



Introduction to Microsoft Project 2007

Legal Stuff



sheepsqueezers.com

This work may be reproduced and redistributed, in whole or in part, without alteration and without prior written permission, provided all copies contain the following statement:

Copyright ©2011 sheepsqueezers.com. This work is reproduced and distributed with the permission of the copyright holder.

This presentation as well as other presentations and documents found on the sheepsqueezers.com website may contain quoted material from outside sources such as books, articles and websites. It is our intention to diligently reference all outside sources. Occasionally, though, a reference may be missed. No copyright infringement whatsoever is intended, and all outside source materials are copyright of their respective author(s).



Technology Lecture Series

*Introduction to
SharePoint
(WSS 3.0)*

*Google
Offerings*

*Introduction to
Microsoft
Project 2007*



Presentation Contents

- ❑ A Note about this Presentation
- ❑ What is Microsoft Office Project 2007?
- ❑ Some Definitions
- ❑ The Project Lifecycle
- ❑ A First Look at *Project 2007*
- ❑ Establishing Basic Project Information
- ❑ Looking at Project Calendars
- ❑ Defining Tasks
- ❑ Creating Milestones
- ❑ Dealing with Recurring Tasks
- ❑ Using Deadline Dates
- ❑ Entering Task Notes
- ❑ Establishing Dependencies Between Tasks
- ❑ Building in Delays between Tasks
- ❑ Building in Overlap between Tasks
- ❑ Creating Resources
- ❑ Understanding Basic Views
- ❑ Work Breakdown Structure (WBS) and Outline Codes
- ❑ Filtering and Grouping Views
- ❑ Dealing with Scheduling Problems
- ❑ Finding the Critical Path
- ❑ Resolving Resource Problems
- ❑ Understanding Tracking
- ❑ Recording Actuals
- ❑ Reporting on Progress
- ❑ Appendix A: Displaying the PERT Analysis Toolbar
- ❑ Appendix B: Defining Work Breakdown Structure Codes (WBS)
- ❑ Appendix C: Changing the Appearance of *Project 2007*
- ❑ *Appendix D: References*



This presentation is about *Microsoft Office Project 2007* (Professional Edition) and does not discuss *Microsoft Project Server 2007* (except for the occasional oblique references). This lecture assumes *no* prior knowledge of project management and *no* prior knowledge of Microsoft Office Project 2007.

Much of this presentation is based on Elaine Marmel's amazingly delicious book *Microsoft Office Project Server 2007 Bible*. In some instances throughout this presentation, I quote from the book. No copyright infringement is intended. Please purchase her wonderful book (see Appendix D).

What is Microsoft Office Project 2007?



sheepsqueezers.com

Microsoft Office Project 2007 – hey, kids, let’s just say *Project 2007* from now on! – is a tool for implementing project management principles and practices in order to successfully manage projects from start to finish, ending the project on-time and within budget. No, really, I’m serious!

Although we define some of the terms later on, *Project 2007* allows the Project Manager to create a *project plan* containing *tasks* which are assigned to *resources*. Tasks can either be *dependent* on another task or can be independent from all tasks. Resources are usually full-time employees but can also include non-human things such as data vendors. *Project 2007* allows the Project Manager to keep track of the project’s budget and cost as well as the schedule to determine if the project is *on-track*.

Project 2007 can also produce a variety of tabular and graphical reports to allow the Project Manager to see if the project is veering off-course. Once detected, the Project Manager can suggest changes to the project plan to put the project back on course.

Project 2007 comes in two flavors: the *Standard Edition* and the *Professional Edition*. The *Professional Edition* – which is the subject of this presentation – is the same as the *Standard Edition* but also allows Project Managers to upload their project plans to a Project Server to allow for enterprise scheduling and reporting.

Some Definitions



sheepsqueezers.com

In order for everyone to be on the same page, we define several project management terms below. If you are not familiar with these terms, please try to memorize them...this will help you when communicating with other Project Managers and sounding intelligent at dinner parties.

A *project* is a series of steps typically performed by more than one person. A project has the following characteristics:

- ❑ A project has a specific and measurable goal
- ❑ A project has a specific time frame
- ❑ A project uses resources
- ❑ A project consists of interdependent, yet individual, steps called *tasks*.

Projects can last for days, months or (heaven-forbid!) years and are dynamic; that is, they tend to grow and change as time goes on. (Surprisingly, that also seems to be the definition of a migraine.)

Project Management is the discipline that examines the nature of projects and offers ways to control their progress. Project Management attempts to organize and systematize the tasks in a project in order to minimize the number of surprises that may be encountered.



A *Project Manager* is responsible for managing projects by applying project management principles and practices. Just as accountants refer to their *Generally Accepted Accounting Principles* (GAAP Guide), Project Managers follow the *Project Management Book of Knowledge* (PMBOK) published by the Project Management Institute. Project Managers concern themselves with the following key areas:

- ❑ Scheduling
- ❑ Budgeting
- ❑ Managing Resources
- ❑ Tracking project progress
- ❑ Reporting project progress

A *task* is one step in a series of steps that must be successfully performed in order to complete a project within the allotted time. A project plan could consist of many thousands of tasks, but unless you're creating a project plan used to design the next generation of computer chip ("M-5"), it's probably best to keep the numbers of tasks small. You can create a task which is a roll-up of subordinate tasks called *subtasks*. When you create subtasks, the upper-level task become a *summary task*. For example, *Build a Space Shuttle* would be a summary task, whereas *Find Place for Astronauts to Go Potty* and *Invent a Really Bitchin' Seatbelt* are subtasks.



The length of time need to complete a single task is called the task's *duration*.

A *resource* is an employee, consultant, external vendor, etc. responsible for performing one or more tasks outlined in the project plan. A resource does not necessarily have to be human and could refer to a company (like LexisNexis, for instance).

A *milestone* is a point in time that marks the start or completion of some phase of the project. Milestones typically have zero duration. For example, a client's acceptance of the proposed template is a milestone – as well as a reason to celebrate.

The project's *critical path* is a series of tasks that must be completed on time in order for the project as a whole to stay on schedule. That is, the critical path is a means of identifying tasks that have NO leeway in their timing in order to ensure that they don't run late and affect the overall schedule. For example, you can push back determining the delivery method to the client – such as E-Mail, FTP, websites, USB/Firewire drive, etc. – toward the end of the project, but you can't push back gathering the business rules that far!

The amount of time that you can delay a task before that task becomes part of the critical path is called the *slack* or *float*. Referring to the example above, determining the delivery method to the client has a lot of slack, but there comes a point in the project where it becomes part of the critical path.



Tasks which take the same amount of time no matter how many resources are assigned to them are called *fixed-duration* tasks. For example, FTPing the same sized file each month to the client's server will take about the same amount of time each time the task is performed.

A task whose duration is affected by the addition or subtraction of resources is called a *resource-driven* or *fixed-unit* task. For example, it could take two days for one programmer to code two programs, but it could take one day for two programmers to code the two programs if each programmer codes one program.

When you create a *fixed-work* task, you set the duration of the task, and *Project 2007* assigns a percentage of effort that is sufficient to complete the task in the time allotted for each resource that you assign to the task.

For fixed-duration and fixed-unit tasks, you can tell *Project 2007* to modify the percentage of total work that is allocated to each resource, based on the number of assigned resources, if the number of resources change. This type of task is called an *effort-driven* task. The work that's required to complete the task stays the same, but *Project 2007* redistributes the work equally among all assigned resources. Note that fixed-work tasks are always effort driven.

Occasionally, resources can become over-allocated. You can smooth out the use of resources and use the resources more efficiently by using a technique called *leveling*. *Project 2007* can help you reallocate your resources and potentially eliminate conflicts.

Some Definitions (continued)



sheepsqueezers.com

The overall duration of a project is not necessarily the sum of each task's duration since some tasks can occur parallel to other tasks while some tasks must be performed after certain tasks are complete. These relationships between tasks are called *dependencies*. Once the Project Manager has defined the tasks to be performed, he/she creates the dependencies between the tasks. For example, the IT programmers **cannot** start coding the program until **after** the business rules have been gathered.

Project 2007 makes certain assumptions about your company's work week. By default, *Project 2007* humorously assumes your company's resources work five days a week (forty working hours). This is called the Standard *calendar*. *Project 2007* allows you to create alternate calendars.

Nonworking time is defined as hours or days designated in a resource or project calendar when *Project 2007* should not schedule tasks because work is not done. Nonworking time can include lunch breaks, weekends, holidays, etc.

Some dependencies are relatively straight-forward: Task B can only begin after Task A has completed. But not every relationship is so clear-cut. A *delay* between two dependent tasks occurs when one task follows another task *only after* a period of inactivity between the two dependent tasks. For example, when the task of writing a business rules document has been completed, there may be one or more days before the walk-through begins. You may think to just extend the writing of the document to take up that delay, but this would not reflect the "real" time it takes to write the document. Any estimates as to the amount of time it takes to write it will be artificially high due to your incorporation of the delay into the document writing task.



Related to delay is overlap. An *overlap* between two dependent tasks occurs when one task occurs at, or near, the same period in time as another task occurs. For example, as the business rules determination task is occurring, the design task can occur nearly simultaneously.

Both delay and overlap can be incorporated into your project plan using *Project 2007's* lag and lead times. Use lag time to create delay and lead time to create overlap. We will discuss this more later in the lecture.

The most common type of dependency between two tasks is the *Finish-to-Start* dependency type: Task B cannot start until Task A finishes. For example, the IT programmers cannot start coding ("Task B") until after the business rules have been gathered ("Task A").

There are three additional dependency types – *Start-to-Finish*, *Start-to-Start*, and *Finish-to-Finish* – all of which can be represented using *Project 2007*.

