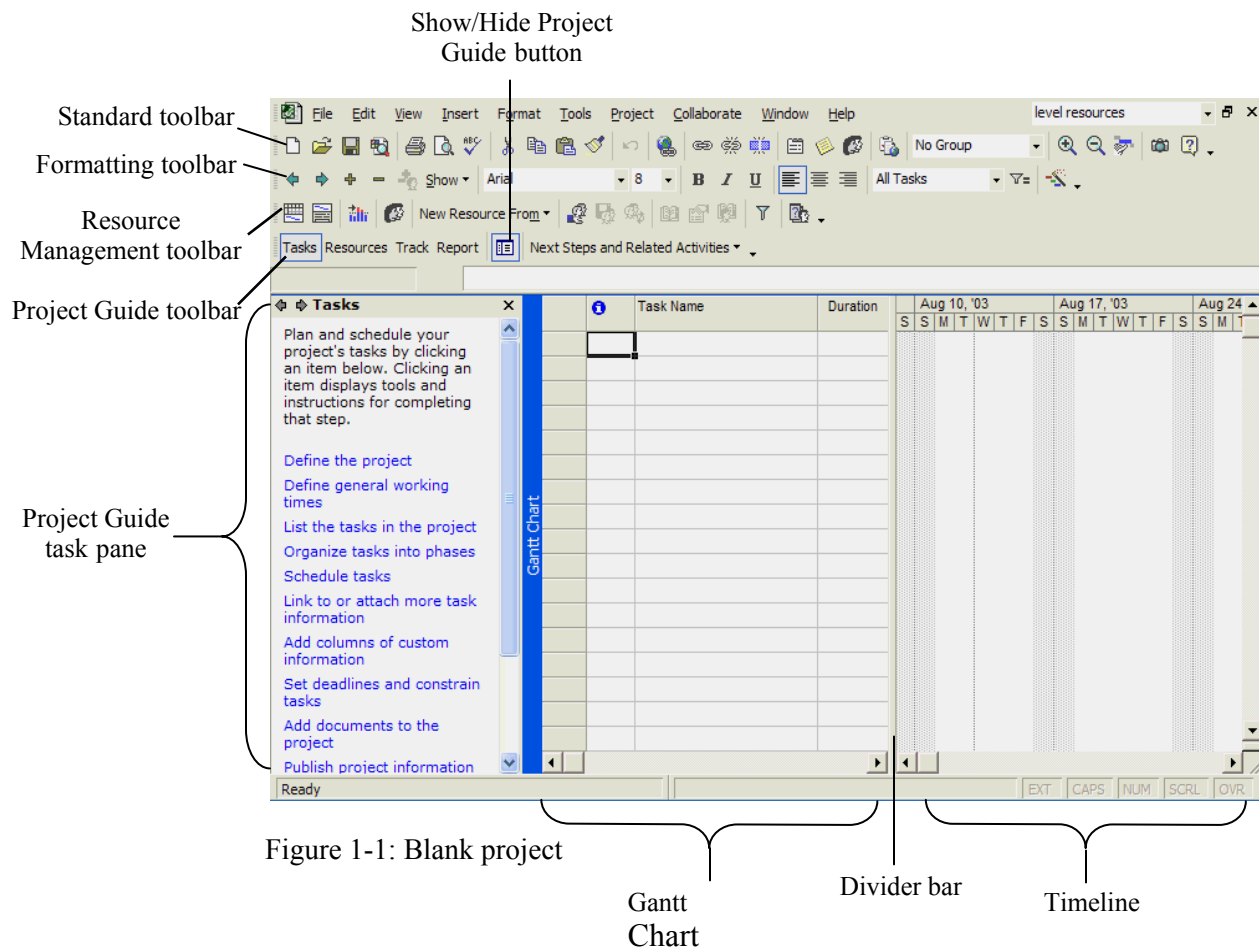


Microsoft® Project 2002

Microsoft® Project is an important tool when planning and implementing a project. A *project* is a defined, goal-oriented group of tasks that have a specific beginning and end. A project can involve one person who is planning, tracking, and executing a controlled group of processes or it can be monitored and accessed by a workgroup.

A successful project will have a definite beginning and end (even though the end date may need to be adjusted as the project progresses). It will be comprised of phases: the schedule or duration, the resources (cost, people, material, etc.), and the objectives or goals.

