

Microsoft

Step by Step



Microsoft® Office **Project 2003**

- Learn at your own pace
- Build exactly the skills you need
- Practice with real-world examples

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What's New in Microsoft Office Project 2003

You'll notice some changes as soon as you start Project 2003. The toolbars and menu bar have a new look, and there are some new task panes available on the left side of your screen. But the features that are new or greatly improved in this version of Project go beyond just changes in appearance. Some changes won't be apparent to you until you start using the program.

New in Office 2003

To help you quickly identify features that are new or greatly enhanced with this version, this book uses the icon in the margin whenever new features are discussed or shown.

The following new or improved features are available in Project Standard and Project Professional:

To learn how to	Using this new feature	See
Connect to the Microsoft Web site for assistance	Office Online service	Chapter 1, page 8
More easily print a view	Project Guide	Chapter 11, page 233
Create a project summary report for an Office application	Copy Picture to Office Wizard	Chapter 13, page 259

The following new or improved features are available in a Project Server–based enterprise project management system:

To learn how to	Using this new feature	See
Develop a new plan	Enterprise template	Chapter 21, page 423
Replace generic resources with work resources	Resource Substitution Wizard	Chapter 21, page 429
Report progress on assignments directly in Outlook	Outlook integration add-in for Project Server	Chapter 22, page 448
Identify risks to projects or tasks	WSS Risks integration with Project Server	Chapter 23, page 466

(continued)

To learn how to	Using this new feature	See
Create and delegate issues relating to projects or tasks	WSS Risks integration with Project Server	Chapter 23, page 469
Upload documents relevant to projects or tasks	WSS Risks integration with Project Server	Chapter 23, page 472

For more information about the Project family of products, see <http://www.microsoft.com/office/project/>.

Getting Help

Every effort has been made to ensure the accuracy of this book and the contents of its CD-ROM. If you do run into problems, please contact the appropriate source for help and assistance.

Getting Help with This Book and Its CD-ROM

If your question or issue concerns the content of this book or its companion CD-ROM, please first search the online Microsoft Press Knowledge Base, which provides support information for known errors in or corrections to this book, at the following Web site:

<http://www.microsoft.com/mspress/support/search.asp>

If you do not find your answer at the online Knowledge Base, send your comments or questions to Microsoft Press Technical Support at

mspinput@microsoft.com

Getting Help with Microsoft Office Project 2003

If your question is about a Microsoft software product, including Project, and not about the content of this Microsoft Press book, please search the Microsoft Knowledge Base at

<http://support.microsoft.com>

In the United States, Microsoft software product support issues not covered by the Microsoft Knowledge Base are addressed by Microsoft Product Support Services. The Microsoft software support options available from Microsoft Product Support Services are listed at

<http://support.microsoft.com>

Outside the United States, for support information specific to your location, please refer to the Worldwide Support menu on the Microsoft Product Support Services Web site for the site specific to your country:

<http://support.microsoft.com>

Using the Book's CD-ROM

The CD-ROM inside the back cover of this book contains all the practice files you'll use as you work through the exercises in the book. By using practice files, you won't waste time creating samples and typing schedule data—instead, you can jump right in and concentrate on learning how to use Microsoft Office Project 2003.

What's on the CD-ROM

In addition to the practice files, the CD-ROM contains the following:

- 60-day trial of Microsoft Office Project 2003 Standard Edition
- Microsoft Office Project Standard 2003 demonstration video
- Enterprise Project Management Solution demonstration video
- *Microsoft Office Project 2003 Step by Step* in eBook format
- *Insider's Guide to Microsoft Office OneNote 2003* in eBook format
- *Microsoft Office System Quick Reference* in eBook format
- *Introducing the Tablet PC* in eBook format
- *Microsoft Computer Dictionary, Fifth edition*, in eBook format
- 25 business-oriented templates for use with the programs in the Microsoft Office System
- 100 pieces of clip art

System Requirements

To use this book, along with Project Standard 2003, you will need

Computer/Processor

Computer with a Pentium 133-megahertz (MHz) or higher processor

Operating System

Microsoft Windows 2000 with Service Pack 3 (SP3) or Microsoft Windows XP or later operating system

Memory

64 MB of RAM (128 MB recommended) plus an additional 8 MB of RAM for each program in the Microsoft Office System (such as Project) running simultaneously

Hard Disk

Hard disk space requirements will vary depending on configuration; custom installation choices may require more or less hard disk space.

- 105 MB of available hard disk space with 70 MB on the hard disk where the operating system is installed.
- An additional 9 MB of hard disk space is required for installing the practice files.
- An additional 237 MB of hard disk space is required for installing the 60-day trial version of Microsoft Office Project 2003 Standard Edition.

Drive

CD-ROM drive

Display

Super VGA (800×600) or higher-resolution monitor with 256 colors or higher

Peripherals

Microsoft Mouse, Microsoft IntelliMouse, or compatible pointing device

Note Project Professional, Project Server, and Project Web Access are not required to complete the chapters in this book but are illustrated in Chapters 21 through 23. You can see the system requirements of these products here:

<http://www.microsoft.com/office/project/evaluation/sysreqs.asp>

Installing the Practice Files

You need to install the practice files on your hard disk before you use them in the chapters' exercises. Follow these steps to prepare the CD's files for your use:

- 1 Insert the CD-ROM into the CD-ROM drive of your computer.

The Step by Step Companion CD End User License Agreement appears. Follow the onscreen directions. It is necessary to accept the terms of the license agreement in order to use the practice files. After you accept the license agreement, a menu screen appears.

Important If the menu screen does not appear, start Windows Explorer. In the left pane, locate the icon for your CD-ROM drive and click the icon. In the right pane, double-click the **StartCD** executable file.

- 2 Click **Install Practice Files**.

- 3 Click **Next** on the first screen, and then click **Yes** to accept the license agreement on the next screen.

- 4 If you want to install the practice files to a location other than the default folder (*\My Documents\Microsoft Press\Project 2003 Step by Step*), click the **Change Folder** button, select the new drive and path, and then click **OK**.
- 5 Click **Next** on the Choose Destination Location screen, click **Next** on the Select Features screen, and then click **Next** on the Start Copying Files screen to install the practice files.
- 6 After the practice files have been installed, click **Finish**.
Within the installation folder are subfolders for each chapter in the book.
- 7 Close the Step by Step Companion CD window, remove the CD-ROM from the CD-ROM drive, and return it to the envelope at the back of the book.

Using the Practice Files

Each topic in the chapter explains how and when to use any practice files. The file or files that you'll need are indicated at the beginning of the procedure in blue type, as shown here:

BE SURE TO: Start Microsoft Office Project 2003 if it's not already open.

OPEN: Parnell Aerospace Promo 18a and Wingtip Toys Commercial 18b from the *\My Documents\Microsoft Press\Project 2003 Step by Step\Chapter 18 Customizing* folder. You can also access the practice files for this book by clicking **Start**, **All Programs**, **Microsoft Press**, **Project 2003 Step by Step**, and then selecting the chapter folder of the file you want to open.

The following table lists each chapter's practice files.

Chapter	Folder	Files
1	Chapter 1 Getting Started	(no practice file)
2	Chapter 2 Simple Tasks	Wingtip Toys Commercial 2a
3	Chapter 3 Simple Resources	Wingtip Toys Commercial 3a
4	Chapter 4 Simple Assignments	Wingtip Toys Commercial 4a
5	Chapter 5 Simple Formatting	Wingtip Toys Commercial 5a, Logo
6	Chapter 6 Simple Tracking	Wingtip Toys Commercial 6a
7	Chapter 7 Advanced Tasks	Short Film Project 7a
8	Chapter 8 Advanced Resources and Assignments	Short Film Project 8a

(continued)

Chapter	Folder	Files
9	Chapter 9 Advanced Plan	Short Film Project 9a
10	Chapter 10 Advanced Formatting	Short Film Project 10a
11	Chapter 11 Printing	Short Film Project 11a
12	Chapter 12 Publishing Online	Short Film Project 12a
13	Chapter 13 Sharing	Short Film Project 13a, Letter To Client, Sample Task List
14	Chapter 14 Advanced Tracking	Short Film Project 14a, Short Film Project 14b, Short Film Project 14c, Short Film Project 14d
15	Chapter 15 Reporting Status	Short Film Project 15a
16	Chapter 16 Getting Back on Track	Short Film Project 16a
17	Chapter 17 Advanced Formatting	Parnell Film 17a
18	Chapter 18 Customizing	Parnell Aerospace Promo 18a, Wingtip Toys Commercial 18b
19	Chapter 19 Earned Value	Short Film Project 19a
20	Chapter 20 Consolidating	Wingtip Toys Commercial 20a, Parnell Aerospace Promo 20b
21	(no practice folder)	(no practice file)
22	(no practice folder)	(no practice file)
23	(no practice folder)	(no practice file)

Uninstalling the Practice Files







After you finish working through this book, you should uninstall the practice files to free up hard disk space.

- 1 On the Windows taskbar, click the **Start** button, and then click **Control Panel**.
- 2 In Control Panel, click **Add or Remove Programs**.
- 3 In the list of installed programs, click **Microsoft Office Project 2003 Step by Step**, and then click the **Remove** or **Change/Remove** button.)
- 4 In the **Uninstall** dialog box, click **OK**.

Important If you need additional help installing or uninstalling the practice files, please see “Getting Help” on page xi. Microsoft’s product support does not provide support for this book or its CD-ROM.

Conventions and Features

You can save time when you use this book by understanding how the Step by Step series shows special instructions, keys to press, buttons to click, and so on.

Convention	Meaning
	This icon indicates a new or greatly improved feature in Microsoft Office Project 2003.
	This icon indicates a reference to the book's companion CD.
BE SURE TO	Following these words are instructions for actions you should take before beginning an exercise.
OPEN	Following this word are instructions for opening the practice files you'll need to use for an exercise.
CLOSE	Following this word are the names of practice files you should close before moving on to another topic in the book.
1 2	Numbered steps guide you through hands-on exercises in each topic.
●	A round bullet indicates an exercise that has only one step.
Tip	This section provides a helpful hint or shortcut that makes working through a task easier.
Important	This section points out information that you need to know to complete the procedure.
Troubleshooting	This section shows you how to fix a common problem.
 Save	The first time a button is referenced in a topic, a picture of the button appears in the margin area with a label.
	A plus sign (+) between two key names means that you must press those keys at the same time. For example, "Press  + 

(continued)

Conventions and Features

Convention	Meaning
Boldface type	Program features that you click or press are shown in black boldface type.
Blue boldface type	Text that you are supposed to type appears in blue boldface type.
<i>Blue italic type</i>	Terms that are explained in the glossary at the end of the book are shown in blue italic type within the chapter.

Quick Reference

Chapter 1 **Getting Started with Project**

Page 6 **To start Project Standard**

- 1** On the Windows taskbar, click the **Start** button.
- 2** On the **Start** menu, point to **All Programs** (in Microsoft Windows XP) or **Programs** (in previous versions of Windows), point to **Microsoft Office**, and then click **Microsoft Office Project 2003**.

10 **To start Project Professional and work offline**

- 1** On the Windows taskbar, click the **Start** button.
- 2** On the **Start** menu, point to **All Programs** (in Microsoft Windows XP) or **Programs** (in previous versions of Windows), point to **Microsoft Office**, and then click **Microsoft Office Project 2003**.
- 3** If the **Project Server Security Login** dialog box appears, click **Cancel**.
- 4** In the **Project Server Accounts** dialog box, under **Choose account** select **My Computer**, and then click **Work Offline**.

13 **To create a project plan from a template**

- 1** In the Getting Started task pane, click **Create a new project**.
- 2** In the New Project task pane, under **Template**, click **On my computer**.
- 3** In the **Templates** dialog box, click the **Project Templates** tab.
- 4** Click the template you want, and then click **OK**.

16 **To switch to a different view**

- 1** On the **View** menu, click the name of the view you want.
- 2** If the view is not listed, click **More Views**, and in the **More Views** dialog box, click the name of the view you want, and click the **Apply** button.

21 **To view a report in the Print Preview window**

- 1** On the **View** menu, click **Reports**.
- 2** Click a report category, or to see all reports, click **Custom**, and then click the **Select** button.
- 3** Select the report you want, and then click the **Select** or **Preview** button.

Quick Reference

23 To create a new project plan using the Project Guide

- 1 On the **File** menu, click **New**.
- 2 In the New Project task pane, under **New**, click the **Blank Project** link.
- 3 In the Tasks pane, click the **Set a date to schedule from** link (in Project Standard) or the **Define the project** link (in Project Professional).
- 4 In the **Date** box, enter the project's start date.
- 5 At the bottom of the pane, click **Done** (in Project Standard) or the **Save and go to Step 2** link (in Project Professional).

26 To set nonworking days using the Project Guide

- 1 On the **Project Guide** toolbar, click the **Tasks** button.
- 2 In the Tasks pane, click the **Define general working times** link, and then follow the instructions that appear on your screen.

29 To enter properties about a Project plan

- 1 On the **File** menu, click **Properties**.
- 2 In the **Properties** dialog box, click the **Summary** tab, and then enter the information you want.

Chapter 2 Creating a Task List

Page 34 To enter tasks using the Project Guide

- 1 On the **Project Guide** toolbar, click the **Tasks** button.
- 2 In the Tasks pane, click the **List the tasks in the project** link, and then follow the instructions that appear on your screen.

38 To enter task durations

- 1 In the Gantt Chart view, click a cell in the **Duration** column.
- 2 Type the task duration, and then press .

40 To enter a milestone

- 1 On the Entry table, enter a name for the milestone, and then press .
- 2 In the **Duration** field, type **0d**, and then press .

41 To organize tasks into phases using the Project Guide

- 1 On the **Project Guide** toolbar, click the **Tasks** button.
- 2 In the Tasks pane, click the **Organize tasks into phases** link, and then follow the instructions that appear on your screen.

- 43 **To link tasks using the Project Guide**
- 1 On the **Project Guide** toolbar, click the **Tasks** button.
 - 2 In the Tasks pane, click the **Schedule tasks** link, and then follow the instructions that appear on your screen.
- 48 **To enter task notes and hyperlinks using the Project Guide**
- 1 On the **Project Guide** toolbar, click the **Tasks** button.
 - 2 In the Tasks pane, click the **Link to or attach more task information** link, and then follow the instructions that appear on your screen.
- 51 **To check a project plan's duration and other statistics**
- 1 On the **Project** menu, click **Project Information**.
 - 2 In the **Project Information** dialog box, click the **Statistics** button.
- 52 **To see an entire project plan in the timescale in the Gantt Chart view**
- 1 On the **View** menu, click **Zoom**.
 - 2 Click **Entire project**, and then click **OK**.

Chapter 3 **Setting Up Resources**

- Page 56 **To set up people and equipment resources using the Project Guide**
- 1 On the **Project Guide** toolbar, click the **Resources** button.
 - 2 In the Resources pane, click the **Specify people and equipment for the project** link, and then follow the instructions that appear on your screen.
- 56 **To set up people and equipment resources**
- 1 On the **View** menu, click **Resource Sheet**.
 - 2 In the **Resource Name** field, enter the resource's name.
 - 3 In the **Type** field, click **Work**.
 - 4 In the **Max. Units** field, type or click the maximum capacity of this resource to accomplish any task.
 - 5 Enter whatever other resource information would be useful to your project.
 - 6 Repeat steps 2 through 5 for each resource.
- 62 **To set up material resources**
- 1 On the **View** menu, click **Resource Sheet**.
 - 2 In the **Resource Name** field, enter the material resource's name.
 - 3 In the **Type** field, click **Material**.

Quick Reference

- 4** In the **Material Label** field, enter the unit of measure you want to use for this resource. For example, you might measure cement in pounds or tons.
 - 5** In the **Std. Rate** field, enter the cost per unit of measure for this material resource.
 - 6** Enter whatever other resource information would be useful for your project.
 - 7** Repeat steps 2 through 6 for each resource.
- 64 **To enter resource pay rates**
- 1** On the **View** menu, click **Resource Sheet**.
 - 2** In the **Std. Rate** field, enter the resource's pay rate, including the duration of a pay period.
 - 3** If the resource should accrue overtime pay, enter his or her overtime pay rate in the **Ovt. Rate** field.
 - 4** If the resource accrues a per-use cost, enter that amount in the **Cost/Use** field.
 - 5** In the **Accrue At** field, click the method by which the resource accrues cost.
 - 6** Repeat steps 2 through 5 for each resource.
- 66 **To adjust working time for individual resources**
- 1** On the **Tools** menu, click **Change Working Time**.
 - 2** In the **For** box, click the name of the resource whose working time you want to change.
 - 3** In the calendar below the **Select Date(s)** label, click the date range or day(s) of the week for which you want to adjust working time.
 - 4** Under **Set selected date(s) to**, click the options you want.
- 69 **To document resources with resource notes**
- 1** Switch to a resource view such as the Resource Sheet view.
 - 2** Click the name of the resource for which you want to create a note.
 - 3** On the Standard toolbar, click the **Resource Notes** button.
 - 4** In the **Resource Information** dialog box, type the note you want associated with this resource.

Chapter 4 Assigning Resources to Tasks

Page 72 **To assign resources using the Project Guide**

- 1** On the **Project Guide** toolbar, click **Resources**.
- 2** In the Resources pane, click the **Assign people and equipment to tasks** link, and then follow the instructions that appear on your screen.

- 73 **To assign resources using the Assign Resources dialog box**
- 1 On the Standard toolbar, click **Assign Resources**.
 - 2 In the Gantt Chart view, click the name of the task to which you want to assign a resource.
 - 3 In the **Resource Name** column of the **Assign Resources** dialog box, click a resource, and then click the **Assign** button.
- 78 **To control how Project schedules the work on a task after assigning an additional resource**
- 1 Assign an additional resource to a task.
 - 2 Click the **Smart Tag Actions** button, and choose the action you want.
- 82 **To assign material resources to tasks**
- 1 On the Standard toolbar, click **Assign Resources**.
 - 2 In the Gantt Chart view, click the name of the task to which you want to assign a resource.
 - 3 In the **Resource Name** column of the **Assign Resources** dialog box, click a resource, and in the **Units** column, enter the number of units of the material resource you want to assign.
 - 4 Click the **Assign** button.

Chapter 5 **Formatting and Printing Your Plan**

Page 86 **To create a custom view**

- 1 On the **View** menu, click **More Views**.
 - 2 In the **More Views** dialog box, do one of the following:
 - To create a view, click the **New** button. Click **Single view** or **Combination view** in the **Define New View** dialog box, and then click **OK**.
 - To redefine a view, click the view's name, and then click the **Edit** button.
 - To create a new view based on another view, click the view's name, and then click the **Copy** button.
 - 3 In the **View Definition** dialog box, choose the options you want.
- 89 **To format Gantt bars with the Gantt Chart Wizard**
- 1 On the **Format** menu, click **Gantt Chart Wizard**.
 - 2 Follow the instructions that appear on your screen.

Quick Reference

92 **To draw a text box on a Gantt chart**

- 1 On the **View** menu, point to **Toolbars**, and then click **Drawing**.
- 2 On the **Drawing** toolbar, click the **Text Box** button, and then drag a small square anywhere on the chart portion of a Gantt Chart view.
- 3 In the square you just drew, type the text you want.

94 **To format a category of text in a view**

- 1 On the **Format** menu, click **Text Styles**.
- 2 In the **Item to Change** list, click the type of text you want to format.
- 3 Select the font and other formatting options you want.

97 **To format selected text in a view**

- 1 Click the cell that contains the text you want to format.
- 2 On the **Format** menu, click **Font**.
- 3 Select the font and other formatting options you want.

102 **To edit a report's header**

- 1 On the **View** menu, click **Reports**.
- 2 Click a report category, or to see all reports, click **Custom**, and then click the **Select** button.
- 3 Select the report you want, and then click the **Select** or **Preview** button.
- 4 On the **Print Preview** toolbar, click the **Page Setup** button.
- 5 In the **Page Setup** dialog box, click the **Header** tab, and select the options you want.

Chapter 6 **Tracking Progress on Tasks**

Page 108 **To save a baseline using the Project Guide**

- 1 On the **Project Guide** toolbar, click the **Track** button.
- 2 In the Track pane, click the **Save a baseline plan to compare with later versions** link, and then follow the instructions that appear on your screen.

110 **To display the Variance table in the Task Sheet view**

- 1 On the **View** menu, click **More Views** to display the **More Views** dialog box.
- 2 In the **Views** box, click **Task Sheet**, and click the **Apply** button.
- 3 On the **View** menu, point to **Table: Entry**, and click **Variance**.

111 **To track a project as scheduled**

- 1 On the **Tools** menu, point to **Tracking**, and click **Update Project**.
- 2 In the **Update Project** dialog box, make sure the **Update work as complete through** option is selected. In the adjacent date list, type or click the date you want, and click **OK**.

112 **To enter a task's percent complete using the Project Guide**

- 1 On the **Project Guide** toolbar, click the **Track** button.
- 2 In the Track pane, click the **Prepare to track the progress of your project** link.
- 3 Click the **Save and go to Step 2** link.
- 4 Click **Always track by entering the Percent of Work Complete**, and then click the **Save and Finish** link at the bottom of the Setup Tracking pane.
- 5 In the Track pane, click the **Incorporate progress information into the project** link.
- 6 In the **% Work Complete** field for a task, type or click the percent complete value you want, and then press .

114 **To enter actual values for tasks using the Project Guide**

- 1 On the **Project Guide** toolbar, click the **Track** button.
- 2 In the Track pane, click the **Prepare to track the progress of your project** link.
- 3 Click the **Save and go to Step 2** link.
- 4 Click **Always track by entering the Actual Work Done and Work Remaining**, and then click **Save and Finish**.
- 5 In the Track pane, click the **Incorporate progress information into the project** link.
- 6 In the **Actual Work** field for a task, type or click the actual work value you want, and then press .

116 **To enter actual start dates and durations of tasks**

- 1 Click the task for which you want to enter actual values.
- 2 On the **Tools** menu point to **Tracking**, and then click **Update Tasks**.
- 3 In the **Start** field in the **Actual** box on the left side of the **Update Tasks** dialog box, type or click the start date you want.
- 4 In the **Actual dur** field, type or click the duration value you want, and then click **OK**.

Chapter 7 **Fine-Tuning Task Details**

Page 126 **To change task relationships**

- 1 Click the successor task whose predecessor relationship you want to change.
- 2 On the Standard toolbar, click the **Task Information** button.
- 3 In the **Task Information** dialog box, click the **Predecessors** tab, and then select the options you want.

126 **To enter lead and lag time between predecessor and successor tasks**

- 1 Click the successor task whose lead or lag time with a predecessor you want to change.
- 2 On the Standard toolbar, click the **Task Information** button.
- 3 In the **Task Information** dialog box, click the **Predecessors** tab.
- 4 In the **Lag** field for a predecessor task, enter the value you want (enter a positive value for lag time, or a negative value for lead time).

127 **To change the task relationship between tasks**

- 1 Click the successor task whose relationship with a predecessor you want to change.
- 2 On the Standard toolbar, click the **Task Information** button.
- 3 In the **Task Information** dialog box, click the **Predecessors** tab.
- 4 Click in the **Type** column for a predecessor task, and click the type of task relationship you want.

131 **To apply a constraint to a task using the Project Guide**

- 1 On the **Project Guide** toolbar, click the **Tasks** button.
- 2 Click the **Set deadlines and constrain tasks** link, and then follow the instructions that appear on your screen.

133 **To view a project's critical path**

- 1 On the **View** menu, click **More Views**.
- 2 In the **More Views** dialog box, click **Detail Gantt**, and then click the **Apply** button.

136 **To interrupt work on a task**

- 1 On the Standard toolbar, click the **Split Task** button.
- 2 Move the mouse pointer over the task's Gantt bar where you want to start the split, click, and then drag to the right.

139 **To create a new base calendar**

- 1 On the **Tools** menu, click **Change Working Time**.
- 2 In the **Change Working Time** dialog box, click the **New** button.
- 3 In the **Name** box, type a name for the base calendar.
- 4 Click **Create new base calendar**, or click **Make a copy of** and then choose the base calendar on which you want to base the new calendar.
- 5 Click **OK**.
- 6 In the **Selected Date(s)** box, click the days of the week for which you want to change working and nonworking time.
- 7 Under **Set selected date(s) to**, click **Nonworking time** for those days you want to mark as nonworking time.
- 8 For working days, in the **From** and **To** boxes, enter the working time you want.

140 **To apply a task calendar to a task**

- 1 In the Gantt Chart view, click a task.
- 2 On the Standard toolbar, click the **Task Information** button.
- 3 In the **Task Information** dialog box, click the **Advanced** tab.
- 4 In the **Calendar** box, choose the task calendar you want to apply.
- 5 If you want the task calendar to override resource calendar settings, click the **Scheduling ignores resource calendars** box.

140 **To change a task type**

- 1 In the Gantt Chart view, click a task.
- 2 On the Standard toolbar, click the **Task Information** button.
- 3 In the **Task Information** dialog box, click the **Advanced** tab.
- 4 In the **Task Type** box, click the task type you want.

145 **To enter a deadline date using the Project Guide**

- 1 On the **Project Guide** toolbar, click the **Tasks** button.
- 2 In the **Tasks** pane, click the **Set deadlines and constrain tasks** link, and then follow the instructions that appear on your screen.

148 **To enter a fixed cost**

- 1 On the **View** menu, point to **Table: Entry**, and then click **Cost**.
- 2 In the **Fixed Cost** field for the task you want, type or click an amount, and press .
- 3 In the **Fixed Cost Accrual** field, choose a method, and then press .

Quick Reference

149 To create a recurring task

- 1 In the Gantt Chart view, click the task above which you want to insert a recurring task.
- 2 On the **Insert** menu, click **Recurring Task**.
- 3 In the **Recurring Task Information** dialog box, select the options you want.

Chapter 8 Fine-Tuning Resource and Assignment Details

Page 156 To create multiple pay rates for a resource

- 1 Switch to a resource view such as the Resource Sheet view.
- 2 Click the name of the resource for whom you want to create an additional pay rate.
- 3 On the Standard toolbar, click the **Resource Information** button.
- 4 In the **Resource Information** dialog box, click the **Costs** tab.
- 5 Under **Cost rate tables**, the resource's initial pay rate information appears on tab A. Click one of the other tabs, and then enter the rate information you want.
- 6 To apply different cost rate tables, pick the one you want in the **Cost Rate Tables** field when you are in a usage view.

158 To create multiple pay rates that apply at different times

- 1 Switch to a resource view such as the Resource Sheet view.
- 2 Click the name of the resource for whom you want to create an additional pay rate.
- 3 On the Standard toolbar, click the **Resource Information** button.
- 4 In the **Resource Information** dialog box, click the **Costs** tab.
- 5 Click the tab of the rate you want to edit.
- 6 In the second or later row of the **Effective Date** column, enter the date the new pay rate is to take effect.
- 7 In the **Standard Rate** column (and, if applicable, the **Overtime Rate** or **Per Use Cost** columns), enter either a dollar amount or a positive or negative percentage of the existing pay rate. If you enter a percentage value, Project will calculate the new pay rate amount.

159 To customize a resource's availability over time

- 1 Switch to a resource view such as the Resource Sheet view.
- 2 Click the name of the resource whose availability you want to change.
- 3 On the Standard toolbar, click the **Resource Information** button.

- 4** In the **Resource Information** dialog box, click the **General** tab.
 - 5** In the **Resource Availability** grid, enter the date ranges and unit values you want.
- 161 **To delay the start of an assignment**
- 1** On the **View** menu, click **Task Usage** or **Resource Usage**.
 - 2** Click the assignment you want to delay.
 - 3** On the Standard toolbar, click the **Assignment Information** button.
 - 4** In the **Assignment Information** dialog box, click the **General** tab.
 - 5** In the **Start** box, type or click the date on which you want the selected resource to start work on the assignment, and then click **OK**.
- 163 **To apply a contour to an assignment**
- 1** On the **View** menu, click **Task Usage** or **Resource Usage**.
 - 2** Click the assignment for which you want to contour to an assignment.
 - 3** On the Standard toolbar, click the **Assignment Information** button.
 - 4** In the **Assignment Information** dialog box, click the **General** tab.
 - 5** In the **Work Contour** box, click the contour you want, and then click **OK**.
- 166 **To apply a different cost rate to an assignment**
- 1** On the **View** menu, click **Task Usage** or **Resource Usage**.
 - 2** Click the assignment for which you want to apply a different cost rate table.
 - 3** On the Standard toolbar, click the **Assignment Information** button.
 - 4** In the **Assignment Information** dialog box, click the **General** tab.
 - 5** In the **Cost Rate Table** box, type or click the rate table you want to apply to this assignment, and then click **OK**.
- 168 **To enter a material resource consumption rate on an assignment**
- 1** In the Gantt Chart view, click the name of the task to which you want to assign a material resource.
 - 2** On the Standard toolbar, click the **Assign Resources** button.
 - 3** In the **Assign Resources** dialog box, in the **Units** field for the material resource, type the consumption rate you want in the format quantity/time period. For example, to specify 20 feet per hour, type **20/hr**.
 - 4** Click the **Assign** button.

Chapter 9 **Fine-Tuning the Project Plan**

Page 174 **To view resource allocations over time using the Project Guide**

- 1** On the **Project Guide** toolbar, click the **Report** button.
- 2** In the Report pane, click the **See how resources' time is allocated** link, and then follow the instructions that appear on your screen.

180 **To manually resolve resource overallocations by changing assignment units**

- 1** On the **View** menu, click **More Views**, click **Resource Allocation**, and then click the **Apply** button
- 2** In the **Resource Name** column, click the name of an assignment for the resource you want to work with.
- 3** On the Standard toolbar, click the **Assignment Information** button.
- 4** In the **Assignment Information** dialog box, click the **General** tab.
- 5** In the **Units** box, enter the unit value you want, and then click **OK**.

186 **To level overallocated resources**

- 1** On the **Tools** menu, click **Level Resources**, and then choose the leveling options you want.
- 2** Click **Level Now**.

191 **To examine project costs and display the project summary task**

- 1** On the **View** menu, click **More Views**, click **Task Sheet**, and then click the **Apply** button.
- 2** On the **Tools** menu, click **Options**.
- 3** In the **Options** dialog box, click the **View** tab.
- 4** Under the **Outline options for** label, select the **Show project summary task** check box, and then click the **OK** button.
- 5** On the **View** menu, point to **Table: Entry**, and click **Cost**.

193 **To check a project's finish date**

- 1** On the **Project** menu, click **Project Information**.
- 2** In the **Project Information** dialog box, click the **Statistics** button.

Chapter 10 Organizing and Formatting Project DetailsPage 198 **To sort data in a view**

- 1 Switch to the view or table you want to sort.
- 2 On the **Project** menu, point to **Sort**, and then click the field by which you want to sort the view. To specify a custom sort, click **Sort By**, and in the **Sort** dialog box, choose the options you want.

202 **To group data in a view**

- 1 Switch to the view or table you want to group.
- 2 On the **Project** menu, point to **Group By: No Group**, and then choose the criteria by which you want to group the view. To specify different grouping options, click **Customize Group By**, and then choose the options you want in the **Customize Group By** dialog box.

207 **To turn AutoFilter on or off**

- On the Formatting toolbar, click the **AutoFilter** button.

207 **To filter data in a view**

- 1 Switch to the view you want to filter.
- 2 On the **Project** menu, point to **Filtered For**, and click **More Filters**.
- 3 In the **More Filters** dialog box, choose the filter you want, and then click the **Apply** button.

208 **To create a custom filter**

- 1 On the **Project** menu, point to **Filtered For: All Tasks** (for task views) or **All Resources** (for resource views), and then click **More Filters**.
- 2 In the **More Filters** dialog box, click the **New** button.
- 3 In the **Filter Definition** dialog box, select the options you want.

210 **To remove a filter**

- On the **Project** menu, point to **Filtered For:<filter name>**, and then click **All Tasks** (for task views) or **All Resources** (for resource views).

Quick Reference

211 To create a custom table

- 1 On the **View** menu, point to **Table: Entry**, and then click **More Tables**.
- 2 In the **More Tables** dialog box, do one of the following:
 - To create a new table, click the **New** button.
 - To redefine a table, click the table's name, and then click the **Edit** button.
 - To create a new table based on another table, click the table's name, and then click the **Copy** button.
- 3 In the **Table Definition** dialog box, choose the options you want.

215 To create a custom view

- 1 On the **View** menu, click **More Views**.
- 2 In the **More Views** dialog box, do one of the following:
 - To create a view, click the **New** button. Select the **Single view** or **Combination view** option in the **Define New View** dialog box, and then click **OK**.
 - To redefine a view, click the view's name, and then click the **Edit** button.
 - To create a new view based on another view, click the view's name, and then click the **Copy** button.
- 3 In the **View Definition** dialog box, choose the options you want.

Chapter 11 Printing Project Information

Page 225 To see the page setup options for views

- 1 Switch to a view you want.
- 2 On the **File** menu, click **Page Setup**.

226 To see the page setup options for reports

- 1 On the **View** menu, click **Reports**.
- 2 In the **Reports** dialog box, click **Custom**, and then click the **Select** button.
- 3 In the **Custom Reports** dialog box, click a report, and then click the **Setup** button.

229 To preview a view before printing

- On the **File** menu, click **Print Preview**.

229 **To work in the Print Preview window**

- 1** On the **File** menu, click **Print Preview**.
- 2** Do one of the following:
 - To navigate between pages of a multi-page print job, click a page navigation button.
 - To zoom out to see all pages of a print job, click the **Multiple Pages** button.
 - To change page setup options such as header or legend text, click the **Page Setup** button, and choose the options you want.
 - To display the **Print** dialog box and set other options, or to print what you see in the Print Preview window, click the **Print** button.
 - To exit the Print Preview window, click the **Close** button.

234 **To print a predefined report**

- 1** On the **View** menu, click **Reports**.
- 2** In the **Reports** dialog box, click the category of report you want, and then click the **Select** button.
- 3** In the dialog box that appears next, click the specific report you want to print, and click the **Select** button.
- 4** In the Print Preview window, click **Print**.

234 **To edit a predefined report**

- 1** On the **View** menu, click **Reports**.
- 2** In the **Reports** dialog box, click the category of report you want, and then click the **Select** button (or for custom reports, click the **Preview** button).
- 3** In the dialog box that appears next, click the specific report you want to edit, and then click the **Edit** button.
- 4** In the dialog box that appears next, choose the options you want.

Chapter 12 Publishing Project Information OnlinePage 242 **To save a snapshot of a view as a GIF image**

- 1** Set up the view with the specific details (such as the table, filter, or group) you want.
- 2** On the Standard toolbar, click the **Copy Picture** button.

Quick Reference

3 Under the **Render Image** label, click **To GIF image file**, and then specify the file name and location you want.

4 Select whatever other options you want, and click **OK**.

246 **To customize how Project saves a Web page**

1 On the **File** menu, click **Save As Web Page**.

2 Specify the file name and location you want, and click the **Save** button.

3 In the Export Wizard, select the options you want.

Chapter 13 **Sharing Project Information with Other Programs**

Page 256 **To copy text from a Project table to the Windows Clipboard**

1 Set up the table to display only the data you want to copy—for example, apply a filter or insert or hide columns.

2 Select the range of data you want to copy.

3 On the **Edit** menu, click **Copy Cell**, **Copy Task**, or **Copy Resource**.

258 **To copy a snapshot of a view to the Windows Clipboard**

1 Set up the view with the specific details (such as tables, filters, or groups) you want.

2 On the Standard toolbar, click **Copy Picture**.

3 In the **Copy Picture** dialog box, click either **For screen**, to optimize the snapshot for online viewing, or **For printer**, to optimize it for printing.

4 Select whatever other options you want, and then click **OK**.

260 **To create a new Project summary report for Word, PowerPoint, or Visio**

1 On the **View** menu point to **Toolbars**, and click **Analysis**.

2 On the **Analysis** toolbar, click the **Copy Picture to Office Wizard** button, and then follow the instructions that appear on your screen.

265 **To open a file in a different format in Project**

1 On the **File** menu, click **Open**.

2 In the **Files of type** box, click the file format you want.

3 Locate and click the specific file you want to open, and then click the **Open** button.

4 If the file you selected is not in Project format, the Import Wizard appears. Follow the instructions that appear on your screen.