In the *Start-to-Start* dependency type, Task B cannot start until Task A starts. For example, when data begin to arrive ("Task A") you can then begin to analyze the data ("Task B").

In the *Finish-to-Finish* dependency type, Task B cannot finish until Task A finishes. For example, you cannot finish creating slides ("Task B") until you finish summarizing the data ("Task A").

Some Definitions (continued)



sheepsqueezers.com

In the *Start-to-Finish* dependency type, Task B cannot finish until Task A starts. For example, you can finish scheduling production crews only when you start receiving materials.

Once the Project Manager has created a project plan that has been vetted, the Project Manager creates a *baseline*, which is a “picture” of the project at a certain point in time. Think of drawing a line in the sand...*None Shall Pass!* As the project progresses, the Project Manager tracks *actual* real-world progress against the baseline project. With both pieces of information – the baseline as well as the actual – the Project Manager can determine if the project is following the project plan or veering off-course – and then attempt to bring the project back in line.



A project is made up of the following key phases:

- Identify the project goal
- Identifying the project scope
- Planning
- Revising
- Tracking

Before you begin to plan the project, you must understand the *goal* of the project. *Why are we doing this project? What is its purpose? What are we trying to accomplish?*

The *scope* of a project is a statement outlining its time, cost, quality and deliverables.

If you cannot explain the goal and scope of the project in a sentence or two, your project may be overly ambitious and complex and may require that you break up your project into smaller projects.

During the planning phase, you enter in tasks, resources, costs, etc. into *Project 2007* to build your project plan.

After reviewing your project plan with your team members, you may need to revise it based on their feedback. This is the *revising* phase.

Once you have created a baseline, you can begin to track the project on a daily or weekly basis to see how you are doing against the baseline.

A First Look at Project 2007



sheepsqueezers.com

Enough with the talk, let's take a look at *Project 2007*.

To start Project 2007, click Start ⇒ All Programs ⇒ Microsoft Office ⇒ Microsoft Office Project 2007. You will see a screen similar to the following on the next page:



On the left side of the screen you will see the *Gantt Table*. This is where you enter in your tasks, durations, resources, etc. On the right side, you will see the *Gantt Chart*. The data entered in the Gantt Table is reflected graphically on the Gantt Chart.

Between the two panes, you will see a divider bar. You can move your mouse over the divider bar to resize the Gantt Table to show more of the columns, or you can show more of the Gantt Chart.

When some of you start *Project 2007*, you may see an additional pane on the left side. The pane contains the Project Guide. The Project Guide is a goal-based user interface that helps you build projects. If you do not see it, click View...Turn On Project Guide to display it. Notice that an additional toolbar – called the Project Guide Toolbar – displays four buttons: Tasks, Resources, Track and Report. Notice that the order of the buttons is in the order of the Project Lifecycle. You can use the Project Guide Toolbar and the Project Guide pane to begin building your project. See next slide.



A First Look at Project 2007 (continued)

Rather than use the Project Guide, we will learn how to create a project plan without the Project Guide. Once you understand how to create a project plan by hand, you can then use the Project Guide to help you out.

Notice on the top of the Gantt Chart you will see a timescale; that is, a ruler displaying, by default, the beginning of the week – appearing on the top of the timescale – and the days of the week – appearing on the bottom of the timescale. *Project 2007* allows up to three timescales to appear. By default, you will see two timescales.

Nov 2, '08						Nov 9, '08							
S	M	T	W	T	F	S	S	M	T	W	T	F	S

To change the timescale, double-click the timescale itself and the Timescale dialog box will appear as you will see on the next slide:



Timescale

Top Tier | **Middle Tier** | Bottom Tier | Non-working time

Middle tier formatting

Units: Weeks | Label: Jan 27, '02 | Use fiscal year

Count: 1 | Align: Left | Tick lines

Timescale options

Show: Two tiers (Middle, Bottom) | Size: 100% | Scale separator

Preview

Oct 26, '08							Nov 2, '08							Nov 9, '08							Nov 16, '08							Nov 23, '08				
S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W

Help | OK | Cancel

If you wish to show just one timescale or show all three timescales, select from the options in the *Show*: drop-down box in the *Timescale options* section. Click on the appropriate tab – Top Tier, Middle Tier, Bottom Tier – to modify the timescale.

The available display unit options are: Years, Half Years, Quarters, Months, Thirds of Months, Weeks, Days, Hours, and Minutes.



A First Look at Project 2007 (continued)

By default, the timescale will show just one display unit; that is, just one week, just one month, etc. between the tickmarks. You can display more units by changing the Count option. For example, if you want to display two weeks on the top tier, change the Count from 1 to 2:

Nov 2, '08														Nov 16, '08													
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S

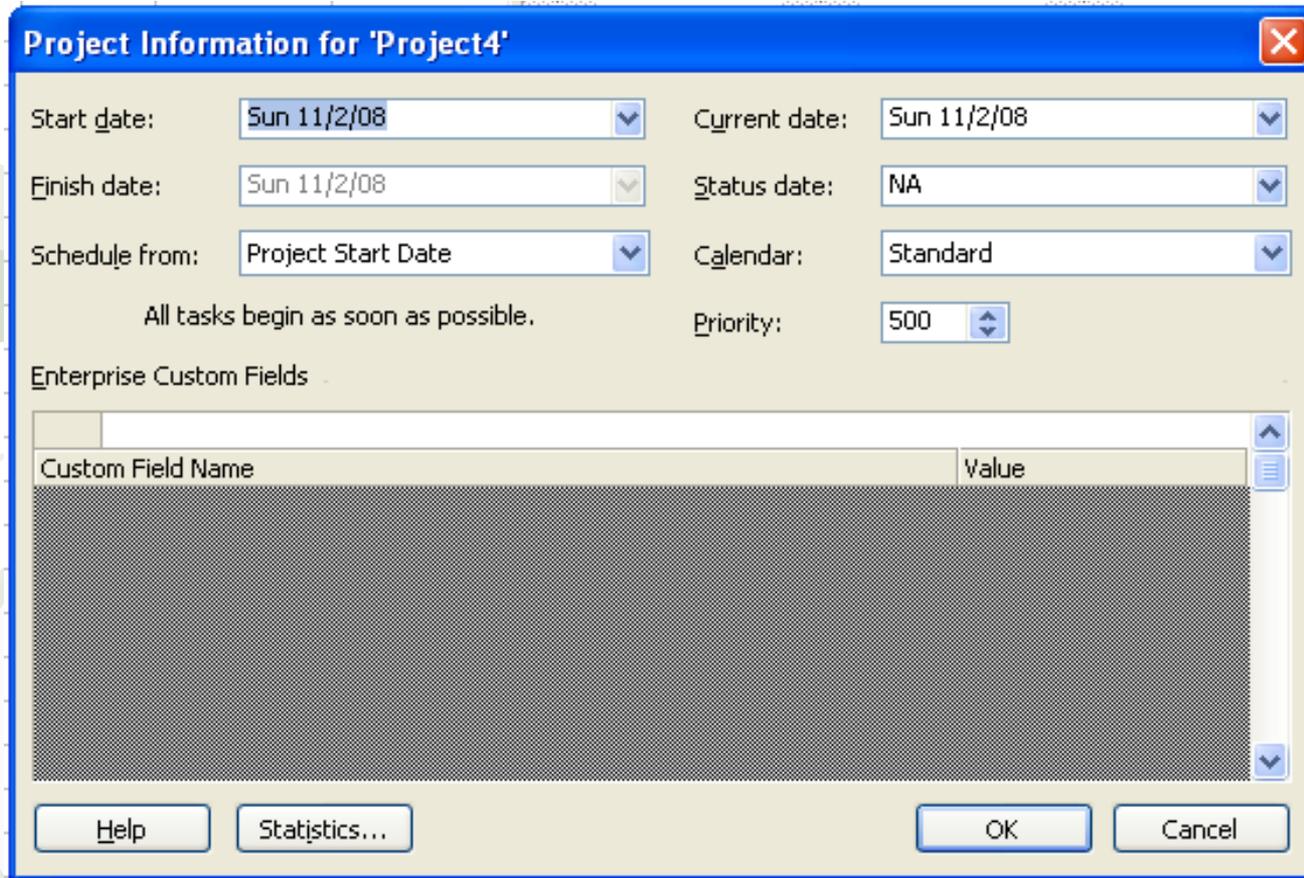
As you saw, when you open up *Project 2007*, a blank project is displayed. As is usual and customary in Windows applications, you can open up a previously created project by either using the File...Open dialog box, or you can double-click on the *Project 2007* file itself. Note that *Project 2007* projects have an extension of *.mpp*.

Please be aware of the free templates installed with *Project 2007*. When you create a new project – File ⇒ New... – the *New Project* pane will appear. From there, you can click on the *On Computer...* link in the *Templates* section in order to display the Templates dialog box. There are two tabs on this dialog: *General* and *Project Templates*. The *General* tab only displays the *Blank Project* template. You can use this template to create a new blank project.

When you click on the *Project Templates* tab, you will see a variety of pre-defined projects from *Annual Report Preparation* to *Home Move* to *Strategic Merger or Acquisition Evaluation*. While we won't be using these in this presentation, be aware of them as they can be a helpful starting point for a future project of yours.

Establishing Basic Project Information

Before you begin to enter tasks, assign resources, create dependencies, etc., a good place to start is to supply basic information about your project by using the *Project Information* dialog box. You can display the *Project Information* dialog by clicking on clicking on Project ⇒ Project Information.