Each time a task is completed within a phase, you can create a milestone. A *milestone* is a reference point that tracks progress.



Creating a Project File

Defining The Project

Good planning, and a sketch or schematic before creating the project, will save time and effort. Once this is accomplished, you are ready to create your new project. The project file contains tasks that require resources to complete.

1. Start MS Project, then Separate the Formatting and Standard toolbars: Click **Tools/Customize/Toolbars**, click the **Show Standard and Formatting toolbars on two rows** checkbox, then click **Close**.
2. Click the **Blank Project** link in the New section of the startup task pane (see Figure 1-1).
3. Click **Define the project** and enter a starting date in the calendar list box.
You can click in the date field and type a date, or you can click the list arrow to view the calendar.
4. Click **Save and go to Step 2**.
5. Click the **No** button under Collaborate on your project.
*If you are part of a workgroup, click **Yes** and specify how you will connect to each other so everyone has access to the project.*
6. Click **Save and go to Step 3**.
7. Click the **Save** link and name your project *Software Upgrade*.
8. Click **Save and go to Step 4**.
9. Click **Save and Finish**.

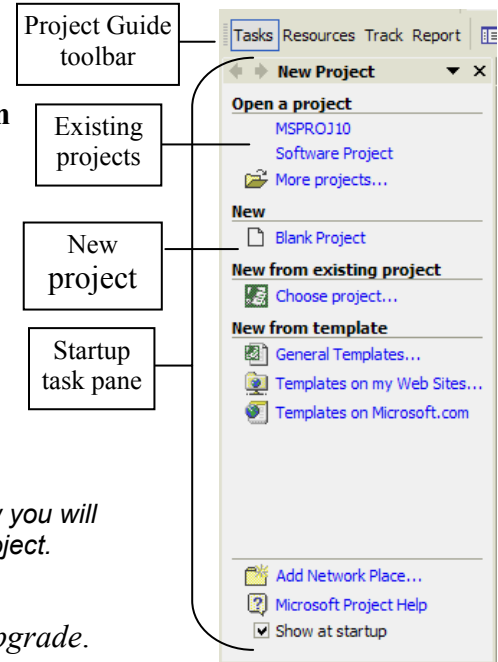


Figure 1-2

You now have a basic working plan that you will customize to fit the needs of your project.

Defining The Working Times

Now you will need to create the schedule for your project. Keep in mind that some tasks may take longer than others or some tasks may need to be performed after hours.




1. Click the **Define general working times** on the startup task pane.
2. Verify the **Calendar template** list box is set to a standard workweek.
3. Click **Save and go to Step 2**.
4. Click **I want to adjust the working hours shown for one or more days of the week**, scroll down to the Hours list box and select **Friday**.
5. Add **6:00 PM** to the *From* column and **12:00 AM** in the *To* column.
6. Click **Save and go to Step 3**.
7. Click **Save and go to Step 4**.
8. In the Hours boxes, select the hours as shown:
Tasks may need to be performed in off hours.
9. Click **Save and go to Step 5**, then click **Save and Finish**.

Hours per day:	<input type="text" value="16"/>
Hours per week:	<input type="text" value="48"/>
Days per month:	<input type="text" value="31"/>

Creating Tasks

Defining Tasks

Each row in the Gantt Chart is one task.


1. Click the Show/Hide Project Guide  button on the Project Guide toolbar to close the guide. You can also click the Close  button.
2. Click the first cell in the Task Name column, type **Testing Phase**, press Enter, then use the table on the right to fill in the rest of the fields:
3. Double-click the task name in row 4, click the **Advanced** tab, click the **Mark task as a milestone** check box, then click the **OK** button.
4. Repeat step 3 for the other Go/no go meeting.
5. Move to the Task Name cell in row 8 and type **Implementation Phase**, then use the table on the right to fill in the rest of the fields:
6. Save your project.
7. Move the cursor to row number 8 (the cursor becomes a right  arrow), right-click, then click the **New Task** command on the shortcut menu.
8. Type **More testing?** and then type **2 days?** for the duration.