271 **To save a Project file in a different format**

- 1 On the **File** menu, click **Save As**.
- 2 In the **Save As** dialog box, click the location, and enter the file name you want.
- 3 In the **Save as type** box, click the format you want, and then click the **Save** button.
- 4 Follow the instructions that appear on your screen in the Export Wizard.

Chapter 14 Tracking Progress on Tasks and AssignmentsPage 279 **To update a baseline**

- 1 On the **Tools** menu, point to **Tracking**, and then click **Save Baseline**.
- 2 In the **Save Baseline** dialog box, select the baseline you want to update.
- 3 Under **For**, click either **Entire project** or **Selected tasks**.

283 **To enter task-level or assignment-level actual work values**

- 1 On the **View** menu, click **Task Usage**.
- 2 On the **View** menu, point to **Table: Usage**, and then click **Work**.
- 3 Enter the actual work values you want for a task or assignment in the **Actual** column.

283 **To enter daily (or other time period's) actual work values per task or assignment**

- 1 On the **View** menu, click **Task Usage**.
- 2 Click the name of the task or assignment for which you want to enter actual values.
- 3 On the Standard toolbar, click the **Go To Selected Task** button.
- 4 On the **Format** menu, point to **Details**, and click **Actual Work**.
- 5 In the timescale grid, enter the task or assignment value you want in the **Act. Work** field.

297 **To reschedule uncompleted work**

- 1 On the **Tools** menu, point to **Tracking**, and then click **Update Project**.
- 2 Click **Reschedule uncompleted work to start after**, and in the date box type or click the date you want.

Chapter 15 Viewing and Reporting Project StatusPage 303 **To identify tasks that have slipped in a view**

- On the **View** menu, click **Tracking Gantt**.

Quick Reference

- 305 **To filter for tasks that have slipped**
- 1 On the **Project** menu, point to **Filtered For: All Tasks**, and then click **More Filters**.
 - 2 In the **More Filters** dialog box, click **Slipping Tasks**, and then click the **Apply** button.
- 306 **To see schedule variance**
- 1 On the **View** menu, point to **Table: Entry**, and then click **Variance**.
- 309 **To see task costs in a view**
- 1 On the **View** menu, click **More Views**.
 - 2 In the **More Views** dialog box, click **Task Sheet** and then click **Apply**.
 - 3 On the **View** menu, point to **Table: Variance**, and click **Cost**.
- 312 **To see task costs and overbudget tasks using the Project Guide**
- 1 On the **Project Guide** toolbar, click the **Report** button.
 - 2 In the Report pane, click the **See project costs** link.
 - 3 In the Project Costs pane under **Apply a filter**, click **Cost Overbudget**.
- 314 **To sort resources by cost**
- 1 On the **View** menu, click **Resource Sheet**.
 - 2 On the **View** menu, point to **Table: Entry** and click **Cost**.
 - 3 On the **Project** menu, point to **Sort**, and click **Sort By**.
 - 4 In the **Sort** dialog box, in the **Sort By** box, click **Cost**, and then select the **Descending** option.
 - 5 Make sure the **Permanently renumber resources** check box is cleared, and then click the **Sort** button.
- 315 **To sort resources by cost variance**
- 1 On the **View** menu, click **Resource Sheet**.
 - 2 On the **View** menu, point to **Table: Entry** and click **Cost**.
 - 3 On the **Project** menu, point to **Sort** and click **Sort By**.
 - 4 In the **Sort** dialog box, in the **Sort By** box, click **Cost Variance**.
 - 5 Make sure the **Permanently renumber resources** check box is cleared, and then click the **Sort** button.

Chapter 16 Getting Your Project Back on TrackPage 330 **To edit resource assignments' work values**

- 1 On the **View** menu, click **Resource Usage**.
- 2 In the **Work** column, edit the values you want.

332 **To replace one resource with another**

- 1 On the **View** menu, click **Task Usage**.
- 2 Click the **Task Name** column heading.
- 3 On the Standard toolbar, click the **Assign Resources** button.
- 4 In the **Assign Resources** dialog box, in the **Resource Name** column, click the name of the resource you want to replace, and then click the **Replace** button.
- 5 In the **Replace Resource** dialog box, click the name of the replacement resource, and click **OK**.

334 **To filter for critical tasks**

- On the **Project** menu, point to **Filtered For: All Tasks**, and then click **Critical**.

335 **To enter overtime work values in the Task Form**

- 1 On the **View** menu, click **Gantt Chart**.
- 2 On the **Window** menu, click **Split**.
- 3 Click anywhere in the Task Form, on the **Format** menu, point to **Details**, and then click **Resource Work**.
- 4 In the **Ovt. Work** column for the resource to which you want to assign overtime work, enter the number of hours of overtime work you want.

Chapter 17 Applying Advanced FormattingPage 344 **To format bar styles in a Gantt chart view**

- 1 On the **Format** menu, click **Bar Styles**.
- 2 In the **Bar Styles** dialog box, select the options you want.

349 **To display horizontal gridlines on the chart portion of a Gantt chart view**

- 1 On the **Format** menu, click **Gridlines**.
- 2 In the **Lines to change** box, make sure that **Gantt Rows** is selected, and then in the **Type** box, click the type of line you want.

Quick Reference

354 To format bars in the Calendar view

- 1 On the **View** menu, click **Calendar**.
- 2 On the **Format** menu, click **Bar Styles**.
- 3 In the **Bar Styles** dialog box, select the options you want.

Chapter 18 Customizing Project

Page 361 To copy a custom element from one project plan to another through the Organizer

- 1 First open the project plan that contains the custom element (such as a custom table), and then open the project plan to which you want to copy the custom element.
- 2 On the **Tools** menu, click **Organizer**.
- 3 Click the tab name that corresponds to the type of custom element you want to copy.
- 4 In the **<Custom Elements>** available in drop-down list on the left side of the **Organizer** dialog box, click the name of the project plan that contains the custom element.
- 5 Click the **Copy** button.

365 To record a macro

- 1 On the **Tools** menu, point to **Macro**, and then click **Record New Macro**.
- 2 In the **Macro name** box, enter a name for the macro (no spaces allowed).
- 3 In the **Store macro in** box, click **This Project** to store the macro in the active project plan, or **Global File** to store it in the global template.
- 4 Click **OK**.
- 5 Perform the actions you want recorded in the macro.
- 6 On the **Tools** menu, point to **Macro**, and then click **Stop Recorder**.

368 To run a macro

- 1 On the **Tools** menu, point to **Macro**, and then click **Macros**.
- 2 In the **Macro name** box, click the name of the macro you want to run, and then click the **Run** button.

369 To edit a macro in the Visual Basic Editor

- 1 On the **Tools** menu, point to **Macro**, and then click **Macros**.
- 2 In the **Macro name** box, click the name of the macro you want to edit, and then click the **Edit** button.

- 3** In the Visual Basic Editor, edit the macro.
 - 4** On the **File** menu in the Visual Basic Editor, click **Close and Return to Microsoft Project**.
- 374 **To create a custom toolbar**
- 1** On the **Tools** menu, point to **Customize**, and then click **Toolbars**.
 - 2** Click the **Toolbars** tab.
 - 3** Click the **New** button.
 - 4** In the **Toolbar Name** box, type the toolbar name you want, and then click **OK**.
- 375 **To add a command to a custom toolbar**
- 1** On the **Tools** menu, point to **Customize**, and then click **Toolbars**.
 - 2** Click the **Commands** tab.
 - 3** In the **Categories** list, click the category you want.
 - 4** Drag the command you want from the **Commands** list to the custom toolbar.
- 377 **To edit the graphic image and text that appears on a custom toolbar button**
- 1** On the **Tools** menu, point to **Customize**, and then click **Toolbars**.
 - 2** Click the **Commands** tab.
 - 3** Click the custom button you want to modify on the custom toolbar.
 - 4** Click the **Modify Selection** button, and then point to **Change Button Image**.
 - 5** In the list of images that appears, click the image you want.
 - 6** Click **Modify Selection**, and in the **Name** box, type the text you want for the custom button name.

Chapter 19 **Measuring Performance with Earned Value Analysis**

- Page 383 **To set the project status date**
- 1** On the **Project** menu, click **Project Information**.
 - 2** In the **Project Information** dialog box, in the **Status Date** box, type or click the status date you want, and click **OK**.
- 383 **To view earned value schedule indicators**
- 1** On the **View** menu, click **More Views**.
 - 2** In the **More Views** dialog box, click **Task Sheet** and then click **Apply**.
 - 3** On the **View** menu, point to **Table: Entry**, and click **More Tables**.
 - 4** In the **More Tables** dialog box, click **Earned Value Schedule Indicators**, and click the **Apply** button.

Quick Reference

385 To view earned value cost indicators

- 1 On the **View** menu, click **More Views**.
- 2 In the **More Views** dialog box, click **Task Sheet** and then click **Apply**.
- 3 On the **View** menu, point to **Table: Entry**, and click **More Tables**.
- 4 In the **More Tables** dialog box, click **Earned Value Cost Indicators**, and click the **Apply** button.

Chapter 20 Consolidating Projects and Resources

Page 393 To create a resource pool

- 1 Create a new project plan.
- 2 Save the new project plan that will become a resource pool.
- 3 Open one of the project plans you want to make a sharer plan.
- 4 On the **Tools** menu, point to **Resource Sharing**, and click **Share Resources**.
- 5 Under **Resources for <Sharer Plan Name>**, click **Use resources**.
- 6 In the **From** list, click the name of your resource pool, and click **OK** to close the **Share Resources** dialog box.
- 7 If you have more than one sharer plan, open another sharer plan.
- 8 Repeat steps 3 through 7 for the other sharer plans.

397 To view assignment details in the resource pool

- 1 On the **View** menu, click **Resource Usage**.
- 2 In the **Resource Name** column, click the name of a resource.
- 3 On the **Window** menu, click **Split** to display the Resource Form.

400 To update a resource's working time in the resource pool

- 1 Open the resource pool as read-write.
- 2 On the **View** menu, click **Resource Usage**.
- 3 In the **Resource Name** column of the Resource Usage view, click the name of the resource whose working time you want to change, and click the **Resource Information** button.
- 4 In the **Resource Information** dialog box, click the **Working Time** tab.
- 5 In the calendar below the **Select Date(s)** label, drag the vertical scroll bar or click the up or down arrow buttons until the month and year you want appears.

- 6 Click the dates you want to designate as nonworking time.
 - 7 Under **Set selected date(s) to**, click **Nonworking time**, and click **OK** to close the **Resource Information** dialog box.
- 402 **To update working time for all sharer plans from the resource pool**
- 1 Open the resource pool as read/write.
 - 2 On the **Tools** menu, click **Change Working Time**.
 - 3 In the **Change Working Time** dialog box, in the **For** box, click the base calendar you want to change, for example **Standard (Project Calendar)**.
 - 4 In the calendar below the **Select Date(s)** label, drag the vertical scroll bar or click the up or down arrow buttons until the month and year you want appears, and then click the specific days you want to make nonworking time.
 - 5 Under **Set selected date(s) to**, click **Nonworking time**.
 - 6 Click **OK** to close the **Change Working Time** dialog box.
- 404 **To link new project files to the resource pool**
- 1 Open the resource pool as read/write.
 - 2 On the Standard toolbar, click the **New** button.
 - 3 On the **Tools** menu, point to **Resource Sharing**, and click **Share Resources**.
 - 4 In the **Share Resources** dialog box, under **Resources for <File Name>**, click **Use resources**.
 - 5 In the **From** list, click the name of the resource pool, and click **OK** to close the **Share Resources** dialog box.
 - 6 Save the sharer plan and resource pool.
- 406 **To edit a sharer plan and update the resource pool**
- 1 Open a sharer plan.
 - 2 When prompted, open the resource pool.
 - 3 In the sharer plan, make changes to assignments.
 - 4 On the **Tools** menu, point to **Resource Sharing**, and click **Update Resource Pool**.
- 410 **To create a consolidated project plan**
- 1 On the Standard toolbar, click the **New** button.
 - 2 Save the new project plan.
 - 3 On the **Insert** menu, click **Project**.

Quick Reference

4 In the **Insert Projects** dialog box, locate and click the project plan you want to insert into the consolidated project plan. To select multiple plans, hold down the **Ctrl** key while you click the name of each plan.

5 Click the **Insert** button.

413 **To create task dependencies between projects**

1 Open the two project plans between which you want to create a task dependency.

2 Switch to the project plan that contains the task you want to make the successor task.

3 On the **View** menu, click **Gantt Chart**.

4 Click the name of the task you want to make the successor task.

5 On the Standard toolbar, click the **Task Information** button.

6 Click the **Predecessors** tab.

7 In the **ID** column, click the next empty cell below any other predecessor tasks, and enter the name of the predecessor task from the other project file in this format:
Filename\Task ID.

8 Press **Enter**, and click **OK** to close the **Task Information** dialog box.

Chapter 21 **Planning Work with Project Server**

Note These procedures require Project Professional with access to Project Server.

Page 422 **To create a new plan based on a template (project manager activity)**

1 In Project Professional, on the **File** menu click **New**.

2 In the New Project pane, under **Templates** click **On my computer**.

3 In the **Templates** dialog box, click the **Project Templates** tab, and double-click the template you want.

427 **To run the Resource Substitution Wizard (project manager activity)**

1 In Project Professional, open an enterprise project plan that contains generic or work resources that you want to replace.

2 On the **Tools** menu, click **Substitute Resources**

3 In the Resource Substitution Wizard, follow the instructions that appear on your screen.

437 **To publish a project plan to Project Server (project manager activity)**

- 1** In Project Professional, develop a project plan to the point that you are ready to publish it to Project Server.
- 2** On the **Collaborate** menu point to **Publish**, and then click **All Information**.
- 3** To republish updated information, on the **Collaborate** menu point to **Publish**, and then click **New and Changed Assignments**.

Chapter 22 Tracking Work with Project Server

Note These procedures require Project Professional or Project Web Access with access to Project Server, or Outlook with the Outlook integration add-in installed from Project Server.

Page 442 **To report task changes through Project Web Access (resource activity)**

- 1** Log in to Project Web Access.
- 2** Click the **Tasks** tab to display the Tasks Center.
- 3** In the Tasks Center, record the actual work, percent complete, or other task status you want.
- 4** Click **Update All**.

442 **To report upcoming nonworking time through Project Web Access (resource activity)**

- 1** Log in to Project Web Access.
- 2** Click the **Tasks** tab to display the Tasks Center.
- 3** Click the **Notify your manager of time you will not be available for project work** in the pane on the left.
- 4** Record the type of nonworking time you want to report, and then click **Submit**.

446 **To manage tasks through the Outlook calendar (resource activity)**

- 1** Start Outlook and display the calendar.
- 2** Do one of the following:
 - To import new or updated task assignments, click the **Import New Assignments** button on the **Project Web Access** toolbar.
 - To record progress on an assignment, double-click the assignment's appointment in the calendar, click the **Project Web Access** tab, and record the values you want.

Quick Reference

451 **To accept task changes from resources (project manager activity)**

- 1 Log in to Project Web Access.
- 2 Click the **Updates** tab to display the Updates Center.
- 3 For the task changes you want to accept, click in the **Accept?** column and in the drop-down list that appears click **Accept**.
- 4 Click **Update**.
- 5 After Project Server updates the affected plans in Project Professional, evaluate the impact of the task changes on the overall schedule.

456 **To see multi-project status and drill into a specific project (executive or other stakeholder activity)**

- 1 Log in to Project Web Access.
- 2 Click the **Projects** tab to display the Project Center.
- 3 Change the display options or active view to see the projects published to Project Server.
- 4 To display information for a specific project, in the **Project Name** column click the name of the project you'd like to see.

Chapter 23 **Managing Risks, Issues, and Documents with Project Server**

Note These procedures require Windows SharePoint Services integrated with Project Server.

Page 464 **To create a new risk (executive, project manager, or resource activity)**

- 1 Log in to Project Web Access.
- 2 Click the **Resources** tab, and then select a project with which you want to associate a risk.
- 3 Enter the risk information you want.

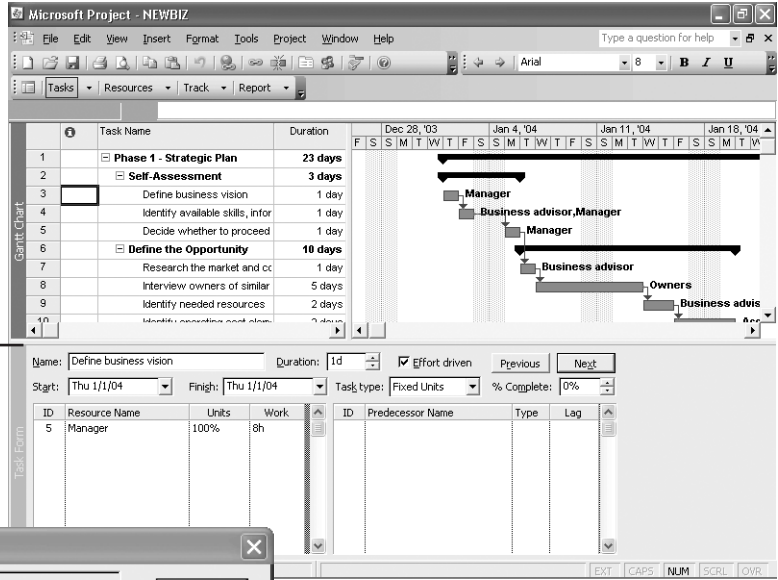
467 **To create a new issue (executive, project manager, or resource activity)**

- 1 Log in to Project Web Access.
- 2 Click the **Issues** tab, and then select a project with which you want to associate an issue.
- 3 Enter the issue information you want.

470 **To upload a document (executive, project manager, or resource activity)**

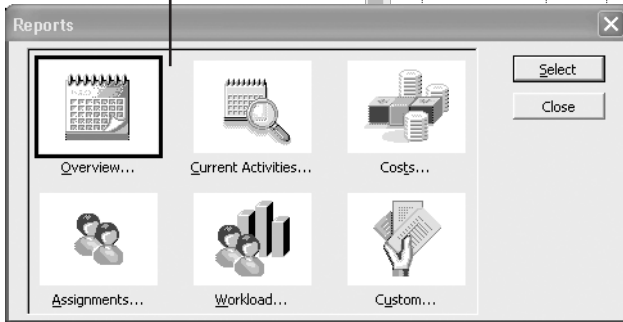
- 1** Log in to Project Web Access.
- 2** Click the **Documents** tab, and then select a project with which you want to associate a document.
- 3** In the document library, click **Upload Document**, and locate the document you want.

I Managing a Simple Project

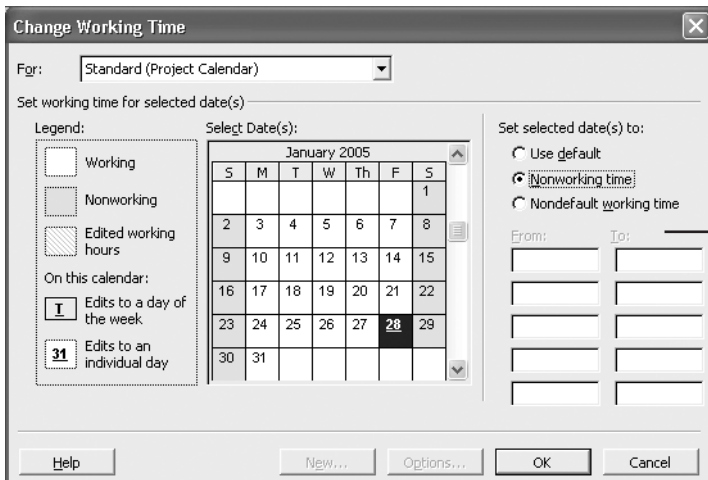


Work with views,
page 16

Work with reports,
page 21



Set the project start date in the Project Guide,
page 23



Modify the
project calendar,
page 26

1

Getting Started with Project

In this chapter you will learn to:

- ✓ Understand the family of Microsoft Office Project 2003 products.
 - ✓ Understand what a good project management tool can help you do.
 - ✓ Start Project Standard or Project Professional, and identify the major parts of the Project window.
 - ✓ Use views to work with project plan details in different ways.
 - ✓ Use reports to print project plan details.
 - ✓ Create a project plan and enter a project start date.
 - ✓ Set the working and nonworking time for a project.
 - ✓ Enter a project plan's properties.
-

Project management is a broadly practiced art and science. If you're reading this book, there's a good chance that either you're seriously involved in project management, or you want to be.

At its heart, project management is a toolbox of skills and tools that help you predict and control the outcomes of endeavors your organization undertakes. Your organization might do other work apart from projects. *Projects* (such as a film project) are distinct from *ongoing operations* (such as payroll services) in that projects are temporary endeavors undertaken to create some sort of unique deliverable or end result. With a good project management system in place, you should be able to answer such questions as

- What *tasks* must be done to produce the *deliverable* of the project?
- Who will complete these tasks?
- What's the best way to communicate project details to people who have an interest in the project?
- When should each task be performed?
- How much will it cost?
- What if some tasks are not completed as scheduled?

Good project management does not guarantee the success of every project, but poor project management usually guarantees failure.

Microsoft Office Project 2003 should be one of the most frequently used tools in your project management toolbox. This book explains how to use Project to build project plans complete with tasks and resources, use the extensive formatting features in Project to organize and format the project plan details, track actual work against the plan, and take corrective action when things get off track.

See Also If you are new to project management, stop right here and read Appendix A, “A Short Course in Project Management,” before proceeding with this chapter. It won’t take you long, and it will help you properly assess and organize your specific project scheduling needs and build solid plans in Project.

Most of the exercises in this book revolve around a fictitious film production company, Southridge Video and Film Productions. Chances are you don’t work for a film production company, but you probably have seen a TV commercial or film recently. Each is its own project; some in fact are fairly complex projects involving hundreds of resources and aggressive *deadlines*. We think you’ll be able to recognize many of the scheduling problems Southridge Video encounters and apply the solutions to your own scheduling needs.

This chapter walks you through the Project interface and presents the steps necessary to create a new project plan in Project.



Important To follow along with the exercises in this book, you need to install the practice files from the companion CD. (You cannot just copy the files.) You will find instructions for installing the files in “Using the Book’s CD-ROM,” on page xiii.

Managing Your Projects with Project

The best project management tool in the world can never replace your good judgment. However, the tool can and should help you accomplish the following:

- Track all the information you gather about the work, duration, costs, and resource requirements for your project.
- Visualize and present your project plan in standard, well-defined formats.
- Schedule tasks and resources consistently and effectively.
- Exchange project information with other Microsoft Office System applications.

- Communicate with resources and other stakeholders while you, the project manager, retain ultimate control of the project.
- Manage projects using a program that looks and feels like other desktop productivity applications.

The Microsoft Office Project 2003 family encompasses a broad range of products, including the following:

- Microsoft Office Project 2003 Standard edition, a Windows-based desktop application for project management. The Standard edition is designed for the single project manager and does not interact with Project Server. The previous version, Project Standard 2002, could be used with Project Server for some collaborative functions, but Project Standard 2003 is a stand-alone product.
- Microsoft Office Project 2003 Professional edition, a Windows-based desktop application that includes the full feature set of the Standard edition, plus—when used with Project Server—additional project team planning and communications features. Project Professional plus Project Server represents Microsoft's *enterprise project management* (EPM) product offering.
- Microsoft Office Project 2003 Server, an intranet-based solution that enables enterprise-level project collaboration, timesheet reporting, and status reporting when used in conjunction with Project Professional.
- Microsoft Office Project 2003 Web Access, the Internet Explorer–based interface for working with Project Server.

Tip To learn more about the new features in Project 2003 and the differences between the Standard and Professional editions, type **What's new?** into the **Search** box in the upper right corner of the Project window. The **Search** box initially contains the text *Type a question for help*.

Most of the chapters in this book focus on the feature set of Project Standard, the entry-level desktop project management tool. The chapters in Part 4 introduce you to the enterprise project management features available with Project Professional and Project Server. All of the content in this book that applies to Project Standard also applies to Project Professional, so you can use either edition of Project to complete Parts 1 through 3 of this book. If you have Project Professional and access to Project Server, you can also explore the features introduced in Part 4. Otherwise, you can browse through Part 4 to help you decide whether you or your organization should be using Project Professional and Project Server.

What Can a Scheduling Engine Do for You?

Many projects are not managed with a real scheduling tool such as Project, but they should be. It's common to see task and resource lists from spreadsheet programs such as Excel, or even nicely formatted Gantt charts from drawing programs such as Visio. One big advantage Project has over such applications is that it includes a scheduling engine—a computational brain that can handle issues such as ripple effects when task 1 in a 100-task sequence changes its start date. This scheduling engine can also account for nonworking time such as weekends when calculating a task's start and finish dates. Applications such as Excel and Visio might have a place in your project management toolbox, but to be really successful you'll need a scheduling engine such as Project.

Starting Project Standard

Note Follow the steps in this section if you have Microsoft Office Project Standard. If you have Microsoft Office Project Professional, skip this section and refer to the next section, “Starting Project Professional.” If you don't know which edition of Project you have, Start Project, and on the **Help** menu click **About Microsoft Office Project**. The dialog box that appears indicates which edition you have.

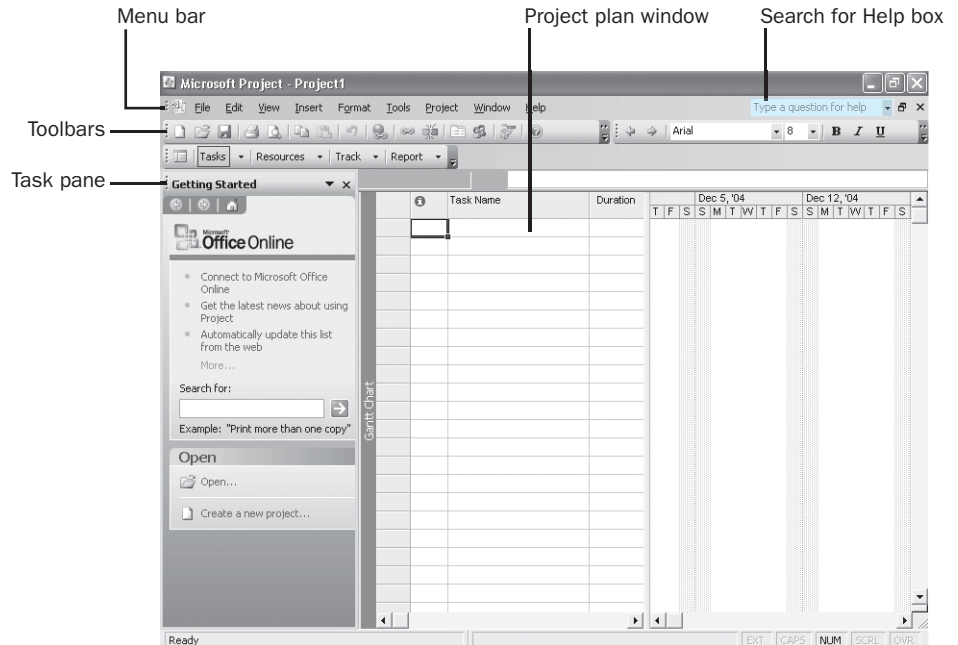
Project Standard is a member of the Microsoft Office System, so much of what you see in Project is similar to what you see in Word, Excel, and Access. For example, Project's menu bar and toolbars are similar in organization, if not in content, to other Office applications.

In this exercise, you'll start Project Standard, create a file based on a *template* (a file containing some initial data that you can use as a starting point for a new project plan), and see the major areas of the default Project interface.



- 1 On the Windows taskbar, click the **Start** button.
The **Start** menu appears.
- 2 On the **Start** menu, point to **All Programs** (in Microsoft Windows XP) or **Programs** (in previous versions of Windows), point to **Microsoft Office**, and then click **Microsoft Office Project 2003**.

Project Standard appears. Your screen should look similar to the following illustration:



Toolbar Options

Important Depending on the screen resolution you have set on your computer and which toolbar buttons you use most often, it's possible that not every button on every toolbar will appear on your Project toolbars. If a button mentioned in this book doesn't appear on a toolbar, click the **Toolbar Options** down arrow on that toolbar to display the rest of the available buttons.

If you've used Office applications, or if you're upgrading from a previous version of Project, you'll be familiar with many of the major interface elements in the Project window. Let's walk through them:

- The main menu bar enables you to give instructions to Project.
- Toolbars provide quick access to the most common tasks; most toolbar buttons correspond to a menu bar command. Like other Office applications, Project customizes the menus and toolbars for you, based on how frequently you use specific commands or toolbar buttons. The most frequently used commands and buttons will remain visible on the menus and toolbars, whereas the commands and buttons you don't use will be temporarily hidden.
- The project plan window contains a view of the active project plan. (We'll refer to the types of documents Project works with as *project plans*, not documents or schedules.) The name of the active view appears on the left edge of the view—in this case, the Gantt Chart view is displayed.

Type a question for help

Search Help

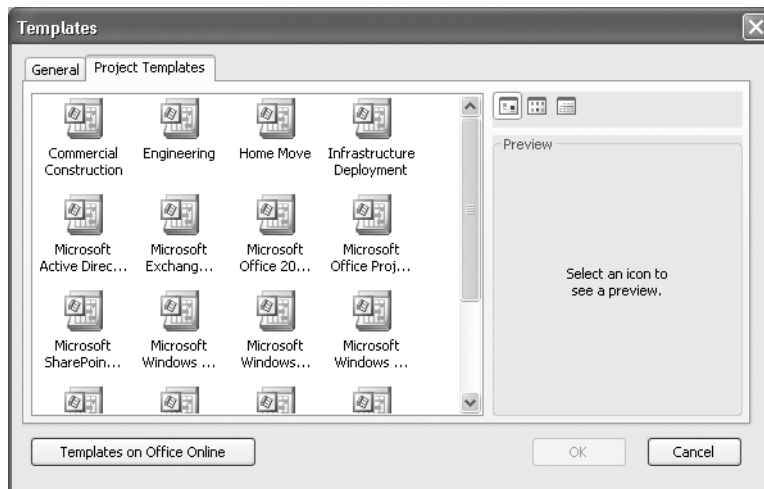
**New in
Office 2003**

- The box labeled *Type a question for help* enables you to quickly search Project's Help for instructions on performing common activities in Project. Just type in a question and press **Enter**. Throughout this book we'll suggest questions you can enter into this box to learn more about specific features. If your computer is connected to the Internet, your search query will go to assistance content on Office Online (part of the Microsoft Web site), and the results displayed will reflect the most up-to-date content available from Microsoft. If your computer is not connected to the Internet, the search results will be limited to the Help installed with Project.
- The Getting Started task pane in Project is similar to the task panes you might see in other Office applications. It is a convenient list of recently opened files as well as another means of creating new files. In addition to this task pane, Project includes the Project Guide, which is discussed below.

Next you will view the templates included with Project and create a project plan based on one of them.

- 3 In the Getting Started task pane, click **Create a new project**.
The New Project task pane replaces the Getting Started task pane.
- 4 In the New Project task pane, under **Template**, click **On my computer**.
The **Templates** dialog box appears.
- 5 Click the **Project Templates** tab.

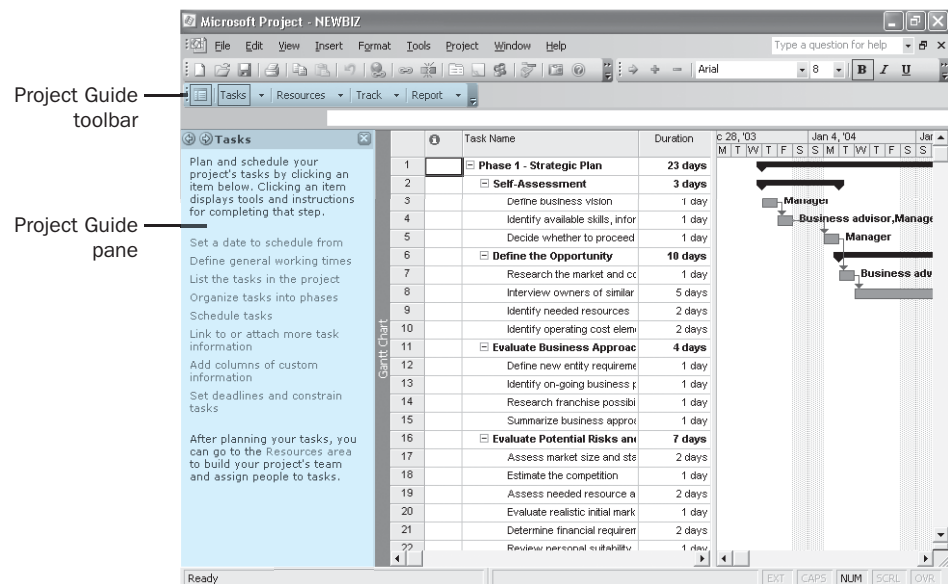
Your screen should look similar to the following illustration:



- 6 Click **New Business** (you may need to scroll down in the list of Project Templates to see it), and then click **OK**.

Important Depending on how Project was installed on your computer, the templates included with Project might not be installed at this point. This “install on first use” setting is one of the setup choices for optional components included with Project. If you have never seen the templates included with Project before, spend some time browsing through them. You might find one that matches an upcoming project for which you’d like to develop a full plan. Starting with a predefined template can save you a lot of effort.

Project creates a project plan based on the New Business template, closes the New Project task pane, and displays the Tasks activity list in the Project Guide. Your screen should look similar to the following illustration:



The Project Guide is a wizard-like interface you can use when creating or fine-tuning a project plan. In later chapters you will use the Project Guide to perform many common activities relating to tasks, resources, and assignments. You can view all activities in the Project Guide through the **Project Guide** toolbar. This toolbar is divided into the most common subject areas of Project (Tasks, Resources, Track, and Report).

For the next few exercises in this chapter, you will use the sample data provided by the template to identify the major parts of the Project interface.

Starting Project Professional

Note Follow the steps in this section if you have Microsoft Office Project Professional. If you have Microsoft Office Project Standard, skip this section and refer to the previous section, “Starting Project Standard.” If you don’t know which edition of Project you have, Start Project and on the **Help** menu click **About Microsoft Office Project**. The dialog box that appears indicates which edition you have.

Project Professional is a member of the Microsoft Office System, so much of what you see in Project is similar to what you see in Word, Excel, and Access. For example, Project’s menu bar and toolbars are similar in organization, if not in content, to other Office applications.

In this exercise, you’ll start Project Professional, create a file based on a *template* (a file containing some initial data that you can use as a starting point for a new project plan), and see the major areas of the default Project interface.



- 1 On the Windows taskbar, click the **Start** button.

The **Start** menu appears.

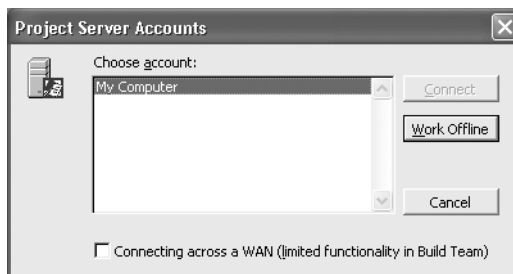
- 2 On the **Start** menu, point to **All Programs** (in Microsoft Windows XP) or **Programs** (in previous versions of Windows), point to **Microsoft Office**, and then click **Microsoft Office Project 2003**.

Depending on how your enterprise options have been set in Project Professional, you may be prompted to log into or choose a Project Server account. If so, complete steps 3 and 4. Otherwise, go to step 5.

- 3 If the **Project Server Security Login** dialog box appears, click **Cancel**.

You would see the **Project Server Security Login** dialog box only if Project Professional has been set up to log into a specific Project Server account using Project Server Security authentication.

- 4 In the **Project Server Accounts** dialog box, under **Choose account** select **My Computer**, and then click **Work Offline**.

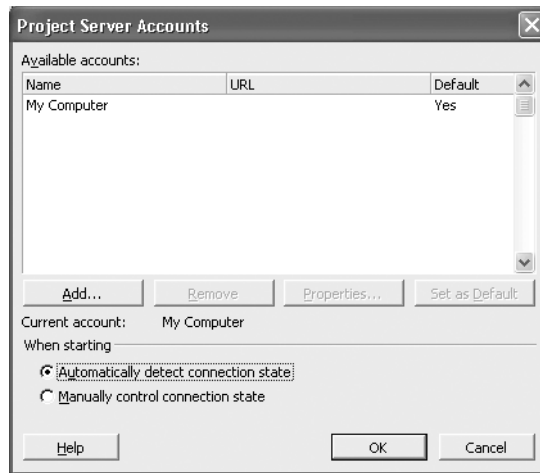


Choosing this option sets Project Professional to work independent of your Project Server and helps ensure that none of the practice file data you use for this chapter can accidentally be published to your Project Server.