Project Information for 'Project4'

Start date: Sun 11/2/08 Current date: Sun 11/2/08

Finish date: Sun 11/2/08 Status date: NA

Schedule from: Project Start Date Calendar: Standard

All tasks begin as soon as possible. Priority: 500

Enterprise Custom Fields

Custom Field Name	Value
-------------------	-------

Help Statistics... OK Cancel



By assigning a *Start Date* to your project, all tasks begin on that date.

If you set the *Start Date*, you can leave the *Finish Date* alone. *Project 2007* will compute the finish date based upon the tasks and task durations you've entered in.

By default, *Project 2007* assumes that you want to schedule tasks from the *Start Date*. This makes intuitive sense: you start a project on a certain date, tasks are performed and then the project ends successfully. This is further solidified by the *Schedule From:* drop-down box, which defaults to *Project Start Date*. But, if you know your project's deadline, you can enter in the *Finish Date* and select *Project Finish Date:* from the *Schedule From:* drop-down box, and then you can work backwards from project finish to project start.

The *Current Date* field is populated automatically based on your computer's system date. You can change this date to see how *Project 2007* reflects your project plan.

The *Status Date* is a date that you set – rather than the current date – for reporting time, cost, or performance condition of a project. *Project 2007* uses the *Status Date* to perform earned value calculations, identify the complete-through date in the *Update Project* dialog box, and place progress lines on the Gantt Chart. If you leave this field set to NA, *Project 2007* uses your computer's current date.



You can assign a calendar using the *Calendar*: drop-down box. By default, the Standard Calendar (5 days per week, 40 working hours) is selected. You also have a choice of two additional *base calendars*: *24 Hours* and *Night Shift*.

- ❑ *Standard Calendar*: This base calendar has a standard work day and work week of Monday through Friday, 8:00 A.M. to 5:00 P.M., with 1 hour of nonworking time for a break between 12:00 P.M. and 1:00 P.M.
- ❑ *24 Hours*: This base calendar has no nonworking time. All time, from Sunday through Saturday, 12:00 A.M. to 12:00 A.M., is set as working time.
- ❑ *Night Shift*: This base calendar is set up for a graveyard shift. Working times are Monday night through Saturday morning, 11:00 P.M. to 8:00 A.M., with 1 hour of nonworking time for a break between 3:00 A.M. and 4:00 A.M.

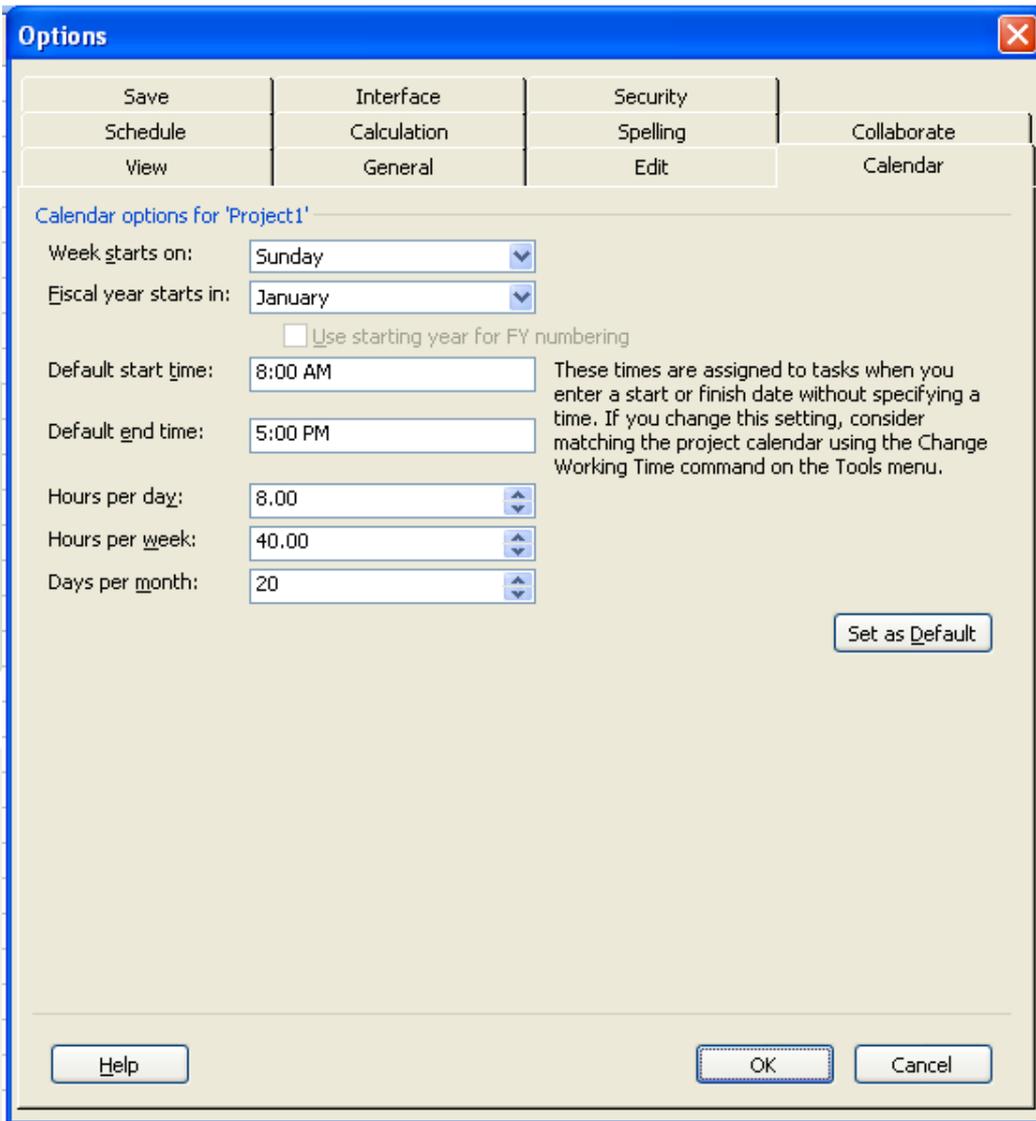
Project 2007 allows you to set a project *priority* from 1 to 1000. The project level priority plays a role when you use shared resources across multiple projects. Setting a project priority helps you to better control how resource leveling adjusts tasks when you share resources across projects.

The *Enterprise Custom Fields* grid is used with *Project Server 2007* to assign values to project-level custom fields or outline codes that are defined in the Project Server database.

For this presentation, just keep the default values in the *Project Information* dialog box. Click OK to dismiss it.

Establishing Basic Project Information (continued)

Now, just because we are using the Standard Calendar, it doesn't mean that we have to stick with 9AM-5PM M-F as the default working period. We can change that by clicking on Tools ⇒ Options... ⇒ Calendar tab.



The screenshot shows the 'Options' dialog box with the 'Calendar' tab selected. The 'Calendar options for 'Project1'' section is visible. The 'Week starts on' dropdown is set to 'Sunday', and the 'Fiscal year starts in' dropdown is set to 'January'. There is an unchecked checkbox for 'Use starting year for FY numbering'. The 'Default start time' is '8:00 AM', 'Default end time' is '5:00 PM', 'Hours per day' is '8.00', 'Hours per week' is '40.00', and 'Days per month' is '20'. A 'Set as Default' button is located at the bottom right of the options section. At the bottom of the dialog are 'Help', 'OK', and 'Cancel' buttons.

Save	Interface	Security	Collaborate
Schedule	Calculation	Spelling	Calendar
View	General	Edit	

Calendar options for 'Project1'

Week starts on: Sunday

Fiscal year starts in: January

Use starting year for FY numbering

Default start time: 8:00 AM

Default end time: 5:00 PM

Hours per day: 8.00

Hours per week: 40.00

Days per month: 20

Set as Default

Help OK Cancel

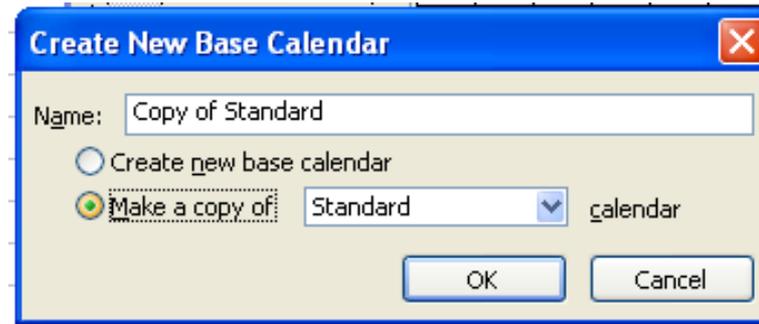
As you can see, you can change on what day the week starts, on what month the fiscal year starts, the default starting and ending time.

You can also change the number of working hours there are in a day, the number of hours in a week and number of working days per month.

For this presentation, we leave the defaults and click OK.



To create a new calendar, click on the *Create New Calendar...* button on the top right of the *Change Working Time* dialog box to display the *Create New Base Calendar* dialog box.



We can either create a copy of a pre-existing base calendar (like the Standard Calendar) by selecting the *Make a copy of* radio button, or we can create a new base calendar from scratch. Let's make a copy of the Standard base calendar and we will name our calendar "YourCompany Standard" by entering in the text in the *Name:* input box. Clicking OK creates the new calendar and brings you back to the *Change Working Time* dialog box specifically for the YourCompany Standard base calendar.

Next, let's make December 25th an exception (Christmas Holiday). Click on the Exceptions tab, click on the first blank cell under the Name column and fill in Christmas Holiday. Next, for Start, select December 25^h and for Finish, select December 25th.



Looking at Project Calendars (continued)

Exceptions		Work Weeks	
	Name	Start	Finish
1	Christmas Holiday	12/25/2008	12/25/2008

Details...
Delete

Now, to ensure that every December 25th is a holiday, click the *Details...* button to display the *Details for* dialog box.

