol rows that should display.
4. The Combo Toolbox offers the option of activating the Arrow Tool when this schedule is opened. This prevents accidentally adding symbols and bars.
5. ***Extra Highlighting*** provides a black outline for selected items in the toolbox.
6. ***Show Light Blue Background for Current Selection*** provides a blue background for selected items in the toolbox.
7. Choose to show or hide the drawing tools.
8. Choose to display 0, 1, or 2 rows of Vertical Links.

Toolbox: Free-floating or Anchored in the Sidebar

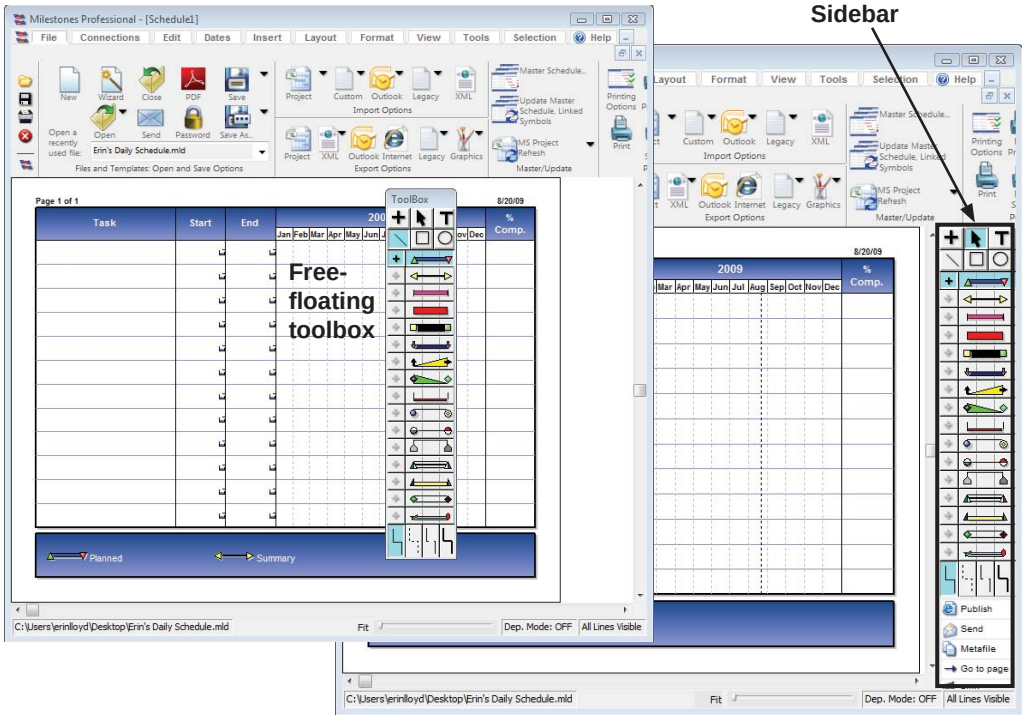
Choose to display the toolbox as free-floating or choose to display the sidebar, in which case the toolbox is automatically displayed within the sidebar. You cannot display the sidebar without the toolbox within it. You cannot display a free-floating toolbox and a sidebar.

Display a free-floating toolbox

1. Choose **Tools** | **Customize** | ***Sidebar Options***.
2. Select ***Do not show Sidebar***.
3. You must close and restart Milestones for these changes to take effect.

Display the toolbox within the sidebar

1. Choose **Tools** | **Customize** | ***Sidebar Options***.
2. Select either ***Show Sidebar on left*** or ***Show Sidebar on right***.
3. You must close and restart Milestones for these changes to take effect.

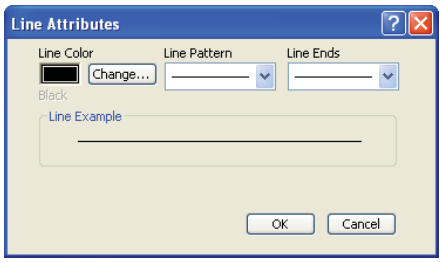


Set Drawing Tools Defaults

The default settings for lines, boxes, and circles that you add to a schedule are black for color and lightweight for line type. You can alter these default values by double-clicking on the Line, Box, or Circle tool in the toolbox.

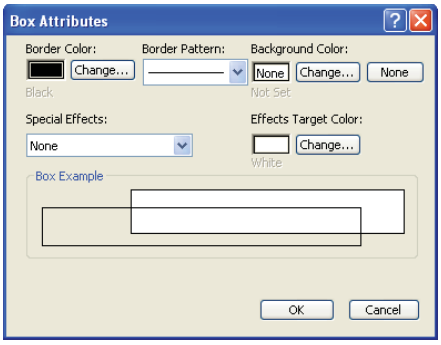
Line drawing tool

Change the Line Color, Line Pattern, and Line Ends (to create an arrow).



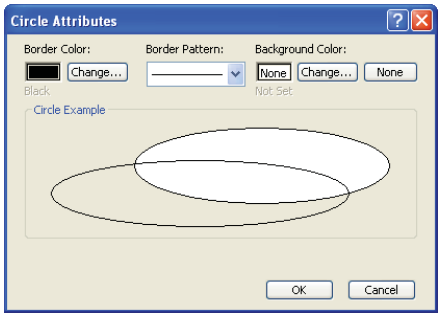
Box drawing tool

Change the Border Color, Border Pattern, Background Color, Target Color, and fading Special Effects. The Special Effects setting will fade the Background Color into the Target Color.



Circle drawing tool

Change the Border Color, Border Pattern, and Background Color.



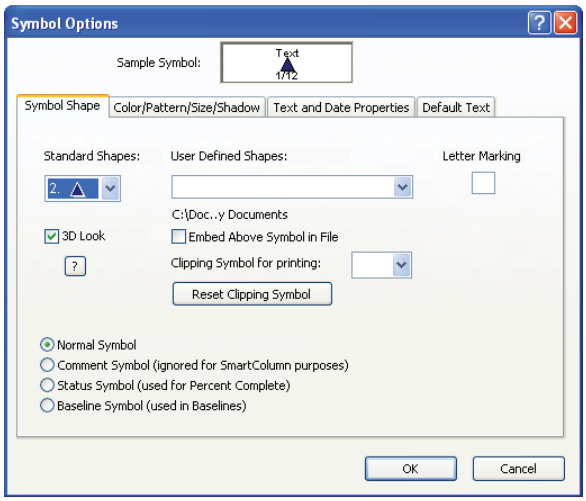
To add any of these shapes to your schedule, click once on the tool, then click-and-drag in the schedule area to draw. Once placed on a schedule, lines, boxes, and circles do not move unless dragged with the arrow tool to a different location.

You can customize the attributes of any line, box, or circle that is already on your schedule by double-clicking directly on the object. When you do, a similar dialog box appears that lets you change the setting of just that object.

Set Symbol Defaults

To change the attributes of a symbol in the toolbox, double-click on the symbol in the toolbox. Any changes to the symbol in the toolbox will affect all occurrences of that symbol on the schedule. That is, when the new changes replace the old, all occurrences of the old symbol type on the schedule are replaced by the new settings.

Choose symbol shape, type, letter mark and user-defined symbols



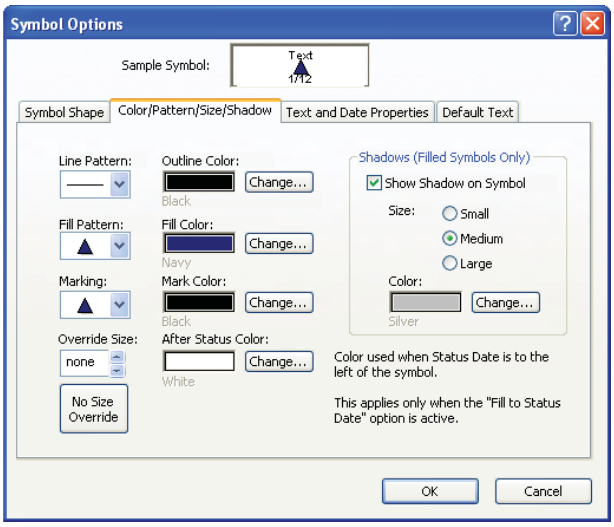
To set a symbol's defaults:

1. Double-click a symbol in the toolbox.
2. Click the **Symbol Shape** tab.
3. Click a drop-down arrow to view the options.

The **Sample Symbol** changes to match your selections as you make them.

- Choose from 130 **Standard Shapes**.
- Apply "3D Look" attributes. 3D Look highlights a symbol with a simulated light source and adds a shadow. Not all symbols allow the 3D Look.
- **Letter Marking**: Enter one letter or number to appear with the symbol. Select Symbol Shape #28 or #33 to show just the letter marking as the symbol.
- Choose from one of four symbol types:
  - » **Normal**: This is the default symbol type, used for most situations. Used in start date, end date, duration, and other SmartColumns.
  - » **Comment**: This symbol type is ignored for SmartColumn purposes. Use this symbol type for additional symbol text or symbol notes.
  - » **Status**: This symbol type is used for controlling percent complete.
  - » **Baseline**: This symbol type is used for baseline SmartColumn calculations.
- If you have created your own symbol, and that symbol is in the Symbols folder, select it under **User-Defined Shapes**. Optionally, choose to embed it in the schedule so that the symbol is available when sending or sharing the chart.

Choose symbol color, pattern, marking, after status color, shadow



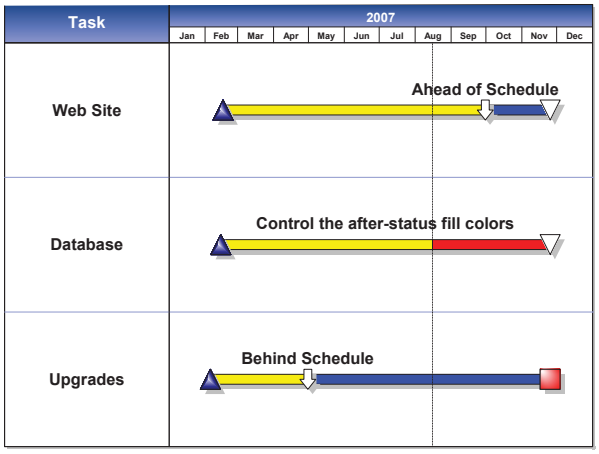
To set a symbol's defaults:

1. Double-click a symbol in the toolbox.
2. Click the **Color/Pattern/ Size/ Shadow** tab.
3. Click a drop-down menu to view the options.

The **Sample Symbol** changes to match your selections, as you make them.

- Choose the **Line Pattern** and **Outline Color** that encompasses the symbol.
- Choose a **Fill Pattern** and **Fill Color** that fills the inside of the symbol.
- Choose a symbol **Marking** pattern and **Mark Color**, such as \ or \\ through the symbol, a box or circle enclosing the symbol, and more.
- The **After Status Color** is the fill color of the symbol after (to the right of) the status date.

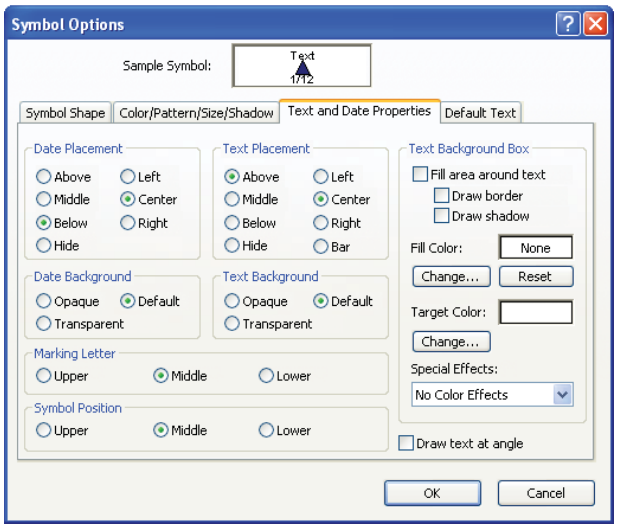
✍ To activate the "fill to status" feature, choose **Dates | Date Related Settings | *Symbols: Fill to Status Date*.**



- Choose a **Shadow** color and size.
- Set an **Override Size** for this symbol only. This override will apply to all symbols of this type that already exist on the schedule (optionally) and all future symbols of this type that are placed on the schedule. Note that bars continue to be displayed at the size that is based upon the symbol size for the entire schedule.

Choose positioning for symbol text, date, marking letter, symbol

Set the position of the symbol date, symbol text, marking letter, and the symbol itself. Choose the symbol text background colors as well as the text and date background degree of transparency.



To set a symbol's defaults:

1. Double-click a symbol in the toolbox.
2. Click the **Text and Date Properties** tab.

The **Sample Symbol** changes to match your selections, as you make them.

- Set the **Date Placement** as ***Above, Middle, Below*** (vertical positioning); and ***Left, Center, Right*** (horizontal positioning). Optionally, ***Hide*** the date.
- Set the **Text Placement** as ***Above, Middle, Below*** (vertical positioning); and ***Left, Center, Right,*** or ***Bar*** (horizontal positioning). Optionally, ***Hide*** the text.
- To add a **Text Background** color, check ☑ **Fill area around text** and click ***Change*** under **Fill Color** to choose a color.
  - » Choose a **Target Color** and **Special Effects** for fading from the Fill Color into the Target Color.
  - » Choose ☑ **Draw Border** to frame the background.
  - » Choose ☑ **Draw Shadow** for a gray text box shadow.
- For **Date Background** and **Text Background**:
  - » ◉ **Opaque** causes a solid background to appear under the text to keep underlying lines from going through the text.
  - » ◉ **Transparent** causes the text to not obscure any underlying graphics.
  - » ◉ **Default** is usually the same as Opaque.
- For **Symbol Position**, choose ***Upper, Middle,*** or ***Lower*** as the vertical placement within a task row.

- For **Marking Letter**, choose ***Upper, Middle,*** or ***Lower*** as the vertical placement within the symbol.
- Check **Draw text at angle** to force symbol text to display at the angle set in **Tools | Program Options | *Edit*.** This override will apply to all symbols of this type that already exist on the schedule (optionally). To change the angle of the angled text, choose **Tools | Program Options | Edit | *Angle for Angled Symbol Text***.

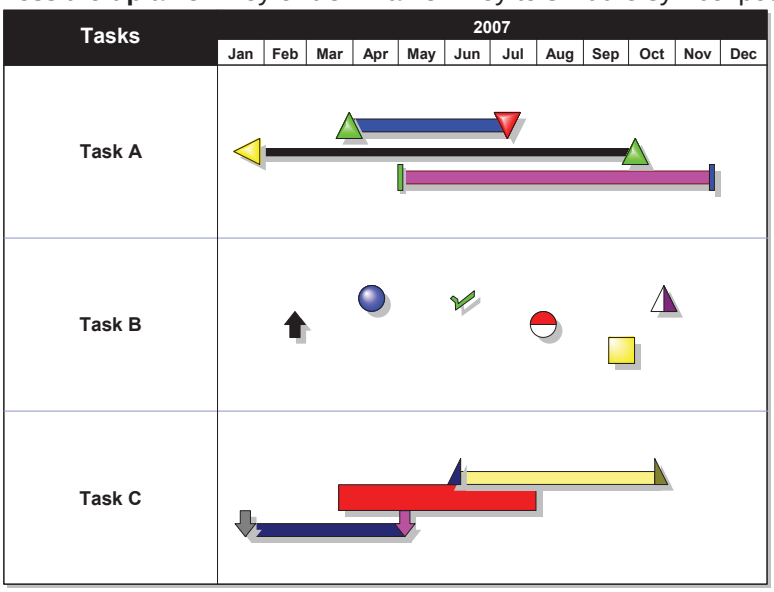
Symbol Positioning Example

This schedule has three task rows. Within each task row, the symbols are positioned vertically as upper, lower, and middle.

The bars follow the positioning of the symbols to which they are attached.

Change a symbol's position

1. Click once on the symbol on the schedule.
2. Hold the **Shift** key.
3. Press the **up arrow** key or **down arrow** key to shift the symbol position.

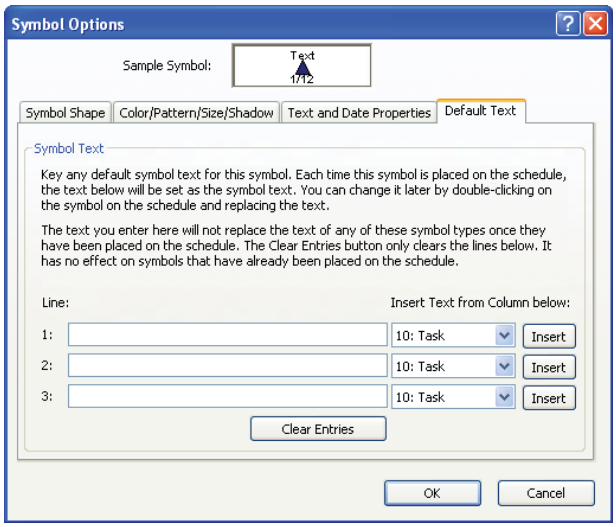


✍ If you change the settings for a symbol in the toolbox and that symbol already exists on the schedule, all the affected symbols are checked to see if they have individual settings that differ from the new default settings. If so, you are given the opportunity to keep the individual override settings by checking or unchecking the items you wish to override on the **Select Items to Change** dialog box.

Choose default symbol text

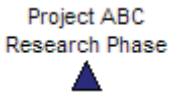
Assign up to three lines of text to each symbol in the toolbox. When a symbol with Default Text is added to the schedule, both the symbol and the text appear.

The text is based on user-entered text or text from a selected column.



To set a symbol's defaults:

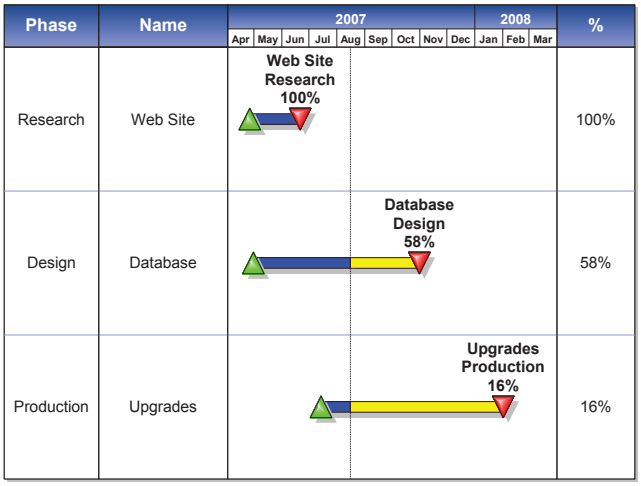
1. Double-click a symbol in the toolbox.
2. Click the **Default Text** tab.
3. Click a drop-down menu to view column names.



✍ Enter up to 56 characters for each default text line.

Text attached to any symbol already on the schedule will not be affected by changes to the *Default Text*. That is, changes to the *Default Text* only affect symbols that subsequently get added, not those already on the schedule.

- For user-entered text, under **Line**, enter the text to appear when this symbol is added to the schedule.
- For a column's text to appear as the default text, under **Insert Text from Column below**, select an existing column from the drop-down list, then press **Insert**.
- Repeat by assigning user-entered text and/or column-based text for up to three lines of symbol text.



Override Settings of Symbols Placed on the Schedule

Symbol settings can be overridden on a symbol-by-symbol basis once a symbol is placed on the schedule.

Override a symbol's color, date/text placement, size and more

Override the symbol fill color, date and text placement, transparent or opaque background setting, symbol size, symbol's vertical position within the task row, and symbol text color.

1. Click the tool.
2. Click once on the symbol within the schedule. The **Selection** menu in the toolbar is now displayed.
3. In the **Text** tab, add or edit text, change the font, date and text placement, text alignment, transparent or opaque background setting, and angled symbol text as well as angled symbol dates.
4. In the **Size/Color** tab, change the symbol fill color, after status color, bar color, symbol size, and vertical symbol position within the task row.
5. In the **Summary** tab, change the summary bar settings.

Override symbol text color and styles, line-by-line

Each symbol can have three lines of symbol text. Each of those text lines can be individually formatted, as an override to the default symbol text settings.

1. Click the tool.
2. Click once on the symbol on the schedule. The **Selection** menu in the toolbar is now displayed.
3. In the **Text** tab, click the ***Text Overrides*** button for a symbol text **Line**.
4. Set color and text attributes, including bold, italic, and underline.
5. Repeat as needed for other symbol text entries. Click ***Apply Text Changes***.

Hide all symbol date and text displays

To hide date and text display for all symbols on the schedule, choose **View | Other | *Override Symbol Text and Symbol Date Display***.

Under **Dates**, choose to ***Hide all symbol dates*** on the schedule.

Under **Text**, choose to ***Hide all symbol text*** on the schedule.

This setting overrides toolbox settings and individual settings for each symbol on the schedule. Revert to the toolbox and individual symbol settings by selecting ***Use Toolbox and individual symbol date/text settings***.

Symbol date prefix and suffix

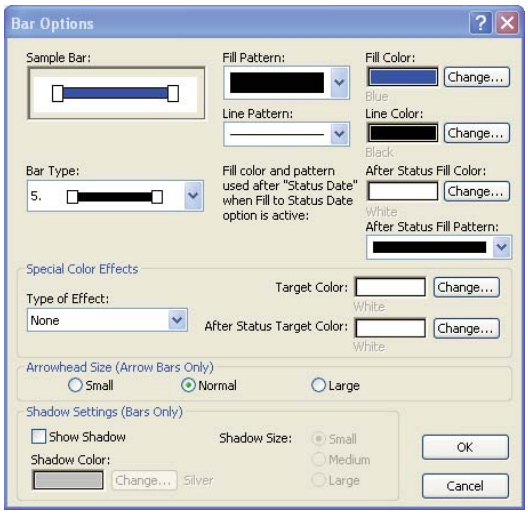
Once a symbol has been placed on the schedule, you can enter any text to appear before and/or after that symbol's date display.

1. Click the button in the toolbox.
2. On the schedule, click once on a symbol.
3. In the **Text** tab, next to ***Date Prefix***, enter characters to appear before the symbol date.
4. In the **Text** tab, next to ***Date Suffix***, enter characters to appear after the symbol date.
   - Enter a backslash (\) after the entry of the prefix to hide the date display, e.g. TBD\
   - Add a blank space after the prefix text or before the suffix text to provide separation between the text and the date display.

Stage 1: 1/29 **TBD** **SoftDate 3/24** **4/27 or TBD**

Set Horizontal Bar Defaults

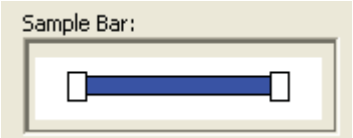
To change the attributes of a horizontal bar in the toolbox, double-click on the bar in the toolbox. Any changes to the bar in the toolbox will affect all occurrences of that bar on the schedule.



To set a bar's defaults:

1. Double-click a bar in the toolbox.
2. Click a drop-down menu to view the options.

The **Sample Bar** changes to match your selections, as you make them.



Change bar shape, pattern, colors, fade effect, and shadow

- Choose from more than 40 **Bar Types**.
- Choose from more that 50 **Fill Patterns**.
  - » Marbled bar fill patterns are full-colored bitmaps which will ignore any *Fill Color* settings. These horizontal bar fill patterns increase the size of printer files and metafiles, especially on high-resolution printers. Thus, printing time may be increased.
- Choose a **Fill Color** that fills the inside of the bar.
- Choose the **Line Pattern** and **Line Color** that encompasses the bar.
- Choose an **Arrowhead Size** if the bar is a line with an arrow ending.
- Choose the **Shadow Settings** color and size.
- The **After Status Fill Color** and **Fill Pattern** controls the fill of the bar after (to the right of) the status date.

✍ To activate the "fill to status" feature, choose **Dates Date Related Settings** | ***Bars: Fill to Status Date***.

- Choose a **Type of Effect** to fade from the **Fill Color** to the **Target Color** (to the left of the status line) and from the **After Status Fill Color** to the **After Status Target Color** (to the right of the status line).

Override a bar's default fill color

The bar fill color can be overridden on a bar-by-bar basis once a bar is placed on the schedule.

1. Click the  tool.
2. On the schedule, click once on the left-most symbol to which the bar is attached. The **Selection** menu in the toolbar is now displayed.
3. Under the **Size/Color** tab, find the **Override Symbol and Bar Colors** section.
4. For **1st Bar Color**, click the None box to the right to choose a color
5. For **2nd Bar Color**, click the None box to the right to choose a color

Below, the top bar is the 1st bar, since it was added first.

“Always on top” bars

This feature controls which bar appears “on top,” when two bars overlap.

Before 

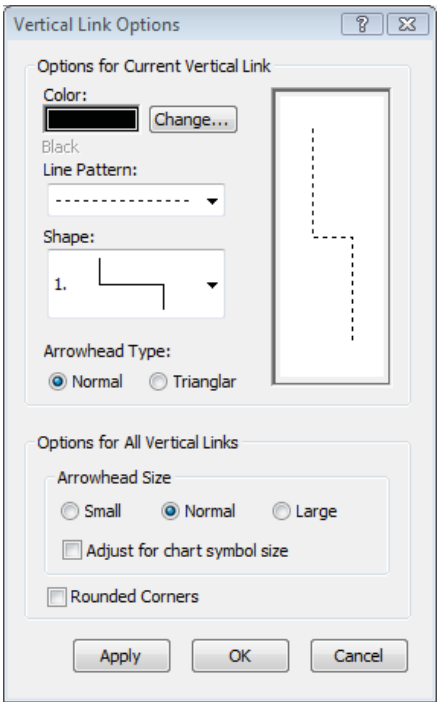
To change, for example, the longer, thinner bar to be “on top”:

1. Click the tool.
2. On the schedule, click once on the left-most symbol to which the bar is attached. In this example, the left-most symbol would be the purple circle.
3. In the **Selection** menu, click the **Size/Color** tab.
4. ☑ ***Horizontal bars from this symbol are on top of other bars***.

   After 

Set Vertical Link Defaults

To change the attributes of a vertical link in the toolbox, double-click on the link in the toolbox. Any changes to the vertical link in the toolbox will affect occurrences of that link on the schedule.



To set a link’s defaults:

1. Double-click a vertical link in the toolbox.
2. Click the drop-down menu to view the options.
3. The sample link changes to match your selections, as you make them:

- Choose a vertical link **Color**.
- Choose from a variety of **Line Patterns.**
- Choose from more than 15 vertical link **Shapes**.
- Choose an **Arrowhead Size** if the link has an arrow ending.
- Optionally, check **Adjust (arrowhead size) for chart symbol size** to scale the arrowheads based on the chart’s symbol size setting. Without this checked, arrowheads may look too large on charts where the symbol size is less than one.
- **Rounded Corners** is a global setting that affects all other vertical links in the toolbox.

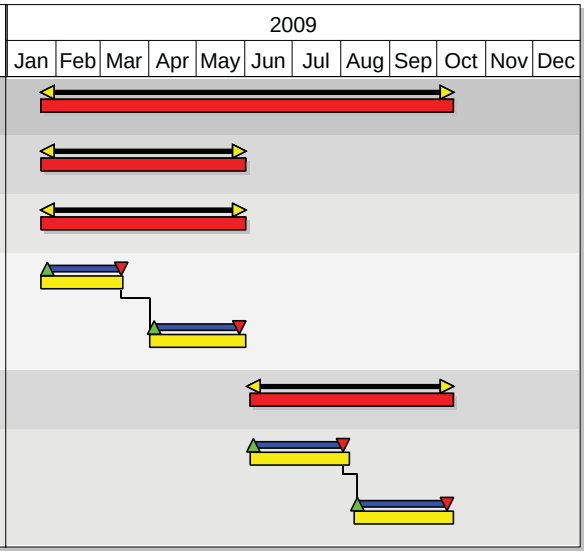
Chapter 4: Working with an Outlined Schedule

Outlining is useful for organizing your schedule at different levels. Usually you want to outline your schedule with enough levels so that each task level has a clear, definable item of work that can be identified, budgeted, assigned, and tracked.

Enter task dates at the sub-task level and the summary bars will automatically appear. Once your schedule is outlined, use the roll-up feature to present different levels of schedule complexity to your various audiences.

Costs, budgets and other numerical values associated with lower-level tasks can automatically roll-up (sum) to each upper outline level.

WBS	Outline Level	Task
1	1	Project 1
1.1	2	Research
1.1.1	3	Phase R1
1.1.1.1	4	Activity R1a
1.1.1.2	4	Activity R2a
1.2	2	Development
1.2.1	3	Phase D1
1.2.2	3	Phase D2



Actual | Baseline | Actual Summary | Baseline Summary

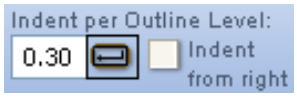
This example is outlined to four levels. The “Task” column uses the outline level indent feature. The “Outline Level” and “WBS” columns are SmartColumns which automatically fill according to the indented text in the task column.

Outlining Tools and Formatting

To create an outlined schedule, at least one of your columns should display indented text in order to see which tasks are outlined to which levels—as in the “Task” column on the previous page.

Set the indentation amount for column text

1. Click once on the column heading with the arrow tool. This will display the Selection menu.
2. Under **Current Object: Column Heading**, choose ***Switch to Column***.
3. Under **Column Type and Format | Indenting per Outline Level**, enter an amount in inches, such as .25 or .30. Press the apply button



✍ This is the amount of space that each successive outline level will be indented for this column.

For example, outline level 2 will be indented .30 inches from the cell’s left margin, level 3 will be indented .60 inches from the left, and so on.

4. If you use one of the methods described on the following pages to outline task rows without first setting the text indentation amount for a column, the **Indent Column** dialog box will appear. This will allow you to choose which column you would like to indent and the indent amount.

Outlining tools

A. The Tab key on your keyboard can be used to indent tasks for outlining purposes. This feature can be turned on and off as follows:

   1. Choose **Tools** | **Program Options** | ***Edit***.
   2. ☑ ***Use TAB key for Outlining***.

   Now, by selecting a task row and then pressing Tab, the outline level increases by 1 (e.g. from level 2 to 3). By pressing Shift+Tab, the outline level decreases by one (e.g. from level 3 to 2).

B. By selecting a task row with the arrow tool, you can quickly indent task rows using the (outdent) and (indent) icons found in **Selection | Task Row Settings |** ***Outline Level.***

C. Yet another way to indent for outlining is using Alt+Shift+Left Arrow key for outdenting and Alt+Shift+Right Arrow key for indenting.

Outline your Tasks

You can outline existing tasks or outline tasks as you enter the task names.

Outline tasks as you enter them

1. Click the T tool in the toolbox.
2. Click once in the first cell below the column heading, and type an Outline Level 1 task name.
3. Click the ↓ key on your keyboard to go to the next cell in the column.
4. Press the **Tab** key (or click the icon), and type the Outline Level 2 task name.
5. Click the ↓ key on your keyboard to go to the next cell in the column (cursor is displayed).
6. Use **Tab** or and enter the next task name.

Outline existing tasks

If the task names are already entered, you can outline those existing tasks.

1. Click the tool in the toolbox.
2. Hold the **Ctrl** key on your keyboard.
3. In the task column, click once on all tasks that should be indented (below left).
4. Click the button. The selected tasks indent one outline level (below right).

Project ABC	1
Research	1
Phase A	1
Activity A1	1
Activity A2	1

Project ABC	1
Research	2
Phase A	1
Activity A1	2
Activity A2	2

Outline Level SmartColumn

This column is a great tool to keep track of each task row's outline level, yet it is not necessary in order to outline. As each task row is indented/outdented, the Outline Level SmartColumn changes automatically.

Add an Outline Level SmartColumn:

1. Choose **Insert | Rows, Column | New Column | *Outline Level***.
2. To edit the column's properties (such as column title), click once on the new column's heading. This will display the Selection menu.

As you indent/outdent your schedule tasks, the outline level value changes automatically. Likewise, when you enter a value in the Outline Level SmartColumn, the tasks indent/outdent accordingly.

WBS SmartColumn

Standard WBS outlining

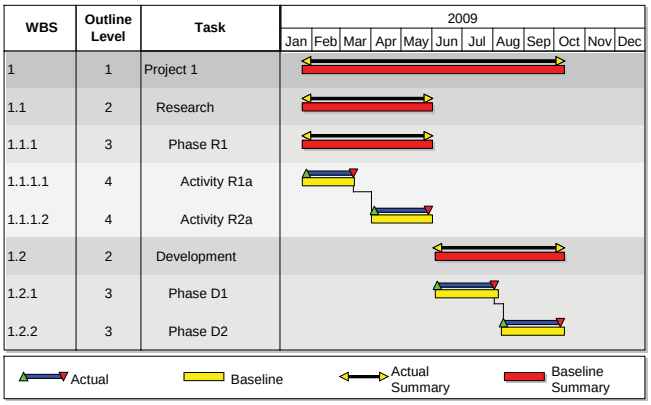
Another type of SmartColumn that can display the current outline level of a task is the WBS (Work Breakdown Structure) number. A WBS number combines the task number and outline level in one number. Task 1 would have WBS number "1" and Sub-task 1 of Task 1 would have WBS number "1.1" and so on.

Here is the Project schedule again—with both Outline Level and WBS SmartColumns:

In this example, the WBS scheme uses numbers only, although letters are optional.

Activities with outline level number 1 correspond to the WBS numbers 1, 2, 3,…

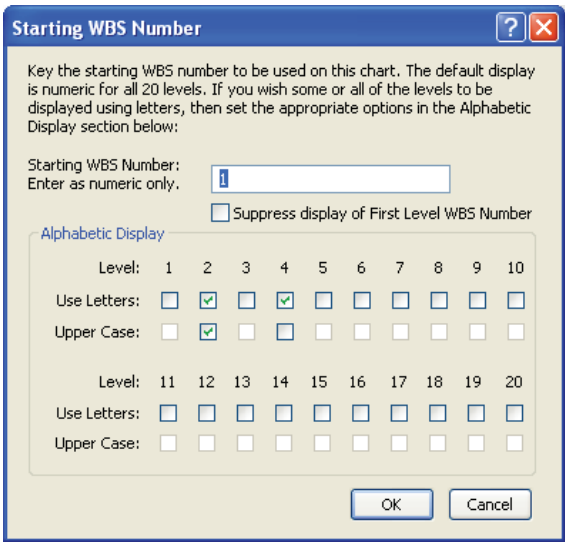
The tasks with Outline Level number 2 correspond to the WBS numbers 1.1, 1.2, 1.3; and 2.1, 2.2, 2.3



Alphanumeric WBS outlining

Again, the WBS hierarchy can contain letters as well as numbers. For example, a task with a WBS of 1.1.1 can be formatted to read 1.a.1, or A.1.1, or a.a.A, etc.

In the dialog that appears when you define a WBS SmartColumn, check any level that should use letters instead of numbers.



In this example…

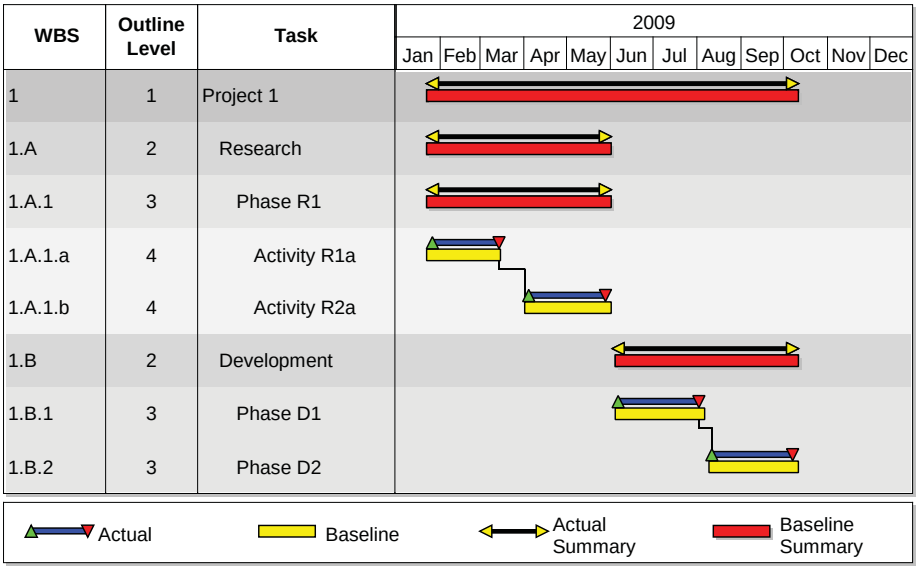
WBS level 1 will display a number.

WBS level 2 will display a capital letter.

WBS level 3 will display a number.

WBS level 4 will display a letter.

The schedule below uses these settings as applied to a schedule with four levels of outlining:



To access SmartColumn properties when a column is already placed on the schedule, click once on the column heading. Go to **Current Object: Column Heading | *Switch to Column***. Choose **Column Type and Format | *Properties.*** If the column has no other properties, this option is not available.

Summary Row Display

Optionally, Summary Bars automatically appear on all upper task levels, as either a single bar summarizing the lower-level tasks' dates or as a roll-up of all lower level bars and single symbols (milestones).

Summary rows also can summarize lower level column data such as hours worked, duration, budget, costs, and more.

Symbols and bars on summary rows move automatically when symbols on lower level task rows move. They are drawn automatically based on the dates in the lower level tasks. Therefore, summary row symbols cannot be selected or moved.

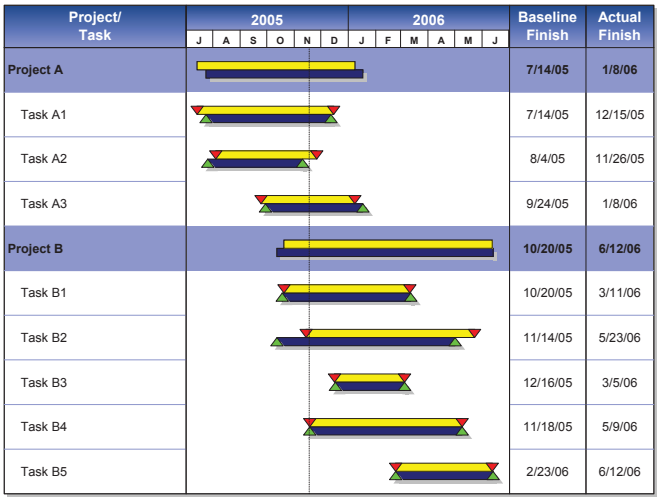
Summary bar display options and default formatting

1. Choose **Layout | Other |** ***Summary Bar Settings***.
2. Choose **When to Draw** the summary bars:
   - *Never* show summary symbols and bars.
   - *Only When Rolled Up* to display summary bars when lower-level tasks are collapsed to the summary row.
   - *Always* display the summary bars.
3. Under **For Normal Summary Bar Symbols and Bars**, select a start symbol, end symbol, and bar for the default summary row display. The available choices match those in your toolbox.

Baseline can be displayed separately from normal symbols on the summary row.

1. Choose **Layout | Other |** ***Baseline Settings***.
2. Follow the **Baseline Wizard** to create baseline symbology for the sub-task rows and summary bars.

✍ To hide the baseline summary bars and symbols (while displaying normal summary bars), choose **View | Baseline |** ***Hide Baseline Summary Bars***.



Override summary row symbols, bars and fill colors

Override the default summary bar formatting for both normal and baseline summary display by outline level or for individual summary rows.

Outline level summary bars override

Customize the summary bar settings for any of the 20 outline levels. These settings will override the schedule default settings.

Change the summary bar's start symbol, horizontal bar and end symbol for each outline level. Set for both normal symbology and baseline symbology.

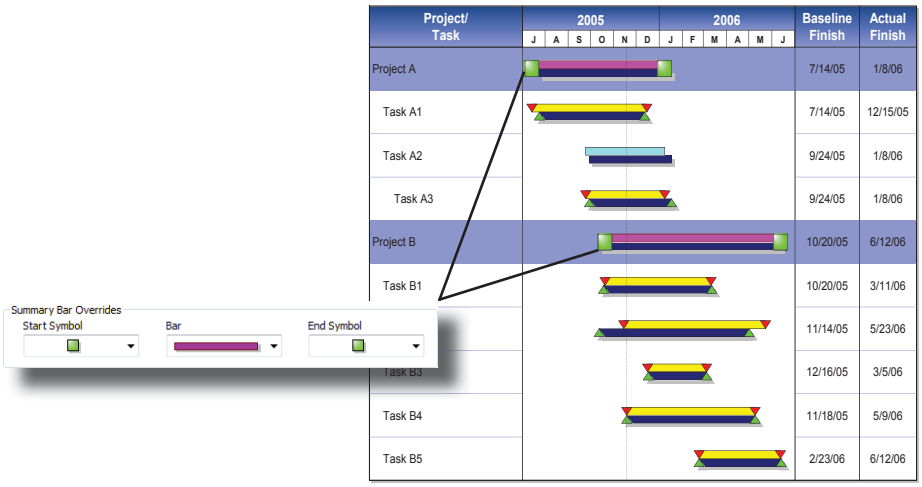
1. Choose **Format | Gridlines |** ***Gridlines, Shading, Font Sizes by Outline Level***.
2. Select the **Outline Level** for your summary bar settings.
3. Under the **Summary Bars** tab, choose a **Start Symbol, Bar** and **End Symbol** for normal summary bars and baseline summary bars.
4. If **Automatically Apply Outline level properties while editing schedule** is not checked, then the summary bar override will be ignored.

You may continue formatting with the task row background shading, column text, and gridline settings for this outline level.

See Chapter 12 for more information about formatting task rows by outline level

Example: Override summary bar symbols, horizontal bars and fill colors

In this schedule, summary bar overrides have been set for all outline Level 1 activities.



Override a selected summary task's bar color

This setting overrides the summary bar's fill color for the selected summary task row. Set the normal and baseline bar colors separately.

1. Click once on any column cell on the summary row. This will display the Selection menu.
2. Under **Selection | Summary Bar Color | *Summary Bar Color Override***, select a color for the horizontal bar by clicking on the colored box.
3. Next to ***Baseline Summary Bar Color Override***, select a color for the horizontal bar.

Display column values on summary rows

Lower-level values in a Values SmartColumn, ValueSet SmartColumn and Calculation/ Indicator SmartColumn can be automatically summed and displayed on summary task levels. Summary bars must be drawn for the values to appear.

1. Choose **Layout | Other | *Summary Bar Settings***.
2. ☑ **Compute Rolled-Up Values for Value/Calc SmartColumns**.
3. Choose either ***Only When Rolled Up*** or ***Always*** for when to draw the summary rows.

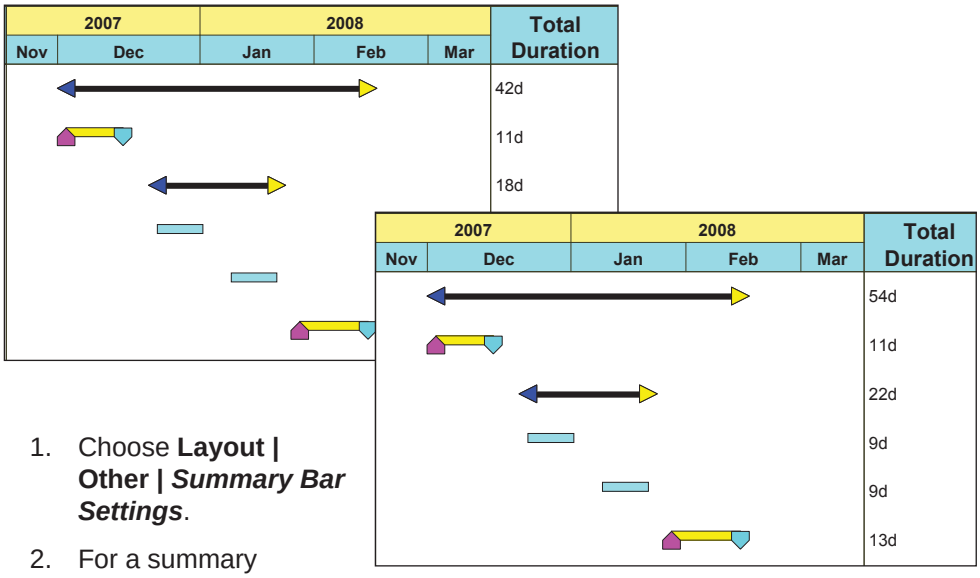
As shown to the right, values from Outline Level 2 are summed and displayed on Outline Level 1.

COSTS	OUTLINE LEVEL
$1,950.	1
$450.00	2
$700.00	2
$425.00	2
$375.00	2

Values SmartColumns also have the option of displaying an average of lower level values instead of a sum, or any overriding, user-entered value. Select from these options in the **Indicators for Values Column** dialog box, found by selecting a Values column and choosing **Selection | Column Type and Format | *Properties*.**

Display column duration values on summary rows

Duration can be displayed in calendar time or as a total of lower-level duration values. The default duration is shown below, left, as a total of the lower-level durations. Calendar duration is shown below, right, as the duration of the summary bar.



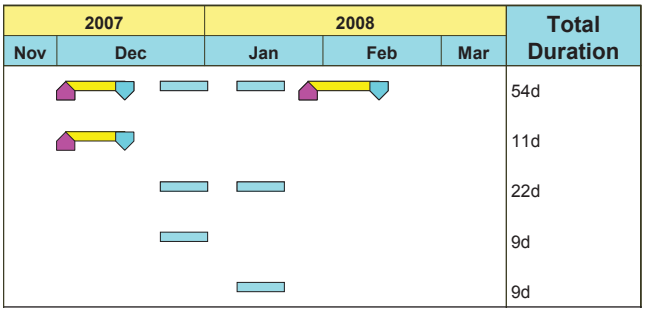
1. Choose **Layout | Other |** ***Summary Bar Settings***.
2. For a summary duration value in calendar time, ☑ ***Show Summary Duration in Calendar Time***.

Display lower-level symbols / bars on summary rows

By default, the summary row displays a single start symbol, end symbol and horizontal bar. Optionally, you can display "duplicates" of all the sub-task's symbols and bars on the summary row.

1. Choose **Layout | Other |** ***Summary Bar Settings***.
2. ☑ ***Split Summary Bars using Lower Level Symbols/Bars***.

✍ In the *Summary Bar Settings* dialog box, you can "turn-off" the symbol date or text display for summary row symbols, by checking ☑ ***Hide Dates on Roll-Up Symbols*** or ☑ ***Hide Text on Rolled up Symbols.***

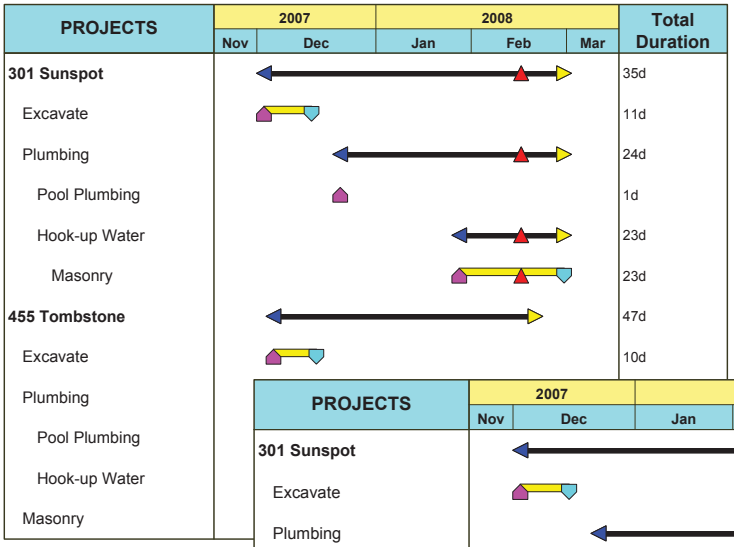


Display selected symbols on specified summary rows

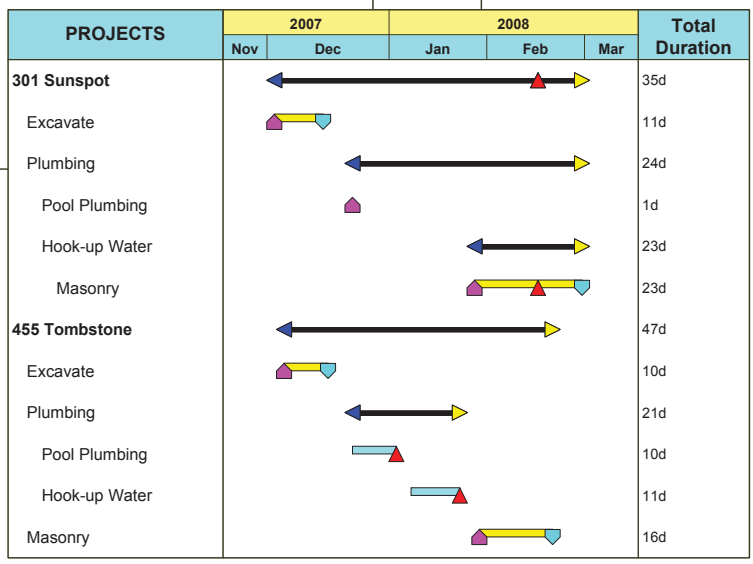
Each symbol on the schedule can be individually rolled-up to any single upper summary row or all summary rows. For example, a symbol on an outline level 4 task row can be rolled-up to just the 1st outline level – thereby skipping the 2nd and 3rd outline levels.

1. Click the  tool in the toolbox.
2. Click once on the symbol to be rolled-up. This will display the Selection menu.
3. Click the **Summary** tab.
4. Choose to ***Include this symbol on all Summary Bar levels***.
5. Or, choose ***Include this symbol on this Summary Bar level***.
6. For step 5, select an upper outline level for the symbol to appear on 

.



In this example, the triangle symbol on the *Masonry* task row (level 4) is rolled up to all of its upper outline levels.



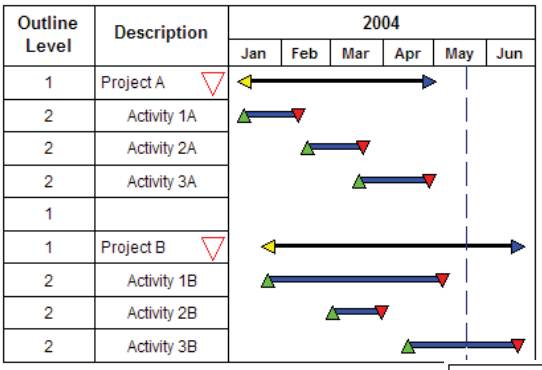
In this example, the triangle symbol on the *Masonry* task row (level 4) is rolled up to outline level 1, only.

Summary Row Roll-up

Another useful feature of outlining is the ability to “roll-up” lower level tasks to the summary level—in effect, hiding lower-level task rows. Use Collapse/Expand Indicators, right-click menus, and filters to collapse for a summary view or expand to a detailed view.

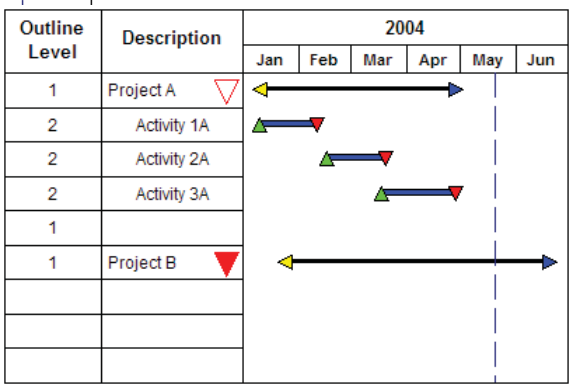
Roll-up and down using Collapse/Expand Indicators

1. Choose **View | Optional Items | *Collapse/Expand Indicators***. Icons ▽ ▼ will appear on the left side of the schedule.
   - The expand indicator (▼) appears when there are hidden lower level tasks which can be expanded (shown).
   - The collapse indicator (▽) appears when lower level tasks are visible and can be collapsed (hidden).
   - Task rows without lower level tasks will not display either indicator.
2. To collapse (roll-up/hide) lower level tasks, click ▽.
3. To expand (roll-down) to show lower level tasks, click ▼ .



Click on the collapse indicator ▽…
…to roll-up (hide) the lower-level tasks, as seen in the schedule below.

Click on the expand indicator ▼ to roll-down (show) the lower-level tasks, as seen in the schedule above



✍ While task rows are rolled-up, you are able to copy and paste all the rolled-up tasks as if they were just one row. This makes it easy to rearrange an outlined schedule.