Project appears. Next you'll review or adjust some enterprise options.

- 5 On the **Tools** menu point to **Enterprise Options**, and then click **Microsoft Office Project Server Accounts**.

The **Project Server Accounts** dialog box appears. Your screen should look similar to the following illustration:



- 6 Note the **Current account** value.

If the **Current account** value is something other than **My Computer**, click **Manually control connection state**, click **OK**, and then complete step 7.

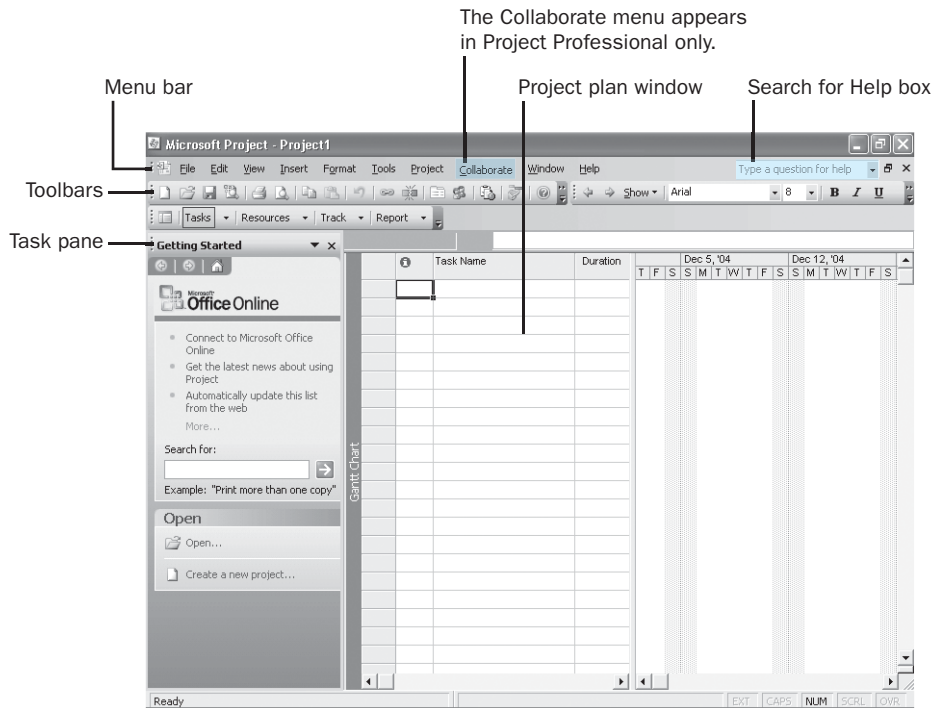
Or

If the **Current account** value is **My Computer**, click **Cancel**, and then skip step 7.

Choosing **Manually control connection state** will cause Project Professional to prompt you to choose an account to work with when you start Project Professional. This helps ensure that none of the practice file data you use for this chapter can accidentally be published to your Project Server.

- 7 Close and restart Project Professional. If prompted to choose an account, click **My Computer**, and then click **Work Offline**.

Project Professional appears. Your screen should look similar to the following illustration:



Toolbar Options

Important Depending on the screen resolution you have set on your computer and which toolbar buttons you use most often, it's possible that not every button on every toolbar will appear on your Project toolbars. If a button mentioned in this book doesn't appear on a toolbar, click the **Toolbar Options** down arrow on that toolbar to display the rest of the available buttons.

If you've used Office applications, or if you're upgrading from a previous version of Project, you'll be familiar with many of the major interface elements in the Project window. Let's walk through them:

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documents or schedules.) The name of the active view appears on the left edge of the view—in this case, the Gantt Chart view is displayed.

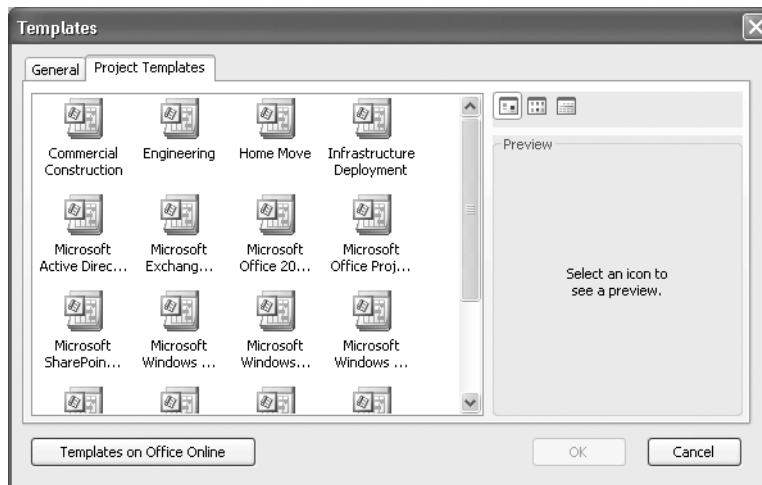
Type a question for help
Search Help

- (The box labeled *Type a question for help* enables you to quickly search Project's Help for instructions on performing common activities in Project. Just type in a question and press **Enter**. Throughout this book we'll suggest questions you can enter into this box to learn more about specific features. If your computer is connected to the Internet, your search query will go to assistance content on Office Online (part of the Microsoft Web site), and the results displayed will reflect the most up-to-date content available from Microsoft. If your computer is not connected to the Internet, the search results will be limited to the Help installed with Project.
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Next you will view the templates included with Project and create a project plan based on one of them.

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The New Project task pane replaces the Getting Started task pane.
- 9 In the New Project task pane, under **Template**, click **On my computer**.
The **Templates** dialog box appears.
- 10 Click the **Project Templates** tab.

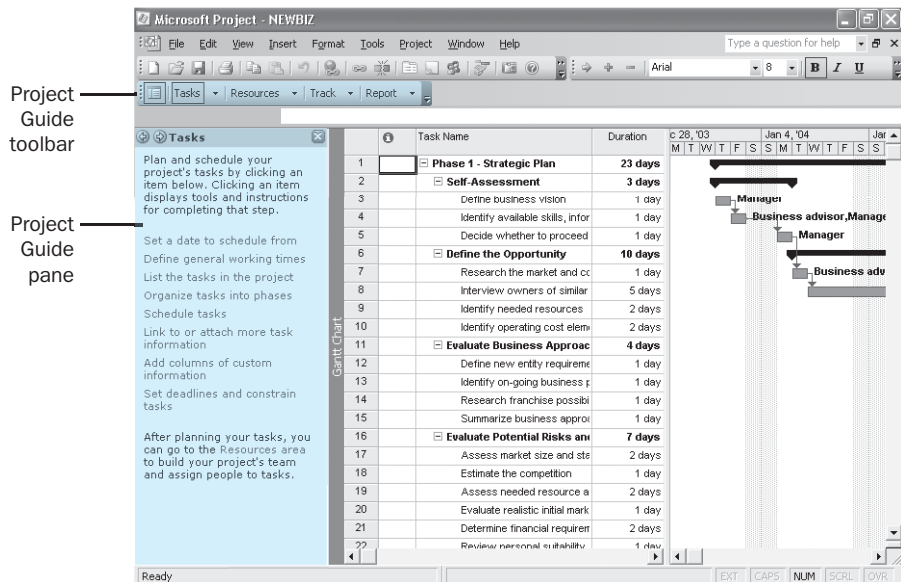
Your screen should look similar to the following illustration:



- 11 Click **New Business** (you may need to scroll down in the list of Project Templates to see it), and then click **OK**.

Important Depending on how Project was installed on your computer, the templates included with Project might not be installed at this point. This “install on first use” setting is one of the setup choices for optional components included with Project. If you have never seen the templates included with Project before, spend some time browsing through them. You might find one that matches an upcoming project for which you’d like to develop a full plan. Starting with a predefined template can save you a lot of effort.

- 12 Project creates a project plan based on the New Business template, closes the New Project task pane, and displays the Tasks activity list in the Project Guide. Your screen should look similar to the following illustration:

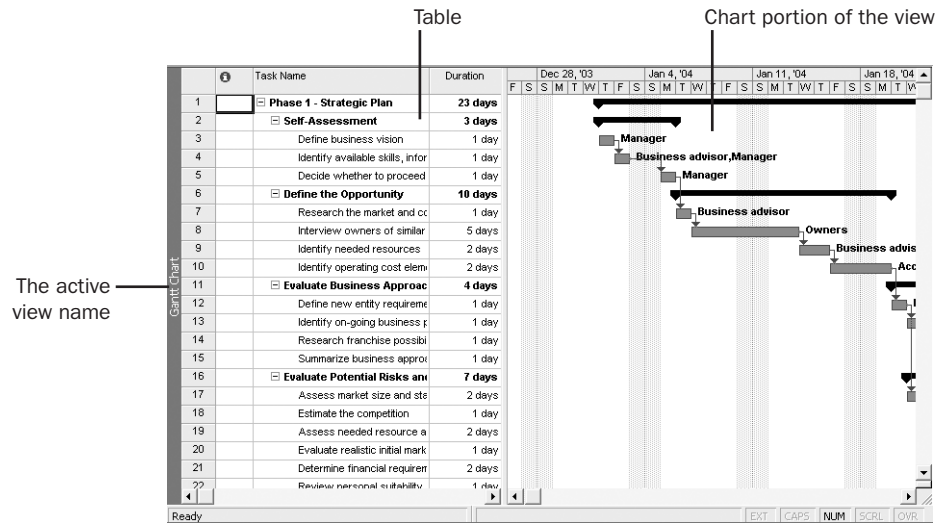


The Project Guide is a wizard-like interface you can use when creating or fine-tuning a project plan. In later chapters you will use the Project Guide to perform many common activities relating to tasks, resources, and assignments. You can view all activities in the Project Guide through the **Project Guide** toolbar. This toolbar is divided into the most common subject areas of Project (Tasks, Resources, Track, and Report).

For the next few exercises in this chapter, you will use the sample data provided by the template to identify the major parts of the Project interface.

Exploring Views

The working space in Project is called a *view*. Project contains dozens of views, but you normally work with just one view (sometimes two) at a time. You use views to enter, edit, analyze, and display your project information. The default view, the one you see when Project starts, is the *Gantt Chart view* shown here.



In general, views focus on either task or resource details. The Gantt Chart view, for example, lists task details in a table on the left side of the view and graphically represents each task as a bar in the chart on the right side of the view. The Gantt Chart view is a common way to represent a project plan, especially when presenting it to others. It is also useful for entering and fine-tuning task details and for analyzing your project.

In this exercise, you'll start at the Gantt Chart view and then switch to other views that highlight different aspects of a project plan. Finally, you'll explore combination views that let you focus on specific project details more easily.

1 On the **View** menu, click **Resource Sheet**.

The Resource Sheet view replaces the Gantt Chart view. The Project Guide is updated to display a list of activities specific to resources:

	Resource Name	Type	Material Label	Initials	Group	Max. Units	SI
1	Business advisor	Work		B		100%	
2	Peers	Work		P		100%	
3	Lawyer	Work		L		100%	
4	Government agency	Work		G		100%	
5	Manager	Work		M		100%	
6	Owners	Work		O		100%	
7	Accountant	Work		A		100%	
8	Banker	Work		B		100%	
9	Information services	Work		I		100%	

The Resource Sheet view displays details about resources in a row-and-column format (called a *table*), with one resource per row. This view is called a sheet view. There is one other sheet view, the Task Sheet view, which lists the task details. Note that Resource Sheet view doesn't tell you anything about the tasks to which resources might be assigned. To see that type of information, you'll switch to a different view.

2 On the **View** menu, click **Resource Usage**.

The Resource Usage view replaces the Resource Sheet view, and the Project Guide is updated again.

This usage view groups the tasks to which each resource is assigned. Another usage view, the Task Usage view, flips this around to display all the resources assigned to each task. Usage views also show you work assignments per resource on a timescale such as daily or weekly. Next you'll switch to the Task Usage view.

3 On the **View** menu, click **Task Usage**.

The Task Usage view replaces the Resource Usage view, and the Project Guide is updated again.

4 In the table portion of the view on the left, click **Define business vision**, the name of task 3.

5 On the Standard toolbar, click the **Go To Selected Task** button.

The timescale side of the view scrolls to show you the scheduled work values for this task, shown below.



Go To
Selected Task

Timescale

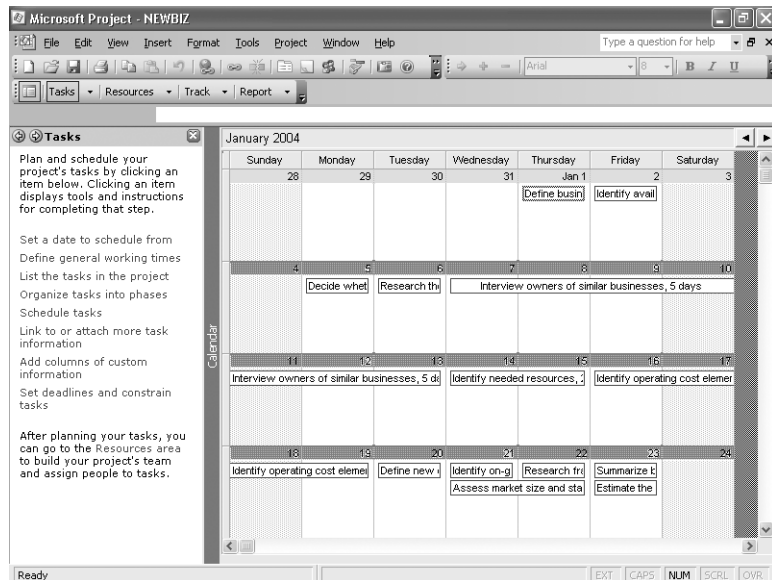
The screenshot shows the Microsoft Project interface with the 'Task Usage' view selected. The 'Task Usage' task sheet is displayed, showing a hierarchy of tasks. The task 'Define business vision' (Task ID 3) is selected, and the 'Timescale' view is visible on the right side of the task sheet, showing work values for each day of the week (W, T, F, S) for the month of January. The 'Task Usage' task sheet is divided into columns for Task Name, Work, and Details. The 'Details' column is further divided into sub-columns for W, T, F, S, and Jan. The 'Work' column shows the total work for each task, and the 'Details' columns show the work values for each day of the week.

Task ID	Task Name	Work	Details
			W T F S Jan
1	Phase 1 - Strategic Plan	240 hrs	Work
2	Self-Assessment	32 hrs	Work
3	Define business vision	8 hrs	Work
	Manager	8 hrs	Work
4	Identify available skill	16 hrs	Work
	Business advis	8 hrs	Work
	Manager	8 hrs	Work
5	Decide whether to p	8 hrs	Work
	Manager	8 hrs	Work
6	Define the Opportuni	96 hrs	Work
7	Research the market	8 hrs	Work
	Business advis	8 hrs	Work
8	Interview owners of	40 hrs	Work
	Owners	40 hrs	Work
9	Identify needed resc	32 hrs	Work
	Business advis	16 hrs	Work
	Peers	16 hrs	Work
10	Identify operating co	16 hrs	Work
	Accountant	16 hrs	Work
11	Evaluate Business A	32 hrs	Work
12	Define new entity re	8 hrs	Work
	Monanor	8 hrs	Work

A usage view is a fairly sophisticated way of viewing project details. Next you'll switch to a simpler view.

6 On the **View** menu, click **Calendar**.

The Calendar view appears as shown here:

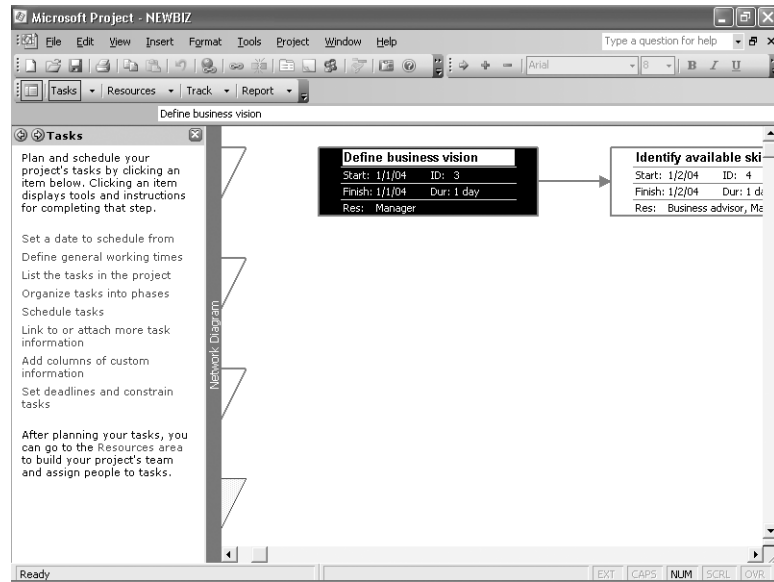


This simple month-at-a-glance view lacks the table structure, timescale, or chart elements you've seen in previous views. Task names appear on the days they're scheduled to start, and if a task's duration is longer than one day, its name will span multiple days.

Another common view used in project management is the Network Diagram. You'll look at this next.

7 On the **View** menu, click **Network Diagram**.

The Network Diagram view appears. Use the scroll bars to view different parts of the Network Diagram view.



This view focuses on task relationships. Each box or node in the Network Diagram displays details about a task, and lines between boxes indicate task relationships. Like the Calendar view, the Network Diagram view lacks a table structure; the entire view is a chart.

To conclude this exercise, you'll look at combination views. These *split* the project plan window into two panes, each pane containing a different view. The views are synchronized, so selecting a specific task or resource in one view causes the other view to display details about that task or resource.

8 On the **View** menu, click **More Views**.

The **More Views** dialog box appears. This dialog box lists all the predefined views available in Project.

- 9 In the **Views** box, click **Task Entry**, and then click the **Apply** button.

The Task Entry view appears:

Gantt Chart view in upper pane

Drag divider bar to show more of either pane

Task Form view in lower pane

ID	Resource Name	Units	Work
5	Manager	100%	8h



Show/Hide
Project Guide

Tip Depending on your screen resolution, you might need to close the Project Guide to see the full width of this view. To do this, click the **Show/Hide Project Guide** button on the **Project Guide** toolbar. You can also make the Project Guide pane narrower by dragging its right edge to the left.

This view is a predefined split-screen or combination view, with the Gantt Chart in the upper pane and the Task Form in the lower pane. A form is the final element of a view you'll see in this chapter. A form displays details about the selected task or resource, much like a dialog box. You can enter, change, or review these details in the form.

- 10 In the Gantt Chart portion of the view, if the selection is not on task 3, *Define business vision*, click that task's name.

The details about task 3 appear in the Task Form portion of the view.

- 11 In the Gantt Chart portion of the view, click the name of task 4, *Identify available skills, information, and support*.

The details about task 4 appear in the Task Form.

Tip Besides using the predefined combination views, you can display two views of your choice by clicking **Split** on the **Window** menu. After the Project window is split into two panes, click in the upper or lower pane, and then choose the view you want to appear there. To return to a single view, on the **Window** menu, click **Remove Split**.

It is important to understand that in all these views, as well as all the other views in Project, you are looking at different aspects of the same set of details about a single project plan. Even a simple project plan can contain too much data to display all at once. You can use views to help you focus on the specific details you want.

In later exercises you'll do more with views to further focus on the most relevant project details.

Exploring Reports

Reports are predefined formats intended for printing Project data. Unlike views, which you can either print or work with on the screen, reports are designed to be printed. You don't enter data directly into a report. Project includes several predefined task and resource reports you can manipulate to get the information you want.

In this exercise, you view a report in the Print Preview window.

- 1 On the **View** menu, click **Reports**.

The **Reports** dialog box appears, showing the six broad categories of reports available in Project.

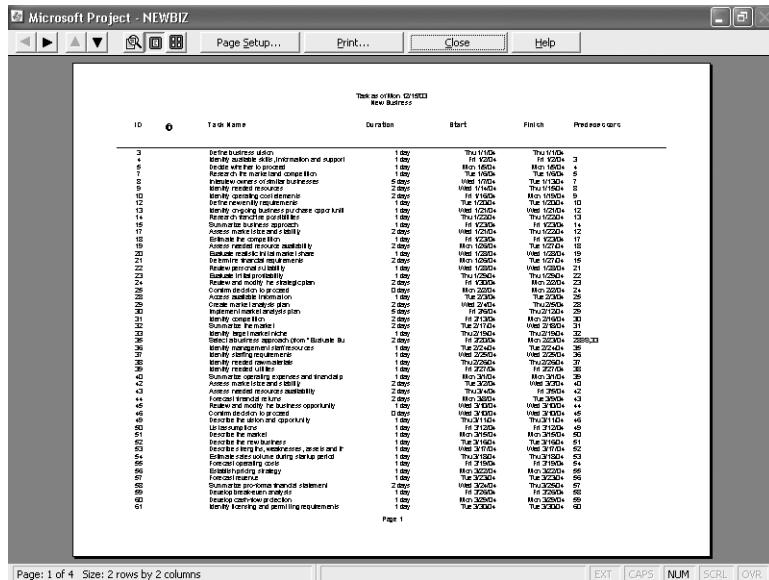


- 2 Click **Custom**, and then click the **Select** button.

The **Custom Reports** dialog box appears, listing all predefined reports in Project and any custom reports that have been added.

- 3 In the Reports list, click Task, and then click the Preview button.

Project displays the Task report in the Print Preview window. Your screen should look similar to the following illustration:



This report is a complete list of project tasks (except for summary tasks), similar to what you'd see in the *Entry table* of the Gantt Chart view. If you want to zoom in, move the mouse pointer (shaped like a magnifying glass) to a portion of the report, and click. Click again to toggle back to the full page preview.

- 4 On the Print Preview toolbar, click the Close button.
- The Print Preview window closes, and the Custom Reports dialog box reappears.
- 5 In the Custom Reports dialog box, click the Close button.
- 6 Click the Close button again to close the Reports dialog box.

Tip We've frequently seen Project users go to a lot of trouble to customize the Gantt Chart view to include specific information they want in the format they want. Before you do that, check the predefined views (for online work or printing) or reports (for printing). There's a good chance the Project designers have anticipated your needs and provided a predefined solution for you.

To conclude this exercise, you'll close the file you've been using to explore views and reports.

- 7 On the **File** menu, click **Close** to close the New Business plan. When prompted to save changes, click the **No** button.

Creating a New Project Plan

Now that you've had a brief look at the major parts of the Project interface, you are ready to create the project plan you will use in Parts 1 through 3 of this book.

A project plan is essentially a model you construct of some aspects of the real project you anticipate—what you think will happen, or what you want to happen (it's usually best if these are not too different). This model focuses on some but not all aspects of the real project—tasks, resources, time frames, and possibly their associated costs.

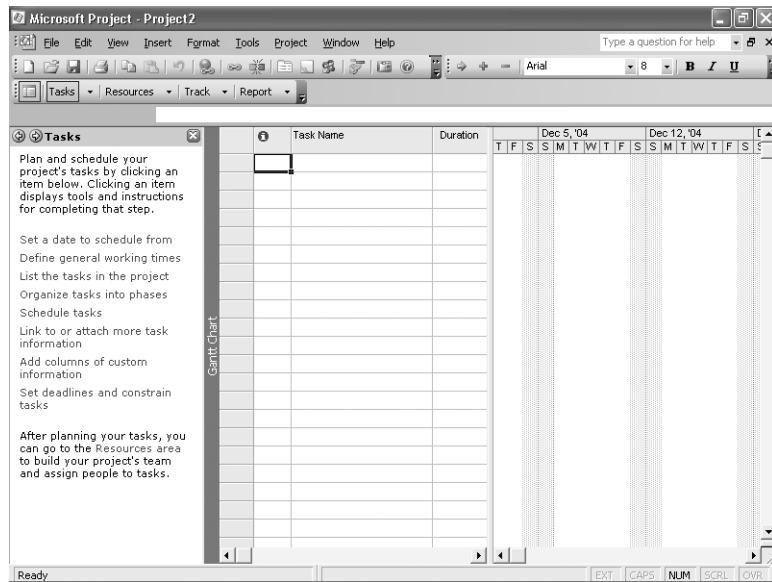
Project Management Focus: Project Is Part of a Larger Picture

Depending on your needs and the information to which you have access, the project plans you develop might not deal with other important aspects of real projects. Many large projects, for example, are carried out in organizations that have a formal change management process. Before a major change to the scope of a project is allowed, it must first be evaluated and approved by the people managing and implementing the project. This is an important project management activity, but not something done directly within Project.

In this exercise, you create a new plan using the Project Guide.

- 1 On the **File** menu, click the **New** command.
The New Project task pane appears.
- 2 Under **New**, click the **Blank Project** link.

Project creates a new project, and the New Project task pane is replaced by the Tasks pane of the Project Guide:



Take a moment to look over the Tasks pane. This pane contains links to several activities, all focused on tasks. (You'll see other types of activities in later chapters.) Each activity in the Project Guide consists of a series of numbered steps. Each step appears in its own pane, like pages in a book.

- 3 In the Tasks pane, click the **Set a date to schedule from** link (in Project Standard) or the **Define the project** link (in Project Professional).

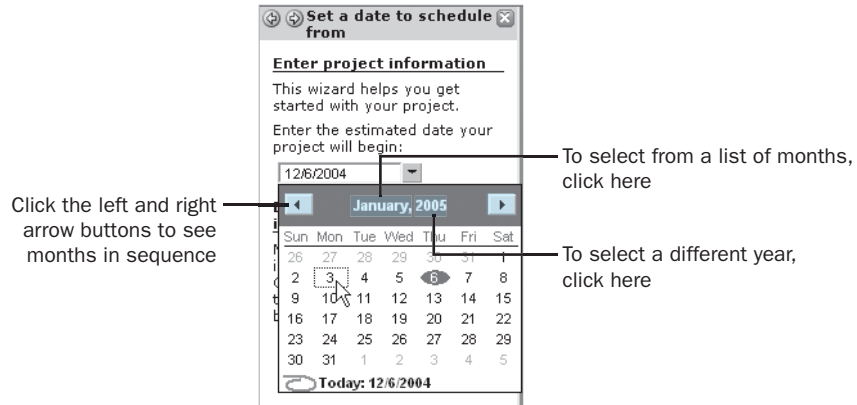
The *Set a date to schedule from* (in Project Standard) or *Define the project* (Project Professional) pane appears.

- 4 In the next pane that appears, in the **Date** box click the down arrow.

A small monthly calendar appears. By default, Project uses the current date as the project start date. However, in this exercise, you change the project start date to January 3, 2005.

- 5 Click the left or right arrow until January 2005 is displayed.

- 6 Click **3**, as shown next.



Tip You use this type of calendar in several places in Project. Here is a handy shortcut for quickly picking a date with the calendar: Click the name of the month to display a shortcut menu of all months, and then select the month you want. Next click the year to display up and down arrows, and then type or select the year you want.

- 7** At the bottom of the pane, click **Done** (in Project Standard) or the **Save and go to Step 2** link (in Project Professional).
- 8** If you have Project Professional, you'll see additional panes that relate to Project Server. In the Step 2 pane, click **No**, then go to Step 3. In Step 3, click **Save and Finish**.

The Tasks activity list reappears in the Project Guide pane. You've completed the Define the Project activity.



Save

- 9** On the Standard toolbar, click the **Save** button. You can also click the **Save** link or button in the pane.

Because this project plan has not previously been saved, the **Save As** dialog box appears.

- 10** Locate the Chapter 1 Getting Started folder in the Project 2003 Step by Step folder on your hard disk. The default location for the Project 2003 Step by Step folder is `\My Documents\Microsoft Press`.
- 11** In the **File name** box, type **Wingtip Toys Commercial 1**.
- 12** Click the **Save** button to close the **Save As** dialog box.

Project saves the project plan as *Wingtip Toys Commercial 1*.

Tip You can instruct Project to automatically save the active project plan at pre-defined intervals, such as every 10 minutes. On the **Tools** menu, click **Options**. In the **Options** dialog box, click the **Save** tab, select the **Save Every** check box, and then specify the time interval you want.

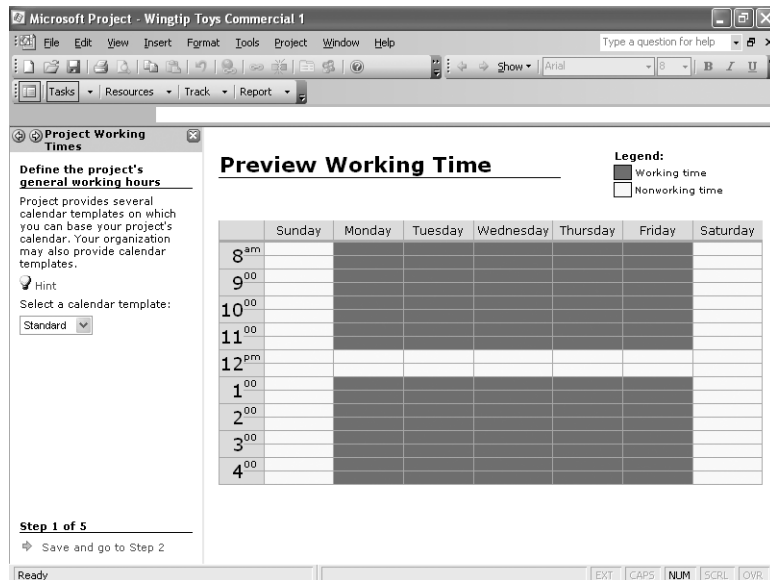
Setting Nonworking Days

This exercise introduces *calendars*, the primary means by which you control when tasks and resources can be scheduled for work in Project. In later chapters you will work with other types of calendars; in this chapter you will work only with the *project calendar*.

The project calendar defines the general working and nonworking time for tasks. Think of the project calendar as your organization's normal working times. This might be, for example, Monday through Friday, 8 A.M. through 5 P.M. with an hour off for lunch. Your organization or specific resources might have exceptions to this normal working time, such as holidays or vacation. In a later chapter you'll address resource vacations, but here you'll address a holiday in the project calendar.

- 1 In the Tasks pane, click the **Define general working times** link.

The Project Working Times pane appears. Your screen should look similar to the following illustration:



Notice the Preview Working Time portion of the pane. This shows you (in blue) the times at which Project can schedule tasks and resources and (in yellow) when it cannot, based on the settings in the project calendar.

Tip Click the **Hint** link in the Project Working Times pane. The hint appears in place, without navigating away from the pane. Click it again to collapse it. You will see many such hints throughout the Project Guide.

2 In the **Select a calendar template** box, click the down arrow.

The list that appears contains the three *base calendars* included with Project. These are as follows:

- **Standard:** the traditional working day, Monday through Friday from 8 A.M. to 5 P.M., with an hour off for lunch.
- **24 Hours:** has no nonworking time.
- **Night Shift:** covers a “graveyard” shift schedule of Monday night through Saturday morning, 11 P.M. to 8 A.M., with a one-hour break.

Just one of the base calendars serves as the project calendar. For this project you’ll use the Standard base calendar as the project calendar, so leave it selected.

Tip To learn more about calendars, type **About calendars** into the box labeled *Type a question for help*.

3 At the bottom of the pane, click the **Save and go to Step 2** link.

The second pane appears. This pane gives you the option of changing the project calendar’s working time for a specific day of every week. For example, you could choose to end the workday every Wednesday at 3 P.M. instead of 5 P.M. For this project, however, you’ll use the default work week.

4 At the bottom of the pane, click the **Save and go to Step 3** link.

The third pane appears. Here you’ll specify some specific nonworking days for the project calendar.

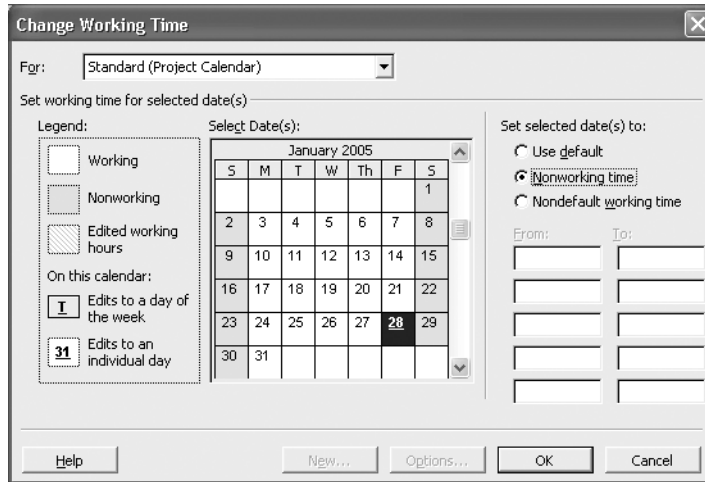
5 Click the **Change working time** link in the pane.

The Project Guide displays the **Change Working Time** dialog box. This is the same dialog box you would see if you clicked the **Change Working Time** command on the **Tools** menu.

6 In the calendar below the **Select Date(s)** label, scroll up or down to January 2005 (unfortunately you can’t use the date picking shortcut mentioned previously with this particular calendar). You know that the entire staff will be at a morale event January 28, and no work should be scheduled that day.

7 Select the date **January 28**.

8 Under **Set selected date(s) to**, click **Nonworking time**:



This date is now nonworking time for the project. In the dialog box, the date appears underlined, and it is formatted gray to indicate nonworking time.

9 Click **OK** to close the **Change Working Time** dialog box.

10 To verify the change to the project calendar, scroll the chart portion of the Gantt Chart view (the portion on the right) to the right until Friday, January 28, is visible. Like the weekends, January 28 is formatted gray to indicate nonworking time:

Friday, January 28 is a nonworking day and is formatted in gray (as are weekends) in the Gantt chart

Task Name	Duration	Jan 16, '05							Jan 23, '05							Jan 30, '05									
		S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W						

11 At the bottom of the pane, click the **Save and go to Step 4** link.

Take a moment to read the text in the Define Time Units pane, because this is a common source of confusion among Project users. Because you did not change the default working times for the project calendar, you should not change these time units.

12 At the bottom of the pane, click the **Save and go to Step 5** link.

The final pane of the Project Working Times activity appears.

13 At the bottom of the pane, click the **Save and Finish** link.

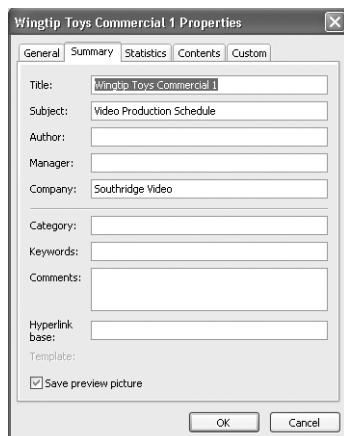
The Tasks activity list reappears in the Project Guide pane. You've completed the Define General Working Times activity.

Entering Project Properties

Like other Office programs, Project keeps track of several file properties. Some of these properties are statistics, such as how many times the file has been revised. Other properties include information you might want to record about a project plan, such as the project manager's name or keywords to support a file search. Project also uses properties in page headers and footers when printing.

In this exercise, you enter some properties that you will use later when printing project information and for other purposes.

- 1 On the **File** menu, click **Properties**.
The **Properties** dialog box appears.
- 2 Click the **Summary** tab.
- 3 In the **Subject** box, type **Video Production Schedule**.
- 4 In the **Author** box, type your name.
- 5 In the **Manager** box, type your name, type your manager's name, or leave the box blank.
- 6 In the **Company** box, type **Southridge Video**.
- 7 Select the **Save preview picture** check box.



- 8 The next time this file appears in the **Open** dialog box with the **Preview** view option selected, a small image showing the first few tasks of the project will be displayed.
- 9 Click **OK** to close the dialog box.

“A Database That Knows About Time”

The project plans you create in Project are files that have many things in common with database files, like those you might work with in Access. If you were to peek inside a Microsoft Project Plan (MPP) file, you'd find it has much in common with a database file format. Data is stored in a set of tables, and relationships connect information in different tables. In fact it's not uncommon for Project users in large organizations to save project plans in a database format, sometimes to a central database on a network server.