Details for 'Christmas Holiday'

Set working times for these exceptions

Nonworking
 Working times:

	From	To

Recurrence pattern

Daily
 Weekly
 Monthly
 Yearly

On
 The of

Range of recurrence

Start: End after: occurrences
 End by:

Help OK Cancel

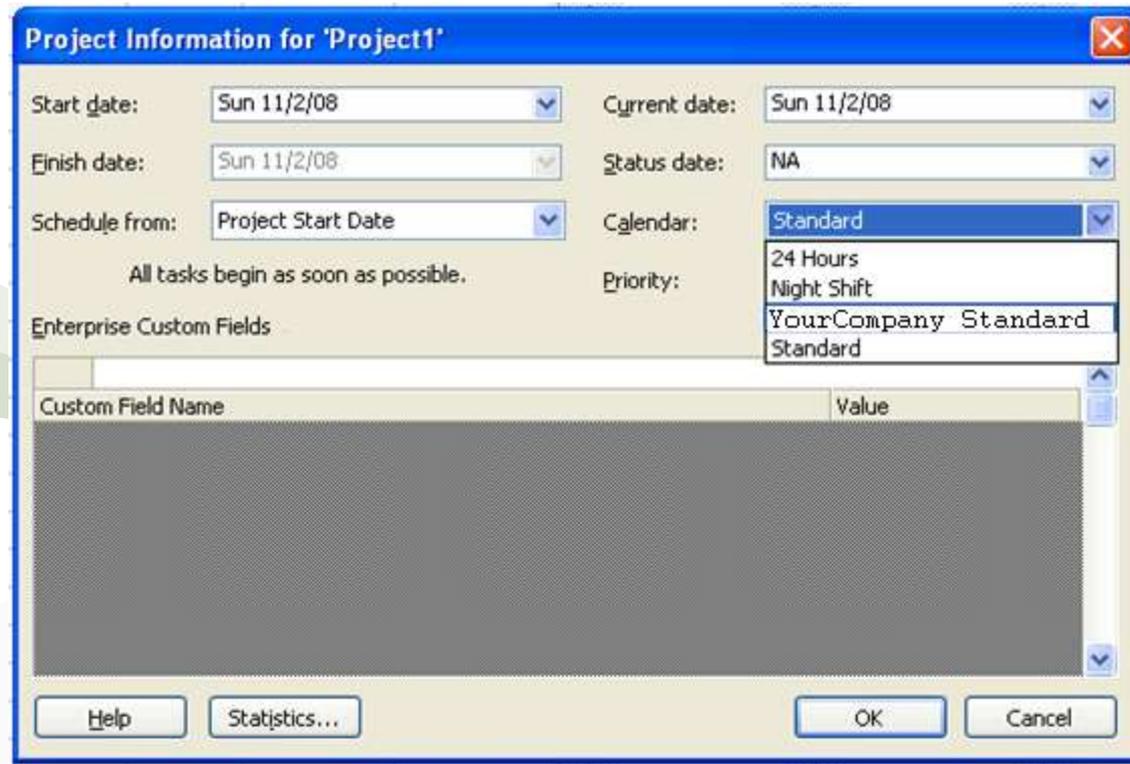
Since Christmas is a non-working holiday, ensure that the Nonworking radio button is checked.

Next, click the Yearly radio button and change the range of occurrence to 10 occurrences. Since your project probably won't last for 10 years, you're probably okay. Click OK to dismiss this dialog box.



Looking at Project Calendars (continued)

Now that we've created the *YourCompany Standard* Calendar, we probably want to use it in our project. Let's go back to the *Project Information* dialog box, and click on the *Calendar* drop-down box to see the base calendars:



Click on *YourCompany Standard* and click OK.

So, why did we go through all of that? Well, in order for Project Managers to assign resources to tasks, the *Project 2007* software needs to know when the resources actually work. By creating your own company-specific calendar, we are telling *Project 2007* exactly when our employees work and when they don't work.



Defining Tasks (continued)

Note that the Task Names we've entered are major tasks. Let's enter in the subtasks. Under Sales Proposal, let's insert the following subtasks: Find Client Who Will Talk to Us, Convince Client to Buy, Send Client Box of Godiva Chocolate as a Bribe, Send Client Recycled Proposal, Get Client's Go-Ahead. To enter in subtasks, you have to click on the line BELOW the Sales Proposal major task and either 1) click the Insert button, 2) click Insert ⇒ New Task, or 3) Right-click on the task number (at the left) and click on the New Task popup menu item.

Task Name	Duration	Start	Finish	Oct 26, '08							Nov 2, '08									
				S	S	M	T	W	T	F	S	S	M	T	W					
Sales Proposal	1 day?	Mon 11/3/08	Mon 11/3/08																	
Find Client Who Will Talk to	1 day?	Mon 11/3/08	Mon 11/3/08																	
Convince Client to Buy	1 day?	Mon 11/3/08	Mon 11/3/08																	
Send Client Box of Godiva	1 day?	Mon 11/3/08	Mon 11/3/08																	
Send Client Recycled Prop	1 day?	Mon 11/3/08	Mon 11/3/08																	
Get Client's Go-Ahead	1 day?	Mon 11/3/08	Mon 11/3/08																	
Business Rules	1 day?	Mon 11/3/08	Mon 11/3/08																	
Template Design Phase	1 day?	Mon 11/3/08	Mon 11/3/08																	
IT Programming	1 day?	Mon 11/3/08	Mon 11/3/08																	
Quality Control Phase	1 day?	Mon 11/3/08	Mon 11/3/08																	
Product Delivery	1 day?	Mon 11/3/08	Mon 11/3/08																	

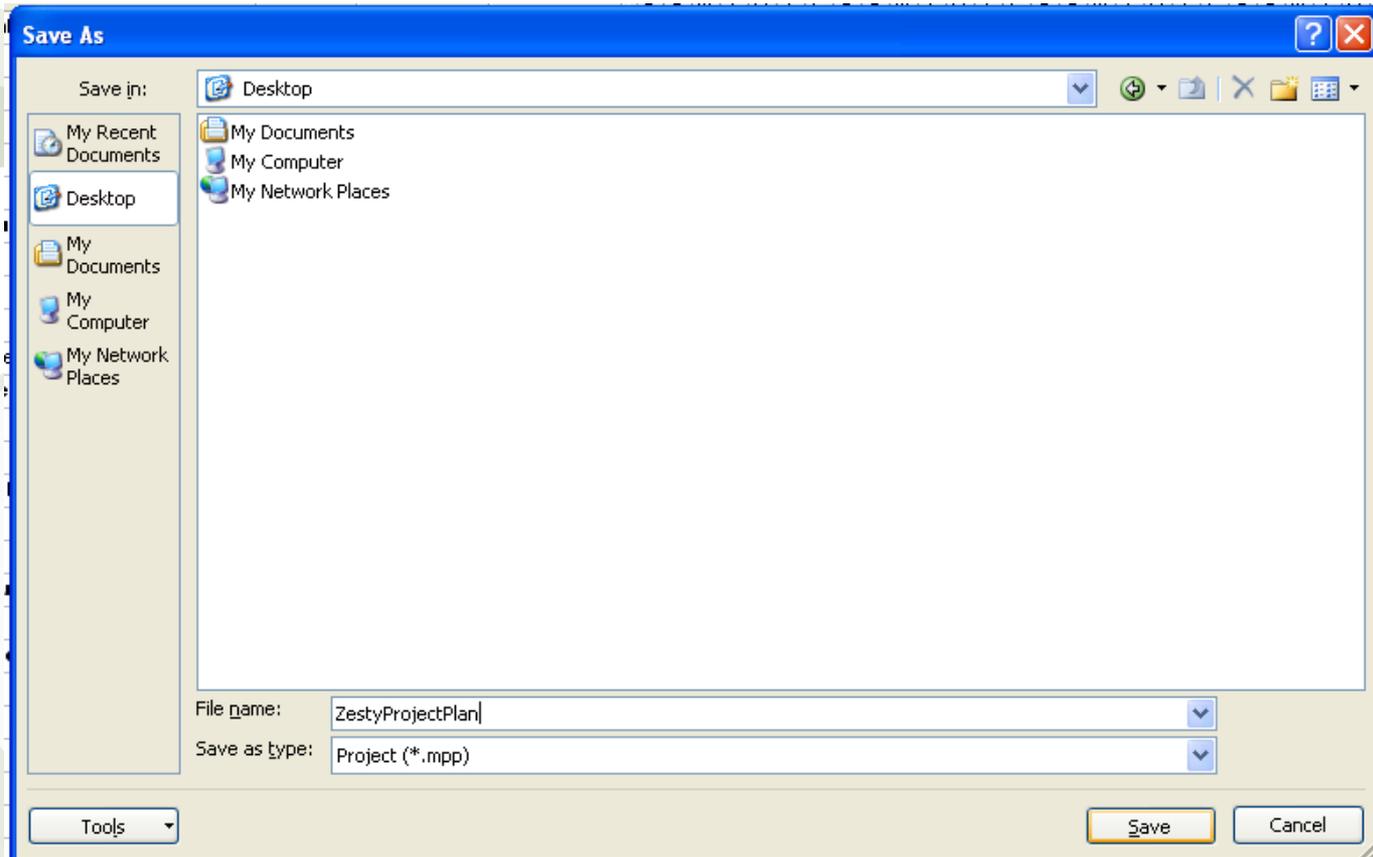
As you see, these tasks are shown at the same level as the major tasks. In order to make them subtasks, you have to Indent them using the indent button. You can either indent them one at a time or you can highlight all of these tasks and indent them at once. To indent them, highlight your tasks, right-click and click on the Indent popup menu item.