Roll-up and down using right-click menus

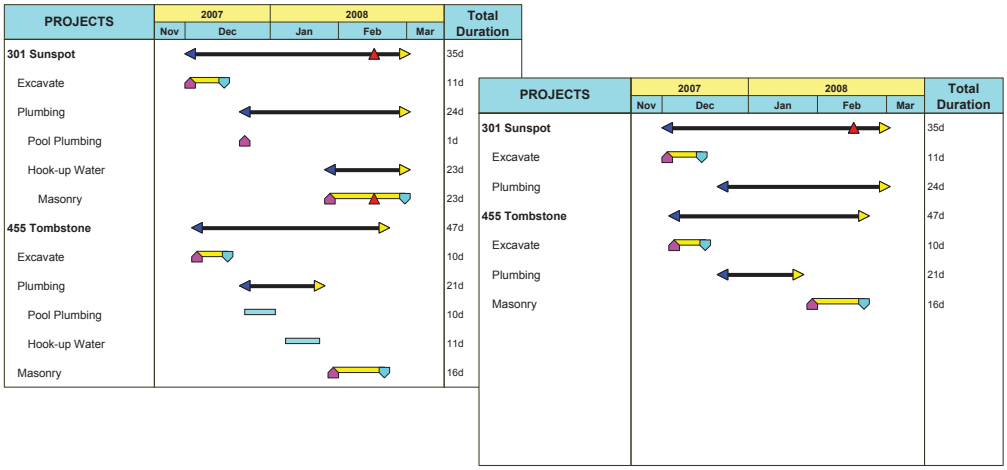
1. Right-click the task row whose sub-tasks you wish to roll-up (hide).
2. Choose to:
    - ***Collapse Selected Task Row*** – only rolls-up (hides) that task's subtasks.
    - ***Collapse All Tasks to Selected Level*** – rolls-up (hides) all tasks with the same outline level.
3. Right-click the task row whose sub-tasks you wish to roll down (show).
4. Choose to:
    - ***Expand Selected Task Row*** – only rolls down (shows) that task's subtasks.
    - ***Show All Tasks Rows*** – rolls down (shows) all tasks.

Roll-up and down by filtering task rows

With the filter option, you can quickly set your entire schedule to hide all tasks beneath a certain outline level.

1. Choose **Tools** | **Filter | *Filter Task Rows***.
2. Select ***Outline Level*** as the type of filter.
3. Enter the outline level to which all sub-tasks should roll-up.

This schedule (below, left) has four outline levels. By entering *2* as the filter roll-up level, the summary schedule (below, right) is produced.



To remove the filter, choose **Tools | Filter | *Show All Task Rows.***

Summary bar status fill control

When “Bars - Fill to Status Date” is active (under **Dates | *Date Related Settings***), the summary bar is filled to match the percent complete of the sub-tasks.

As shown here, Project B’s fill-to-status goes beyond the current date line because the bar’s fill is based on the percent compete, not the current date line.

The 86% complete value is calculated as the total completed duration of the activities divided by the total overall duration of the activities for Project B.

Note that even if all sub-tasks are tracking exactly to the current date, the summary bar may be filled to a point either before the current date or after the current date since it is merely a gauge of the progress of all the sub-tasks, and not tied to the current date.

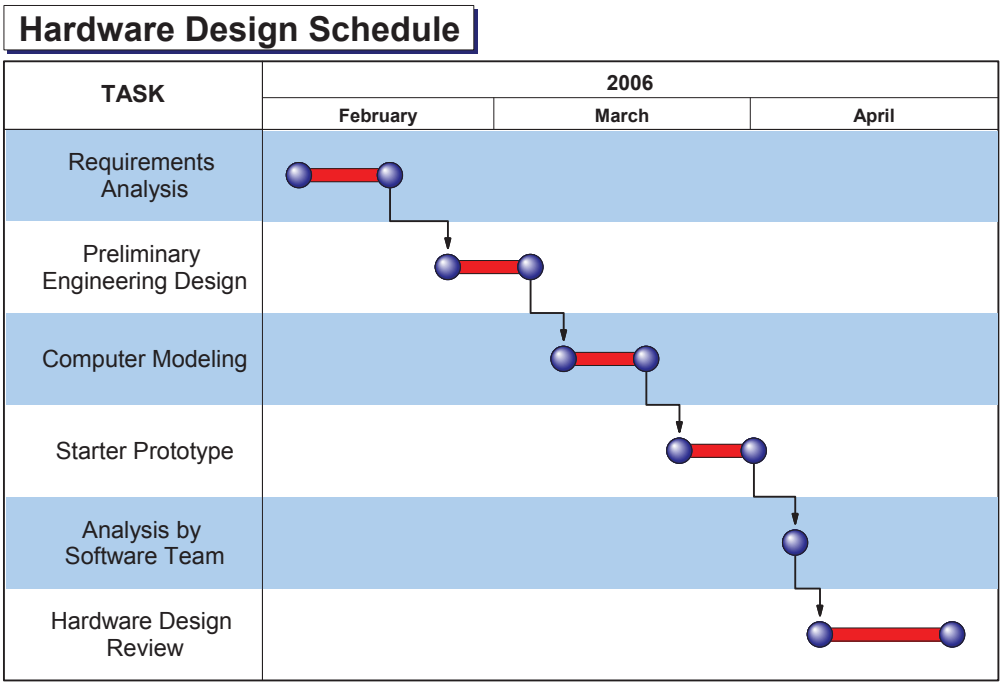
To completely fill summary bars, choose **Layout | Other | *Summary Bar Settings*** and check ***Summary Bars Ignore Fill to Status Setting.***

For more details, see the *Milestones Professional Help Topics* under the *Help* menu Index keywords “fill a summary row bar.”

Chapter 5: Dependencies and Vertical Links

Milestones Professional's dependency (predecessor/successor; parent/child) capabilities enable you to link task dates so that when one date changes, the dates that are dependent upon that date also change.

Within any one schedule, symbols on different task rows are linked using vertical links, as shown in the example below. Any of 15+ vertical link shapes can be used. Any symbol can have up to 5 vertical links extending from it.



See Chapter 9 for more information on symbol linking between files.

Dependency Mode and Display

Dependency Mode may be on or off. If Dependency Mode is on, then symbols that are dependent upon other symbols (successors) will move when the parent (predecessor) symbol moves. When Dependency Mode is off, then dependent symbols do not move.

The on/off status of Dependency Mode is shown in the Status Bar at the bottom of the Milestones Professional screen, as circled below:

Turn Dependency Mode on and off

Dependency Mode is either on or off for the whole schedule. It is a global setting.

1. Choose **Dates** | **Date Related Settings |** ☑ ***Dependency Mode***.
   - A check mark by Dependency Mode indicates that it is on.

- or -

1. Click the tool in the toolbox.
2. Right-click any symbol.
3. Choose ***Turn On Dependency Mode*** or ***Turn Off Dependency Mode.***
   - Even though you only selected one symbol and turned the dependency mode on or off, this setting applies to the whole schedule.

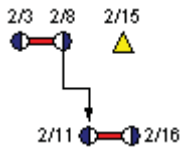
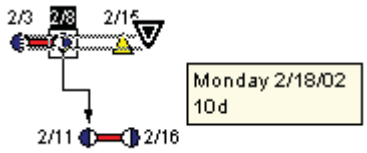
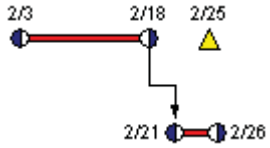
Show or hide the vertical links

The vertical links which establish dependencies may by visible or hidden.

1. Choose **View** | **Optional Items |** ☑ ***Task Links.***
   - A check mark next to the *Task Links* menu means that vertical links are currently being displayed.
   - If there is no check mark, then click the menu once to make the check mark appear.
   - Even when the vertical links are hidden, the rules for the movement of parent (predecessor) and dependent (successor) symbols still apply.

Symbol Dependencies and Movement

When Dependency Mode is on, a symbol is dependent (successor) if it comes after (to the right of) the parent symbol (predecessor) on the same row, or if a vertical link runs from the parent symbol to the dependent symbol on another task row. Vertical links can go both up and down, so dependent symbols can actually be on task rows above the parent symbol. In the example on the first page of this chapter (shown below, in excerpt), a vertical link with a “from-to” arrowhead is used to easily see the direction of the dependencies.

	If the February 8th symbol is moved to the right, the triangle symbol will move an equal amount. The 2/3 symbol will not move because it is to the left of the 2/8 symbol. The vertically connected symbols are also dependent symbols.
	Here, the 2/8 symbol is moved 10 days to the right, as shown in the tooltip box that appears as the symbol is moved. All symbols connected to the parent symbol and to the right of the parent symbol on the same task row are dependent and should move an equal amount.
	All dependent symbols have shifted 10 working days, matching the movement of the parent symbol. The 2/3 symbol remained in place because it is to the left of the parent symbol.

If Dependency Mode is on, then dependent symbols will always shift if the parent symbol is moved with the mouse. If you try to change an individual symbol’s date in the **Selection** menu or the **Symbol Properties** dialog box, you will be prompted to allow/not allow dependent symbols to shift.

If a symbol move would cause a locked baseline symbol to move or a symbol with a “Lock to Date” constraint, then the symbol move is not allowed and a warning message is displayed. However, if when creating the constraint you selected ***“If checked, then Lock to Date constraints do not prevent other symbols from moving...”*** all dependent symbols up to the locked symbol will move.

Move dependent symbols based on duration

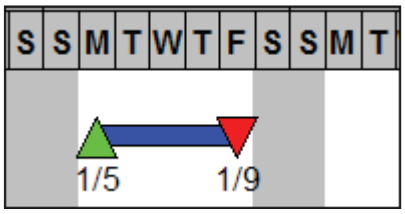
By default, when moving a symbol (predecessor), that symbol's dependent symbols (successors) may be moved to a date outside the workday time period or to a non-working day.

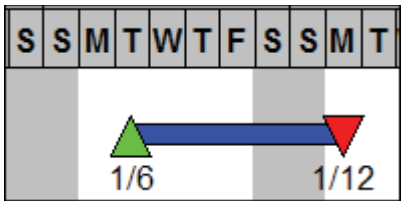
By checking ***Always move dependent symbols based upon duration*** as found under **Tools | Program Options** | ***Dates***, the dependent tasks will move the amount of working time the parent symbol was moved. This prevents tasks from being pushed into non-working times and ensures duration values remain constant for the dependent tasks.

- Note that if a parent symbol is shifted within a block of non-working time (e.g. from a non-working Saturday to a non-working Sunday), then the dependent symbols will not shift since the parent's date change had a net zero effect on duration.

Example:

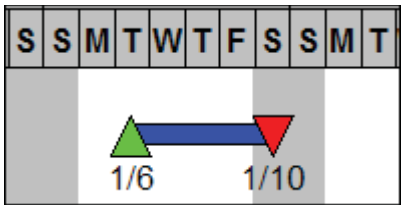
In this example, the task begins on Monday and ends on Friday. The weekends are shaded and are non-working days.





With ☑ ***Always move dependent symbols based upon duration***, moving the start date forward by one day would result in the end date moving ahead one day, to the next working day, as shown to the left. The duration would remain as five days

With ☐ ***Always move dependent symbols based upon duration***, moving the start date forward by one day would result in the end date moving ahead one day, to the next day regardless of working/non-working days, as shown to the right. The duration would change to four days if weekends are non-working days

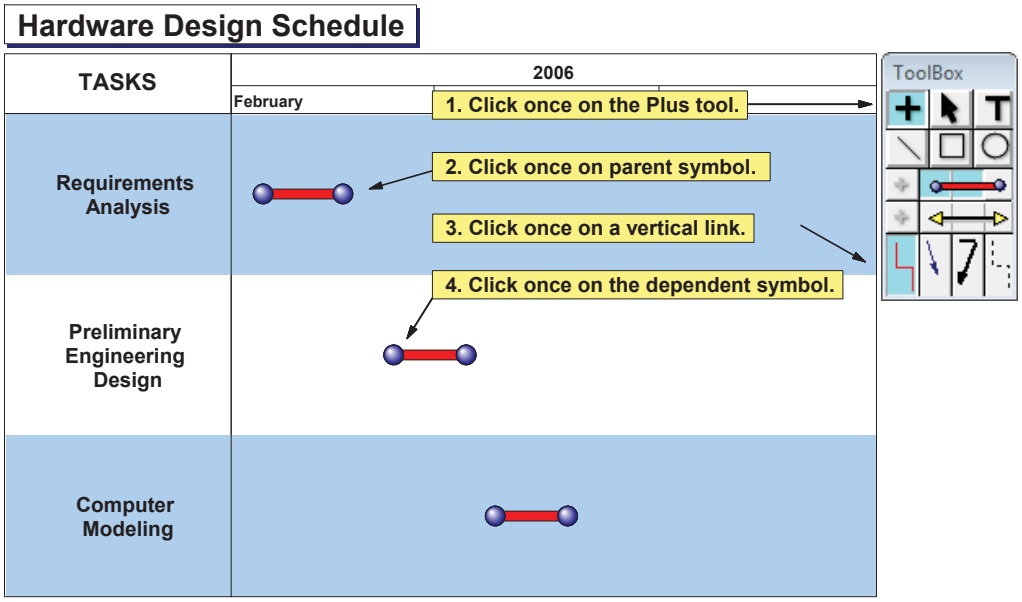


Add and Edit a Vertical Link

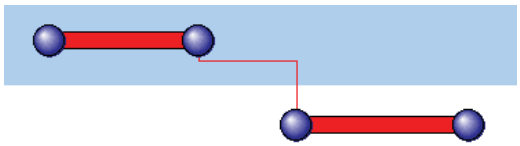
There are three methods for adding vertical links between symbols on different task rows: (1) Add a vertical link between two symbols using the mouse; (2) add a vertical link between two symbols using the **Selection** menu; (3) add vertical links between symbols on selected task rows using the **Insert** menu.

Add a vertical link with the mouse

Follow the directions in the schedule below using your mouse:



If this exact order is used, then the chosen vertical link will appear between the two symbols, as shown to the right:



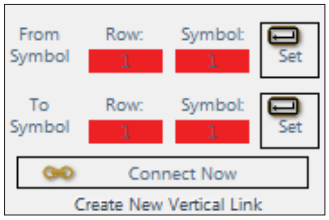
If you continue to add links after these four steps, then you can skip step 1 and begin the next link procedure with step 2. If other actions are performed (e.g. moving a symbol), then you should begin with step 1 when adding another vertical link.

If your vertical links are not displayed, make sure the option to display task links is checked. Refer to page 5-2 for more information.

Add a vertical link using the toolbar

Use this method if you would prefer to use the toolbar rather than the plus tool to create a single vertical link. This method is best when you want no more than one link extending from each symbol.

1. In the toolbox, click once on  and once on the parent symbol of the vertical link you wish to add. This will display the **Selection** menu for that symbol.



2. Go to **Selection | Vertical Links | Create New Vertical Link**.

3. Press the ***Set*** button on the **From Symbol** line. The boxes on this line should turn from red to green.

4. In the toolbox, click once on  and once on the dependent symbol of the vertical link you wish to add. This will display the **Selection** menu for that symbol.

5. Go to **Selection | Vertical Links | Create New Vertical Link**.

6. Press the ***Set*** button on the **To Symbol** line. The boxes on this line should turn from red to green.

7. Press 

.

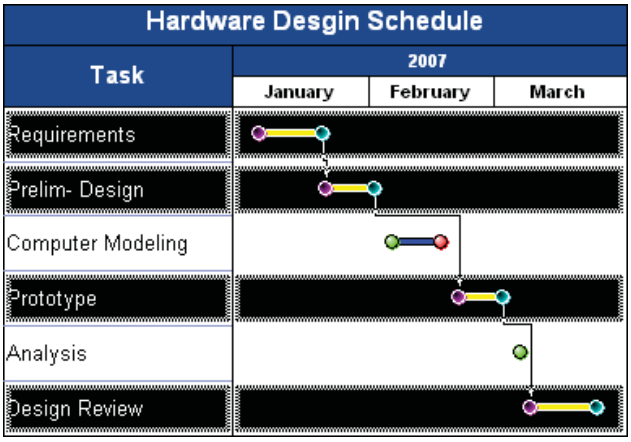
Add vertical links between symbols on multiple task rows

This method is best when each of your task rows contains one start symbol and/or one end symbol. You can connect either baseline symbols or normal symbols.

1. In the toolbox, click once on  and once on the vertical link you wish to add.

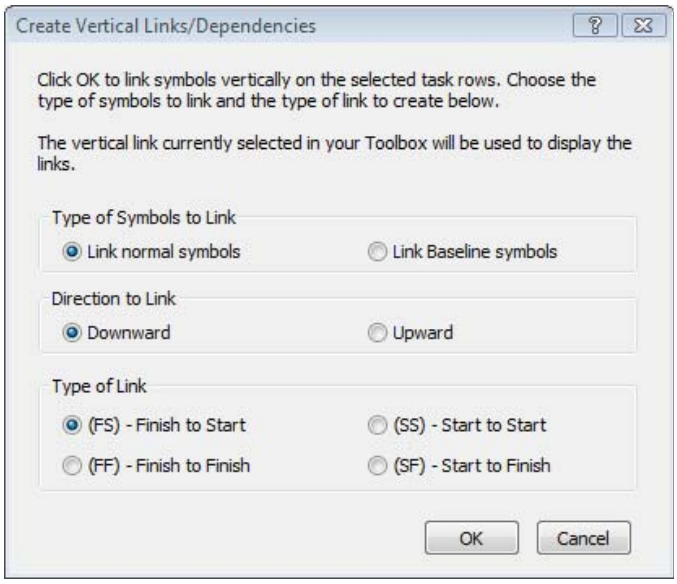
2. Hold the **Ctrl** key on the keyboard, and then click on each of the task rows whose symbols will be vertically linked (click in the column area of the task row).

   The chosen task rows (here, rows 1, 2, 4, and 6) will highlight in black, as shown to the right.



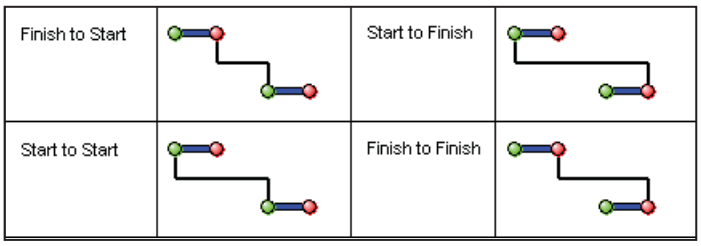
3. Choose **Insert** | **Vertical Links | Vertical Links between selected task rows**.

   - Choose to ***Link Normal symbols*** or ***Link Baseline symbols***.



   - Choose to make **Downward** or **Upward** links between symbols

   - Choose the type of link:



Edit an existing vertical link

Chapter 3 discusses how to change the default settings for vertical links. Here is how to change a single vertical link that is already on the schedule from one type to another.

1. In the toolbox, click the  tool.
2. On the schedule, click once on the symbol from which the link extends.
3. In the toolbox, click once on the new vertical link. The new vertical link appears.

Remove Vertical Links

Vertical links can be removed from their originating symbols in several ways.

Remove a single vertical link

1. In the toolbox, click the tool.
2. On the schedule, right-click the parent symbol from which the link extends.
3. Choose **Clear Vertical Links**.

Remove vertical links from all symbols on a single task row

1. Right-click the task row (in the column area) that contains parent symbols whose vertical links you wish to remove.
2. Choose **Clear Vertical Links**.

Remove vertical links from all symbols, selected task rows

1. In the toolbox, click the tool.
2. Hold the **Ctrl** key and click once on each task row (in the column area) that contains parent symbols whose vertical links you wish to remove. This will display the Selection menu.
3. Choose **Selection** | **Task Row Settings** | **More Task Row Options |** ***Clear Vertical Links***.

Remove selected vertical links from a single symbol

1. In the toolbox, click the tool.
2. Click once on the parent symbol from which the links extend.
3. Choose the **Vertical Links** tab.
   - The vertical links are numbered under **Link**.
   - **Linked to Task Row** indicates the task row number at which the vertical link ends. **Linked to Symbol** indicates the symbol at which the vertical link ends. The number is the symbol's position counting from left to right with a base of 1.
4. Click the **Break Link** button for the appropriate vertical link.

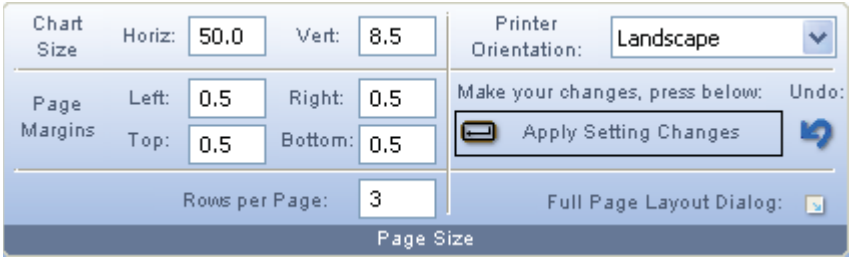
Chapter 6: Formatting and Layout

Milestones Professional offers the most complete and flexible layout of any project management package available. You have complete control over page size, rows per page, individual row height, and all other layout aspects of your schedule.

Layout

In the new Enhanced Toolbar, choose the Layout menu to access formatting choices such as page size, legend size, and datagraph size.

Change the chart size and margins



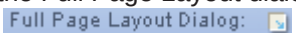
1. Choose **Layout | Page Size.**
2. Next to ***Chart Size***, enter a horizontal and vertical value in inches.
3. Next to ***Page Margins***, enter a value in inches for the Left, Right, Top and Bottom margin areas.
4. Next to ***Printer Orientation***, choose Landscape or Portrait.
5. Next to ***Rows per Page***, enter the number of rows that should appear on each page.
6. Select the ***Apply Setting Changes*** button. You must press the apply button in order for all changes made to the **Layout | Page Size** menu to take effect.

Rows per page and row height

Display 2 to 300 rows per page. If you override the height of one or more individual rows, then the actual number of rows on that page may be more or less than the rows per page value in **Layout**. That is, if a row height is decreased, then the rows per page may increase; if the height is increased, the rows per page may decrease.

The default row height is based upon the available space for rows divided by the number of rows per page. If you choose **Layout | Row/Symbol Sizes |** ***Reset all rows to default height***, then any row heights that you modified will be reset to the default value. The number of rows per page will also be restored.

Scaling the chart size to the current paper size

To access the current paper size, click on the Full Page Layout dialog button found in the bottom right of the Page Size section. 

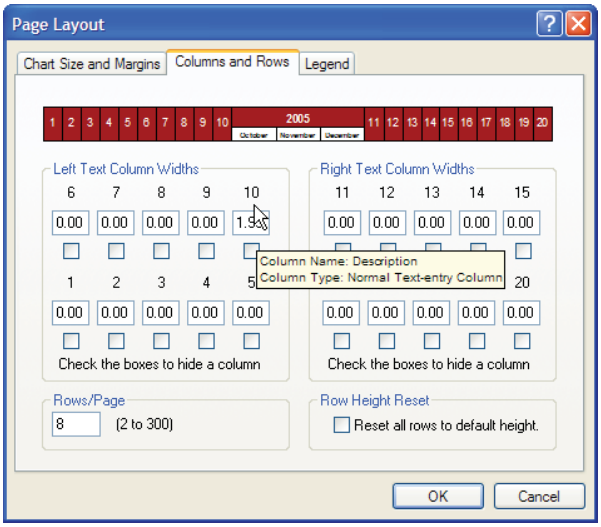
Create stamp-size to wall-size schedules. The maximum horizontal and vertical chart size is approximately 300 inches, or 25 feet. When the schedule prints, Milestones Professional will either scale each page of your schedule to fit within the **Current Paper Size**, or it will allow each page to span as many sheets of paper as needed, depending upon the printing options you select. To avoid the need for scaling, it is best to make sure that your **Chart Size** exactly matches the **Current Paper Size**.

The measurements in the **Page Layout** dialog box are shown in U.S. inches. If your regional settings are set to use metric, then the measurements will be shown in centimeters.

The **yellow border** surrounding the sample chart (seen here or in the **File** | **Printing** | ***Print Preview*** screen) shows the unusable area of the paper where the printer cannot print, as reported by your current printer. You should keep the margins large enough so that no part of the sample goes into the yellow area.

Change the number of columns

Milestones Professional allows for up to 20 columns—10 on each side of the schedule. Columns may contain text, dates, values, and symbols.



1. Choose **Layout | Page Size | *Full Page Layout Dialog***. Click on the **Columns and Rows** tab.
2. Under **Left Text Column Widths**, enter a value in inches in order to create a column on the left side of the schedule.
4. Under **Right Text Column Widths**, enter a value in inches in order to create a column on the right side of the schedule.
5. A ☑ under a column number means that column will be hidden.

✍ The number and size of columns directly affects the amount of space available in the schedule area under the date headings. By increasing the horizontal chart size, you gain more horizontal space for columns and for the schedule area.

Column numbering

Columns are numbered from 1 to 10 on the left side of the schedule, and from 11 to 20 on the right side of the schedule, as shown in the column numbering graphic under the **Columns and Rows** tab.

Column 10 is closest to the schedule area on the left side of the schedule; column 11 is closest to the schedule area on the right side of the schedule.

For example, if only one column is on the left side of the schedule, it would be column number 10.

Hide and unhide columns

If you check the box to hide a column, then the width will be remembered and restored if you later unhide the column. Columns of zero width are automatically not displayed; however, zero width columns must always be on the outer edges of the schedule. For example, if column 10 is marked as 0.0 width and column 9 is marked as 1.0 width, after you press OK, the 1.0 will be moved to column 10.

It is best to use the hide check boxes if you need to hide a column that has data in it, instead of entering a 0.0 width value to essentially “hide” a column. Unhidden columns marked as 0.0 width will eventually have their data blanked out.

Legend

Create a legend

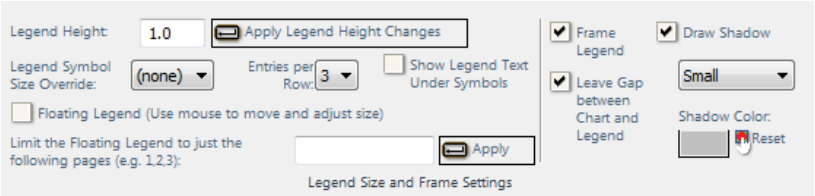
The legend is the area reserved for documenting the usages of the various symbols, horizontal bars and vertical links on your schedule. The only meaning of a symbol or bar is that which you give it.

You can access the full legend properties in two ways. The first is to stay within the **Page Layout** dialog box as depicted on the previous page. Choose the **Legend** tab to edit its properties. The second way is described below.

1. Choose **Layout | Legend Size**. Next to ***Enter Legend Height***, enter a value in inches.
2. Choose the ***Apply Legend Changes*** button.
3. Choose the ***Full Legend Settings*** button to access more Legend options. This will display the **Selection** menu for full legend properties.

Format a legend

When the full legend settings are accessed, there are many options available for customization.



1. The legend symbols and bars use the default symbol size setting. Enter a value next to **Legend Symbol Size Override** to override the default setting for legend entries.

2. Use the drop-down menu next to **Entries Per Row** to enter the number of legend entries to display on each row in the legend.

3. Choose ☑***Show Legend Text Under Symbols*** to place legend text directly underneath the legend symbols. This helps to condense overcrowded legend entries.

4. ☑ ***Floating Legend*** to be able to position the legend anywhere.

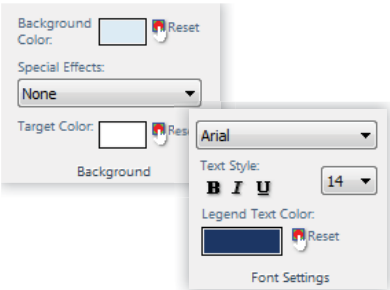
   - Optionally, ***Limit the Floating Legend to just the following pages*** to assign a floating legend to particular pages within the schedule. Enter in the page numbers separated by commas and press the Apply button.

5. ☑ ***Frame Legend*** to draw a border around the legend area.

6. ☑ ***Draw Shadow*** to display a shadow around the legend. Select the shadow size from the drop-down menu and choose a Shadow color by selecting the color box next to the reset button.

5. ☑ ***Leave Gap between Chart and Legend*** to separate the last task row in the schedule from the legend border.

Legend background color and font settings



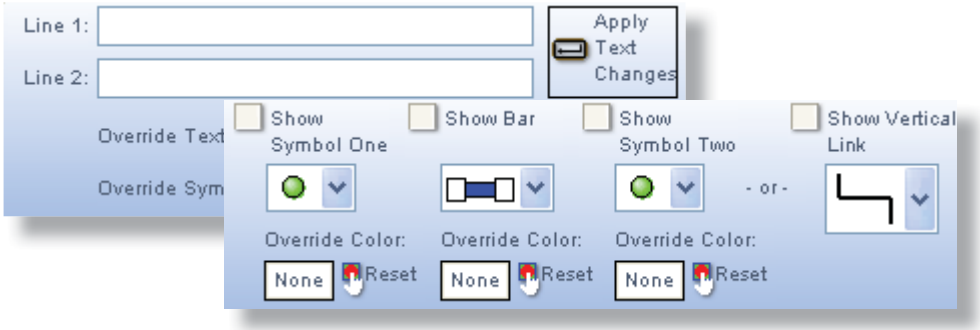
In the **Background** section, click on the color box next to **Background Color** to change the color of the legend. To fade that color to a target color, click on the color box next to **Target Color**. Next, choose from one of the **Special Effects** for the two colors to fade together.

In the **Font Settings** section, choose the legend font, font size, text style, and legend text color.

Legend entries

The Legend height should be large enough to hold the number of entries that you plan to have. Legend entries are placed left to right, in the order in which they are created. Once created, these entries can be edited, moved, or deleted.

Add a legend entry



1. Choose **Insert | Picture, Legend |** ***New Legend Entry***.
2. Next to **Line 1** and **Line 2**, enter the Legend Text. Press the ***Apply Text Changes*** button.
3. **Override Text Color** and **Override Symbol Size** will change the text color or symbol display size for this legend entry only. The bar size is not affected.
4. Select any or all of the ***Show Symbol One***, ***Show Bar***, and ***Show Symbol Two*** options; or select a ***Show Vertical Link*** to appear with the text.
   - All symbols and bars in the drop-down boxes under ***Show Symbol One, Show Bar, Show Symbol Two***, and ***Show Vertical Link*** are those available in the toolbox. If the symbol or bar is not available in the legend entry dialog box, then add it to the toolbox
5. Click a drop-down arrow to view and make selections.
6. Choose an optional **Override Color** for symbols and horizontal bars.

Move a legend entry

Once two or more legend entries are present, simply click-and-drag to move them.

1. In the toolbox, click the tool.
2. Position the cursor over the legend entry to be moved.
3. Click and hold the left-mouse button, and then drag to a new location in the legend. As you move the mouse, the cursor will look like this:
4. Release the mouse button, and the legend entry will appear, shifting all other entries to the right and down, if there is more than one row of entries.

Move and resize a floating legend

Resize a floating legend by moving the cursor to the right or left edge or a corner, then click-and-drag with the ↔ or ↖↘ cursor. Move a floating legend by moving the cursor to the bottom or top edge of the legend, then click-and-drag with the ✥ cursor.

Delete a legend entry

To delete a Legend entry, either right-click on the entry and select the ***Delete Legend Entry*** option, or click once on it and select the ***Delete This Entry*** option from the **Selection** menu (or press the Delete key on your keyboard).

Columns

You can use the **Columns and Rows** tab in the **Full Page Layout Dialog** box to insert columns by simply changing a width from 0.0 to some other value, but the easiest way to insert columns is to simply use the **Insert** menu.

Insert a column

To insert a column next to the schedule area (then you can move it):

- Choose **Insert | Rows, Columns |** ***New Column*** and select from the list of column types. The column will appear closest to the schedule area, on the left side. When the left side of the schedule contains 10 columns (maximum number allowed), the new column will appear on the right side.

To insert a column between two existing columns:

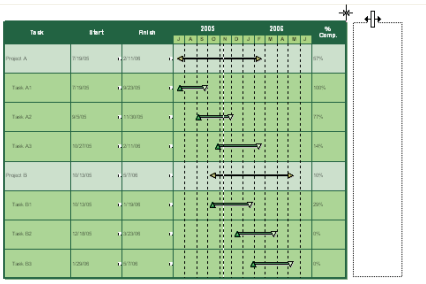
1. Click the tool.
2. Right-click the column heading and choose ***Insert Column***. The new column will appear to the left of the selected column.

Move a column

1. Click the tool.
2. Move the cursor to the top edge of the column to be moved, until the cursor becomes a ⇹.
3. Click and hold the mouse button, and then drag to the new location. As you drag, a faint outline of the column moves with the cursor.

4. An insert point will appear, showing you where the column will appear when you release the mouse button.

   When you move a column to the far left or far right edge, you may need to grab the column near the column's left or right edge to allow room for the column to clear the edge of the chart.



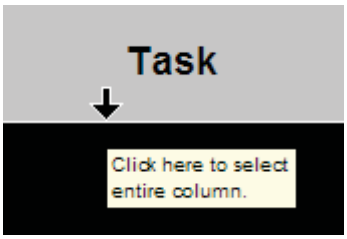
Remember that the total width of all the columns together takes away from the area reserved for the schedule. If your column widths must be so wide that there is no room left over for the schedule, then you need to consider changing your chart width.

Delete a column

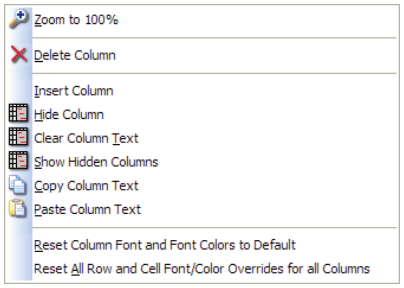
1. Click the tool.
2. Right-click the column heading and choose ***Delete Column***.

-or-

1. Click the tool.
2. Select the column by left-clicking the mouse at the bottom of the column heading cell, as shown to the right.
3. Press the Delete key on your keyboard.



Right-click to edit column



When the cursor turns to an arrow for selection of a column and you right-click, the menu display offers many editing choices.

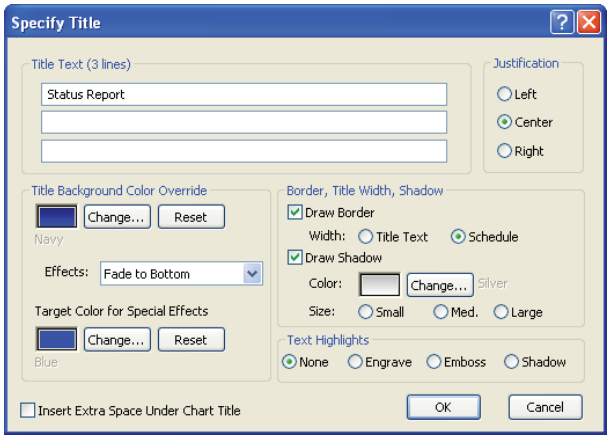
Choose ***Clear Column Text*** to delete text in the column cells without deleting the column.

Choose ***Reset Column Font and Font Colors to Default*** to revert to default column text font, color and size settings in the selected column.

Color themes do not override a column's cell-by-cell settings. To reset all individual overrides made to column cell text color and size back to the schedule defaults, choose ***Reset all Row and Cell Font/Color Overrides for all Columns***.

Chart Title

Enter up to three lines of text for the chart title. The title can have a background color, frame, shadow, text highlights, and special effects shading.



1. To add a chart title, choose **Insert** | **Title** | ***Insert/Edit Chart Title***.
2. Under **Title Text**, click once and enter text.
3. Under **Title Background Color Override**, click ***Change*** and choose a color.
4. Choose fade **Effects** for fading from the background color to the target color.
5. Under **Target Color for Special Effects**, click ***Change*** and choose a color.
6. Choose a text **Justification**.
7. Under **Border, Title Width, Shadow**, choose to ☑ ***Draw Border*** around the title. The border can extend the width of the ***Title Text*** or the width of the ***Schedule***.
8. Choose to ☑ ***Draw Shadow*** and choose its **Color** and **Size**.
9. Under **Text Highlights**, choose ***None, Engrave, Emboss***, or ***Shadow***.
11. ☑ ***Insert Extra Space Under Chart Title*** to increase the amount of space between the title and the schedule.

The options above would result in the following chart title:

Date Headings

You can have up to 4 levels of Date Headings on your schedule, shown above the schedule area, below the schedule area, or both. The Date Headings are used as a reference point for the symbols and bars on your schedule.

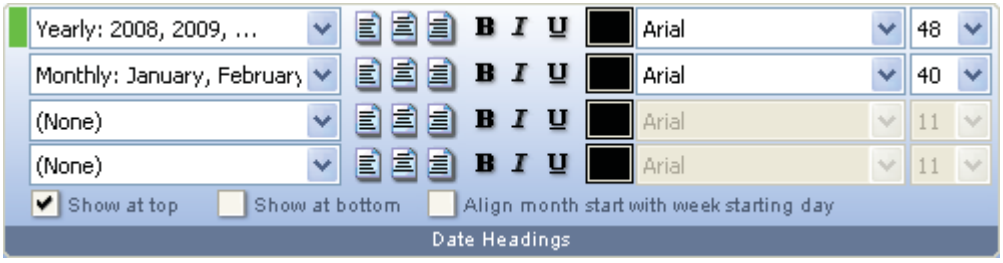
You should select headings that are appropriate for the time span of your schedule and the amount of horizontal space over your schedule area. For example, daily headings in a schedule displaying one year would not be appropriate for an 8.5” by 11” page size, since it would be difficult to squeeze 365 daily divisions into the amount of space available.

Format the Date Headings

To bring up the menu for formatting the date headings:

1. On the schedule, click the once on the date heading. This should display the **Selection** menu. This menu can also be found under **Dates | Date Headings | *Date Headings Full Dialog.***

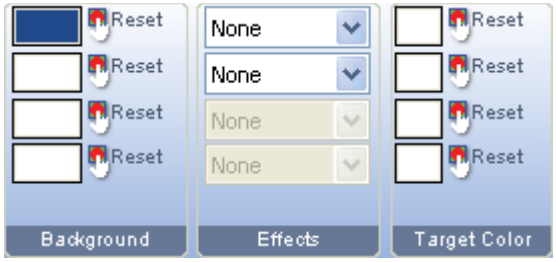
   The following menu appears:



2. For any of the four available headings, click the drop-down arrow and choose a heading type. Choose from 35 standard date heading styles ranging from years to minutes and 4 user-created custom headings.

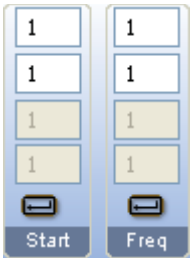
3. Choose ☑ ***Align month start with week starting day*** in order to line up the month headings with the week headings.

4. Under **Background**, click the the color box and choose a background color. Choose an optional **Target Color** and **Effects** for fading from the background color to target color.



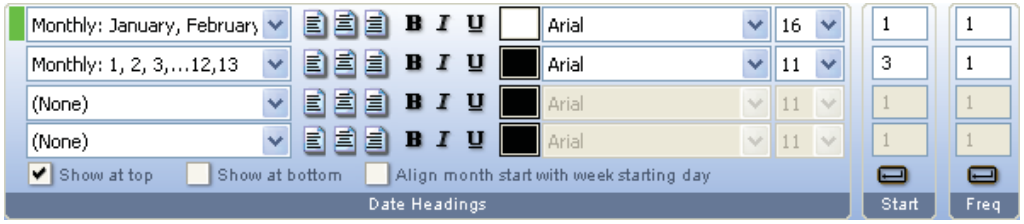
Date heading Start number

If the date heading type is a series of non-repeating numbers, then you can choose a **Start** number.



For example, the heading *Monthly 1, 2, 3,…12, 1* cycles from 1 to 12, then begins again at 1. A Start number would be ignored with this heading type.

The heading *Monthly 1, 2, 3,…12, 13* begins with 1 and does not start over; therefore, you can use a **Start** number. This is the setting for such a date heading:



This is the result of this date heading in a one-year schedule:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
3	4	5	6	7	8	9	10	11	12	13	14

For a countdown heading, enter a negative *Start* number, such as –12 instead of 3:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12	11	10	9	8	7	6	5	4	3	2	1

Date heading Frequency number

Any of the standard heading types can have the **Frequency** altered. For example, for a schedule that covers fifty years, you might want to set the frequency to 10, so that on a yearly heading, only every 10th year is displayed, such as 2000, 2010, 2020, etc.

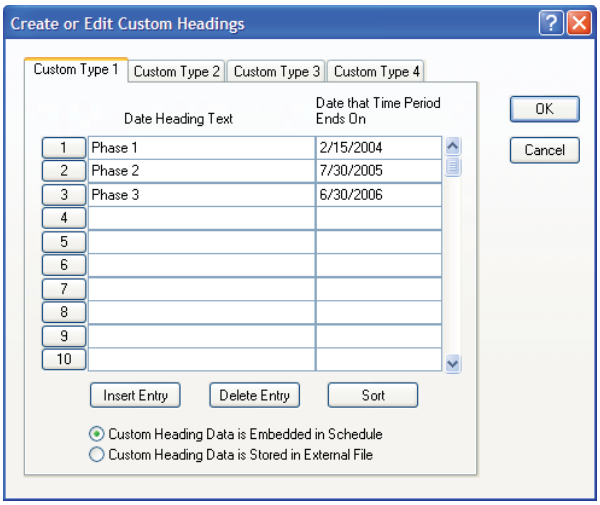
Below is the result of a date heading format in which the **Frequency** has been changed to 10. In this example, the schedule dates are from 1/1/2000 to 12/31/2059. The 2000 heading spans from 1/1/2000 to 12/31/2009; the 2010 heading spans from 1/1/2010 to 12/31/2019; and so on.

2000	2010	2020	2030	2040	2050

Custom date heading

There are also 4 custom heading settings, known as *Custom Types*. You set the date and time of each date heading division, and the text for the division.

To edit the custom headings, click **Selection | Current Object: Date Heading | *Edit Custom Headings***.



Here is an example of a custom heading with user-entered text "Phase 1," "Phase 2" and "Phase 3."

An end date is entered to designate the end of each date division and the beginning of the next division.

The schedule's start date determines when the first division begins.

In this example, the date heading is set to show two standard headings, plus this custom heading.

The result is show below.

2003				2004				2005				2006	
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Phase 1				Phase 2				Phase 3					

Choose ***Sort*** to arrange the custom heading entries in date order.

Click on a line entry number and choose ***Insert Entry*** to insert a blank entry line.

Click on a line entry number and choose ***Delete Entry*** to delete the text and date.

Recommended: Choose ***Custom Heading Data is Embedded in Schedule*** to allow the custom heading to stay with the schedule in cases where you might send the schedule to a colleague.

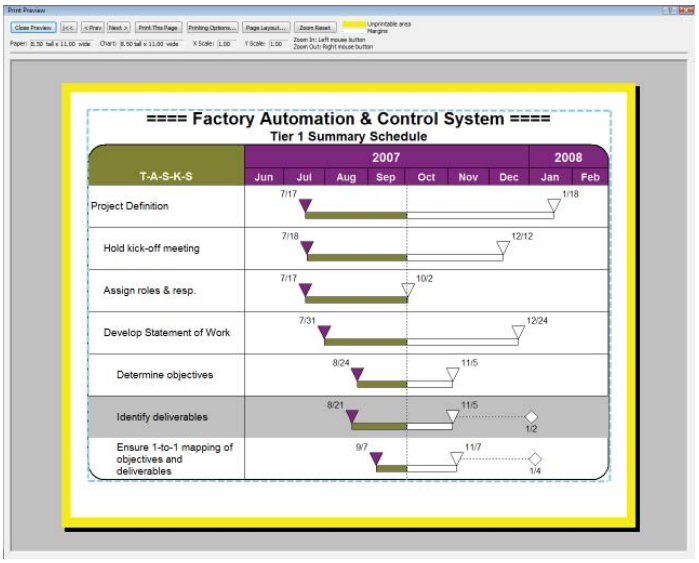
Chapter 7: Printing

With Milestones Professional you can print stamp-size to wall-size schedules using a variety of printing options.

Print Preview

Use the *Print Preview* feature to see a sample of how the schedule will print.

1. Choose **File | Printing | *Print Preview*** 



2. Click the ***Prev*** and ***Next*** buttons to move from schedule page to page.
3. Click ***Printing Options*** for output format selections (addressed in the next section).
4. Click ***Page Layout*** to change the chart size, margins, and rows per page.
5. Point the cursor to a part of the schedule and zoom-in by clicking the left mouse button; zoom-out with the right mouse button.

The light blue dashed line around the edges shows the margins that you have selected. The yellow border identifies the unprintable portion of the schedule. If your chart extends into this yellow area, it may be cut off when it is printed.

Print Setup

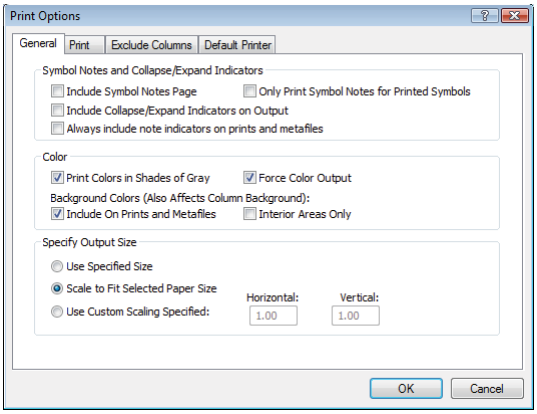
Use the Print Setup option to change to a different printer or to make changes to your current printer's settings.

Choose **File | Printing | *Print Setup***  . Choose the **Printer**, the printer **properties**, the **Paper Size** and **Source**, and the page **Orientation**.

Printing Options

To format the printing output of your schedule, choose **File | Printing |** ***Printing Options*** **.**

General tab



- **Symbol Notes and Collapse/Expand Indicators**
- **Color**
- **Specify Output Size**

Within these options, you can choose to:

☑ ***Include Symbol Notes Page*** to print a separate page containing the Symbol Notes entries. These will be numbered according to the numbered symbols on the schedule, so that you can match the notes to the symbols.

- To print the symbol notes without printing the schedule, choose **Tools** | **Reports** | **Symbol |** ***Symbol Notes***. Press the ***Copy Report to Clipboard*** button and then paste into another application for printing.

☑ ***Only Print Symbol Notes for Printed Symbols*** to print only notes within the specified date range (as set under the *Print by Date Range* tab); thus ignoring notes from symbols that are outside the date range being printed.

☑ ***Include Collapse/Expand Indicators on Output*** to print summary roll-up indicators if they are shown on the schedule.

☑ ***Always include note indicators on prints and metafiles*** to print symbol note indicators if they are shown on the schedule.

☑ ***Print Colors in Shades of Gray*** to cause the software to use shades of gray on non-color printers. Generally, this should be selected.

☑ ***Force Color Output*** to ensure that color commands are sent to color printers. It is ignored on non-color printers. Generally, this should be selected.

Background Colors (Also Affects Column Background)

☑ ***Include on Prints and Metafiles*** to print the background color as set in **Format | Frame, Highlights |** ***Background color, border, frame corners***.

☑ ***Interior Areas Only*** to print the background color only within the schedule frame. Areas outside of this frame will not be shaded.

- ***Use Specified Size*** to retain the schedule's horizontal and vertical size settings as set in the **Layout** menu. This setting allows the schedule page to span across multiple sheets of paper. This option is also important to choose if you have placed graphics or free-form text on your schedule.

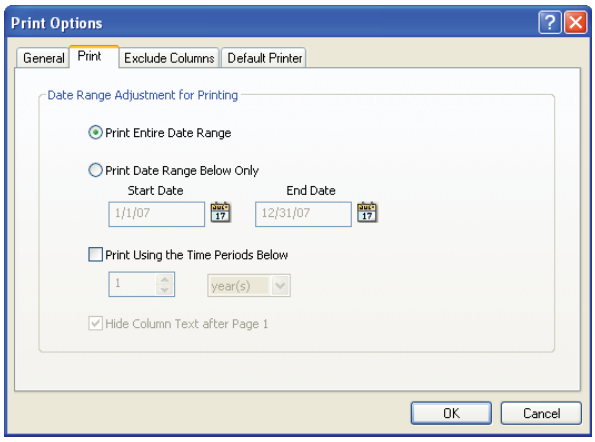
- ***Scale to Fit Selected Paper Size*** to force the size of the schedule to scale down or up to the size of the printing paper.

- ***Use Custom Scaling Specified*** to increase or decrease the horizontal and vertical scale of the schedule. For example, change the *Horizontal* factor to .5 to reduce the schedule size horizontally by 50%. The default scaling factor of 1 is for 100%. Note that if you use custom scaling, you cannot make a schedule page span across multiple sheets of paper. Only the ***Use Specified Size*** option allows that.

If you call up the **Print Options** dialog box while in **Print Preview**, the option ☑ ***Preview Selected Lines Only*** is visible. This option allows you to preview selected task rows within the Print Preview screen.

Print tab

Choose to print the entire schedule date range or a specific date range portion of the schedule.



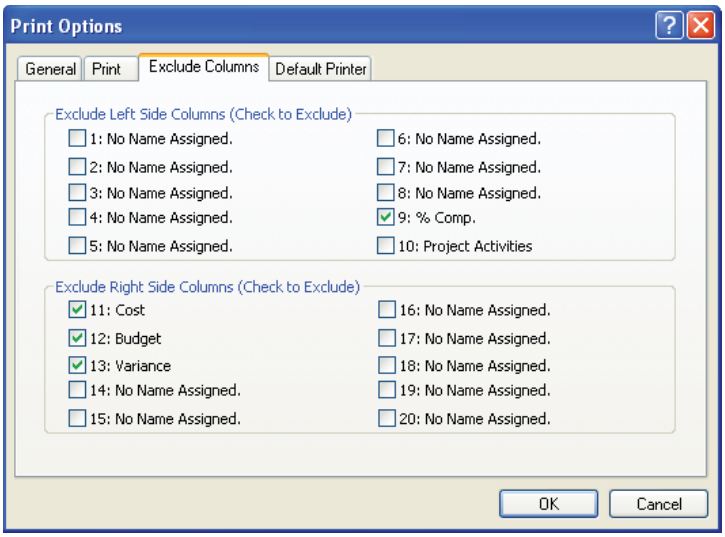
- ***Print Entire Date Range*** to print the schedule from start date to end date as set under **Dates | Start and End Dates**.

- ***Print Date Range Below Only*** to specify the start and end date range to be printed. Enter a ***Start Date*** and ***End Date***, or click the calendar icons to choose each date.

- ***Print Using the Time Periods Below*** to select a time period to be printed on each page.

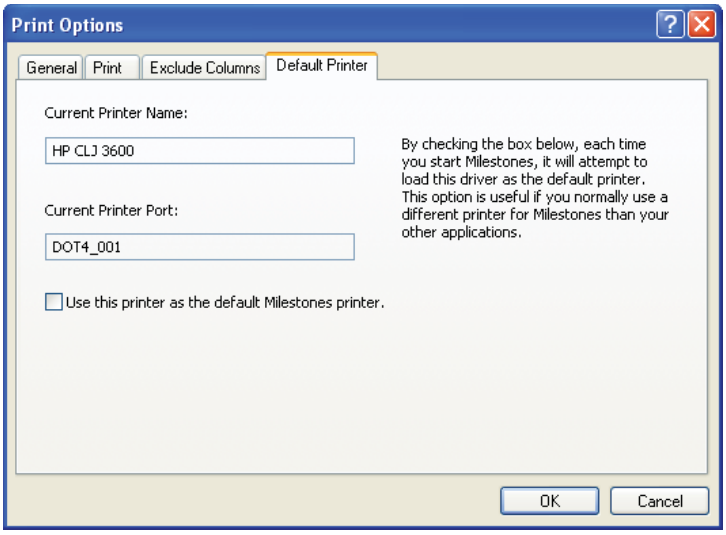
Exclude columns when printing

Under the **Exclude Columns** tab, check each column that should be hidden while printing. Column heading text appears next to column numbers. In this example, all but the “Project Activities” column is hidden for printing purposes:



Default printer

The **Default Printer** tab is useful if you normally use a different printer for Milestones than the printer you have set as the default on your computer. If you check ***Use this printer as the default***, then each time Milestones starts, it pre-selects this printer as the current Milestones printer.