What Project provides that a regular database application can't, however, is the active scheduling engine mentioned earlier. One Project expert we know describes it as “a database that knows about time.”

CLOSE: the [Wingtip Toys Commercial 1 file](#).

Key Points

- The Project product family includes Project Standard, Project Professional, Project Server, and Project Web Access. Normally you would use Project Standard on the desktop, or the latter three in combination to form an enterprise project management solution.
- One of the key distinguishing factors that separates Project from other list-keeping tools like Excel is that Project has a scheduling engine that can work with time.
- Project includes several sophisticated templates that may provide you with a good start to a new project plan.
- The main working space in Project is a view. Normally you have one or sometimes two views displayed at a time. The Gantt Chart view is the default and probably best known view in Project.
- Project includes a large number of built-in reports. These are intended for viewing (but not editing) Project data.
- You use calendars in Project to control when work can be scheduled to occur.

Create task lists,
page 38

			Jan 2, '05							Jan 9, '05									
Task ID	Task Name	Duration	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	Pre-Production	1 day?																	
2	Develop script	5 days																	
3	Develop production boards	3 days																	
4	Pick locations	2 days																	
5	Hold auditions	2 days																	
6	Production	1 day?																	
7	Rehearse	2 days																	
8	Shoot video	2 days																	
9	Log footage	1 day																	

Create summary tasks,
page 41

			Jan 2, '05							Jan 9, '05									
Task ID	Task Name	Duration	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	Pre-Production	5 days																	
2	Develop script	5 days																	
3	Develop production boards	3 days																	
4	Pick locations	2 days																	
5	Hold auditions	2 days																	
6	Pre-Production complete	0 days																	
7	Production	1 day?																	
8	Rehearse	2 days																	
9	Shoot video	2 days																	
10	Log footage	1 day																	

Link tasks to create dependencies,
page 45

			Jan 2, '05							Jan 9, '05									
Task ID	Task Name	Duration	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	Pre-Production	12 days																	
2	Develop script	5 days																	
3	Develop production boards	3 days																	
4	Pick locations	2 days																	
5	Hold auditions	2 days																	
6	Pre-Production complete	0 days																	
7	Production	2 days																	
8	Rehearse	2 days																	

Add notes and
hyperlinks to the Web,
page 48

Microsoft Project - Wingtip Toys Commercial 2

File Edit View Insert Format Tools Project Window Help

Tasks Resources Track Report

Hold auditions

Add Information

Add notes
You can add supporting information about a task by typing in a note.
Hint
To add a task note, select the task on the right and click the link below:
Add a note...

Insert Hyperlink
To link to information about a task, you can insert a hyperlink to another file or Web page.
Hint
To add a hyperlink to a task, select the task on the right and click the link below:
Add a hyperlink...

Done

More Information

			Jan 9, '05							Jan 16, '05							Jan 23, '05						
Task ID	Task Name	Duration	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	Pre-Production	12 days																					
2	Develop script	5 days																					
3	Develop production boards	3 days																					
4	Pick locations	2 days																					
5	Hold auditions	2 days																					
6	Check recent agent postings	1 day																					
7	Production	5 days																					
8	Rehearse	2 days																					
9	Shoot video	2 days																					
10	Log footage	1 day																					

Ready

2

Creating a Task List

In this chapter you will learn to:

- ✓ Enter task information.
 - ✓ Estimate and enter how long each task should last.
 - ✓ Create a milestone to track an important event.
 - ✓ Organize tasks into phases.
 - ✓ Create task relationships by linking tasks.
 - ✓ Record task details in notes and insert a hyperlink to content on the World Wide Web.
 - ✓ Check a project plan's overall duration.
-

See Also Do you need a quick refresher on the topics in this chapter? See the quick reference entries on pages xx–xxi.



Important Before you can use the practice files in this chapter, be sure you install them from the book's companion CD to their default location. See “Using the Book's CD-ROM,” on page xiii, for more information.

Entering Tasks

Tasks are the most basic building blocks of any project—tasks represent the work to be done to accomplish the goals of the project. Tasks describe project work in terms of sequence, duration, and resource requirements. Later in this chapter, you will work with two special types of tasks: summary tasks (which summarize or “roll up” the durations, costs, and so on of subtasks) and milestones (which indicate a significant event in the life of a project).

In this exercise, you enter the first tasks required in the video project:

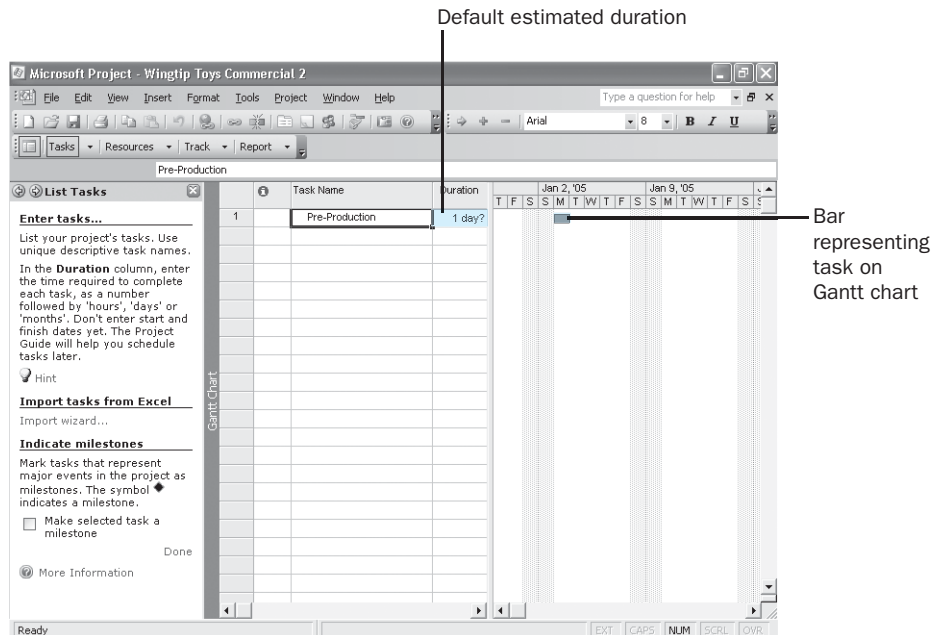
BE SURE TO: Start Microsoft Office Project 2003, if it's not already open.

Important If you are running Project Professional, you may need to make a one-time adjustment to use the My Computer account and to work offline. This helps ensure that the practice files you work with in this chapter don't affect your Project Server data. For more information, see “Starting Project Professional,” on page 10.

OPEN: *Wingtip Toys Commercial 2a* from the `\My Documents\Microsoft Press\Project 2003 Step by Step\Chapter 2 Simple Tasks` folder. You can also access the practice files for this book by clicking **Start, All Programs, Microsoft Press, Project 2003 Step by Step**, and then selecting the chapter folder of the file you want to open.

- 1 On the **File** menu, click **Save As**.
The **Save As** dialog box appears.
- 2 In the **File name** box, type **Wingtip Toys Commercial 2**, and then click **Save**.
- 3 If the **Tasks** pane is not already displayed in the Project Guide, on the **Project Guide** toolbar, click **Tasks**.
- 4 In the **Tasks** pane, click the **List the tasks in the project** link.
The **List Tasks** pane appears. Take a moment to read the information in the pane. Later you'll use this pane to create a milestone task.
- 5 Click the cell directly below the **Task Name** column heading.
- 6 Type **Pre-Production**, and then press **Enter**.
- 7 Click the name of the new task 1, **Pre-Production**.

Your screen should look similar to the following illustration:



The task you entered is given an ID number. Each task has a unique ID number, but it does not necessarily represent the order in which tasks occur.

Project assigns a duration of one day to the new task, and the question mark indicates that this is an estimated duration. A corresponding task bar of one day's length appears in the Gantt chart. By default the task start date is the same as the project start date.

- 8** Enter the following task names below the Pre-Production task name, pressing after each task name:

- Develop script
- Develop production boards
- Pick locations
- Hold auditions
- Production
- Rehearse
- Shoot video
- Log footage

Your screen should look similar to the following illustration:

	Task Name	Duration	Jan 2, '05							Jan 9, '05							v ▲	
			T	F	S	S	M	T	W	T	F	S	S	M	T	W		
1	Pre-Production	1 day?																
2	Develop script	1 day?																
3	Develop production boards	1 day?																
4	Pick locations	1 day?																
5	Hold auditions	1 day?																
6	Production	1 day?																
7	Rehearse	1 day?																
8	Shoot video	1 day?																
9	Log footage	1 day?																

Tip In addition to typing task information directly into Project, you can develop task lists in other applications and then import them into Project. For example, Project installs an Excel template named Microsoft Project Task List Import Template, which you or others can complete and then import into Project with the proper structure. In Excel, this template appears on the **Spreadsheet Solutions** tab of the **Templates** dialog box. You can also import your Outlook task list into a project plan. In Project, click **Import Outlook Tasks** on the **Tools** menu.

Project Management Focus: Defining the Right Tasks for the Right Deliverable

Every project has an ultimate goal or intent: the reason that the project was started. This is called the project *deliverable*. This deliverable is usually a product, such as a TV commercial, or a service or event, such as a software training session. Defining the right tasks to create the right deliverable is an essential skill for a project manager. The task lists you create in Project should describe all the work required, and only the work required, to complete the project successfully.

In developing your task lists, you might find it helpful to distinguish product scope from project scope. *Product scope* describes the quality, features, and functions of the deliverable of the project. In the scenario used in Part 1 of this book, for example, the deliverable is a TV commercial, and the product scope might include its length, subject, and audience. *Project scope*, on the other hand, describes the work required to deliver such a product or service. In our scenario, the project scope includes detailed tasks relating to the creation of a TV commercial, such as holding auditions, shooting the video, editing it, and so on.

Estimating Durations

A task's *duration* is the amount of time you expect it will take to complete the task. Project can work with task durations that range from minutes to months. Depending on the scope of your project, you'll probably want to work with task durations on the scale of hours, days, and weeks.

For example, a project might have a *project calendar* with working time defined as 8 A.M. through 5 P.M. with an hour off for lunch Monday through Friday, leaving nonworking time defined as evenings and weekends. If you estimate that a task will take 16 hours of working time, you could enter its duration as **2d** to schedule work over two eight-hour workdays. You should then expect that starting the task at 8 A.M. on a Friday means that it wouldn't be completed until 5 P.M. on the following Monday. No work would be scheduled over the weekend, because Saturday and Sunday have been defined as nonworking time.

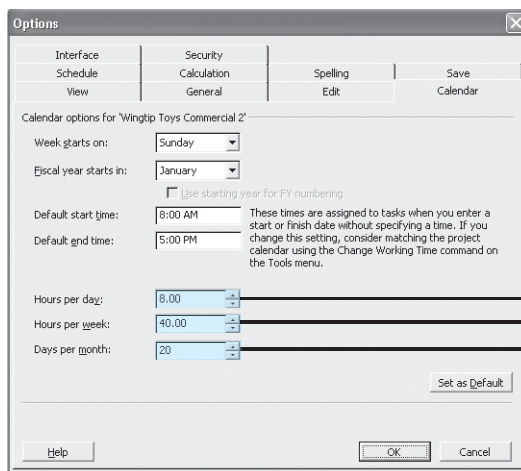
Tip You determine the overall duration of a project by calculating the difference between the earliest start date and the latest finish date of the tasks that compose it. The project duration is also affected by other factors, such as task relationships, which are discussed in the topic "Linking Tasks," on page 43. Because Project distinguishes between working and nonworking time, a task's duration doesn't necessarily correlate to elapsed time.

When working in Project, you can use abbreviations for durations.

If you enter this abbreviation	It appears like this	And means
m	min	minute
h	hr	hour
d	day	day
w	wk	week
mo	mon	month

Tip You can schedule tasks to occur during working and nonworking time. To do this, assign an *elapsed duration* to a task. You enter elapsed duration by preceding the duration abbreviation with an e. For example, type **3ed** to indicate three elapsed days. You might use an elapsed duration for a task that you don't directly control but that nonetheless is critical to your project. For instance, you might have the tasks *Pour foundation concrete* and *Remove foundation forms* in a construction project. If so, you might also want a task called *Wait for concrete to cure*, because you don't want to remove the forms until the concrete has cured. The task *Wait for concrete to cure* should have an elapsed duration, because the concrete will cure over a contiguous range of days, whether they are working or nonworking days. If the concrete takes 48 hours to cure, you can enter the duration for that task as **2ed**, schedule the task to start on Friday at 9 A.M., and expect it to be complete by Sunday at 9 A.M. In most cases, however, you'll work with nonelapsed durations in Project.

Project uses standard values for minutes and hours for durations: one minute equals 60 seconds, and one hour equals 60 minutes. However, you can define nonstandard durations for days, weeks, and months for your project. To do this, on the **Tools** menu, click the **Options** command, and in the **Options** dialog box, click the **Calendar** tab, illustrated here:



With a setting of 8 hours per day, entering a two-day task duration is the same as entering 16 hours.

With a setting of 40 hours per week, entering a three-week task duration is the same as entering 120 hours.

With a setting of 20 days per month, entering a one-month task duration is the same as entering 160 hours (8 hours per day x 20 days per month).

The exercises in this chapter use the default values: 8 hours per day, 40 hours per week, and 20 days per month.

Tip Although it's beyond the scope of this book, Program Evaluation and Review Technique (PERT) analysis can be a useful tool for estimating task durations. For more information, type **Estimate task durations by using PERT analysis** into the **Search** box in the upper right corner of the Project window. The **Search** box initially contains the text *Type a question for help*.

In this exercise, you enter durations for the tasks you've created. When you created those tasks, Project entered an estimated duration of one day for each. (The question mark in the **Duration** field indicates that the duration is an explicit estimate, although really you should consider all task durations to be estimates until the task is completed.) To enter durations:

1 Click the cell below the **Duration** column heading for task 2, *Develop script*.

The **Duration** field for task 2 is selected.

2 Type **5d**, and then press .

The value *5 days* appears in the **Duration** field.

3 Enter the following durations for the remaining tasks:

Task ID	Task name	Duration
3	Develop production boards	3d
4	Pick locations	2d
5	Hold auditions	2d
6	Production	(Press <input type="button" value="Enter"/> to skip this task for now)
7	Rehearse	2d
8	Shoot video	2d
9	Log footage	1d

Your screen should look similar to the following illustration:

	Task Name	Duration	Jan 2, '05							Jan 9, '05							
			T	F	S	S	M	T	W	T	F	S	S	M	T	W	
1	Pre-Production	1 day?															
2	Develop script	5 days															
3	Develop production boards	3 days															
4	Pick locations	2 days															
5	Hold auditions	2 days															
6	Production	1 day?															
7	Rehearse	2 days															
8	Shoot video	2 days															
9	Log footage	1 day															

Project Management Focus: How Do You Come Up with Accurate Task Durations?

You should consider two general rules when estimating task durations:

- Project duration often correlates to task duration; long projects tend to have tasks with longer durations than do tasks in short projects.
- If you track progress against your project plan (described in Chapter 6, “Tracking Progress on Tasks,” and in Part 2, “Advanced Project Scheduling”), you need to think about the level of detail you want to apply to your project’s tasks. If you have a multi-year project, for example, it might not be practical or even possible to track tasks that are measured in minutes or hours. In general, you should measure task durations at the lowest level of detail or control you care about, but no lower.

For the projects you work on in this book, the durations are supplied for you. For your real-world projects, you will often have to estimate task durations. Good sources of task duration estimates include:

- Historical information from previous, similar projects.
- Estimates from the people who will complete the tasks.
- The expert judgment of people who have managed similar projects.
- The standards of professional or industry organizations that carry out projects similar to yours.

For complex projects, you probably would combine these and other sources to estimate task durations. Because inaccurate task duration estimates are a major source of *risk* in any project, making good estimates is well worth the effort.

Entering a Milestone

In addition to tracking tasks to be completed, you might want to track an important event for your project, such as when the pre-production *phase* of the project will end. To do this, you will create a *milestone*.

Milestones are significant events that are either reached within the project (completion of a phase of work, for example) or imposed upon the project (a deadline by which to apply for funding, for example). Because the milestone itself doesn't normally include any work, milestones are represented as tasks with zero duration.

In this exercise, you create a milestone.

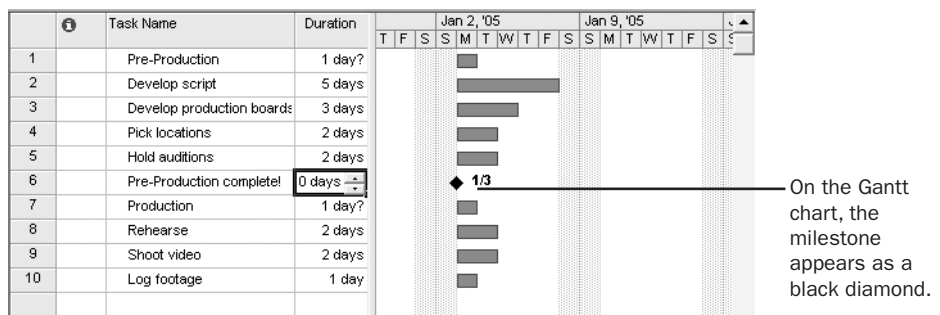
- 1 Click the name of task 6, **Production**.
- 2 On the **Insert** menu, click **New Task**.

Project inserts a row for a new task and renumbers the subsequent tasks.

Tip You can also press the key to insert a new task above the selected task. To insert multiple new tasks, select multiple tasks first, and then press . Project will insert the same number of new tasks.

- 3 Type **Pre-Production complete!**, and then press the key to move to the **Duration** field.
- 4 Either type **0d** in the **Duration** field, or in the List Tasks pane select the **Make selected task a milestone** check box.

The milestone is added to your plan. Your screen should look similar to the following illustration:



- 5 At the bottom of the List Tasks pane, click the **Done** link.

The Tasks pane appears.

Tip You can also mark a task of any duration as a milestone. Double-click the task name to display the **Task Information** dialog box, and then click the **Advanced** tab. Select the **Mark task as milestone** option.

Organizing Tasks into Phases

It is helpful to organize groups of closely related tasks into *phases*. Seeing phases of tasks helps you and anyone else reviewing a project plan to think in terms of major work items and detailed work items. For example, it is common to divide a film or video project into major phases of work such as pre-production, production, and post-production. You create phases by indenting and outdenting tasks. You can also collapse a task list into phases, much as you can work with an outline in Word. In Project, phases are represented by *summary tasks*.

A summary task behaves differently from other tasks. You can't edit its duration, start date, or other calculated values directly, because this information is derived or "rolled up" from the detail tasks, called subtasks (these appear indented under the summary tasks). Summary tasks are useful for getting information about phases of project work.

Project Management Focus: Top-Down and Bottom-Up Planning

The two most common approaches to developing tasks and phases are top-down and bottom-up planning.

Top-down planning identifies major phases or products of the project before filling in the tasks required to complete those phases. Complex projects can have several layers of phases. This approach works from general to specific.

Bottom-up planning identifies as many of the bottom-level detailed tasks as possible before organizing them into logical groups, called phases or summary tasks. This approach works from specific to general.

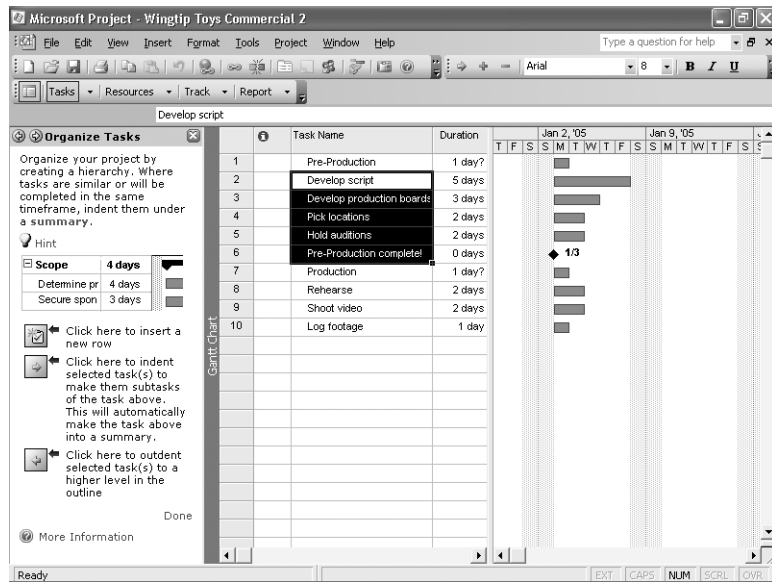
Creating accurate tasks and phases for most complex projects requires a combination of top-down and bottom-up planning. For some project work, you will already know the low-level tasks; for others, you might initially know only the broader project goals.

In this exercise, you create two summary tasks by indenting tasks.

1 In the Tasks pane, click the **Organize tasks into phases** link.

The Organize Tasks pane appears.

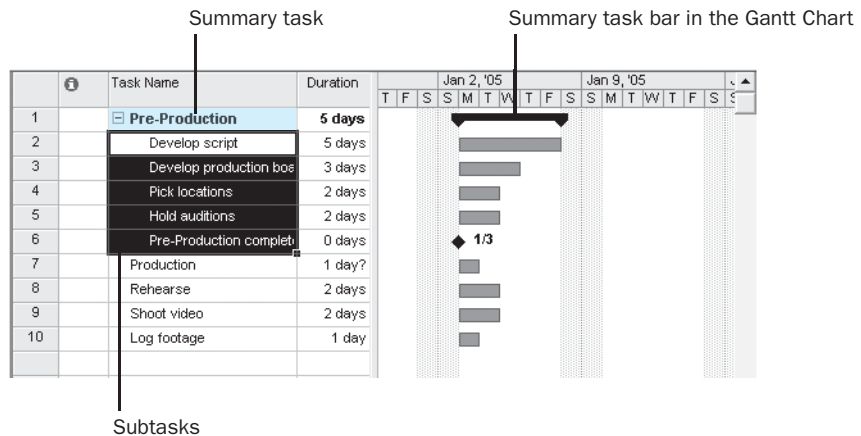
- Select the names of tasks 2 through 6. Your screen should look similar to the following illustration:



Indent Tasks

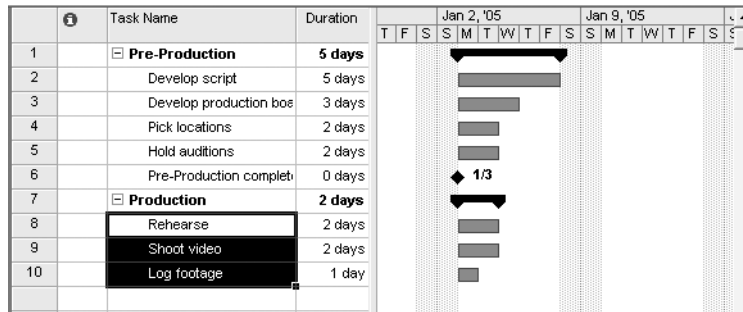
- In the Organize Tasks pane, click the **Indent Tasks** button. (You can also click this button on the Formatting toolbar.)

Task 1 becomes a summary task, and a summary task bar for it appears in the Gantt chart. The summary task name is also formatted in bold type. Your screen should look similar to the following illustration:



- 4 Next select the names of tasks 8 through 10.
- 5 In the Organize Tasks pane, click the **Indent Tasks** button.

Task 7 becomes a summary task, and a summary task bar for it appears in the Gantt chart. Your screen should look similar to the following illustration:



- 6 At the bottom of the Organize Tasks pane, click the **Done** link.
The Tasks pane reappears.

Tip If your organization uses a work breakdown structure (WBS) process in the project-planning phase, you may find it helpful to view WBS codes in Project. For information about using WBS codes with Project, type **View WBS codes** into the **Search** box.





Linking Tasks

Projects require tasks to be done in a specific order. For example, the task of filming a scene must be completed before the task of editing the filmed scene can occur. These two tasks have a finish-to-start *relationship* (also called a link or a dependency), which has two aspects:

- The second task must occur after the first task; this is a *sequence*.
- The second task can occur only if the first task is completed; this is a *dependency*.

In Project, the first task (“film the scene”) is called the *predecessor* because it precedes tasks that depend on it. The second task (“edit the filmed scene”) is called the *successor* because it succeeds tasks on which it is dependent. Any task can be a predecessor for one or more successor tasks. Likewise, any task can be a successor to one or more predecessor tasks.

This might sound complicated, but it turns out tasks can have one of only four types of task relationships:

This task relationship	Means	Looks like this in the Gantt chart	Example
Finish-to-start (FS)	The finish date of the predecessor task determines the start date of the successor task.		A film scene must be shot before it can be edited.
Start-to-start (SS)	The start date of the predecessor task determines the start date of the successor task.		Reviewing a script and developing the script breakdown and schedule are closely related, and they should occur simultaneously.
Finish-to-finish (FF)	The finish date of the predecessor task determines the finish date of the successor task.		Tasks that require specific equipment must end when the equipment rental ends.
Start-to-finish (SF)	The start date of the predecessor task determines the finish date of the successor task.		The time when the editing lab becomes available determines when a pre-editing task must end. (This type of relationship is rarely used.)

Representing task relationships and handling changes to scheduled start and finish dates is one area where using a scheduling engine like Project really pays off. For example, you can change task durations or add or remove tasks from a chain of linked tasks, and Project will reschedule tasks accordingly.

Task relationships appear in several ways in Project. For example:

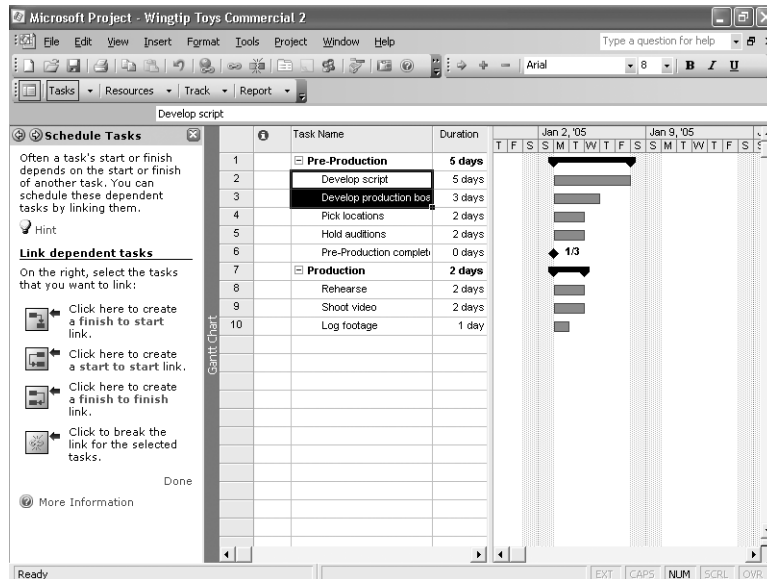
- In the Gantt Chart and Network Diagram views, task relationships appear as the lines connecting tasks.
- In tables, such as the Entry table, task ID numbers of predecessor tasks appear in the Predecessor fields of successor tasks.

You create task relationships by creating *links* between tasks. Currently, all the tasks in the project plan are scheduled to start on the same day—the project start date. In this exercise, you use different methods to create links between several tasks, creating finish-to-start relationships.

- 1 In the Tasks pane, click **Schedule tasks**.

The Schedule Tasks pane appears. First you'll create a finish-to-start dependency between two tasks.

- 2 Select the names of tasks 2 and 3. Your screen should look similar to the following illustration:



- 3 In the Schedule Tasks pane, click the **Finish-to-Start Link** button.



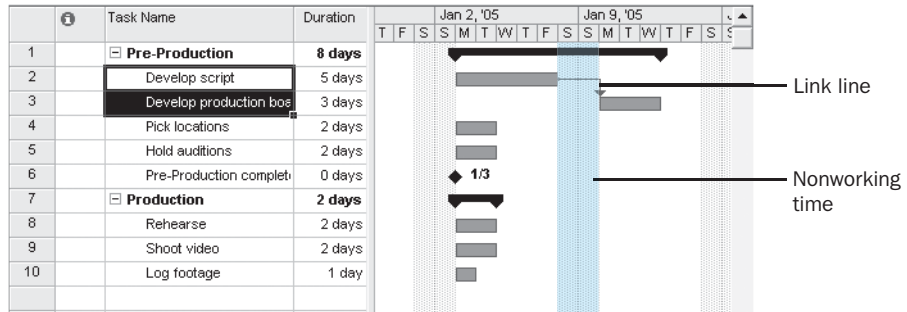
Finish-to-Start Link



Link Tasks

Note To create a finish-to-start dependency, you can also click the **Link Tasks** button on the **Standard** toolbar, or click **Link Tasks** on the **Edit** menu.

Tasks 2 and 3 are linked with a finish-to-start relationship. Note that Project changed the start date of task 3 to the next working day following the completion of task 2 (skipping over the weekend), and the duration of the Pre-Production summary task grew correspondingly. Your screen should look similar to the illustration on the next page.

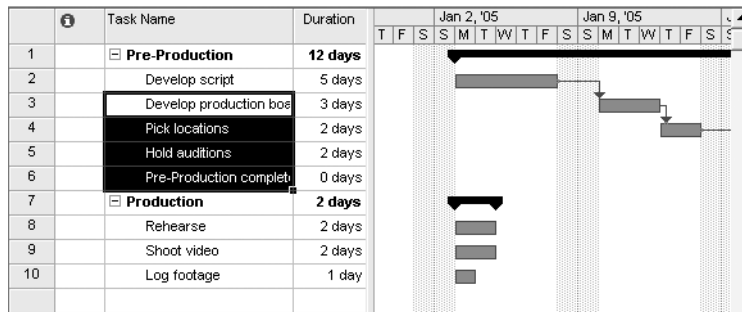


Tip To unlink tasks, select the tasks you want to unlink, and then click the **Unlink Tasks** button on the Standard toolbar (you can also click **Unlink Tasks** on the **Edit** menu). If you unlink a single task that is part of a chain of linked tasks with finish-to-start relationships, Project reestablishes links between the remaining tasks.

Next you will link several tasks at once.

- 4 Select the names of tasks 3 through 6.
- 5 In the Schedule Tasks pane, click the **Finish-to-Start Link** button.

Tasks 3 through 6 are linked with a finish-to-start relationship. Your screen should look similar to the following illustration:



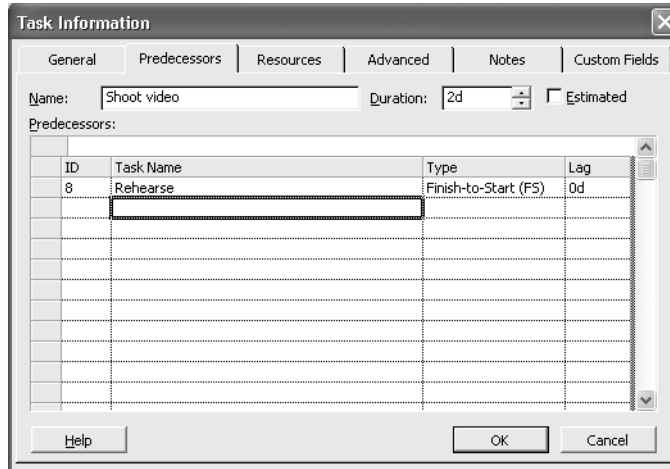
Next you will link two tasks in a different way. You will make task 8 the predecessor of task 9.

- 6 Select the name of task 9.
- 7 On the Standard toolbar, click the **Task Information** button.



The **Task Information** dialog box appears.

- 8 Click the **Predecessors** tab.
- 9 Click the empty cell below the **Task Name** column heading, and then click the down arrow that appears.
- 10 In the **Task Name** list, click **Rehearse**, and press . Your screen should look similar to the following illustration:



- 11 Click **OK** to close the **Task Information** dialog box.

Tasks 8 and 9 are linked with a finish-to-start relationship.

To wrap up this exercise, you'll link the remaining production tasks and then link the two summary tasks.

- 12 Select the names of tasks 9 and 10.
- 13 In the Schedule Tasks pane, click the **Finish-to-Start Link** button.
- 14 Now select the name of task 1, and while holding down the key, select the name of task 7. This is how you make a nonadjacent selection in a table in Project.
- 15 In the Schedule Tasks pane, click the **Finish-to-Start Link** button to link the two summary tasks.

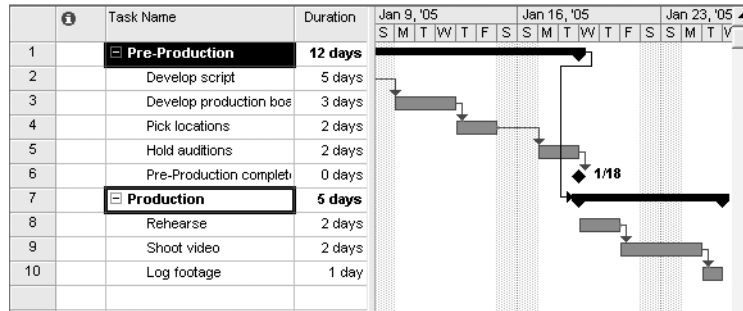


Finish-to-Start Link

Tip When working with summary tasks, you can either link summary tasks directly (as you did above), or link the latest task in the first phase with the earliest task in the second phase. The scheduling end result is the same either way, but it's preferable to link the summary tasks to better reflect the sequential nature of the two phases. Under no circumstances, however, can you link a summary task to one of its own subtasks. Doing so would create a circular scheduling problem, so Project doesn't allow it.

- 16** Scroll the chart portion of the Gantt Chart view to the right until the second phase of the project plan is visible.

Your screen should look similar to the following illustration:



- 17** Click **Done** in the Schedule Tasks pane.

Tip You can also create a finish-to-start relationship between tasks right in the Gantt chart. Point to the task bar of the predecessor task until the pointer changes to a four-pointed star. Then drag the mouse pointer up or down to the task bar of the successor task. While you're dragging the mouse pointer to create a task relationship, the pointer image changes to a chain link.

Documenting Tasks

You can record additional information about a task in a *note*. For example, you might have detailed descriptions of a task and still want to keep the task's name succinct. You can add such details to a task note. That way, the information resides in the Project file and can be easily viewed or printed.

There are three types of notes: task notes, resource notes, and assignment notes. You enter and review task notes on the **Notes** tab in the **Task Information** dialog box. (You can open the **Task Information** dialog box by clicking the **Task Information** command on the **Project** menu.) Notes in Project support a wide range of text formatting options; you can even link to or store graphic images and other types of files in notes.

Hyperlinks enable you to connect a specific task to additional information that resides outside of the project plan—such as another file, a specific location in a file, a page on the World Wide Web, or a page on an intranet.

In this exercise, you enter task notes and hyperlinks to document important information about some tasks.

- 1** In the Tasks pane, click the **Link to or attach more task information** link.
The Add Information pane appears. Take a moment to read the information in the pane.
- 2** Select the name of task 4, *Pick locations*.

- 3 In the Add Information pane, click the **Add a note** link.

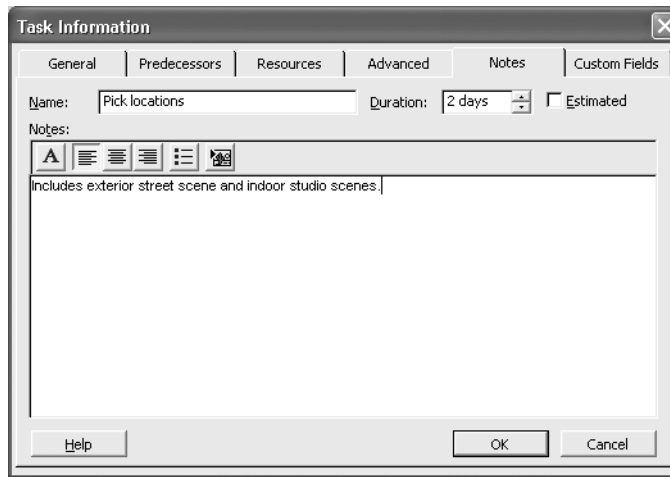


Task Notes

Tip You can also click the **Task Notes** button on the Standard toolbar, or right-click on the task name and in the shortcut menu that appears click **Task Notes**.