Defining Tasks (continued)

Notice that I've entered in one additional task: *Client Business Rule Sign-Off*. This will be used to show you how to create a milestone later in the presentation.

At this point, it's probably a good idea to save your project plan. As with other Microsoft products, you can click File ⇒ Save As... to bring up the *Save As* dialog box. Navigate in the normal manner to where you want to save your project plan, change the name of the project from the default *Project1* to a more useful name and click Save to save the file to disk.



Defining Tasks (continued)

As with other software products, you can cut, copy, paste and move items around. To cut (remove) a task, highlight the row by clicking on the task's number (at the left) and click Ctrl-X.

To copy and paste a task, highlight the task number, click Ctrl-C to copy the task and click Ctrl-V to paste the task.

To move tasks around, highlight the row by clicking on the task number, wait until the four-sided arrow appears, click and drag to the task's final spot. You will see a grey bar indicating where the task will drop in when you let go of the mouse button:

5		Send Client Recycled Propo	1 day?	Mon 11/3/08	Mon 11/3/08
6		Get Client's Go-Ahead	1 day?	Mon 11/3/08	Mon 11/3/08
7	<input type="checkbox"/>	Business Rules	1 day?	Mon 11/3/08	Mon 11/3/08
8		Meet with Client to Discuss	1 day?	Mon 11/3/08	Mon 11/3/08

You will also note that each summary task has a minus sign to the left of the summary task name. This indicates that the subtasks are shown. If you want to hide the subtasks, click on the minus sign and the subtasks will be hidden:

<input type="checkbox"/>	Sales Proposal	1 day?	Mon 11/3/08	Mon 11/3/08	
<input type="checkbox"/>	Business Rules	1 day?	Mon 11/3/08	Mon 11/3/08	
	Client Business Rule Sign-Off	1 day?	Mon 11/3/08	Mon 11/3/08	
<input type="checkbox"/>	Template Design Phase	1 day?	Mon 11/3/08	Mon 11/3/08	
<input type="checkbox"/>	IT Programming	1 day?	Mon 11/3/08	Mon 11/3/08	
<input type="checkbox"/>	Quality Control Phase	1 day?	Mon 11/3/08	Mon 11/3/08	
<input type="checkbox"/>	Product Delivery	1 day?	Mon 11/3/08	Mon 11/3/08	



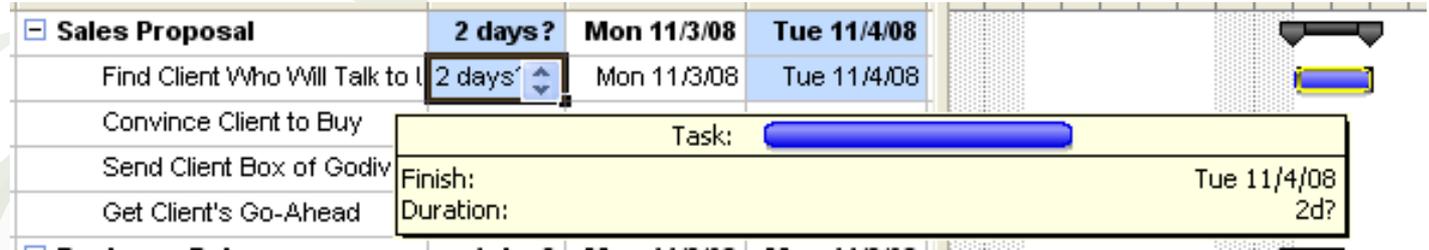
Defining Tasks (continued)

Now it's time to change the duration of each task. Recall that *Project 2007* defaults each task's duration to one day. There are several ways to change the duration of a task: 1) Enter in an appropriate number of days in the task's Duration cell, 2) Drag the right side of the task's blue bar to the task's finish date, 3) Double-click the task to bring up the *Task Information* dialog box and enter the duration on the General tab.

1. Click on the Duration cell for you task and us the up and down arrows to increase or decrease the number of days the task will last.



2. You can drag the blue bar by moving your cursor over the right edge of the bar until the mouse pointer changes to an arrow pointing to the right.



3. Double-click the task and the Task Information dialog box will appear. Click on the General tab, and change the duration just as you did in #1 above.

Defining Tasks (*continued*)



sheepsqueezers.com

Task Information

General | Predecessors | Resources | Advanced | Notes | Custom Fields

Name: Find Client Who Will Talk to Us Duration: 2d? Estimated

Percent complete: 0% Priority: 500

Dates

Start: Mon 11/3/08 Finish: Tue 11/4/08

Hide task bar
 Roll up Gantt bar to summary

Help OK Cancel

Since our project will only last a few weeks, we should be okay with entering durations in days. But, if you have a project that will last for a very long time, you may want to enter in duration in weeks instead of days. To change this setting, click on Tools ⇒ Options ⇒ Schedule Tab and change the *Duration is entered in:* drop-down box from *Days* to *Weeks*. Click OK to dismiss this dialog box and the next task you create will allow for durations in weeks instead of days. (See next slide.)



Defining Tasks (continued)

Options [X]

View	General	Edit	Calendar
Save	Interface	Security	
Schedule	Calculation	Spelling	Collaborate

Schedule options for Microsoft Office Project

Show scheduling messages

Show assignment units as a:

Scheduling options for 'ZestyProjectPlan.mpp'

New tasks:

Duration is entered in:

Work is entered in:

Default task type:

New tasks are effort driven

Autolink inserted or moved tasks

Split in-progress tasks

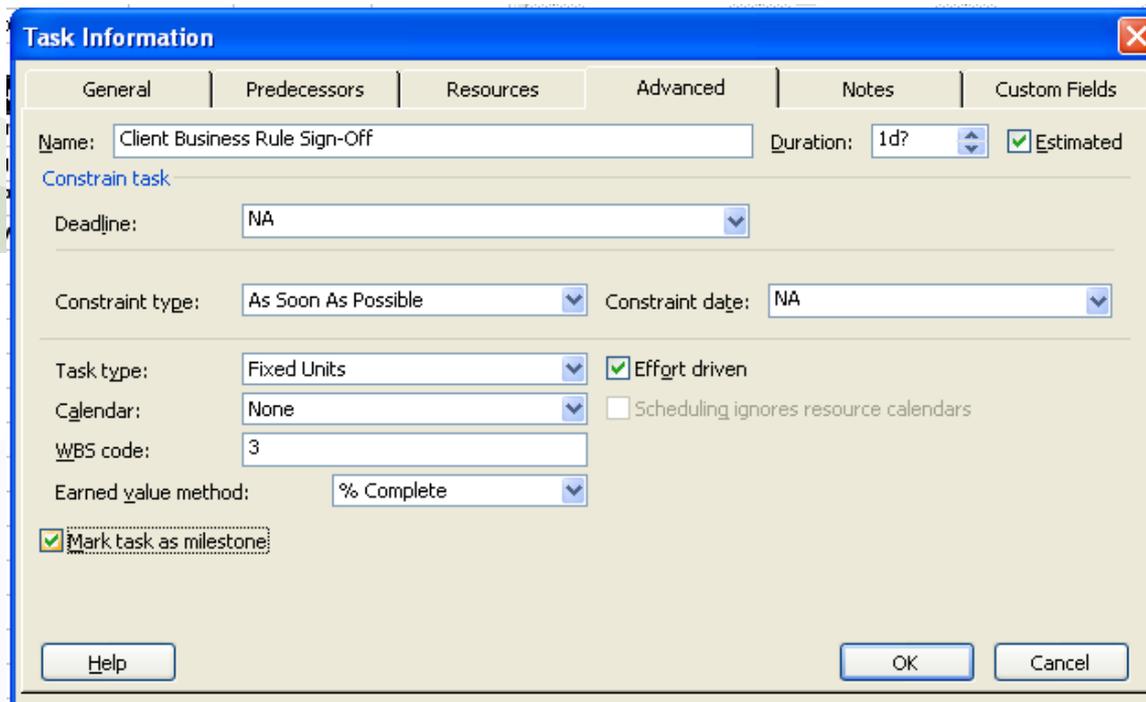
Tasks will always honor their constraint dates

Show that tasks have estimated durations

New tasks have estimated durations

Creating Milestones

Project Managers use milestones to mark key moments in a project such as the completion of a phase or an approval by the client. The task entitled *Client Business Rule Sign-off* will be our milestone. Milestones usually have zero duration, but any task can be marked as a milestone. To mark a task as a milestone, double-click on the task to bring up the Task Information dialog box. Click on the Advanced Tab and click the checkbox to the left of the text *Mark task as a milestone*:



The screenshot shows the 'Task Information' dialog box with the 'Advanced' tab selected. The 'Name' field contains 'Client Business Rule Sign-Off' and the 'Duration' is '1d?'. The 'Estimated' checkbox is checked. Under 'Constrain task', the 'Deadline' is 'NA'. The 'Constraint type' is 'As Soon As Possible' and the 'Constraint date' is 'NA'. The 'Task type' is 'Fixed Units' and the 'Effort driven' checkbox is checked. The 'Calendar' is 'None' and the 'Scheduling ignores resource calendars' checkbox is unchecked. The 'WBS code' is '3' and the 'Earned value method' is '% Complete'. The 'Mark task as milestone' checkbox is checked. Buttons for 'Help', 'OK', and 'Cancel' are visible at the bottom.

Milestones are indicated by a diamond shape on the Gantt Chart. The date of the milestone will appear to the right of the diamond.