Chapter 8: Master Schedules

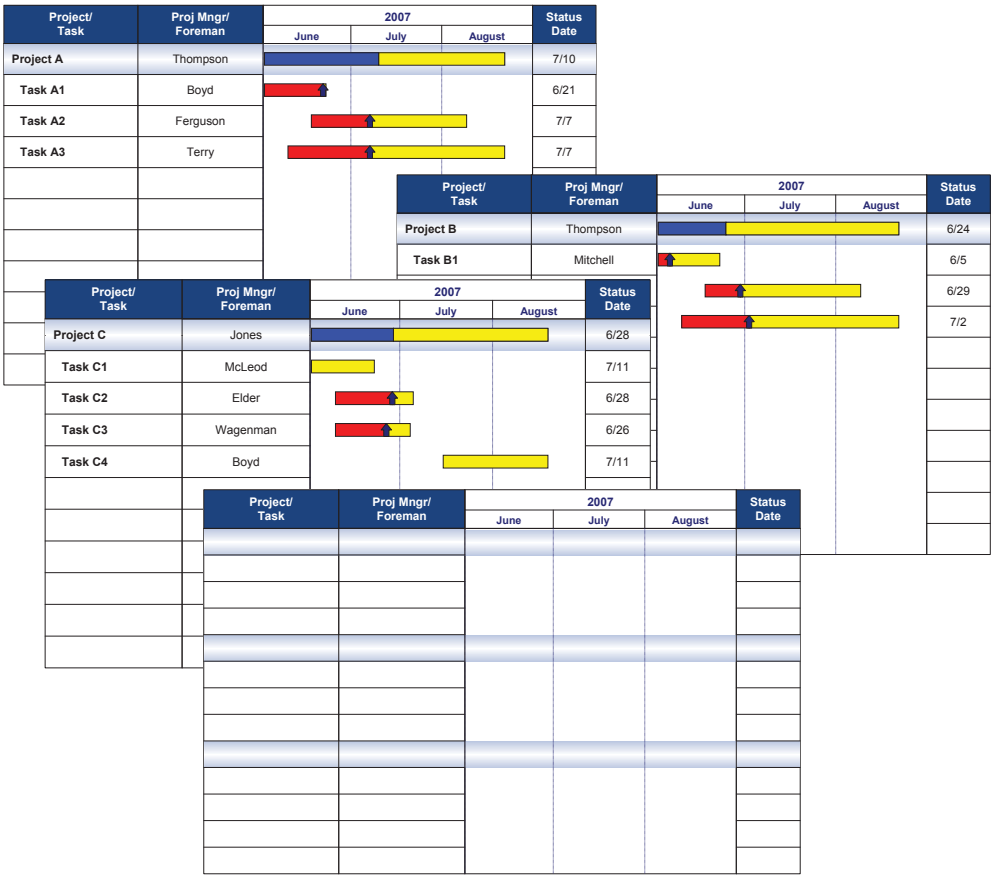
A Milestones Professional master schedule is a compilation of separate Milestones schedules (sub-schedules). Usually, the sub-schedules are each maintained by different people or departments, each responsible for one or more projects. Thus, the master schedule gives a summary view of all projects or all parts of a single project.

Changes to data in the sub-schedules appear in the master schedule. Any changes to the master schedule will not appear in the sub-schedules.

Master Schedule Example

Review this general master schedule scenario, and then continue to the more detailed instructions for formatting, creating and updating a master schedule.

Assume that we have three sub-schedules, Project A, Project B and Project C; which need to be reviewed and presented at a high level.



To combine these sub-schedules into a master schedule, first create a blank Milestones file with the same formatting as the sub-schedules. This blank schedule (the master schedule) will fill with the data from the sub-schedules.

Add the sub-schedules to the list of source schedules which will populate the master schedule.

After updating the master schedule, the following schedule would result:

Master Schedule
Division Headquarters

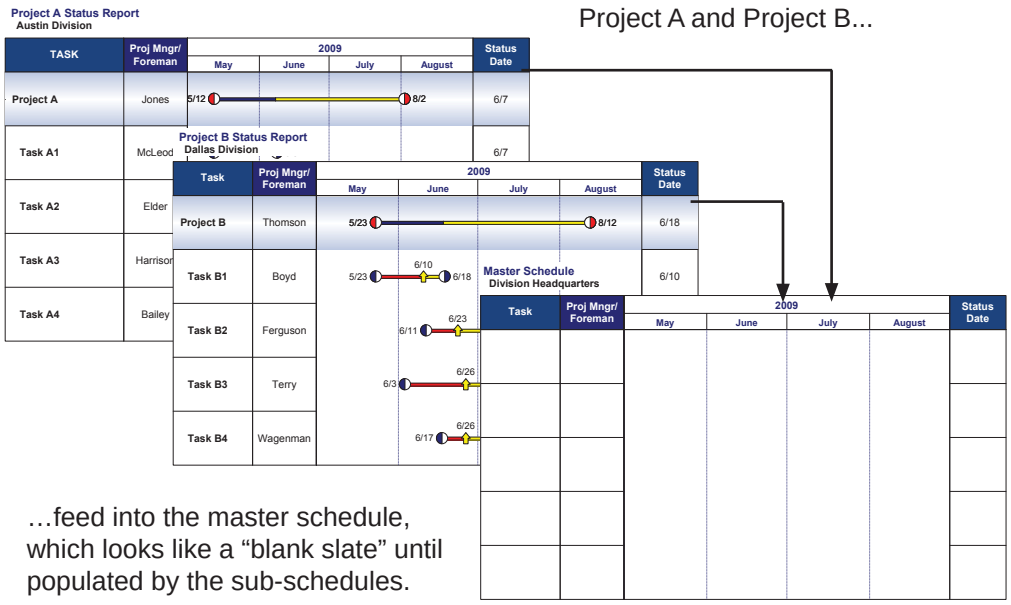
Project/ Task	Proj Mngr/ Foreman	2007 June	2007 July	2007 August	Status Date
Project A	Thompson				7/10
Task A1	Boyd				6/21
Task A2	Ferguson				7/7
Task A3	Terry				7/7
Project B	Thompson				6/24
Task B1	Mitchell				6/5
Task B2	Ferguson				6/29
Task B3	Terry				7/2
Project C	Jones				6/28
Task C1	McLeod				6/11
Task C2	Elder				6/28
Task C3	Wagenman				6/26
Task C4	Boyd				6/11

When a master schedule is updated, any graphics, titles, or free-form text originally in the master schedule, will remain. Note also that only the task rows are read from the sub-schedules, not titles, graphics, formatting information, or free-form text. In this example, the shading for outline level 1 is set in the master schedule—the shading is not “brought in” from the sub-schedules.

Format the Master Schedule and Sub-schedules

Before you merge sub-schedules into a master schedule, all sub-schedules and the master schedule should have basically the same format.

- **All columns should be the same type and in the same location.** That is, if the master schedule has one column with text on the left side of the schedule, then all sub-schedules should also have such a column in the same position.
- **The symbols and horizontal bars should be the same or similar, and in the same positions in the toolbox.** When the sub-schedules are merged into the master schedule, the master schedule's symbology is used.
- **The date range should be the same**, as set under **Dates | Start and End Dates**. If the date range in the master schedule is Jan-Dec 2009 and a sub-schedule's date range is Jan-Dec 2010, then the information will still be merged into the master schedule; yet you will have to scroll to see the symbols and bars.



The formatting in the master schedule (rows per page, symbol size, text size, chart size, shading, etc.) is applied to all symbols and text that are merged into it.

How can you make formatting all of these schedules an easy task? Use a template when creating your schedules; or create a template and apply it to all existing schedules.

See Chapter 12 for more information about templates.

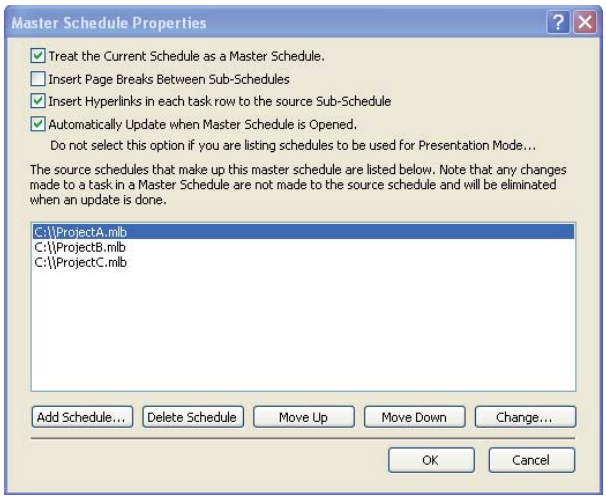
Create a Master Schedule

The master schedule references one or dozens of sub-schedules which will merge together into the master schedule.

1. Open the Milestones schedule that will be the master schedule.
2. Choose **File | Master/Update | *Master Schedule***. The following dialog box appears:

✍ Sub-schedules will fill the master schedule in the order shown in the **Master Scheduling Properties** dialog box.

✍ When deleting a sub-schedule from the list in the **Master Scheduling Properties** dialog box, the schedule itself is removed only from the master schedule, not deleted from the hard drive of the computer.



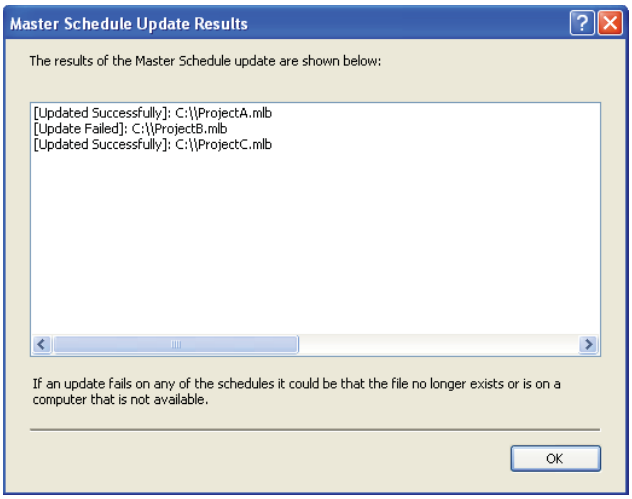
3. ☑ ***Treat the Current Schedule as the Master Schedule***.
4. ☑ ***Insert Page Breaks Between Sub-Schedules***: Sub-schedules will be separated by page breaks in the master schedule.
5. ☑ ***Insert Hyperlinks in each task row to the source Sub-Schedule***: Every task row will have a task row hyperlink shortcut to the source sub-schedule from which that task originated.
6. ☑ ***Automatically Update when Master Schedule is Opened***: Each time this master schedule is opened, the latest sub-schedules automatically populate the master schedule.
   - Otherwise, the master schedule has to be updated through **File | Master/Update | *Master Schedule***.
   - It's important that all of the sub-schedules be available when this update is done or they will be left out of the update.
7. Click the ***Add Schedule*** button to launch the *Windows* browser. Locate and select sub-schedules to be added to the master schedule. Click ***Open*** to add the schedule(s) to the master schedule list.
8. Use the ***Move Up*** and ***Move Down*** buttons to change the order of the schedules.

9. Use the ***Change*** button to replace a selected file from the sub-schedule list with another Milestones schedule.
10. Use the ***Delete*** button to remove a selected file from the sub-schedule list.
11. Click ***OK*** when you are finished adding sub-schedules.

Update the Master Schedule

After adding the sub-schedules to the master schedule, the master schedule is not automatically populated with the sub-schedules' data. The master schedule is either updated when opened, as described in the previous section, or the update is "forced" by choosing **File** | **Master/Update** | ***Master Schedule***.

The **Master Schedule Update Results** dialog box appears:



✍ Keep in mind that once a master schedule is built, any changes made to tasks in the master schedule are NOT also made to the sub-schedules.

All sub-schedules which were selected to merge into the master schedule are listed, along with the path to each schedule.

- If the master schedule found and merged the sub-schedule, then the message is ***Updated Successfully***.
- If the master schedule did not merge the sub-schedule, then the message is ***Update Failed***.

Failed updates are usually the result of renamed, moved, or deleted sub-schedules.

Sub-schedules can be located on other computers and referred to by a UNC path, such as \\server2\schedules\master1.mld. If the "server2" machine was not available when the update was done, then the update for "master1.ml8" would fail and its task rows would be left out of the master schedule.

Tips and considerations regarding master schedules

General information

- The typical use of a master schedule is to see the progress of selected projects in a single Milestones Professional file. Generally, all sub-schedules should have the same format, especially column types and locations. Create a template or blank chart to meet this need.
- If changes are made to a master schedule, those changes are not retained when it is updated with the latest sub-schedule data.
- All sub-schedules should follow an agreed-upon hierarchy when displaying various levels of detail. Even agreeing on the names of the various project stages is a good idea. For example, in all sub-schedules, level 1 could be the project name; level 2 as the phase level (e.g. “Research,” “Development,” “Production,” “Testing,” “Delivery”); level 3 as the task level (e.g. under “Testing” phase...”Beta Product 1,” “Beta 2,” “Beta 3”).
- If the master schedule is to contain a single summary row for all merged projects, then all sub-schedules need to begin at outline level 2. This allows for an outline level 1 roll-up summary of all projects in the master schedule.
- Sub-schedules should be saved in a static location, such as a network folder, to ensure the master schedule has access to the latest sub-schedules’ data. As always, be sure to frequently back-up these files.

A shared format for the master schedule and sub-schedules

- By creating a schedule template or blank chart, and using it for all sub-schedules and the master schedule, the format is consistent and ensures that sub-schedules will merge successfully into the master schedule. Distribute a copy of the template or blank chart to each person entering project data into his sub-schedule.
- Why is a common format so important? If one sub-schedule contains columns of duration values, percents complete, and end dates; and another sub-schedule contains columns of baseline dates and task names; then the master schedule will not know which columns to display. Thus, all schedules should have columns of the same format and placement.
- After each person populates his sub-schedule, it’s recommended that the schedule is saved to a shared network folder and that the name of the sub-schedule is passed along to the keeper of the master schedule.

More resources

For more detailed information, examples and guidance on creating master schedules, refer to **Help | Help Files | *Help Topics***, Index keywords “master schedule.”

Chapter 9: Symbol Linking

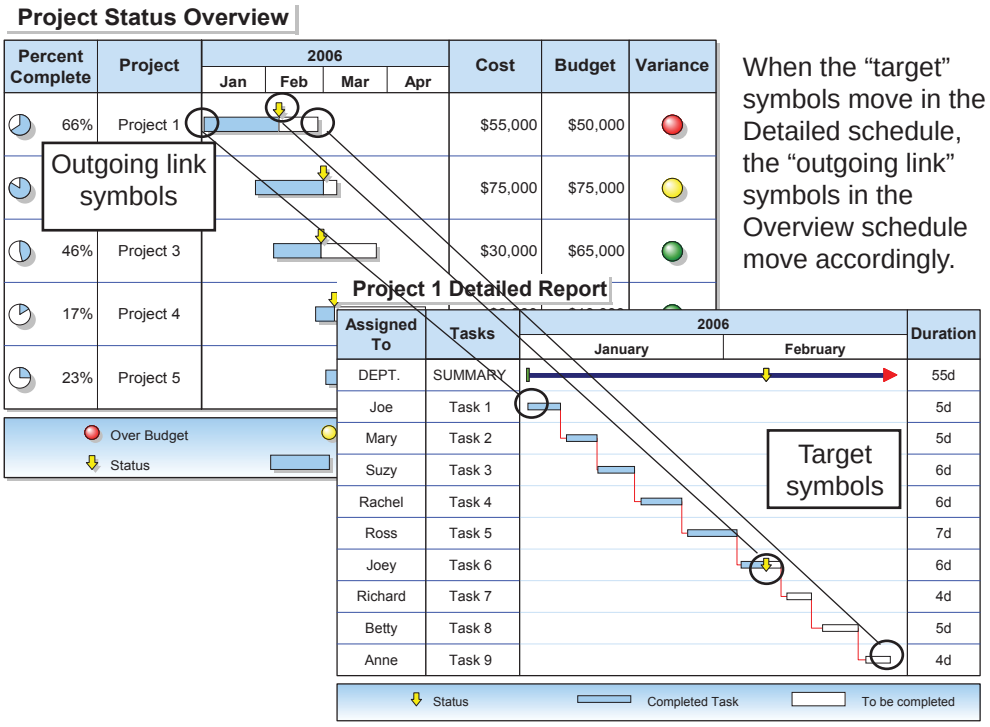
With symbol linking, a symbol's date in one schedule can be based on a symbol's date in another schedule or the same schedule.

Symbol linking involves a few steps, including naming the target symbol, establishing the link from the outgoing symbol to the target symbol, and updating the linked symbols.

Symbol Linking Example

In the example below, there are two schedules. The "Project Status Overview" schedule is used by top-level management to track status, dollars, and percent complete across multiple projects. The "Project 1 Detailed Report" schedule is used by mid-management to track the details of the project, including task assignments, task flow, and task durations.

In the Project Status Overview schedule, the start date on the Project 1 task row is linked to the first start date in the Project 1 Detailed Report schedule. Likewise, the arrow status symbol in the Overview schedule is linked to the arrow status symbol in the Detailed schedule. Finally, the end dates are linked, as shown below.



When the "target" symbols move in the Detailed schedule, the "outgoing link" symbols in the Overview schedule move accordingly.

Link Symbols between Separate Schedules

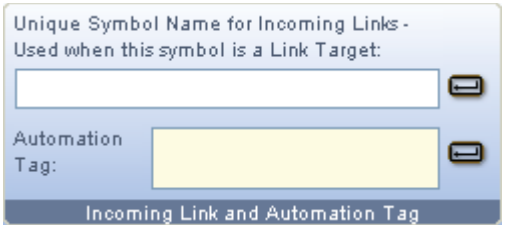
Linking symbols located on two separate schedules involves setting up two things:

1. The symbol to be used as the “target” of the link must be given a unique name, so that it can be found when the “outgoing link” symbol needs to check the target symbol’s date and update its own date.
2. The symbol with the outgoing link must reference the target symbol using the full path (UNC path or Drive path) and schedule filename along with the target symbol name.

Name the target symbol

The date of this target symbol will drive the date of any symbol whose outgoing link references it.

1. Click the arrow tool in the toolbox.
2. In the schedule that will control the dates of symbols in another schedule, click once on the appropriate symbol. This will display the **Selection** menu.
   - In the example on the previous page, this would be the “Task 1” start date of the “Detailed Report” schedule.
3. In the **Selection** menu, click the **Symbol Links** tab and go to the **Incoming Link and Automation Tag** section as shown below:

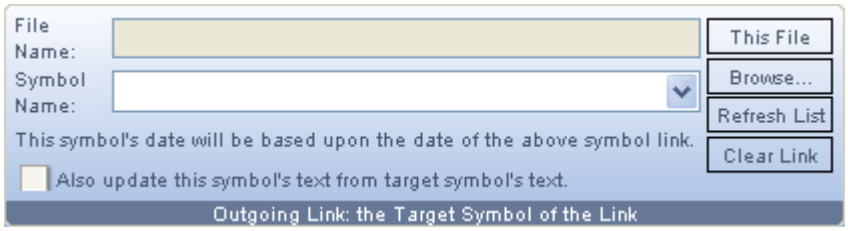


4. Under ***Unique Symbol Name for Incoming Links - Used when this symbol is a Link Target***, enter a symbol name.
5. Click the apply button .
6. Repeat this process to name other target symbols, and then **Save** the schedule .

Link a symbol to the named target symbol

When a target symbol's date changes, the symbol linked to the target symbol will also change to that date.

1. Click the arrow tool in the toolbox.
2. In the appropriate schedule, click once on the symbol whose outgoing link should point to a target symbol. This will display the **Selection** menu.
   - In the example on page 9-1, this would be the "Project 1" task row's start date in the "Overview" schedule.
3. In the **Selection** menu, click the **Symbol Links** tab and go to the **Outgoing Link: the Target Symbol of the Link** section as shown below:



4. Choose the ***Browse*** button. Browse...
5. Locate the schedule that contains the target symbol, click on the file name, and click ***Open***.
6. To the right of ***Symbol Name***, all available target symbol names for that schedule will be listed in the drop-down menu.
   - If the target symbol names do not appear, then click the ***Refresh List*** button. If they still do not appear, you may not have saved the schedule that contains the target symbols.
7. Choose the appropriate ***Symbol Name*** (the target symbol's name) from the list.
8. ☑ ***Also update this symbol's text from target symbol's text***: The symbol text displayed by the outgoing symbol will automatically display the symbol text used by the target symbol. When changes are made to the target symbol's text, the outgoing symbol's text is updated.
9. Choose ***Clear Link*** to break the link between this symbol and the ***File Name*** and ***Symbol Name*** that is displayed.

Formatting Options

With a symbol selected, in **Selection | Symbol Links | Options**, choose to:

1. ☑ ***Update Symbol Links when Schedule is Opened***: All symbols with outgoing links in the newly opened schedule will look for the target symbols and update symbol dates accordingly.

2. ☑ ***Highlight symbols with names or outgoing links***: Attaches an icon to all symbols involved in symbol linking, as follows: attaches to symbols with an outgoing link; attaches to symbols with a target name; attaches to symbols with both an outgoing link and a target name.

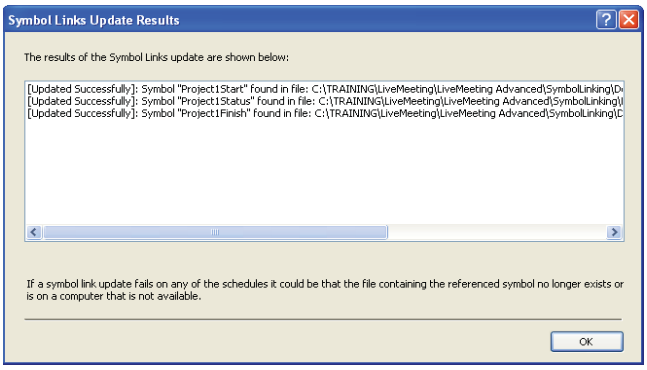
3. ☑ ***Do Not Update Dependent Symbols***: If a symbol with an outgoing link has dependent tasks, normally those tasks will move when their parent symbol is updated with the target symbol's date. Check this option to prevent any dependent symbols from moving to new dates.

Update Linked Symbols

1. Open the schedule containing the symbols with outgoing links.
   - If ***Update Symbol Links when Schedule is Opened*** was checked for this schedule, then all symbols with outgoing links will look for the target symbols and update symbol dates accordingly.
2. If no update occurred, choose **File** | **Master/Update | Update Master Schedule, Linked Symbols |** ***Linked Symbols***.

A dialog box reports the successful and failed updates:

The name of each target symbol that was searched for is listed along with the schedule name and location. The bracketed message reports if the *[Update Failed*| or *[Updated Successfully]*.

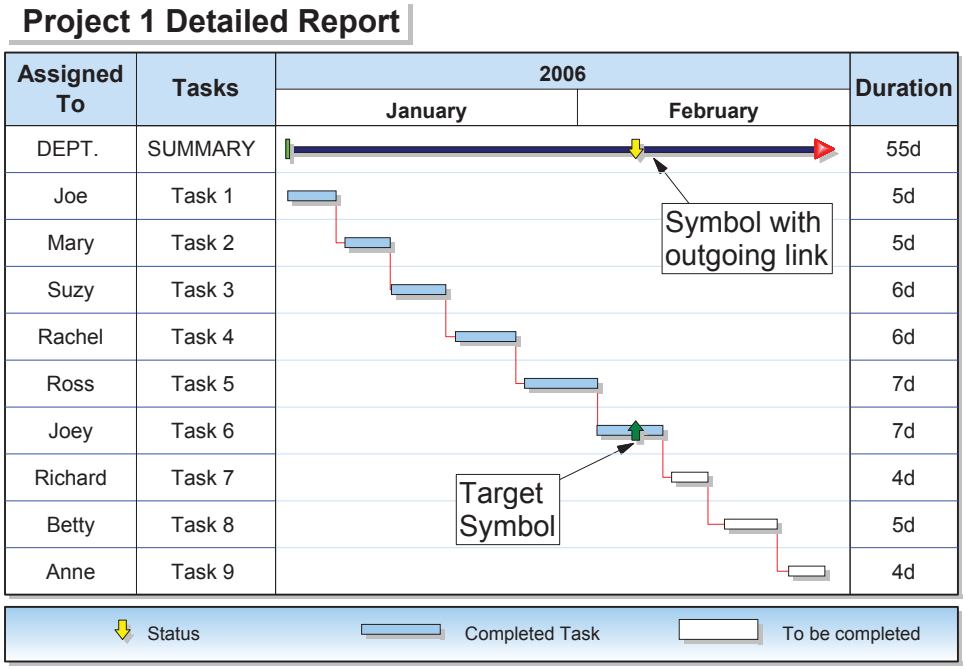


If any of the updates failed, the schedule containing the target symbols may no longer exist, the computer containing the schedule may not be available, or the target symbol's name may have changed or may have been deleted.

Link Symbols within the Same Schedule

The use of symbol links within the same schedule involves setting up two things:

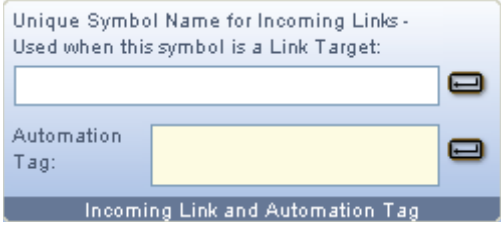
1. The symbol to be used as the “target” of the link must be given a unique name, so that it can be found when the “outgoing link” symbol needs to check the target symbol’s date and update its own date.
2. The symbol with the outgoing link must reference the target symbol.



In this example, the darker arrow symbol pointing upwards controls the date of the lighter arrow symbol pointing downwards on the summary row. Thus, the lighter arrow has an outgoing link to the darker arrow, which is a named target symbol. When the darker arrow (target) moves, the lighter arrow (outgoing link) will move accordingly.

Name the target symbol

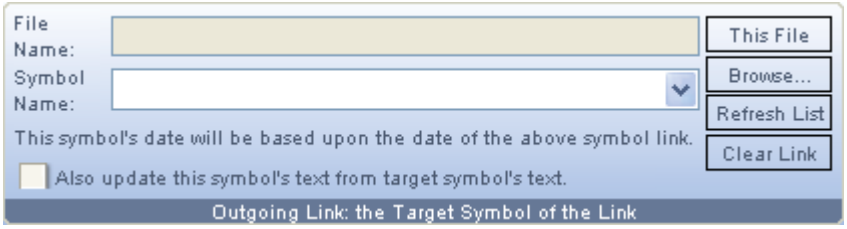
1. Click the arrow tool in the toolbox.
2. Click once on the symbol that will control the date of another symbol This will display the **Selection** menu.
   - In the example on the previous page, this would be the darker arrow symbol.
3. In the **Selection** menu, click the **Symbol Links** tab and go to the **Incoming Link and Automation Tag** section as shown to the right.



4. Under ***Unique Symbol Name for Incoming Links - Used when this symbol is a Link Target***, enter a symbol name.
5. Click the apply button .
6. Repeat this process to name other target symbols in this schedule, and then **Save** the schedule .

Link a symbol to the named target symbol

1. Click the arrow tool in the toolbox.
2. Click once on the symbol whose outgoing link should point to a target symbol. This will display the **Selection** menu.
   - In the example on the previous page, this would be the lighter arrow symbol.
3. In the **Selection** menu, click the **Symbol Links** tab and go to the **Outgoing Link: the Target Symbol of the Link** section as shown below:



4. Choose the ***This File*** button. 

5. To the right of ***Symbol Name***, all available target symbol names for this schedule will be listed in the drop-down menu.
   - If the target symbol names do not appear, then click the ***Refresh List*** button.
6. Choose the appropriate ***Symbol Name*** from the list.

7. Repeat this process to link other symbols to target symbols.
8. To update the linked symbols, choose **File** | **Master/Update | Update Master Schedule, Linked Symbols |** ***Linked Symbols***.

View a Report of Symbol Links, Names, and Attributes

Generate reports on data embedded in symbols, including symbol target names and links between symbols (i.e. symbol linking).

Generate a report by selecting **Tools** | **Reports | Symbol** and choose a report.

Each report can be copied to the clipboard for pasting into another program for printing.

Symbol to Symbol Links Report

The ***Symbol to Symbol Links Report*** displays data for each symbol which has an outgoing link to another symbol, including the task row on which the symbol appears, the symbol's ordinal placement from left to right along the task row, the symbol's date, the target name of the symbol to which it is linking, and the full path to the file containing the named symbol.

Symbol Names Report

The ***Symbol Names Report*** displays data for each symbol which has a target name, including the task row on which the symbol appears, the symbol's ordinal placement from left to right along the task row, the symbol's date, and the symbol's link target name as found under the **Selection | Symbol Links** tab when the symbol is selected.

Symbol Attributes Report

The ***Symbol Attributes Report*** displays data for each symbol which has either a hyperlink, note, outgoing link, target name, or tag. The information displayed includes the task row on which the symbol appears, the symbol's ordinal placement from left to right along the task row, the symbol's date, and the symbol's attributes. If a symbol has a target name, NA is placed in the attribute column. If a symbol has an outgoing link, OL is placed in the attribute column.

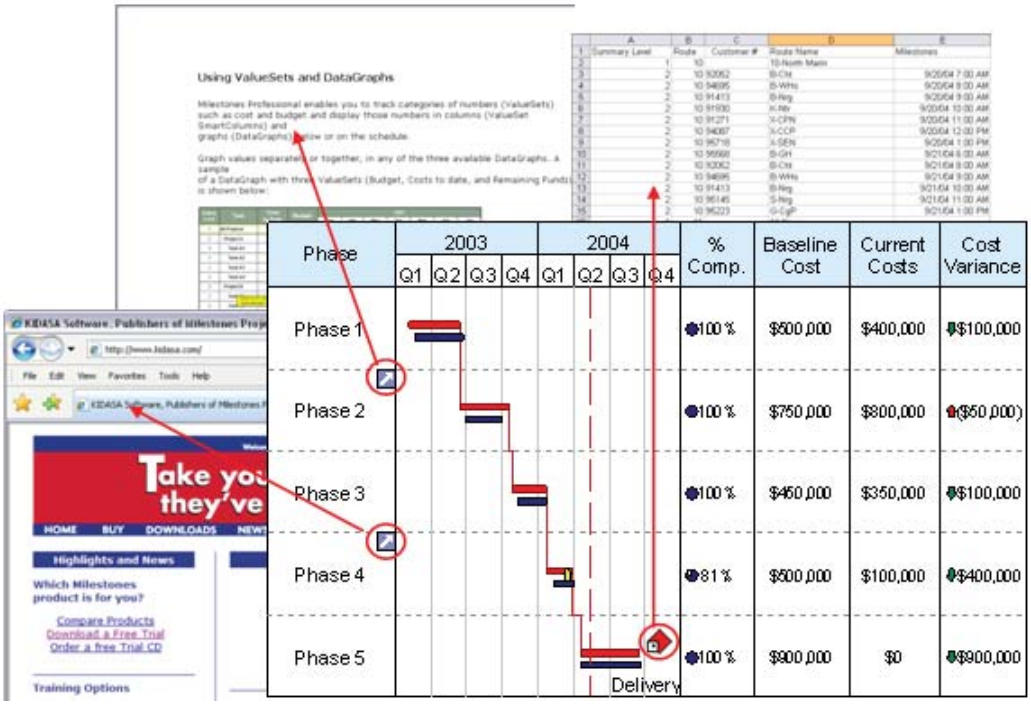
Symbol Linking versus Master Scheduling

Schedules with symbol links are another way to maintain a type of "master schedule," but without the task rows being replaced each time an update is done (as is true in the Master Schedule feature). When symbols are updated via symbol links, only the dates are updated, nothing else (unless the symbol text option is chosen). However, in using a symbol linking method to update a top-level schedule, there is no way of knowing about new or deleted sub-tasks. Thus, the method you use depends upon your own needs and methods of operation.

Chapter 10: Hyperlinks

Any symbol or task row on your schedule can have hyperlink shortcuts to other Milestones schedules, documents or web pages. Launch a hyperlink to open the linked file or URL.

With this feature, you can use a Milestones schedule as the project hub with quick links to all project related information — a great way to cross-reference or drill-down for more detail on any project activity.



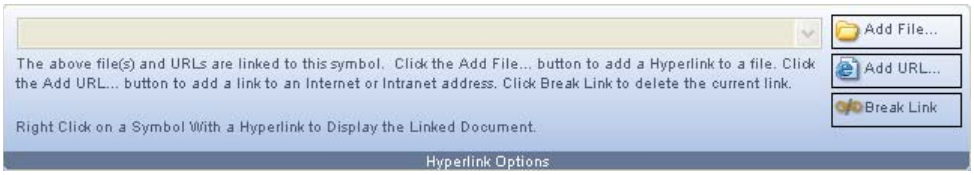
Using the Internet Publishing Wizard, a schedule with symbol hyperlinks is automatically transformed into a graphic with “hotspot” links from symbols to the schedules, documents, and web pages that are hyperlinked to the symbols. That graphic is included in an HTML document, ready for uploading to your Internet or Intranet site. In addition, the first hyperlink for each task row and all hyperlinked symbols are displayed as clickable links when saved as a PDF.

See Chapter 13 for more on using the Internet Publishing Wizard with symbol hyperlinks.

Add a Hyperlink to a Symbol

Dozens of hyperlinks can be attached to any symbol on the schedule.

1. Click the arrow tool in the toolbox.
2. Click once on the symbol to which you will attach the hyperlink. This will display the **Selection** menu.
3. Choose **Selection | Hyperlinks | Hyperlink Options**, as shown here:

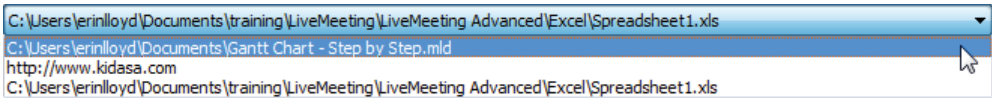


To add a file as a hyperlink (such as a Milestones file, a Word document, etc.):

4. Click the ***Add File*** button.
5. In the **Select the Document File to Link** dialog box, locate and select the file to hyperlink.
   - You may need to change the **Files of type** to ***All Files*(*.*)**.
6. Click ***Open*** to add the file as a hyperlink.

To add a URL as a hyperlink (such as an Internet or Intranet site):

7. Click the ***Add URL*** button to see the following dialog box:
8. Enter the complete address to the site, and then click ***OK***.
9. View your hyperlinks by clicking the drop arrow to the left of *Add File*.



With a symbol selected, choose from the following options in **Selection | Hyperlinks | Hyperlink Display**.

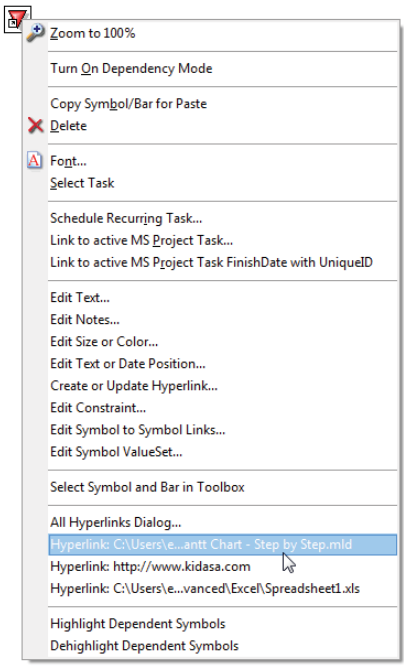
10. ☑ ***Highlight Symbols With Hyperlinks*** to add an arrow icon to all symbols that contain hyperlinks, as shown here: 

11. ☑ ***Include Hyperlink References When Creating HTML Files*** to include a numbered list of hyperlink URLs in the HTML document created by the Internet Publishing Wizard. This setting will be overridden if you check/ uncheck ***Include Symbol Hyperlinks in HTML File*** during the Internet Publishing Wizard process.

Launch a Hyperlink from a Symbol

When you launch (or open) a hyperlinked file or URL, the selected file or URL will launch in the appropriate program.

1. Click the arrow tool in the toolbox.
2. Hover over the symbol to see the available hyperlinks, as shown to the right. For this feature, tooltips must be turned on for the schedule area in **Tools | Program Options | *Help***.
3. Right-click the symbol that contains the hyperlink, and view the list of hyperlinks at the bottom of the right-click menu.
4. Move your cursor to the list of hyperlinks and click once on the one you wish to launch.
5. The hyperlink will open in the appropriate application (e.g. Word, Internet Explorer, Milestones, etc.).



✍ You can increase the length of time and space for the tooltip display when hovering over a symbol.

Choose **Tools | Program Options** | ***Help***. Under **Normal Tooltip Display**, choose a different length of time. For more space, check the box next to ***Expanded Symbol Hover information display***.

Add a Hyperlink to a Task Row

Dozens of hyperlinks can be attached to any task row on the schedule.

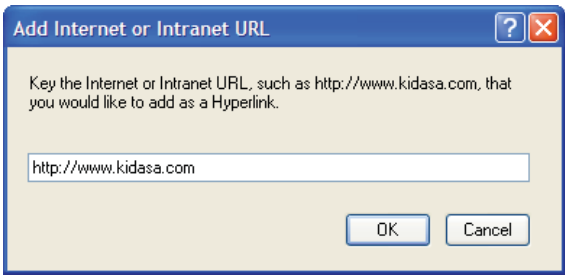
1. Click the arrow tool in the toolbox.
2. Click once on any column cell on the appropriate task row. The row should now be highlighted. If the cell only is highlighted, click **Selection | Current Object: Task Row |** ***Switch to Selected Task***.
3. Find the **Hyperlink Settings** section.

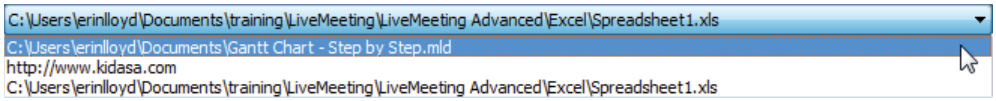
To add a file as a hyperlink (such as a Milestones file, a Word document, etc.):

4. Click the ***Add File*** button.
5. In the **Select the Document File to Link** dialog box, locate and select the file to hyperlink.
    - You may need to change the **Files of type** to ***All Files(*.*)***.
6. Click ***Open*** to add the file as a hyperlink.

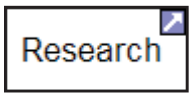
To add a URL as a hyperlink (such as an Internet or Intranet site):

7. Click the ***Add URL*** button to see the following dialog box:
8. Enter the complete address to the site, and then click ***OK***.
9. View your hyperlinks by clicking the drop arrow.





10. ***Show Hyperlink icons*** to add an arrow icon to all task rows that contain hyperlinks, as shown here. The icon appears in the column cell on the left side of the schedule, closest to the schedule area.



Launch a Hyperlink from a Task Row

When you open (or launch) a hyperlinked file or URL, the selected file or URL will launch in the appropriate program.

1. Click the hyperlink icon associated with the task row.
    - If this icon is not visible, then use the method described below.

- See the previous page for how to show hyperlink icons.

2. In the **Select Hyperlink to Launch** dialog box, choose the file or URL from the list and then ***OK***.
    - The right-most column on the left side of the schedule must not be hidden in order to successfully select this icon.
3. The hyperlink will open in the appropriate application (e.g. Word, Internet Explorer, Milestones, etc.).

-or-

1. Right-click a task row that has a hyperlink.
2. Choose **Hyperlink** and select from the list of hyperlinked files and URLs.

Launch a Hyperlink while in Calendar View

Hyperlinks attached to symbols while in the Gantt View are carried over to the Calendar View. Note that symbols on summary rows will not display symbol hyperlinks in the Calendar View. Only symbol hyperlinks attached to symbols at the lowest outline level will appear in the Calendar View.

1. Move the cursor to the arrow next to the calendar day.
2. Click the arrow to launch the list of hyperlinks for that day; or right-click and choose **Hyperlinks**.
3. Choose the hyperlink and then ***OK***.

Remove a Hyperlink from a Symbol or Task Row

Delete one or all hyperlinks attached to a symbol on the schedule.

1. Click the arrow tool  in the toolbox.
2. Click once on the symbol which has the hyperlink(s).
3. Choose the **Selection | Hyperlinks** tab.
4. Click the drop-down arrow to view all available hyperlinks, and select the link to be deleted.
5. Click the ***Break Link*** button.

Delete one or all hyperlinks attached to a task row on the schedule.

1. Click the arrow tool  in the toolbox.
2. Click once on any column cell on the appropriate task row. The row should now be highlighted. If the cell only is highlighted, click **Selection | Current Object: Task Row |** ***Switch to Selected Task***.

3. Find the **Hyperlink Settings** section.
4. Click the drop-down arrow to view all available hyperlinks, and select the link to be deleted.
5. Click the ***Break Link*** button.

Hyperlinks as Column Text or Freeform Text

A hyperlink can be added as a column cell text entry or as a freeform text entry. The link can be to a URL or document.

1. Click the text tool in the toolbox.
2. Click once in the column cell that will contain the hyperlink (or anywhere in or outside the schedule for freeform text).
3. Type the URL (e.g. http://www.kidasa.com) or document link (e.g. C:\Financial\ProjectXBudget.xls).
4. To launch the hyperlink, use the text tool and highlight the entire document path and name.
5. With the URL highlighted, press and hold the **CTRL, ALT,** then **L** key on your keyboard. This should launch the highlighted hyperlink.

Add a Hyperlink to a Graphic

A hyperlink can be added to a graphic file placed in the schedule.

1. Click the arrow tool in the toolbox.
2. Click once on any graphic. This will display the Selection menu for that graphic.
3. In the **Selection** menu, next to **Hyperlink:**, input the hyperlink path and press the apply button.
4. Open by right-clicking the graphic and selecting the hyperlink.

Symbol Hyperlinks Report

Generate reports on data embedded in symbols, including hyperlinks. Each report can be copied to the clipboard for pasting into another program and printing.

Select **Tools** | **Reports | Schedule |** ***Hyperlinks***. This report displays data for each symbol which has a hyperlink, including the task row on which the symbol appears, the symbol's ordinal placement from left to right along the task row, the symbol's date and the full path to the hyperlinked file. Task row hyperlinks are also listed in this report.

Chapter 11: Working with other Applications

Milestones Professional can read information from other sources including Microsoft Project MPP/MPD files; Microsoft Project Server files, XML files, comma delimited files; Excel and other spreadsheet data copied to the clipboard; Microsoft Outlook tasks or calendar events; ODBC data sources and more.

You can copy and paste a Milestones Professional schedule into another application such as Word, Excel, or PowerPoint. The schedule can be a picture or an embedded or linked object. You can also “map” (copy and paste) information from another application, such as an Excel spreadsheet, into Milestones.

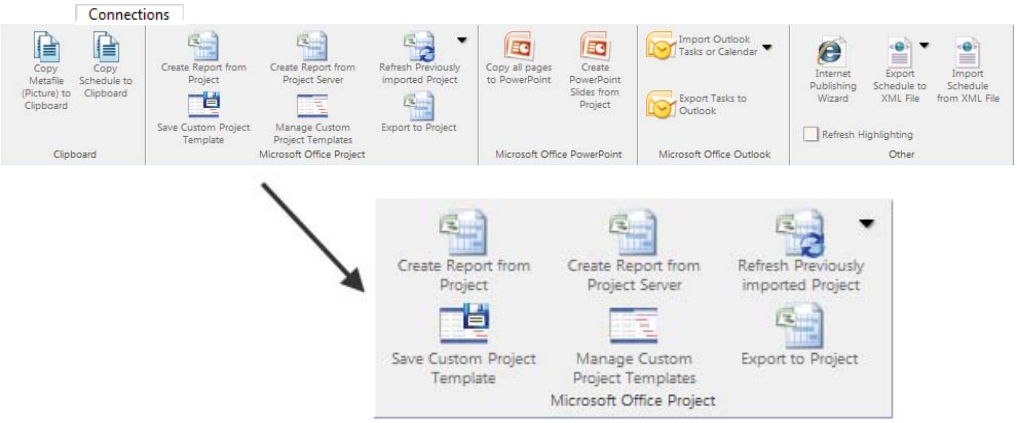
For those who also have Microsoft Project 2003/2007 installed, use Milestones’ import wizard for creating presentation-ready reports from MPP and MPD files. Milestones Professional can also import MPX, XML, CSV, TXT files created from Microsoft Project.

For moving data from Milestones to other applications, Milestones schedules can be exported to MPX, CSV, and XML formats.

For programmers, Milestones Professional also supports OLE Automation for creating a custom interface between Milestones and any OLE compliant application. Using Visual Basic, C++ or other programming languages, it’s easy to interchange data programmatically with other applications and databases. The programming that makes use of this automation feature is created by the user.

The Connections Tab

The enhanced toolbar at the top of the Milestones window includes a Connections tab. This menu contains most of the options for interfacing with other Microsoft Office programs, as well as the Windows clipboard. In particular, the Connections tab offers easy access to all of the Microsoft Project options.



Create Presentation Reports from Microsoft Project

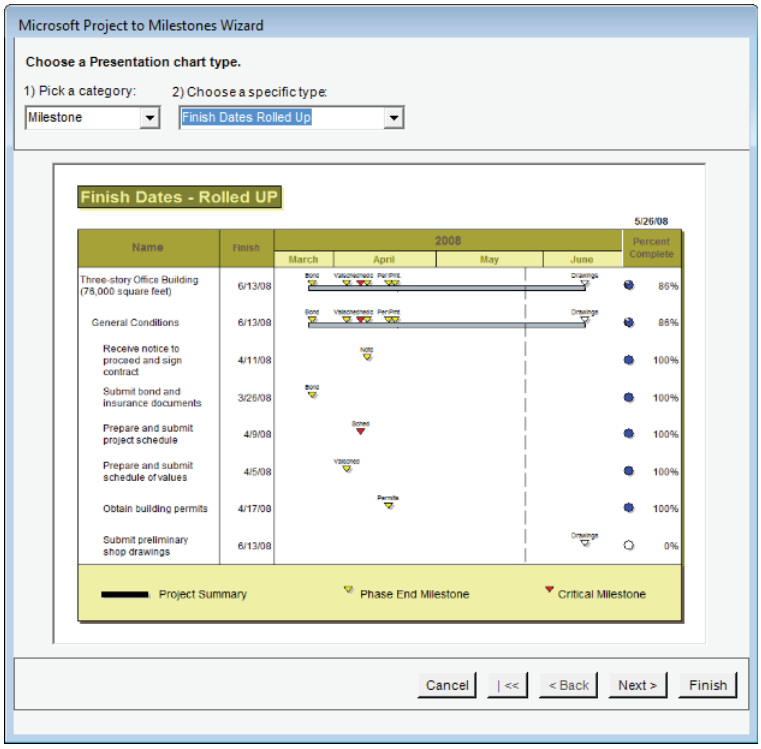
Milestones Professional offers a direct interface to Microsoft Project, which makes it easy to generate chart formats beyond the standard formats offered by Project.

Microsoft Project to Milestones Wizard

Use the wizard to choose from built-in report formats for creating presentation-ready schedules from Microsoft Project files. Microsoft Project must be installed in order to use the Project to Milestones Wizard.

1. Choose **Connections | Microsoft Project** | ***Create Report from Project***.
   - If you are opening an Microsoft Project Server file, choose **Connections | Microsoft Project | *Create Report from Project Server***. It's best to first log-on to Microsoft Project Server before importing.
2. Select the MPP file and click ***Open***.
3. Follow the **Microsoft Project to Milestones Wizard** prompts to create a Milestones. Once in Milestones, you can further customize your schedule.

The Project to Milestones Wizard offers a visual representation of the schedule as it is created, allowing you to see the effects of the formatting choices you make in a dynamically updated screen. Start off by choosing from one of the built-in formats.



Project Wizard Built-In Formats

The Project to Milestones Wizard offers 11 categories for the built in formats. These built-in formats give you a starting foundation for importing your information into Milestones.

Categories for Built-In Formats:

- Gantt contains layouts suited to a basic Gantt schedule, including start and finish dates. The Gantt step-by-step offers the most flexibility of all of the wizard formats.
- Stoplight formats offer several commonly used presentation red, yellow, green stoplight charts for easy management viewing of key indicators.
- Milestone charts show tasks with zero duration or finish dates only.
- Summary charts are condensed presentation formats.
- Choose one of the earned value formats and show an earned value graph along with your project schedule.
- Resource charts show work variance, resources and other data by task, often with a graph below the schedule.
- Status formats display current, remaining, or slipping tasks.
- Dashboard charts offer several unique formats with the popular “dashboard” appearance and content.
- Coded Summary allows extra flexibility for the data imported by letting you code tasks in Microsoft Project.
- Special offers three formats which did not fall into one of the previous categories: Work remaining versus money remaining, percent complete bar graph, and finish variance.
- The Custom category is reserved for presentation formats you add. When you find a presentation format you like, customize it with additional columns, format the colors, and change other aspects of the schedule. Then save it as a Custom Project Template which adds the format to the custom category and then appears in this menu.

For more on Custom Project Templates, see page 11-4.

Once you have chosen a format, follow the prompts and watch as your Microsoft Project information is brought into a professional-looking Milestones schedule.

Custom Project Templates

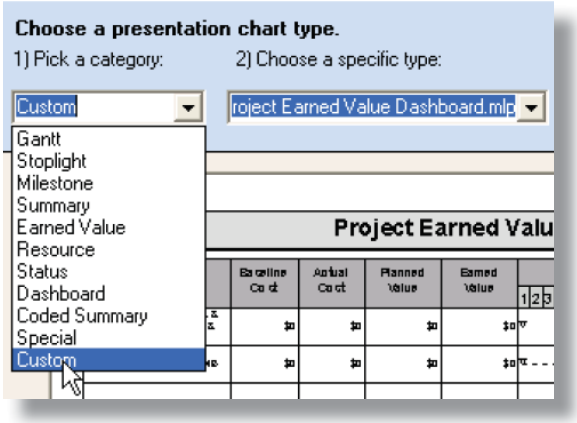
Can't find a chart format in the Project to Milestones wizard that is exactly what you need? Import one of your Microsoft Office Project Schedules, customize the presentation Milestones chart and save it as a Milestones Custom Project Template.

Create a Custom Project Template

1. After bringing the information into Milestones using the Project to Milestones Wizard, customize the Milestones schedule so that it's just right for your needs.

   Schedule changes which are appropriate:

   - Changing the date headings.
   - Customizing the legend.
   - Adding freeform text and arrows.
   - Adding columns to the left or right of already existing columns.



   Things to avoid changing:

   - The symbol type (whether a symbol is normal, baseline, comment or status)
   - The "automation tag" for a column.
   - The order of the original columns (Do not move the original columns).

2. Save your customized chart as a Custom Project Template. Choose **Connections | Microsoft Project** | ***Save Custom Project Template***.

   - You will be prompted to enter a description of the template and save the file. The description of the template only appears in the **Manage Custom Project Templates** dialog box. The saved name appears in the drop down list when choosing the custom template from the Import Wizard. It is important, therefore, to save the file with a descriptive, unique name.

3. The Custom Project Template you created is then available as one of the specific types in the Custom Category within the Project to Milestones Wizard.

4. To delete or change templates you've created, go to **Connections | Microsoft Project** | ***Manage Custom Project Templates***.

   - To change a template, select the template from the menu and choose ***Open Selected Template***.
   - To delete a template, select the template from the menu and choose ***Delete Selected Template***.

Build & Update a Milestones Chart from Multiple Project Schedules

Is it possible to update a single Milestones presentation chart from multiple Microsoft Project schedules? Yes. There are two options.

Create a Microsoft Project master schedule

The first option is to combine the schedules into a single Microsoft Project master schedule so that Project assigns new UniqueIDs to each task. Using this method, it's possible to combine two or more Microsoft Project schedules into a Microsoft Project master schedule.

1. Create a Microsoft Project master schedule. (See Help in Microsoft Office Project for instructions on creating a master schedule). You will notice that the uniqueIDs in the master schedules will be different than they were on the individual schedule.
2. Import the master schedule using the **Microsoft Project to Milestones Wizard**.

- If you plan to maintain your Microsoft Project schedules in the Master Schedule format, then accomplishing the import and refresh with this method may be a good way to go.
- If you plan to maintain the schedules individually and only combine them periodically, before a refresh for example, then this method may prove to be time consuming, as the UniqueIDs on the master schedule will change each time you combine the schedules.

Manually tag symbols in Milestones to different Microsoft Project files

The second option is to use another field (other than the UniqueID field in Microsoft Project) as the Identifier when manually tagging a free-form Milestones presentation schedule.

See page 11-6 for more information on manually tagging a free-form schedule.

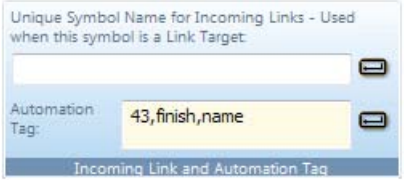
1. Build a free-form Milestones chart. Symbols, bars, and text will represent key information from multiple Project files.
2. Tag each symbol and column (optional) to the corresponding Project task.
   - You will need to tag using an identifier that is truly unique for every task in multiple Project files so that each task is guaranteed a different id. You can create these identifiers within the Project fields discussed on page 11-8. For example, using a text field will allow using the tags A1, A2, A3 in one file, B1, B2, B3 in another file, and C1, C2, C3 in another file.
3. Refresh for each Microsoft Project file used to build the free-form Milestones schedule.