Baseline testing of the software	10 days
Compile data on errors	2 days
Go/no go meeting	2 hrs
Submit fixes	5 days
Round two testing for the fixes	5 days
Go/no go meeting	2 hrs

Backup all Servers	3 hrs
Remove agents from live production	1 hr
Update corresponding software	2 hrs
Install new software	1 hr
Log agents onto live production	1 hr
Monitor software	4 hrs
Go/no go decision	1 hr

Outlining Tasks


Outlining tasks is an efficient way to visually organize the tasks in your project.


1. Click row 2 to select it, hold down the Shift key, then click row 8.
2. You can also click and drag the mouse to select the tasks.
3. Click the **Indent**  button on the formatting toolbar. You have defined these rows as subtasks of the Testing Phase task.
4. Repeat steps 1 and 2 for rows 10-15 for the Implementation Phase task.
5. You can now expand or collapse the subtasks as needed.

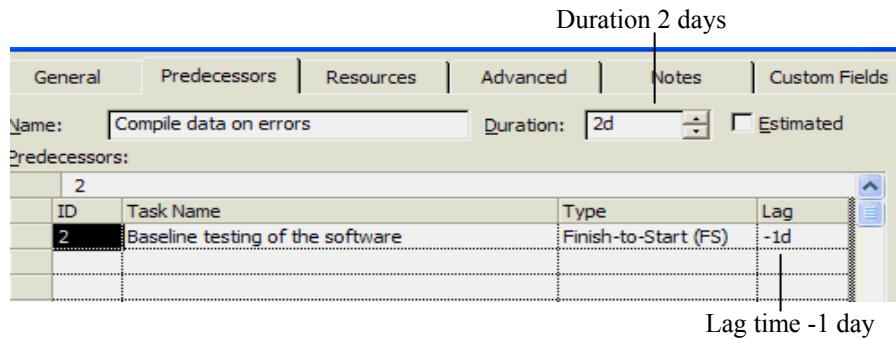
Sequencing Tasks

It is important to define the *task dependencies* when creating a list of tasks. Some tasks cannot be started (called the successor) until a different task is completed (called the predecessor). There are three types of dependencies: Finish to Start, Start to Start, and Finish to Finish.

Linking tasks

If the tasks all need to finish before the next one begins, the easiest way is to select all of the tasks and then click the Link Tasks  button on the Standard toolbar. If some of the tasks can begin before the previous task finishes, you can create lag or lead-time.

1. Select tasks 2-8 and click the **Link Tasks**  button on the Standard toolbar.
Notice how each task begins after the previous task finished. Scroll the Timeline pane to view the task durations.
2. Double-click the **Compile data on errors** task and click the **Predecessors** tab.
*You can also click the **link line** between the two tasks to change the lag time.*
3. Click Duration field to change the task's duration to 2 days.



4. Click the **Lag** field and then click the **bottom scroll arrow** to select -1d.
5. Click **OK**, then view the change in the Timeline.

The Compile data on errors task will begin one day before the task is complete and will last for 2 days, as shown in Figure 1-4.

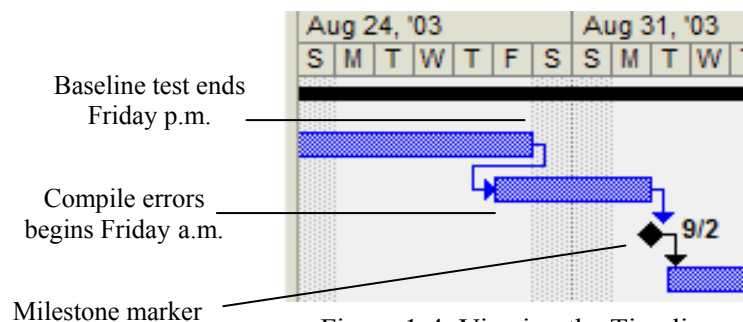



Figure 1-4: Viewing the Timeline

Unlinking Tasks

To break a link, select the task or tasks in the Gantt Chart, and click the **Unlink**  button. You can select noncontiguous tasks by holding down the Ctrl key while clicking the tasks.

Managing Resources

Resources are the materials, cost, people, and equipment it takes to complete each task in a project. You will also need to determine the quantity of each resource needed.

Resource Pool

You can create a *resource pool* by creating a list of needed resources for your project. There are two main types of resources: work resources and material resources. A *work resource* works on specific tasks. People and equipment are examples of a work resource. A *material resource* is used to complete tasks. Computers, printers, paint, and cement are examples of material resources.