Client Business Rule Sign-Off	1 day?	Mon 11/3/08	Mon 11/3/08
-------------------------------	--------	-------------	-------------



Dealing with Recurring Tasks

Projects often have tasks that occur on a regular basis, such as weekly staff meetings, etc. Rather than creating several weekly staff meeting tasks over the course of the project, you can use *Project 2007's* Recurring Tasks feature to create them instead.

We will create a weekly one hour status meeting that will occur every Monday for the duration of the project. Click on a blank task row, click on Insert ⇒ Recurring Task... to display the *Recurring Task Information* dialog. Enter in a name of the task: Weekly Status Meeting, enter in a duration of the task, say 1h (for 1 hour), click Weekly under Recurrence Pattern and check the Monday checkbox. Next, in the Range of recurrence section, select the appropriate start and finish dates. Click OK to create the weekly status meeting tasks.

Recurring Task Information

Task Name: Duration:

Recurrence pattern

Daily Recur every week(s) on:

Weekly

Monthly Sunday Monday Tuesday Wednesday

Yearly Thursday Friday Saturday

Range of recurrence

Start: End after: occurrences

End by:

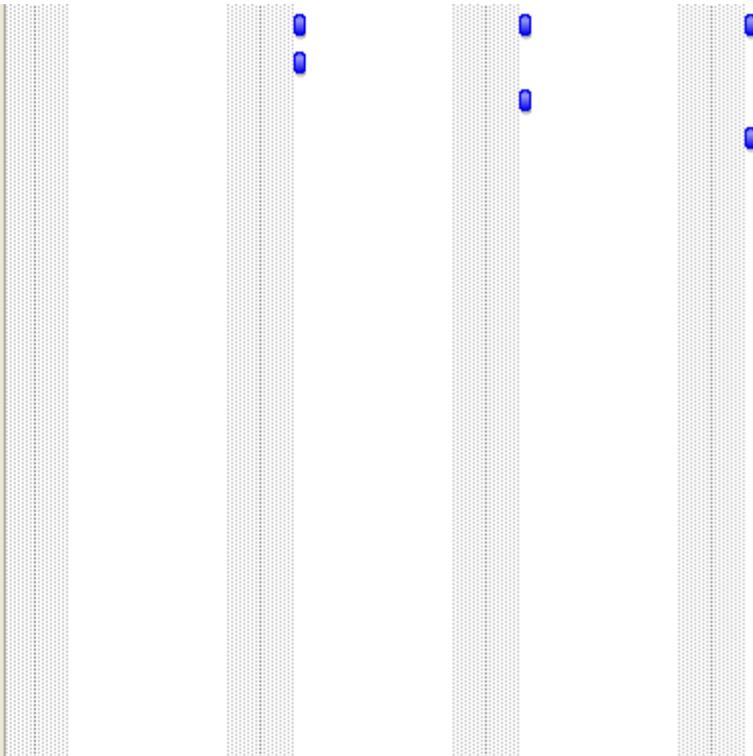
Calendar for scheduling this task

Calendar: Scheduling ignores resource calendars



Dealing with Recurring Tasks (continued)

22		Weekly Status Meeting	5.13 days	Mon 11/3/08	Mon 3/30/09
23		Weekly Status Meeting 1	1 hr	Mon 11/3/08	Mon 11/3/08
24		Weekly Status Meeting 2	1 hr	Mon 11/10/08	Mon 11/10/08
25		Weekly Status Meeting 3	1 hr	Mon 11/17/08	Mon 11/17/08
26		Weekly Status Meeting 4	1 hr	Mon 11/24/08	Mon 11/24/08
27		Weekly Status Meeting 5	1 hr	Mon 12/1/08	Mon 12/1/08
28		Weekly Status Meeting 6	1 hr	Mon 12/8/08	Mon 12/8/08
29		Weekly Status Meeting 7	1 hr	Mon 12/15/08	Mon 12/15/08
30		Weekly Status Meeting 8	1 hr	Mon 12/22/08	Mon 12/22/08
31		Weekly Status Meeting 9	1 hr	Mon 12/29/08	Mon 12/29/08
32		Weekly Status Meeting 10	1 hr	Mon 1/5/09	Mon 1/5/09
33		Weekly Status Meeting 11	1 hr	Mon 1/12/09	Mon 1/12/09
34		Weekly Status Meeting 12	1 hr	Mon 1/19/09	Mon 1/19/09
35		Weekly Status Meeting 13	1 hr	Mon 1/26/09	Mon 1/26/09
36		Weekly Status Meeting 14	1 hr	Mon 2/2/09	Mon 2/2/09
37		Weekly Status Meeting 15	1 hr	Mon 2/9/09	Mon 2/9/09
38		Weekly Status Meeting 16	1 hr	Mon 2/16/09	Mon 2/16/09
39		Weekly Status Meeting 17	1 hr	Mon 2/23/09	Mon 2/23/09
40		Weekly Status Meeting 18	1 hr	Mon 3/2/09	Mon 3/2/09
41		Weekly Status Meeting 19	1 hr	Mon 3/9/09	Mon 3/9/09



Take note of the icons appearing in the Information Column (column 1 in the Gantt Table). The Yin-Yang icon indicates that the task is a recurring task. The symbol appearing below is a constraint indicator. If you move your cursor over the icon, information about the task is displayed:

22		Weekly Status Meeting	5.13 day
23		Weekly Status Meeting 1	1
24		Weekly Status Meeting 2	1
25		Weekly Status Meeting 3	1
26		Weekly Status Meeting 4	1

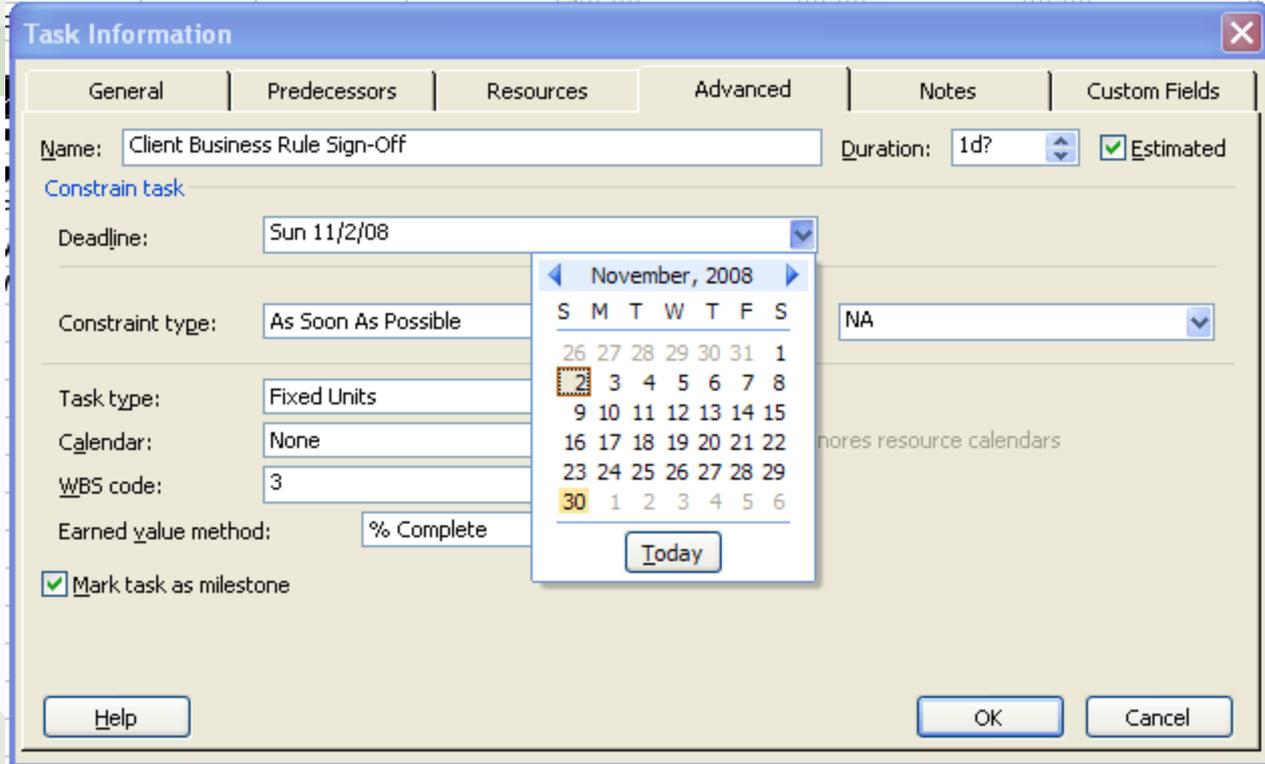
This task has a 'Start No Earlier Than' constraint on Mon 11/3/08.



Using Deadline Dates

You can establish a *deadline date* for a task. This serves as a visual indicator on the Gantt Chart to show that a deadline exists. If the task finishes after the deadline date, a symbol appears in the Information column (column 1 on the Gantt Table) indicating that the task is past its deadline. Note that deadline dates don't affect the calculation of a project's schedule.

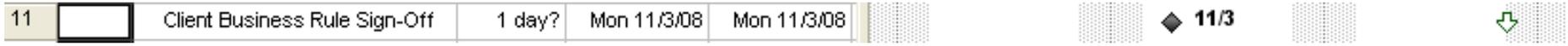
To establish a deadline date, double click on the task you want to place a deadline date on. The *Task Information* dialog box will appear. Click on the Advanced tab and click the down-arrow to the right of *Deadline:* in the *Constrain task* section. Select your deadline date and click OK to dismiss the dialog box.