Manually Tagging/Building a free-form Presentation Schedule

Do you have a unique presentation format? Do you have one or more Microsoft Project schedules which you need to present at once? It's possible to design a presentation chart "free-form" and link it to your Microsoft Project schedules for future updates. The process involves adding symbols to the Milestones schedule, and then "tagging" these symbols back to the Project file. You can also add columns and tag these columns back to Microsoft Project fields.

Tag a Symbol

1. In Milestones, select the symbol you wish to tag. The **Selection** menu for that symbol is now active. In **Selection | Symbol Links | Incoming Link and Automation Tag**, enter the tag for the symbol in the box next to **Automation Tag:**



   - A symbol is "tagged" in the following general format: Identifier,Date Type,Symbol Text Field (optional). There should be commas but no spaces between each field.

Unique ID	Finish	Name
42	Thu 12/23/10	HW Avail
43	Wed 12/2/09	Upgrade Online

For more information on accepted Identifiers, Date types, and Symbol Text Sources, see page 11-8.

2. Press the apply button. When the refresh option is applied, the symbol will update with the latest information from the corresponding task in the Project file.

Build a column

1. Create a Microsoft Project SmartColumn:
   - Choose **Insert | Rows, Columns | New Column | *Microsoft Project Column...***
   - Choose which **Microsoft Project field** you would like to use to populate the column.
2. Tag each cell within the column:
   - Click once on the cell you wish to tag. This will highlight the task row. Click again on the cell and a single cell should be highlighted. The **Selection** menu for that cell is now active.
   - In **Selection** | **Cell and Tag Text**, enter the identifier only for the appropriate task in the box to the left of the ***Update Tag*** apply button.
   - Press ***Update Tag***. A newly inserted Microsoft Project Column will be blank. When the refresh option is applied, Milestones uses the selected MPP file to fill the column based on the Microsoft Project field.

Tag a Symbol to Microsoft Project Using the Right-Click Menu

Optionally, choose to manually tag symbols using the right-click menu for a symbol.

Tag a Symbol using the Right-Click menu

In Microsoft Project:

1. Open a Microsoft Project .mpp file.
2. Select the row within the Project file that contains the information for the corresponding Milestones symbol.

In Milestones:

3. Right-click the symbol that you want to link to the Project file.
4. Choose ***Link to Active MS Project Task***.
5. In the **Tag Symbol** dialog box, next to **Date Field**, choose the date field for the tag from the drop-down menu.
   - Choose from: Actual Start, Actual Finish, Baseline Start, Baseline Finish, Start, or Finish.
6. Next to **ID for tag**, choose the identifier for the tag from the drop-down menu. *See page 11-8 for a list of accepted identifiers.*
7. Press ***Tag*** to complete the link process. Once the ***Link to active MS Project Task*** feature has been used, Milestones will retain the previous settings chosen (the date field and the ID for tag) for the option directly below ***Link to active MS Project Task*** on the right-click menu.

Symbol Tags Report

You can generate a report on all tagged symbols in a Milestones presentation schedule. The Symbol Tag Report displays data for each symbol that has a tag, including the task row on which the symbol appears, the symbol's ordinal placement from left to right along the task row, the symbol's date, the symbol's text, and the full tag text.

1. Select **Tools** | **Reports** | **Symbol** ▼ | ***Symbol Tags...***
2. Press ***Copy Report To Clipboard*** to place the entire text of the report on the clipboard.
3. Paste the report into another program to print and/or edit. Generating a Symbol Tags Report can be helpful when:
   - You are manually tagging a free-form schedule. Use the report to check for errors before refreshing.
   - You created the schedule from multiple Project files. Use the report to match identifiers back to the corresponding Project file.
   - You have a large Milestones file with many tagged symbols and need to find a particular task based on the identifier or the symbol text.

Accepted Tag fields

Accepted Identifiers:

- UniqueID
- Project Server GUID
- WBS
- Text1-Text30
- EnterpriseText1-EnterpriseText40
- EnterpriseProjectText1-EnterpriseProjectText40

Accepted Date Fields:

- start [st]
- finish [fn]
- baseline start [bs]
- baseline finish [bf]
- actual start [as]
- actual finish [af]
- early start [es]
- early finish [ef]
- deadline [dl]
- resume [rs]
- constraint date [csd]
- start 1,2,....start 10 [st1 ..... st10]
- finish 1,2,...finish 10 [fn1.....fn10]
- baseline 1 start, baseline 2 start,... baseline 10 start [b1s ..... b10s]
- baseline 1 finish, baseline 2 finish,... baseline 10 finish [b1f .... b10f]
- late start [ls]
- late finish [lf]
- stop (no abbreviation)
- created [cr]
- date 1 ..... date 10 [dt1....dt10]

Accepted Symbol Text Fields:

- actualcost • actualduration • actualfinish • actualovertimecost • actualovertimework
- actualstart • actualwork • acwp • assignment • assignmentdelay • assignmentunits
- baselinecost • baselineduration • baselinefinish • baselinestart • baselinework
- baseline1cost-baseline10cost • baseline1duration-baseline10duration
- baseline1finish-baseline10finish • baseline1start-baseline10start
- baseline1work-baseline10work • bcwp • bcws • confirmed • constraintdate
- constrainttype • contact • cost • cost1-cost10 • costvariance • cpi • critical • cv
- cvpercent • date1-date10 • deadline • duration • duration1-duration10
- durationvariance • eac • earlyfinish • earlystart • finish • finish1-finish10 • finishslack
- finishvariance • fixedcost • fixedcostaccrual • flag1-flag20 • freeslack • Hyperlink
- Hyperlinkaddress • HyperlinkHref • Hyperlinksubaddress • number1-number20 • objects
- outlinecode1-outlinecode10 • outlinelevel • outlinenumber • overallocated • overtimecost
- overtimework • percentcomplete • percentworkcomplete • physical%complete
- predecessors • preleveledfinish • preleveledstart • priority • project • recurring
- regularwork • remainingcost • remainingduration • remainingovertimecost
- remainingovertimework • resourcegroup • resourceinitials • resourcenames
- resourcetype • spi • start • start1-start10 • startslack • startvariance • status
- statusindicator • stop • subprojectfile • successors • summary • sv • svpercent
- taskcalendar • tcpi • text1-text30 • totalslack • type • uniqueid
- uniqueidpredecessors • uniqueidsuccessors • vac • wbs• work • workvariance

Refresh Your Presentation Schedules

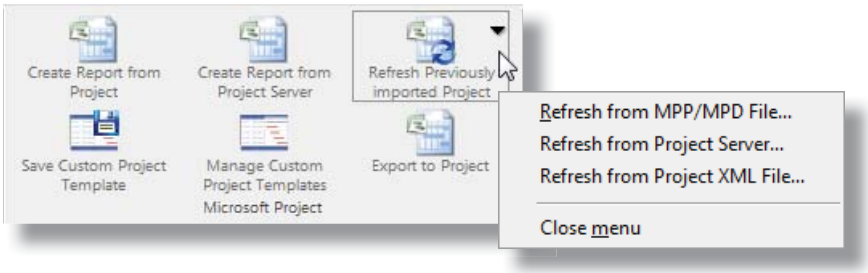
When the Milestones Project Wizard creates a presentation schedule from a Microsoft Project schedule, task start and end symbols are tagged with a Unique ID (or other identifier specified; see page 11-8 for information on accepted identifiers) the date type, and optionally a symbol text source. Free-form schedules are manually tagged in the same format.

During the refresh process, tagged items in Milestones are matched to their counterparts in the selected Microsoft Project file. All tagged items are updated with the latest data from the Microsoft Project file.

Thus, if a start date changes in the Microsoft Project file, the refresh will change the date of the symbol with the corresponding tag in the Milestones schedule.

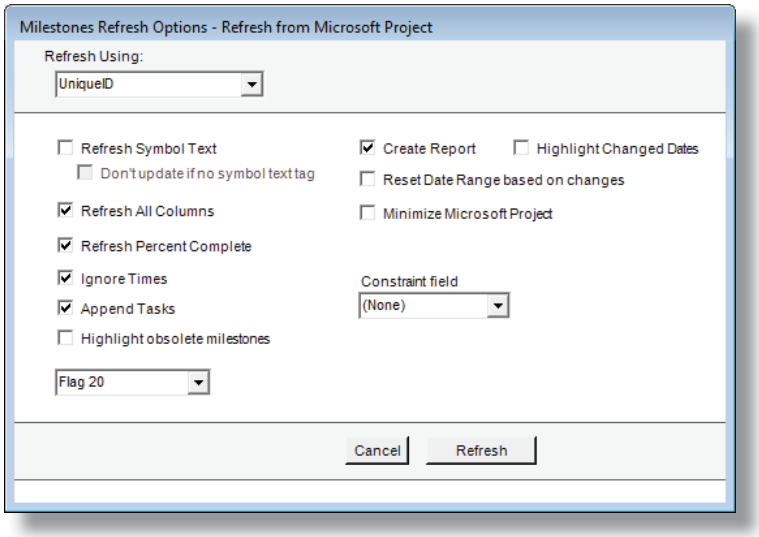
Refresh to update your Milestones schedule

1. Go to **Connections** | **Microsoft Project**. Click on the arrow ▼ next to ***Refresh Previously Imported Project***.



2. Choose the refresh option that correlates to the type of file you imported.

3. The **Milestones Refresh Options - Refresh from Microsoft Project** dialog box will appear.



Refresh Options

• **Refresh Using**: Select the identifier used when importing or tagging symbols. (Accepted identifiers are found on page 11-8).

• ☑ ***Refresh Symbol Text***: updates text/values attached to symbols with the source field's text/values

  • ☑ ***Don't update if no symbol text tag***: symbol text on symbols without a symbol text tag will not be updated.

• ☑ ***Refresh All Columns***: updates column text/values with the source field's text/values

• ☑ ***Refresh Percent Complete***: updates each status symbol according to the latest percent complete values. The status symbol controls the fill-to-status for bars and symbols.

• ☑ ***Ignore Times***: Changes the date but not the time (hour or minute) of a symbol.

• ☑ ***Append Tasks***: Choose to add tasks to the end of a presentation chart. Note that if a number of tasks have been added in the Microsoft Project schedule, re-importing is usually best.

• **Flag 20**: If you choose to append tasks, Milestones uses a flag field during the refresh function. Make sure the flag designated in this drop-down menu is an unused flag field in your Microsoft Project file.

• ☑ ***Highlight obsolete milestones***: Symbols in the Milestones schedule which are no longer in the Microsoft Project file will change to a question mark symbol. Avoid using this option if refreshing from more than one Microsoft Project schedule.

• ☑ ***Create Report***: generates a report of fields which were updated. Report is both placed 1) on the clipboard and 2) saved to the user's My Documents folder. The name of the report is milesrefreshfile. (milesrefreshfile.txt) Retrieve the clipboard report by opening an application that accepts clipboard text and choosing ***Paste***.

• ☑ ***Reset Date Range based on changes***: Check this if the date range (start/end dates) of the Milestones chart should be changed to reflect the changes made during the refresh process. If this option is not checked, the schedule's date range will not be changed and new dates might not be visible if they are outside the date range.

• ☑ ***Minimize Microsoft Project***: minimizes the Microsoft Project window during the refresh process.

• ☑ ***Highlight Changed Dates***: causes any dates which are changed during the refresh process to be highlighted. Once highlighted, it's possible to toggle the display on and off by checking or un-checking the ***Refresh Highlighting*** in **Connections | Other**.

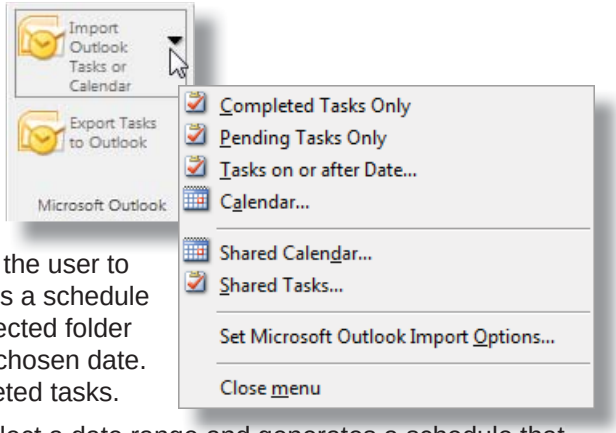
• **Constraint Field**: Choose a date field from Project that will be used to populate the Milestones constraint date. When chosen, two other drop-down menus display:

• **Add constraint to this date field only**: Choose the date field to which you want to apply the constraint. (Note that while only one date field can be refreshed at one time, it's possible to run the refresh process multiple times to apply constraints to multiple date field types).

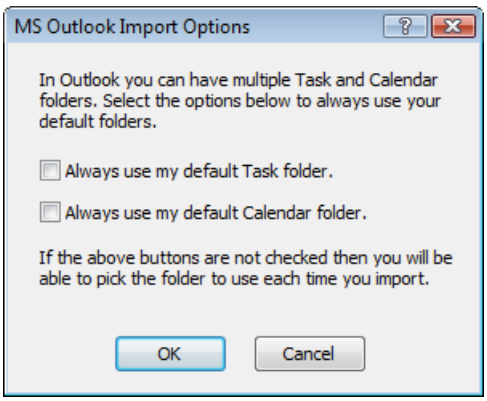
• **Constraint type**: You will be able to choose a default constraint type to be applied. Note that Milestones constraint types are shown and do not match up to Microsoft Project constraint types.

Import Tasks and Appointments from Microsoft Outlook

Milestones is now capable of importing both Tasks and Calendar Appointments from Microsoft Outlook (version 2000 or later). The following import choices are available in **Connections | Microsoft Outlook** | **Import Outlook Tasks or Calendar** ▼:



- ***Completed Tasks Only***: Imports all tasks in the selected folder that are marked completed.
- ***Pending Tasks Only***: Imports all tasks in the selected folder that are not marked completed
- ***Tasks on or after Date***: Allows the user to select a start date and generates a schedule that includes all tasks in the selected folder with a start date on or after the chosen date. Includes incomplete and completed tasks.
- ***Calendar***: Allows the user to select a date range and generates a schedule that includes all calendar appointments in the selected folder within that date range.
- ***Shared Calendar***: Allows the user to select a date range and generates a schedule that includes all calendar appointments from pre-selected shared calendars. (Note: You will need to open the shared calendars in Outlook before importing).
- ***Shared Tasks***: Allows the user to import all tasks in a pre-selected shared task list. (Note: You will need to open the shared task list in Outlook before importing).
- ***Set Microsoft Outlook Import Options***: This dialog box lets the user specify that the default folder for Tasks and/or Calendar Appointments should always be used when importing. If these options are checked, the user will not be prompted to choose an Outlook folder.



Smart Import from Clipboard

Importing into Milestones from a spreadsheet is made easier with the Smart Import From Clipboard feature. This feature allows you to import a schedule from a spreadsheet without mapping individual fields to their corresponding columns in Milestones.

Import a spreadsheet using Smart Import from Clipboard

1. Open both Milestones Professional and the spreadsheet application.
2. In Milestones, create columns and format the schedule to accept the data from the spreadsheet.
   - In order for the Smart Import to recognize corresponding columns without mapping, column headings in the spreadsheet and in the Milestones schedule must match exactly. *See page 11-13 for accepted SmartColumns.*
   - Set your Milestones date range to accommodate the dates in the spreadsheet (**Dates | Start and End Dates**).
   - If you are importing an outline structure using an Outline Level and/or WBS SmartColumn, set up outline features such as summary bars (see page 4-6) and an indentation value for column text (see page 4-2).
   - If you are importing status using a Percent Complete SmartColumn, set up status features such as **Dates | Date Related Settings |** ☑ ***Symbols/ Bars: Fill to Status Date*** and ***Dates | Start and End Dates | More Settings | Hourly/Minute |*** ☑ ***Allow Hourly/Minute Detail*** (to portray exact percent complete as shown on spreadsheet).
3. In the spreadsheet, highlight and copy the cells to be pasted into Milestones.
   - Each record is expected to be on a line by itself and have the same field layout. Date fields must be formatted in the default date order for your computer. When using a different separator, choose the format with two digits for each, e.g. dd.mm.yy.

Level	WBS	Project	Start	End	Baseline Start	Baseline End	% Complete
1	1	Project					
2	1.a	Computer Checkout	3/9/2009	11/20/2009	3/9/2009	11/20/2009	100
2	1.b	Upgrade	3/9/2009	7/16/2009	3/9/2009	7/16/2009	50
2	1.c	Systems Development	3/9/2009	7/2/2009	3/9/2009	7/2/2009	40
2	1.d	Test Plans & Procedures					
3	1.d.1	Test event 1	3/17/2009	5/11/2009	3/17/2009	5/11/2009	20
3	1.d.2	Test event 2	5/11/2009	8/11/2009	5/11/2009	8/11/2009	50

4. In Milestones, choose **File | Import Options | Custom |** ***Smart Import from Clipboard.***

Accepted SmartColumns for Smart Import from Clipboard

Milestones SmartColumns must be built and formatted before selecting ***Smart Import from Clipboard***. Remember, in order to populate a schedule in Milestones from a spreadsheet accurately, the column headings in the spreadsheet and in Milestones must match exactly. The following SmartColumns can be populated using the ***Smart Import from Clipboard*** option.

- **Start Date** - brings in a milestone*
- **Baseline Start Date** - brings in a milestone*
- **End Date** - brings in a milestone*
- **Baseline End Date** - brings in a milestone*
- **Outline Level** - defines an outline structure
- **WBS** - defines an outline structure
- **Percent Complete** - defines percent complete for a task, creates in a status symbol+

All other columns in the spread sheet will be brought into the Milestones schedule as text columns.

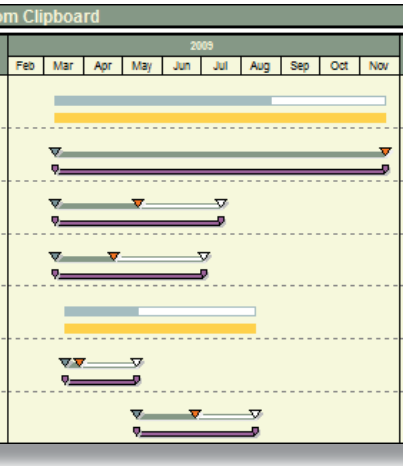
Notes:

* If both a start date and an end date or a baseline start and a baseline end date are on the same row, they will be connected with a bar.

+ The 32nd symbol in the toolbox becomes the status symbol. Double click this symbol in the toolbox to change its properties.

Smart Import from Clipboard

Level	WBS	Project	Start Date	End Date	Baseline Start	Baseline End	% Complete
1	1	Project	3/9/09	11/20/09	3/9/09	11/20/09	65%
2	1.a	Computer Checkout	3/9/09	11/20/09	3/9/09	11/20/09	100%
2	1.b	Upgrade	3/9/09	7/16/09	3/9/09	7/16/09	50%
2	1.c	Systems Development	3/9/09	7/2/09	3/9/09	7/2/09	40%
2	1.d	Test Plans & Procedures	3/17/09	8/11/09	3/17/09	8/11/09	39%
3	1.d.1	Test event 1	3/17/09	5/11/09	3/17/09	5/11/09	20%
3	1.d.2	Test event 2	5/11/09	8/11/09	5/11/09	8/11/09	50%



Create a Milestones Schedule from a Spreadsheet

Milestones' Custom Import feature is designed to to bring in data from any application that can copy data to the Windows Clipboard or to a comma delimited ASCII file.

For example, if you select cells in an Excel spreadsheet and copy them to the Clipboard, you can then map and paste them into Milestones Professional.

Import a spreadsheet using Custom Import from Clipboard

1. Open both Milestones Professional and the spreadsheet application.
2. In Milestones, create columns to accept the data from the spreadsheet.
   - For the spreadsheet below, you would create (in Milestones) one text column for the "Project" text, one for the "Resource" text, an Outline Level SmartColumn, and a Percent Complete SmartColumn for the percent values. (choose **Insert | Rows, Columns** and choose a column type).
   - The start and ends dates are not mapped to columns; they are plotted in the schedule area.
   - Set your Milestones date range to accommodate the dates in the spreadsheet (**Dates | Start and End Dates**).
   - If you are importing an outline structure using an Outline Level and/or WBS SmartColumn, set up outline features such as summary bars (see page 4-6) and an indentation value for column text (see page 4-2).
   - If you are importing status using a Percent Complete SmartColumn, set up status features such as **Dates | Date Related Settings |** ☑ ***Symbols/ Bars: Fill to Status Date*** and ***Dates | Start and End Dates | More Settings | Hourly/Minute |*** ☑ ***Allow Hourly/Minute Detail*** (to portray exact percent complete as shown on spreadsheet).
3. In the spreadsheet, highlight and copy the cells to be pasted into Milestones.
   - Each record is expected to be on a line by itself and have the same field layout. Date fields must be formatted in the default date order for your computer. When using a different separator, choose the format with two digits for each, e.g. dd.mm.yy.

Project	Level	Start	End	Resource	% Complete	Title	Successor
Project	1						
Computer Checkout	2	3/9/2010	11/20/2010	A. Jones	100		
Upgrade	2	3/9/2010	7/16/2010	B. Goodman	50		4FS
Systems Development	2	3/9/2010	7/2/2010	C. Smith	40		
Test Plans & Procedures	2						
Test event 1	3	3/17/2010	5/11/2010	D. Thomas	20		7FS
Test event 2	3	5/11/2010	8/11/2010	E. Lloyd	50	Project Report	

4. In Milestones, choose **File | Import Options | Custom |** ***Custom Import from Clipboard.***

5. In the **Import: Custom Format** dialog box, select an existing filter and choose ***Retrieve Settings***. Or, create a new import filter using the *Create a new filter* instructions which follow. Then continue with Step 6 below.

6. ☑ ***Append Imported Data*** if the data on the clipboard should appear below existing data in the Milestones schedule. Otherwise, existing data will be overwritten.

7. Click ***Continue Import Using Current Filter*** to import using the selected filter's column mapping.

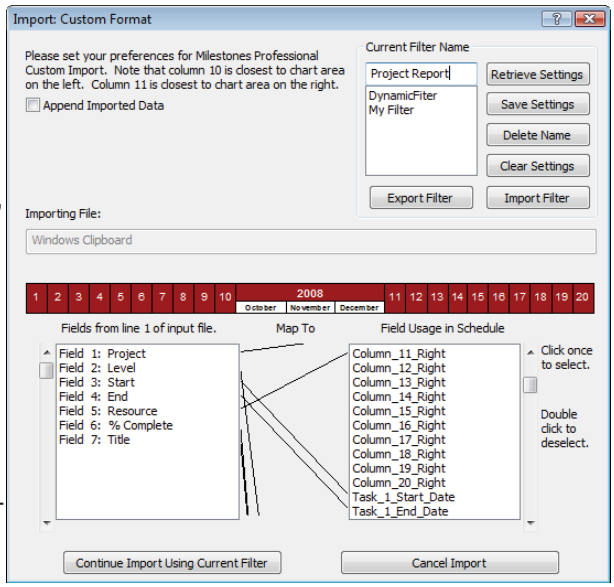
Create a new filter in the *Import: Custom Format* dialog box

Designate where data should be placed in Milestones by mapping spreadsheet fields to Milestones columns or fields. This mapping of fields will then be saved as a "filter."

1. Click ***Clear Settings*** to clear any mapping lines.

2. Under **Fields from line 1 of input file**, click once on a spreadsheet field; under **Field Usage in Schedule**, click on a Milestones column or field where that data should appear.

   A connecting line will appear, showing, for example, that the information from ***Field 1*** will be pasted into ***Column_10_Left***. Double-click a field on the right to remove the mapping line.



- ***Field 1*** is the left-most column in the spreadsheet. ***Field 2*** is the second column, and so on.

- Milestones columns are numbered 1 to 10 on the left side of the schedule, with column 10 being closest to the schedule area. For example, if your schedule only has three columns on the left, then they are numbered 8, 9 and 10 respectively.

- Milestones columns are numbered 11 to 20 on the right side of the schedule, with column 11 being closest to the timeline area.

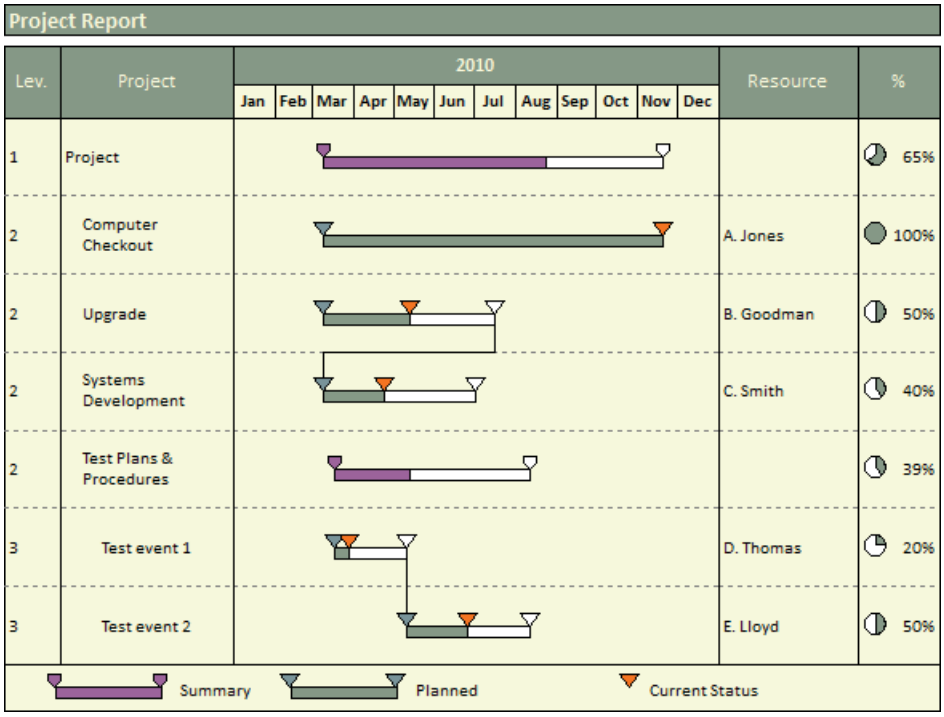
- *Do not map dates to columns.* Map start dates from start-to-finish task bars to ***Task_1_Start_Date*** and their finish dates to ***Task_1_End_Date***. Map the milestone dates (zero duration tasks) to ***Milestone_Date_1***.

- For mapping multiple start and end dates per task row (per record), map the first set of dates to ***Task_1_Start_Date*** and ***Task_1_End_Date***; map the next set of dates to ***Task_2_Start_Date*** and ***Task_2_End_Date***, and so on.
- Map multiple milestone dates per task row to ***Milestone_Date_1,... Milestone_Date_4.***

3. Continue mapping fields.

   See page 11-17 for accepted Milestones fields and SmartColumns.

4. Under **Current Filter Name**, enter a name for these mapping settings.
5. Click ***Save Settings***. These settings can now be retrieved during subsequent uses of Custom Import.
6. Click ***Continue Import Using Current Filter*** to populate the Milestones schedule with the spreadsheet information.
7. If you have created a filter that you need to share with other Milestones users, choose ***Export Filter*** and save the filter as a .txt file. Send the .txt file to colleagues or other Milestones users. They can use the ***Import Filter*** option to transfer the .txt file from a saved location to the Import: Custom Format dialog box.



Custom Import: Accepted Milestones fields and SmartColumns

Column Custom Fields

When mapped into the Milestones fields you see to the right, information from a spreadsheet will display in a Milestones text column. Milestones text columns just display text and do not populate the schedule or calculate values.

Column_1_Left	Column_11_Right
Column_2_Left	Column_12_Right
Column_3_Left	Column_13_Right
Column_4_Left	Column_14_Right
Column_5_Left	Column_15_Right
Column_6_Left	Column_16_Right
Column_7_Left	Column_17_Right
Column_8_Left	Column_18_Right
Column_9_Left	Column_19_Right
Column_10_Left	Column_20_Right

Task Start and End Date Custom Fields

When mapped into both the start and the end date of the Milestones fields to the right, date information from a spreadsheet will display symbols connected with a bar. When a date column from a spreadsheet is mapped to either the Task_#_Start Date or the Task_#_End field a single milestone will be added to the schedule.

Task_1_Start Date	Task_9_Start Date	Task_15_Start Date
Task_1_End Date	Task_9_End Date	Task_15_End Date
Task_2_Start Date	Task_10_Start Date	Task_16_Start Date
Task_2_End Date	Task_10_End Date	Task_16_End Date
Task_3_Start Date	Task_11_Start Date	Task_17_Start Date
Task_3_End Date	Task_11_End Date	Task_17_End Date
Task_4_Start Date	Task_12_Start Date	Task_18_Start Date
Task_4_End Date	Task_12_End Date	Task_18_End Date
	Task_13_Start Date	Task_19_Start Date
	Task_13_End Date	Task_19_End Date
	Task_14_Start Date	Task_20_Start Date
	Task_14_End Date	Task_20_End Date

Task Milestone Date Custom Fields

When mapped into the Milestones fields to the right, date information from a spreadsheet will display individual symbols in a Milestones schedule.

Milestone_Date_1
Milestone_Date_2
Milestone_Date_3
Milestone_Date_4

Task Date and Time Custom Fields

When mapped into the following Milestones fields, date and time information from a spreadsheet will display symbols connected with a bar or just a symbol in a Milestones schedule. These symbols will be placed on the schedule at the date and time as specified in the spreadsheet columns.

Task_5_Start_Year	Task_6_Start_Year	Task_7_Start_Year	Task_8_Start_Year
Task_5_Start_Month	Task_6_Start_Month	Task_7_Start_Month	Task_8_Start_Month
Task_5_Start_Day	Task_6_Start_Day	Task_7_Start_Day	Task_8_Start_Day
Task_5_Start_Hour	Task_6_Start_Hour	Task_7_Start_Hour	Task_8_Start_Hour
Task_5_Start_Minute	Task_6_Start_Minute	Task_7_Start_Minute	Task_8_Start_Minute
Task_5_End_Year	Task_6_End_Year	Task_7_End_Year	Task_8_End_Year
Task_5_End_Month	Task_6_End_Month	Task_7_End_Month	Task_8_End_Month
Task_5_End_Day	Task_6_End_Day	Task_7_End_Day	Task_8_End_Day
Task_5_End_Hour	Task_6_End_Hour	Task_7_End_Hour	Task_8_End_Hour
Task_5_End_Minute	Task_6_End_Minute	Task_7_End_Minute	Task_8_End_Minute

- When Milestones imports from a spreadsheet, it uses the symbols from the toolbox in a specific order. This order is left to right, top to bottom. If you skip a date field in the mapping, Milestones skips a symbol in the toolbox. Once you get to the field Task_Start_Date_15 Milestones repeats the symbols from the toolbox in order again- left to right, top to bottom.

Outline Level/WBS Custom Fields

When mapped into the Milestones fields Outline_Level or WBS_Number, Outline Level and/or WBS information from a spreadsheet will create an outline structure in the Milestones schedule.

Successors Custom Field

When mapped into the Milestones field Successors, successor information from a spreadsheet will display vertical links between tasks in the Milestones schedule. To accurately import successors, format the spreadsheet as follows:

- Click on the cell within the successor field where the link is to start.
- Enter the task row number for the successor of the link (the end symbol). Note: The first task row in spreadsheet is counted as 0.
- Finally, enter the direction of the link. Choose from one of the following options: SF (Start to Finish) SS (Start to Start) FS (Finish to Start) FF (Finish to Finish). In the example on page, 11-14, 7FS would create a link between the finish date on the row of this entry and the start date of Test Event 2, as shown in the example on page 11-16.

Percent Complete Custom Field

When mapped into the Milestones field Percent_Complete, Percent Complete information from a spreadsheet will display the percent complete of a task by establishing a status symbol.

Duration Custom Field

When mapped into the Milestones fields Duration or Negative_Duration, duration information from a spreadsheet will display as a task bar with start and end symbols in the Milestones schedule.

- A positive duration value in the spreadsheet is used to generate task bar with an end symbol when the task's start date is available in the spreadsheet and imported.
- A negative duration value in the spreadsheet is used to generate a task bar and start symbol when the task's end date is available in the spread sheet and imported.
- The Negative_Duration import field in the Milestones custom import should be used only when a negative number can not be used.

Create a Milestones Schedule from CSV and TXT Files

You can use this same Custom Import procedure to read TXT and CSV files (ASCII files with fields separated by commas) into Milestones.

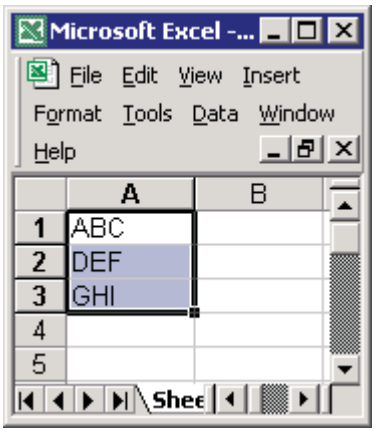
1. Choose **File** | **Import Options | Custom |** ***Custom Import*****.**
2. Select the CSV file, or change the ***Files of Type*** to TXT and select a TXT file.
3. Follow the mapping procedure in the previous section.

Paste Text and Numbers into Single Columns or Cells

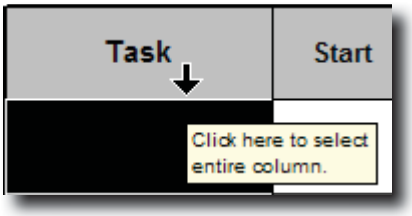
Instead of copying multiple columns of information from another application and using *Custom Import* to map those columns to Milestones, you can copy and paste single columns or cells of data into Milestones columns.

Copy and paste text into column cells

If you have a column of cells or a single cell in another application, such as Excel, you can easily paste that data into any Milestones schedule column.



1. In the other application, highlight and copy the column of text, as shown to the right.
2. In Milestones, select the column that will receive the text, as shown below. The **Selection** menu will display for that column.

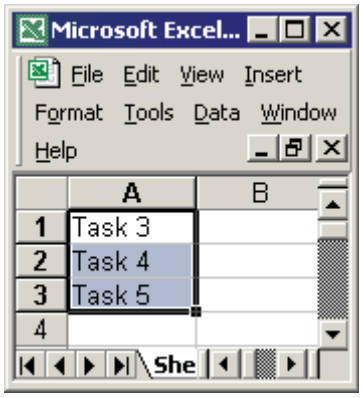


3. Choose **Selection** | **Column Type and Format** | **More Column Options** | ***Paste Column Text***. The results are shown below. Any text already existing in the column will be over-written with the pasted text.

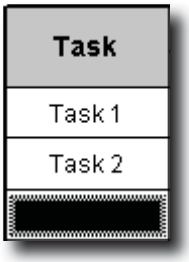
Task	
	Jan
ABC	
DEF	
GHI	

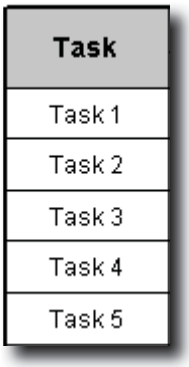
Copy and paste text into column cells below existing text

If you have a column of cells or a single cell in another application, such as Excel, you can easily paste that data into any Milestones schedule column.



1. In the other application, highlight and copy the column of text, as shown to the right.
2. In Milestones, click the tool in the toolbox.
3. Click once in the cell below the existing text—pause—then click again to highlight just that cell, as shown below.





4. Choose **Selection | Cell Text Settings | *Paste.***

The results are shown to the right.

Copy and paste text into a single column cell

You can also paste copied cells into a single column cell in Milestones.

1. In the other application, highlight and copy the column of text (or single text entry).
2. In Milestones, click the text tool in the toolbox.
3. Click once in the cell in which the text should appear.
4. Choose **Selection | Cell Text Settings | *Paste***.

The results are shown to the right.

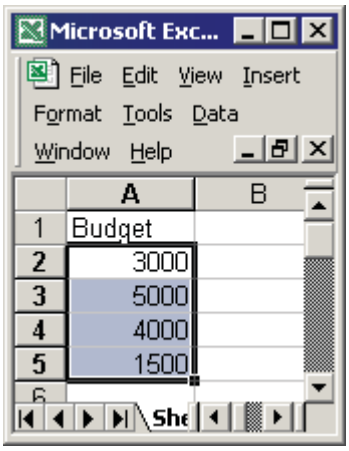
Any text already existing will NOT be over-written with the pasted text.

Copy and paste numbers into a ValueSet

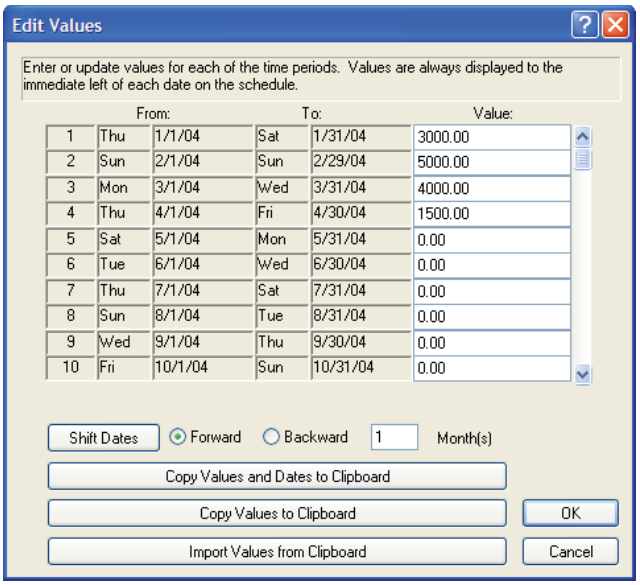
You can paste numbers from the clipboard into a Type 1 or Type 2 ValueSet.

See Chapter 14 to set up these ValueSets.

1. In the other application, highlight and copy the column of values, as shown to the right.
2. In the Type 1 or Type 2 ValueSet's **Edit Values** dialog box, click the **Import Values from Clipboard** button, as shown below:



The ability to copy the numbers to and from the clipboard can be a great time-saver and reduces errors.



	From:		To:		Value:
1	Thu	1/1/04	Sat	1/31/04	3000.00
2	Sun	2/1/04	Sun	2/29/04	5000.00
3	Mon	3/1/04	Wed	3/31/04	4000.00
4	Thu	4/1/04	Fri	4/30/04	1500.00
5	Sat	5/1/04	Mon	5/31/04	0.00
6	Tue	6/1/04	Wed	6/30/04	0.00
7	Thu	7/1/04	Sat	7/31/04	0.00
8	Sun	8/1/04	Tue	8/31/04	0.00
9	Wed	9/1/04	Thu	9/30/04	0.00
10	Fri	10/1/04	Sun	10/31/04	0.00

Copy and paste column text and numbers into other columns

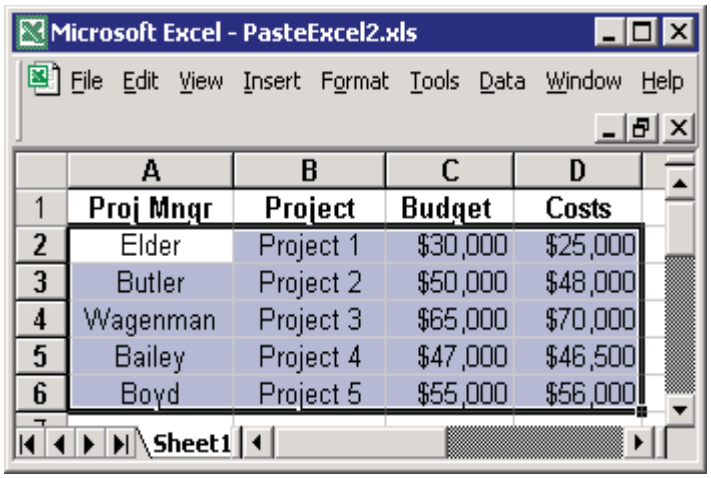
You can copy an entire Milestones column to the clipboard by first selecting the entire column and then selecting **Selection | Column Type and Format | More Column Options |** ***Copy Column Text***.

Once your column of text is on the clipboard, you can paste it into a spreadsheet, another Milestones column, or any program that allows columns to be pasted from the clipboard.

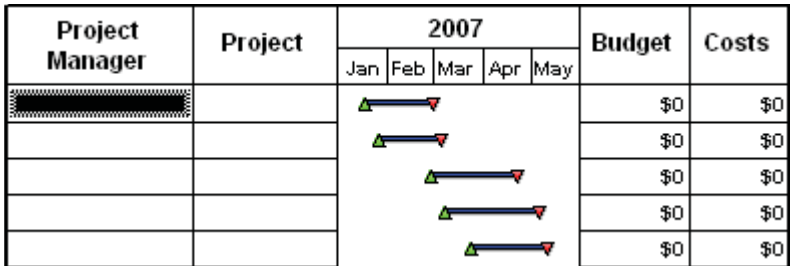
Paste Text and Values into Multiple Columns and Rows

As described earlier in this chapter, the *Custom Import* feature uses “column mapping” to populate the Milestones schedule. Here, you can paste cells from a spreadsheet directly into the Milestones column cells, across many rows.

1. In the other application, highlight and copy the cells, as shown below.



2. In a Milestones schedule that is prepared to accept this specific data (i.e. the columns match the information in the spreadsheet), click the  tool in the toolbox.
3. Click once in the cell that will “anchor” the pasted information—pause—then click again to highlight just that cell, as shown below. This cell is where the pasting of information will begin.



In this example, the Excel spreadsheet has 4 cells horizontally and 5 cells vertically. These cells will paste into Milestones using that same pattern—4 cells across and 5 rows down.

4. In Milestones, choose **Selection | Cell Text Settings | *Paste***.

   The results for this example are below:

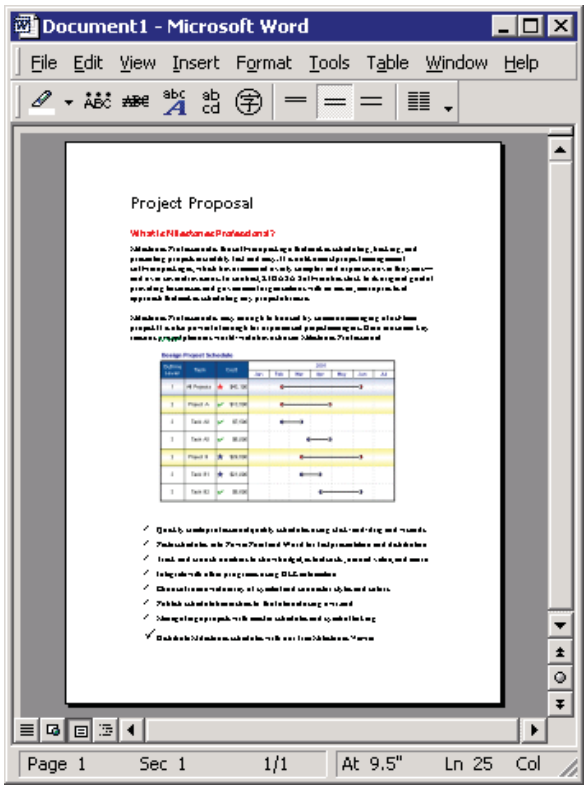
Project Manager	Project	2007					Budget	Costs
		Jan	Feb	Mar	Apr	May		
Elder	Project 1						$30,000	$25,00
Butler	Project 2						$50,000	$48,00
Wagenman	Project 3						$65,000	$70,00
Bailey	Project 4						$47,000	$46,50
Boyd	Project 5						$55,000	$56,00

You can also paste cells below existing column cells in Milestones.

Link and Embed Schedules in other Applications

Because Milestones Professional is an Object Linking and Embedding server, it is possible to paste entire schedules into other OLE compliant applications, such as the Microsoft Office applications.

Once embedded or linked, you can launch the schedule in Milestones from that application, by double-clicking the schedule.



Embed a schedule in another document

An embedded schedule becomes a part of the document in which it is embedded. The embedded schedule is not linked to the original source schedule—meaning a change in the source schedule does not equate to a change in the embedded schedule.

1. In Milestones, choose **Connections** | **Clipboard | *Copy Schedule to Clipboard.***
2. In your other Windows document (Word, Excel, or any other OLE application), click **Edit** | **Paste Special**. The document's **Paste Special** dialog box appears.
3. Choose **Paste** and **Milestones Professional Schedule Object** and then click ***OK***.
4. Close the Milestones schedule used in Step 1, and then double-click on the embedded schedule. The schedule opens in Milestones.
   - If you make changes to the embedded schedule, then those changes will be retained in the embedded schedule in the Windows document (not the source file in Milestones) when the schedule is closed.

Link a schedule in another document

When a Milestones schedule is inserted into a document as a "linked object," a connection is maintained between the source schedule and the inserted schedule—meaning a change in the source schedule equates to a change in the schedule that was inserted in the document.

1. In your Windows document (Word, Excel, or any other OLE application), click **Insert** | **Object**.
2. Under the **Create New** tab, scroll down the **Object type** list, and choose **Milestones Professional Schedule**.
3. Under the **Create from File** tab, click the **Browse** button.
4. Locate the schedule, click once on it, and then click the **Insert** button.
5. **Link to file** and then ***OK***. [Go to Step 9.]

-or-

6. In Milestones, choose **Connections | Clipboard | *Copy Schedule to Clipboard.***
7. In your other Windows document (Word, Excel, or any other OLE application), click **Edit** | **Paste Special**. The document's **Paste Special** dialog box appears.

8. Choose **Paste Link** and **Milestones Professional Schedule Object** and then click ***OK***.
9. Double-click on the linked schedule.
    - The schedule will open within Milestones.
    - Changes to the source schedule will appear in the linked schedule.

Is linking or embedding the best approach?

Use linking if you want to automatically update the linked schedule in the destination document when the schedule is updated. Linking is the best approach if you need to maintain the schedule separately from the document in which it is included. Remember, however, that if you move a document containing links to other objects from your computer to another computer, you will need to re-link those documents.

Embedding is a better choice if you want to keep your document portable.

If different pages of the schedule need to be displayed in another document, then use neither linking nor embedding—instead paste each schedule page as a picture, as described in the following section.

Paste a Picture of the Schedule into another Application

When you only need a static image of the schedule, generate a metafile (enhanced picture) of the schedule and paste it into another application.

Compared to linking/embedding, metafiles take up less space in the other application's file, since just the picture is pasted and not the entire Milestones file.

Further, linking and embedding do not support different Milestones schedule pages in the other application.

1. Open Milestones and the application in which the metafiles will be pasted.
2. In Milestones, choose **Connections | Clipboard |** ***Copy Metafile (Picture) to Clipboard***.
3. Click ***OK*** when the **Metafile is on the Clipboard** message appears.
4. In the other application (Word, Excel, etc.), choose **Edit** | **Paste Special**.
5. Choose **Picture (Enhanced Metafile)**, and then ***OK***.
6. Resize the schedule graphic by clicking and dragging the image's corners and edges.
7. Repeat for other schedule pages in Milestones.

Copy all Pages to PowerPoint

In addition to copying and pasting single metafiles of schedule pages, it is possible to copy all pages to a PowerPoint presentation with one click. PowerPoint 2000 or later must be installed.

1. Choose **Connections** | **Microsoft PowerPoint** | ***Copy all pages to PowerPoint***.
2. You will be prompted to choose whether or not you would like the Milestones pages to be pasted in a new PowerPoint presentation or after the selected slide in an active (open) PowerPoint presentation. Choose ***Yes*** to create a new presentation; choose ***No*** to paste in the open presentation.
3. Optionally, choose **Connections** | **Microsoft PowerPoint** | ***Create PowerPoint Slides from Project*** to open the **Project to Milestones Wizard** and paste the imported Milestones schedule into a PowerPoint presentation.

Export as XML

You can export a Milestones Professional schedule in an XML format. Simply map the columns in Milestones to selected fields, save those preferences as an XML file, then open that file in another application which reads XML files. The same basic method applies to MPX exporting.

Choose which Milestones columns to export to XML:

1. Choose **Connections | Other** | **Export Schedule to XML** | ***XML Column Mapping.***
2. On the **XML Export Preferences** dialog box, choose **<NAME>** next to the column heading for the project activities.
   - This is the only required field to export. Other critical data is exported by default (e.g. start and duration values for each activity).
3. Choose other fields next to any other Milestones columns you wish to export.

Export the selected data to an XML file:

1. Choose **Connections | Other** | **Export Schedule to XML |** ***Export Schedule to XML File***.
2. Enter a File name and ***Save***.

Microsoft Outlook Export

Tasks can also be exported from Milestones to Outlook by choosing **Connections | Microsoft Outlook |** ***Export Tasks to Outlook*****.** Choose which column in Milestones contains task names and select an existing or new task folder in Outlook for the exported task list.

Direct to Microsoft Project Export

Export your Milestones tasks to Microsoft Project quickly and easily. Choose **Connections | Microsoft Project | *Export to Project***.

When the Milestones to Project Export Options dialog box appears, choose:

- ☑ ***Generate multiple Microsoft Office Project schedules for this Master schedule.*** If your schedule is a Milestones Professional master schedule and you would like to export the entire hierarchy, choose this option.
- ☑ ***Adjust row height in Microsoft Office Project as needed*** to allow Project to adjust row height based on information in the task row.
- ☑ ***Tag this Schedule for later Refresh.*** If you would like the Milestones chart to be tagged for a later refresh from the exported Project file, choose this option.

Other Export and Import Formats

Milestones Professional continues to support all the proprietary CSV based import and export formats. The primary proprietary format is the “Expanded 20 Column” format. This format gives you complete access, via a CSV file, to most task row and symbol properties.

When Milestones is started from a command line or by another application, it is possible to pass it a CSV file, and other information needed, via the command line. This is an alternate method of controlling Milestones via another application. For example, you could have an Access application create a CSV file in a format that Milestones can read, then start Milestones and have it automatically read and format the file for display.

Automation

The automation interface, built into Milestones Professional, lets you use programs written in Visual Basic, or any other language that supports automation, to interchange data programmatically between Milestones Professional and other automation capable applications, such as Microsoft Project, Access, Excel, and more.

The automation-based Microsoft Project feature was done using Visual Basic. The use of automation-based interfaces enables the interface to be much more dynamic and flexible than a file-based interface such as CSV or MPX.

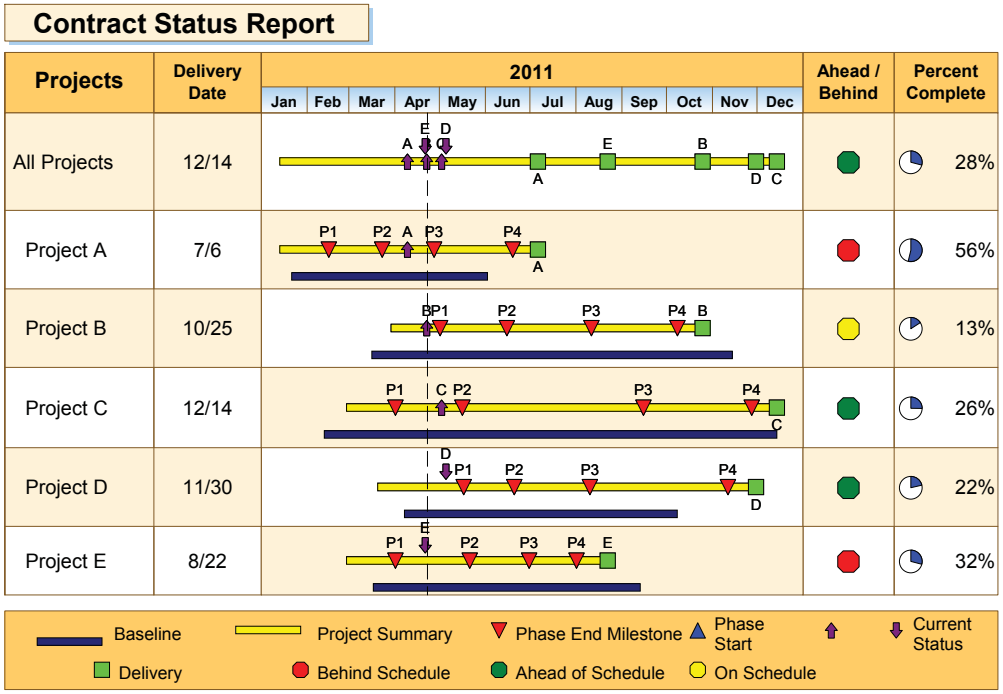
Complete documentation of all the methods and properties supported by this interface, as well as program examples, are given under **Help | Help Files | *Automation Help***.