Project displays the **Task Information** dialog box with the **Notes** tab visible.

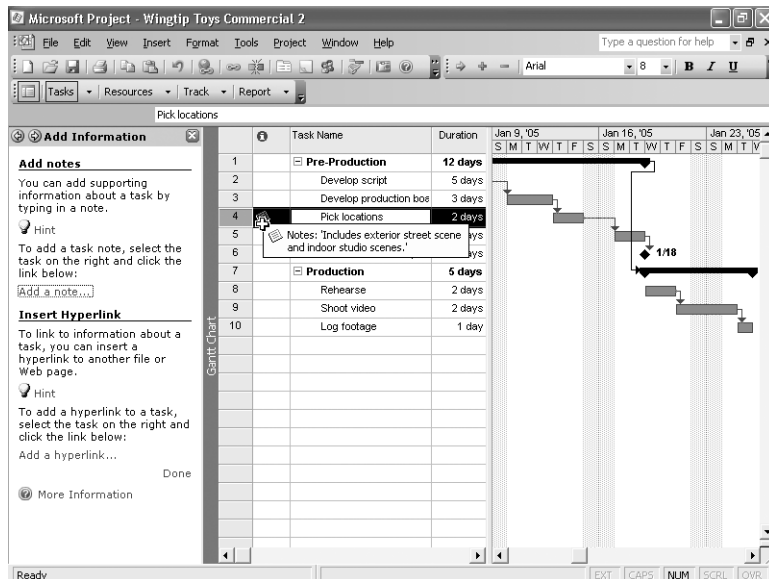
- 4 In the **Notes** box, type **Includes exterior street scene and indoor studio scenes**.



- 5 Click **OK**.

A note icon appears in the Indicators column.

- 6 Point to the note icon as shown here:



The note appears in a *ScreenTip*. For notes that are too long to appear in a *ScreenTip*, you can double-click the note icon to display the full text of the note.

To conclude this exercise, you create a hyperlink.

- 7 Select the name of task 5, *Hold auditions*.
- 8 In the Add Information pane, click the **Add a hyperlink** link.

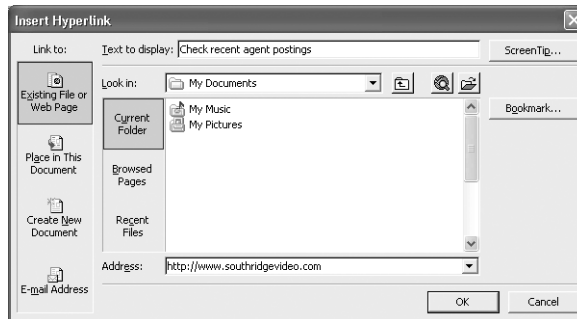
Tip You can also click the **Insert Hyperlink** button on the Standard toolbar.

The **Insert Hyperlink** dialog box appears.

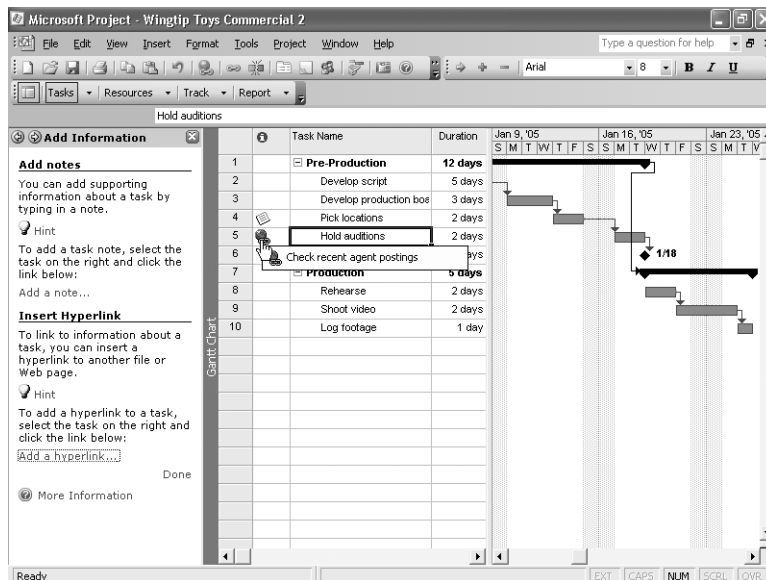
- 9 In the **Text to display** box, type **Check recent agent postings**.
- 10 In the **Address** box, type **http://www.southernridgevideo.com**



Insert Hyperlink



- 11 Click **OK**.



A hyperlink icon appears in the Indicators column. Pointing to the icon displays the descriptive text you typed above. Clicking the icon opens the Web page in your browser.

- 12 Click **Done** in the Add Information pane.

Checking the Plan's Duration

At this point, you might want to know how long the project is expected to take. You haven't directly entered a total project duration or finish date, but Project has calculated these values, based on individual task durations and task relationships. An easy way to see the project's scheduled finish date is via the **Project Information** dialog box.

In this exercise, you see the current total duration and scheduled finish date of the project, based on the task durations and relationships you've entered.

- 1 On the **Project** menu, click **Project Information**.

The **Project Information** dialog box appears.



The screenshot shows the 'Project Information for "Wingtip Toys Commercial 2"' dialog box. It contains the following fields and values:

Start date:	Mon 1/3/05	Current date:	Mon 12/6/04
Finish date:	Tue 1/25/05	Status date:	NA
Schedule from:	Project Start Date	Calendar:	Standard

Below the fields, it says "All tasks begin as soon as possible." and "Priority: 500". At the bottom are buttons for "Help", "Statistics...", "OK", and "Cancel".

Note the Finish date: 1/25/05.

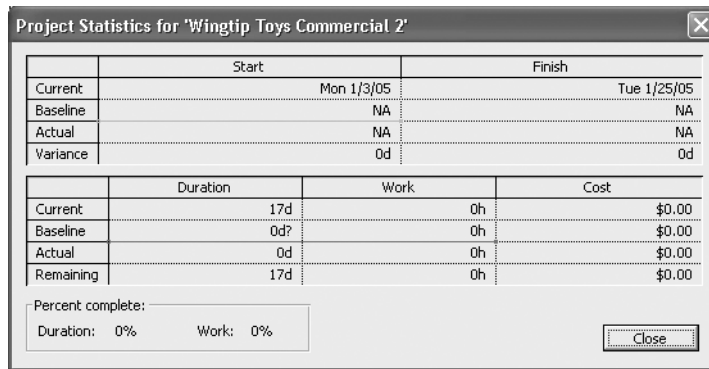
Tip *This tip describes enterprise project management (EPM) functionality. If you are running Project Professional, you will see a slightly different dialog box. The **Project Information** dialog box in Project Professional includes an **Enterprise Custom Fields** section. Enterprise custom fields are used only with Project Server. For more information about Project Server, see Part 4, "Introducing Project Server."*

You can't edit the finish date directly because this project is set to be scheduled from the start date. Project calculates the project's finish date based on the total number of working days required to complete the tasks, starting at the project's start date. As this project plan is now built, any change to the start date will cause Project to recalculate the finish date.

Next let's look at the duration information in more detail.

- 2 Click the **Statistics** button.

The **Project Statistics** dialog box appears:



You don't need to pay attention to all these numbers yet, but the current finish date and the current duration are worth noting. The duration is the number of working days in the project calendar between the project's start date and finish date.

You can visually verify these numbers on the Gantt chart.

- 3 Click the **Close** button to close the **Project Statistics** dialog box.
- 4 Click the **Show/Hide Project Guide** button on the **Project Guide** toolbar.

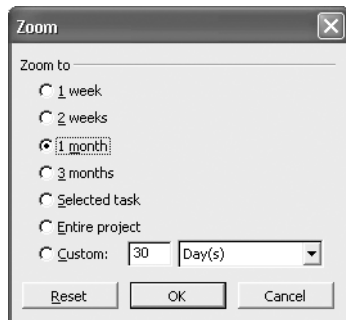


Show/Hide Project Guide

The Project Guide closes. Next you will look at the complete project by changing the timescale in the Gantt Chart view.

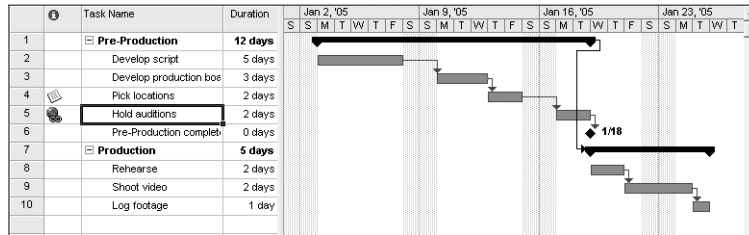
- 5 On the **View** menu, click **Zoom**.

The **Zoom** dialog box appears.



- 6 Click **Entire project**, and then click **OK**.

The entire project appears on the screen. Your screen should look similar to the following illustration:



You can see the project's overall duration in the Gantt Chart view.



Zoom
In



Zoom
Out

Tip You can also click the **Zoom In** and **Zoom Out** buttons to change the time-scale of the Gantt Chart view.

CLOSE: the Wingtip Toys Commercial 2 file.

Key Points

- Essential aspects of tasks in a project plan include their duration and order of occurrence.
- The Project Guide can help you develop a good initial task list.
- Task links, or relationships, cause the start or end of one task to affect the start or end of another task. A common task relationship is a finish-to-start relationship, where the completion of one task controls the start of another task.
- In Project, phases of a schedule are represented as summary tasks.
- The **Project Information** dialog box (**Project** menu) is an excellent way to see the key values of a project plan, such as its scheduled finish date and duration.

Create a list of resources,
page 56

	Resource Name	Email Address	Group	Standard Rate	Overtime Rate
1	Garrett R. Vargas			\$0.00/hr	\$0.00/hr
2	Jim Hance			\$0.00/hr	\$0.00/hr
3	Scott Cooper			\$0.00/hr	\$0.00/hr
4	Jo Brown			\$0.00/hr	\$0.00/hr
5	Patti Mintz			\$0.00/hr	\$0.00/hr
6	Peter Kelly			\$0.00/hr	\$0.00/hr
7	John Rodman			\$0.00/hr	\$0.00/hr
8	Jonathan Mollerup			\$0.00/hr	\$0.00/hr
9	Jon Ganio			\$0.00/hr	\$0.00/hr

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Ac
1	Garrett R. Vargas	Work		G		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
2	Jim Hance	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
3	Scott Cooper	Work		S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
4	Jo Brown	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
5	Patti Mintz	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
6	Peter Kelly	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
7	John Rodman	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
8	Jonathan Mollerup	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
9	Jon Ganio	Work		J		50%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
10	Electrician	Work		E		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
11	Mini-DV Camcorder	Work		M		300%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
12	600-Watt Light and St	Work		6		400%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
13	Reflector Kit	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
14	Camera Boom	Work		C		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
15	Editing Lab	Work		E		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr

Change a resource's capacity to perform work,
page 60

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Ac
1	Garrett R. Vargas	Work		G		100%	\$800.00/wk	\$0.00/hr	\$0.00	Pr
2	Jim Hance	Work		J		100%	\$18.75/hr	\$0.00/hr	\$0.00	Pr
3	Scott Cooper	Work		S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
4	Jo Brown	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
5	Patti Mintz	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
6	Peter Kelly	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
7	John Rodman	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
8	Jonathan Mollerup	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
9	Jon Ganio	Work		J		50%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
10	Electrician	Work		E		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
11	Mini-DV Camcorder	Work		M		300%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
12	600-Watt Light and St	Work		6		400%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
13	Reflector Kit	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
14	Camera Boom	Work		C		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
15	Editing Lab	Work		E		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
16	Video Tape	Material	30-min. cassett	V					\$0.00	Pr

Enter resource cost rates,
page 64

Change Working Time

For: based on Standard calendar

Set working time for selected date(s)

Legend:

- Working
- Nonworking
- Edited working hours

On this calendar:

- Edits to a day of the week
- Edits to an individual day

Select Date(s):

January 2005						
S	M	T	W	Th	F	S
						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	28	29
30	31					

Set selected date(s) to:

- Use default
- Nonworking time
- Nondefault working time

From: To:

Buttons: Help, New..., Options..., OK, Cancel

Change a resource's working time,
page 66

3

Setting Up Resources

In this chapter you will learn to:

- ✓ Set up basic resource information for the people who work on projects.
- ✓ Enter basic resource information for the equipment that will be used in projects.
- ✓ Enter basic resource information for the materials that will be consumed as the project progresses.
- ✓ Set up cost information for resources.
- ✓ Change a resource's availability for work.
- ✓ Record additional information about a resource in a note.

See Also Do you need a quick refresher on the topics in this chapter? See the quick reference entries on pages xxi–xxii.

Resources are the people, equipment, and material needed to complete the tasks in a project. Microsoft Office Project 2003 focuses on two aspects of resources: their availability and their costs. Availability determines when specific resources can work on tasks and how much work they can do, and costs refer to how much money will be required to pay for those resources.

In this chapter, you will set up the resources you need to complete the TV commercial project. Effective resource management is one of the most powerful advantages of using Project over task-focused planning tools, such as paper-based organizers. You do not need to set up resources and assign them to tasks in Project; however, without this information, you might have less control over who does what work, when, and at what cost. Setting up resource information in Project takes a little effort, but the time is well spent if your project is primarily driven by time or cost *constraints*. (And nearly all complex projects are driven by one, if not both, of these factors.)



Important Before you can use the practice files in this chapter, be sure you install them from the book's companion CD to their default location. See "Using the Book's CD-ROM," on page xiii, for more information.

Setting Up People Resources

Project works with two types of resources: work resources and material resources. *Work resources* are the people and equipment that do the work of the project. You will learn about material resources later in this chapter.

Some examples of work resources are listed below.

Work resource	Example
Individual people identified by name	Jon Ganio; Jim Hance
Individual people identified by job title or function	Director; camera operator
Groups of people who have common skills (When assigning such interchangeable resources to a task, you do not care who the individual resource is, as long as the resource has the right skills.)	Electricians; carpenters; extras
Equipment	Video camera; 600-watt light

Equipment resources don't need to be portable; a fixed location or piece of machinery (for example, a video editing studio) can also be considered equipment.

All projects require some people resources, and some projects require only people resources. Project can help you make smarter decisions about how to manage work resources and monitor financial costs.

Tip *This tip describes enterprise project management (EPM) functionality. The combination of Project Professional and Project Server provides substantial, enterprise-level resource management capabilities, such as skills-based resource assignments and a centralized enterprise resource pool. For more information, see Part 4, "Introducing Project Server."*

In this exercise, you set up resource information for several people resources.

BE SURE TO: Start Project if it's not already running.

Important If you are running Project Professional, you may need to make a one-time adjustment to use the My Computer account and to work offline. This helps ensure that the practice files you work with in this chapter don't affect your Project Server data. For more information, see "Starting Project Professional," on page 1xxx.

OPEN: *Wingtip Toys Commercial 3a from the \My Documents\Microsoft Press\Project 2003 Step by Step\Chapter 3 Simple Resources folder. You can also access the practice files for this book by clicking Start, All Programs, Microsoft Press, Project 2003 Step by Step, and then selecting the chapter folder of the file you want to open.*

- 1** On the **File** menu, click **Save As**.
The **Save As** dialog box appears.
- 2** In the **File name** box, type **Wingtip Toys Commercial 3**, and then click **Save**.

- 3** On the **Project Guide** toolbar, click **Resources**.

You will use the Project Guide to help set up the initial list of resources for the toy commercial project.

- 4** In the Resources pane, click the **Specify people and equipment for the project** link.

The Specify Resources pane appears, and the Project Guide: Simple Resource Sheet view replaces the Gantt Chart view.

- 5** Select the **Enter resources manually** option.

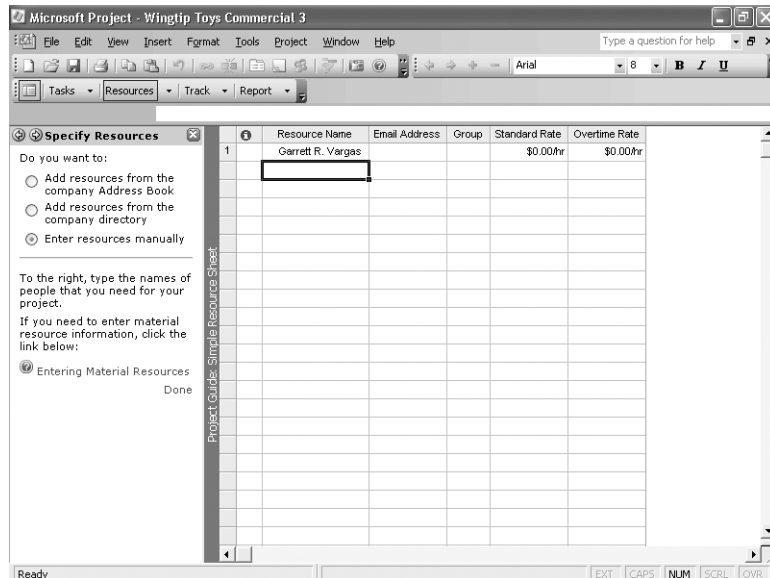
Tip For your own projects, if your resource information resides in the right source on your network, such as a Microsoft Exchange address book or Active Directory, you can quickly import the resource information into Project. This saves you the effort of retyping the information and reduces the chance of making a data-entry error.

- 6** In the Simple Resource Sheet view, click the cell directly below the **Resource Name** column heading.

- 7** Type **Garrett R. Vargas**, and press **Enter**.

Project creates a new resource.

- 8** Widen the **Resource Name** column by moving the mouse pointer to the vertical divider line between the **Resource Name** and **Email Address** columns and double-clicking. Your screen should look like the following illustration:



- 9 Enter the remaining resource information into the Simple Resource Sheet.

Jim Hance
 Scott Cooper
 Jo Brown
 Patti Mintz
 Peter Kelly
 John Rodman
 Jonathan Mollerup
 Jon Ganio

Your screen should look similar to the following illustration:

	Resource Name	Email Address	Group	Standard Rate	Overtime Rate
1	Garrett R. Vargas			\$0.00/hr	\$0.00/hr
2	Jim Hance			\$0.00/hr	\$0.00/hr
3	Scott Cooper			\$0.00/hr	\$0.00/hr
4	Jo Brown			\$0.00/hr	\$0.00/hr
5	Patti Mintz			\$0.00/hr	\$0.00/hr
6	Peter Kelly			\$0.00/hr	\$0.00/hr
7	John Rodman			\$0.00/hr	\$0.00/hr
8	Jonathan Mollerup			\$0.00/hr	\$0.00/hr
9	Jon Ganio			\$0.00/hr	\$0.00/hr

- 10 Click the **Close** button in the upper right corner of the Project Guide pane to close the Project Guide.

You can also have a resource that represents multiple people. Next you will switch to a different view to set up such a resource.

- 11 On the **View** menu, click **Resource Sheet**.

The Resource Sheet view appears. This sheet contains more resource-related fields than the Simple Resource Sheet does.

- 12 In the **Resource Name** field below the last resource, type **Electrician**, and then press **Tab**.

- 13 In the **Type** field, make sure that **Work** is selected, and then press **Tab** several times to move to the **Max. Units** field.

The **Max. Units** field represents the maximum capacity of a resource to accomplish any task. Specifying that a resource such as Garrett R. Vargas, for example, has 100 percent maximum units means that 100 percent of Garrett's time is available to work on the tasks to which you assign him. Project will alert you if you assign Garrett to more tasks than he can accomplish at 100 percent maximum units (or, in other words, if Garrett becomes overallocated).

- 14** In the **Max. Units** field for the electrician, type or select **200%**, and then press .

Tip When you click a numeric field, up and down arrows appear. You can click these to display the number you want, or just type the number in the field.

The resource named Electrician does not represent a single person; instead, it represents a category of interchangeable people called electricians. Because the Electrician resource has a maximum units setting of 200 percent, you can plan on two electricians being available to work full time every workday. At this point in the planning phase, you do not know exactly who these electricians will be, and that's OK. You can still proceed with more general planning.

Now you'll update the maximum units value for Jon Ganio to indicate that he works half time.

- 15** Click the **Max. Units** field for Jon Ganio, type or select **50%**, and then press .

Your screen should look similar to the following illustration:

③	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Ac
1	Garrett R. Vargas	Work		G		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
2	Jim Hance	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
3	Scott Cooper	Work		S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
4	Jo Brown	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
5	Patti Mintz	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
6	Peter Kelly	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
7	John Rodman	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
8	Jonathan Mollerup	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
9	Jon Ganio	Work		J		50%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
10	Electrician	Work		E		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr

When you create a new resource, Project assigns it 100% Max. Units by default. You change the resource's Max. Units here.

What Is the Best Way to Enter Resource Names?

In Project, resource names can refer to specific people (for example, Jon Ganio or Jim Hance) or to specific job titles (for example, Camera Operator or Actor). Use whatever makes the most sense to you and those who will see the project plan information you publish. The important questions are Who will see these resource names? and How will they identify the resources? The resource names you choose will appear both in Project and in information published from Project. For example, in the default Gantt Chart view, the name of the resource, as you enter it in the **Resource Name** field, appears next to the bars of the tasks to which that resource is assigned.

A resource might refer to somebody already on staff or to a position to be filled later. If you have not yet filled all the resource positions required, you might not have real people's names yet. In that case, use placeholder names or job titles when setting up resources in Project.

Tip If you prefer, you can enter maximum units as partial or whole numbers (for example, .5, 1, 2) rather than as percentages (50%, 100%, or 200%). To use this format, on the **Tools** menu, click **Options**, and then click the **Schedule** tab. In the **Show assignment units as a box**, click **Decimal**.

Setting Up Equipment Resources

You set up people and equipment resources exactly the same way in Project. However, you should be aware of important differences in how you can schedule these two types of resources. For example, most people resources have a working day of no more than 12 hours, but equipment resources might work around the clock. Moreover, people resources might be flexible in the tasks they can perform, but equipment resources tend to be more specialized. For example, a director of photography for a film or video project might also act as a camera operator in a pinch, but a video camera cannot replace an editing studio.

You do not need to track every piece of equipment that will be used in your project, but you might want to set up equipment resources when

- Multiple teams or people might need a piece of equipment to do different tasks simultaneously, and the equipment might be overbooked.
- You want to plan and track costs associated with the equipment.

In this exercise, you enter information about equipment resources in the **Resource Information** dialog box.

- 1 In the Resource Sheet, click the next empty cell in the **Resource Name** column.
- 2 On the Standard toolbar, click the **Resource Information** button.

The **Resource Information** dialog box appears.

Tip You can also double-click a resource name or an empty cell in the **Resource Name** column to display the **Resource Information** dialog box.

- 3 Click the **General** tab if it is not already displayed.

In the upper portion of the **General** tab, you might recognize the fields you saw in the Resource Sheet view. As with many types of information in Project, you can usually work in at least two ways: a table or a dialog box.

- 4 In the **Resource name** field, type **Mini-DV Camcorder**.
- 5 In the **Type** field, click **Work**.



Resource
Information

Your screen should look similar to the following illustration:

The Resource Information dialog box contains many of the same fields you see in the Resource Sheet view.

Resource Information

General Working Time Costs Notes Custom Fields

Resource name: Mini-DV Camcorder Initials:

Email: Group:

Code:

Type: Work

Material label:

Resource Availability

Available From	Available To	Units
NA	NA	100%

Help Details... OK Cancel

Tip The Resource Information dialog box contains a button labeled **Details**. If you have an e-mail program that complies with the Messaging Application Programming Interface (MAPI) and the program is installed on the same computer as Project, you can click **Details** to see contact information about the selected resource. MAPI-compliant programs include Outlook and Outlook Express.

- Click **OK** to close the Resource Information dialog box and return to the Resource Sheet.

The **Max. Units** field shows 100% for this resource; next you will change this.

Tip You can also double-click on an empty cell in the Resource Name column to create a new resource using the Resource Information dialog box. Note that when creating a resource in this way, you cannot enter a Max. Units value. However, you can edit this value in the dialog box, as well as in the Resource Sheet, after you create the resource.

7 In the **Max. Units** field for the Mini-DV Camcorder, type or click the arrows until the value shown is **300%** and press **Tab**.

This means that you plan to have three camcorders available every workday.

8 Enter the following information about equipment resources directly in the Resource Sheet or in the **Resource Information** dialog box, whichever you prefer. In either case, make sure **Work** is selected in the **Type** field.

Resource name	Max. Units
600-Watt Light and Stand	400%
Reflector Kit	100%
Camera Boom	200%
Editing Lab	100%

Your screen should look similar to the following illustration:

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Ac. ▲
1	Garrett R. Vargas	Work		G		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
2	Jim Hance	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
3	Scott Cooper	Work		S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
4	Jo Brown	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
5	Patti Mintz	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
6	Peter Kelly	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
7	John Rodman	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
8	Jonathan Mollenup	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
9	Jon Ganio	Work		J		50%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
10	Electrician	Work		E		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
11	Mini-DV Camcorder	Work		M		300%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
12	600-Watt Light and St	Work		S		400%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
13	Reflector Kit	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
14	Camera Boom	Work		C		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
15	Editing Lab	Work		E		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr

Setting Up Material Resources

Material resources are consumables that you use up as the project proceeds. On a construction project, material resources might include nails, lumber, and concrete. For the toy commercial project, video tape is the consumable resource that interests you most. You work with material resources in Project mainly to track the rate of consumption and the associated cost. Although Project is not a complete system for tracking inventory, it can help you stay better informed about how quickly you are consuming your material resources.

Comparing Work and Material Resources

Following are some ways material resources are similar to and different from work resources.

For both material and work resources, you can edit and *contour* resource *assignments*, set up multiple pay rates, specify different pay rates to apply at different times, and share resources through a *resource pool*. (You will work with these subjects in later chapters.) In addition, cost calculations for material resources work just about the same way as they do for work resources.

Unlike work resources, however, material resources do not use overtime cost rates, resource calendars, or maximum units.

In this exercise, you enter information about a material resource.

- 1 In the Resource Sheet, click the next empty cell in the **Resource Name** column.
- 2 Type **Video Tape** and press **Tab**.
- 3 In the **Type** field, click the down arrow and select **Material**, and press **Tab**.
- 4 In the **Material Label** field, type **30-min. cassette** and press **Enter**.

You will use 30-minute cassettes as the unit of measure to track video tape consumption during the project. Your screen should look similar to the following illustration:

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Ac ▲
1	Garrett R. Vargas	Work		G		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
2	Jim Hance	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
3	Scott Cooper	Work		S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
4	Jo Brown	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
5	Patti Mintz	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
6	Peter Kelly	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
7	John Rodman	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
8	Jonathan Mollerup	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
9	Jon Ganio	Work		J		50%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
10	Electrician	Work		E		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
11	Mini-DV Camcorder	Work		M		300%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
12	600-Watt Light and St	Work		6		400%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
13	Reflector Kit	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
14	Camera Boom	Work		C		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
15	Editing Lab	Work		E		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
16	Video Tape	Material	30-min. cassette	V			\$0.00		\$0.00	Pr

The Material Label field only applies to material resources.

Entering Resource Pay Rates

Almost all projects have some financial aspect, and cost limits drive the scope of many projects. Tracking and managing cost information allows the project manager to answer such important questions as

- What is the expected total cost of the project, based on our task duration and resource estimates?
- Are we using expensive resources to do work that less expensive resources could do?
- How much money will a specific type of resource or task cost over the life of the project?
- Are we spending money at a rate that we can sustain for the planned duration of the project?

For the TV commercial project, you have been entrusted with pay rate information for all people resources used in the project. In the information below, note that the fees for the camcorders, the lights, and the editing lab are rental fees. Because the Southridge Video company already owns the reflector kit and camera booms, you will not bill yourself for them.

In this exercise, you enter cost information for each resource.

- 1 In the Resource Sheet, click the **Std. Rate** field for resource 1, *Garrett R. Vargas*.
- 2 Type **800/w** and press . Garrett's standard weekly rate of \$800 per week appears in the **Std. Rate** column.
- 3 In the **Std. Rate** field for resource 2, *Jim Hance*, type **18.75/h**, and press . Jim's standard hourly rate appears in the **Std. Rate** column. Your screen should look similar to the following illustration:

Resource ID	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Ac
1	Garrett R. Vargas	Work		G		100%	\$800.00/wk	\$0.00/hr	\$0.00	Pr
2	Jim Hance	Work		J		100%	\$18.75/hr	\$0.00/hr	\$0.00	Pr
3	Scott Cooper	Work		S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
4	Jo Brown	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
5	Patti Mintz	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
6	Peter Kelly	Work		P		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
7	John Rodman	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
8	Jonathan Mollerup	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
9	Jon Ganio	Work		J		50%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
10	Electrician	Work		E		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
11	Mini-DV Camcorder	Work		M		300%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
12	600-Watt Light and St	Work		S		400%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
13	Reflector Kit	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
14	Camera Boom	Work		C		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
15	Editing Lab	Work		E		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
16	Video Tape	Material	30-min. cassette	V			\$0.00		\$0.00	Pr

4 Enter the following standard pay rates for the given resources:

Resource name	Standard rate	Resource name	Standard rate
Scott Cooper	775/w	Electrician	22/h
Jo Brown	18.75/h	Mini-DV Camcorder	250/w
Patti Mintz	9.40/h	600-Watt Light and Stand	100/w
Peter Kelly	16.75/h	Reflector Kit	0/h
John Rodman	22/h	Camera Boom	0/h
Jonathan Mollerup	10/h	Editing Lab	200/d
Jon Ganio	15.50/h	Video Tape	5

Your screen should look similar to the following illustration:

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Ac
1	Garrett R. Vargas	Work		G		100%	\$800.00/wk	\$0.00/hr	\$0.00	Pr
2	Jim Hance	Work		J		100%	\$18.75/hr	\$0.00/hr	\$0.00	Pr
3	Scott Cooper	Work		S		100%	\$775.00/wk	\$0.00/hr	\$0.00	Pr
4	Jo Brown	Work		J		100%	\$18.75/hr	\$0.00/hr	\$0.00	Pr
5	Patti Mintz	Work		P		100%	\$9.40/hr	\$0.00/hr	\$0.00	Pr
6	Peter Kelly	Work		P		100%	\$16.75/hr	\$0.00/hr	\$0.00	Pr
7	John Rodman	Work		J		100%	\$22.00/hr	\$0.00/hr	\$0.00	Pr
8	Jonathan Mollerup	Work		J		100%	\$10.00/hr	\$0.00/hr	\$0.00	Pr
9	Jon Ganio	Work		J		50%	\$15.50/hr	\$0.00/hr	\$0.00	Pr
10	Electrician	Work		E		200%	\$22.00/hr	\$0.00/hr	\$0.00	Pr
11	Mini-DV Camcorder	Work		M		300%	\$250.00/wk	\$0.00/hr	\$0.00	Pr
12	600-Watt Light and St	Work		S		400%	\$100.00/wk	\$0.00/hr	\$0.00	Pr
13	Reflector Kit	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
14	Camera Boom	Work		C		200%	\$0.00/hr	\$0.00/hr	\$0.00	Pr
15	Editing Lab	Work		E		100%	\$200.00/day	\$0.00/hr	\$0.00	Pr
16	Video Tape	Material	30-min. cassette	V			\$5.00		\$0.00	Pr

Note that you don't enter a rate (hourly, daily, or weekly) for the video tape's cost. For material resources, the standard rate value is per unit of consumption—in our case, 30-minute cassettes.

Project Management Focus: Getting Resource Cost Information

Work and material resources account for the majority of costs in many projects. To take full advantage of the extensive cost management features in Project, the project manager should know the costs associated with each work and material resource. For people resources, it might be difficult to get such information. In many organizations, only senior management and human resource specialists know the pay rates of all resources working on a project, and they might consider this information confidential. Depending on your organizational policies and project priorities, you might not be able to track resource pay rates. If you cannot track this information, your effectiveness as a project manager might be reduced, and the *sponsors* of your projects should understand this.

Adjusting Working Time for Individual Resources

Project uses different types of calendars for different purposes. In this exercise, we will focus on the *resource calendar*. A resource calendar controls the working and nonworking times of a resource. Project uses resource calendars to determine when work for a specific resource can be scheduled. Resource calendars apply only to work resources (people and equipment) and not to material resources.

When you initially create resources in a project plan, Project creates a resource calendar for each resource. The initial working time settings for resource calendars exactly match those of the *Standard base calendar*. (This is a calendar built into Project that accommodates an 8 A.M. to 5 P.M., Monday through Friday work schedule.) If all the working times of your resource match the working time of the Standard base calendar, you do not need to edit any resource calendars. However, chances are that some of your resources will need exceptions to the working time in the Standard base calendar—such as

- A flex-time work schedule
- Vacation time
- Other times when a resource is not available to work on the project, such as time spent training or attending a conference

Any changes you make to the Standard base calendar are automatically reflected in all resource calendars that are based on the Standard base calendar. Any specific changes you have made to the working time of a resource are not changed, however.

Tip If you have a resource who is available to work on your project only part-time, you might be tempted to set the working time of the resource in your project to reflect a part-time schedule—for example, 8 A.M. to 12 P.M. daily. However, a better approach would be to adjust the availability of the resource as recorded in the **Max. Units** field to 50%. Changing the unit availability of the resource keeps the focus on the capacity of the resource to work on the project, rather than on the specific times of the day when that work might occur. You set the maximum units for a resource in the Resource Sheet view, which you display by selecting the resource and then clicking **Resource Sheet** on the **View** menu. For more information about resource units, see “Setting Up People Resources,” on page 55.

In this exercise, you specify the working and nonworking times for individual work resources.

- 1 On the **Tools** menu, click **Change Working Time**.
The **Change Working Time** dialog box appears.

- 2** In the **For** box, click **Garrett R. Vargas**.

Garrett R. Vargas's resource calendar appears in the **Change Working Time** dialog box. Garrett, the producer of the TV commercial, has told you he will not be available to work on Thursday and Friday, January 13 and 14.

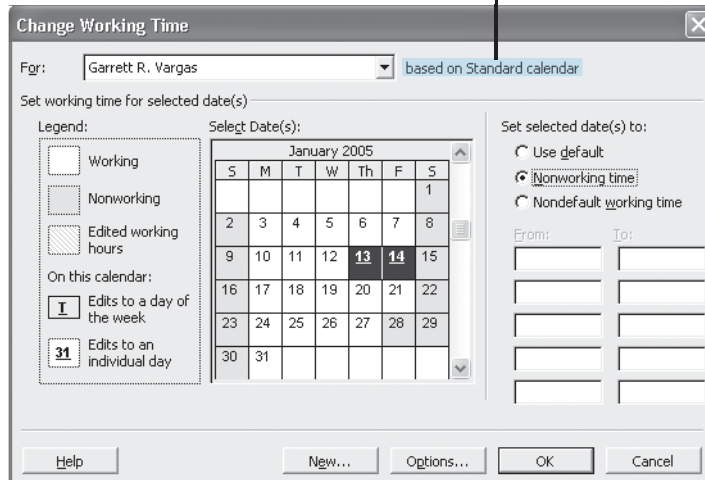
- 3** In the calendar below **Select Date(s)**, drag the vertical scroll bar or click the up or down arrow buttons until **January 2005** appears.
- 4** Select the dates January 13 and 14.

Tip To quickly select this date range, drag from **13** through **14**.

- 5** Under **Set selected date(s) to**, click **Nonworking time**.

Your screen should look similar to the following illustration:

Every resource calendar is based on the Standard base calendar unless you pick a different base calendar.



Project will not schedule work for Garrett on these dates.

Tip If your team uses the calendar module in Outlook and Project Web Access, resources can automatically report to you times they are not available to work on project activities. These times are based on calendar items marked as busy or out of office in Outlook. Once the times are reported, you can easily update the resource's working time in the project plan without retyping anything. For more information, see Part 4, "Introducing Project Server."

To conclude this exercise, you will set up a “4 by 10” work schedule (that is, 4 days per week, 10 hours per day) for a resource.

- 6 In the **For** box, click **John Rodman**.
- 7 When prompted to save the resource calendar changes you made for Garrett, click **Yes**.
- 8 Select the Monday through Thursday column headings in the calendar.

Tip To quickly select the Monday through Thursday column headings, drag from the **M** through the **Th**.

Although you can see only one month at a time in the dialog box, selecting a column heading for a day of the week selects every occurrence of that day—past, present, and future.