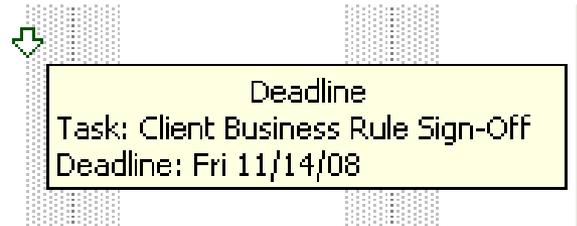


Using Deadline Dates (continued)

Here is what the Gantt Chart looks like after establishing the deadline date (notice the down-arrow on the far right):



If you hover your mouse cursor over the deadline date down-arrow, you will see a message similar to the following:

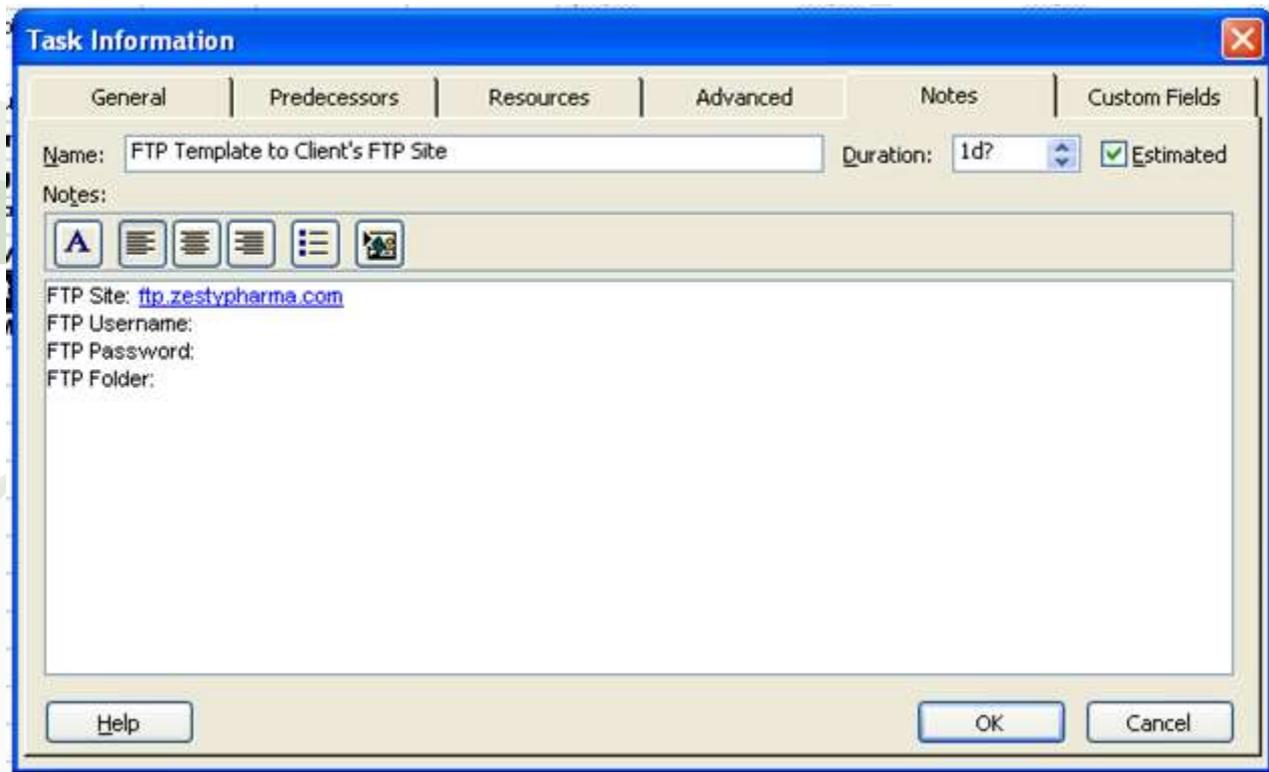




Entering Task Notes

Project 2007 has a nice feature which allows you to enter notes to individual tasks to remind you of certain details for the task such as client contact information, FTP IP Address/username/password, etc.

To create a task note, double-click the task to display the *Task Information* dialog box. Click on the *Notes* tab and enter in your notes in the area provided. Click OK to dismiss the dialog.



A note icon will appear in the Information column (column 1 on the Gantt Table) indicating that there is a note for the task. Hover your mouse cursor over the icon and the note will display.



Establishing Dependencies Between Tasks

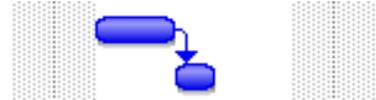
Dependencies tie tasks to the timing of other tasks in a project. Dependencies exist because tasks rarely occur simultaneously; usually, tasks must start or finish before others can begin.

A task that must occur before another task is a *predecessor task*. The task that occurs later in the relationship is the *successor task*. Tasks with dependency relationships are said to be *linked*. The Gantt Chart shows these dependencies as lines running between task bars; an arrow at one end points to the successor task.

You can create dependencies in one of three ways: 1) you select two tasks and click on Edit ⇒ Link Tasks (or use the Link Tasks button on the Standard Toolbar); 2) You can open the Task Information dialog box for the successor task and enter predecessor information on the Predecessor tab; 3) you can click the predecessor task's Gantt bar and drag it to the Gantt bar of the successor task.

When you link tasks, you will see an arrow from the predecessor task to the successor task and you will also note that the successor task's Start Date and Finish Date on the Gantt Table have shifted:

2	Find Client Who Will Talk to l	2 days?	Mon 11/3/08	Tue 11/4/08
3	Convince Client to Buy	1 day?	Wed 11/5/08	Wed 11/5/08



Now, this type of dependency is called a *Finish-to-Start (FS)* dependency type and is the most common dependency type. Despite that fact, there are three other dependency types: *Start-to-Finish (SF)*, *Finish-to-Finish (FF)* and *Start-to-Start (SS)*.



Establishing Dependencies Between Tasks (continued)

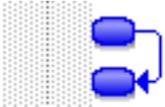
Note that the *Finish-to-Start (FS)* dependency type is the only dependency type you can create by using Edit ⇒ Link Tasks, or by clicking-and-dragging the mouse. The other three dependency types must be established using the *Task Information* dialog box's *Predecessor* tab, or the *Task Dependency* dialog box.

With the *Finish-to-Start (FS)* dependency type, the successor task cannot start until the predecessor task finishes. For example, the business rules must be established before computer programming begins.

In the *Finish-to-Finish* dependency type, the successor task cannot finish until the predecessor task finishes. For example, you cannot finish creating slides (the successor task) until you finish summarizing the data (the predecessor task).

To create a *Finish-to-Finish (FF)* dependency, double-click on the successor task to display the *Task Information* dialog box and then click on the *Predecessor* tab. In the *ID* column, enter the *ID* of the predecessor task then click tab. In the *Type* column, click on the cell and choose *Finish-to-Finish (FF)*. Click *OK* to dismiss the dialog box.

16		RTN Walk-Through	1 day?	Mon 11/3/08	Mon 11/3/08
17		Program Views Phase	1 day?	Mon 11/3/08	Mon 11/3/08

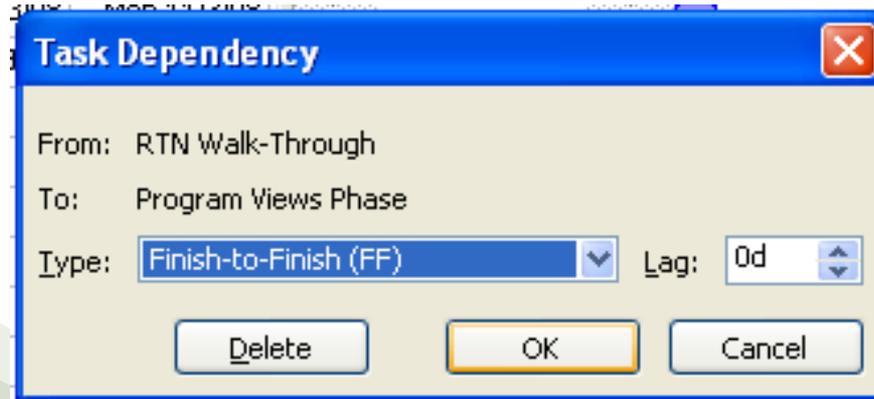


Establishing Dependencies Between Tasks (continued)



sheepsqueezers.com

An equivalent, but alternative, method is to link the two tasks together as described at the beginning of this section, but to then double-click on the link between the two tasks on the Gantt Chart.



The remaining dependency types can be created in a similar fashion.

To remove a link between two tasks, select the two tasks and click Edit ⇒ Unlink Tasks.

Once you've established your dependencies, you can double-click on each task to bring up the Task Information dialog box to see information about the dependencies. A new feature for *Project 2007* is the *Task Drivers* pane which shows you the dependencies in a pane on the left of the screen. To show the *Task Drivers* pane, click on Project ⇒ Task Drivers.



Establishing Dependencies Between Tasks (continued)

Task Drivers [X]

The following factors are affecting the start date of:

Task: **3 - Convince Client to Buy**
Start: **Wed 11/5/08**

- Predecessor Tasks:

Name	Type	Lag
2 - Find Client Who Will Talk to Us	Finish To Start	0d

- Calendars:

Project: Standard

	Task Name	Duration	Start	Finish
1	<input type="checkbox"/> Sales Proposal	3 days?	Mon 11/3/08	Wed 11/5/08
2	Find Client Who Will Talk to Us	2 days?	Mon 11/3/08	Tue 11/4/08
3	Convince Client to Buy	1 day?	Wed 11/5/08	Wed 11/5/08
4	Send Client Box of Godiva Chocolates	1 day?	Mon 11/3/08	Mon 11/3/08
5	Get Client's Go-Ahead	1 day?	Mon 11/3/08	Mon 11/3/08
6	<input checked="" type="checkbox"/> Business Rules	1 day?	Mon 11/3/08	Mon 11/3/08
11	Client Business Rule Sign-Off	1 day?	Mon 11/3/08	Mon 11/3/08
12	<input checked="" type="checkbox"/> Template Design Phase	1 day?	Mon 11/3/08	Mon 11/3/08
15	<input type="checkbox"/> IT Programming	1 day?	Mon 11/3/08	Mon 11/3/08

Nov 2, '08

T	W	T	F	S	S	M	T	W	T	F

Click on the X button in the *Task Drivers* pane to hide the *Task Drivers* pane.