Screen capture of the programmer’s page and where to find.

Chapter 12: Custom Formatting for Presentation

One of the key strengths of Milestones Professional is its excellent customization and presentation capability. Virtually every aspect of your schedule, including background colors, shading patterns, special fading effects, symbol colors, bar colors, and chart size can be customized.

Apply features such as templates and color themes to quickly change the look of the schedule.



Charts and Templates

Templates retain the formatting (the “look” of a chart) while *charts* preserve schedule details (such as task names, dates, value entries, etc.) and the schedule format.

You can overlay a blank schedule (a chart) with a template and then fill-in the schedule data, or overlay an existing chart with a template.

Standard Templates come with the software and can be applied at any time, even while using the **Milestones Professional Setup Wizard**, found by clicking **File | Files and Templates: Open and Save Options | *Wizard***.

Personal Templates are user-created, saved, and then applied to charts.

When saving a file as a Personal Template or Standard Template, these elements of the schedule *are saved* with the template:

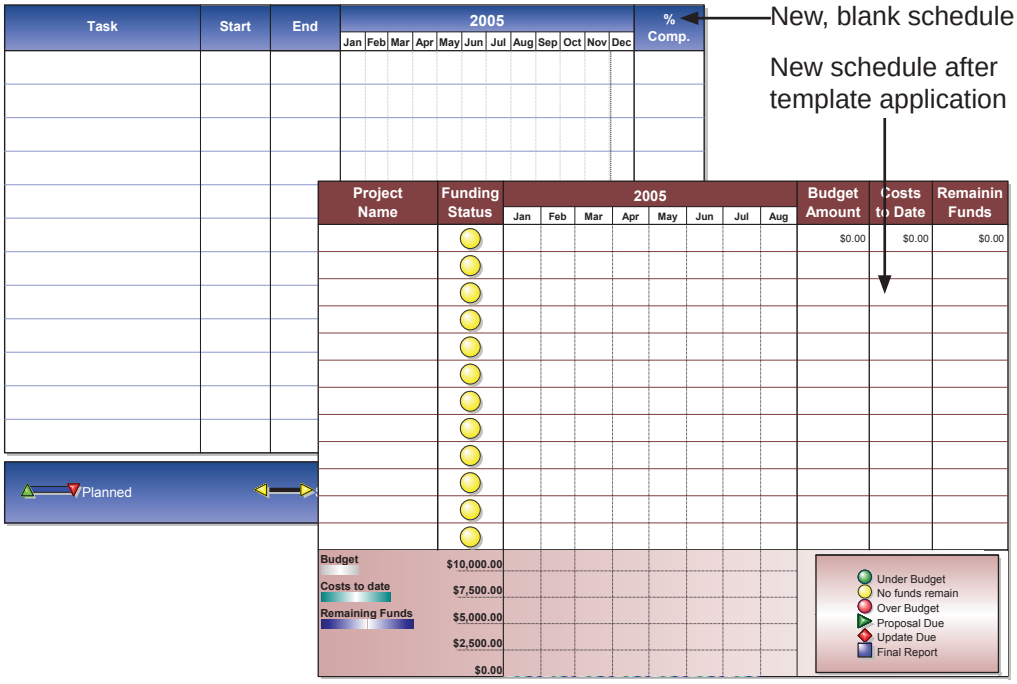
- The schedule layout - chart size, margins, column widths, legend height, rows per page
- Background color, frame and shadow
- Calendar icons in date SmartColumns
- Chart title text format and background format (but not the chart title text)
- Column headings and SmartColumn settings
- “Column Text Containing” filters which were saved
- Current date line and text display
- DataGraph and ValueSet formatting
- Date headings and all timescale settings
- Date sensitivity options
- Default symbol size
- Default text styles
- Dependency mode setting
- Embedded graphics
- Gridline settings
- Legend entries and legend format
- Month and weekday name overrides
- Multi-Column Sort names which were saved
- Override Symbol Date and Text Display options
- Page number display
- Status line display toggle and properties
- Symbol date format
- Toolbox settings, including the size of the toolbox, and the symbols and bars used
- View modes: Gantt, Calendar, Duration, Percent Complete

When saving a file as a Personal Template or Standard Template, these elements of the schedule *are NOT saved* with the template:

- Bars and lines in the DataGraph
- Bookmarks
- Freeform text
- Graphics files that are not embedded
- Hidden menu items (this is a global setting applied to all schedules)
- Lines, circles or boxes drawn with the drawing tools
- Number and currency formats
- Schedule title
- Sidebar and toolbar shortcut button list (this is a global setting applied to all schedules)
- Symbols and bars on the schedule
- Task names on the schedule and any text entered into columns
- Values in the ValueSets

Format a blank schedule with a selected template

Click **File | Files and Templates: Open and Save Options |** ***New*** to open a blank schedule. Choose **File | Files and Templates: Open and Save Options | Open | *Personal Template*** or ***Standard Template***. Click on the file name of the template you want and then click ***Open*** (an .MTP file).

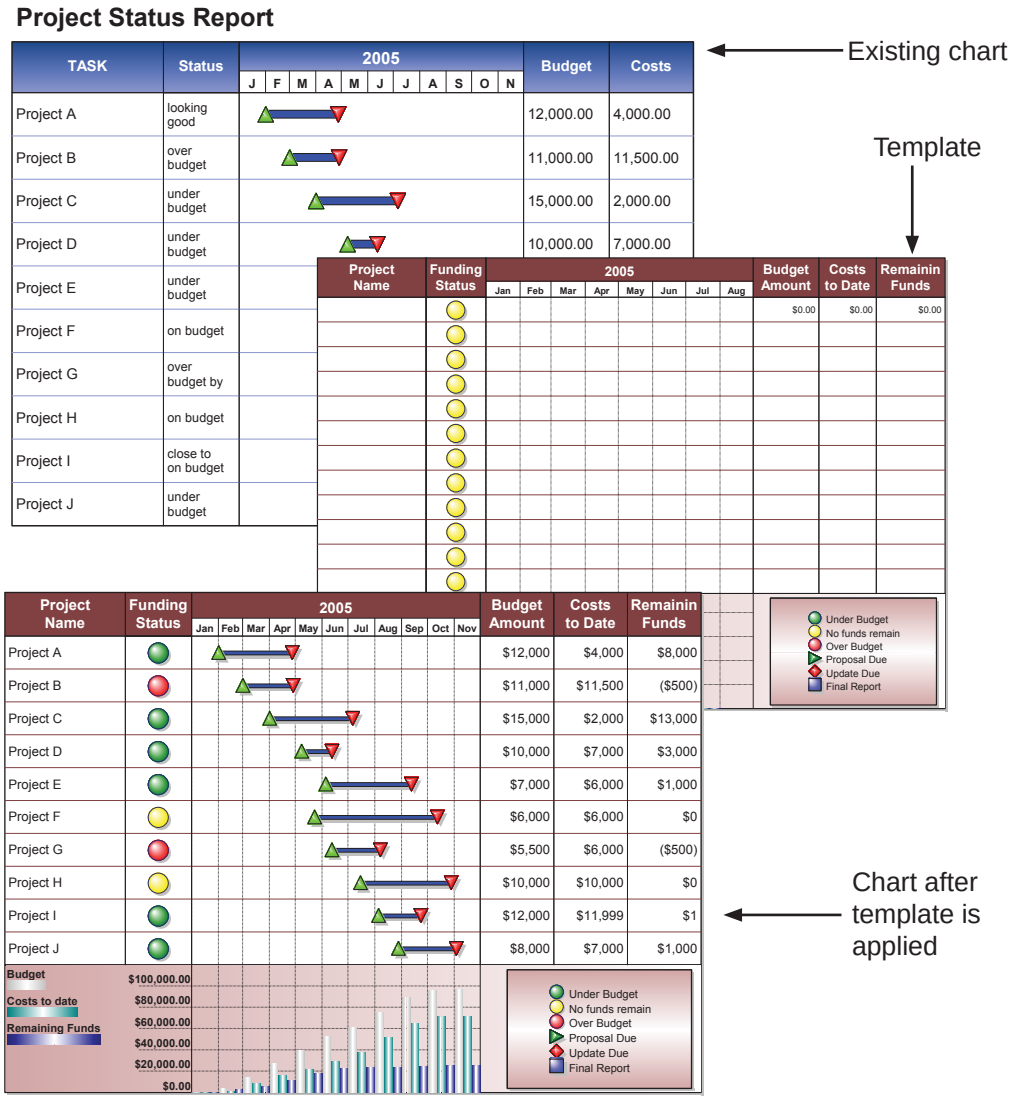


Format an existing schedule with a selected template

Open an existing schedule. Then open a template that instantly formats the schedule!

The columns in the existing schedule should match the column arrangement and column types in the template, as shown in the example below. The only exception: the template can have extra columns positioned at the far right or left, as shown by the “Remaining Funds” column in the template below.

The template’s symbols replace those of the original schedule, according to their positions in the toolbox.



To format an existing schedule (chart) with a template:

1. Open your schedule if it is not already open.
2. Choose **File | Files and Templates: Open and Save Options | Open** ▼ **|** ***Personal Template*** or ***Standard Template***.
3. Locate the template (MTP file) that you want.
4. Click on the file name, and then click ***Open***.

Setup Wizard templates

When starting a new schedule using the **Milestones Setup Wizard**, choose from dozens of ready-to-go schedule templates.

1. Choose **File | Files and Templates: Open and Save Options | *Wizard.***
2. ◉ ***Select Predesigned Template***
3. Under **Template Category**, choose a category—each has its own set of templates.
4. Under **Templates in current template folder**, select a template.
5. Choose ***Next***, then enter a schedule title.
6. Choose ***Next***, then select a schedule start date.
7. Click ***Finish***.

Most templates have basic instructions on how to use the schedule. These instructions are in a freeform text box that can be deleted by clicking on the box once with the arrow tool and pressing the Delete button on your keyboard.

Templates are categorized by industry and common usage. Here is a sampling of those categories—

- Baseline Schedules
- Basic Gantt
- Budget Tracking
- Earned Value
- Events Tracking
- Project Presentations
- Resources
- Stoplights
- Track Status
- Aerospace & Defense
- Architecture & Construction
- Business & Finance
- Education & Training
- Engineering
- Government
- Manufacturing & Production
- Sales & Marketing
- Technology

Create and save a template

Open a blank schedule and format it—see the beginning of this section for schedule areas whose format is retained by a template.

Or, open an existing schedule that is already formatted to your liking.

1. Chose **File** | **Files and Templates: Open and Save Options** | **Save As...** | ***Personal Template***.
2. Enter a template name in the field labeled **File Name**.
3. If you wish to use this template as the default, choose **File | Files and Templates: Open and Save Options | Save As... | *Standard Template*** and name the template **default.mtp**.
4. Click ***Save***.

If the template was saved as default.mtp, when you click **File** | **Files and Templates: Open and Save Options** | ***New***, the new default template will appear.

Color Themes

Color themes set predefined background shading for most areas of the schedule -- task rows, chart title, date headings, columns, column headings, schedule background, legend, DataGraphs and toolbox symbol and bar colors.

Choose from more than 85 color themes or create your own, then apply the theme to a new or existing schedule for instant color formatting.

Color themes do not override column cell by cell settings. To reset all individual overrides made to column cell text color and size back to the schedule defaults, select an entire column, right-click and choose ***Reset all Row and Cell Font/Color Overrides for all Columns***.

The program will remember the last color theme category used.

Create a color theme

Color themes which you save are listed in the **Format | Color Themes** drop down categories of *Personal Themes* and *All Themes*.

1. Format your schedule's background shading for task rows, chart title, date headings, columns, column headings, legend, DataGraphs and toolbox symbol and bar colors. You may choose to create either outline level shading, gridline, and text formatting; or create default horizontal task row shading and gridline formatting.
2. After your schedule has the look that you want, choose **Format | Color Themes | *Manage Color Themes***.

3. In the **Manage Color Themes** dialog box, enter a theme name.
4. Click ***Save Theme***, and then click ***Close*** to exit.

Delete a color theme

1. Choose **Format | Color Themes | *Manage Color Themes***.
2. Click on a name from the color theme list.
3. Click ***Delete Selected Theme.***
4. Click ***Close.***

Apply a color theme

A color theme can be applied to a new or existing Milestones schedule.

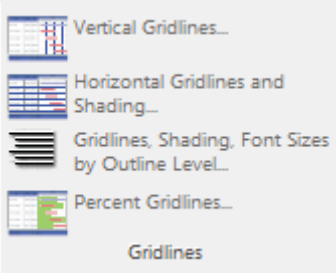
1. Choose **Format | Color Themes**.
2. Choose a color theme category. The ***All Themes*** category lists all available color themes.
3. Click on a color theme from the list, and see a preview of the theme as it applies to your schedule (click ***Undo Color Theme*** to return to the original schedule).
   - *Use Outline Shading*: Applies the color theme shading to all schedule areas and uses the outline level shading for task shading, which overrides all other shade settings.
   - *Use Schedule Shading*: Applies the color theme shading to all schedule areas and uses the default horizontal task row shading for task shading (either no shading or odd/even row shading), instead of the outline level shading.
   - *Do not alter Task Shading*: Applies the color theme shading to all schedule areas, yet retains the schedule's current outline level shading.
   - *No Task Row Shading*: Applies the color theme shading for all schedule areas, yet clears all task row shading. The schedule's background shading is displayed.

☑ *Include Toolbox Colors*: Applies the color theme's toolbox colors to the existing toolbox.

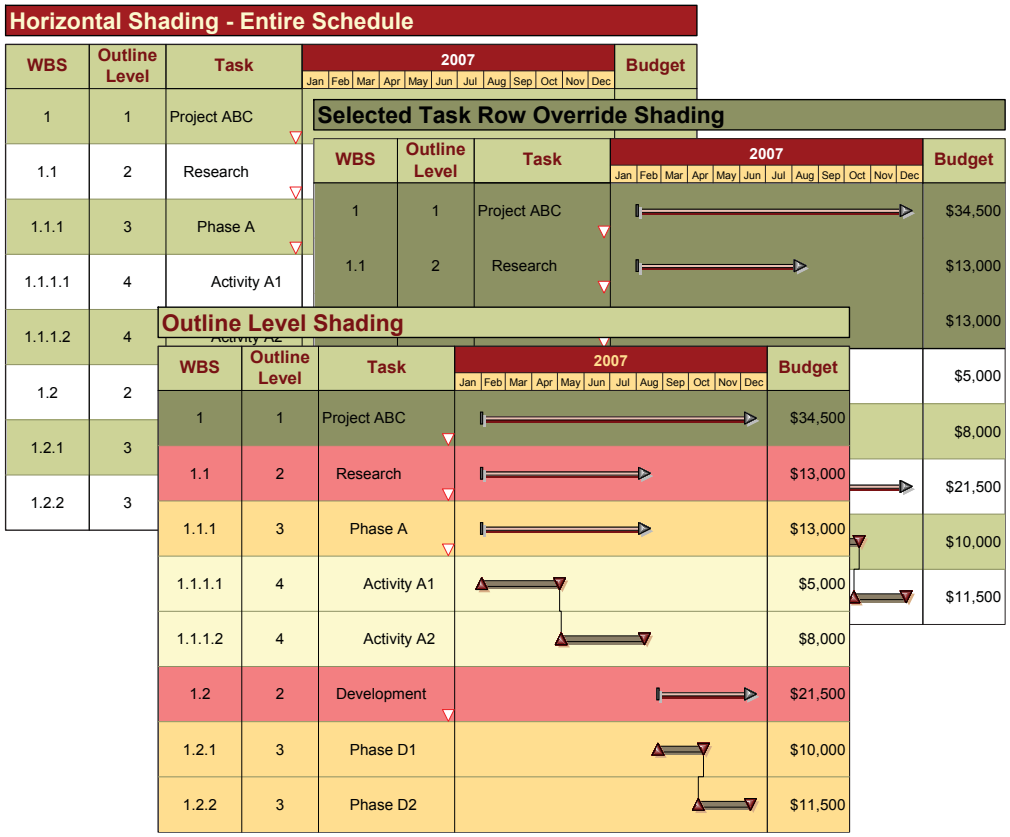
☑ *Leave out Gridlines:* Applies the color theme without affecting existing gridlines.

Task Gridlines, Shading, Text and Summary Formatting

Milestones offers many task row gridlines, shading, text, and summary bar formatting options, including:



- Default gridline and shading settings for all, only odd, or only even task rows. These settings are accessed in **Format | Gridlines |** ***Horizontal Gridlines and Shading...***
- Override individual gridline and shading settings for selected task rows. These settings are accessed by selecting the rows to be overridden and using the **Selection** tab of the enhanced toolbar.
- Override gridlines, shading, text, and summary bar settings by outline level. These settings are accessed in **Format | Gridlines |** ***Gridlines, Shading, Font Sizes by Outline Level...***



Horizontal gridlines and shading for entire schedule

When formatting the horizontal gridlines and shading for the entire schedule, keep in mind that these settings will be overridden if you set up gridlines, shading, and font sizes by outline level (as described later in this chapter). Therefore, you should choose to use to define either horizontal gridlines and shading for the entire schedule or outline level settings.

Horizontal gridlines between task rows

1. Choose **Format | Gridlines | *Horizontal Gridlines and Shading...*** The following dialog box appears:
2. Click the **Gridlines** tab.

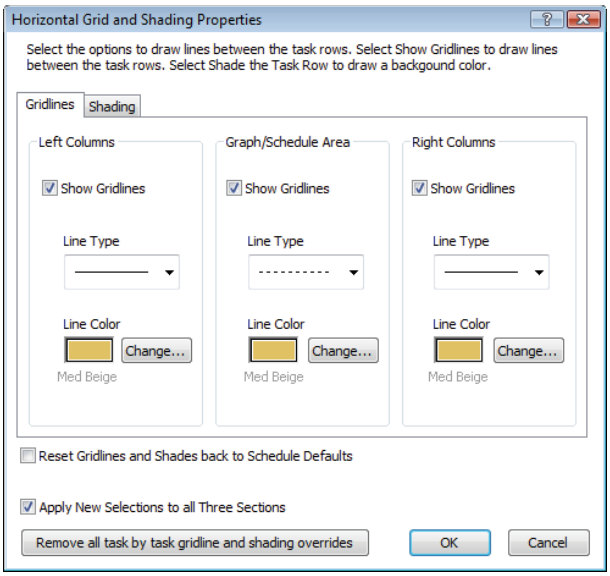
   ☑ ***Apply New Selections to all Three Sections*** to quickly format all three areas of the schedule—*Left Columns*, *Graph/Schedule Area* and *Right Columns*. Any choice in one section is applied to the other two sections.

   OR choose from the following:

   ☑ Left Columns - all columns to the left of the schedule area

   ☑ Graph/Schedule Area - the area in which the symbols and bars are located

   ☑ Right Columns - all columns to the right of the schedule area



3. Under **Left Columns**, ☑ ***Show Gridlines*** to display gridlines between tasks
4. Under **Line Type**, choose a gridline pattern.
5. Under **Line Color**, click the ***Change*** button and choose a gridline color.

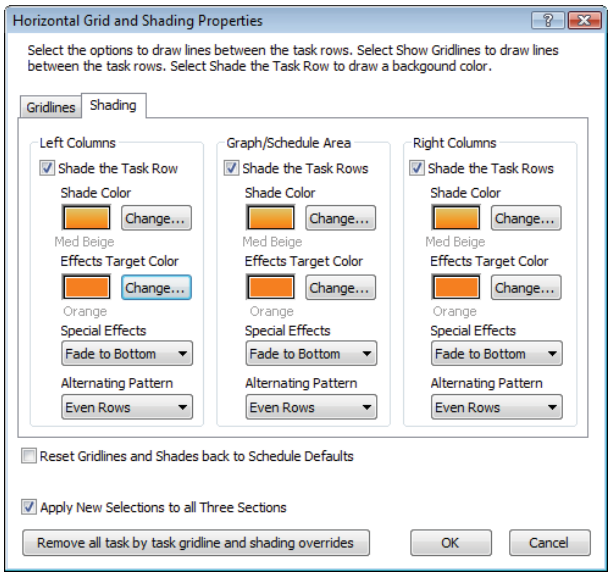
If you ☑ ***Reset Gridline and Shades back to Schedule Defaults***, then all settings will be cleared.

Press the ***Remove all task by task gridline and shading overrides*** button to remove previously set individual or selected task row overrides as described on the next page.

Horizontal task row shading

7. Click the **Shading** tab.

   ☑ ***Apply New Selections to all Three Sections*** to quickly format all three areas of the schedule—*Left Columns*, *Graph/Schedule Area* and *Right Columns*. Any choice in one section is applied to the other two sections.



8. Under **Left Columns**, ☑ ***Shade the Task Row*** to shade task rows to the left of the schedule area.
9. Under **Shade Color**, click the ***Change*** button and select a background color.
10. Under **Effects Target Color**, click the ***Change*** button and select a target color that the color choice in Step 9 will fade into.
11. To implement the target color, choose a **Special Effects** fading option.
12. Under **Alternating Pattern**, choose to shade only **Odd Rows** or **Even Rows**.
13. Click ***OK*** to apply the selections

Gridlines and shading for selected task rows

You can set the gridlines and shading options for specific task rows.

1. Click the arrow tool in the toolbox.
2. While holding the **Ctrl** key, click once on the appropriate task rows (click in the column area). Use the **Shift** key to select a range of task rows. This will display the **Selection** menu.
3. Choose **Selection | *Task Row Settings* | *More Task Row Options* | *Gridline/Shade***.
   - A message may appear that requires you to turn-off **Automatically Apply Outline Level…** before you can set gridline and shading options for selected tasks. To have the software do this for you, click **Yes**.
4. In the **Horizontal Grid Properties for Selected Task Rows** dialog box, make gridline and shading selections.

Apply only to visible tasks: Check this option if there are hidden task rows, as found in a filtered or rolled-up schedule. When using the *Shift* key to select contiguous task rows for formatting, non-visible task rows will also be formatted unless this option is checked.

Outline level settings - gridlines, shading, text, and summary bars

Each outline level can have its own task row background shading, gridlines, text and summary bar formatting. Your settings can be automatically applied as you outline each task row and add new task rows. These settings override any formatting done in Horizontal Gridlines and Shading or horizontal gridlines for selected task rows.

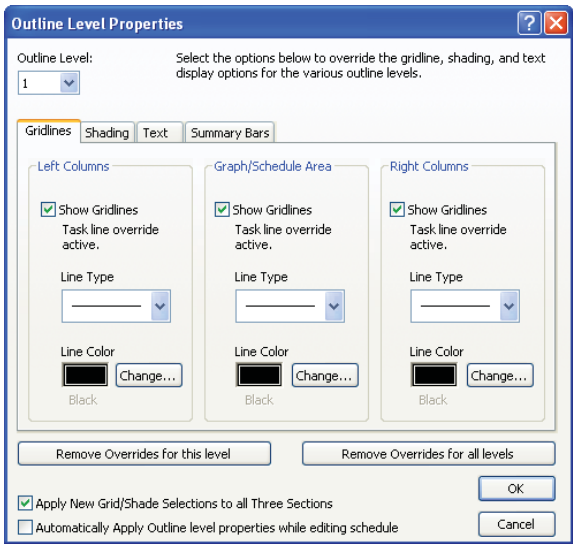
1. Choose **Format | Gridlines | *Gridlines, Shading, Font Sizes by Outline Level***.

- ***Apply New Grid/Shade Selections to all Three Sections*** to quickly format all three areas of the schedule—*Left Columns*, *Graph/Schedule Area* and *Right Columns*. Any choice in one section is applied to the other two sections.
- ***Automatically Apply Outline level properties while editing schedule*** must be checked for outline properties to be applied to the schedule.
- ***Remove Overrides for this level***: Clears all gridlines, shading, text and summary bar settings for the selected outline level.
- ***Remove Overrides for all levels***: Clears all gridlines, shading, text, and summary bar settings for all outline levels.

2. From the drop-down menu 1, choose the **Outline Level** that you will be formatting. After making selections for this outline level, choose from one of twenty other outline levels.

Gridlines tab:

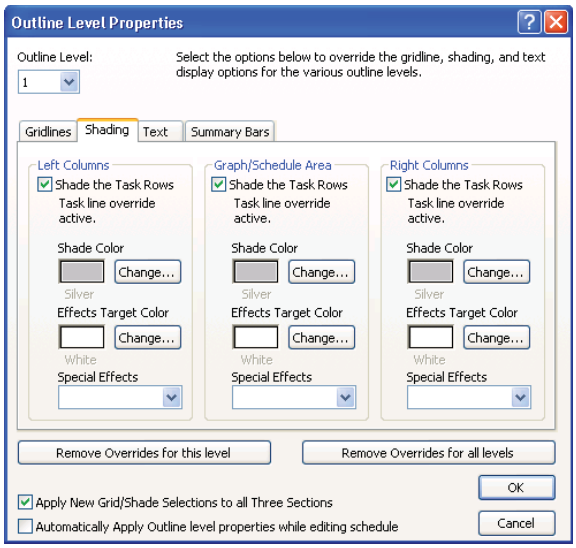
1. Under **Left Columns**, click once on ***Show Gridlines***. (If appears next to ***Show Gridlines***, the default settings in **Horizontal Gridlines and Shading** are being displayed).
2. Click again to ***Show Gridlines***, or leave as to hide gridlines.
3. Choose a **Line Type**.
4. Under **Line Color**, click **Change** and choose a color.
5. Repeat for **Graph/Schedule Area** and **Right Columns** unless **Apply New Grid/ Shade Selections to all Three Sections** is checked.



Gridline settings apply to the task row's lower gridline border.

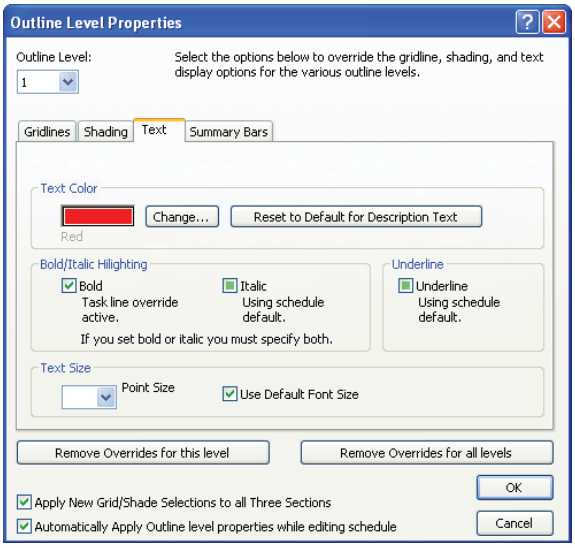
Shading tab:

1. Under **Left Columns**, click once on **Shade the Task Rows** to turn-off the default settings.
2. Click again to ***Shade the Task Rows,*** or leave as .
3. Under **Shade Color**, click **Change** and choose a color.
4. Under **Effects Target Color**, click ***Change*** and choose a color.
5. Under **Special Effects**, choose a fade setting for the two colors.
6. Repeat for **Graph/Schedule Area** and **Right Columns** unless **Apply New Grid/ Shade Selections to all Three Sections** is checked.



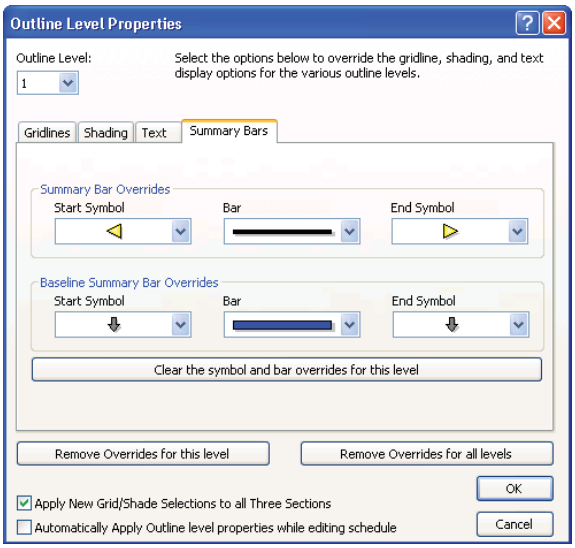
Text tab:

1. Choose a **Text Color** for the text in the columns (not the schedule area).
2. Under **Bold/Italic** and **Underline**, click once on ***Bold***, ***Italic***, and/or ***Underline*** to turn-off the default settings.
3. Click again on any of these to ☑ ***Bold, Italic***, and/or ***Underline***, or leave as ☐.
4. Note that if ***Bold*** is ☑ or ☐, then ***Italics*** must have the same setting or be set to ■ ***Using schedule default***. For example, you cannot set ***Bold*** to ☑ and ***Italics*** to ☐ .
5. Choose a **Text Size**.



Summary Bars tab:

1. Under **Summary Bar Overrides**, choose a summary bar **Start Symbol**, **Bar** and **End Symbol** for this outline level.
2. Set baseline summary symbology under **Baseline Summary Bar Overrides**. This does not change the selected symbols to Baseline in the toolbox.
3. Click **Clear the symbol and bar overrides for this level** to clear only the settings under the **Summary Bars** tab.

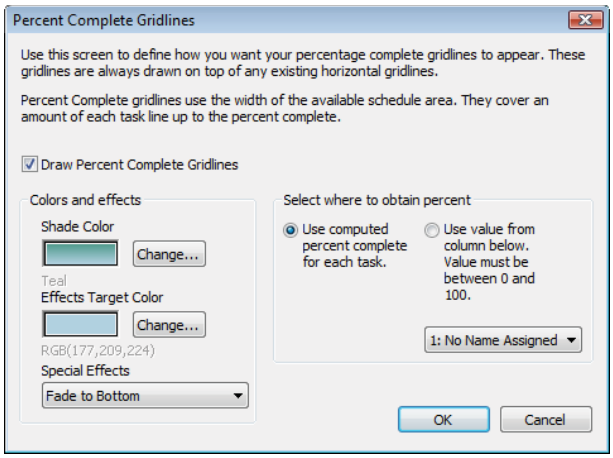


The outline level summary bar settings override the default summary bar settings (**Layout | Other |** ***Summary Bar Settings*** and ***Baseline Settings***).

Percent Complete Gridlines

The Percent Complete Gridlines option is a horizontal shading feature that fills in the task row within the schedule area by an amount determined from the percent complete of a given task. Percent complete gridlines use the length of the available schedule area to determine the amount shaded per task row. Therefore, a task that is 100% complete will have percent complete gridlines that fill the entire task row.

1. Choose **Format** | **Gridlines** | ***Percent Gridlines***.



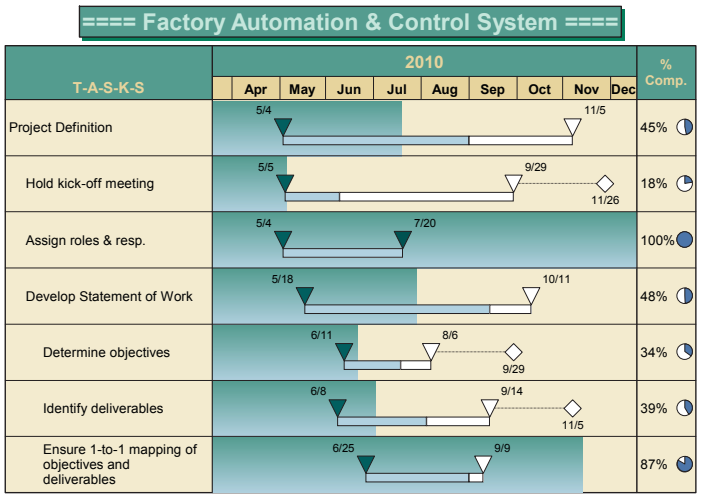
2. ☑ ***Draw Percent Complete Gridlines*** to show the percent complete gridlines in the schedule area.

3. Under **Colors and effects**, press the ***Change*** button to choose a **Shade Color** and an **Effects Target Color**.

4. Change the **Special Effects** for the color fading from the **Shade Color** to the **Effects Target Color**.

5. Under **Select where to obtain percent**, choose:

- ◉ ***Use computed percent complete for each task*** to fill in the schedule area of the task row according to its percent complete status.
- ◉ ***Use value from column below*** to pick a column from the drop-down menu which will compute the amount of fill for the schedule area of the task row.



Column and Column Heading Shading and Text

Set the shading and text properties for the columns and column headings.

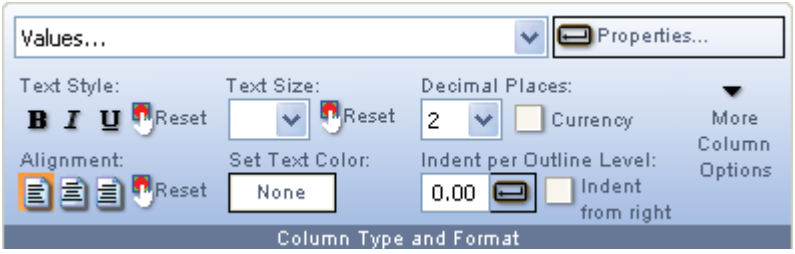
Column text and shading

Change the default setting for text and values displayed in all columns (not column heading text) under **Format** | **Default Text** | ***Column Text***.

To override the default column text and background settings for an individual column:

1. Click once on the column heading whose column properties you wish to change. This should display the **Selection** menu. Choose **Selection | Current Object: Column Heading |** ***Switch to Column***.
2. In **Selection | Column Background**, choose the ***Background Color*** and ***Background Target Color*** by clicking the box as depicted below.

3. Change the ***Background Color Special Effects*** for the color fading from the ***Background Color*** to the ***Background Target Color***.
4. In **Selection | Column Type and Format**, make selections for ***Text Style, Text Color, Alignment***, and ***Text Size*** to override the defaults.

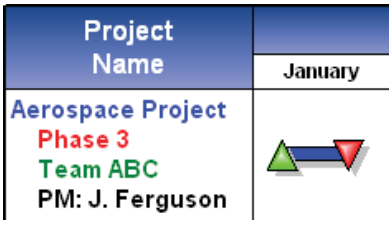


5. Under ***Indenting per Outline Level***, enter a value in inches to indent the text by outline level.
6. Under ***Decimal Places***, choose the number of decimals that will display for numbers in a SmartColumn.
7. ☑ ***Currency*** to add a currency sign to values in the column.
   - The currency symbol is controlled under **Format** | **International** | ***International, Number, and Currency Settings***.

   See Chapter 14 for more about displaying numbers.

Column text color override for individual column cell

Text in column cells can be formatted for a specified color, on a line-by-line basis, for the first five lines in the cell.

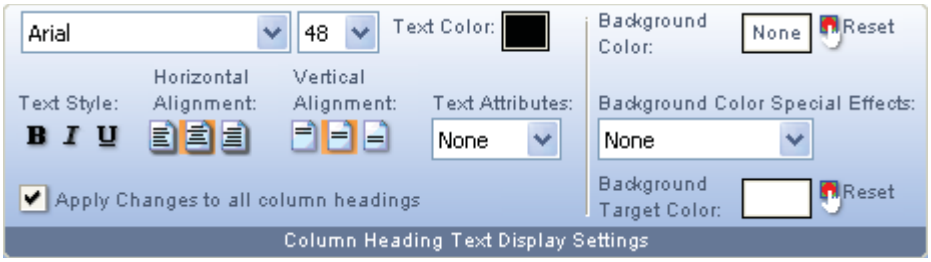


1. Click the arrow tool in the toolbox.
2. Click once on the column cell. This should display the **Selection** menu. Choose **Selection | Current Object: Task Row |** ***Switch to Selected Cell***.
3. Choose **Selection | Cell Text Settings |** ***Set Line by Line Text Color Overrides.***
4. For each of the first five lines of text in the column cell, choose an override color.
5. Choose ***OK*** to return to the schedule.

Column heading text and shading

1. Click once on the column heading whose properties you wish to change. This should display the **Selection** menu.
2. In **Selection | Column Heading Text**, enter up to two lines of text.
4. In **Selection | Column Heading Text Display Settings**, make selections for ***Text Style, Horizontal Alignment,*** and ***Vertial Alignment***.

   ☑ ***Apply Changes to all column headings*** to apply the format settings to all other column headings.



5. Choose a ***Text Color***.
6. Select a ***Size*** for the column heading text.
7. Next to ***Background Color***, click the box to change the color.
8. Next to ***Background Target Color***, click the box to change the color.
9. If you choose one of the ***Background Color Special Effects*** for fading, the ***Background Color*** selection fades into the ***Background Target Color***.

Vertical Gridlines

Vertical gridlines are aligned along time boundaries (years, fiscal years, quarters, months, weeks, days, hours, minutes, and custom headings) and extend from the date heading to the bottom of the schedule.

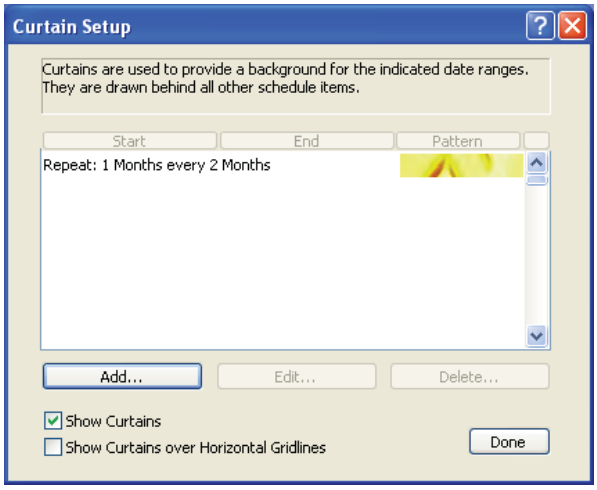
1. Choose **Format** | **Gridlines** | ***Vertical Gridlines***.
2. Check the gridline boundaries to display.
3. Choose a **Frequency**. For example, ***Monthly*** and a **Frequency** of *2* display a vertical gridline between every two months.
4. Choose a **Line Type** and a **Line Color**.
5. ☑ ***Extend Vertical Gridlines into DataGraph Area*** to display the gridline settings in the DataGraph area.

Vertical Shading—Curtains

Curtains are a way of highlighting a date range with a background color or a pattern. A single pattern can be repeated at a chosen interval. Each schedule can have multiple curtains with varying colors and patterns.

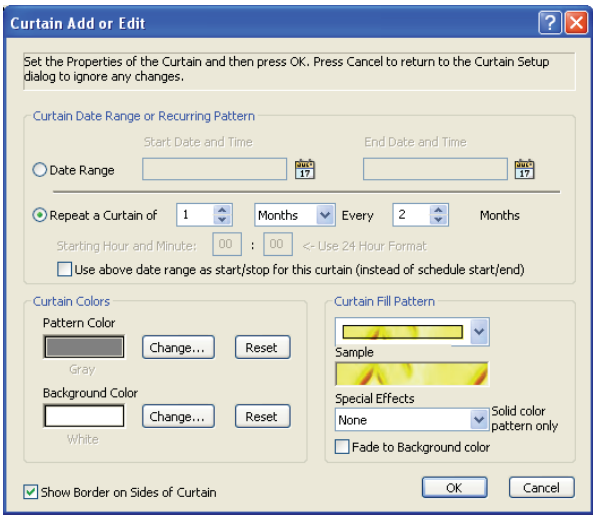
Add, edit or delete curtains

1. Choose **Format** | **Vertical Shading** | **Curtains (Shade by Date Range)** to view the **Curtain Setup** dialog box, listing any existing curtains.
2. Select an existing curtain to ***Edit*** or ***Delete*** it.
3. Click the ***Add*** button to add a curtain.



The **Curtain Add or Edit** dialog box appears:

Under **Curtain Date Range or Recurring Pattern,** there are several options:



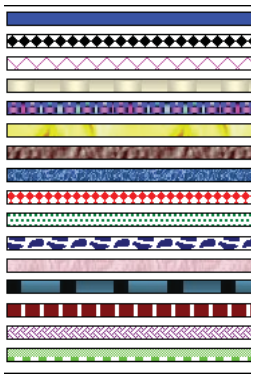
Date Range allows you to specify the time span that the curtain covers.

Repeat a Curtain of allows you to choose a time interval for the curtain to appear and reappear within a date range.

Use above date range… allows you to apply the ***Repeat a Curtain of*** selection within the ***Date Range*** dates, instead of the schedule's start and end dates.

For the curtain to appear across a specified date range:

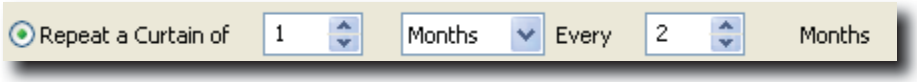
1. ***Date Range***.
2. Enter a ***Start Date and Time*** and an ***End Date and Time***; or click the calendar icon to choose dates.
3. Choose a ***Pattern Color, Background Color, Curtain Fill Pattern, and Special Effects***.
   - Marbled fill patterns ignore the color selections and special effects. Use of these fill patterns increases the size of printer files and metafiles.
   - If the first pattern is selected in the ***Curtain Fill Pattern*** drop-down list, optionally choose a ***Special Effects*** fade setting. The ***Pattern Color*** will fade to white, unless ***Fade to Background Color*** is checked, in which case the ***Pattern Color*** fades to the ***Background Color.***
4. Click ***OK***, and then ***Done***.



For the curtain to repeat within a specified date range:

1. ***Date Range.***
2. Enter a ***Start Date and Time*** and an ***End Date and Time***; or click the calendar icon to choose dates.
3. ***Repeat a Curtain of***, and make selections for duration and interval.

   In this example, a curtain will appear across one month, every two months (effectively, every other month will be shaded).

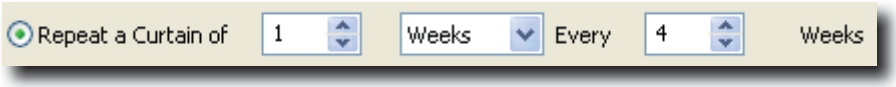


4. ***Use above date range…*** to repeat the curtain within the date range as set in Step 1 and 2.
5. Choose a ***Pattern Color, Background Color, Curtain Fill Pattern***, and ***Special Effects***.
6. Click ***OK***, and then ***Done***.

For the curtain to repeat within the schedule's start and end dates:

1. ***Repeat a Curtain of***, and make selections for duration and interval.

   In this example, the duration is 1 week and the interval is every 4 weeks.



2. Choose a ***Pattern Color, Background Color, Curtain Fill Pattern***, and ***Special Effects***.
3. Click ***OK***, and then ***Done***.

To display the curtains over horizontal gridlines, check ***Show Curtains over Horizontal Gridlines***.

Shift curtains

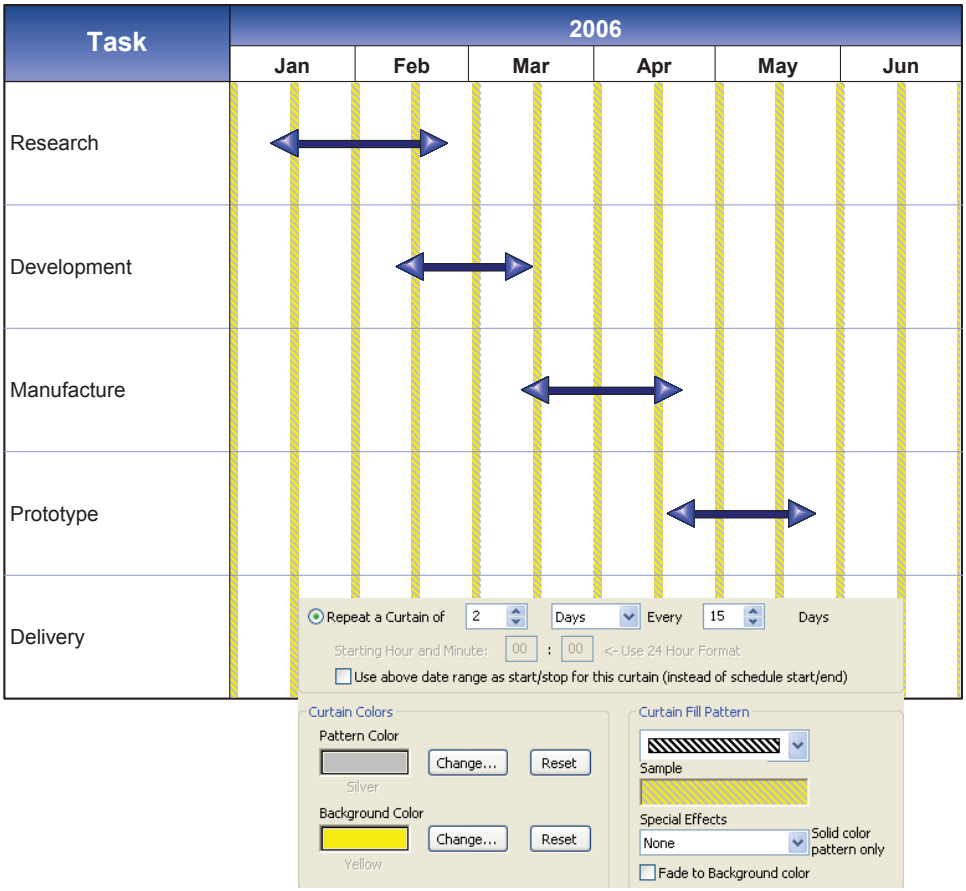
When shifting schedule dates under **Dates | Date Range Tools |** ***Shift all task dates***, there is a ***Shift Curtain Dates by the same amount*** option.

Curtains example

In this example, the curtain is set to display over two days, beginning every 15 days.

A ***Date Range*** is not set, so the schedule's start date (1/1/2006) and end date (6/30/2006) are used.

Repeat a Curtain of 2 Days Every 15 Days is used.



Chapter 13: Distribute and Present Schedules

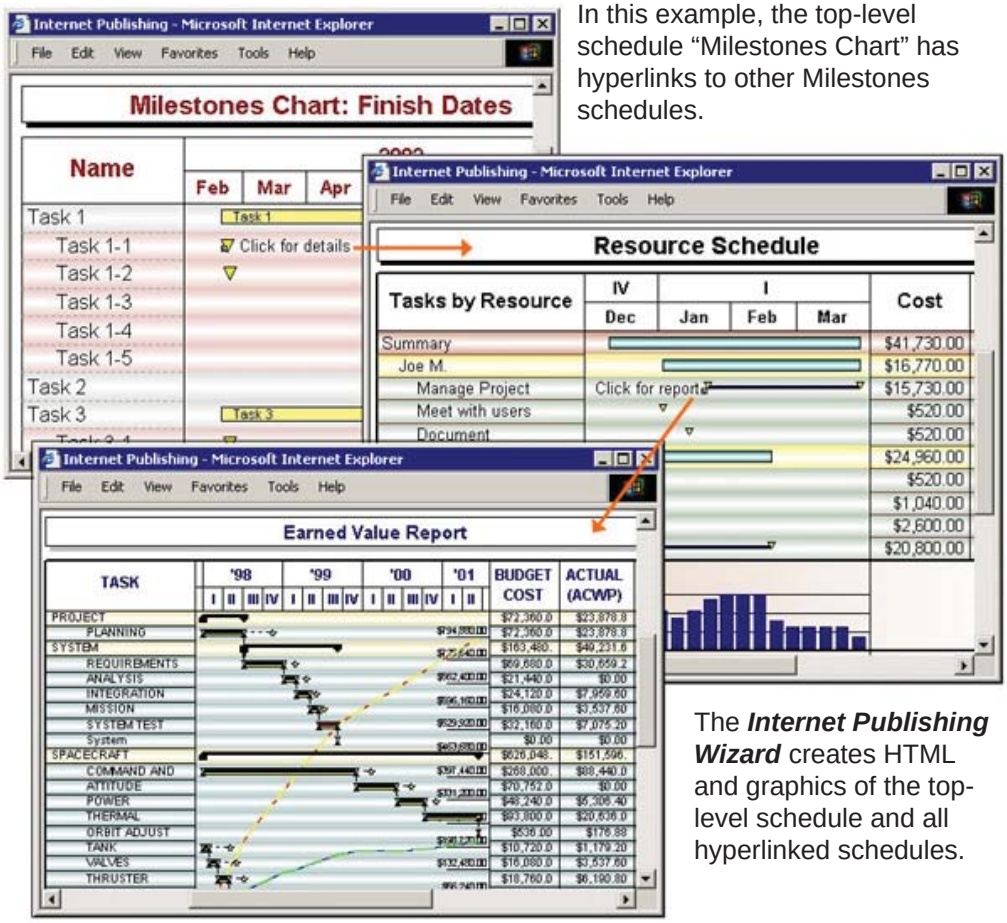
Milestones Professional schedules can be presented and distributed in a wide variety of methods and formats:

- Quickly transform a detailed, working schedule to a top-level presentation schedule using task roll-up (see Chapter 4)
- Print a wall-size schedule for viewing (see Chapter 7).
- Copy and paste a schedule to other Windows applications (see Chapter 11).
- Publish a complete hierarchy of schedules to the Internet or company Intranet.
- E-mail a Milestones schedule to a client or colleague along with the free Milestones Viewer, which can open and print the schedule without allowing editing rights.
- Use Presentation Mode to display your schedules in a slide-show format.
- Use Full Screen mode both present and modify the schedule in a working meeting.
- Save your schedule as a PDF file to share via e-mail or internet distribution.

Publishing for the Internet/Intranet

Milestones Professional's built-in *Internet Publishing Wizard* gives you several HTML and graphics output options:

- Generate a graphic file of each page of the Milestones Professional schedule.
- Create a single HTML document that contains a picture of each page of the schedule; a table of schedule data; the start and end date of the schedule; the schedule title; as well as symbol notes and symbol hyperlinks.
- Create HTML and graphics for a collection of hyperlinked schedules. Symbol hyperlinks become hotspots in the HTML page. *See the example below*.
- Create a tiered, interactive picture of the rolled-up schedule. Then click a task on the HTML page to drill-down for more details. Includes any hyperlinks from symbols and task rows to URLs and other non-Milestones files.



In this example, the top-level schedule "Milestones Chart" has hyperlinks to other Milestones schedules.

The ***Internet Publishing Wizard*** creates HTML and graphics of the top-level schedule and all hyperlinked schedules.

Graphics Output and Bitmap Options

All of the following settings are available in the ***Internet Publishing Wizard***. When applicable, refer to these suggestions and explanations for making optimal choices.

Create a Bitmap for each page of the schedule or ***Include a bitmap of each page***: Generates a picture of each schedule page.

Include a Hyperlink Image Map: Creates a hotspot for each symbol that has a hyperlink. Up to nine hotspots are supported for any one symbol.

Bitmap Format for the graphics output: PNG is usually the best choice if the image will be viewed with a browser. Not all browsers support BMP files. GIF is limited to only 256 colors, so any included bitmaps or gradient fills will degrade in quality. JPEG is a lossy format best suited for photos, not charts and graphs. All browsers support PNG (Portable Network Graphics) files; it is not limited to 256 colors; and is a lossless format; and is a good alternative to GIF. PNG files are about the same size as GIF files.

JPEG Compression factor: A factor from 10 to 99 (or none). The lower the JPEG Compression number you select, the smaller the file will be. However, the image quality will degrade accordingly.

Image Scale ratio: Determines how large the resultant bitmap is. 1.0 is full size according to the Page Size set in the **Layout** tab. 0.5 is 50% of the Page Size.

Graphic File Name Starter: Adds a letter which prefixes all graphics file names, e.g. G0001.jpg.

Show Roll-up Indicators in Graphics Output: Displays an expand indicator ▼ next to tasks that have sub-task information hidden below them. If you do not check this feature, you can still click a task to see the sub-tasks.

Create a graphic only of each schedule page

With the ***Internet Publishing Wizard***, create a picture (bitmap) of each page of the schedule.

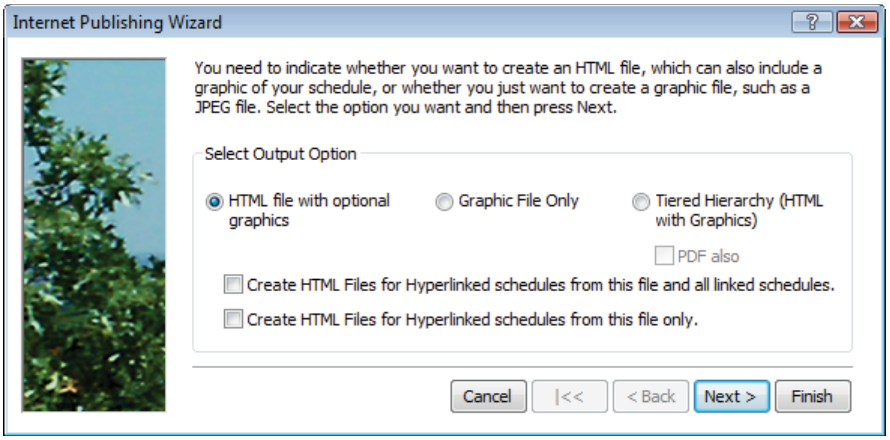
1. Choose **Connections | Other |** ***Internet Publishing Wizard***.
2. Choose ◉ ***Graphic File Only***, then ***Next***.
3. ☑ ***Create a bitmap for each page of the schedule*** to create a graphic file for all schedule pages. ☐ to create a graphic file of the first page only.
3. Select the **Graphic Output Options**, then ***Next***.
4. Choose ***Browse*** to find a folder for the output files, then ***Next***.
5. Review your selections and press ***Finish***.