Creating Resources

You can assign a resource by selecting a task and then assigning one or more resources to complete it, or you can create a resource pool to define them beforehand. Defining them beforehand is the easiest way when you have multiple tasks and a resource is assigned to more than 1 task.

1. Click **View** and then click **Resource Sheet**.
If you are creating a project for your company, you can easily add resources by using the global address book.
2. Type in the resource information you'll need for the project, as shown in Figure 1-5.
Normally, you know your testers, analysts, and engineers, but for this next skill, you will add their title to the end of their name to make the following steps easier.

Double-headed arrow adjusts column size




		Resource Name	Type	Material Label	Initials	Group
12		Debra Jean Test	Work		D	Test
8		Janet Russian Test	Work		J	Test
5		Gerald Irish Test	Work		G	Test
1		Jenny Banning Test	Work		J	Test
14		Christy Maine Test	Work		C	Test
3		Peggy Norfolk Test	Work		P	Test
2		Martin Edward Test	Work		M	Test
4		Cathy Tableau DBA	Work		C	DBA
13		Sam Cedar DBA	Work		S	DBA
7		Nate Perro DBA	Work		N	DBA
10		Ted Ransom Data	Work		T	Data center
6		Betty Curd Mgr	Work		B	Site Manager
9		Larry Guest eng	Work		L	System Engineer
17		Don Quiver eng	Work		D	System Engineer
15		Servers 1-3	Material		S	Term Servers
11		Testing Room 1	Material		T	Labs

Figure 1-5: Adding Resources

Assigning Resources

Now that you have defined resources, it is time to assign them to the tasks.

1. Click the **View** menu and then click **Gantt Chart**.
2. Move the mouse over the divider bar between the Gantt chart and the Timeline. When the cursor becomes a double-headed  arrow, drag the divider to the right until you can see the Resource Names column on the Gantt Chart.
3. Click the **Baseline testing of the software** task and click the **Assign Resources**  button.
This displays the Assign Resources dialog box.
4. In the **Assign Resources** dialog box, click the first tester, **Christy Maine**, hold down the **Ctrl** key and select each tester in the list, plus testing room 1, then click the **Assign** button.

The testers move to the top of the list with checkmarks showing they have been assigned.


5. Click **Round two testing for fixes** in the Gantt Chart and click the Assign button.
Now the testers are assigned to this task as well.
6. Click **Compile data on errors** in the Gantt Chart, scroll the list box in the Assign Resources dialog box, then click Sam Cedar and assign him to the task.
7. Click **Go/no go meeting** in the Gantt chart, scroll the list box in the Assign Resources dialog box and assign all names that are not testers, click the second **Go/no go meeting** in the Gantt chart and click the Assign button, then click the **Go/no go decision** at the bottom of the Gantt chart and click the Assign button.
8. Under Implementation Phase in the Gantt chart, click **Backup all servers** and assign the system engineers, the site manager, and the data center in the Assign Resources dialog box.
9. Click **Remove agents from live production**, assign the site manager, the data center, and the DBAs, click **Log agents onto live production**, then click the **Assign** button.
10. Assign the System Engineers and the Servers 1-3 to **Update corresponding software** and **Install new software** tasks.
11. Click **Monitor software**, assign the DBAs and the data center, then close the dialog box.
12. Click the **Resource Name** cell for the **Submit fixes** task, click the list arrow, then scroll to find and select **Don Quiver**.

Your project should resemble Figure 1-6. Add the new data in row 17. Move the **Divider bar** to view the Timeline and the allocation of resources.