- 9 In the lower **To** box, click **5:00 PM** and replace it with **7:00 PM**.
- 10 Click the **Friday** column heading.
- 11 Under **Set selected date(s) to**, click **Nonworking time**.

Now Project can schedule work for John as late as 7 P.M. every Monday through Thursday, but it will not schedule work for him on Fridays.

- 12 Click **OK** to close the **Change Working Time** dialog box.

Because you have not yet assigned these resources to tasks, you don't see the scheduling effect of their nonworking time settings. You will in Chapter 4, “Assigning Resources to Tasks.”

Tip If you find that you must edit several resource calendars in a similar way (to handle a night shift, for example), it may be easier to assign a different base calendar to a resource or collection of resources. This is more efficient than editing individual calendars, and it allows you to make project-wide adjustments to a single base calendar if needed.

For example, if your project includes a day shift and a *night shift*, you can apply the Night Shift base calendar to those resources who work the night shift. You change a resource's base calendar in Step 2 of the Resource Working Times Project Guide, or in the **Base Calendar** box on the **Working Time** tab of the **Resource Information** dialog box. You can open this dialog box by clicking **Resource Information** on the **Project** menu when in a resource view. For collections of resources, you can make these changes directly in the **Base Calendar** column on the **Entry table** in the **Resource Sheet** view.

Documenting Resources

You might recall from Chapter 2, “Creating a Task List,” that you can record any additional information that you want about a task, resource, or assignment in a *note*. For example, if a resource is not available to work on a specific date range, it is a good idea to record why in a note. That way, the note resides in the project plan and can be easily viewed or printed.

In this exercise, you enter resource notes to document why a resource is not available to work on certain dates.

- 1** In the **Resource Name** column, click the name of resource 1, **Garrett R. Vargas**.
- 2** On the Standard toolbar, click the **Resource Notes** button.
Project displays the **Resource Information** dialog box with the **Notes** tab visible.
- 3** In the **Notes** box, type **Garrett attending West Coast film festival January 13 and 14; unavailable to work on project.** Then click **OK**.
A note icon appears in the Indicators column.
- 4** Point to the note icon, as shown here:



	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Ac
1	G			G		100%	\$800.00/wk	\$0.00/hr	\$0.00	Pr
2				J		100%	\$18.75/hr	\$0.00/hr	\$0.00	Pr
3				S		100%	\$775.00/wk	\$0.00/hr	\$0.00	Pr
4	Jo Brown	Work		J		100%	\$18.75/hr	\$0.00/hr	\$0.00	Pr
5	Patti Mintz	Work		P		100%	\$9.40/hr	\$0.00/hr	\$0.00	Pr

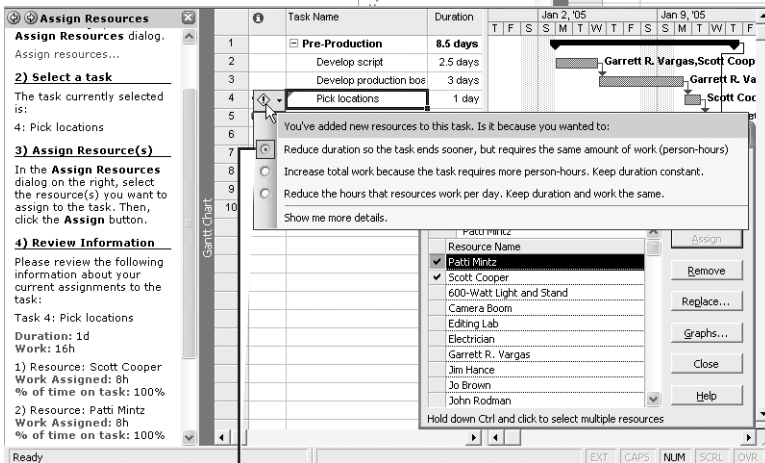
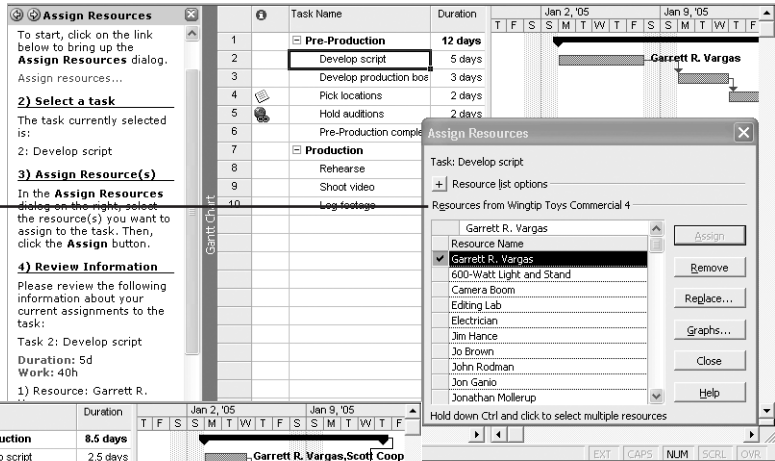
The note appears in a ScreenTip. For notes that are too long to appear in a ScreenTip, you can double-click the note icon to display the full text of the note.

CLOSE: the **Wingtip Toys Commercial 3** file.

Key Points

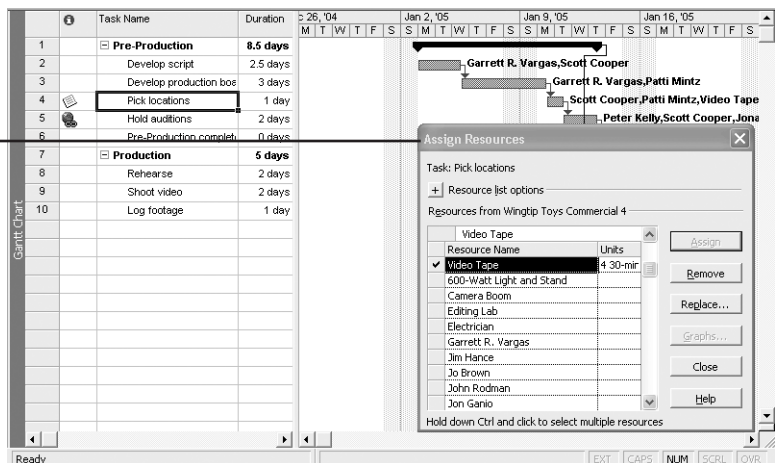
- Recording resource information in your project plans helps you better control who does what work when, and at what cost.
- People and equipment resources perform the work in a project.
- Material resources are consumed during a project.

Assign work resources to tasks,
page 72



Control how effort-driven
scheduling affects task durations,
page 78

Assign material resources to tasks,
page 82



4

Assigning Resources to Tasks

In this chapter you will learn to:

- ✓ Assign resources to tasks.
 - ✓(Control how Microsoft Office Project 2003 schedules additional resource assignments.
 - ✓ Assign material resources to tasks.
-

See Also Do you need a quick refresher on the topics in this chapter? See the quick reference entries on pages xxii–xxiii.

If you completed Chapter 2, “Creating a Task List,” and Chapter 3, “Setting Up Resources,” you have already created *tasks* and *resources*. Now you are ready to assign resources to tasks. An *assignment* is the matching of a resource to a task to do *work*. From the perspective of tasks, you might call the process of assigning a resource a task assignment; from the perspective of resources, you might call it a resource assignment. It is the same thing either way: a task plus a resource equals an assignment.

You do not have to assign resources to tasks in Project; you could work with just tasks. But there are several good reasons to assign resources in your project plan. If you assign resources to tasks, you can answer questions such as

- Who should be working on what tasks and when?
- (Do you have the right number of resources to do the scope of work your project requires?
- (Are you expecting a resource to work on a task at a time when that resource will not be available to work (for example, when the resource will be on vacation)?
- (Have you assigned a resource to so many tasks that you have exceeded the capacity of the resource to work—in other words, have you *overallocated* the resource?

In this chapter, you assign resources to tasks. You assign work resources (people and equipment) and material resources to tasks, and you see where resource assignments should affect task duration and where they should not.



Important Before you can use the practice files in this chapter, be sure you install them from the book's companion CD to their default location. See "Using the Book's CD-ROM," on page xiii, for more information.

Assigning Resources to Tasks

Assigning a resource to a task enables you to track the progress of the resource's work on the task. If you enter cost information, Project also calculates resource and task costs for you.

You might recall from Chapter 3 that the capacity of a resource to work is measured in *units* and recorded in the **Max. Units** field. Unless you specify otherwise, Project assigns 100 percent of the units for the resource to the task—that is, Project assumes that all the resource's work time can be allotted to the task. If the resource has less than 100 percent maximum units, Project assigns the resource's maximum units value.

In this exercise, you make the initial resource assignments to tasks in the project plan.

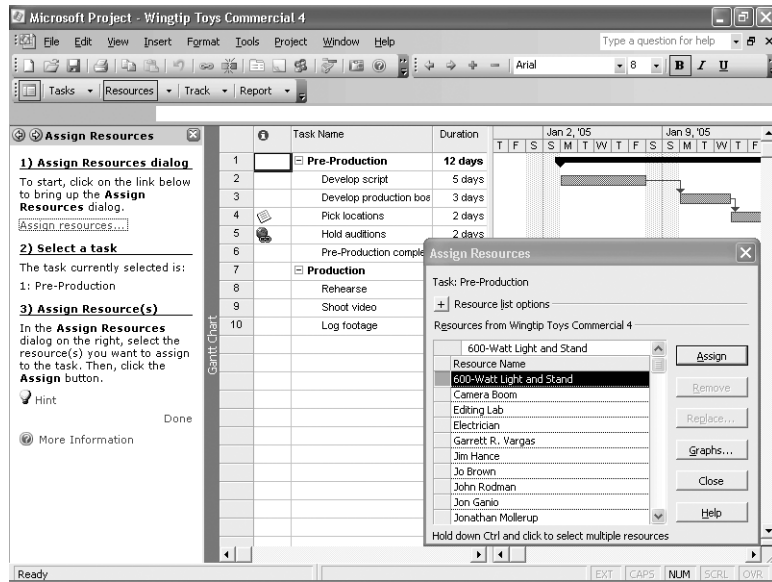
BE SURE TO: Start Project if it's not already running.

Important If you are running Project Professional, you may need to make a one-time adjustment to use the My Computer account and to work offline. This helps ensure that the practice files you work with in this chapter don't affect your Project Server data. For more information, see "Starting Project Professional" on page 10.

OPEN: *Wingtip Toys Commercial 4a* from the `\My Documents\Microsoft Press\Project 2003 Step by Step\Chapter 4 Simple Assignments` folder. You can also access the practice files for this book by clicking **Start, All Programs, Microsoft Press, Project 2003 Step by Step**, and then selecting the chapter folder of the file you want to open.

- 1** On the **File** menu, click **Save As**.
The **Save As** dialog box appears.
- 2** In the **File name** box, type **Wingtip Toys Commercial 4**, and then click the **Save** button.
- 3** On the **Project Guide** toolbar, click **Resources**.
- 4** In the Resources pane, click the **Assign people and equipment to tasks** link.
The Assign Resources Project Guide pane and the Gantt Chart view appear.
- 5** In the Assign Resources Project Guide pane, click the **Assign Resources** link.

The **Assign Resources** dialog box appears. In it you see resource names you entered in Chapter 3. If the **Assign Resources** dialog box obscures the **Task Name** column, drag the dialog box to the lower right corner of the screen. Your screen should look similar to the following illustration:



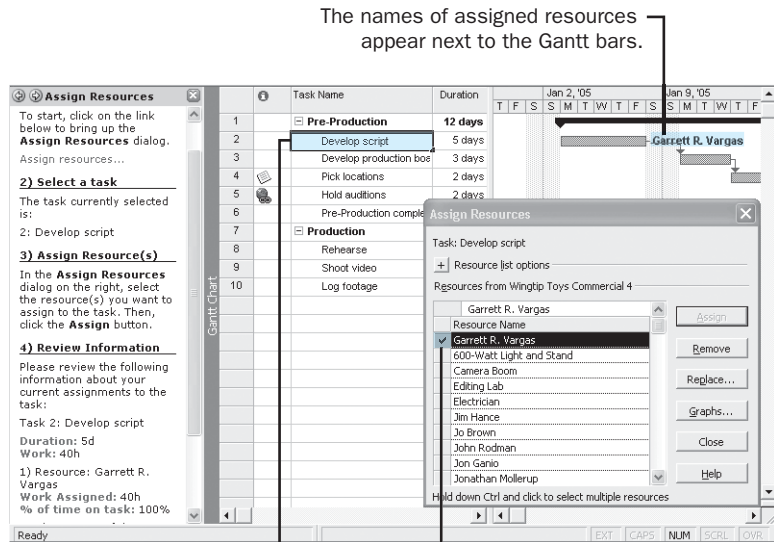
Tip When you display the **Assign Resources** dialog box from the Project Guide, you see a slightly simplified version of the dialog box. You'll see the more complete version of it later in this chapter.

- 6** In the **Task Name** column, click task 2, **Develop script**.
- 7** In the **Resource Name** column in the **Assign Resources** dialog box, click **Garrett R. Vargas**, and then click the **Assign** button.

A check mark appears next to Garrett's name, indicating that you have assigned him to the task of developing the script.

Tip Except for assigned resources, which appear at the top of the list, resources are sorted alphabetically in the **Assign Resources** dialog box.

- 8 If necessary, scroll the Assign Resources pane down to see the information under step 4, **Review Information**. Your screen should look similar to the following illustration:



Here you can see the essential scheduling values for this task: *duration*, *work*, and assignment *units* (units are reported here as *% of time on task*). In the next exercise, you will look at these values more closely to understand the basic scheduling logic that Project follows.

Next you assign two resources simultaneously to a task.

- 9 In the **Task Name** column, click task 3, **Develop production boards**.
- 10 In the **Assign Resources** dialog box, click **Garrett R. Vargas**, hold down the **Ctrl** key, click **Patti Mintz**, and then click the **Assign** button.

Check marks appear next to Garrett's and Patti's names, indicating that you have assigned both to task 3.

Troubleshooting If you should accidentally assign just a single resource when you intended to assign multiple resources, you can undo the assignment. On the **Edit** menu click **Undo Assignment**. You must do this before you perform another action, however, as Project can undo only the most recent action you've performed.

To conclude this exercise, you will make initial resource assignments for remaining pre-production tasks.

- 11** In the **Task Name** column, click the name of task 4, **Pick locations**.
- 12** In the **Assign Resources** dialog box, click **Scott Cooper**, and then click the **Assign** button.

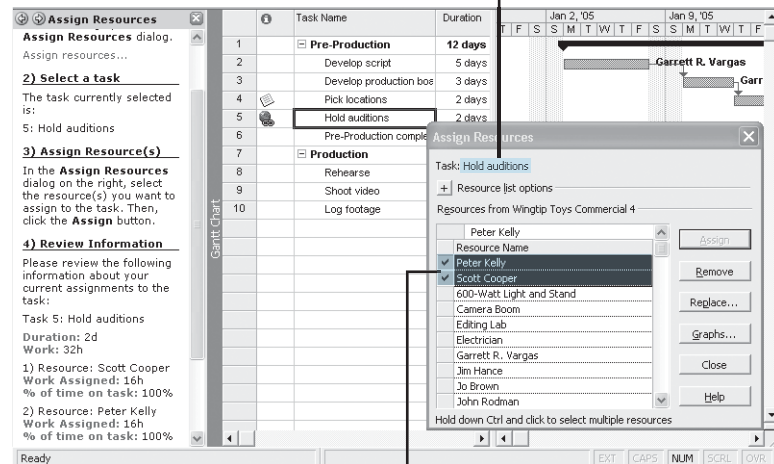
A check mark appears next to Scott's name, indicating that you have assigned him to task 4.

Tip To remove or unassign a resource from the selected task, in the **Assign Resources** dialog box, click the resource name, and then click the **Remove** button.

- 13** In the **Task Name** column, click the name of task 5, **Hold auditions**.
- 14** In the **Assign Resources** dialog box, click **Peter Kelly**, hold down the **Ctrl** key, click **Scott Cooper**, and then click the **Assign** button.

Check marks appear next to Peter's and Scott's names, indicating that you have assigned both to task 5. Your screen should look similar to the following illustration:

The name of the selected task also appears here.



Assigned resources appear at the top of the list.

Tip In Part 2 you will work more with assignments, but if you want to read more about assignments now, type **About assignments** into the **Search** box in the upper right corner of the Project window.

The Scheduling Formula: Duration, Units, and Work

After you create a task but before you assign a resource to it, the task has duration but no work associated with it. Why no work? Work represents the amount of effort a resource or resources will spend to complete a task. For example, if you have one person working full-time, the amount of time measured as work is the same as the amount of time measured as duration. In general, the amount of work will match the duration unless you assign more than one resource to a task or the one resource you assign is not working full-time.

Project calculates work using what is sometimes called the *scheduling formula*:

$$\text{Duration} \times \text{Units} = \text{Work}$$

Let's look at a specific example. The duration of task 2 is five days. For our TV commercial project, five days equals 40 hours. When you assigned Garrett R. Vargas to task 2, Project applied 100 percent of Garrett's working time to this task. The scheduling formula for task 2 looks like this:

$$40 \text{ hours task duration} \times 100\% \text{ assignment units} = 40 \text{ hours work}$$

In other words, with Garrett assigned to task 2 at 100 percent units, the task should require 40 hours of work.

Here's a more complex example. You assigned two resources, each at 100 percent assignment units, to task 5. The scheduling formula for task 5 looks like this:

$$16 \text{ hours task duration} \times 200\% \text{ assignment units} = 32 \text{ hours work}$$

The 32 hours of work is the sum of Peter's 16 hours of work plus Scott's 16 hours of work. In other words, both resources will work on the task in parallel.

Assigning Additional Resources to a Task

Now you will assign additional resources to some of the pre-production tasks to see the effect on the overall duration of the tasks. By default, Project uses a scheduling method called *effort-driven scheduling*. This means that the task's initial work value remains constant, regardless of the number of additional resources you assign. The most visible effect of effort-driven scheduling is that as you assign additional resources to a task, that task's duration decreases. Project applies effort-driven scheduling only when you assign resources to or remove resources from tasks.

As you saw previously, you define the amount of work a task represents when you initially assign a resource or resources to it. With effort-driven scheduling turned on, if you later add resources to that task, the amount of work for the task does not change but the task's duration decreases. Or you might initially assign more than one resource to a task and later remove one of those resources from the task. With effort-driven

scheduling on, the amount of work for the task stays constant. The duration, or time it takes the remaining resource to complete that task, increases.

Tip By default, effort-driven scheduling is enabled for all tasks you create in Project. To change the default setting for all new tasks in a project plan, on the **Tools** menu, click **Options**, and in the **Options** dialog box, click the **Schedule** tab. Select or clear the **New tasks are effort-driven** check box. To control effort-driven scheduling for a specific task or tasks, first select the task or tasks. Then on the **Project** menu, click **Task Information**, and on the **Advanced** tab of the **Task Information** dialog box, select or clear the **Effort driven** check box.

In this exercise, you assign additional resources to tasks and see how this affects task durations.

- 1 In the Gantt Chart view, click the name of task 2, **Develop script**.

Currently, Garrett R. Vargas is assigned to this task. A quick check of the scheduling formula looks like this:

40 hours (the same as 5 days) task duration × 100% of Garrett's assignment units = 40 hours work.

If you want, you can scroll the Assign Resources pane down to see these values. Next you will assign a second resource to the task.

- 2 In the **Resource Name** column in the **Assign Resources** dialog box, click **Scott Cooper**, and click the **Assign** button.

Scott Cooper is assigned to task 2. Your screen should look similar to the following illustration:

The duration of this task decreases as additional resources are assigned to it.

The 40 hours total task work is divided between the two assigned resources.

As you can see in the Gantt Chart view, Project reduced the duration of task 2 from 5 days to 2.5 days.

The total work required is still 40 hours, as it was when only Garrett was assigned to the task, but now the work is distributed evenly between Garrett and Scott. This shows how effort-driven scheduling works. If, after an initial assignment, you add resources to a task, the total work remains constant but is distributed among the assigned resources. Further, the task's duration decreases accordingly.

The scheduling formula now looks like this:

$$20 \text{ hours (the same as 2.5 days) task duration} \times 200\% \text{ assignment units} \\ = 40 \text{ hours work}$$

The 200 percent assignment units is the sum of Garrett's 100 percent plus Scott's 100 percent, and the 40 work hours is the sum of Garrett's 20 hours plus Scott's 20 hours.

The other important effect of reducing the duration of task 2 is that the start dates of all successor tasks have changed as well. In Chapter 2, you created finish-to-start task relationships for these tasks. In this example, you see the benefit of creating task relationships rather than entering fixed start and finish dates. Project adjusts the start dates of successor tasks that do not have a constraint, such as a fixed start date or finish date.

Next you assign multiple resources to other tasks, using a Smart Tag to control how Project schedules the work on the tasks.

- 3 In the Gantt Chart view, click the name of task 4, **Pick locations**.

Currently, only Scott Cooper is assigned to this two-day task. You'd like to assign an additional resource and reduce the task's duration to one day.

- 4 In the **Resource Name** column of the **Assign Resources** dialog box, click **Patti Mintz**, and then click the **Assign** button.

Patti Mintz is also assigned to task 4.

Note the Smart Tag indicator that appears next to the name of task 4. Until you perform another action, you can use the Smart Tag to choose how you want Project to handle the additional resource assignment.

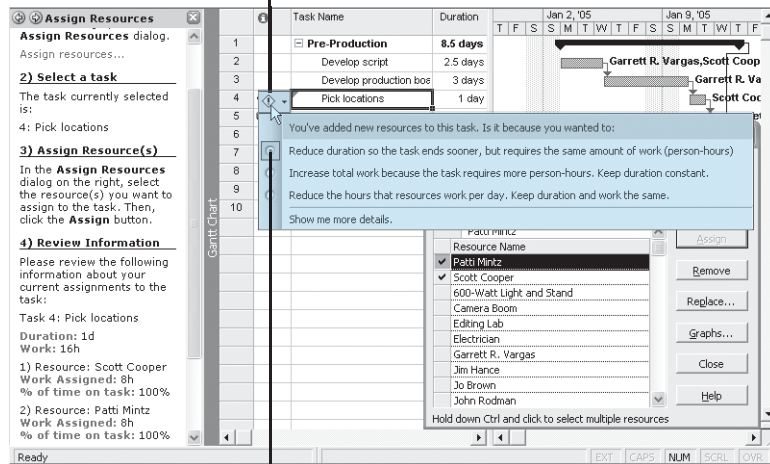
- 5 Click the **Smart Tag Actions** button.

Look over the options in the list that appears. Your screen should look like the following illustration:



Smart Tag
Actions

Clicking the Smart Tag Actions button displays a list of options, but it is available only until you perform another action in Project.



In the Actions list, the selected option describes the result of your most recent action; if this is not the result you want, pick another option.

These options let you choose the scheduling result you want, should it differ from the effort-driven scheduling result. You can adjust the task's duration, the resource's work, or the assignment units.

For this task, you want the additional resource assignment to reduce the task's duration. Because this is the default setting in the Smart Tag Actions list, you don't need to make any changes.

- 6** Click the **Smart Tag Actions** button again to close the list.

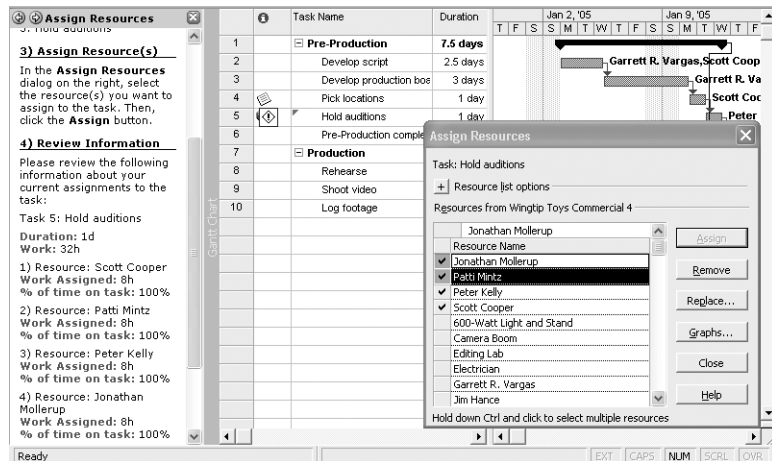
Tip You will see other Smart Tags while using Project. They generally appear when you might otherwise ask yourself, "Hmm, why did Project just do that?" (for example, when a task's duration changes after you assign an additional resource). The Smart Tag Actions list gives you the chance to change how Project responds to your actions.

To conclude this exercise, you will assign additional resources to a task and change how Project schedules the work on the task.

- 7** In the Gantt Chart view, click the name of task 5, **Hold auditions**.

- 8 In the **Resource Name** column of the **Assign Resources** dialog box, click **Jonathan Mollerup**, hold down the **Ctrl** key, click **Patti Mintz**, and then click the **Assign** button.

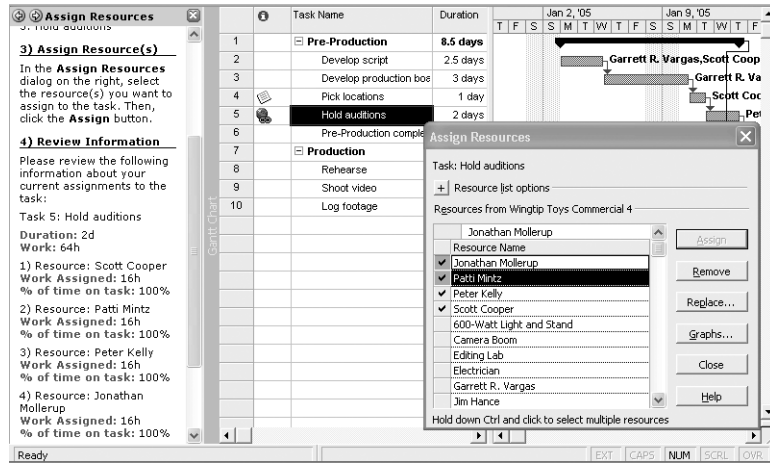
Project assigns Jonathan and Patti to the task. Because effort-driven scheduling is on for this task, Project reduces the duration of the task and adjusts the start dates of all successor tasks. Your screen should look similar to the following illustration:



However, this time you do not want the additional resource assignments to change the task's duration. Jonathan and Patti will perform additional work on the task, beyond the scope of the task's previous work, which was assigned to Peter and Scott.

- 9 Click the **Smart Tag Actions** button.
- 10 In the **Smart Tag Actions** list, select the option **Increase total work because the task requires more person-hours. Keep duration constant**.

Project changes the task's duration back to two days and adjusts the start dates of all successor tasks. The additional resources get the same work values that the initially assigned resources had, so the total work on the task increases. Your screen should look similar to the following illustration:



Tip If you initially assign two resources to a task with a duration of three days (the same as 24 hours), Project schedules each resource to work 24 hours, for a total of 48 hours of work on the task. However, you might initially assign one resource to a task with a duration of 24 hours and later add a second resource. In this case, effort-driven scheduling will cause Project to schedule each resource to work 12 hours in parallel, for a total of 24 hours of work on the task. Remember that effort-driven scheduling adjusts task duration only if you add or delete resources from a task.

Project Management Focus: When Should Effort-Driven Scheduling Apply?

You should think through the extent to which effort-driven scheduling should apply to the tasks in your projects. For example, if one resource should take 10 hours to complete a task, could 10 resources complete the task in one hour? How about 20 resources in 30 minutes? Probably not; the resources would likely get in each other's way and require additional coordination to complete the task. If the task is very complicated, it might require significant ramp-up time before a resource could contribute fully. Overall productivity might even decrease if you assign more resources to the task.

No single rule exists about when you should apply effort-driven scheduling and when you should not. As the project manager, you should analyze the nature of the work required for each task in your project and use your best judgment.

Assigning Material Resources to Tasks

In Chapter 3, you created the material resource named Video Tape. In our TV commercial project, we are interested in tracking the use of video cassettes and their cost. When assigning a material resource, you can handle consumptions and cost in one of two ways:

- Assign a fixed-unit quantity of the material resource to the task. Project will multiply the unit cost of this resource by the number of units assigned to determine the total cost. (You'll use this method in the following exercise.)
- Assign a variable-rate quantity of the material resource to the task. Project will adjust the quantity and cost of the resource as the task's duration changes. (You'll use this method in Chapter 9, "Fine-Tuning the Project Plan.")

In this exercise, you assign the material resource Video Tape to a task and enter a fixed-unit quantity of consumption. You will also work with the more complete version of the **Assign Resources** dialog box.

- 1 In the **Assign Resources** dialog box, click the **Close** button.
- 2 Click the **Show/Hide Project Guide** button on the **Project Guide** toolbar. The Project Guide closes.



Show/Hide
Project Guide



Assign
Resources

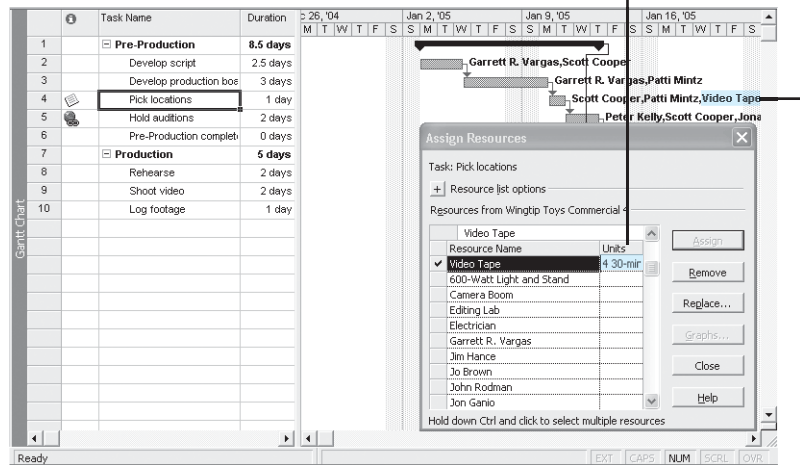
- 3 On the **Standard** toolbar, click the **Assign Resources** button. The **Assign Resources** dialog box appears. Unlike the version of this dialog box you saw using the Project Guide, this version includes the **Units** column. *Units* here refers to assignment units.

Tip If you are using Project Professional, you also see the **R/D** (request or demand) column in the **Assign Resources** dialog box. This relates to setting a priority for a resource assignment when using a Project Server feature called resource substitution. For more information, see Part 4, "Introducing Project Server."

- 4 In the **Task Name** column, click the name of task 4, **Pick locations**. You plan to use up to four tapes while picking locations.
- 5 In the **Assign Resources** dialog box, select the **Units** field for the Video Tape resource.
- 6 Type **4**, and then click the **Assign** button.

Project assigns the video tape to the task. Your screen should look like the following illustration:

When you assign a material resource to a task, its label value appears in the Units column...



...and next to the Gantt bar to which it is assigned.

Because video tape is a material resource, it cannot do work. Therefore, assigning a material resource does not affect the duration of a task.

CLOSE: the Wingtip Toys Commercial 4 file.

Key Points

- In Project, a task normally has work associated with it after a work resource (people or equipment) has been assigned to the task.
- When resources are assigned more work than they can complete in a specific period of time, they are said to be overallocated during that time period.
- You must assign resources to tasks before you can track their progress or cost.
- Project follows the scheduling formula: duration times units equals work.
- Effort-driven scheduling is a task-level setting. It determines whether work remains constant when you assign additional resources to the task.
- The easiest way to understand effort-driven scheduling is to ask yourself, “If one person can do this task in 10 days, could two people do it in five days?” If so, then effort-driven scheduling should be turned on for the task.
- Smart tags appear after you perform certain actions in Project. They allow you to quickly change the effect of your action to something other than the default effect.
- Assigning material resources to tasks allows you to track consumables.



Gantt Chart Wizard

What kind of information do you want to display in your Gantt Chart?

- Standard
- Critical path
- Baseline
- Other: Standard: Style 4
- Custom Gantt Chart

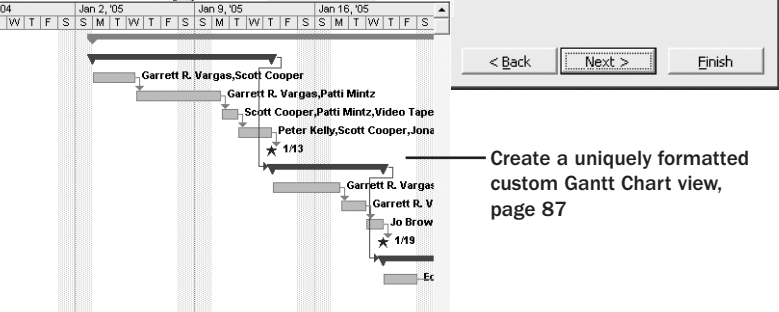
< Back Next > Finish

Format categories of Gantt bars with the Gantt Chart Wizard, page 87

Custom Gantt Chart

Task Name	Duration
Wingtip Toys Comm	16.5 days
Pre-Production	8.5 days
Develop script	2.5 days
Develop production l	3 days
Pick locations	1 day
Hold auditions	2 days
Pre-Production com	0 days
Production	4.5 days
Rehearse	2.25 days
Shoot video	2 days
Log footage	1 day
Production complete	0 days
Post-Production	3.5 days
Fine cut edit	2 days
Add final audio	1 day
Hand off master to c	4 hrs

Ready



Create a uniquely formatted custom Gantt Chart view, page 87

Preview views and reports before printing them, page 87

Microsoft Project - Wingtip Toys Commercial 5

Page Setup... Print... Close Help

ID	Task Name	Duration
0	Wingtip Toys Commercial 5	16.5 days
1	Pre-Production	8.5 days
2	Develop script	2.5 days
3	Develop production l	3 days
4	Pick locations	1 day
5	Hold auditions	2 days
6	Pre-Production com	0 days
7	Production	4.5 days
8	Rehearse	2.25 days
9	Shoot video	2 days
10	Log footage	1 day
11	Production complete	0 days
12	Post-Production	3.5 days
13	Fine cut edit	2 days
14	Add final audio	1 day
15	Hand off master to c	4 hrs

Microsoft Project - Wingtip Toys Commercial 5

Page Setup... Print... Close Help

Who has what? (tasks of type: Gantt) - Wingtip Toys Commercial 5

Task Name	IS	IL	IR	IC	IT	IS	IL	IR	IC	IT	IS	IL	IR	IC	IT
Garrett R. Vargas	0:01	0:01	0:01	0:01	0:01										
Scott Cooper	0:01	0:01	0:01	0:01	0:01										
Peter Kelly	0:01	0:01	0:01	0:01	0:01										
Jo Brown	0:01	0:01	0:01	0:01	0:01										

Page 1

Page: 1 of 4 Size: 2 rows by 2 columns

Print reports to communicate important details about the project plan, page 99

5

Formatting and Printing Your Plan

In this chapter you will learn to:

- ✓ Customize a view and preview the way it will look when printed.
 - ✓ Draw on the chart portion of a Gantt Chart view.
 - ✓ Change the formatting of text in a project plan.
 - ✓ Edit and print reports.
-

See Also Do you need a quick refresher on the topics in this chapter? See the quick reference entries on pages xxiii–xxiv.

In this chapter, you use some of the formatting features in Microsoft Office Project 2003 to change the way your data appears, and then you preview the results in the Print Preview window. As you might recall from Chapter 1, “Getting Started with Project,” a Project plan is really a database of information, not unlike a Microsoft Office Access 2003 database file. You don’t normally see all the data in a project plan at one time. Instead, you focus on the aspect of the plan that you’re currently interested in. *Views* and *reports* are the most common ways to see or print a project plan’s data. In both cases (especially with views), you can substantially format the data to meet your needs.

The primary way Project represents tasks graphically is as bars on the chart portion of a Gantt Chart view. These are called Gantt bars. On a Gantt chart, tasks, summary tasks, and milestones all appear as Gantt bars, and each type of bar has its own format. Whenever you work with Gantt bars, keep in mind that they represent tasks in a project plan.

Tip This chapter introduces you to some of the simpler view and report formatting features in Project. You’ll find quite a bit more material about formatting, printing, and publishing your project plans in Chapters 10, 11, 12, and 17. To find more information about available views and reports in Project’s online Help, type **About printing views and reports** into the **Search** box in the upper right corner of the Project window. The **Search** box initially contains the text *Type a question for help*.