To save your schedule as a Metafile (.WMF or .EMF), choose **File | Export Options | Graphics |** ***Export Graphics Metafile***, then name the file and choose ***Save***.

Create an HTML file with graphics and optional hyperlinks

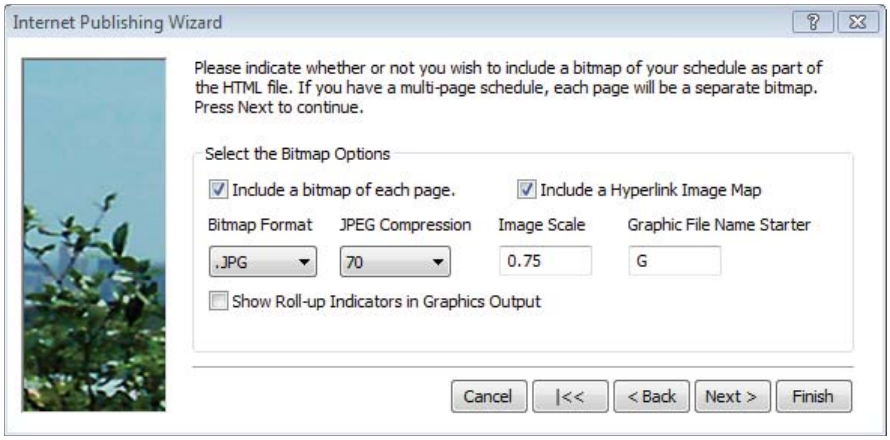
With the ***Internet Publishing Wizard***, create a picture of each page of the schedule and display those graphics in a web page. Optionally, create HTML and graphics pages for schedules hyperlinked to symbols in that schedule. Those links become web page hotspots.

1. Choose **Connections | Other |** ***Internet Publishing Wizard***.



2. ***HTML file with optional graphics***.
3. The two checkboxes enable you to specify how symbol hyperlinks within the Milestones file that your are publishing are handled, as follows:
   - If neither box is checked, then no symbol hyperlinks are processed.
   - ***Create HTML Files for Hyperlinked schedules from this file and all linked schedules.*** All hyperlinks are processed. If any refer to other Milestones schedules, then the hyperlinks within those schedules are also processed, and so on, until the entire tree of hyperlinked schedules has been processed. Each schedule results in its own HTML file.
   - ***Create HTML Files for Hyperlinked schedules from this file only.*** Just the hyperlinks for the current schedule are processed.
4. Choose ***Next***.
5. Click ***Change*** to choose an **HTML Background Color** for the HMTL page, then ***Next***.
6. **Enter a Title** for the HTML page, optional HTML code for the <body> section, then click ***Next***. For no title, just key an HTML command, such as <br>.

7. Select the **Bitmap Options** and then ***Next***.



- ***Graphic File Name Starter*** (the right-most option within the dialog box) is only used when you are creating an HTML page and images for just the current schedule. The starting letters or numbers will be added to the beginning of the saved graphic file name.

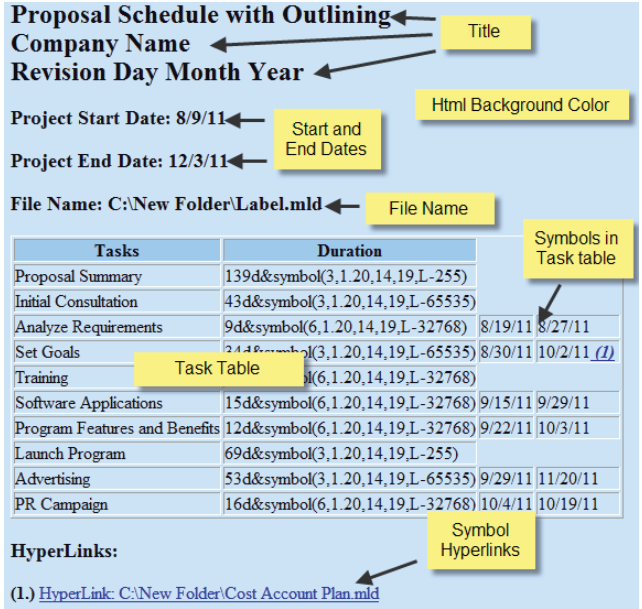
8. Select from **Task Table Options** and then ***Next***:

☑ ***Exclude Symbols from Task Table*** to exclude symbol dates from the Task Table portion of the HTML file.

☑ ***Exclude Task Table from HTML File*** to exclude the entire Task Table from the HTML file.

9. **Select Additional Options** and then ***Next***:

☑ ***Exclude File Name from HTML File*** to exclude the name of the Milestones file from the HTML file.



☑ ***Exclude Start and End Date from HTML file*** to exclude the schedule start and end date (as set under *Format* | *Dates* | *Schedule Details*) from the HTML file.

☑ ***Include Symbol Hyperlinks in HTML file*** to display a number in the Task Table next to the symbol dates. This number is a hyperlink to the appropriate file or URL. The same link is included with the file's path name in the **Hyperlinks:** list directly below the task table. If you check this option, then you must also include the Task Table and Symbol dates.

11. Choose ***Browse*** to select the file name and location for the HTML and graphics files. All other HTML files and graphic image files will be placed in the same folder.
    - Normally you would want to keep the HTML files and images for any one publishing session in a folder by themselves.
    - When you publish an entire tree of hyperlinked schedules and images, quite a few files can be produced. All references to files created by the wizard are relative to the folder that you choose. That is, no referenced file or image has a path in front of the filename. This makes it easy to move the contents of the entire folder to a web server.
    - HTML files or images created that are based upon filenames that have blanks, will have underscores where the blanks were. This is done because some browsers cannot handle blanks in filenames.
12. Choose ***Next***.
13. Review your selections and press ***Finish***.

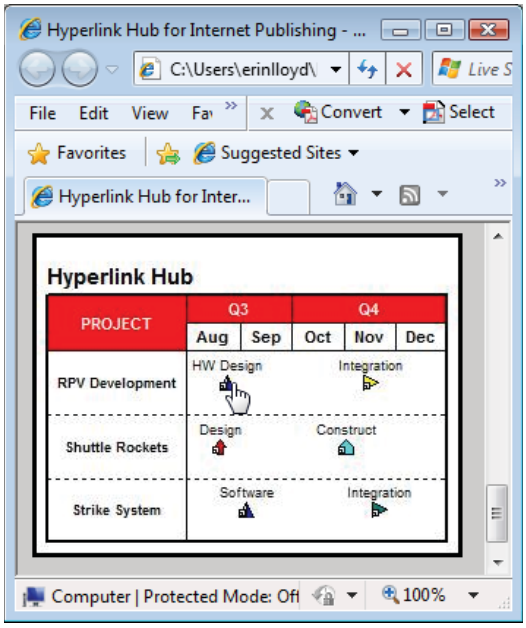
When you do, the imaging and HTML process will begin. The Status Bar indicates the progress.

When the process is complete, a Message Box appears asking if you want to view the output.

If you press **Yes**, then your browser is started with the first HTML page created.

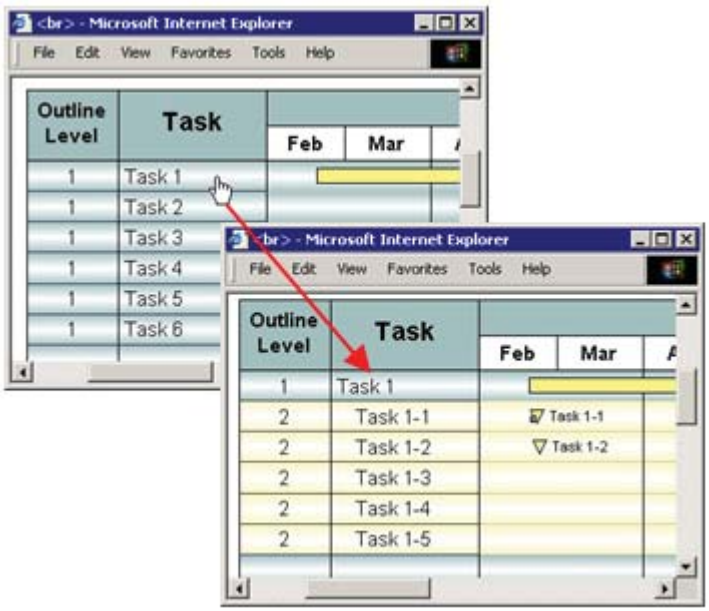
If a symbol on your schedule contained a hyperlink, which is now a hotspot in the HTML document, position the cursor over that symbol and notice that that cursor changes to the finger-pointer. The browser status bar shows the location of the referenced hyperlink.

For symbols with multiple hyperlinks, move the cursor slightly when hovering over the symbol hotspot in the web page and see the different linked files in the Status Bar.

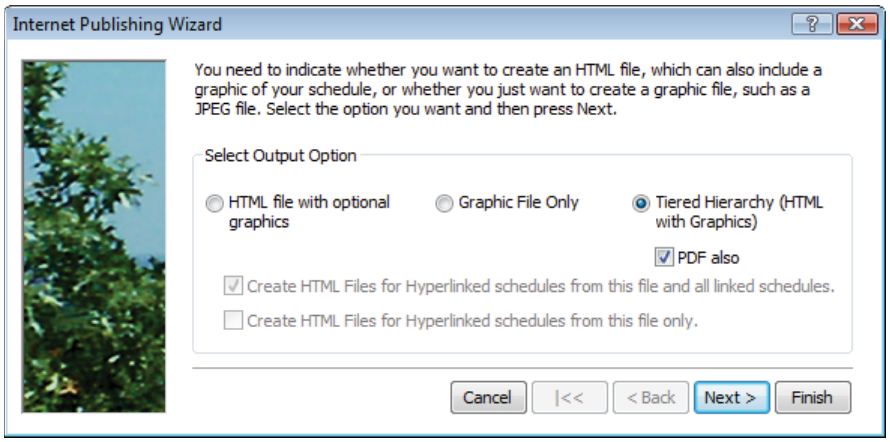


Tiered Hierarchy: Web drill-down with optional hyperlinks

Use the ***Internet Publishing Wizard*** to create an HTML document containing a graphic of an outlined schedule. On this picture of the schedule that displays in your browser, you can click an upper level task to reveal the lower-level details. Include any hyperlinks from symbols to URLs and other non-Milestones files.



1. Choose **Connections | Other |** ***Internet Publishing Wizard***.



2. ***Tiered Hierarchy (HTML with Graphics)***

3. ***PDF also*** to generate a pdf file of each page, then ***Next***.

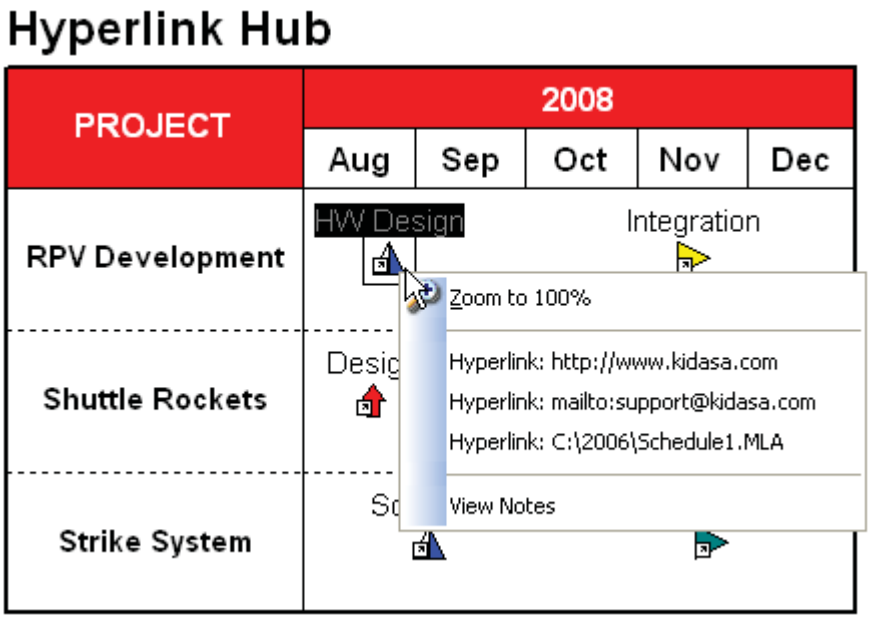
4. Click ***Change*** to choose an **HTML Background Color** for the HMTL page, then ***Next***.
5. **Enter a Title** for the HTML page, optional HTML code for the <body> section, then click ***Next***. For no title, just key an HTML command, such as <br>.
6. See *Graphics Output/Bitmap Options* on page 13-3 for choosing **Bitmap Options**.
   - ☑ ***Include a Hyperlink Image Map*** will create a hotspot for each symbol that has a hyperlink to a URL or non-Milestones file. Hyperlinks to Milestones schedules are not processed.
7. Choose ***Next***.
8. Choose ***Browse*** to select the file name and location for the HTML and graphics files. All other HTML files and graphic image files, including optional pdf files, will be placed in the same folder.
   - It is highly recommended that you create a folder in which to place these numerous HTML and graphics files.
   - When you publish an entire tree of hyperlinked schedules and images, quite a few files can be produced. All references to files created by the wizard are relative to the folder that you choose. That is, no referenced file or image has a path in front of the filename. This makes it easy to move the contents of the entire folder to a web server.
   - HTML files or images created that are based upon filenames that have blanks, will have underscores where the blanks were. This is done because some browsers cannot handle blanks in filenames.
9. Choose ***Next***.
10. Review your selections and press ***Finish***.

The initial rolled-up HTML page and graphic is named after the MLD file name. Subsequent HTML files and graphics are named using WBS numbers.

Free Milestones Viewer

Using the free Milestones Viewer, your clients and co-workers can view Milestones schedules. The free Viewer shares these features with Milestones Professional:

- Open a Milestones schedule.
- Full printing and preview options
- View symbol notes.
- Launch symbol hyperlinks.
- Copy a metafile of the schedule to the clipboard (then paste into another application).
- Complete task filtering options
- Tooltip and hover time control
- Target shared charts, holidays, and symbols folders for better collaboration.
- Zoom controls
- Calendar and Continuous view modes
- Find and Go To Page options



In the Viewer, schedules cannot be edited, nor can they be saved.

KIDASA is the only company that offers a free Viewer to go along with its project management software. Anyone in the world may use the free Viewer even if they do not have any copies of Milestones Professional.

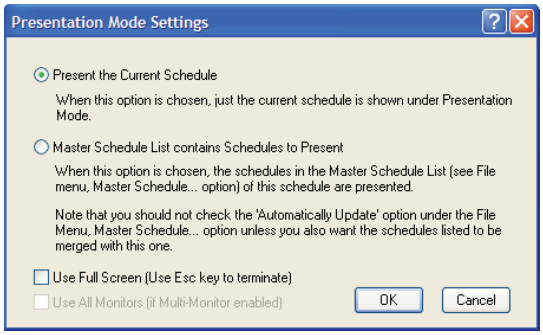
Right-click a symbol to launch a hyperlink or view the symbol notes. Set folder locations, tooltip options, color settings, and more under **File | Preferences**. To Window-over to another schedule that is open in the Viewer, choose from other files listed at the bottom of the **File** menu.

Presentation Mode

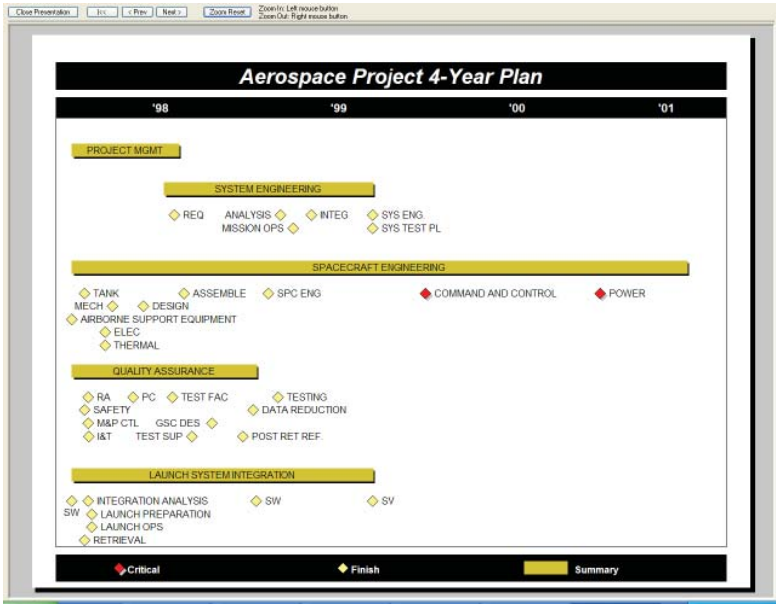
Use the Presentation view mode to present one or a series of separate Milestones schedules as a “slide show” with a full screen option and schedule manipulation controls.

Before using Presentation Mode, change your **File | Printing |** ***Printing Options*** **| General** setting to ***Scale to Fit Selected Paper Size***. This ensures that the schedule pages will be scaled to fit the screen.

Present a single schedule



1. Choose **View** | **Viewing Options | Page View** | **Presentation Mode**.
2. Choose ***Present the Current Schedule***.
3. ☑ ***Use Full Screen*** to fill the entire screen with the Milestones schedule, without any visible controls.
4. ☑ ***Use All Monitors*** if your computer has multiple monitors (the schedule will span all the monitors).
5. Click ***Close Presentation*** or press the **Esc** key to exit Full Screen and Presentation mode.



Present many schedules

To present multiple schedules, you need to first use the Master Scheduling option to input a list of schedules. Unlike the true Master Scheduling system, the presentation schedules' formatting does not have to be the same.

1. Click **File | Files and Templates: Open and Save Options |** ***New***.
2. Choose **File | Master/Update |** ***Master Schedule...***.
3. ☑ ***Treat the Current Schedule as a Master Schedule***.
4. Click the ***Add Schedule*** button, find the schedule, and double-click to add it.
5. Repeat Step 4 to add more schedules to your presentation list.
6. Click ***Move Up*** or ***Move Down*** to rearrange the order of schedule presentation.
7. Click ***Delete*** to remove any schedules from the presentation list.
8. Click ***OK***.
9. Choose **View** | **Viewing Options | Page View |** ***Presentation Mode***.
10. Choose ◉ ***Master Schedule List contains Schedules to Present***, then ***OK***.

Presentation Mode controls

Manipulate the schedules while in Presentation Mode with these controls. On-screen buttons are not available with the Full Screen option.

Esc or ***Close Presentation*** button: exit Presentation Mode

Left Mouse Button: zoom in

Right Mouse Button: zoom out

Left/Right/Up/Down Arrow keys: scroll to the direction indicated when zoomed in

< Prev button: view previous page

Next > button: view next page

Zoom Reset button: return the zoom to fit-in-window

|<< button: exit Presentation Mode when only presenting one schedule; return to first schedule when presenting multiple schedules

Full-Screen Mode

Do you need to make changes to a schedule “live” during a meeting? Full-Screen mode displays your schedule at the largest size possible by eliminating the toolbar, status bar and menus. The sidebar and/or toolbox can also be hidden.

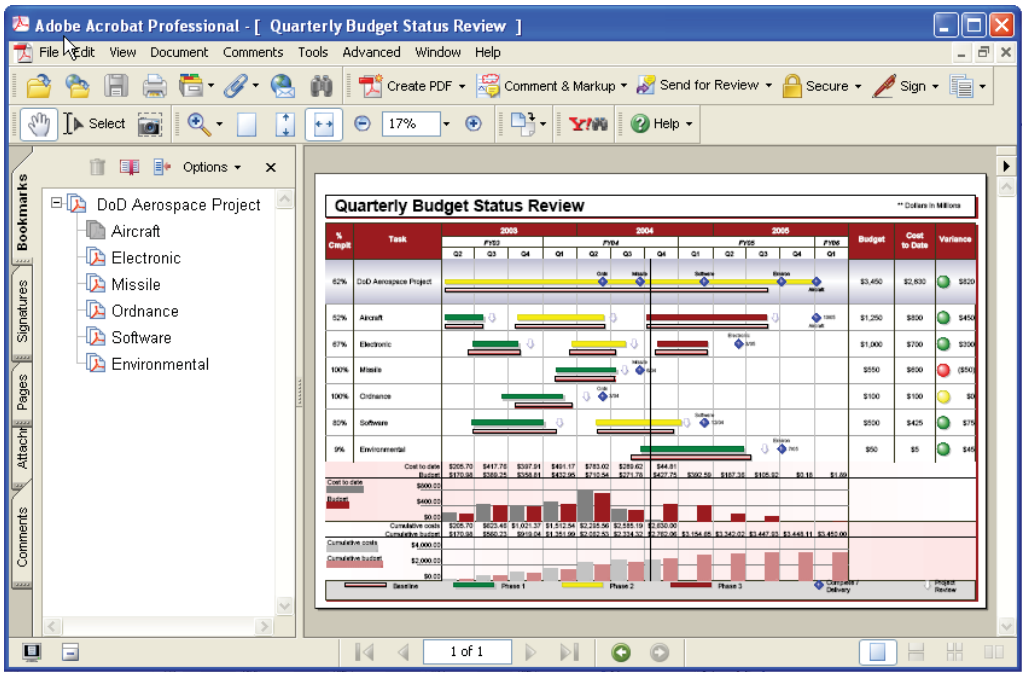
1. Choose **View** | **Viewing Options | Page View** | ***Full Screen***, or press **Ctrl+F**.
2. Use the **Esc** key or **Ctrl+F** to exit full screen mode.

Save to PDF

The “Save As” option “Save As PDF” enables Milestones to directly save to a PDF file. Users can create PDF files from a schedule without needing a PDF printer such as Adobe PDF®.

Simply select **File | Files and Templates: Open and Save Options |** ***PDF*** and enter a filename; then, when the file has been created, click ***OK*** to view the new PDF. Milestones will attempt to launch the file using the default PDF-viewer.

The PDF file automatically includes a bookmark section made up of any bookmarks in the schedule, and optional buttons for hyperlinks. Only the first hyperlink on each symbol or task row is included.



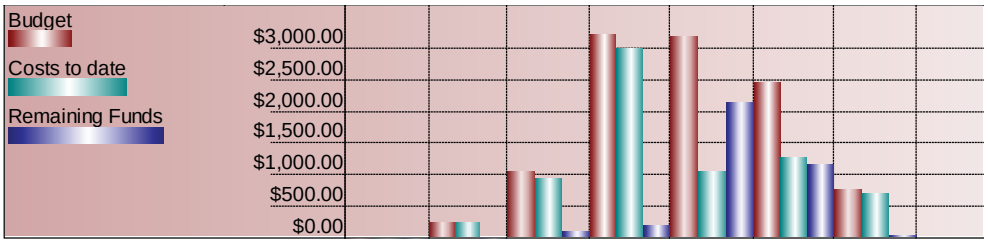
Chapter 14: Track and Graph Values

Milestones Professional offers many ways to enter, display, calculate, and graph numbers. These numbers can represent values such as budget, cost, earned value, man-hours, units, and materials.

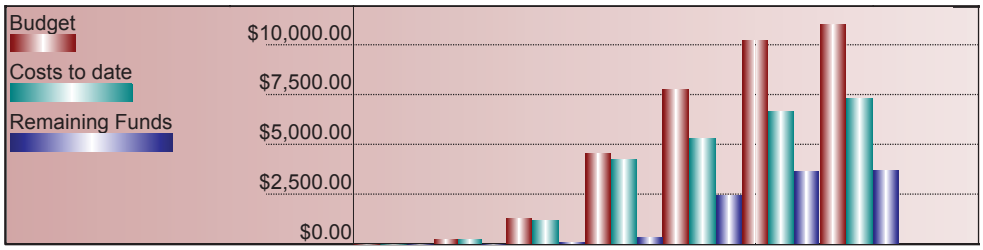
Milestones offers specialized columns for entering and calculating values; ValueSets for entering values in groups, and three graph areas (DataGraphs) for displaying line and bar graphs of values.

Each of the three available DataGraphs can contain up to 8 ValueSets.

A sample of a DataGraph with three ValueSets (“Budget,” “Costs to date” and “Remaining Funds”) is shown below:



You can also display values as cumulative. The same DataGraph above, with the same ValueSets with cumulative values, is shown below:



ValueSet SmartColumns sum and display values from specific ValueSets for each task row, with optional indicator symbols, text or colors:

Grant Proposals and Project Tracking

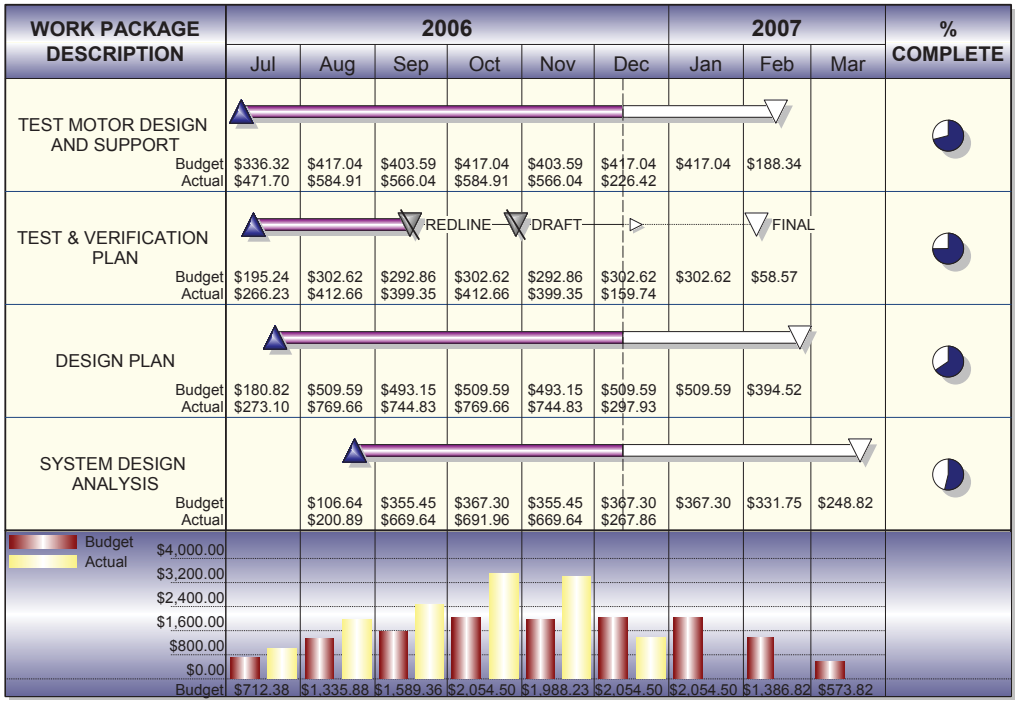
Project Name	Funding Status	2007								Budget Amount	Costs to Date	Remaining Funds
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug			
Project 1		1/26		3/12		5/11	6/17	7/24		$2,000	$1,400	$600
Design			3/2			5/1				$800	$800	$0
Construction					5/2			7/1		$1,200	$600	$600
Project 2			2/12	3/19		5/12	6/6			$1,800	$1,000	$800

Generally, the overall process of entering and displaying values in a DataGraph is as follows:

1. Create ValueSets that will contain values (e.g. “Budget”).
2. Enter values into those ValueSets (e.g. $200 for January’s budget; $450 for February; $350 for March; and so on).
3. Create a DataGraph that displays those values (e.g. a bar graph for each of the $200, $450 and $350 values for January, February and March, respectively).

The **DataGraph and ValueSet Wizard** (under the **Tools | Graph Options | *DataGraph and ValueSet Wizard*** menu) takes you through the creation and display of these ValueSets and DataGraphs.

The instructions in this chapter by-pass the Wizard and show you how to create and edit ValueSets and DataGraphs directly.



ValueSets

ValueSets are user-defined categories that contain numbers ($400 in sales, 52 hours, 135 purchases, etc.) associated with a time period, such as days, weeks, months, quarters, or years. All of the ValueSets within any one schedule must use the same time period. For example, daily and weekly ValueSets cannot be combined in the same schedule.

Values from ValueSets can be graphed in one or more of the schedule's DataGraphs.

ValueSets are created and formatted under **Tools | Graph Options |** ***Setup ValueSets***.

There are five different types of ValueSets available:

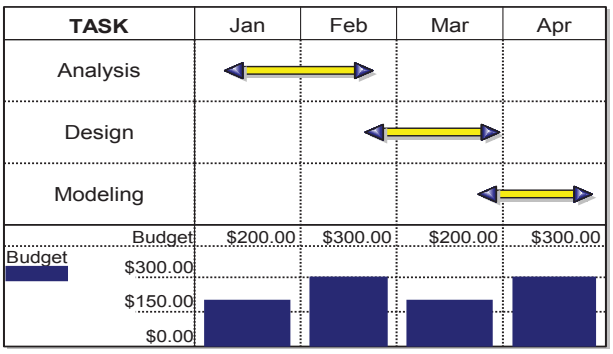
- **Type 1: Keyed-in Global Values**. Enter values by time period for the whole schedule—such as monthly budget values.
- **Type 2: Sum of Values Keyed into Task Rows**. Numbers are entered by time period for each task—such as separate monthly budget values for Task 1, Task 2, etc. When the schedule is outlined, only the lowest outline level tasks should receive values because entered values roll-up to upper level tasks.
- **Type 3: Allocate Column Values Across Timeline**. Values are entered into a column. The column value for each task is spread across the task's duration. Optionally, values can be allocated to the current date, or allocated from the current date to the end of the task's time span. Also, the values can be allocated to the task's baseline time span.
- **Type 4: Use Values from Symbols**. Values can be attached to any symbol. Those values are graphed according to the time period in which each symbol resides.
- **Type 5: Total of other ValueSets**. Values from selected ValueSets are totaled and graphed, such as "Overhead Cost" ValueSet + "Labor Cost" ValueSet = "Total Cost" ValueSet.

Any of the five different types can be used in the same schedule and placed in the same DataGraph. The chapter sections that follow describe each type of ValueSet in more detail.

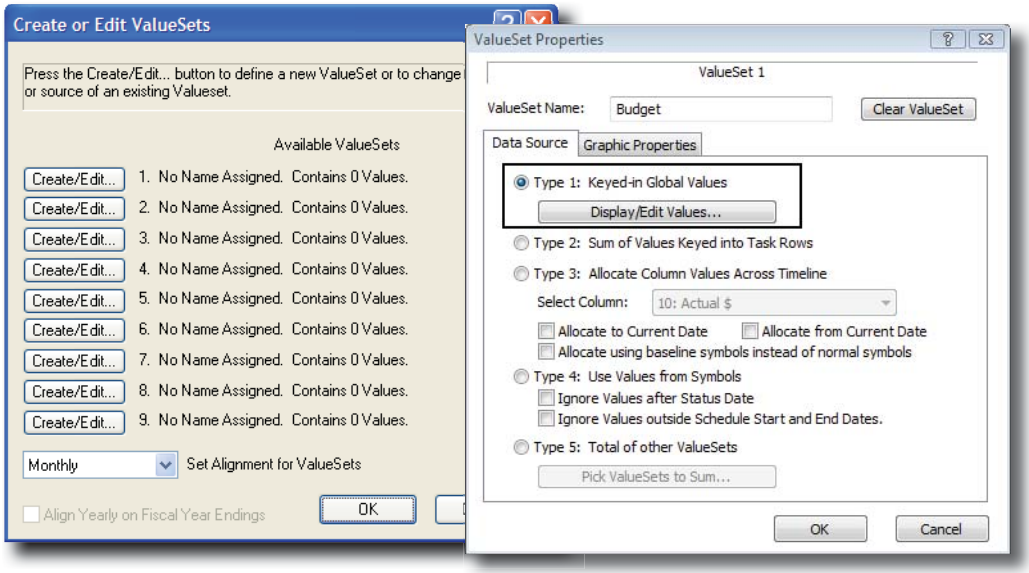
Type 1 ValueSet: Keyed-in global values

In this type of ValueSet, you enter a set of values by time period. These values apply to the entire schedule.

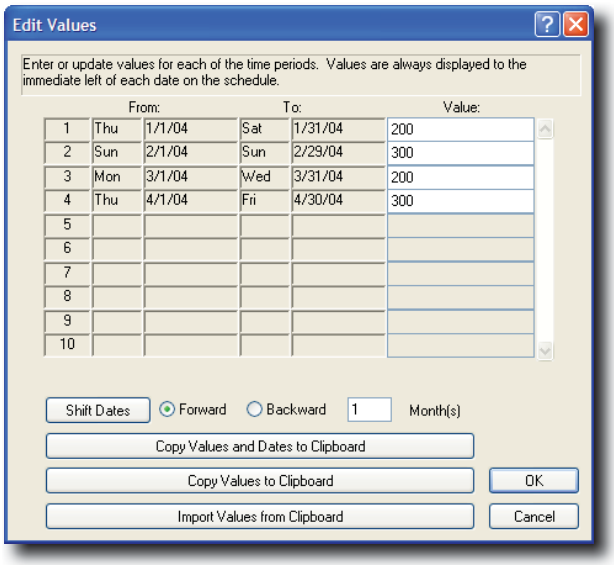
These values are displayed in the DataGraph as bars or lines, and the numeric values can be displayed above or below the DataGraph.



1. Choose **Tools | Graph Options | *Setup ValueSets***.
   - The **Create or Edit ValueSets** dialog box appears, revealing 9 **Available ValueSets**, as shown below, left.
2. At the bottom left of this dialog box, next to **Set Alignment for ValueSets**, choose a time period by which the values will be entered, totaled and graphed.
   - In the example above, the Alignment is Monthly.
3. Click any ***Create/Edit*** button with **No Named Assigned**. The **ValueSet Properties** dialog box appears, as shown below, right.
4. Type in a name for the **ValueSet Name**—here, “Budget” is entered.
5. Click **Type 1: Keyed-in Global Values**.



6. Click the ***Display/Edit Values*** button to enter the values.
   - The **Edit Values** dialog box appears, as shown:



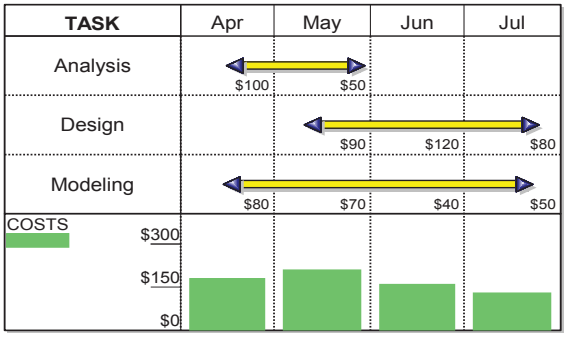
   - The dates in the **From** and **To** columns follow the time period Alignment chosen in Step 2—monthly increments, in this example.
   - The first date, 1/1/04 in this example, is the schedule's displayed start date.
7. Under **Value**, enter numbers for each time period.
   - Do not include any commas or symbols such as $.
8. Choose ***OK***.
9. Choose the **Graphic Properties** tab and make selections as described on page 14-13 in this chapter.
10. Choose ***OK*** to return to the **Create or Edit ValueSets** dialog box.
11. Repeat Steps 3 – 10 to create or edit additional ValueSets.
12. When finished, click ***OK*** to return to the schedule.

Refer to the DataGraph section of this chapter (page 14-15) to learn how to graph these values.

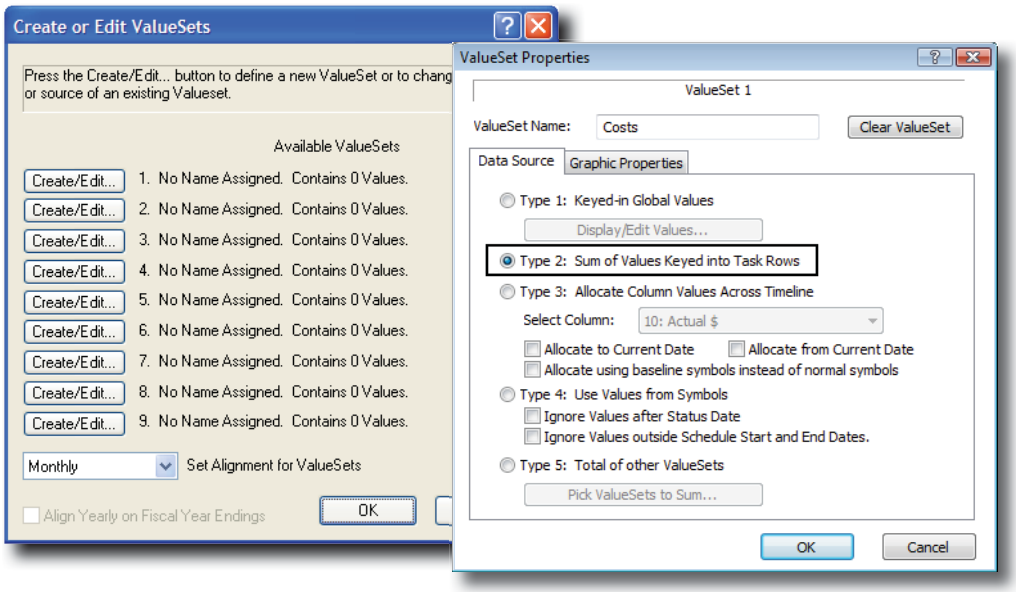
Type 2 ValueSet: Sum of values keyed into task rows

In this type of ValueSet, values are entered by time period for each task row.

These values are displayed in the DataGraph as bars or lines, and the numeric values can be displayed above or below the DataGraph.



1. Choose **Tools | Graph Options | *Setup ValueSets***.
   - The **Create or Edit ValueSets** dialog box appears, revealing 9 **Available ValueSets**, as shown below, left.
2. At the bottom left of this dialog box, next to **Set Alignment for ValueSets**, choose a time period by which the values will be entered, totaled and graphed.
   - In the example above, the Alignment is Monthly.
3. Click any ***Create/Edit*** button with **No Named Assigned**. The **ValueSet Properties** dialog box appears, as shown below, right.
4. Type in a name for the **ValueSet Name**—here, “Costs” is entered.
5. Click **Type 2: Sum of Values Keyed into Task Rows**.

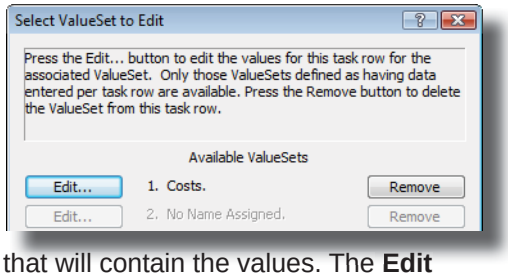


6. Choose the **Graphic Properties** tab and make selections as described on page 14-13 in this chapter.
7. Click ***OK*** to return to the **Create or Edit ValueSets** dialog box.
8. Repeat Steps 3 – 7 to create or edit additional Type 2 ValueSets.
9. Click ***OK*** to return to the schedule.

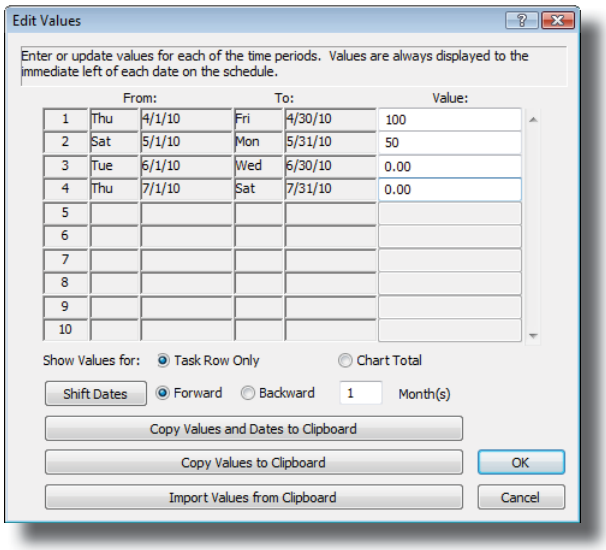
Enter values for Type 2 ValueSets

When the schedule is outlined, only the lowest outline level tasks should receive values because entered values roll-up to upper level tasks.

1. Right-click the task row in the column area and choose ***Edit ValueSet***—in this example, the "Analysis" task row to begin with.
   - The **Select ValueSet to Edit** dialog box appears:



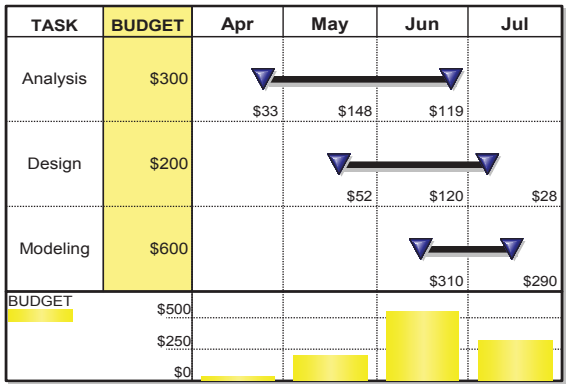
2. Click the ***Edit*** button for the ValueSet that will contain the values. The **Edit Values** dialog box appears, show below.
   - The dates in the **From** and **To** columns follow the time period Alignment from the ValueSet—monthly increments, in this example.
   - The first date, 4/1/10 in this example, is the schedule's displayed start date.
3. Under **Value**, enter numbers for each time period. Usually, values are only entered for time periods that the symbols and horizontal bars cover—here, April and May.
   - Do not include any commas or symbols.
   - To see the total values that have been entered so far for each month, choose ***Chart Total.***
4. Click ***OK*** and ***OK*** to return to the schedule.
5. Repeat for other task rows.



Refer to the DataGraph section of this chapter (page 14-15) to learn how to graph these values.

Type 3 ValueSet: Allocate column values across timeline

In this type of ValueSet, values are entered in a column. Those values are then spread across each task's time span.



For this schedule's "Analysis" task, the $300 is distributed evenly between the days in April, May and June.

The amount for each month is based upon the total number of days in that month that are included in the time span. (Notice that the value for May is larger since it is a full month.)

For how to display the numbers under each task bar, as shown here, see page 14-14.

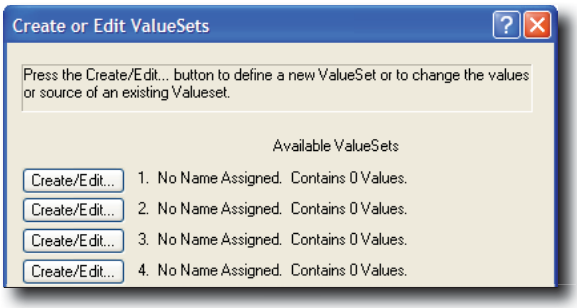
Create a Values SmartColumn and enter values

First, you will create a Values SmartColumn that will contain these values, such as the "Budget" column in the example above. Then, you will create the Type 3 ValueSet which references this column and graphs this column's values.

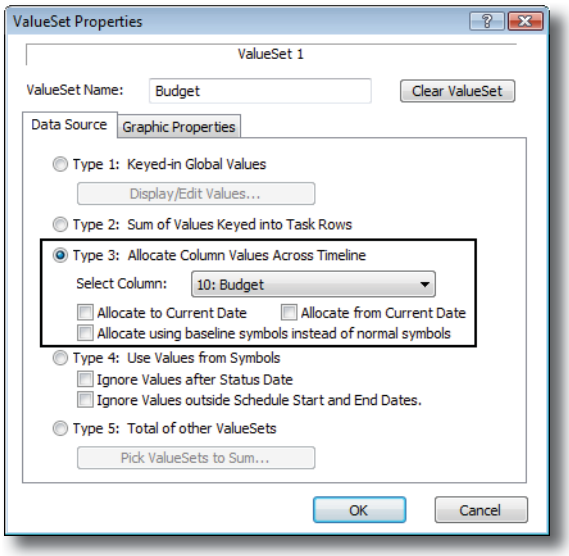
- Note: A Type 3 ValueSet can reference any column containing values, such as a Values SmartColumn, a Calculation/Indicator SmartColumn, a Duration SmartColumn, and an Earned Value SmartColumn.

1. Choose **Insert | Rows, Columns** | **New Column | *Values***.
2. Choose ***OK*** to view the **Column Properties** dialog box.
3. Choose the **Column Heading** tab and name the column.
4. Choose the **Column Formatting** tab and make decimal and currency selections, if applicable.
5. Choose ***OK*** to return to the schedule.
6. Click the text tool , click once in a cell in the new column, and then enter the values.
   - When the schedule is outlined, only the lowest outline level tasks should receive values because entered values roll-up to upper level tasks, as set under **Layout | Other | *Summary Bar Settings***.
7. Repeat for other column cells.

Create a Type 3 ValueSet that will reference a column containing values



1. Choose **Tools | Graph Options | *Setup ValueSets***.
   - The **Create or Edit ValueSets** dialog box appears, revealing 9 **Available ValueSets**:
2. At the bottom left of this dialog box, next to **Set Alignment for ValueSets**, choose a time period by which the values will be totaled and graphed.
3. Click any ***Create/Edit*** button with **No Named Assigned**. The **ValueSet Properties** dialog box appears, as shown below.
4. Type in a name for the **ValueSet Name**—here, "Budget" is entered.
5. Click **Type 3: Allocate Column Values Across Timeline**.
6. From the **Select Column** list, choose the appropriate column.
   - ☑ ***Allocate to Current Date***: Values will be spread evenly from the task's start date to the current date.
   - ☑ ***Allocate from Current Date***: Values will be spread evenly from the current date to the task's end date.
   - ☑ ***Allocate using baseline symbols***: Values will be allocated to task bars with baseline start and end symbols, instead of normal start and end symbols.



7. Choose the **Graphic Properties** tab and make selections as described on page 14-13 in this chapter.
8. Click ***OK*** to return to the **Create or Edit ValueSets** dialog box.
9. Repeat Steps 3 – 8 to create or edit additional Type 3 ValueSets.
10. Click ***OK*** to return to the schedule.

Refer to the DataGraph section of this chapter (page 14-15) to learn how to graph these values.

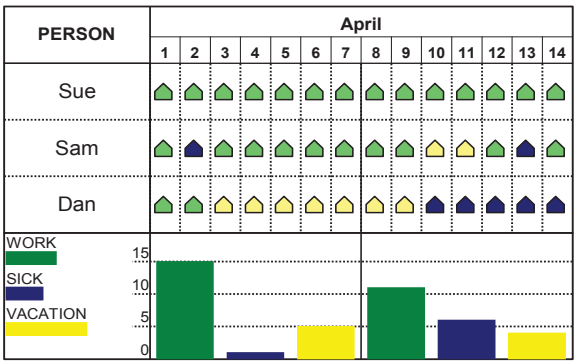
Type 4 ValueSet: Use values from symbols

In this type of ValueSet, values are entered for each symbol and remain attached to the symbol when moved.

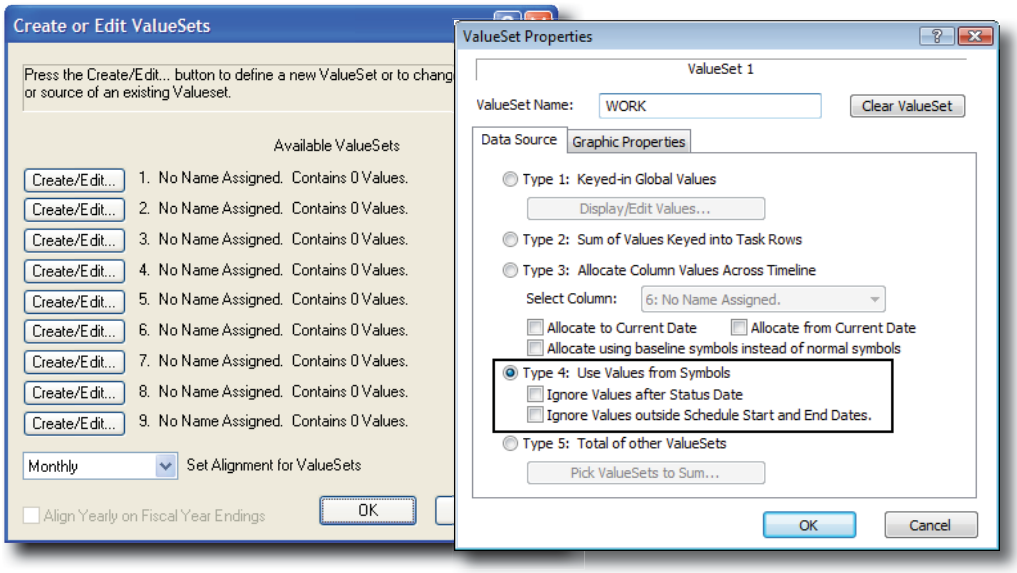
These values are displayed in the DataGraph as bars or lines, and the numeric values can be displayed above or below the DataGraph.

The employee attendance example shown here has three Type 4 ValueSets.

Daily Attendance Tracking



1. Choose **Tools | Graph Options | *Setup ValueSets***.
   - The **Create or Edit ValueSets** dialog box appears, revealing 9 **Available ValueSets**, as shown below, left.
2. At the bottom left of this dialog box, next to **Set Alignment for ValueSets**, choose a time period by which the values will be totaled and graphed.
   - In the example above, the Alignment is Weekly.
3. Click any ***Create/Edit*** button with **No Named Assigned**. The **ValueSet Properties** dialog box appears, as shown below, right.
4. Type in a name for the **ValueSet Name**—here, “WORK” is entered.
5. Click **Type 4: Use Values from Symbols**.



- ☑ ***Ignore Values after Status Date***: Only the values attached to symbols before (to the left of) the status date will be displayed and graphed.
- ☑ ***Ignore Values outside Schedule Start and End Dates***: Only the values attached to symbols within the schedule's displayed start and end date range will be displayed and graphed.
- Note that symbol values can only be entered *after* the ValueSet has been created.

6. Choose the **Graphic Properties** tab and make selections as described on page 14-13 in this chapter.
7. Click ***OK*** to return to the **Create or Edit ValueSets** dialog box.
8. Repeat Steps 3 – 7 to create or edit additional Type 4 ValueSets.
9. When finished, click ***OK*** to return to the schedule.

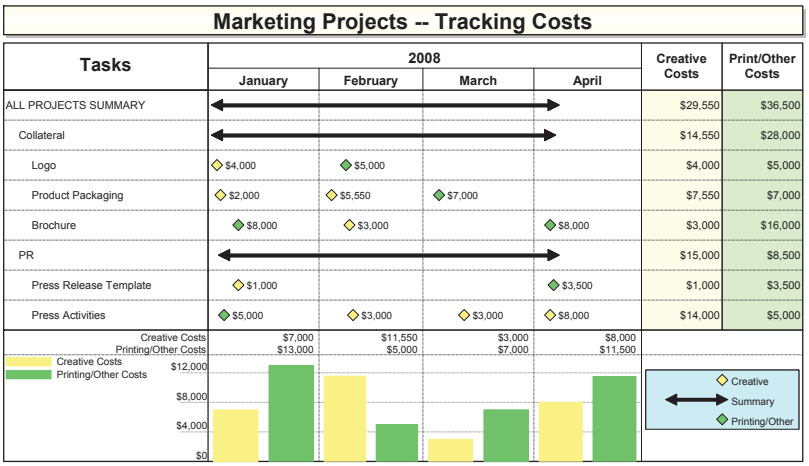
Add values to symbols

1. In the toolbox, click the arrow tool .
2. On the schedule, click once on a symbol. This should display the **Selection** menu.
3. In the **Selection** menu, go to the **ValueSets** tab.
4. Enter a value for any or all of the **ValueSets**, as shown to the right.
5. Click the apply button as shown on the right..
6. Repeat for other symbols.

Refer to the DataGraph section of this chapter (page 14-15) to learn how to graph these values.

Here is another example of a Type 4 ValueSet.