	Task Name	Duration	Start	Finish	Predecessor	Resource Names
1	Testing Phase	23.5 days?	Mon 8/18/03	Thu 9/18/03		
2	Baseline testing of the software	10 days	Mon 8/18/03	Fri 8/29/03		Christy Maine,Debra Jean,Gerald Irish,Janet Russian,Jenny Banning,Martin Edward,Peggy Norfolk
3	Compile data on errors	2 days	Fri 8/29/03	Mon 9/1/03	2FS-1 day	Sam Cedar
4	Go/no go meeting	2 hrs	Tue 9/2/03	Tue 9/2/03	3	Betty Curd,Cathy Tableau,Don Quiver,Larry Guest,Nate Perro,Ted Ransom
5	Submit fixes	5 days	Tue 9/2/03	Tue 9/9/03	4	Don Quiver
6	Round two testing for the fixes	5 days	Tue 9/9/03	Tue 9/16/03	5	Christy Maine,Debra Jean,Gerald Irish,Janet Russ
7	Go/no go meeting	2 hrs	Tue 9/16/03	Tue 9/16/03	6	Betty Curd,Cathy Tableau,Don Quiver,Larry Gues
8	More testing?	2 days?	Tue 9/16/03	Thu 9/18/03	7	Christy Maine,Debra Jean,Gerald Irish,Janet Russian,Jenny Banning,Martin Edward,Peggy Norfolk
9	Implementation Phase	1.31 days	Fri 9/19/03	Fri 9/19/03		
10	Backup all Servers	1.5 hrs	Fri 9/19/03	Fri 9/19/03		Don Quiver,Larry Guest,Betty Curd,Ted Ransom
11	Remove agents from live production	1 hr	Fri 9/19/03	Fri 9/19/03	10	Cathy Tableau,Nate Perro,Sam Cedar,Betty Curd
12	Update corresponding software	2 hrs	Fri 9/19/03	Fri 9/19/03	11	Don Quiver,Larry Guest
13	Install new software	1 hr	Fri 9/19/03	Fri 9/19/03	12	Don Quiver,Larry Guest
14	Log agents onto live production	1 hr	Fri 9/19/03	Fri 9/19/03	13	Cathy Tableau,Nate Perro,Sam Cedar,Betty Curd
15	Monitor software	3 hrs	Fri 9/19/03	Fri 9/19/03	14	Cathy Tableau,Nate Perro,Sam Cedar,Ted Ransom
16	Go/no go decision	1 hr	Fri 9/19/03	Fri 9/19/03	15	Betty Curd,Cathy Tableau,Don Quiver,Larry Guest,Nate Perro,Ted Ransom
17	If no go, reinstall original software version	2 hrs	Fri 9/19/03	Fri 9/19/03		Don Quiver,Larry Guest,Ted Ransom,Betty Curd

Figure 1-6: Adding resources

*Tip: You can also refine your search in the **Assign Resources** dialog box as follows:*

1. Click  to view the Resource list options.
2. Click **the Filter by** check box, click the filter list box, select **Group**, then type **Test**.
The seven testers are displayed in the Resources from Software Upgrade window.

Allocating Resource Time

When assigning a resource to a task, the default time allocation is 100%. A resource can be split between tasks in a project or between projects. While assigning a resource to a task, you can change the 100% allocation to the amount of time the resource will spend on each task. When added together, the total allocation for the resource must equal 100%.

Material resources are allocated two ways: as a fixed amount or by the rate of use. You can change the allocation time the resource will spend on a task, with the total allocation equaling 100%.

1. Double-click the **Baseline testing of the software** task to display the Task Information dialog box.
You can change any work allocations necessary for this task.
2. Click the **Resources** tab, click the **Units** cell for Testing Room 1, then type 40/w.
This is the rate of use allocation and it's allocating 40 hours per week.

Overallocation of a Resource

If you have allocated more than 100% for a resource, you will see it on the Resource Graph. Click View/Resource Graph. Use the Page Up and Page Down to view each resource's allocation. The overallocation will display in red on the graph.

Sharing Resources

To share resources you need a resource pool, which you have already created. A resource pool allows you to share the resources from one project to other projects you may have.

1. Create another project that will need the resources from the resource pool.
2. Save the file and then click Tools/Resource Sharing/Share Resources.

The **Share Resources** dialog box opens, as shown in Figure 1-7. To share from a pool or another project, click the **Use resources** option. In the event of a resource conflict, choose which resources take precedence.