Important Before you can use the practice files in this chapter, be sure you install them from the book's companion CD to their default location. See "Using the Book's CD-ROM," on page xiii, for more information.

Creating a Custom Gantt Chart View

The Gantt chart became a standard way of visualizing project plans when, in the early twentieth century, American engineer Henry Gantt developed a bar chart showing the use of resources over time. For many people, a Gantt chart is synonymous with a project plan. In Project, the default view is the Gantt Chart view. You are likely to spend a lot of your time in Project in this view.

The Gantt Chart view consists of two parts: a *table* on the left and a *timescaled* bar chart on the right. The bars on the chart graphically represent the tasks in the table in terms of start and finish dates, duration, and status (for example, whether work on the task has started or not). Other elements on the chart, such as link lines, represent *relationships* between tasks. The Gantt chart is a popular and widely understood representation of project information throughout the project management world.

Tip By default, Project displays the Gantt Chart view when you start it. However, you can change this to display any view you want at startup. On the **Tools** menu, click **Options**. In the **Options** dialog box, click the **View** tab. In the **Default View** box, click the view you want. The next time you start Project, that view will appear.

The default formatting applied to the Gantt Chart view works well for onscreen viewing, sharing with other programs, and printing. However, you can change the formatting of just about any element on the Gantt chart. In this exercise, we will focus on Gantt bars.

There are three distinct ways to format Gantt bars:

- Format whole categories of Gantt bars in the **Bar Styles** dialog box, which you can open by clicking the **Bar Styles** command on the **Format** menu. In this case, the formatting changes you make to a type of Gantt bar (a *summary task*, for example) apply to all such Gantt bars in the Gantt chart.
- Format whole categories of Gantt bars using the Gantt Chart Wizard, which you can start by clicking the **Gantt Chart Wizard** command on the **Format** menu. This wizard contains a series of pages in which you select formatting options for the most-used Gantt bars on the Gantt chart. Use the Gantt Chart Wizard to step you through some of the formatting actions that you can perform in the **Bar Styles** dialog box.

- Format individual Gantt bars directly. The formatting changes you make have no effect on other bars in the Gantt chart. You can double-click a Gantt bar on the Gantt chart to see its formatting options.

In this exercise, you create a custom Gantt chart and apply predefined formatting to it with the Gantt Chart Wizard. You then preview the results for printing.

Important If you are running Project Professional, you may need to make a one-time adjustment to use the My Computer account and to work offline. This helps ensure that the practice files you work with in this chapter don't affect your Project Server data. For more information, see "Starting Project Professional," on page 10.

OPEN: Wingtip Toys Commercial 5a from the `\My Documents\Microsoft Press\Project 2003 Step by Step\Chapter 5 Simple Formatting` folder. You can also access the practice files for this book by clicking **Start, All Programs, Microsoft Press, Project 2003 Step by Step**, and then selecting the chapter folder of the file you want to open.

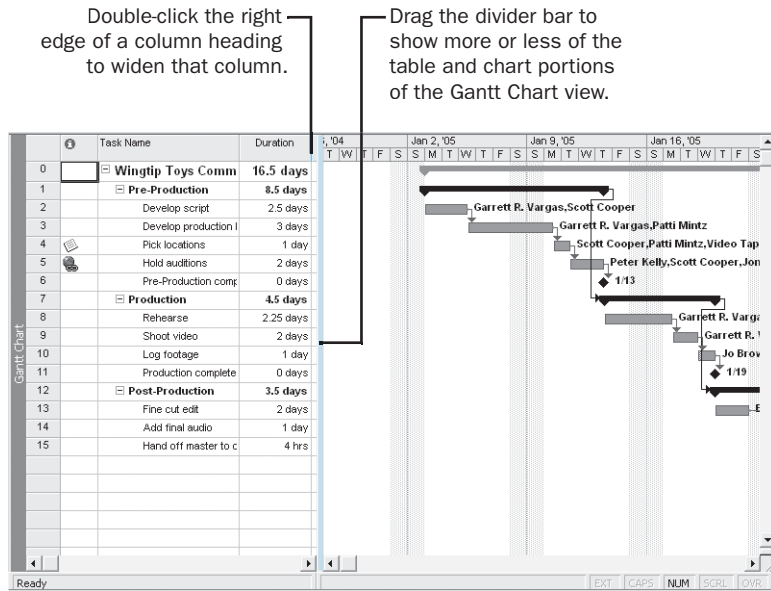
- 1** On the **File** menu, click **Save As**.
The **Save As** dialog box appears.
- 2** In the **File name** box, type **Wingtip Toys Commercial 5**, and then click the **Save** button.
Next you will display the project summary task to see the top-level or rolled-up details of the project. Project automatically generates the *project summary task* but doesn't display it by default.
- 3** On the **Tools** menu, click **Options**.
- 4** In the **Options** dialog box, click the **View** tab.
- 5** Under the **Outline options for** label, select the **Show project summary task** check box, and then click **OK**.
Project displays the project summary task at the top of the Gantt Chart view. You might see pound signs (##) in the project summary task's duration field. If so, complete steps 6 and 7.
- 6** Drag the vertical divider bar between the table and chart to the right until you can see the right edge of the **Duration** column.

Tip Double-clicking the divider bar will snap the divider to the nearest column edge.

- 7** Double-click the right edge of the **Duration** column, in the column heading, to expand the column so that you can see the entire value.

Tip You can also double-click anywhere in a column heading, and in the **Column Definition** dialog box that appears, click the **Best Fit** button.

The **Duration** column widens to show the widest value in the column. In this case, that value is the duration for the project summary task. Your screen should look similar to the following illustration:



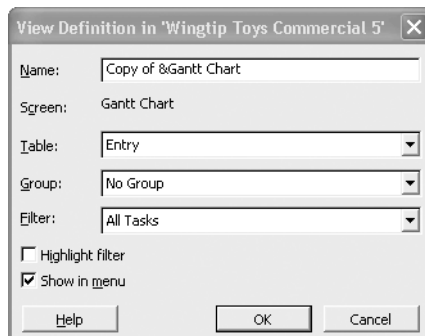
Next you will create a copy of the Gantt Chart view so that the formatting changes you make won't affect the original Gantt Chart view.

- 8 On the **View** menu, click **More Views**.

The **More Views** dialog box appears, with the current view (the Gantt Chart view) selected.

- 9 Click the **Copy** button.

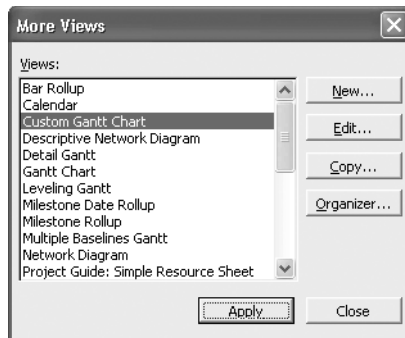
The **View Definition** dialog box appears. Your screen should look similar to the following illustration:



The **Name** field contains the proposed name of the new view, as it will appear in the **More Views** dialog box and, if you specify, on the **View** menu. Note the ampersand (&) in the **Name** field. This is a code that indicates the keyboard shortcut character of the new view name, should you wish to include one.

- 10 In the **Name** field, type **Custom Gantt Chart**, and then click **OK**.

The **View Definition** dialog box closes. The Custom Gantt Chart view appears and is selected in the **More Views** dialog box. Your screen should look similar to the following illustration:



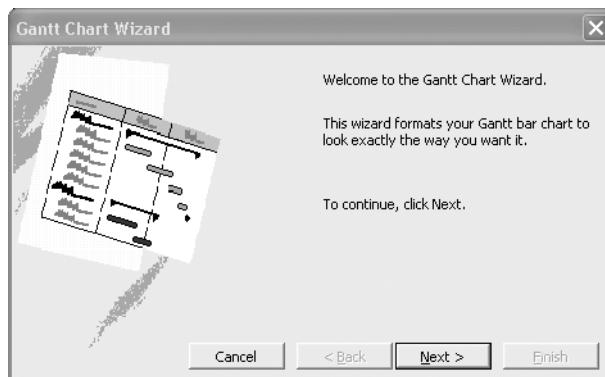
- 11 In the **More Views** dialog box, click the **Apply** button.

At this point, the Custom Gantt Chart view is an exact copy of the original Gantt Chart view, so the two views look alike. Note, however, that the view title on the left edge of the view is updated.

Next you will use the Gantt Chart Wizard to format the Gantt bars and milestones in the chart portion of the Custom Gantt Chart view.

- 12 On the **Format** menu, click **Gantt Chart Wizard**.

The welcome page of the Gantt Chart Wizard appears. Your screen should look similar to the following illustration:



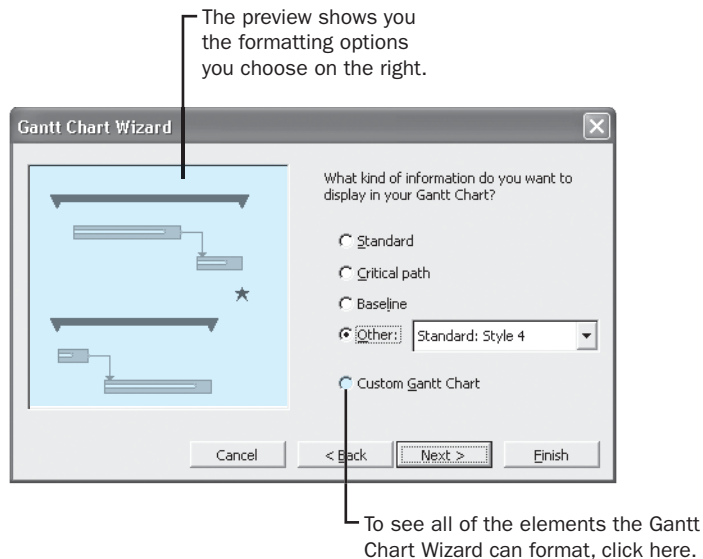
Tip You can also start the Gantt Chart Wizard, and several other formatting features, using the items in the Report pane of the Project Guide.

13 Click **Next**.

The next screen of the Gantt Chart Wizard appears.

14 Click the **Other** button, and in the drop-down list next to the **Other** option, click **Standard: Style 4**.

Your screen should look similar to the following illustration:



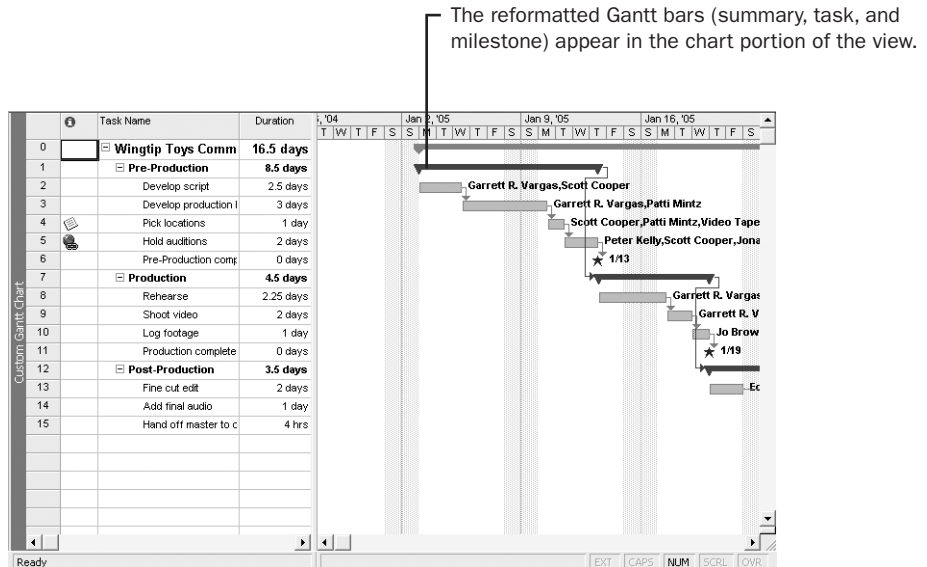
Tip If you want to see the other built-in Gantt chart formats available in the wizard, click them in the **Other** box to see the preview on the left side of the wizard's window. When you are done, make sure that **Standard: Style 4** is selected.

15 This is the only selection you'll make in the Gantt Chart Wizard for now, so click the **Finish** button.

The final page of the Gantt Chart Wizard appears.

- 16** Click the **Format It** button, and then click the **Exit Wizard** button.

The Gantt Chart Wizard applies the Standard: Style 4 formatting to the Custom Gantt Chart view and then closes. Your screen should look similar to the following illustration:

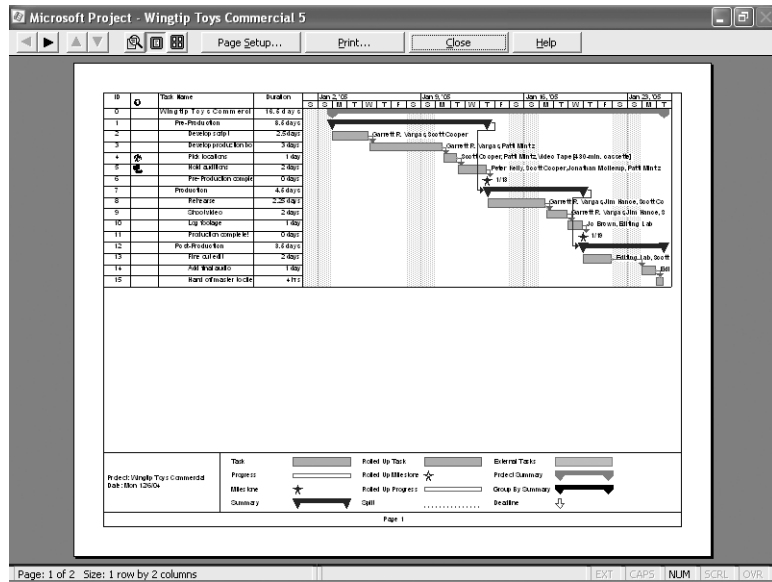


Here you can see the effects of the Standard: Style 4 formatting applied to the project plan. Note that none of the data in the project plan has changed; only the way it is formatted has changed. These formatting changes affect only the Custom Gantt Chart view; all the other views in Project are unaffected.

To conclude this exercise, you will preview the Custom Gantt Chart view. What you see on the screen closely approximates what you'd see on the printed page, and you'll verify this now.

- 17** On the **File** menu, click **Print Preview**.

Project displays the Custom Gantt Chart view in the Print Preview window. You will do more work in the Print Preview window later in this chapter and in Chapter 11, “Printing Project Information.” Your screen should look similar to the following illustration:



Note If you have a plotter (a device used to draw charts, diagrams, and other line-based graphics) selected as your default printer, or you have a different page size selected for your default printer, what you see in the Print Preview window might differ from what you see here.

18 On the **Print Preview** toolbar, click the **Close** button.

You can print the project plan now if you want, but previewing it is adequate for the purposes of this chapter. When printing in Project, you have additional options in the **Print** dialog box, which you can open by clicking the **Print** command on the **File** menu. For example, you can choose to print a specific date range of a timescaled view such as the Gantt Chart view, or you can print a specific page range.

Drawing on a Gantt Chart

Project includes a **Drawing** toolbar with which you can draw objects directly on the chart portion of a Gantt chart. For example, if you would like to note a particular event or graphically call out a specific item, you can draw objects such as text boxes, arrows, and other items directly on a Gantt chart. If you want, you can link a drawn

object to either end of a Gantt bar or to a specific date on the timescale. Here's how to choose the kind of link you need:

- Link objects to a Gantt bar when the object is specific to the task the Gantt bar represents. The object will move with the Gantt bar, if it is rescheduled.
- Link objects to a date when the information the object refers to is date-sensitive. The object will remain in the same position relative to the timescale, no matter which part of the timescale is displayed.

Tip If the **Drawing** toolbar does not have the type of item you would like to add, you can add bitmap images or documents using the **Object** command on the **Insert** menu.

In this exercise, you display the **Drawing** toolbar and add a text box to the Custom Gantt Chart view.

- 1** On the **View** menu, point to **Toolbars**, and then click **Drawing**.

The **Drawing** toolbar appears.

Tip You can also right-click any toolbar to see the **Toolbars** shortcut menu, and then display or hide a toolbar listed on that menu.

- 2** On the **Drawing** toolbar, click the **Text Box** button, and then drag a small square anywhere on the chart portion of the Custom Gantt Chart view.

- 3** In the square you just drew, type **Film festival January 13 and 14**.

- 4** On the **Format** menu, point to **Drawing**, and then click **Properties**.

The **Format Drawing** dialog box appears.

Tip You can also double-click the border of the text box to view its properties.

- 5** Click the **Line & Fill** tab if it is not already selected.

- 6** In the **Color** box under the **Fill** label, click **Yellow**.

Next, you'll attach the text box to a specific date on the timescale.

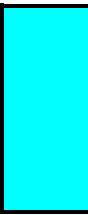
- 7** Click the **Size & Position** tab.

- 8** Make sure that **Attach To Timescale** is selected, and in the **Date** box, type or click **1/13/05**.

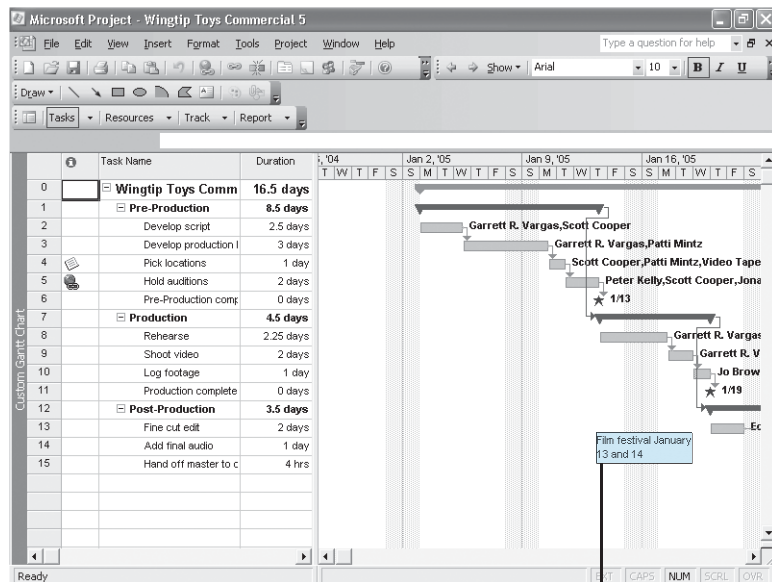
- 9** In the **Vertical** box under **Attach To Timescale**, type **2.75**, (this is the number of inches below the timescale where the top of the box will be positioned) and then click **OK** to close the **Format Drawing** dialog box.



Text Box



Project colors the text box yellow and positions it below the timescale near the date you specified. Your screen should look similar to the following illustration:



Double-click the border of a drawn object to change its formatting or other properties.

- 10** Because you attached the text box to a specific date on the timescale, it will always appear near this date, even if you zoom the timescale in or out, or scroll the chart left or right. Had you attached the text box to a Gantt bar, it would move with the Gantt bar if the task were rescheduled. To conclude this exercise, you will hide the **Drawing** toolbar.

- 11** On the **View** menu point to **Toolbars**, and then click **Drawing**.

The **Drawing** toolbar is hidden.

Formatting Text in a View

You can format text in tables, such as task names in a Gantt Chart view. There are two distinct ways to format text:

- Format whole categories of text in the **Text Styles** dialog box, which you can open by clicking the **Text Styles** command on the **Format** menu. The formatting changes you make to a category (milestones or summary tasks, for example) apply to all cases of that category in the active view. You can see the categories for which you can change text formatting in the **Item to Change** box in the **Text Styles** dialog box.

- Format individual selections of text directly. The formatting changes you make have no effect on other text in the view.

Tip You might notice some similarities between Project and Word in how you can format text. In Project, style-based formatting (available through the **Text Styles** command on the **Format** menu) is similar to applying paragraph styles in Word. Likewise, the direct formatting of text (available through the **Font** command on the **Format** menu) is similar to direct text formatting in Word.

As with all formatting options in Project, the formatting changes you make to any view or report affect only that view or report, and only for the active project plan. Later chapters will introduce ways of copying custom views or reports between project plans.

In this exercise, you switch to a different view and then use text styles and direct formatting to change the appearance of the text in that view.

- On the **View** menu, click **More Views**.

The **More Views** dialog box appears, with the current view (the Custom Gantt Chart view) selected.

- In the **Views** box, click **Task Sheet**, and then click the **Apply** button.

The Task Sheet view appears. Unlike Gantt Chart views, this view does not include a chart component; it consists of a single table. Next you will change the table displayed in the Task Sheet view.

- On the **View** menu, point to **Table: Entry**, and then click **Summary**.

The Summary table appears in the Task Sheet view. Like the Entry table, this table focuses on task details, but it includes a different set of *fields*. The field we're most interested in now is the **Cost** field. Your screen should look similar to the following illustration:

	Task Name	Duration	Start	Finish	% Comp.	Cost	Work
0	Wingtip Toys Comm	16.5 days	Mon 1/3/05	Tue 1/25/05	0%	\$8,671.40	700 hrs
1	Pre-Production	8.5 days	Mon 1/3/05	Thu 1/13/05	0%	\$2,631.70	168 hrs
2	Develop script	2.5 days	Mon 1/3/05	Wed 1/5/05	0%	\$787.50	40 hrs
3	Develop production l	3 days	Wed 1/5/05	Mon 1/10/05	0%	\$705.60	48 hrs
4	Pick locations	1 day	Mon 1/10/05	Tue 1/11/05	0%	\$250.20	16 hrs
5	Hold auditions	2 days	Tue 1/11/05	Thu 1/13/05	0%	\$888.40	64 hrs
6	Pre-Production comp	0 days	Thu 1/13/05	Thu 1/13/05	0%	\$0.00	0 hrs
7	Production	4.5 days	Thu 1/13/05	Wed 1/19/05	0%	\$4,476.70	456 hrs
8	Rehearse	2.25 days	Thu 1/13/05	Mon 1/17/05	0%	\$1,717.40	214 hrs
9	Shoot video	2 days	Mon 1/17/05	Tue 1/18/05	0%	\$2,409.30	226 hrs
10	Log footage	1 day	Wed 1/19/05	Wed 1/19/05	0%	\$350.00	16 hrs
11	Production complete	0 days	Wed 1/19/05	Wed 1/19/05	0%	\$0.00	0 hrs
12	Post-Production	3.5 days	Thu 1/20/05	Tue 1/25/05	0%	\$1,563.00	76 hrs
13	Fine cut edit	2 days	Thu 1/20/05	Fri 1/21/05	0%	\$978.00	48 hrs
14	Add final audio	1 day	Mon 1/24/05	Mon 1/24/05	0%	\$505.00	24 hrs
15	Hand off master to c	4 hrs	Tue 1/25/05	Tue 1/25/05	0%	\$80.00	4 hrs

Next you'll change how Project formats an entire category of information—in this case, summary tasks.

- 4 On the **Format** menu, click **Text Styles**.

The **Text Styles** dialog box appears.

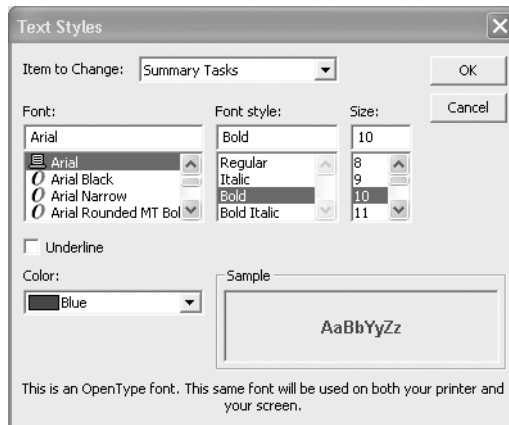
Tip Text styles in Project are similar to styles in Word. The **Item to Change** list displays all the types of information in a project plan that you can consistently format.

- 5 In the **Item to Change** list, click **Summary Tasks**.

The current format settings of summary tasks appear in the dialog box, and a preview appears in the **Sample** box. Next you will change the formatting so that the summary tasks appear larger and in color.

- 6 In the **Size** box, click **10**.
- 7 In the **Color** box, click **Blue**.

Your screen should look similar to the following illustration:



- 8 Click **OK**.

Project applies the new format settings to all summary tasks in the project (except for the project summary task, which appears separately in the **Item to Change** list). Any new summary tasks added to the project plan will also appear with the new formatting.

- 9 Double-click between the text in the column labels to widen any columns that display pound signs (##).

Your screen should look similar to the following illustration:

After applying the text style formatting change, all summary tasks are reformatted.

If you see pound signs (##), double-click here to widen the column to the right.

Task Name	Duration	Start	Finish	% Comp.	Cost	Work
0 Wingtip Toys Comm	16.5 days	Mon 1/3/05	Tue 1/25/05	0%	\$8,671.40	700 hrs
1 Pre-Production	8.5 days	Mon 1/3/05	Thu 1/13/05	0%	\$2,631.70	168 hrs
2 Develop script	2.5 days	Mon 1/3/05	Wed 1/5/05	0%	\$787.50	40 hrs
3 Develop production l	3 days	Wed 1/5/05	Mon 1/10/05	0%	\$705.60	48 hrs
4 Pick locations	1 day	Mon 1/10/05	Tue 1/11/05	0%	\$250.20	16 hrs
5 Hold auditions	2 days	Tue 1/11/05	Thu 1/13/05	0%	\$888.40	64 hrs
6 Pre-Production comp	0 days	Thu 1/13/05	Thu 1/13/05	0%	\$0.00	0 hrs
7 Production	4.5 days	Thu 1/13/05	Wed 1/19/05	0%	\$4,476.70	456 hrs
8 Rehearse	2.25 days	Thu 1/13/05	Mon 1/17/05	0%	\$1,717.40	214 hrs
9 Shoot video	2 days	Mon 1/17/05	Tue 1/18/05	0%	\$2,409.30	226 hrs
10 Log footage	1 day	Wed 1/19/05	Wed 1/19/05	0%	\$350.00	16 hrs
11 Production complete	0 days	Wed 1/19/05	Wed 1/19/05	0%	\$0.00	0 hrs
12 Post-Production	3.5 days	Thu 1/20/05	Tue 1/25/05	0%	\$1,563.00	76 hrs
13 Fine cut edit	2 days	Thu 1/20/05	Fri 1/21/05	0%	\$978.00	48 hrs
14 Add final audio	1 day	Mon 1/24/05	Mon 1/24/05	0%	\$505.00	24 hrs
15 Hand off master to c	4 hrs	Tue 1/25/05	Tue 1/25/05	0%	\$80.00	4 hrs

The format changes you've made to summary tasks apply to all tables that you can display in the Task Sheet view, but only in the Task Sheet view. If you displayed the Summary table in the Gantt Chart view, for example, these format changes would not appear there.

To conclude this exercise, you will apply direct formatting to a specific item in a view. As with styles in Word, you can use direct formatting in conjunction with text style formatting. In this project plan, you'll apply italic formatting to the production phase's cost.

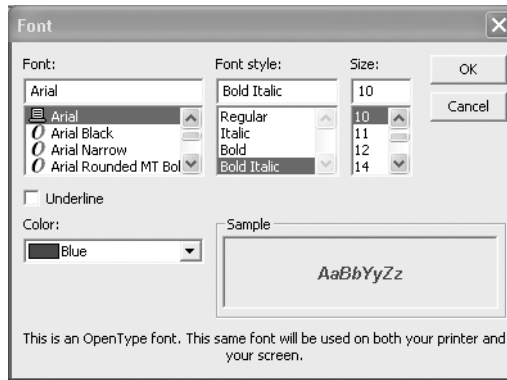
- 10 In the **Summary** table, click the **Cost** field for task 7, the Production summary task.
- 11 On the **Format** menu, click **Font**.

The **Font** dialog box appears. This is similar to the **Text Styles** dialog box you worked with earlier. However, the options you choose here apply only to the selected text.

Troubleshooting The **Font** command on the **Format** menu applies only to selections of text; you can't use this command to affect the formatting of empty rows in a table. To set the default formatting of rows, use the **Text Styles** command (**Format** menu) instead.

- 12 In the **Font Style** box, click **Bold Italic**.

Your screen should look similar to the following illustration:



- 13 Click **OK**.

Project applies bold italic formatting to task 7's **Cost** field. Your screen should look similar to the following illustration:

After applying direct formatting, only this value is formatted.

Task Name	Duration	Start	Finish	% Comp.	Cost	Work
0 Wingtip Toys Comm	16.5 days	Mon 1/3/05	Tue 1/25/05	0%	\$8,671.40	700 hrs
1 Pre-Production	8.5 days	Mon 1/3/05	Thu 1/13/05	0%	\$2,631.70	168 hrs
2 Develop script	2.5 days	Mon 1/3/05	Wed 1/5/05	0%	\$787.50	40 hrs
3 Develop production l	3 days	Wed 1/5/05	Mon 1/10/05	0%	\$705.60	48 hrs
4 Pick locations	1 day	Mon 1/10/05	Tue 1/11/05	0%	\$250.20	16 hrs
5 Hold auditions	2 days	Tue 1/11/05	Thu 1/13/05	0%	\$888.40	64 hrs
6 Pre-Production comp	0 days	Thu 1/13/05	Thu 1/13/05	0%	\$0.00	0 hrs
7 Production	4.5 days	Thu 1/13/05	Wed 1/19/05	0%	\$4,476.70	456 hrs
8 Rehearse	2.25 days	Thu 1/13/05	Mon 1/17/05	0%	\$1,717.40	214 hrs
9 Shoot video	2 days	Mon 1/17/05	Tue 1/18/05	0%	\$2,409.30	226 hrs
10 Log footage	1 day	Wed 1/19/05	Wed 1/19/05	0%	\$350.00	16 hrs
11 Production complete	0 days	Wed 1/19/05	Wed 1/19/05	0%	\$0.00	0 hrs
12 Post-Production	3.5 days	Thu 1/20/05	Tue 1/25/05	0%	\$1,563.00	76 hrs
13 Fine cut edit	2 days	Thu 1/20/05	Fri 1/21/05	0%	\$978.00	48 hrs
14 Add final audio	1 day	Mon 1/24/05	Mon 1/24/05	0%	\$505.00	24 hrs
15 Hand off master to c	4 hrs	Tue 1/25/05	Tue 1/25/05	0%	\$80.00	4 hrs

Troubleshooting You can remove direct formatting that's been applied to text and restore that text to the formatting defined by the **Text Styles** dialog box (**Format** menu). First select the cell containing the formatted text. Next, on the **Edit** menu point to **Clear**, and click **Formats**.

To sum up, use the **Text Styles** command (on the **Format** menu) to change the formatting of entire categories of information, such as all summary tasks. When you want to reformat a specific item (such as one task's cost value) to draw attention

to it, use the **Font** command (on the **Format** menu). Note that the **Font** command is not available in some views, such as the Calendar view.

Note Some buttons on the Formatting toolbar correspond to the options available with the **Font** command (on the **Format** menu). These options control direct formatting, not the style-based formatting you might apply with the **Text Styles** dialog box.

Formatting and Printing Reports

Reports are predefined formats intended for printing Project data. Unlike views, which you can either print or work with on the screen, reports are designed only for printing or for viewing in the Print Preview window. You do not enter data directly into a report. Project includes several predefined task, resource, and assignment reports you can edit to get the information you want.

In this exercise, you view a report in the Print Preview window, and then you edit its format to include additional information.

- 1 On the **View** menu, click **Reports**.

The **Reports** dialog box appears, showing the six broad categories of reports available in Project. Your screen should look similar to the following illustration:



- 2 Click **Overview**, and then click the **Select** button.

The **Overview Reports** dialog box appears, listing the five predefined reports in Project that provide project-wide overview information.

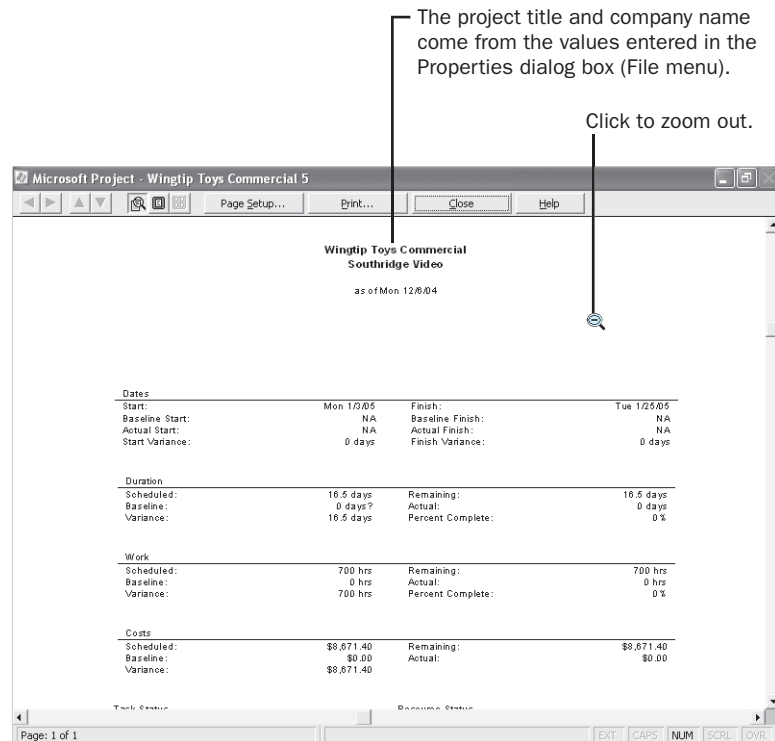
- 3 In the **Overview Reports** dialog box, click **Project Summary**, and then click the **Select** button.

Project displays the Project Summary report in the Print Preview window. This is a handy summary of the project plan's tasks, resources, costs, and current status. You could use this report, for example, as a recurring status report that you share with the clients or other *stakeholders* of the project.

Depending on your screen resolution, the text in the report might not be readable when you view a full page.

Tip Here's a quick way to see vital project statistics on the screen: Click the **Project Information** command on the **Project** menu, and then click **Statistics**.

- 4 In the Print Preview window, click the upper half of the page with the mouse pointer. Project zooms in to show the page at a legible resolution. Your screen should look similar to the following illustration:



At this point in the project life cycle, the most pertinent pieces of information in the report are the planned start and finish dates and the total cost. If any of these values did not fit within the expectations of the project *sponsor* or other stakeholders, now would be a good time to find out.

- 5 On the **Print Preview** toolbar, click the **Close** button.

The Print Preview window closes, and the **Reports** dialog box reappears. Next you will preview and edit a different report.

For a small, simple project such as the TV commercial, a report is a simple way to communicate assignments to the resources involved. To do this, you will work with the Who Does What When report.

Tip This tip describes enterprise project management (EPM) functionality. For more detailed projects, communicating resource assignments (and subsequent changes) and other project details can be a significant responsibility for a project manager. Project Server offers an intranet-based solution for communicating such project details in conjunction with Project Professional. For more information, see Part 4, “Introducing Project Server.”

- 6** Click **Assignments**, and then click the **Select** button.

The **Assignment Reports** dialog box appears, listing four predefined reports in Project that provide resource assignment information.

- 7** In the **Assignment Reports** dialog box, click **Who Does What When**, and then click the **Select** button.