Additionally, this schedule uses ValueSet SmartColumns to total symbol values by task row. *For more on ValueSet Smartcolumns see page 14-18*



Marketing Projects -- Tracking Costs

Tasks	2008 January	2008 February	2008 March	2008 April	Creative Costs	Print/Other Costs
ALL PROJECTS SUMMARY					$29,550	$36,500
Collateral					$14,550	$28,000
Logo	$4,000	$5,000			$4,000	$5,000
Product Packaging	$2,000	$5,550	$7,000		$7,550	$7,000
Brochure	$8,000	$3,000		$8,000	$3,000	$16,000
PR					$15,000	$8,500
Press Release Template	$1,000			$3,500	$1,000	$3,500
Press Activities	$5,000	$3,000	$3,000	$8,000	$14,000	$5,000
Creative Costs	$7,000	$11,550	$3,000	$8,000		
Printing/Other Costs	$13,000	$5,000	$7,000	$11,500		

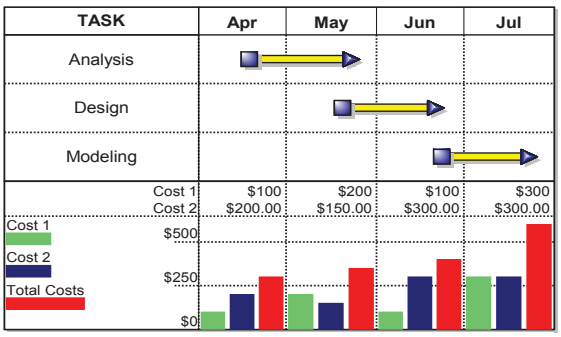
Type 5 ValueSet: Total of other ValueSets

In this type of ValueSet, other ValueSets are totaled.

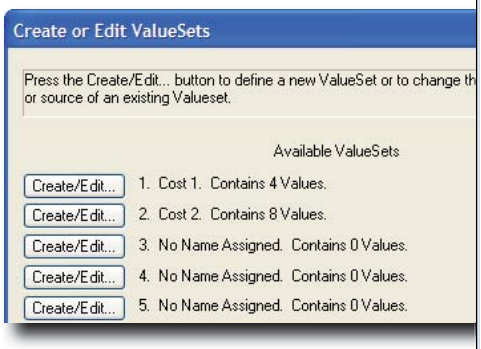
These values are displayed in the DataGraph as bars or lines, and the numeric values can be displayed above or below the DataGraph.

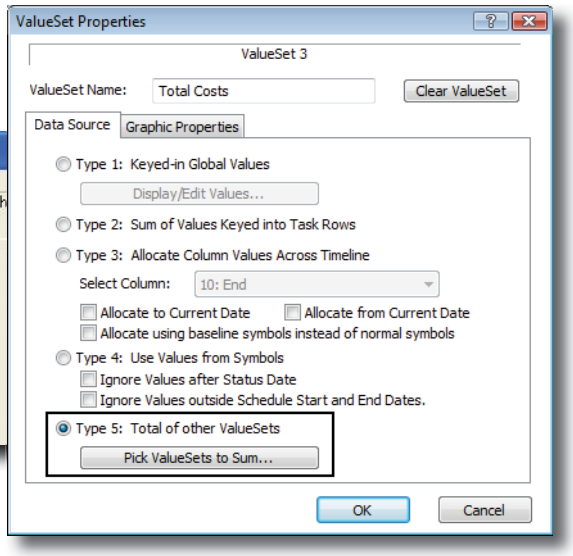
This example has three ValueSets.

The “Cost 1” and “Cost 2” ValueSets are Type 1, and “Total Costs” is a Type 5 ValueSet that totals “Cost 1” and “Cost 2.”

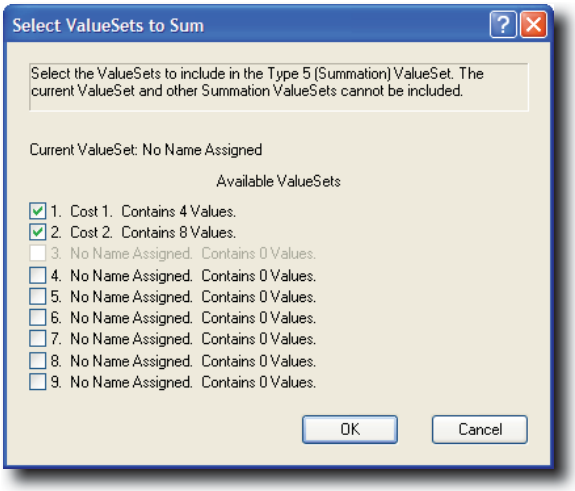


1. Choose **Tools | Graph Options | *Setup ValueSets***.
   - The **Create or Edit ValueSets** dialog box appears, revealing 9 **Available ValueSets**, as shown below, left.
2. At the bottom l**eft of this dialog box, next to Set Alignment for ValueSets**, choose a time period by which the values will be totaled and graphed.
   - In the example above, the Alignment is Monthly.
3. Click any ***Create/Edit*** button with **No Named Assigned**. The **ValueSet Properties** dialog box appears, as shown below, right. Two ValueSets must already exist so that they can be totaled.
4. Type in a name for the **ValueSet Name**—here, “Total Costs” is entered.
5. Click **Type 5: Total of other ValueSets**.
6. Click the ***Pick ValueSets to Sum*** button.





7. In the **Select ValueSets to Sum** dialog box, ☑ the ValueSets to total.
8. Click ***OK***.
9. Choose the **Graphic Properties** tab and make selections as described on page 14-13 in this chapter.
10. Click ***OK*** to return to the **Create or Edit ValueSets** dialog box.
11. Repeat Steps 3 – 10 to create or edit additional Type 5 ValueSets.
12. Click ***OK*** to return to the schedule.



Refer to the DataGraph section of this chapter (page 14-15) to learn how to graph these values.

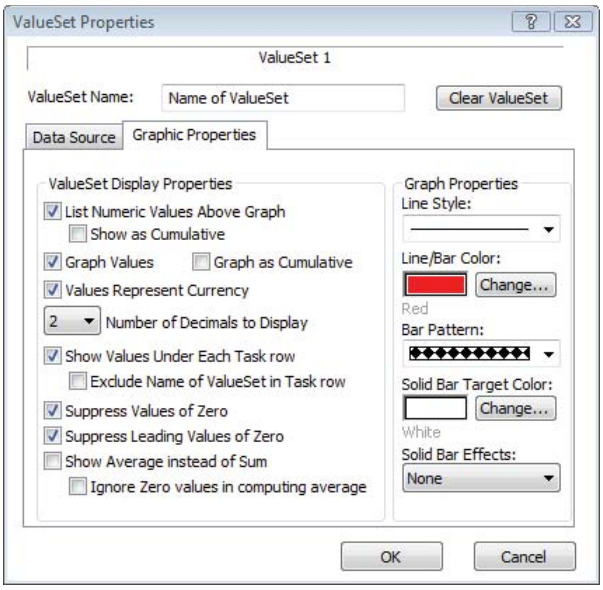
ValueSet Graphic Properties

ValueSet graphic display options allow you to independently format how each ValueSet is displayed as numbers and graphs of numbers.

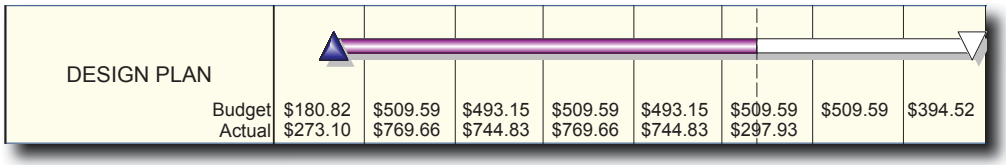
Each ValueSet can have different settings for line/bar graph colors and patterns; cumulative and non-cumulative display of values and graphing of values; adding currency symbols to values; decimal place control; summing of values and averaging of values.

1. Choose **Tools | Graph Options | *Setup ValueSets***.
2. Click ***Create/Edit*** for the appropriate ValueSet. The **ValueSet Properties** dialog box appears.
3. Click the **Graphic Properties** tab, as shown:

   This tab has two sections: the **ValueSet Display Properties** and the **Graph Properties**.



4. Under **ValueSet Display Properties**:
   - ☑ ***List Numeric Values Above Graph***: Values appear above DataGraph.
   - ☑ ***Show as Cumulative***: Numeric values appear above DataGraph as cumulative values.
   - ☑ ***Graph Values***: Values are converted to line or bar graphs.
   - ☑ ***Graph as Cumulative***: Cumulative values are converted to line or bar graphs.
   - ☑ ***Values Represent Currency***: Add currency symbol to numeric values. Affects ValueSet values above/below DataGraph, Y-axis values, and ValueSet values under each task row. Y-axis currency display is controlled by the first ValueSet's setting for that DataGraph.
   - ***Number of Decimals to Display***: Choose 0 - 6 decimal places when displaying values. Affects ValueSet values above/below DataGraph, Y-axis values, and ValueSet values under each task row.
   - ☑ ***Show Values Under Each Task row***: For Type 2, 3 and 4 ValueSets, only. Display numeric values on task rows and within the appropriate time periods.



   - ☑ ***Exclude Name of ValueSet in Task row***: For Type 2, 3 and 4 ValueSets, only. Hide the name of the ValueSet which will otherwise display in the column area, in line with its value on the task row. The example above does not exclude ValueSet names in the task rows.
   - ☑ ***Suppress Values of Zero***: Values of 0 (zero) are not displayed above/below the DataGraph or on task row ValueSet value displays.
   - ☑ ***Suppress Leading Values of Zero***: For ValueSet numbers such as 0.35 to appear as .35.
   - ☑ ***Show Average instead of Sum***: Normally, ValueSet values are totalled by time period, then displayed and graphed as summed values. This option changes that computation to an average of values.
   - ☑ ***Ignore Zero values when computing average***: Does not consider ValueSet values of zero when computing average.

5. Under **Graph Properties**:

   Note that the choice of displaying the values as lines, bars, or wide bars in the

DataGraph is made in the **DataGraph Options** dialog box, as discussed in the next section.

- **Line Style**: For line graphs in the DataGraph, choose a thin, dotted, dashed or thicker line.
- **Line/Bar Color**: Choose a line color or bar fill color.
- **Bar Pattern**: For bar graphs in the DataGraph, choose a pattern which fills each bar. Marbled patterns are full-colored bitmaps which will ignore any foreground or background color settings. Use of these increases the size of printer files and metafiles, especially on high-resolution printers. Thus, printing time may be increased.
- **Solid Bar Target Color**: For the solid Bar Pattern only, choose a Target Color for fading from the Line/Bar Color to this Target Color. For other bar patterns, the Target Color fills the white area shown in the bar pattern sample.
- **Solid Bar Effects**: For the solid Bar Pattern only, choose a gradient fill pattern for fading from the Line/Bar Color to this Target Color.

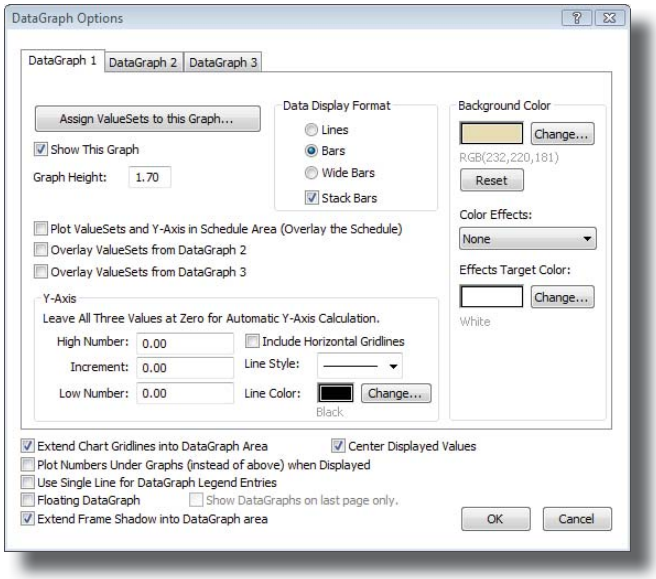
6. Choose ***OK*** and ***OK*** to return to the schedule.

DataGraphs

DataGraphs display values from ValueSets as bar or line graphs. One DataGraph can display up to 8 ValueSets.

A schedule can have up to 3 DataGraphs, none of which is allowed to take up more than ½ of the available space.

You can create a DataGraph before or after creating ValueSets, yet a main component of formatting the DataGraph is choosing which ValueSets to display. Thus, normally, ValueSets are created first.



1. Choose **Tools | Graph Options |** ***Setup DataGraphs***. The **DataGraph Options** dialog box appears, with tabs for each of the three available DataGraphs.
2. Choose the tab for **DataGraph 1**.

3. For **Graph Height**, enter a value in inches. Make sure ☑ ***Show This Graph*** is selected.

4. ☑ ***Plot ValueSets and Y-Axis in Schedule Area*** to display the graph on the schedule instead of below the schedule.

5. ☑ ***Overlay ValueSets from DataGraph 2*** (or ***3***) to display the ValueSets from the **DataGraph 2** or **DataGraph 3** tab on top of the **DataGraph 1** ValueSets. This makes it possible to overlay line graphs onto bar graphs. (See schedule on page 14-17).

6. Under **Data Display Format**, choose to graph values as ***Lines*** (line graph), **Bars** (bar graph) or ***Wide Bars*** (bars which fill the full width of the available area). If you choose ***Bars*** or ***Wide Bars***, choose to ☑ ***Stack Bars*** from different ValueSets on top of one another.

7. Under **Background Color**, click the ***Change*** button and choose a color.

8. Choose a fade setting under **Color Effects** and then choose an **Effects Target Color**. The *Background Color* will fade into the *Effects Target Color*.

9. Under **Y-Axis**, you can customize the numeric value increments that display in the DataGraph.

   - Leave all values at 0 for Milestones to calculate high, low and increment values based on the powers of 10 when possible, for values up to 1,000,000,000. For graphing negative numbers, 0 may not appear on the Y-axis when Milestones calculates the Y-axis values.

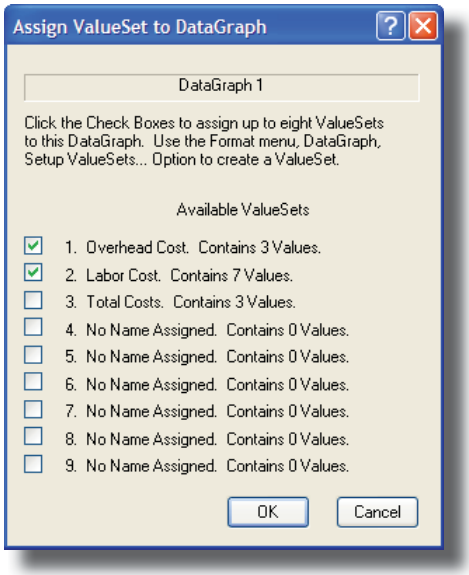
   - For a custom display of Y-Axis values, enter a **High Number** representing the highest number to be displayed along the Y-axis; enter a **Low Number** representing the lowest number; enter an **Increment** which controls the incremental values between the high and low numbers along the Y-axis.

10. Choose to ☑ ***Include Horizontal Gridlines*** that extend from the Y-Axis values, across the DataGraph area, cutting through the line and bar graphs.

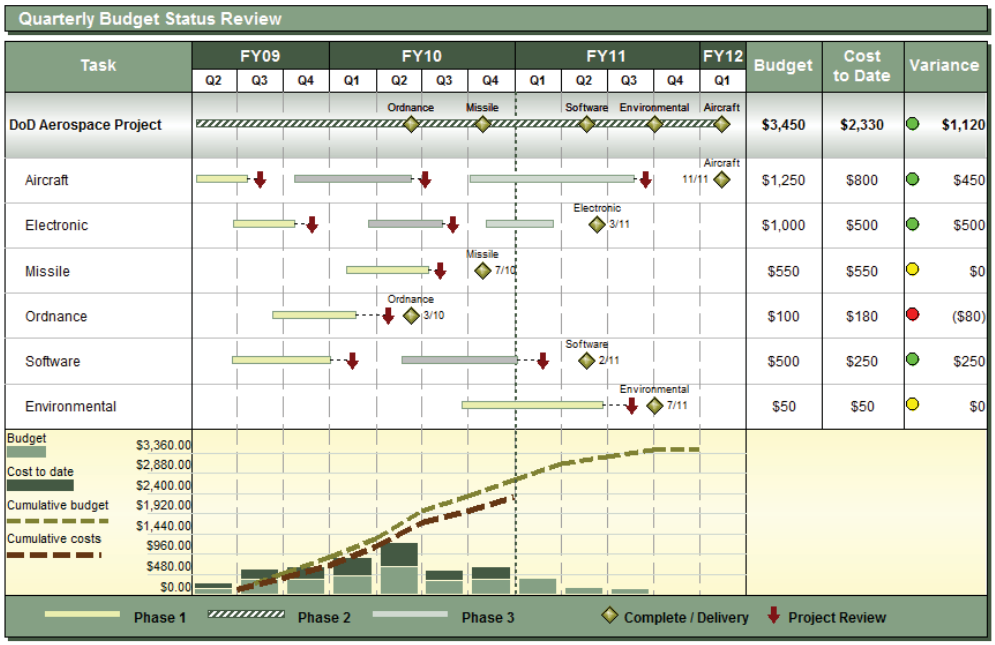
11. Click the ***Assign ValueSets to this Graph*** button.

    The ***Assign ValueSet to DataGraph*** dialog box appears, as shown.

12. ☑ the **Available ValueSets** that should appear in this DataGraph. Click ***OK***.



13. Click the **DataGraph 2** or **DataGraph 3** tab to format and add ValueSets to the other two available graph areas.
14. Options which apply to all DataGraphs:
    - ☑ ***Extend Chart Gridlines into DataGraph area*** to display vertical gridlines in the DataGraph as well as the schedule area.
    - ☑ ***Plot Numbers under Graphs*** to display numbers from ValueSets under the DataGraph, instead of above the DataGraph.
    - ☑ ***Use Single Lines for DataGraph Legend Entries*** to display the name of the ValueSet and the graph color for that ValueSet along a single horizontal space.
    - ☑ ***Float DataGraph*** to undock the DataGraph from the bottom of the schedule.
    - ☑ ***Show DataGraphs on last page only*** to display floating DataGraphs on only the last schedule page.
    - ☑ ***Extend Frame Shadow into DataGraph area*** to display the schedule's shadow along the edge of the DataGraphs as well.
    - ☑ ***Center Displayed Values*** to align the values above or below the graph in the center of the time period in which the values display.
16. Click ***OK*** to return to the schedule. The values from the selected ValueSets should now display in the appropriate DataGraphs.



ValueSet SmartColumn

The ValueSet SmartColumn is used to display the row total (task row total) of any Type 2 or Type 4 ValueSet in a column cell.

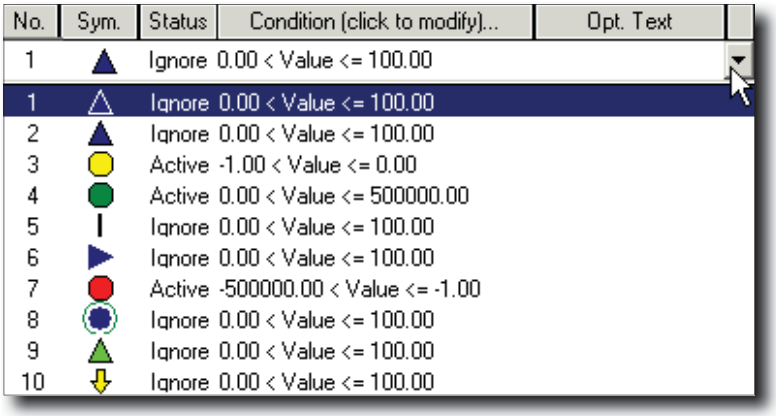
Why only these two ValueSets? Type 2 values are entered in time period increments, row-by-row; therefore, they can be totaled by row. Type 4 values are attached to symbols that appear on task rows; therefore, those values can also be totaled on a row-by-row basis.

These instructions assume that you have first created a Type 2 or Type 4 ValueSet as described previously.

1. Choose **Insert | Rows, Columns | New Column | *ValueSet***.
2. Under **ValueSet to Use**, choose the ValueSet whose values will be totaled in this column.

Optional Indicators:

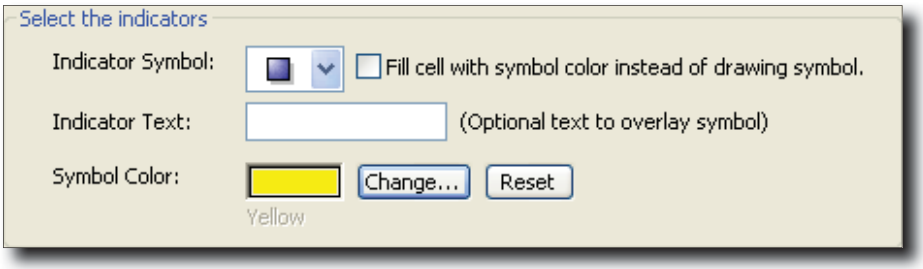
3. ***Pick indicator symbology based upon the following conditions*** to display symbols, text, and/or color based on the column values.
4. Click the drop-down arrow to view 10 active/ignored indicators and their conditions.



No.	Sym.	Status	Condition (click to modify)...	Opt. Text
1	▲	Ignore	0.00 < Value <= 100.00	
1	△	Ignore	0.00 < Value <= 100.00	
2	▲	Ignore	0.00 < Value <= 100.00	
3	●	Active	-1.00 < Value <= 0.00	
4	●	Active	0.00 < Value <= 500000.00	
5	|	Ignore	0.00 < Value <= 100.00	
6	▶	Ignore	0.00 < Value <= 100.00	
7	●	Active	-500000.00 < Value <= -1.00	
8	●	Ignore	0.00 < Value <= 100.00	
9	▲	Ignore	0.00 < Value <= 100.00	
10	⇩	Ignore	0.00 < Value <= 100.00	

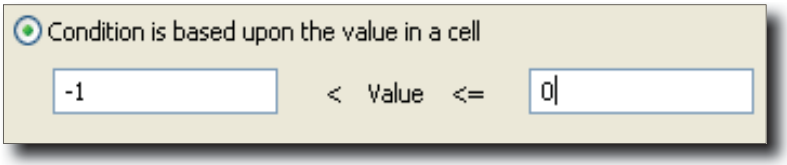
- Any of these symbols can be changed to another symbol from the toolbox.
- All symbols are **Ignored** until you create a condition for them to appear, becoming **Active**.

5. Choose one of the ten symbols. The **Indicator Condition Settings** dialog box opens, as shown below:



- Choose an **Indicator Symbol**. The available choices are the symbols from the toolbox.
- OR, choose to ☑ ***Fill the cell with the symbol color instead of drawing symbol***, not the symbol itself.
- Optionally, enter **Indicator Text** to appear with the symbol or color fill.
- Choose the **Symbol Color** for the symbol or color fill.

6. The indicator can appear based on a value in the column cell.



- ◉ ***Condition is based upon the value in a cell***.
- The indicator will appear when a cell's value is greater than the first value and less than/equal to the second value.
- Do not use commas or currency signs when entering values.

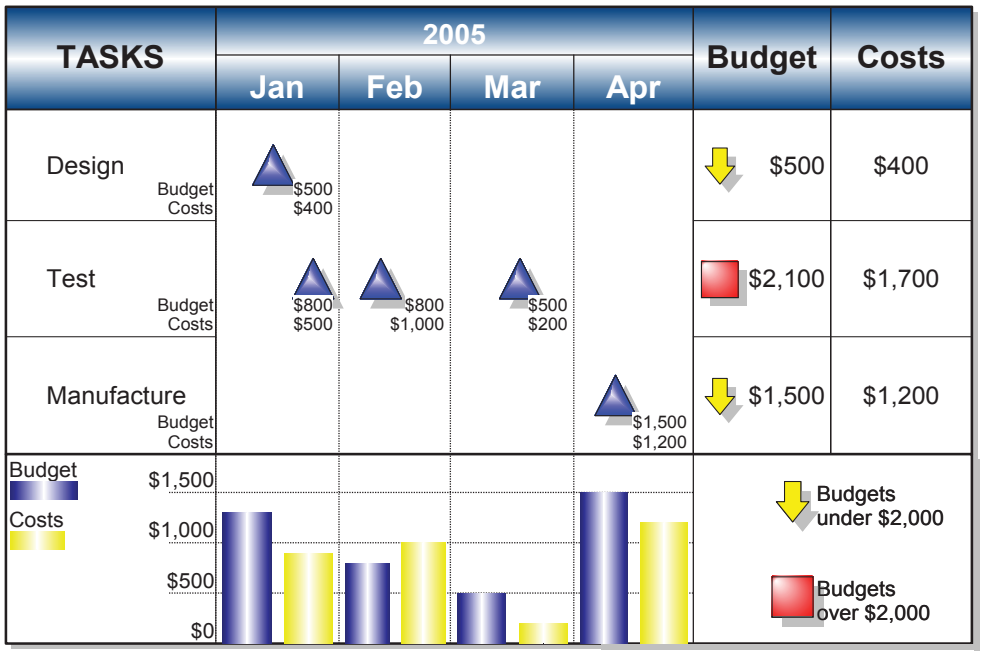
7. Choose ***OK*** to return to the ***Pick indicator symbology based upon the following conditions*** list.
8. Repeat Steps 3 - 7 to display other indicators.
9. Choose **Symbol size** and **Symbol Alignment**.
10. ☑ ***Display numerical value also*** to show the values.
11. Choose ***OK*** to return to the **Column Properties** dialog box where you can add a column heading title and format the column data for currency, decimals, and other selections.
12. Choose ***OK*** to return to the schedule.

The example below has two Type 2 ValueSets, “Budget” and “Costs.” Monthly budget values and cost values are entered for each task. The values are totaled for each month, then displayed and graphed below the schedule.

The “Budget per Task” and “Costs per Task” columns are ValueSet SmartColumns. The “Budget per Task” ValueSet SmartColumn totals the “Budget” Type 2 ValueSet values for each task row. The “Costs per Task” ValueSet SmartColumn totals the “Costs” Type 2 ValueSet values for each task row.

Thus, ValueSet SmartColumns can total values from selected Type 2 or Type 4 ValueSets.

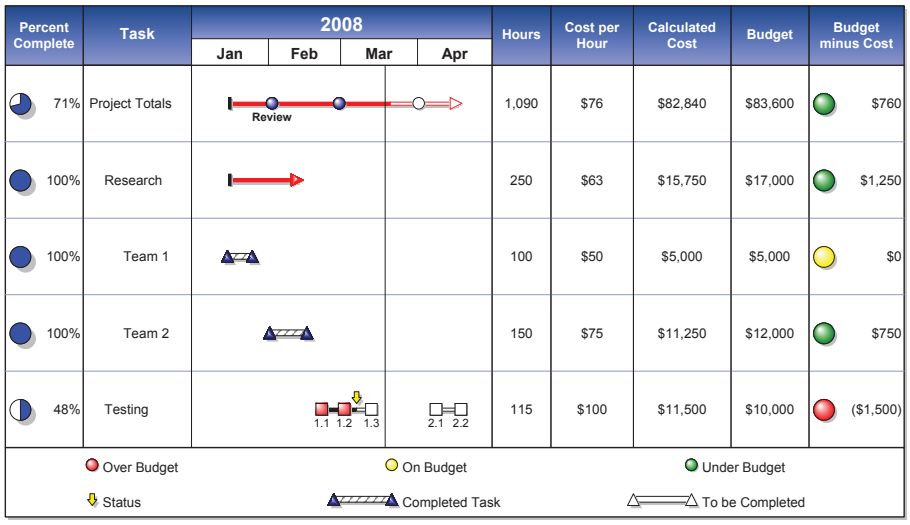
The “Budget per Task” column also displays indicator symbols based on the column cell values.



Chapter 15: SmartColumns and Indicators

What is a SmartColumn?

SmartColumns automatically fill according to schedule data or entered data. For example, the Symbol Count SmartColumn automatically totals the number of symbols on a task row, and the Duration SmartColumn calculates the length of time between the first symbol and last symbol for each task row. Some SmartColumns can also display indicators. The schedule below has six SmartColumns, two of which have indicators.



SmartColumns:

- Dates
- Date from Symbol Automation Tag
- Microsoft Project Column
- Outline Level
- WBS Number
- Resource Allocation Percent
- Symbol Count
- Symbol Text
- Task Number

SmartColumns with optional Indicators:

- Percent Complete
- Stoplight
- Duration
- Values
- Calculation/Indicator
- ValueSet
- Earned Value

Date SmartColumns

The Date Smartcolumns display the dates of different types of symbols found on the task row.

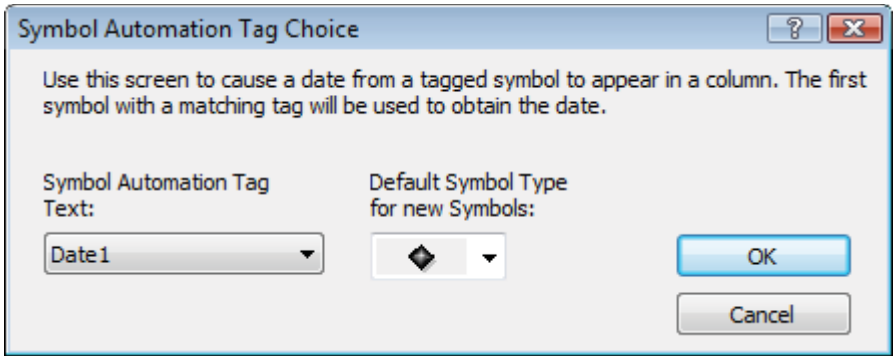
Create a Date SmartColumn:

1. Choose **Insert | Rows, Columns | New Column | *Dates...***
2. Then, choose from:
   - Start Date: displays the date of the first Normal symbol found on the task row.
   - End Date: displays the date of the last Normal symbol found on the task row.
   - Status Date: displays the date of the first status symbol on the task row or the computed status date based on percent complete.
   - Baseline Start Date: displays the date of the first Baseline symbol found on the task row.
   - Baseline End Date: displays the date of the last Baseline symbol found on the task row.

For more on adding a symbol using a date smartcolumn, refer to page 2-10.

Date from Symbol Automation Tag SmartColumn

The Date from Symbol Automation Tag column displays the date associated with a tagged symbol on the task row. In order to display the date of a tagged symbol, this symbol must be tagged with text from one of the accepted Automation Tag text choices. When the Date from Symbol Automation Tag Smartcolumn is inserted, Milestones provides a drop-down menu of accepted Automation Tag text to choose from:



Create a Date from Symbol Automation Tag SmartColumn:

1. Choose **Insert | Rows, Columns | New Column |** ***Date from Symbol Automation Tag...***
2. In the Symbol Automation Tag Choice dialog box:
   - Choose the **Symbol Automation Tag Text** from the drop-down menu. If you choose Date1, for example, the date of the first symbol tagged with Date1 on the row will be entered into the column.
   - Choose the **Default Symbol Type for new Symbols** from the drop-down menu. This will determine which symbol is created when you first type in a date in the Date from Symbol Automation Tag SmartColumn. Milestones will place the symbol in the schedule area and automatically assign tag text according to your choice in Step 2.

Refer to page 11-5 for more information on manually tagging a symbol.

Microsoft Project SmartColumn

The Microsoft Project SmartColumn will fill with text or values from a user-specified Microsoft Project field when the Milestones schedule is refreshed. A newly inserted Microsoft Project Column will be blank. When the refresh option is applied, Milestones uses the selected MPP file to fill the column based on the user-selected Microsoft Project field.

Create a Microsoft Project SmartColumn:

1. Choose **Insert | Rows, Columns | New Column |** ***Microsoft Project Column...***
2. Choose which **Microsoft Project field** you would like to use to populate the column.
3. Refresh the schedule.
   - Go to **Connections | Microsoft Project | Refresh Previously Imported Project** and choose which type of file you would like to refresh the data.
   - In the Refresh dialog box, make sure to check ☑ ***Refresh All Columns***.
   - When you select ***Refresh***, the Microsoft Project Smartcolumn will fill according to the field you previously selected.

Outline Level and WBS SmartColumns

Refer to page 4-4 for more information on the Outline Level and WBS SmartColumns.

Resource Allocation Percent SmartColumn

Control the effort of a resource assigned to a particular task by using a resource allocation percentage. The resource allocation value can be entered in the Resource Allocation Percent SmartColumn or in any cell on the appropriate task row.

According to the Duration SmartColumn Settings, the resource allocation percent will or will not be applied to the Duration SmartColumn's values.

Create a Resource Allocation Percent SmartColumn

1. Choose **Insert | Rows, Columns | New Column |** ***Resource Allocation Percent.***
2. Click once on the new column's heading.and enter a column title under **Selection | Column Heading Text**. Press the Apply Text Changes button.

Enter a Resource Allocation Percent

1. Click in the toolbox, and enter values into the column cells

—or—

1. Double-click a column cell on the task row whose resource needs an allocation percent (do not choose a Duration SmartColumn cell).
2. Choose the **Task/Row Settings and Info** tab.
3. Enter a value, as shown:

% of Listed Resource Allocated to this task: 50

Resource Allocation Percent example

In the example below, Amy will be working on Task 1, 50% of the time, and Task 2, 50% of the time. This does not change the durations of the tasks, yet better indicates the effort needed to complete the tasks. Thus, the overall usage of this resource is 100% for this time period.

Here, the "Allocated Duration" column is a Duration SmartColumn.

This SmartColumn can be set to apply the resource allocation percent to the duration value (see page 15-19) or to display the normal duration value.

Resource Allocation for Duration Values

Task	PM	2007				% of Resource Allocation	Allocated Duration
		Jan	Feb	Mar	Apr		
Project A	Bobby					100%	62d
Task 1	Amy	40d				50%	20d
Task 2	Amy	40d				50%	20d
Task 3	Katie	44d				100%	44d
Task 4	Johnny	31d				100%	31d

Symbol Count SmartColumn

The Symbol Count SmartColumn reports the number of symbols on a task row.

For example, if the symbols on a row represent a certain kind of event, then the number of events can be easily reported in the SmartColumn.

Create a Symbol Count SmartColumn

1. Choose **Insert | Rows, Columns | New Column |** ***Symbol Count.***

Location	Floods	2008					
		Jan	Feb	Mar	Apr	May	Jun
Travis County	6	1/21	2/12	3/6 3/19	4/6	4/28	
Hays County	3			3/17	4/13	5/6	
Marion County	2				4/24	5/17	
Howard County	2					5/6	6/4
Santa Clara County	3	1/18	2/8	3/2			
Madison County	2			3/16	4/3		

Symbol Text SmartColumn

Refer to page 2-13 for more information on the Symbol Text SmartColumn.

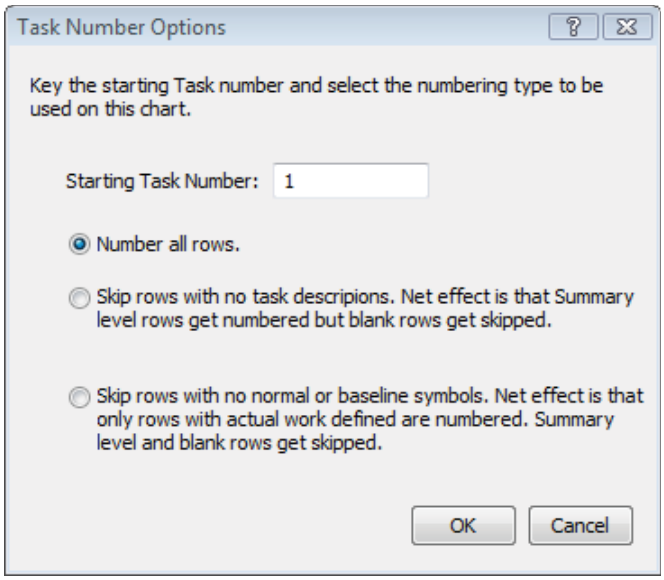
Task Number SmartColumn

The Task Number SmartColumn numbers your project steps.

Create a Task Number SmartColumn

1. Choose **Insert | Rows, Columns | New Column |** ***Task Number...***

The **Task Number Options** dialog box appears, as shown:



- Choose the **Starting Task Number.** This number will begin the task row numbering.
- ***Number all rows*** to number each task row, including blank and summary rows.
- ***Skip rows with no task descriptions*** to number each row except for those without text located in a text column.
- ***Skip rows with no normal or baseline symbols*** to number each row except for those with no user-entered symbols. Summary rows and rows with no symbols are skipped.

SmartColumns with optional Indicators

How do you know if a project activity is costing more than the expected budget? In a project schedule with hundreds of activities, it's helpful to display status "indicators" to show at-a-glance which activities are under, on, or over budget; of long, medium, or short duration; and complete, started or not started.

Milestones displays these status "indicators" in specialized SmartColumns. Not only can any toolbox symbol be displayed in these SmartColumns, the "indicator" displayed can also be text, a number, color, percent pie or combinations of these items.

Indicators can be based upon conditions inherent to the column. This is true of two columns: the Percent Complete SmartColumn and the Stoplight Smartcolumn. In the Percent Complete SmartColumn, the percent complete pie is an indicator based upon the percent complete calculation. In the Stoplight SmartColumn, the stoplights are subsequently based upon the numbers 1-4 or 1-10.

In all other SmartColumns with optional indicators, the indicators must be based upon user-entered conditions. The user can choose from a list of three pre-defined indicator conditions or set up each condition individually. Indicators based upon user-entered conditions may appear in these SmartColumns: Duration, Values, Calculation/ Indicator, ValueSet, and Earned Value.

Percent Complete SmartColumn

The Percent Complete SmartColumn displays the completed portion of each activity as a value, based on an activity's completed duration divided by its total duration. By default, percent complete or "progress" is based on the current date. A status symbol added to a task row will override the current date as the status driver. Create a Percent Complete SmartColumn to display the percent complete value, the percent complete pie, or both.

Percent Complete SmartColumn example

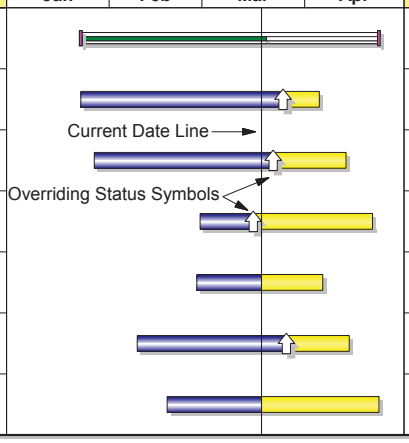
By default, the current date line drives the percent complete values. In the example below, the status symbol (here, the arrow) overrides the percent complete values to show activities which are ahead or behind schedule.

The completed portion of each horizontal bar is filled with a selected color (to the left of the status symbol or current date line). The to-be-completed portion of each horizontal bar is filled with another color (to the right of the status symbol or current date line). The percentage value is also displayed in pie format.

Percent Complete and Status

Current Date
3/18/05

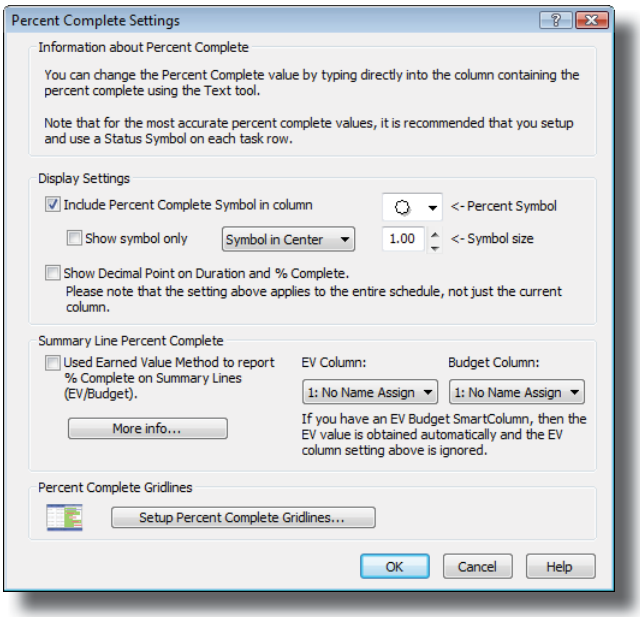
Projects	2005 (Jan, Feb, Mar, Apr)	Status Date	Ahead/ Behind	% Complete
ALL PROJECTS		3/20/05	17d	62%
Project 1		3/25/05	7d	85%
Project 2		3/22/05	4d	71%
Project 3		3/16/05	-2d	32%
Project 4		3/18/05	0d	51%
Project 5		3/26/05	8d	71%
Project 6		3/18/05	0d	45%



Create a Percent Complete SmartColumn

1. Choose **Insert | Rows, Columns | New Column |** ***Percent Complete***.

   The **Percent Complete Settings** dialog box appears, as shown:



2. ☑ ***Include Percent Complete Symbol in column*** to display the percent complete pie.

3. ☑ ***Show symbol only*** to hide the percent complete value and display the pie, only.

4. Value and pie formatting options:

   - If the **Percent Symbol** is not the shape as shown above, Milestones will automatically convert a symbol to this shape.
   - Choose a **Symbol Size** for the percent pie.
   - Choose left, right or center alignment for the pie symbol.
   - ☑ ***Show Decimal Point on Duration and % Complete*** for detailed percent complete values.

5. **Summary Row Percent Complete** options:

   - ☑ ***Use Earned Value method*** and select existing columns which contain the **BCWP Column** values and **Budget Column** values.
   - Choose the ***More info*** button for an extended explanation and additional schedule formatting instructions.

6. Press the ***Setup Percent Complete Gridlines*** button to create shading based on the percent complete for each task row.

   See page 12-14 for more information.

7. Choose ***OK*** to return to the **Column Properties** dialog box where you can add a column heading title and format the column data.

Stoplight SmartColumn

The Stoplight SmartColumn offers two basic methods for displaying stoplight symbols, text and colors based on user-entered numbers 1 to 4, or 1 to 10.

Standard Stoplights: Built-in stoplights appear based on user-entered numbers. G, Y, R, and B can appear with the stoplights, or fill the cell with the designated color instead of the stoplights.

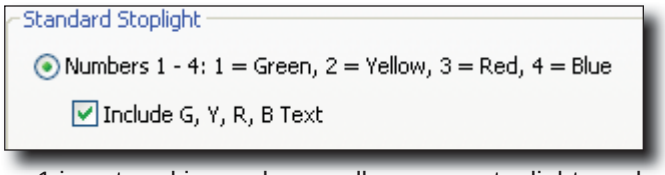
Custom Stoplights: Assign numbers 1 through 10 to any symbol, color and optional text. Optionally, fill the cell with the designated color instead of the stoplights.

Create a Stoplight SmartColumn

1. Choose **Insert | Rows, Columns | New Column | *Stoplight***.

For *Standard Stoplights*:

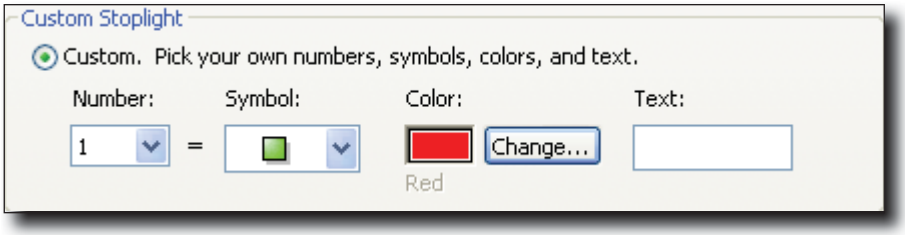
- Under **Standard Stoplight**, choose ***Numbers 1-4***.



- When 1 is entered in a column cell, a green stoplight symbol will appear; 2 displays a yellow stoplight; 3 displays a red stoplight; 4 displays a blue stoplight.
- ☑ ***Include G, Y, R, B Text*** to display these letters with their appropriate stoplights or color-fills.

For *Custom Stoplights*:

- Under **Custom Stoplight**, choose ***Custom. Pick your own...***



- Select any **Number**, 1 through 10.
- Select a **Symbol** to appear when that number is entered in a column cell.
- Select a **Color** for the symbol or column cell fill-color.
- Optionally, enter **Text** (up to 29 characters) to appear with the symbol or cell fill-color.

2. Optionally, ☑ ***Fill the cell with color instead of displaying a symbol***. The selected color, instead of the symbol, fills the column cell.
3. Select the **Stoplight symbol size** from .10 to 5.0.
4. Choose ***OK***.

The list of available symbols for stoplights is generated from the symbols in the toolbox. Therefore, you would need to change the available symbols in the toolbox to change the list of available symbols for stoplights.

For displaying indicator symbols or text based on other column's values or text, ranges of numbers, and calculation results, use Calculation/Indicator SmartColumns, Values SmartColumns or ValueSet SmartColumns.

Stoplight SmartColumn example

In this Stoplight SmartColumn sampler, the two columns to the far left use the Standard option of green, yellow, red, and blue symbols or color-fills with the optional letters. The other two columns use the Custom option of matching any symbol, color and text to numbers 1-10.

Standard Stoplights | Custom Stoplights

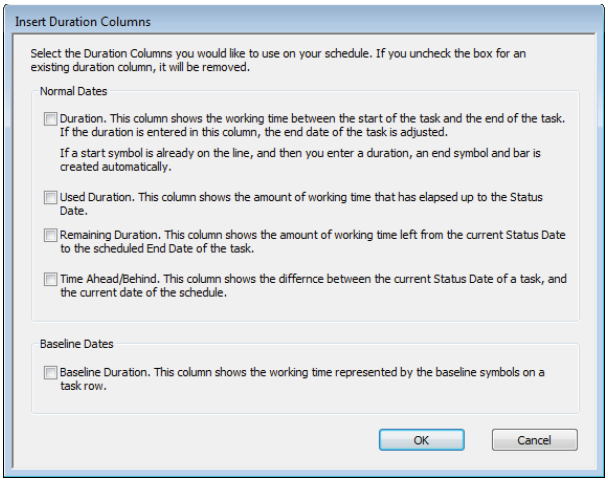
Fill Color + Letter	Symbol + Letter	Custom 1 to 10	Custom 1 to 10	Description	2008 Jan Feb Mar Apr May Jun
G	G	ON TARGET		Project A	
G	G	ON TARGET		Activity 1A	
Y	Y			Activity 2A	
R	R	ALERT		Activity 3A	
G	G	ON TARGET		Project B	
Y	Y			Activity 1B	
B	B			Activity 2B	
G	G	ON TARGET		Activity 3B	

Duration SmartColumn

A Duration SmartColumn can be used to show the amount of time worked. The duration value can be shown in minutes, hours, days or weeks. Optionally, indicator symbols, text and colors can appear based on the duration values.

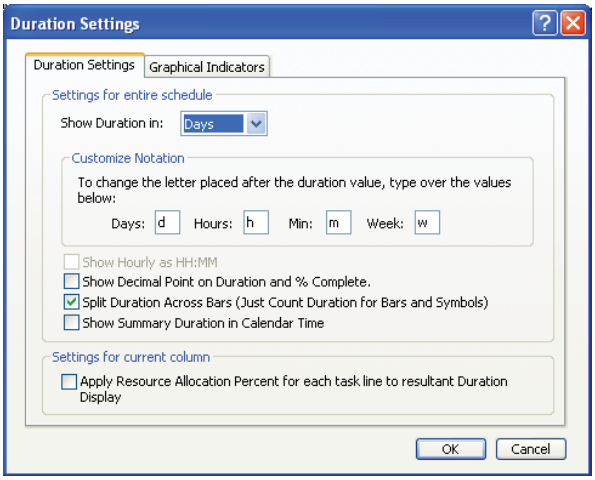
Create a Duration SmartColumn

1. Choose **Insert | Rows, Columns | New Column | *Duration*...**
2. Choose a type of Duration column to insert:



Each column checked will be added to the schedule. Also, previously added columns that are later un-checked in this dialog box will be removed from the schedule.

The duration display settings are found under **Layout | Other | *Duration Settings***, and are global for all duration SmartColumns



Duration Settings options

- **Show Duration in**: Choose days, hours, minutes or weeks.
- **Customize Notation**: You may change the letter notation next to the duration values.
- ☑ ***Show Hourly as HH:MM*** to display hourly duration as HH:MM (available for selection only if you choose to show duration in Hours). 47 hours and 17 minutes will display as 47:17.
- ☑ ***Show Decimal Point on Duration and % Complete*** to display duration SmartColumn values with two decimal places and Percent Complete SmartColumns values with one decimal place.
- ☑ ***Split Duration Across Bars*** to count only the bars' and symbols' duration amounts.

- ☐ ***Split Duration Across Bars*** to count duration from the first symbol on the task row to the last symbol on the task row, which may include non-working “gaps” between activities.
- ☑ ***Show Summary Duration in Calendar Time*** to display the duration of the summary bar, not the total of lower task rows’ duration values.
- ☑ ***Apply Resource Allocation Percent*** (see page 15-20) to display the duration value as duration [x] the resource allocation percent. For example, if the duration is 10 days and the resource allocation percent is 50%, then the displayed value will be 5 days. Note that this option does not apply to the Remaining Duration SmartColumn.

3. Click once on the column heading of the new column to display the **Selection** menu and make changes to the **Column Heading Text**.
4. Choose **Switch to Column** to access the **Selection** menu for the entire column. Click the ***Properties*** button (located next to the SmartColumn type) to access graphical indicator and duration display options.

Graphical Indicators for duration SmartColumns

While the **Duration Settings** apply to all duration SmartColumns, the **Graphical Indicator** settings apply to individual duration SmartColumns (e.g., Duration, Baseline Duration, Time Ahead/Behind, Used Duration, Remaining Duration).

To display symbols, text or colors based on duration values:

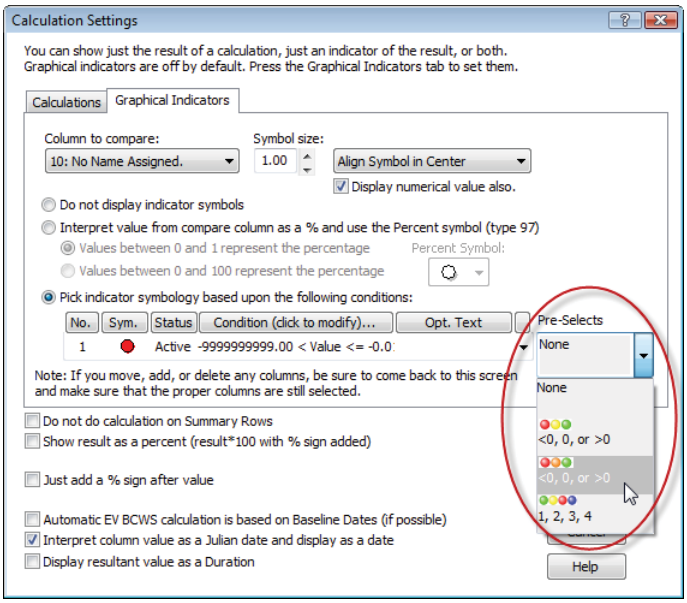
1. For the appropriate column, click once on the column heading. This will display the **Selection** menu for the column heading. To the left of the menu, choose **Switch to Column**.
2. In the **Column Type and Format** section next to the Smart Column Type, click the ***Properties*** button.
3. Select the **Graphical Indicators** tab.

Factors which impact duration computation

- The workday start and end times affect hourly duration values. Change these times in **Dates | Start and End Dates | More Settings... |** ***Hourly Minute***.
- Whether or not Saturdays and Sundays are set as working days. Change this setting in **Dates | Start and End Dates | More Settings... |** ***Weekly/Daily/ Holiday Shading***.
- Holidays that you might have indicated. Set up holidays for either the current schedule or all schedules in **Dates | Date Range Tools |** ***Holidays (schedule)*** or ***Holidays (global)***.

Predefined Indicators

Optionally, choose to use predefined indicators for indicator SmartColumns. Predefined indicators are located to the right of the ***Pick indicator symbology based on the following conditions*** drop down menu in the **Graphical Indicators** tab of SmartColumns in which indicators can appear. When chosen, the indicators in the drop-down menu will automatically switch to the predefined selections.



Pre-Selects available:

-  The Red indicator will be placed in cells with a value less than zero, the Yellow indicator with a value of zero, and the Green indicator with a value greater than zero.
-  The Red indicator will be placed in cells with a value less than zero, the Amber indicator with a value of zero, and the Green indicator with a value greater than zero.
-  The Green indicator will be placed in cells with a value less of one, the Yellow indicator with a value of two, the Red indicator with a value of three, the Blue indicator with a value of four.

Values SmartColumn

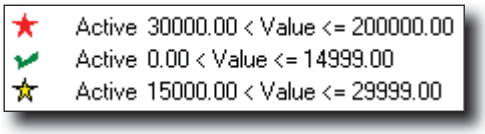
A Values SmartColumn contains user-entered values that can automatically total (roll-up) from lower task levels to upper, summary levels. A Values SmartColumn can display values only; symbols, text or colors based on those values; symbols, text, or colors based on another column's values; or a combination of these options.