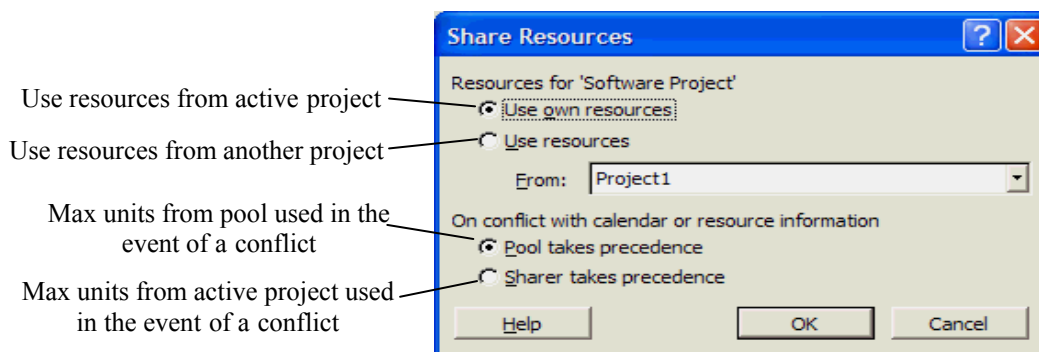



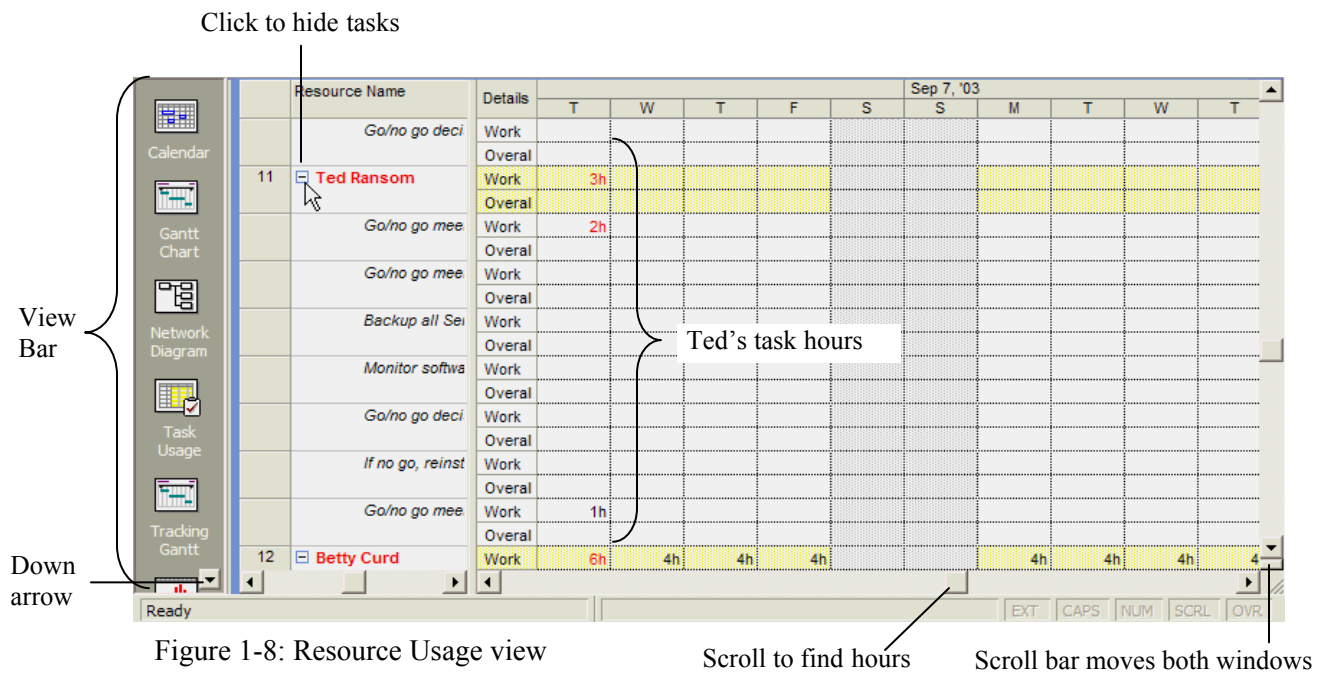


Figure 1-7: Share Resources dialog box

3. In Software Upgrade, Click **View/Resource Sheet**, then scroll the Gantt chart to the right and change the Max Units for Betty and Ted from 100% to 50%, then change the Max Units for Don and Larry from 100% to 75%.
4. Display the new project and click  to display the Assign Resources dialog box.
5. Assign Betty, Ted, Don, and Larry to the tasks of your choice.
6. Close the dialog box and view the resource sheet again.
Betty, Ted, Don, and Larry now have warnings  about leveling due to overallocation.
7. To view the overallocations, click **View/View Bar**, then click the **down arrow** to the Resource Usage button.
The view bar is displayed on the left side of your screen.
8. Click **Format/Detail Styles**, which opens the Detail Styles dialog box.
9. Scroll down the *Available fields* list and select **Overallocation**, click the **Show** button to add it to the fields that will be visible, then click **OK**.