Project displays the first page of the Who Does What When report in the Print Preview window. Your screen should look similar to the following illustration:

	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Doreen P. Vayns Resource Resource production board Finance Chronicles Head of sales & credit	0:00	0:00	0:00	0:00	0:00									
Jim Ranz Resource Chronicles													0:00	0:00
Scotty Rouse Resource Resource production board Head of sales & credit Finance Chronicles Head of sales & credit All available	0:00	0:00	0:00	0:00				0:00	0:00	0:00			0:00	0:00
Jo Brown Resource All available														
Paul Rouse Resource production board Head of sales & credit Finance Chronicles				0:00	0:00	0:00		0:00	0:00	0:00			0:00	0:00
Perry Rouse Head of sales & credit Finance Chronicles Head of sales & credit								0:00	0:00	0:00			0:00	0:00
Zany Rouse Resource Chronicles													0:00	0:00
Jonathan Rouse Head of sales & credit Finance Chronicles								0:00	0:00	0:00			0:00	0:00
Kim Rouse Resource Chronicles													0:00	0:00
Brock Rouse Chronicles														0:00
Wally W. Calculator													0:00	0:00

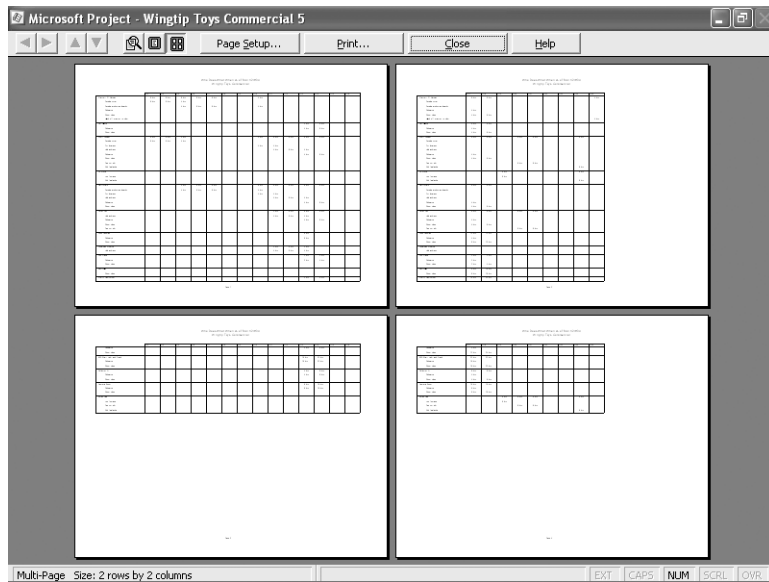
Note that the status bar message tells you this report spans four pages. To get a broader view of the output, you will switch to a multipage view.



Multiple Pages

- 8** On the **Print Preview** toolbar, click the **Multiple Pages** button.

The entire report appears in the Print Preview window. Your screen should look similar to the following illustration:



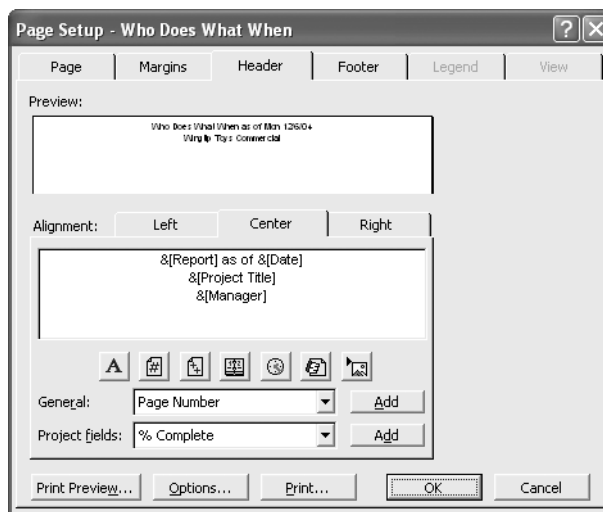
To conclude this exercise, you will customize the header that appears at the top of each printed page so that it includes a logo graphic.

- 9 On the **Print Preview** toolbar, click the **Page Setup** button.

The **Page Setup** dialog box for the Who Does What When report appears.

- 10 Click the **Header** tab.

Your screen should look similar to the following illustration:



As you can see in the **Preview** and **Alignment** boxes, codes such as &[Date] determine the specific text that appears in the header. You will add a logo to the left side of the header.

11 Next to **Alignment**, click the **Left** tab.

As with all regions of the header and footer, you can insert standard elements, such as page numbers, as well as any Project field. In this exercise, you'll insert a logo graphic that's supplied for you.



Insert Picture

12 Click the **Insert Picture** button.

13 Navigate to the *Chapter 5 Simple Formatting* folder and double-click the Logo file.

The logo image appears on the left side of the header in the **Page Setup** dialog box.

14 Click **OK** to close the **Page Setup** dialog box.

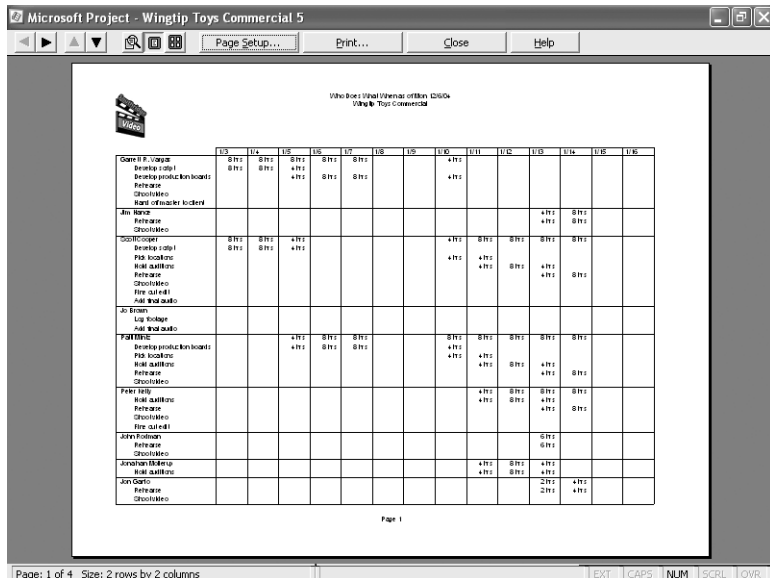
The updated header appears on each page in the Print Preview window.



One Page

15 To get a closer look at the updated header, on the **Print Preview** toolbar, click the **One Page** button.

Project displays the first page of the report. Your screen should look similar to the following illustration:



16 On the **Print Preview** toolbar, click the **Close** button.

17 Click **Close** again to close the **Reports** dialog box. The Task Sheet view reappears.

Tip You can change the headers and footers of views in the same way you do in reports. Keep in mind that changes you make to the page setup of any view or report apply only to that view or report. However, the general way you customize the page setup is the same for any report or view.

CLOSE: the Wingtip Toys Commercial 5 file.

Key Points

- To format whole categories of Gantt bars you can use either the **Bar Styles** dialog box (**Format** menu) or the Gantt Chart Wizard (**Format** menu). To format individual Gantt bars, use the **Bar** command (**Format** menu).
- You can redefine the formatting of a built-in view, or copy a view first and then reformat it.
- You can draw or insert graphic objects on the chart portion of a Gantt chart view, but not on the table portion.
- Reports are intended for print-previewing or printing only; you cannot enter or edit data directly in a report. You can, however, edit some elements of reports such as the text that appears in the header or footer of the page.

Save a baseline and compare scheduled, baseline and actual values, page 109

Task Name	Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish Var.
0 Wingtip Toys Co	Mon 1/3/05	Tue 1/25/05	Mon 1/3/05	Tue 1/25/05	0 days	0 days
1 Pre-Production	Mon 1/3/05	Thu 1/13/05	Mon 1/3/05	Thu 1/13/05	0 days	0 days
2 Develop script	Mon 1/3/05	Wed 1/5/05	Mon 1/3/05	Wed 1/5/05	0 days	0 days
3 Develop production boards	Wed 1/5/05	Mon 1/10/05	Wed 1/5/05	Mon 1/10/05	0 days	0 days
4 Pick locations	Mon 1/10/05	Tue 1/11/05	Mon 1/10/05	Tue 1/11/05	0 days	0 days
5 Hold auditions	Tue 1/11/05	Thu 1/13/05	Thu 1/13/05	Thu 1/13/05	0 days	0 days
6 Pre-Production complete!	Thu 1/13/05	Thu 1/13/05	Thu 1/13/05	Thu 1/13/05	0 days	0 days
7 Production	Thu 1/13/05	Wed 1/19/05	Thu 1/13/05	Wed 1/19/05	0 days	0 days
8 Rehearse	Thu 1/13/05	Mon 1/17/05	Mon 1/17/05	Mon 1/17/05	0 days	0 days
9 Shoot video	Mon 1/17/05	Tue 1/18/05	Mon 1/17/05	Tue 1/18/05	0 days	0 days
10 Log footage	Wed 1/19/05	Wed 1/19/05	Wed 1/19/05	Wed 1/19/05	0 days	0 days
11 Production complete!	Wed 1/19/05	Wed 1/19/05	Wed 1/19/05	Wed 1/19/05	0 days	0 days
12 Post-Production	Thu 1/20/05	Tue 1/25/05	Thu 1/20/05	Tue 1/25/05	0 days	0 days
13 Fine cut edit	Thu 1/20/05	Fri 1/21/05	Thu 1/20/05	Fri 1/21/05	0 days	0 days
14 Add final audio	Mon 1/24/05	Mon 1/24/05	Mon 1/24/05	Mon 1/24/05	0 days	0 days
15 Hand off master	Tue 1/25/05	Tue 1/25/05	Tue 1/25/05	Tue 1/25/05	0 days	0 days

The screenshot shows the Microsoft Project interface with the 'Incorporate Progress' dialog box open. The dialog has two sections: '1. Set the Status Date' and '2. Update progress'. The 'Update progress' section is active, showing a table with columns for Task Name, Work, and % Work Complete. The table lists tasks from 'Wingtip Toys Commercial 6' down to 'Hand off master to client'. The 'Update progress' section also includes instructions on how to use the status date and the % Work Complete column.

Enter percent work complete per task, page 112

Enter actual and remaining work per task, page 112

Task Name	Work	% Work Complete
0 Wingtip Toys Commercial 6	700 hrs	19%
1 Pre-Production	168 hrs	81%
2 Develop script	40 hrs	100%
3 Develop production boards	48 hrs	100%
4 Pick locations	16 hrs	100%
5 Hold auditions	64 hrs	50%
6 Pre-Production complete!	0 hrs	0%
7 Production	456 hrs	0%
8 Rehearse	214 hrs	0%
9 Shoot video	226 hrs	0%
10 Log footage	16 hrs	0%
11 Production complete!	0 hrs	0%

Record a task's actual duration, page 115

The screenshot shows the 'Update Tasks' dialog box. It has fields for 'Name' (Rehearse), 'Duration' (2.25d), '% Complete' (0%), 'Actual dur.' (80), and 'Remaining dur.' (2.25d). There are also sections for 'Actual' and 'Current' start and finish dates. The 'Actual' section has 'Start' set to 1/17/05 and 'Finish' set to NA. The 'Current' section has 'Start' set to Thu 1/13/05 and 'Finish' set to Mon 1/17/05. Buttons for 'Help', 'Notes...', 'OK', and 'Cancel' are at the bottom.

6

Tracking Progress on Tasks

In this chapter you will learn to:

- ✓ Save current values in a schedule as a baseline.
 - ✓ Record progress on tasks through a specific date.
 - ✓ Record a task's percentage of completion.
 - ✓ Enter actual start, finish, work, and duration values for tasks.
-

See Also Do you need a quick refresher on the topics in this chapter? See the quick reference entries on pages xxiv–xxv.

Until now, you have focused on project *planning*—developing and communicating the details of a project before actual work begins. When work begins, so does the next phase of project management: tracking progress. *Tracking* means recording project details such as who did what work, when the work was done, and at what cost. These details are often called *actuals*.

Tracking actuals is essential to properly managing, as opposed to just planning, a project. The project manager must know how well the project team is performing and when to take corrective action. Properly tracking project performance and comparing it to the original plan lets you answer such questions as these:

- Are tasks starting and finishing as planned, and, if not, what will be the impact on the project's finish date?
- Are resources spending more or less time than planned to complete tasks?
- Are higher-than-anticipated task costs driving up the overall cost of the project?

Microsoft Office Project 2003 supports several ways to track progress. Your choice of a tracking method should depend on the level of detail or control required by you, your project *sponsor*, and other *stakeholders*. Tracking the fine details of a project requires more work from you and possibly from the resources working on the project. So before you begin tracking progress, you should determine the level of detail you need. The different levels of tracking detail include the following:

- Record project work as scheduled. This works best if everything in the project occurs exactly as planned. Hey, it could happen!

- Record each task's percentage of completion, either at precise values or at increments such as 25, 50, 75, or 100 percent.
- Record the actual start, actual finish, actual work, and actual and remaining duration for each task or assignment.
- Track assignment-level work by time period. This is the most detailed level of tracking. Here you record actual work values per day, week, or another interval.

Because different portions of a project might have different tracking needs, you might need to apply a combination of these approaches within a single project. For example, you might want to track high-risk tasks more closely than low-risk ones. In this chapter, you will perform the first three actions in the preceding list; the fourth (tracking assignment-level work by time period) is addressed in Part 2, “Advanced Project Scheduling.” For users of Project Professional and Project Server, enterprise-level tracking is addressed in Part 4, “Introducing Project Server.”



Important Before you can use the practice files in this chapter, be sure you install them from the book's companion CD to their default location. See “Using the Book's CD-ROM,” on page xiii, for more information.

Saving a Project Baseline

One of a project manager's most important activities, after developing a project plan, is to record actuals and evaluate project performance. To judge project performance properly, you will need to compare it to your original plan. This original plan is called the baseline plan, or just the *baseline*. A baseline is a collection of important values in a project plan, such as the planned start dates, finish dates, and the costs of the tasks, resources, and assignments. When you save a baseline, Project takes a “snapshot” of the existing values and saves it in your Project plan for future comparison.

The specific values saved in a baseline include the task, resource, and assignment fields, and *timephased fields* in the following list.

Task fields	Resource fields	Assignment fields
Start	Work and timephased work	Start
Finish	Cost and timephased cost	Finish
Duration		Work and timephased work
Work and timephased work		Cost and timephased cost
Cost and timephased cost		

Tip Timephased fields show task, resource, and assignment values distributed over time. For example, you can look at a task with five days of work planned at the weekly, daily, or hourly level and see the specific baseline work values per time increment. In Part 2 you will work with timephased values.

You should save the baseline when

- You have developed the project plan as fully as possible. (However, this does not mean you cannot add tasks, resources, or assignments to the project after work has started. Usually this is unavoidable.)
- You have not yet started entering actual values, such as a task's percentage of completion.

The TV commercial project plan is now fully developed, and actual work on the project will soon begin. In this exercise, you save the baseline for the TV commercial project and then view the baseline task values.

Important If you are running Project Professional, you may need to make a one-time adjustment to use the My Computer account and to work offline. This helps ensure that the practice files you work with in this chapter don't affect your Project Server data. For more information, see "Starting Project Professional," on page 10.

OPEN: Wingtip Toys Commercial 6a from the `\My Documents\Microsoft Press\Project 2003 Step by Step\Chapter 6 Simple Tracking` folder. You can also access the practice files for this book by clicking **Start, All Programs, Microsoft Press, Project 2003 Step by Step**, and then selecting the chapter folder of the file you want to open.

- 1** On the **File** menu, click **Save As**.
The **Save As** dialog box appears.
- 2** In the **File name** box, type **Wingtip Toys Commercial 6**, and then click the **Save** button.
- 3** On the **Project Guide** toolbar, click the **Track** button.
The Track pane appears.
- 4** In the Track pane, click the **Save a baseline plan to compare with later versions** link.
The Save Baseline pane appears.
- 5** Click the **Save Baseline** button.

Project saves the baseline, even though there's no indication in the Gantt Chart view that anything has changed. You will now see some of the changes caused by saving the baseline.

Tip To save a baseline, you can also click the **Save Baseline** command. (On the **Tools** menu, point to **Tracking** and click **Save Baseline**.)



Show/Hide Project Guide

6 Click the **Show/Hide Project Guide** button on the **Project Guide** toolbar.

The Project Guide closes.

Tip You can save up to 11 baselines in a single plan. (The first one is called **Baseline**, and the rest are **Baseline 1** through **Baseline 10**.) Saving multiple baselines can be useful for projects with exceptionally long planning phases, where you might want to compare different sets of baseline values. For example, you might want to save and compare the baseline plans every month as the planning details change. To learn more about baselines in Project’s online Help, type **About baselines** into the **Search** box in the upper right corner of the Project window. The **Search** box initially contains the text *Type a question for help*.

7 On the **View** menu, click **More Views**.

The **More Views** dialog box appears.

8 In the **Views** box, click **Task Sheet**, and then click the **Apply** button.

Because the Task Sheet view does not include the Gantt chart, you have more room to see the fields in the table. Now you’ll switch to a different table in the Task Sheet view.

9 On the **View** menu, point to **Table: Summary**, and click **Variance**.

The Variance table appears. This table includes both the scheduled and baseline starts and finish columns, shown side by side for easy comparison.

Tip If any column contains pound signs (###), double-click between the column titles to widen that column.

Your screen should look similar to the following illustration:

	Task Name	Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish Var.
0	Wingtip Toys Co	Mon 1/3/05	Tue 1/25/05	Mon 1/3/05	Tue 1/25/05	0 days	0 days
1	Pre-Production	Mon 1/3/05	Thu 1/13/05	Mon 1/3/05	Thu 1/13/05	0 days	0 days
2	Develop script	Mon 1/3/05	Wed 1/5/05	Mon 1/3/05	Wed 1/5/05	0 days	0 days
3	Develop produc	Wed 1/5/05	Mon 1/10/05	Wed 1/5/05	Mon 1/10/05	0 days	0 days
4	Pick locations	Mon 1/10/05	Tue 1/11/05	Mon 1/10/05	Tue 1/11/05	0 days	0 days
5	Hold auditions	Tue 1/11/05	Thu 1/13/05	Tue 1/11/05	Thu 1/13/05	0 days	0 days
6	Pre-Production	Thu 1/13/05	Thu 1/13/05	Thu 1/13/05	Thu 1/13/05	0 days	0 days
7	Production	Thu 1/13/05	Wed 1/19/05	Thu 1/13/05	Wed 1/19/05	0 days	0 days
8	Rehearse	Thu 1/13/05	Mon 1/17/05	Thu 1/13/05	Mon 1/17/05	0 days	0 days
9	Shoot video	Mon 1/17/05	Tue 1/18/05	Mon 1/17/05	Tue 1/18/05	0 days	0 days
10	Log footage	Wed 1/19/05	Wed 1/19/05	Wed 1/19/05	Wed 1/19/05	0 days	0 days
11	Production com	Wed 1/19/05	Wed 1/19/05	Wed 1/19/05	Wed 1/19/05	0 days	0 days
12	Post-Producti	Thu 1/20/05	Tue 1/25/05	Thu 1/20/05	Tue 1/25/05	0 days	0 days
13	Fine cut edit	Thu 1/20/05	Fri 1/21/05	Thu 1/20/05	Fri 1/21/05	0 days	0 days
14	Add final audio	Mon 1/24/05	Mon 1/24/05	Mon 1/24/05	Mon 1/24/05	0 days	0 days
15	Hand off maste	Tue 1/25/05	Tue 1/25/05	Tue 1/25/05	Tue 1/25/05	0 days	0 days

At this point, because no actual work has occurred yet and no changes to the scheduled work have been made, the values in the **Start** and **Baseline Start** fields are identical, as are the values in the **Finish** and **Baseline Finish** fields. After actual work is recorded or later schedule adjustments are made, the scheduled start and finish values might differ from the baseline values. You would then see the differences displayed in the variance columns.

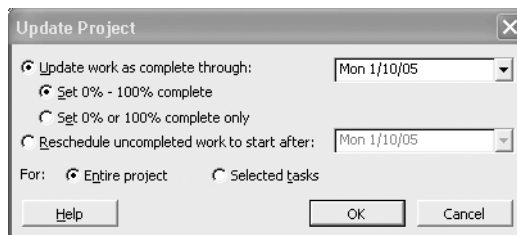
Now that you have had a look at some baseline fields, it is time to enter some actuals!

Tracking a Project as Scheduled

The simplest approach to tracking progress is to report that the actual work is proceeding exactly as planned. For example, if the first month of a five-month project has elapsed and all of its tasks have started and finished as scheduled, you can quickly record this in the **Update Project** dialog box.

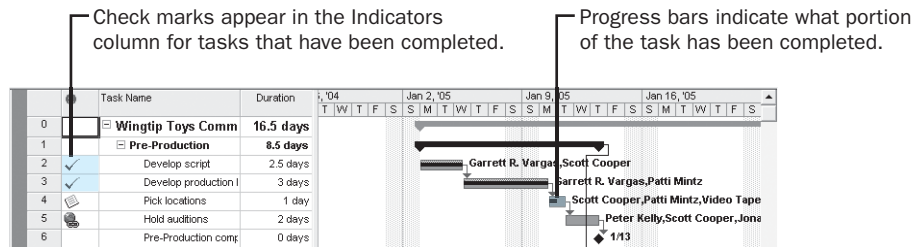
In the TV commercial project, suppose that some time has now passed since saving the baseline. Work has started, and so far, so good. In this exercise, you record project actuals by updating work to the current date.

- 1** On the **View** menu, click **Gantt Chart**.
The Gantt Chart view appears.
- 2** On the **Tools** menu, point to **Tracking**, and click **Update Project**.
The **Update Project** dialog box appears.
- 3** Make sure the **Update work as complete through** option is selected. In the adjacent date list, type or select **1/10/05**, and click the **OK** button, as shown next:



Tip You can also click the down arrow in the **Update work as complete through** box, and in the calendar that appears, select **January 10, 2005**.

Project records the completion percentage for the tasks that were scheduled to start before January 10. Then it displays that progress by drawing *progress bars* in the Gantt bars for those tasks. Your screen should look similar to the following illustration:



In the Gantt Chart view, the progress bar shows how much of each task has been completed. Because tasks 2 and 3 have been completed, a check mark appears in the Indicators column for those tasks, and the progress bars extend through the full length of the tasks' Gantt bars.

Entering a Task's Completion Percentage

After work has begun on a task, you can quickly record progress on it as a percentage. When you enter a completion percentage other than 0, Project changes the task's actual start date to match its scheduled start date. It then calculates actual duration, remaining duration, actual costs, and other values, based on the percentage you enter. For example, if you specify that a four-day task is 50 percent complete, Project calculates that it has had two days of actual duration and has two days of remaining duration.

Here are some ways of entering completion percentages:

- Use the **Tracking** toolbar (on the **View** menu, point to **Toolbars**, and then click **Tracking**). This toolbar contains buttons for quickly recording that a task is 0, 25, 50, 75, or 100 percent complete.
- Enter any percentage value you want in the **Update Tasks** dialog box (on the **Tools** menu, point to **Tracking**, and then click **Update Tasks**).
- Use the Project Guide (as you will do in this exercise).

In this exercise, you record completion percentages of tasks via the Project Guide.

- 1 On the **Project Guide** toolbar, click the **Track** button.
The Track pane appears.
- 2 In the Track pane, click the **Prepare to track the progress of your project** link.

- 3** If you have Project Professional, you'll see an additional pane that relates to using Project Server to collect actuals from resources. In the step 1 pane, click **No**, and then click **Save and go to Step 2**. If you have Project Standard, you won't see this pane.
- 4** In the Setup Tracking pane, select the **Always track by entering the Percent of Work Complete** option, and then click the **Done** link (in Project Standard) or the **Save and Finish** link (in Project Professional) at the bottom of the Setup Tracking pane.
Project updates the Project Guide: Custom Tracking view to the right. In the **% Work Complete** column in the Custom Tracking view, you will enter the completion percentage of the next few tasks.
- 5** In the Track pane, click the **Incorporate progress information into the project** link. The Incorporate Progress pane appears. Here you can set the **status date**. In this chapter, you won't change the status date directly. The status date and other calculation options can help you control how Project schedules actual and remaining work. You will work with the status date in Part 2.
- 6** In the **% Work Complete** field for task 4, type or select **100**, and then press **Enter**. Project records the actual work for the task as scheduled and extends a progress bar through the length of the Gantt bar. Next you'll get a better look at the task's Gantt bar.
- 7** On the Standard toolbar, click the **Go To Selected Task** button.

Your screen should look similar to the following illustration:



Go To
Selected Task

The screenshot shows the Microsoft Project interface for 'Wingtip Toys Commercial 6'. The 'Incorporate Progress' pane is open on the left, showing options to 'Set the Status Date' and 'Update progress'. The main window displays a task list and a Gantt chart. The task list is as follows:

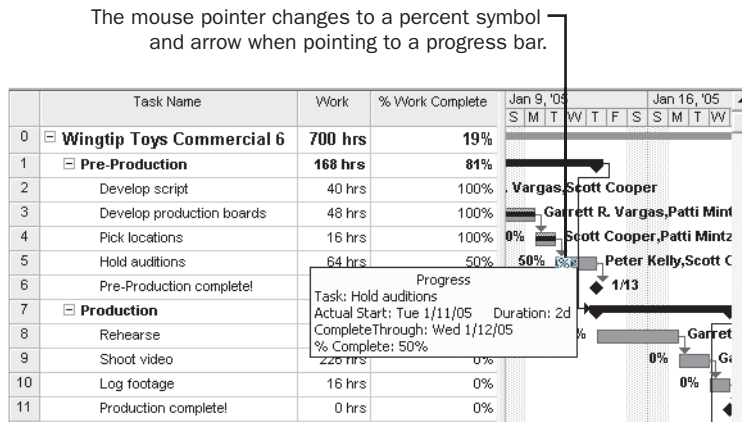
Task Name	Work	% Work Complete
0 Wingtip Toys Commercial 6	700 hrs	15%
1 Pre-Production	168 hrs	62%
2 Develop script	40 hrs	100%
3 Develop production boards	48 hrs	100%
4 Pick locations	16 hrs	100%
5 Hold auditions	64 hrs	0%
6 Pre-Production complete!	0 hrs	0%
7 Production	456 hrs	0%
8 Rehearse	214 hrs	0%
9 Shoot video	226 hrs	0%
10 Log footage	16 hrs	0%
11 Production complete!	0 hrs	0%
12 Post-Production	76 hrs	0%
13 Fine cut edit	46 hrs	0%
14 Add final audio	24 hrs	0%
15 Hand off master to client	4 hrs	0%

The Gantt chart on the right shows the project schedule from Jan 9, '05 to Jan 16, '05. Resources listed include Vargus, Scott Cooper; Garrett R. Vargus, Patti Mintz; Scott Cooper, Patti Mintz; and Peter Kelly, Scott C. The Gantt bars show progress for tasks 2, 3, 4, and 5.

Next you will enter a completion percentage value for a different task.

- 8 In the **% Work Complete** field for task 5, type or select **50**, and then press .
- Project records the actual work for the task as scheduled, and then it draws a progress bar through 50 percent of the Gantt bar.
- 9 In the chart portion (on the right) in the Gantt Chart view, hold the mouse pointer over the progress bar in task 5's Gantt bar.

Your screen should look similar to the following illustration:



The ScreenTip tells you the task's completion percentage and other tracking values.

- 10 At the bottom of the Incorporate Progress pane, click the **Done** link.

So far, you have recorded actual work that started and finished on schedule. While this might prove true for some tasks, often you need to record actuals for tasks that lasted longer or shorter than planned. This is the subject of the next topic.

Entering Actual Values for Tasks

One way to keep your schedule up to date is to record what actually happens for each task in your project. You can record each task's actual start, finish, work, and duration values. When you enter these values, Project updates the schedule and calculates the task's completion percentage. Project uses the following rules:

- When you enter a task's actual start date, Project moves the scheduled start date to match the actual start date.
- When you enter a task's actual finish date, Project moves the scheduled finish date to match the actual finish date and sets the task to 100 percent complete.
- When you enter a task's actual work value, Project recalculates the task's remaining work values.

- When you enter a task's actual duration, if it is less than the scheduled duration, Project subtracts the actual duration from the scheduled duration to determine the remaining duration.
- When you enter a task's actual duration, if it is equal to the scheduled duration, Project sets the task to 100 percent complete.
- When you enter a task's actual duration, if it is longer than the scheduled duration, Project adjusts the scheduled duration to match the actual duration and sets the task to 100 percent complete.

Suppose that a few more days have passed and work on the TV commercial has progressed. In this exercise, you record actual work values for some tasks, and start dates and durations for other tasks.

- 1 In the Track pane, click the **Prepare to track the progress of your project** link.
- 2 If you have Project Professional, you'll see an additional pane that relates to using Project Server to collect actuals from resources. In the Step 1 pane, click **No**, and then click **Save and go to Step 2**. If you have Project Standard, you won't see this pane.
- 3 Select the **Always track by entering the Actual Work Done and Work Remaining** option, and then click the **Done** link (in Project Standard) or the **Save and Finish** link (in Project Professional).

Project updates the Project Guide: Custom Tracking view to the right. In the **Actual Work** and **Remaining Work** columns in the Project Guide: Custom Tracking view, you will enter actual and remaining work values of the next few tasks.

In the chart portion of the Custom Tracking view, you can see that task 5 is currently 50 percent complete, and in the table portion of the view, you can see the resulting hour values of work that this percentage corresponds to. You want to record that the task is now complete but required more work than expected.

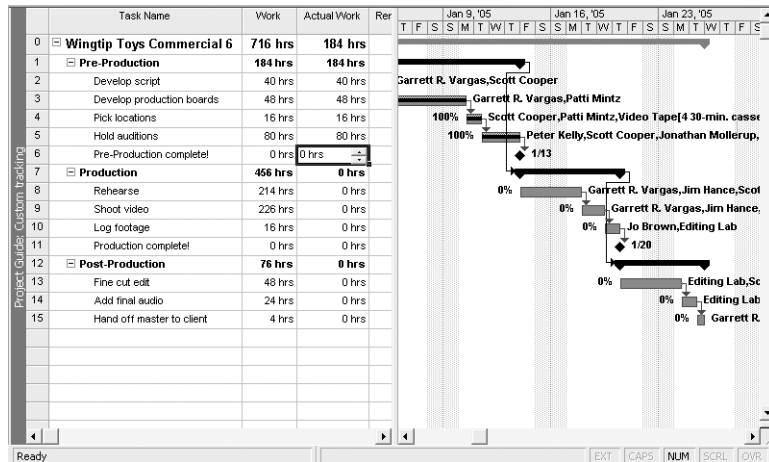
- 4 In the Track pane, click the **Incorporate progress information into the project** link.
The Incorporate Progress pane appears. Here you can set the status date and read about how to enter values in the **Actual Work** or **Remaining Work** fields. In this chapter, you won't change the status date directly.
- 5 Click the **Show/Hide Project Guide** button on the **Project Guide** toolbar.
The Project Guide closes.
- 6 In the **Actual Work** field for task 5, type or select **80**, and then press .

Project records that 80 hours of work have been completed on task 5. It extends the Gantt bar of the task to indicate its longer duration and reschedules subsequent tasks.



Show/Hide
Project Guide

Your screen should look similar to the following illustration:



Now suppose that more time has passed. To conclude this exercise, you will enter actual start dates and durations of tasks.

- 7** In the **Task Name** column, click task 8, **Rehearse**.

This task started one working day behind schedule (the Monday after its scheduled start date) and took a total of three days to complete. You will record this information in fields that are not in the Project Guide: Custom Tracking view by default. You could insert the fields, switch to a different table that includes them, or (as you will do now) enter the values in the **Update Tasks** dialog box.

- 8** On the **Tools** menu, point to **Tracking**, and then click **Update Tasks**.

The **Update Tasks** dialog box appears. This dialog box shows both the actual and scheduled values for the task's duration, start, and finish, as well as its remaining duration. In it, you can update the actual and remaining values.

- 9** In the **Start** field in the **Actual** box on the left side of the dialog box, type or select **1/17/05**.
- 10** In the **Actual dur** field, type or select **3d**.

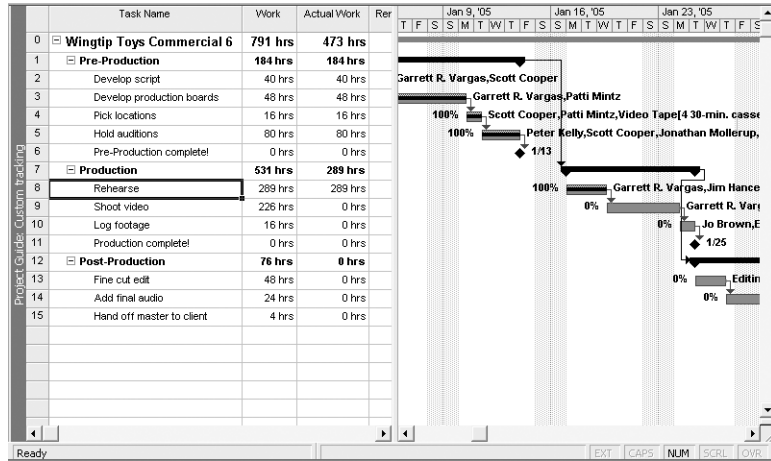
The 'Update Tasks' dialog box is shown with the following fields and values:

- Name:** Rehearse
- Duration:** 2.25d
- % Complete:** 0%
- Actual dur:** 3d
- Remaining dur:** 2.25d
- Actual Start:** 1/17/05
- Actual Finish:** N/A
- Current Start:** Thu 1/13/05
- Current Finish:** Mon 1/17/05

Buttons at the bottom include Help, Notes..., OK, and Cancel.

11 Click the **OK** button.

Project records the actual start date and duration of the task. Your screen should look similar to the following illustration:



To conclude this exercise, you will record that task 9 started on time but took longer than planned to complete.

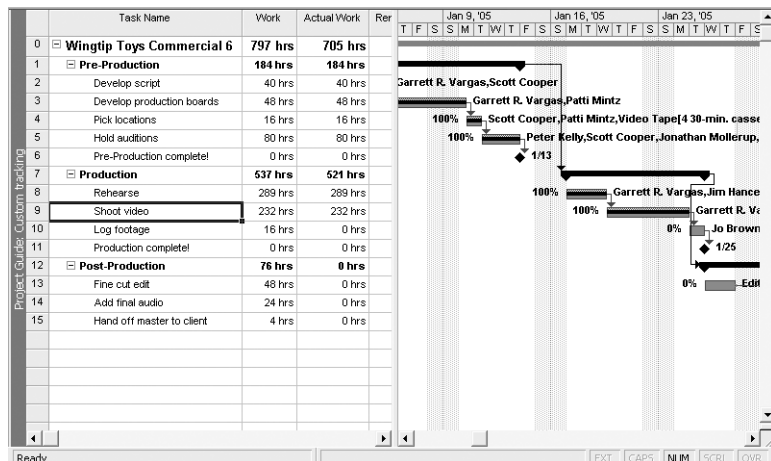
12 In the **Task Name** column, click task 9, **Shoot Video**.

13 On the **Tools** menu, point to **Tracking**, and then click **Update Tasks**.

The **Update Tasks** dialog box appears.

14 In the **Actual dur** field, type or select **3d**, and then click the **OK** button.

Project records the actual duration of the task. Your screen should look similar to the following illustration:



Because you did not specify an actual start date, Project assumes that the task started as scheduled, but the actual duration you entered causes Project to calculate an actual finish date that is later than the originally scheduled finish date.

Project Management Focus: Is the Project on Track?

Properly evaluating a project's status can be tricky. Consider the following issues:

- For many tasks, it is very difficult to evaluate a completion percentage. When is an engineer's design for a new motor assembly 50 percent complete? Or when is a programmer's code for a software module 50 percent complete? Reporting work in progress is in many cases a "best guess" effort and inherently risky.
- The elapsed portion of a task's duration is not always equal to the amount of work accomplished. For example, a task might require relatively little effort initially, but require more work as time passes. (This is referred to as a back-loaded task.) When 50 percent of its duration has elapsed, far less than 50 percent of its total work will have been completed.
- The resources assigned to a task might have different criteria for what constitutes the task's completion than the project manager or the resources assigned to successor tasks might.

Good project planning and communication can avoid or mitigate these and other problems that arise in project execution. For example, developing proper task durations and status-reporting periods should help you identify tasks that have substantially varied from the baseline early enough to make adjustments. Having well-documented and well-communicated task completion criteria should help prevent "downstream" surprises. Nevertheless, large, complex projects will almost always vary from the baseline.

CLOSE: the Wingtip Toys Commercial 6 file.

Key Points

- Before tracking actual work in a project plan, you should save a baseline. This gives you a “snapshot” of your initial project plan for later comparison against actual progress. This is one way to tell if your project is on track or not.
- The ability to track actual work in a project plan is a major advantage that a real project management tool like Project has over list-keeping tools like Excel. In Project, you can track actual work at a very broad or very granular level.
- The Project Guide helps you set up your project plan correctly for the level of tracking you want to do.
- To properly evaluate a project’s status after you begin tracking requires a combination of recording accurate data in Project and using your good judgment when interpreting the results.