Additional options include showing an average of lower level values instead of a total on summary rows; converting the entered value to a percentage; adding a % sign to the entered value; and overriding the summary row values.

Values SmartColumn example

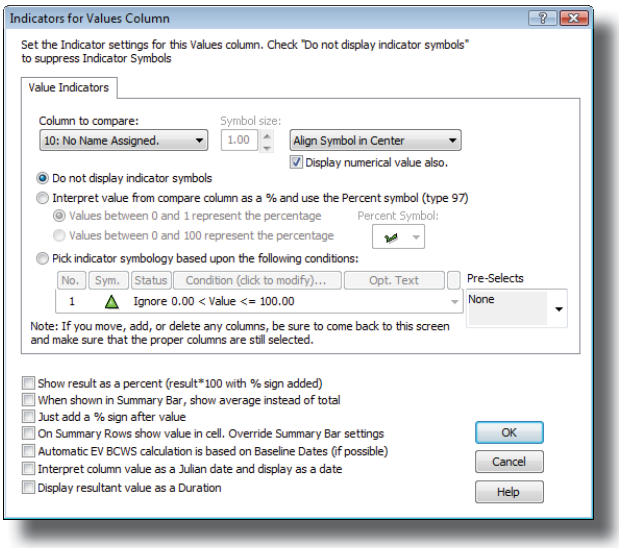
In this example, the Cost column values for Task A1 and A2 are automatically totaled and displayed in Project A's Cost cell. Cost values for Project A and Project B are automatically totaled and displayed in All Project's Cost cell. The symbols are displayed according to the values in each Cost column cell. The symbols and conditions are user-defined.

Here are the user-defined value ranges that cause the symbols to display in the "Cost" Values SmartColumn:

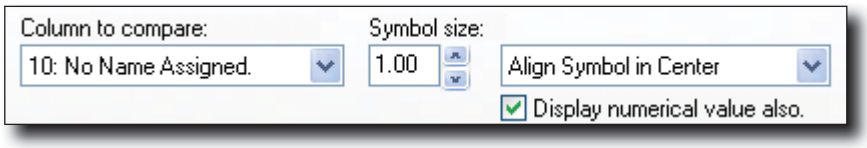


Outline Level	Task	Cost	2008					
			Jan	Feb	Mar	Apr	May	Jun
1	All Projects	43,100						
2	Project A	13,500						
3	Task A1	7,500						
3	Task A2	6,000						
2	Project B	29,600						
3	Task B1	21,000						
3	Task B2	8,600						

Create a Values SmartColumn with optional indicators

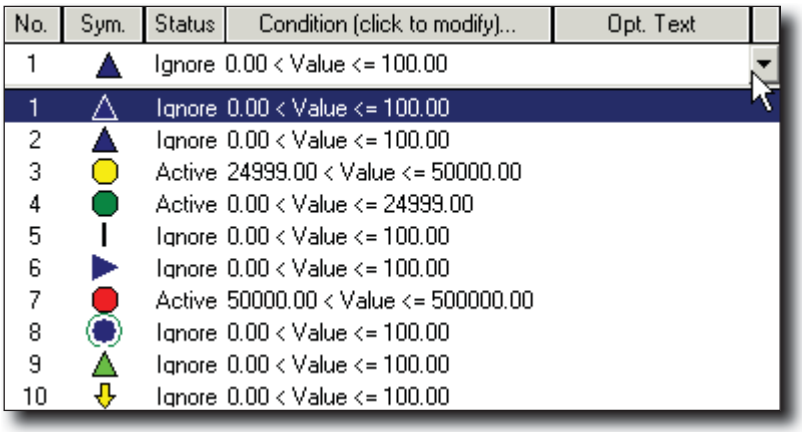


1. Choose **Insert | Rows, Columns | New Column | *Values***.
2. The **Indicators for Values Column** dialog box appears, as shown. This is where you choose which indicators appear based on the value in each column cell.
3. To create a Values SmartColumn without indicators, click ***OK***.
4. For **Column to compare**, the newly inserted column *No Name Assigned* should already be selected.
   - Or, choose an existing column that contains numbers or text to display indicators based on those values.



5. ☑ ***Display numerical value also*** to show the entered values, as shown above.

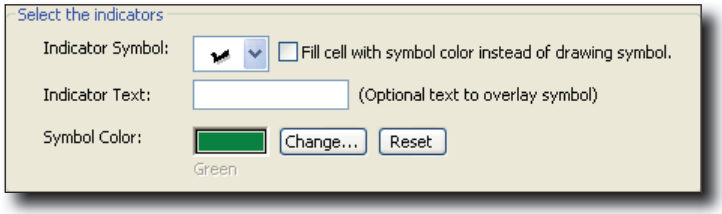
   ☐ ***Display numerical value also*** to only show the symbol indicator based on the entered values (the values will be hidden).
6. Align the indicator symbols as a left, center, or right position in the column cell.
7. ◉ ***Pick indicator symbology based upon the following conditions*** to display symbols, text, and/or color based on the column values.
8. You can now choose a **Symbol size**.
9. Click the drop-down arrow to view 10 active/ignored indicators and their conditions.



No.	Sym.	Status	Condition (click to modify)...	Opt. Text
1	▲	Ignore	0.00 < Value <= 100.00	
1	△	Ignore	0.00 < Value <= 100.00	
2	▲	Ignore	0.00 < Value <= 100.00	
3	●	Active	24999.00 < Value <= 50000.00	
4	●	Active	0.00 < Value <= 24999.00	
5	I	Ignore	0.00 < Value <= 100.00	
6	▶	Ignore	0.00 < Value <= 100.00	
7	●	Active	50000.00 < Value <= 500000.00	
8	●	Ignore	0.00 < Value <= 100.00	
9	▲	Ignore	0.00 < Value <= 100.00	
10	⇩	Ignore	0.00 < Value <= 100.00	

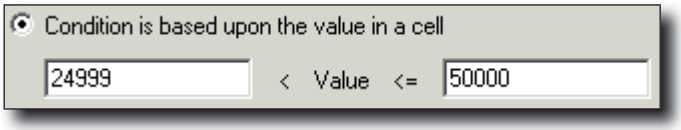
- Any of these symbols can be changed to another symbol from the toolbox. Optionally, choose from the **Pre-Selects** drop-down menu to automatically assign indicators to the listed conditions (see page 15-9).
- All symbols are set to **Ignore** until you create a condition for them to appear, becoming **Active**.

10. Choose one of the ten symbols. The **Indicator Condition Settings** dialog box opens, as shown below:



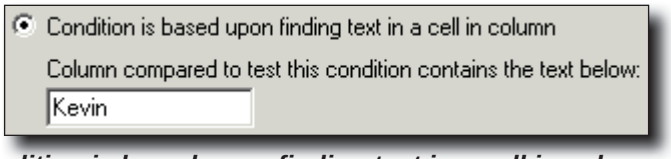
- Choose an **Indicator Symbol**. They are the symbols from the toolbox.
- OR, choose to ***Fill the cell with the symbol color***, not the symbol itself.
- Optionally, enter **Indicator Text** to appear with the symbol or color fill.
- Choose the **Symbol Color** for the symbol or color fill.

11. The indicator can appear based on a value in the column cell.



- ***Condition is based upon the value in a cell***.
- The indicator will appear when a cell's value is greater than the first value and less than/equal to the second value.
- Do not use commas or currency signs when entering values.

12. The indicator can appear based on text in another column's cells. This would require a **Column to compare** reference (Step 4) which contains text.



- ***Condition is based upon finding text in a cell in column***.
- The indicator will appear when a cell contains specific text that you enter.

13. Choose ***OK*** to return to the ***Pick indicator symbology based upon the following conditions*** list.
14. Repeat Steps 9 - 13 to display other indicators.
15. More options:

☑ ***Show result as a percent*** if you want the values multiplied by 100, with a % sign added (.35 becomes .35 x 100 = 35%).

☑ ***When shown on Summary Bar, show average*** if you want the summary row values to be an average of lower-level values instead of a sum.

☑ ***Just add a % sign after value*** if you want to add % to the values (35 becomes 35%).

☑ ***On Summary Rows show value in cell*** if you want to override summary row values (which are normally sums or averages of lower-level values) with user-entered summary row values.

☑ ***Automatic EV BCWS calculation is based on Baseline Dates (if possible*** to assign an earned value calculation to baseline symbols in the schedule.

☑ ***Interpret column value as a Julian date and display as a date*** to designate that a column of numbers can be displayed as dates. When date SmartColumns are used in calculations, they are first converted to their Julian date. If you want the result of the calculation to be displayed as a date, then use this option.

☑ ***Display resultant value as a Duration***. Converts values entered into duration values.

16. Choose ***OK*** to return to the **Column Properties** dialog box where you can add a column heading title and format the column data.
17. Finally, exit all dialog boxes. Enter values into the column cells and see the indicators appear accordingly.

For extensive instructions for Values SmartColumns, press the *Help* button in the **Indicators for Values Column** (Values SmartColumn) dialog box.

Calculation/Indicator SmartColumn

Calculation/Indicator SmartColumns display values and/or value-driven indicators through these methods:

- Multiply, divide, add, or subtract any two columns with values.
- Multiply a column by percent complete or percent not complete.
- Display symbols, colors, or text based on calculated values, user-entered values from another column, or text from another column.
- Multiply, divide, add or subtract a column by a constant value.

You can also use the results of one calculation column in another calculation, as well as choose to show the result as a percent or add a % sign with the resulting value.

Calculation/Indicator SmartColumn Examples

Calculation SmartColumn

Items	2008			Units Sold	Price per Unit	Total Sales
	January	February	March			
All Items				377	$43	$16,211
Item 1	10	15	20	45	$35	$1,575
Item 2	18	14	22 23	77	$35	$2,695
Item 3	35	26	33 28	122	$62	$7,564
Item 4	33 14	42	19 25	133	$40	$5,320

The symbols in this schedule have numbers associated with them, shown in the symbol text.

These numbers, which are part of a Symbol ValueSet, are added up in the “Units Sold” column (a ValueSet SmartColumn).

“Total Sales” is a Calculation/Indicator SmartColumn that multiplies the “Units Sold” column by the “Price per Unit” column.

Calculation/Indicator SmartColumn options

1. Make a calculation between two columns and show the resulting values.

Cost	Budget	Budget minus Cost
$27,750	$29,250	$1,500
$16,250	$16,250	$0

2. Make a calculation between two columns and show the resulting values with symbols, text or colors.

Cost	Budget	Budget minus Cost
$27,750	$29,250	● $1,500
$16,250	$16,250	● $0

Cost	Budget	Budget minus Cost
$27,750	$29,250	●
$16,250	$16,250	●

Cost	Budget	Budget minus Cost
$27,750	$29,250	$1,500
$16,250	$16,250	$0

Cost	Budget	Budget minus Cost
27,750	29,250	UNDER
16,250	16,250	ON

3. Make a calculation between a column and a constant value (10 in the example below) and show the resulting values and/or symbols.

Total Units	Total Cost
625	$6,250 ↓
485	$4,850 ◇

4. Use a calculation result in another calculation.

"Target vs. Actual Sales" uses the "Units (x) $ per Unit" results in its calculation.

Units Sold	$ Per Unit	Units (x) $ per Unit	Target Sales	Target vs. Actual Sales
45	$17	$765	$675	↑ $90

5. Make a division calculation and convert the results to percent values and pies.

Total Units	Units Sold	Percent Sold
625	355	◐ 57%

6. Show various symbols, text or colors based on the values in another column.

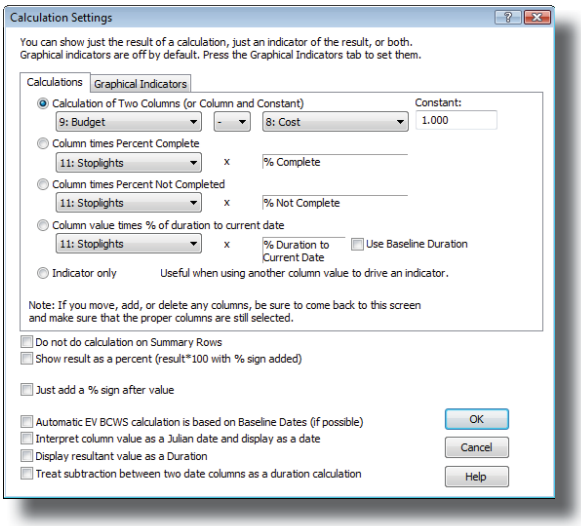
Below, the "Project Status" column displays text and colors based on user-entered values in the "Number" column.

Project Status	Number
GO	1
HOLD	2

Create a Calculation/Indictor SmartColumn

These instructions assume that you have created two Values SmartColumns whose column values can be used in a calculation.

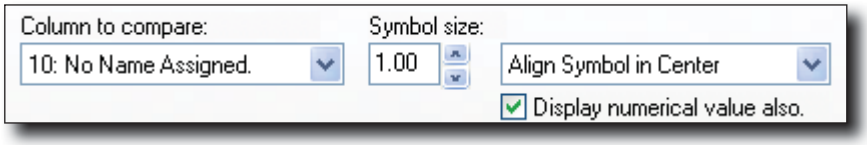
1. Choose **Insert | Rows, Columns | New Column | *Calculation/Indicator***.
2. Under the **Calculations** tab, choose ***Calculation of Two Columns.***
3. Choose two columns and a calculation operator (- + x /).
4. ☑ ***Do not do calculation on Summary Rows*** if you want the values to roll-up (add up) from lower levels to upper levels.
5. ☑ ***Show result as a percent*** if you want the resulting calculation values multiplied by 100, with a % sign added (.35 becomes .35 x 100 = 35%).



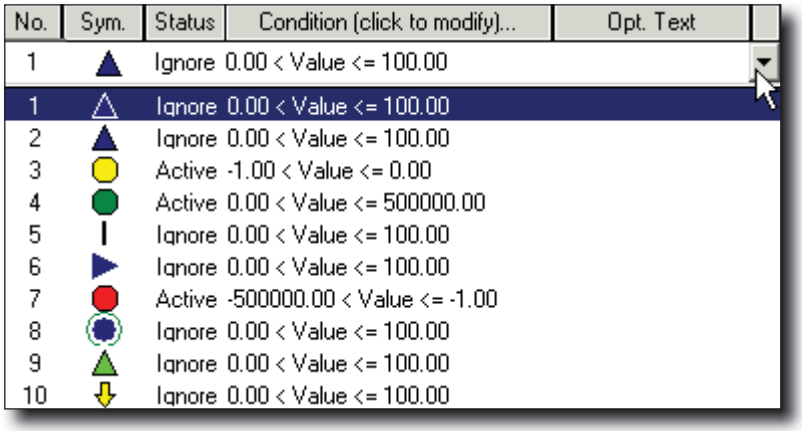
6. ☑ ***Just add a % sign after value*** if you want to add % to the resulting calculation values (35 becomes 35%).
7. ☑ ***Automatic EV BCWS calculation is based on Baseline Dates (if possible)*** to assign an earned value calculation to baseline symbols in the schedule.
8. ☑ ***Interpret column value as a Julian date and display as a date*** to designate that a column of numbers can be displayed as dates. When date SmartColumns are used in calculations, they are first converted to their Julian date. If you want the result of the calculation to be displayed as a date, then use this option.
9. ☑ ***Display resultant value as a Duration***. Converts values entered into duration values.
10. ☑ ***Treat subtraction between two date columns as a duration calculation*** to display the difference between two date columns as a duration value. Holidays and non-working time will be excluded from the result.

If you just want to create a calculation column, then stop here by clicking **OK**.

11. Select the **Graphical Indicators** tab. This is where you choose which indicators appear based on the calculated values in each column cell.
12. For **Column to compare**, the newly inserted column *No Name Assigned* should already be selected:



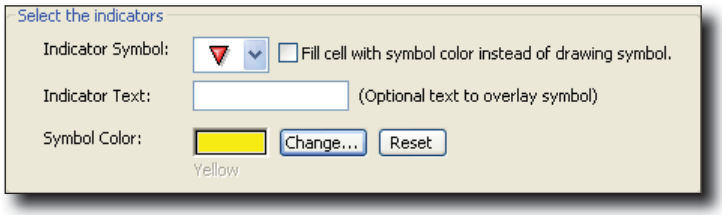
13. Align the indicator symbols as a left, center, or right position in the column cell.
14. ☑ ***Display numerical value also*** to show the calculation results, as shown above. ☐ ***Display numerical value also*** to only show the indicator that results from this calculation.
15. ◉ ***Pick indicator symbology based upon the following conditions*** to display symbols, text, and/or color based on the calculated values.
16. You can now choose a **Symbol size.**
17. Click the drop-down arrow to view 10 active/ignored indicators and their conditions.



No.	Sym.	Status	Condition (click to modify)...	Opt. Text
1	▲	Ignore	0.00 < Value <= 100.00	
1	△	Ignore	0.00 < Value <= 100.00	
2	▲	Ignore	0.00 < Value <= 100.00	
3	●	Active	-1.00 < Value <= 0.00	
4	●	Active	0.00 < Value <= 500000.00	
5	|	Ignore	0.00 < Value <= 100.00	
6	▶	Ignore	0.00 < Value <= 100.00	
7	●	Active	-500000.00 < Value <= -1.00	
8	⬢	Ignore	0.00 < Value <= 100.00	
9	▲	Ignore	0.00 < Value <= 100.00	
10	⇩	Ignore	0.00 < Value <= 100.00	

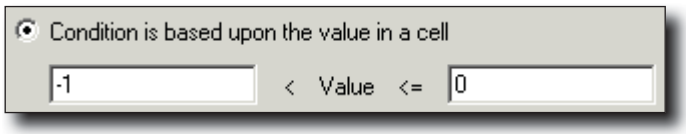
- Any of these symbols can be changed to another symbol from the toolbox.
- All symbols are set to **Ignore** until you create a condition for them to appear, becoming **Active**.
- Optionally, choose from the **Pre-Selects** drop-down menu to automatically assign indicators to the listed conditions (see page 15-9).

18. Choose one of the ten symbols. The **Indicator Condition Settings** dialog box opens, as shown below:



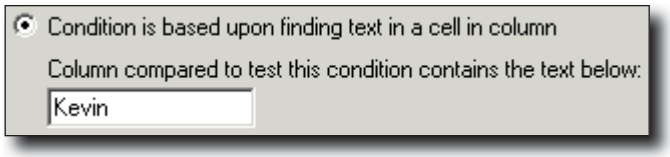
- Choose an **Indicator Symbol**. These are the same symbols found in the toolbox.
- OR, choose to ☑ ***Fill the cell with symbol color***, not the symbol itself.
- Optionally, enter **Indicator Text** to appear with the symbol or color fill.
- Choose the **Symbol Color** to override the symbol fill color.

19. The indicator can appear based on a value in the column cell.



- ◉***Condition is based upon the value in a cell***.
- The indicator will appear when a cell's value is greater than the first value and less than/equal to the second value.
- Do not use commas or currency signs when entering values.

20. The indicator can appear based on text in another column's cells. This would require changing the **Column to compare** to a column which contains text.



- ◉***Condition is based upon finding text in a cell in column***.
- The indicator will appear when a cell contains specific text that you enter.

21. Choose ***OK*** to return to the ***Pick indicator symbology based upon the following conditions*** list.
22. Repeat Steps 16 - 20 to display other indicators.
23. Choose ***OK*** to return to the **Column Properties** dialog box where you can add a column heading title and format the column data.

For extensive instructions, press the ***Help*** button in the **Calculation Settings** (Calculation/Indicator SmartColumn) dialog box.

ValueSet SmartColumn

Refer to page 14-18 for more information on ValueSet SmartColumns.

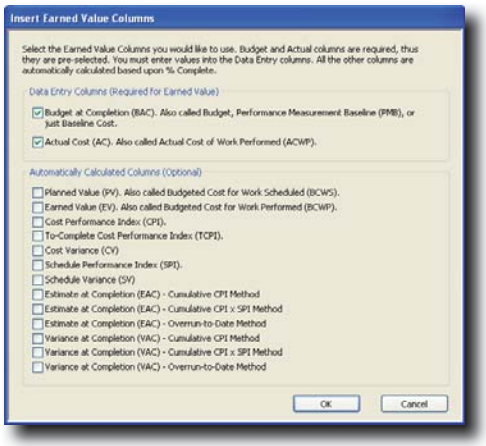
Earned Value SmartColumns and Reports

What is Earned Value Management?

Earned Value Management (EVM) is a project management system that combines schedule performance and cost performance to answer the question, “What did we get for the money we spent?”

Basic concepts of EVM:

1. All project steps “earn” value as work is completed.
2. The Earned Value (EV) can then be compared to actual costs and planned costs to determine project performance and predict future performance trends.
3. Physical progress is measured in dollars, so schedule performance and cost performance can be analyzed in the same terms.

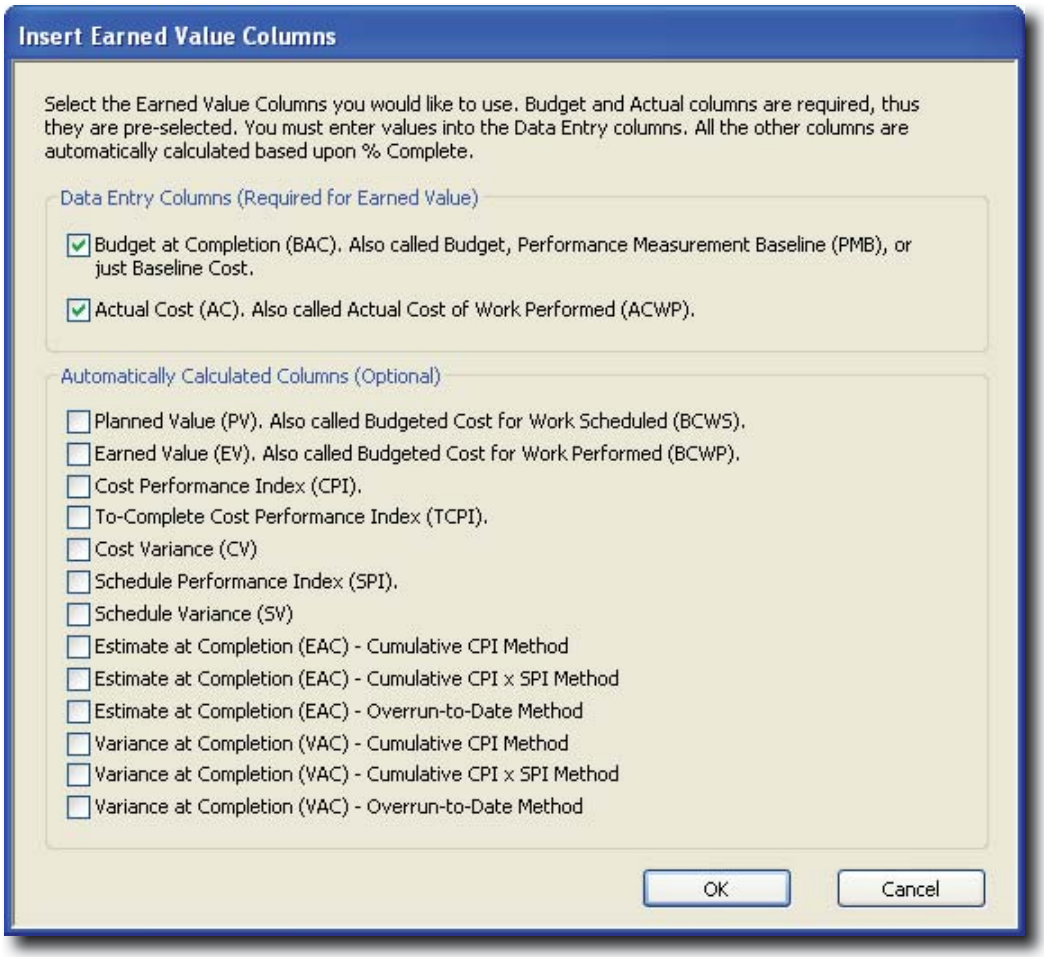


Earned Value has been used since the 1960’s by the Department of Defense as a central part of the C/SCSC (Cost/Schedule Control Systems Criteria). Recently, the DOD revised the 35 criteria contained in the C/SCSC and produced the 32 criteria for EVMS (Earned Value Management Systems).

These criteria have since been accepted by the American National Standards Institute/Electronic Industry Association as a new standard, called ANSI/EIA 748. Now, EVM is being used in a wider variety of government contracts, and is spreading through the private sector as a valuable tool for project managers.

Earned Value SmartColumns

Milestones Professional makes it easy to show Earned Value metrics with a simplified SmartColumn selection screen. Choose **Insert | Rows, Columns | New Column | *Earned Value*...**



Budget-at-Completion and Actual Cost are necessary fields to derive further EV calculations, so those two columns are pre-selected.

Any columns that are checked will be added to the schedule; any columns that are un-checked will be deleted.

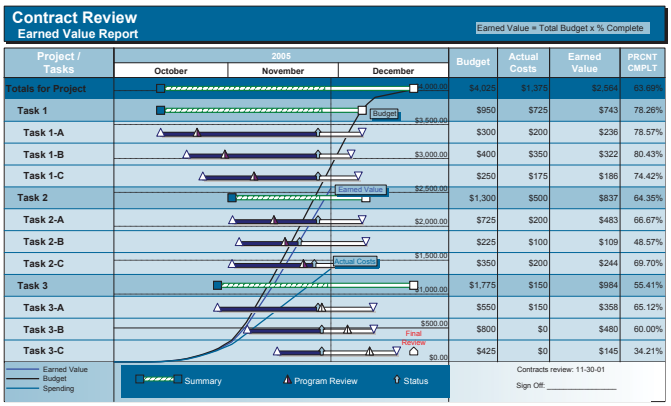
If a column in the list already exists on the schedule, that column will already be checked in the insert column dialog.

The following list provides the basic calculation performed and description of each main EV SmartColumn. Note that there are multiple versions of EAC and VAC; for a detailed description of these columns see the Earned Value section of the *Milestones Professional Help Topics* in the **Help** menu:

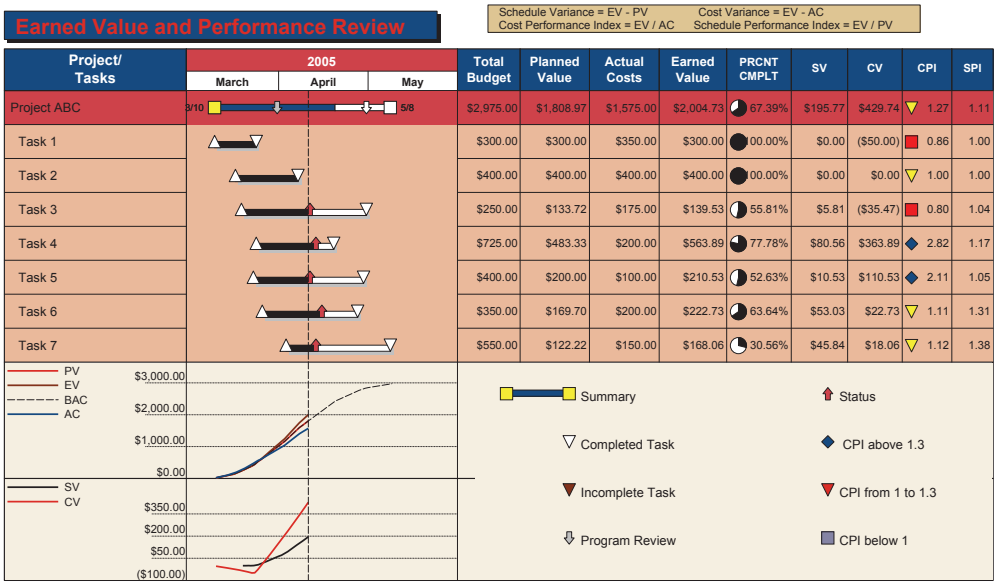
- Budget at Completion (BAC) = Overall approved budget for a task.
- Actual Costs (AC or ACWP) = Total amount spent on a task up to the current date.
- Planned Value (PV or BCWS) = The point along the time-phased budget that crosses the current date. Shows the budgeted cost of scheduled work as of the current date.
- Earned Value (EV or BCWP) = BAC x Percent Complete. The budgeted cost of completed work as of the current date.
- Cost Performance Index (CPI) = Earned Value / Actual Costs. Cost variance related as a ratio instead of a dollar amount. A ratio less than 1.0 indicates that the value of the work that has been accomplished is less than the amount of money spent.
- To-Complete Performance Index (TCPI) = (BAC-EV) / (BAC-AC). Indicates the CPI required throughout the remainder of the project to stay within the stated budget.
- Cost Variance (CV) = Earned Value – Actual Costs. The difference between the work that has been accomplished (in dollars) and how much was spent to accomplish it.
- Schedule Performance Index (SPI) = Earned Value / Planned Value. Schedule variance related as a ratio instead of a dollar amount. A ratio less than 1.0 indicates that work is being completed slower than planned.
- Schedule Variance (SV) = Earned Value – Planned Value. The difference between what was planned to be completed and what has actually been completed as of the current date.
- Estimate at Completion (EAC) = AC + ((BAC-EV)/CPI). A forecast of total costs that will be accrued by project completion based on past cost performance trends.
- Variance at Completion (VAC) = EAC – BAC. The difference between the new Estimate at Completion and the original Budget at Completion.

The following schedule shows the basic Earned Value columns Budget and Actual Costs, with the calculated Earned Value.

Once values have been entered into the Budget and Actual Costs columns, the Earned Value SmartColumn will perform the necessary calculation and display the results automatically.



A more complex EV report could show multiple SmartColumns, including BAC, PV, AC, EV, SV, CV, CPI, and SPI. Any of the EV SmartColumns can be used to drive a Type 3 ValueSet and graphed either below or overlayed on the schedule.

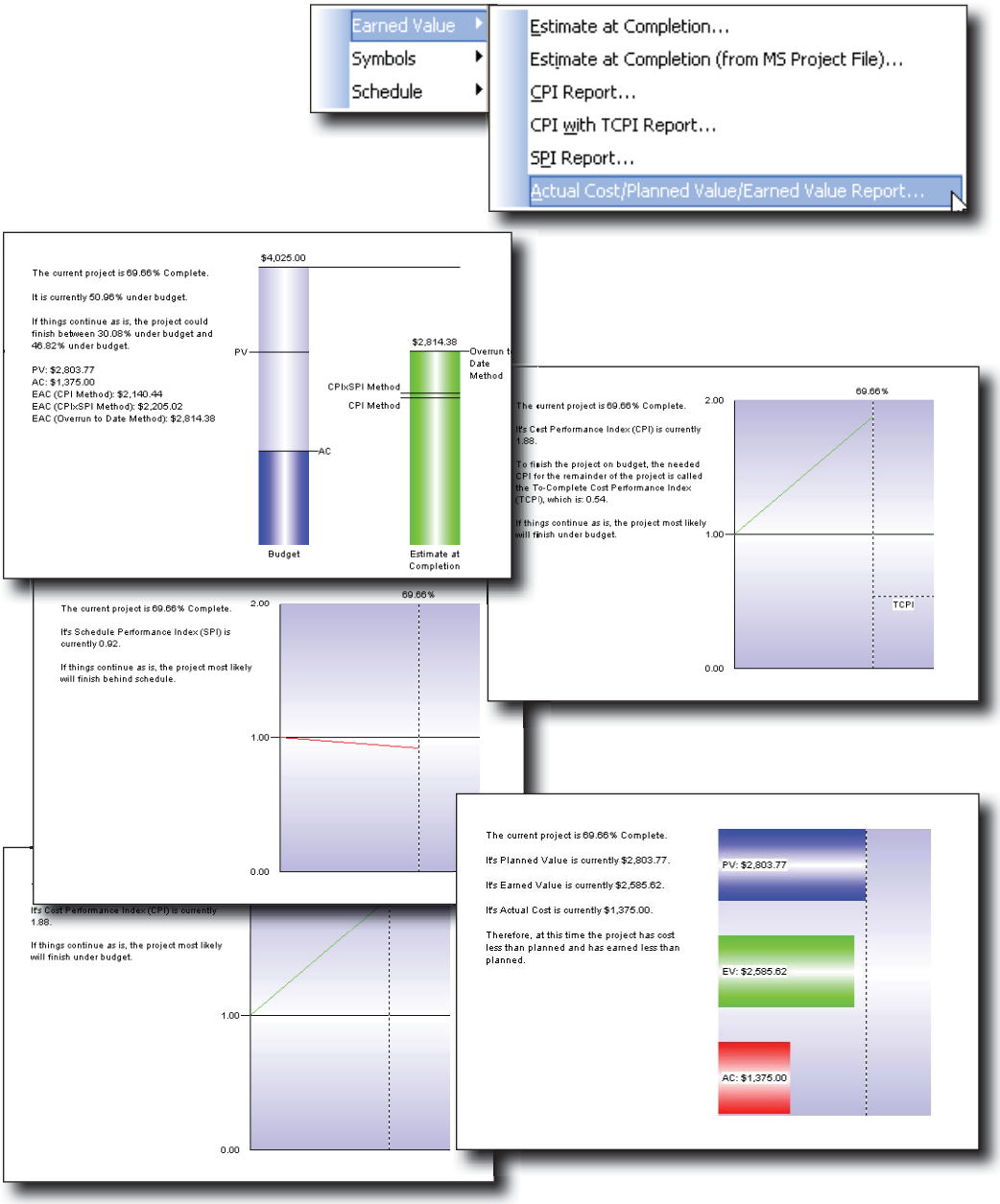


In addition, several of the EV SmartColumns are capable of displaying indicators, while the CPI and TCPI columns have pre-programmed indicators.

Earned Value Reports

Any schedule that has the appropriate Earned Value SmartColumns in use can generate several types of EV Reports.

Choose **Tools | Reports | *Earned Value*** to choose a report:



Summary Level Value Roll-up

Numbers in a Values SmartColumn, ValueSet SmartColumn and Calculation/Indicator SmartColumn can be automatically summed and displayed on summary task levels. Summary bars must be drawn for the values to appear, as instructed below.

To automatically total lower level values on summary rows:

1. Choose **Layout | Other |** ***Summary Bar Settings***.
2. ☑ ***Compute Rolled-Up Values for Value/Calc SmartColumns***.
3. Under **When to Draw** choose ☑ ***Always*** to have Milestones draw summary bars.

See Chapter 4 for more about outlining and summary bar controls.

Currency and Numbers Format

When a schedule is initially created and saved, the currency and number formats (based on *Regional and Language Options*) are saved and carried with the schedule. Thus, if numbers are originally set to display with a comma as the grouping symbol, then they will continue to display as such, even if the schedule is displayed on a system where the default separator is a period.

For example, if a Milestones user in the UK who is using pounds for currency sends a Milestones schedule to someone in the United States who is using dollars for currency, then the Milestones schedule will retain the pounds setting.

In previous Milestones versions, numbers displayed in Values SmartColumns and ValueSet SmartColumns did not display grouping separators, such as commas. To retain this setting found in previous versions, choose **Tools | Program Options | General**, and uncheck ***Use current regional settings to format numbers***. Unchecking this default setting will, for example, display a number as 10000 instead of 10,000.

Change the number format and number grouping options

Number and currency settings apply to the current schedule only.

1. Choose **Format** | **International** | **International, Number, and Currency Settings |** ***Number Format*****.**
2. Select from the display settings options:
   - Leading zeros
   - Negative Number Format
   - Decimal Symbol
   - Digit grouping symbol
   - Digit grouping

Change the number of decimal places displayed in a column

1. Click once on the column heading of the column containing the values. This should display the **Selection** menu.
2. Choose **Selection | Current Object: Column Heading |** ***Switch to Column***
3. In **Selection | Column Type and Format |** ***Decimal Places*** select a number from 0 to 5.

Display the currency symbol with a column's values

1. Click once on the column heading of the column containing the values. This should display the **Selection** menu.
2. Choose **Selection | Current Object: Column Heading |** ***Switch to Column***
3. In **Selection | Column Type and Format,** choose ☑ ***Currency***.

Change the currency symbol and other currency formats

1. Choose **Format | International | International, Number, and Currency Setings |** ***Currency Format***.
2. Select from the display settings options:
   - Currency Symbol, enter up to four characters (e.g. $)
   - Positive Currency Format
   - Negative Currency Format
   - Decimal Symbol.
   - Digit grouping symbol
   - Digit grouping

In the **Currency Format** dialog box, the **Positive Currency Format** and **Negative Currency Format** options show the $ symbol in the examples, yet will use the **Currency Symbol** entry you choose when applied to the schedule.

Appendix A: Quick Reference Tables

Scheduling Basics

TO ADD OR SET:	DO THIS:
Project activities or other column text	Click the T tool. Click in a column cell and begin typing.
Symbol	Click the + tool. Click once on the symbol to add, click with the mouse in the schedule area, and drag.
Horizontal bar between two symbols	Click the + tool. Click once on the left-most symbol on the schedule. Click once on the horizontal bar type in the toolbox. Then, click once on the right-most symbol on the schedule.
Vertical link	Click the + tool. Click once on the “from” (top) symbol. Click once on the vertical link type in the toolbox. Then, click once on the “to” (bottom) symbol.
Many vertical links at once	Click the tool. Hold the Ctrl key and click once on each task row whose symbols will be connected vertically. Choose **Insert | Vertical Links | *Vertical Links between selected task rows*.**
Task row, in-between two existing task rows	Click the tool. Select the task row above which you want to insert the new row. Choose **Insert | Rows, Columns | *New Task Row*.**
Current date line	Choose **Dates | Current Date** to format.
Date headings	Click once on the date headings within the schedule with the arrow tool. This will activate the Selection menu. Or choose Dates | Date Headings.
Start and/or end date for the schedule	Choose **Dates | Start and End Dates** to format. Click on the icon to view the calendar.

Scheduling Basics

TO ADD OR SET:	DO THIS:
To turn on date sensitivity	Click **Dates | Date Related Settings** , then on ***Symbols: Fill to Status Date***. Repeat for ***Bars: Fill to Status Date***. This causes bars and/or symbols to display an “after-status” fill color after the current date.
Progress of a task row using a status symbol	Add a status symbol by double-clicking on one of your toolbox symbols and clicking the ***Status Symbol*** option. Add the symbol on any task row to adjust the task’s progress.
Constraint date for a symbol	Click the tool. Click once on the symbol, then choose **Selection | Constrants**.
Set up a column for indenting	Click once on the column heading. **Choose Selection | Switch to Column**, then under **Column Type and Format**, enter a value for ***Indent per outline level.***
Change the outline level of task row(s)	Click the tool. Select the task row you want to indent or outdent. The outline level settings are located under **Selection | Task Row Settings**. To indent: click , or press the *Tab* key. To outdent: click , or press the *Tab* key.
Roll up all tasks to a certain level	Right-click a task that is at the level you want to roll all tasks to. Then click ***Collapse All Tasks to Selected Level***.
Work and display weekends	Choose **Dates | Start and End Dates | *Full Dialog***. Click the **Weekly/Daily** tab.
Work-week starting day	Choose **Dates | Start and End Dates | *Full Dialog***. Click the **Weekly/Daily** tab.

Scheduling Basics

TO ADD OR SET:	DO THIS:
Color themes	Choose **Format | Color Themes** to apply pre-formatted background coloring to the schedule. Choose **Format | Color Themes | *Manage Color Themes*** to save a user-created color theme.
Date range override for single page	Choose **Dates | Start and End Dates | *Full Dialog***. Enter dates for ***Current Page Override.***
Shading, gridlines, text and summary bars by outline level	Choose **Format | Gridlines | *Gridlines, Shading, Font Sizes by Outline Level***.
Custom coloring for “after-status” fill-colors for symbols and bars	In the toolbox, double-click the symbol or bar. For symbols, click the **Color/Pattern/Size/ Shadow** tab and then choose an ***After Status Color***. For bars, change the ***After Status Fill Color***.
Page number format	Click the tool. Click once on the page number at the top left part of the schedule. If the page numbers are not displayed, choose **View | Optional Items | *Page Number*** then repeat the above steps.
Workday hours	Choose **Dates | Start and End Dates | *Full Dialog***. Then click the **Hourly/Minute** tab. ☑ ***Allow Hourly Detail***, and then enter the working hours and the hours to display**.**
Fiscal year starting month	Choose **Dates | Start and End Dates | *Full Dialog***. Then click the **Yearly/ Monthly** tab.

Add Graphics, Text and Legend

TO ADD:	DO THIS:
Title	Select **Insert | Title | *Insert/Edit Chart Title***.
Freeform text	Click the T tool. Click in the area you want to place the text, and begin typing**.**
Text to a symbol	Click the tool. Click once on the symbol on the schedule. Click the **Text** tab.
Symbol notes	Click the tool. Click once on the symbol on the schedule, then click the **Notes** tab. Symbol notes can be viewed by hovering over the symbol, or choose **Tools | Reports | Symbol | *Symbol Notes***.
Current date, system date, page number, max page number, or filename as free-form text	Click the T tool. Click on the schedule and type: &date for the current chart date &sysdate for the computer date &curpage for the current page number &maxpage for the maximum page # &filename for the name of the chart &systime for the computer time
Line, box or circle	Click the (line) tool, the (box) tool or the (circle) tool, and then click-and-drag on the schedule to add a line, a box or a circle**.**
Legend	Choose **Layout | Legend Size** and enter 1.0 (or more) for ***Enter Legend Height***.
Legend entry	Choose **Insert | Picture, Legend | *New Legend Entry***.
Graphic	Choose **Insert | Picture, Legend | *Picture from File***. Or, copy the graphic to the clipboard from another application. Choose **Edit | Paste | *Picture***. Note: To convert a graphic file to an embedded graphic, click once on the graphic, then choose **Selection | Properties | *Convert to Embedded Graphic.***
Column heading text	Click once on the column heading and edit text.

Format the Schedule

TO ADD OR CHANGE:	DO THIS:
Chart size	Choose **Layout | Page Size | *Chart Size***.
Number of task rows per page	Choose **Layout | Page Size | *Rows per Page.***
Page to a schedule	Choose **Insert | Page | *Insert a New Page before Current Page*** or ***Insert a New Page After the Last Page***.
Column	Choose **Insert | Rows, Columns | *New Column.***
Background color or frame options	Choose **Format | Frame, Highlights | *Background color, border, frame corners***.
Margins	Choose **Layout | Page Size | *Page Margins***.
Column width	Click the tool. Click-and-drag on the column edge with your mouse. The cursor will change to at the column edge.
Date format for symbol dates	Choose **Dates | Date Related Settings | *Set Symbol Date Format***.
Date headings	Click once on the date headings. Or, click **Dates | Date Headings**.
Gridlines between task rows	Choose **Format | Gridlines | *Horizontal Gridlines for entire schedule***. Then choose the **Gridlines** tab.
Task row shading	Choose **Format | Gridlines | *Horizontal Gridlines for entire schedule***. Then choose the **Shading** tab.
Curtains	Choose **Format | Vertical Shading | *Curtains (Shade by Date Range)***.
Holiday and weekend shading	Choose **Format | Vertical Shading | *Weekend and Holiday Shading...***

Format the Schedule

TO ADD OR CHANGE:	DO THIS:
Default symbol date and text location for a symbol in your toolbox	Double-click the symbol in the toolbox. Click the **Text and Date Properties** tab.
Default symbol size	Choose **Format | Frame, Highlights | *Symbol Size***.
SmartColumns	Choose **Insert | Rows, Columns | *New Column***, or click once on an existing column heading, choose ***Switch to Column Heading***, then use the drop down menu under **Column Type and Format** to choose one of the *SmartColumn Definitions*.
Default text styles	Choose **Format | Default Text**.
A page break	Click the tool. Right-click the task row you want at the top of the next page, and then click ***Insert Page Break*.**
Default symbol text	Double-click the symbol in the toolbox. Click the **Default Text** tab. Enter text or choose a column and press ***Insert***.

Make Changes

TO CHANGE:	DO THIS:
A legend entry	Click once on the legend entry you want to change. To move a legend entry, first click the tool. Click on the legend entry, drag to the new location and drop.
A single link on your schedule from one type to another type that is in your toolbox	Click the tool. Select the left-most symbol (or in the case of vertical links, select the symbol from which it originates). Click once on the new link type in your toolbox.
Selected symbol(s) on your schedule from one type to another type that is in your toolbox	Click the tool. Select the symbol(s) to be changed (hold down *Shift* to select more than one symbol). Next, click once on the new symbol type in your toolbox.
All symbols or bars of one type, on your schedule, to another type	Double-click the symbol or bar in your toolbox. Choose a new symbol type (shape).
The dates of a group of tasks linked with vertical links	Choose **Dates | Date Related Settings | *Dependency Mode***. A check by Dependency Mode indicates that it is turned on. Then, use the tool to click-and-drag a symbol. All dependent symbols will move by the same amount.
The dates of all the tasks on your schedule	Choose **Dates | Date Range Tools | *Shift all task dates*** to shift all symbol dates forward or backward by a specified number of days.

Make Changes

TO CHANGE:	DO THIS:
Text size of an individual symbol or an individual task row's column text	Click the tool. Select the item to be changed. Next, choose the **Text** tab and change the **Font** ***Size*** or ***Color***.
Individual symbol color	Click the tool. Select the symbol on the chart. Next, choose the **Size/Color** tab and change the ***Symbol Fill Color***.
Height of individual task rows	Choose **Tools | Program Options |** ***Edit***. Make sure there is a check next to ***Allow Task Row Height Adjustments***. Click the tool. Click-and-drag the light blue row guide (or gridline if you are using gridlines) at the bottom of your task row and within the column area. The cursor will change to a . Release to resize.
Summary bar preferences	Choose **Layout | Other |** ***Summary Bar Settings***. Choose how and when you want the Summary Bars to appear. Also, choose the symbols and bar to use for summary bars.
The date of a symbol	Click the tool. Then click-and-drag the symbol on the schedule. Or, click once on the symbol you want to change. Enter a new date under **Selection | Current Object: Symbol (1 Selected)**. Or, click the tool. Click once on the symbol on the schedule and release the mouse button. Hold down the *Shift* key and press the left or right arrow keys.

Delete Items

TO DELETE:	DO THIS:
Symbol(s)	Click the tool. Select the symbol to be deleted. Press the *Delete* key on your keyboard. To delete several symbols at once, hold down the *Shift* key while selecting the symbols. Then press the *Delete* key.
Horizontal bar(s)	Click the tool. Right-click the symbol on the left most end of the bar. Click ***Clear Horizontal Bars (Bars)***.
Vertical link(s)	Click the tool. Right-click the starting symbol for the vertical link. Click ***Clear Vertical Links***.
Task row(s)	Click the tool. Right-click a task row. Then click ***Delete Task***. To delete several task rows, hold down the *Shift* key while selecting the task rows and then press the *Delete* key. To delete several non-contiguous task rows, hold down the *Ctrl* key while selecting the task rows and then press the *Delete* key.
Legend entry	Click the tool. Click once on the legend entry you want to delete. Press the *Delete* key.
Column	Click the tool. Select the column you want to delete (move the cursor to the lower edge of the column heading cell—the cursor changes to a downward pointing arrow—click once to select—the whole column highlights in black. Press the *Delete* key.
Page on your schedule	Choose **Edit | Delete | *Current Page***.

Customizing Milestones Professional

TO CUSTOMIZE:	DO THIS:
The starting template	Create the format you need, including customization of your toolbox and page layout. Click **File | Files and Templates: Open and Save Options | *Save As...File***. Next, click ***Standard Template***. Save the schedule with the name *default.mtp*. From now on every time you click New, a blank schedule template using your format and toolbox settings will be displayed**.**
The default file locations	Choose **Tools | Program Options | *Folders.*** Click the ***Browse*** button to set the default locations.
A bar or link in your toolbox	Double-click on a horizontal bar or vertical link in the toolbox.
A symbol in your toolbox	Double-click on a symbol in the toolbox.
The toolbox size, other options	Right-click the toolbox and choose ***Toolbox Properties***. Select the number of symbol/bar/ symbol combinations, and other options.
The sidebar	Choose **Tools | Customize | *Sidebar Options***. Changes to the “Show” and “Do not show” options require you to close and restart Milestones.
Month and week day names	Choose **Format | International | *International, Number, and Currency Settings***. Pick from *Month Names*, *Weekday Names*, and *Page n of n*.

Work with Other Applications

TO DO THIS:	DO THIS:
Copy a picture of the schedule to a document	Choose **Edit | Copy Schedule | *Copy Metafile to Clipboard***. In your other application, click *Paste Special*. Choose *Enhanced Metafile*.
Embed a schedule into another document	Choose **Edit | Copy Schedule | *Copy Schedule to Clipboard (OLE)***. In your other Windows application, click *Paste Special*. Or, locate the schedule using Windows Explorer. Click and drag the schedule name to the other application's window and release**.**
Copy a schedule with a transparent background	Before copying the schedule to the clipboard, choose **Format | Frame, Highlights | *Background, color, border, frame corners***. Uncheck ***Include on Prints and Metafiles***.
Export schedule pages as graphics (JPG, PNG, BMP or GIF files)	Choose **File | Export Options | *Graphics***. Click ***Export Bitmap File***.
Copy schedule information from another application	Select and copy data from a spreadsheet, document table, or database table to the clipboard. In Milestones Professional choose **File | Import Options | Custom | *Custom Import From Clipboard***.
Import information from a file	Choose from the options under **File | Import Options**.

Print Your Schedules

TO DO THIS:	DO THIS:
Print the schedule using the default settings	Choose **File | Printing | *Print*** .
Print the schedule and choose options	Choose **File | Printing | *Printing Options***. [Options are described below:]
Print a large chart on one sheet	In the **Printing Options** dialog box, choose ***Scale to Fit Selected Paper Size***.
Print a large chart in “pieces”	In the **Print Options** dialog box choose ***Use Specified Size***.
Enlarge a small schedule to fit on a larger paper size	In the **Print Options** dialog box, choose ***Scale to Fit Selected Paper Size***.
Scale your schedule by horizontal and vertical scaling factors you set	In the **Print Options** dialog box, choose ***Use Custom Scaling Specified***. Next, enter a scaling factor for **Horizontal** and **Vertical**.
Print color schedules on a black and white printer	In the **Print Options** dialog box, ☑ ***Print Colors in Shades of Gray*.**
Print all open schedules	Choose **File | Printing | *Print All Pages***.

Print Your Schedules

TO DO THIS:	DO THIS:
Set up your printer	Choose **File | Printing | *Printer Setup*** .
Exclude certain columns when printing	In the **Print Options** dialog box, choose the **Exclude Columns** tab. Check the columns to exclude from printing.
Print symbol notes on a separate page	In the **Print Options** dialog box, ☑ ***Include Symbol Notes Page.*** Or, choose *Tools* | *Reports* | *Symbol Notes*. Copy the notes to clipboard and paste into another application for printing**.**
Print your schedule by time period For example, one page for each month	In the **Print Options** dialog box, click the **Print** tab. ☑ ***Print Using the Time Periods Below***. Next, choose a frequency from the left list box and a time period from the right list box. For example choosing *3* and *months* will result in 3 month printing on each page for the date range specified**.**
Print a certain date range	In the **Print Options** dialog box, click the **Print** tab. ☑ ***Print Date Range Below Only*** Next, specify both a start date and an end date for the range you want to print.

Appendix B: Support and Where to Get More Information

Help Reference Information

Milestones Professional offers extensive reference information in an easy-to-use manner. In fact, the Milestones Professional Help Topics contain more detail than this manual.

To access the reference information, just choose **Help | Help Files |** ***Help Topics.*** Browse the **Contents**, or search for keywords under the **Index** and **Search** tabs. Help is well organized and extensive, giving you precise answers and instructions.

Online Support

Choose **Help | Internet Support** for a list of useful links to our website, including the ***Main Support Home Page***, ***Quick Tips, Knowledge Base***, ***The latest news***, and more.

E-Mail Support

You can e-mail us at support@kidasa.com with any questions or suggestions that you may have. We try to answer e-mail questions 7 days a week.

Technical Support by Telephone

You can call us at 1-512-328-0168 or 1-800-765-0167 between 8:30 am and 5:00 pm Central Time on normal workdays.

There is no charge for technical support.

Web Site

Our web site is at http://www.kidasa.com. It contains a significant amount of information: white papers, question and answer sections, movies, samples, additional documentation, and more.

Automation Help

Choose **Help | Help Files |** ***Automation Help*** for everything you need to know for programming your own interface to Milestones.

Movies

Choose **Help | Internet Support |** ***Online Movies*** to go to our movies page on our website.

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