The Resource Usage view shows all tasks and hours for each resource, as shown in Figure 1-8. Overallocated hours display in red. There are several ways to correct overallocation: assign more resources for the task, change the schedule of the task, and link the tasks (or check the task links). When you are ready to resolve the conflicts, click the **Level**  **Help** button on the Resource Management toolbar or click **Tools/Level Resources**.



Changing Gantt Chart And Table Views

Changing Gantt Chart Views

The Gantt chart is the default initial view when you start a new project. You can change the view by using the Gantt chart wizard.

1. Click the **Gantt Chart Wizard**  button on the Formatting toolbar.
2. Click through the options and select your own view, clicking **Next** after each choice.

Changing the Appearance Of The Gantt Chart

You can also change the appearance of the Gantt chart. Move the divider bar to the left so you can view more of the timeline.

1. Double-click one of the vertical bars in the timeline to display the Bar Styles dialog box.
2. Look at all the elements and select changes in color and view, then click **OK**.

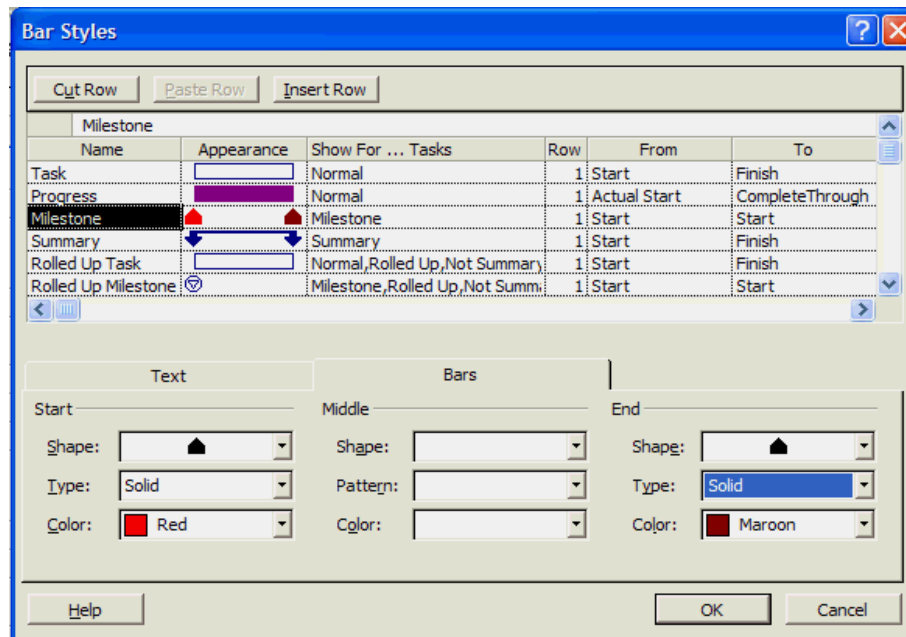


Figure 1-9: Bar Styles dialog box

Changing Table Views

You can view the Gantt chart table based on specific information. Drag the divider bar to the right, if necessary to view the entire Gantt chart. The following table describes your choices.

1. Click **View/Table [Entry]**.
The name of the table will change depending on the view.
2. Select one of the views and look at the table.
3. Keep selecting different views to see how the table changes.

Cost	The cost for each task is displayed
Entry	The default view that displays all information
Hyperlink	A way to link to files or web sites
Schedule	Displays the start and finish dates, late start and finish dates, and slack time
Summary	Totals for cost and hours, % completed, current and remaining duration, and start and finish dates, actual cost and work
Tracking	Actual start and finish dates, % completed, duration, and Totals for cost and hours
Usage	Start and finish dates, duration, and totals for cost and hours
Variance	Compares the baseline start and finish dates with the actual start and finish dates
Work	Actual and remaining time, % work completed, baseline hours, and estimated hours
More Tables	Provides even more table views you can select

Monitoring Work

Saving a baseline plan

You need to create a baseline plan in order to track progress. A *baseline* consists of the original project estimates that are unchangeable so that you can compare this original information against updated information to see if you are on track.

You can create up to 11 baselines in one project. You can also create up to 10 interim plans. An *interim plan* contains only current start and finish dates so you can track your project's progress.

1. Click **View/More Views**. You can also access More Views from the View Bar.
2. In the Views window, scroll down and double-click **Task Sheet**.
3. Click **View/Table [Entry]/Variance**, then click **Tools/Tracking/Save Baseline**.
4. Select **Save Baseline** and **Entire project** in the Save Baseline dialog box, then click **OK**.

Now that you have created a baseline plan, you can begin creating interim plans. Repeat the above steps and then save an interim plan in step 4.

Update The Percentage Of Task Completed

You can use the Tracking wizard for this section.

1. Click **View/More Views** and double-click **Tracking Gantt**. You can also access this on the View Bar.
2. Click **View/Toolbars/Tracking** to display the Tracking toolbar.
3. Click Track on the Project Guide, then click Prepare to track the progress of your project.
4. Click **No** to track your project manually, then click **Save and go to Step 2**.
5. Verify Always track by entering the Percent of Work Complete is selected, then click Save and Finish.
6. Drag the divider bar to the left to view the timeline.

Update Actual Work Performed

You can use the Task Usage view to review actual work performed.

1. Select the task you want to update.
2. Click **View/Task Usage** or click the Task Usage button on the View bar.
3. Click **Format/Details/Actual Work**.
4. Right-click the Details page (to the right of the divider) and click Actual Work.

The names of the resources are listed beneath each task on the left side of the divider bar and the actual work performed will be displayed on the right side.

Manually Update Actual Costs

1. Click **Tools/Options** and then click the **calculation** tab.
2. Click the **Manual** and **Active project** options under *Calculation options for Microsoft Project* and then click **OK**.
3. Activate the Task Usage view.
4. Click **View/Table: Usage/Tracking**.
5. Scroll to the Actual Cost column, select a task to update, then change the actual cost.

Display Progress Lines

1. Click the **Gantt chart** button on the View bar, then click Tools/Tracking/Progress Lines.
2. Click the **Dates and Interval** tab, if necessary.
3. Click the **Display progress lines at recurring intervals** check box.
4. Under *Weekly*, select every week and then check Mon, Wed, and Fri.
5. Begin the progress lines on the first Wednesday after the project starts.
6. Under *Daily progress lines in relation to* click **Actual**, if necessary. Afterward, return and select Baseline to see the difference.
7. Click **OK**.

You may need to drag the divider bar to the left to view the progress lines.

Monitor Slack Time

Knowing where slack time exists in your project will allow you to move task times that are over scheduled to slack times.

1. Click **View/More Views** or click the **More Views** button on the View bar.
2. Click the **Detail Gantt** in the View menu and then click **Apply**.
3. Click View/Table/Schedule.

The slack time will appear on the timeline as thin bars to the right of a task. You may need to move the divider bar to view the Free Slack and Total Slack columns on the Gantt chart.

Assigning Overtime

Assigning overtime will decrease the time it takes to complete a task.

1. Click the **Resource Usage** button on the View bar.
2. Move the divider bar to the right, if necessary, to view the Overtime column.
3. Assign Sam Cedar 5 extra hours to compile data.
4. Assign 3 extra hours to the resource of your choice.

Scroll the timeline until your data shows in the Overallocated rows.

Workgroup Communications

Microsoft Project connects team members and the project manager. Through the use of email, team members can accept or decline a meeting request or task, respond to inquiries and task updates, and track the project's schedule.

Please note: if you are not connected to a server with a system administrator, you will not be able use workgroups or Microsoft® Project server.

Sending Workgroup Messages

Once resources have been assigned to tasks, you can select the task and perform the following options:

1. Send the task assignment.
2. Notify our team of changes.
3. Request progress reports.
4. Team members can respond to workgroup messages

Printing Reports and Views

1. Click **View/Reports** and double-click a report to view, such as Overview.
2. Double-click the type of Overview report, such as Project Summary.
3. Click the report to zoom in, then click the Close button.

You can go back to the Reports dialog box and keep viewing different reports. Close the dialog box when you are finished.

Printing Views

Printing a view is setting up the screen the way you want it to look in a printout. Select the font, colors, and cell sizes on your screen and then when ready, click **File/Print**, select print options, and then print.