Building in Delays Between Tasks

Occasionally, the successor task does not immediately start right after the predecessor task finishes. For example, an airplane may be cleared to taxi onto the runway (predecessor task), but must wait a few minutes before being given clearance to take off (successor task). Note that there is still a Finish-to-Start (FS) dependency between these two tasks, but there is some lag time before the successor task starts. This lag time is called a *delay* and can be entered via the Task Information dialog box's Predecessors tab, as you see below under the grid column marked *Lag*:

Task Information

General | **Predecessors** | Resources | Advanced | Notes | Custom Fields

Name: Duration: Estimated

Predecessors:

ID	Task Name	Type	Lag
2	Find Client Who Will Talk to Us	Finish-to-Start (FS)	0d

Buttons: Help, OK, Cancel



Building in Delays Between Tasks (continued)

Now, let's enter in a delay of 5 days between the predecessor and successor tasks by filling in "5d" in the Lag cell. This is what the Gantt Chart looks like with a five day lag between these dependent tasks. Take note of the long link line between the two tasks:





Building in Overlap Between Tasks

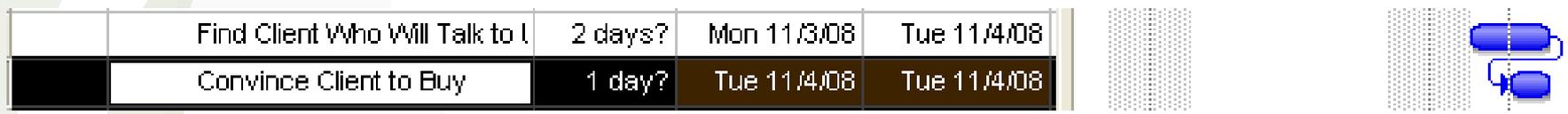
As we've mentioned on the previous slides, when you specify a lag between predecessor and a successor tasks, you create a delay; that is, a number of days on inactivity between the finish of the predecessor task and the start of the successor task.

If you specify a lag of zero, the default, the successor task start immediately after the predecessor task. This is usually what you want.

If we extend the progression from the previous two statements, what would happen if you entered a negative number for the Lag column on the Predecessors tab in the Task Information dialog? What would that mean?

Entering in a negative lag means you want to specify, not a delay, but an *overlap* between the two tasks. That is, the successor task starts *before* the predecessor task finishes. Thus, for a period of time, the two tasks are occurring in parallel. For example, while the cake is still in the oven baking (predecessor task), you can start to make the icing (successor task).

Let's enter a negative one day "-1d" for the Lag cell of our two tasks. This is what this looks like on the Gantt Chart:



Note that, in this example, the blue bar for the successor task appears underneath the blue bar for the predecessor task. For your project plan, the blue bar for the successor task may even extend to the right as well as being partially underneath the predecessor task.



In the last few slides, we've seen how to add tasks to the project plan, create dependencies between tasks, create milestones, etc. Now you have to decide who is going to do the work of completing these tasks. As the Project Manager, one of your jobs is to assign resources to each task. *Resources* are the people, supplies, and equipment that enable you to complete the tasks in your project.

Project 2007 has several different types of resources: work resources, material resources, generic resources, and cost/budget resources.

Work resources are people or equipment that consume time when working on a task. When you set up work resources, you define the amount of time that the resources have to spend on a *project* (100% means full-time). When you assign a work resource to a *task*, you must indicate the amount of time that you want the work resource to spend on that task (100% means full-time). Take note the difference between the two sentences! As a Project Manager, you must first create a list of resources that will work on the project as a whole. Then, from that list of resources, you assign one of them to perform a task.

You can also define *material resources* – items that are consumed while working on a project such as the amount of mainframe computer time.

You can define *generic resources* – resources that aren't specific people, but rather descriptions of the skills that you need to complete a task. Although this feature was designed to be used with Project Server 2007, you can still use this feature if you don't care who does the work...just that it's a warm body.



The final resource type is the *cost or budget resource*. Using a cost resource, you can add a fixed cost to a task without making the cost depend on work performed. For example, putting a salesperson up in a *Motel 6* for one night before giving a presentation to the client would be a fixed cost.

When you define and then assign resources, you can:

- keep track of the tasks that are being performed by resources
- identify potential resource shortages that may cause you to miss deadlines
- identify underutilized resources and reassign
- determine the cost of each task and your project as a whole

Note that by assigning a resource to a task can affect the duration of the project because work on the task can't begin until the resource becomes available.

Project 2007 uses a *resource calendar* – a calendar specific to each resource on the project – to define the working days/times for a resource. Note that *Project 2007* will indicate that a resource is over-allocated and allow you to make adjustments.

Some of you may be put off by the idea of assigning costs to resources since that is “not in your job description”. But, by doing this, *Project 2007* can compute the cost of the project's tasks and the entire project. When using *Project Server 2007*, this information will be invaluable to your company's senior management (that is, the managers at the top of the organization, not just the really old ones).



Creating Resources (continued)

The fields on the Resource Sheet are as follows:

- Resource Name: the full name of the resource
- Type: Drop-down box allowing for the following choices: Work, Material, Cost. *Project 2007* defined "Work" for human resources.
- Material Label: For material resources, specify the unit of measure such as miles for gasoline usage, minutes for long distance, etc.
- Initials: The initials of the resource used as shorthand on displays
- Group: Assign each resource to a group for reporting later on in the project. For example, groups could be "Sales", "IT", "Rpt Dev", etc.
- Max Units: 100% indicates exactly one work full-time employee, 200% indicates two full-time employees, and 50% indicates only half a full-time employee.
- Std. Rate: This is the rate you charge for regular work for a resource. For example, your company may bill IT personnel out at \$300/hour. This field is expecting an hourly rate (e.g., 300), but you can enter in days by entering "300/d".
- Ovt. Rate: This is the overtime rate charged reported as an hourly rate.
- Cost/Use: This is a fixed one-time cost for the resource.
- Accrue At: Drop-down box allowing for the following choices: Start, Prorated, End. This field specifies how and when *Project 2007* charges resource costs to a task at the standard or overtime rates. If specify Start/End, then *Project 2007* calculates the cost for a task as soon as the task begins/ends. Use Prorated.
- Base Calendar: Drop-down box allowing for the selection of calendar
- Code: Use this field for cost-center codes or as a catch-all to assign any info you want.



Creating Resources (continued)

Let's create some resources and enter them in the Resource Sheet:

Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar
Bud Gump	Work		BG	IT	100%	\$300.00/hr	\$0.00/hr	\$0.00	Prorated	Stands
Mary Frumpp	Work		MF	IT	100%	\$300.00/hr	\$0.00/hr	\$0.00	Prorated	Stands
Joe Lump	Work		JL	IT	100%	\$300.00/hr	\$0.00/hr	\$0.00	Prorated	Stands
Dee Dee Chumpp	Work		DDC	IT	100%	\$300.00/hr	\$0.00/hr	\$0.00	Prorated	Stands
Harry Bump	Work		HB	IT	100%	\$300.00/hr	\$0.00/hr	\$0.00	Prorated	Stands

Another way to enter in information for each resource is via the Resource Information dialog box. Double-click one of the rows in the Resource Sheet, or right-click and click on Resource Information.

Resource Information [X]

General | Costs | Notes | Custom Fields

Resource name: Initials:

Email: Group:

Code:

Booking type: Type:

Material label:

Default Assignment Owner:

Generic Budget

Inactive

Resource Availability

NA	Available From	Available To	Units
	NA	NA	100%



Creating Resources (continued)

As you see, the Resource Information dialog box allows you to also enter in the resource's email address as well as specify the booking type. The booking type drop-down box allows you to choose Committed or Proposed. When you choose Committed, you are officially assigning the resource to the project. When you choose Proposed, you are indicating that the resource is not yet officially assigned to the project. Booking type is generally used with *Project Server 2007*.

You can also specify when a resource is available by modifying the Resource Availability section on the General tab of the Resource Information dialog. For example, Bud Gump is now only available for one week:

The screenshot shows the 'Resource Information' dialog box with the 'General' tab selected. The 'Resource name' is 'Bud Gump' and 'Initials' is 'BG'. The 'Booking type' is set to 'Committed'. The 'Resource Availability' table shows a single row for availability from 11/10/2008 to 11/14/2008 at 100% units.

Available From	Available To	Units
11/10/2008	11/14/2008	100%



Creating Resources (continued)

Occasionally, you don't need to know who is exactly going to work on the task, just that someone is working on the task. This is a good example of a generic resource. Below, we've defined another resource named "Lowly Intern" and checked the "Generic" checkbox on the Resource Information dialog box:

	Lowly Intern	Work		LI-1	IT	100%	\$25.00/hr	\$0.00/hr	\$0.00	Prorated	24 Hours
--	--------------	------	--	------	----	------	------------	-----------	--------	----------	----------

Resource Information

General | Costs | Notes | Custom Fields

Resource name: Initials:

Email: Group:

Code:

Booking type: Type:

Material label:

Default Assignment Owner:

Generic Budget

Note that a two-headed icon appears in the Information column indicating that the resource is a generic resource.

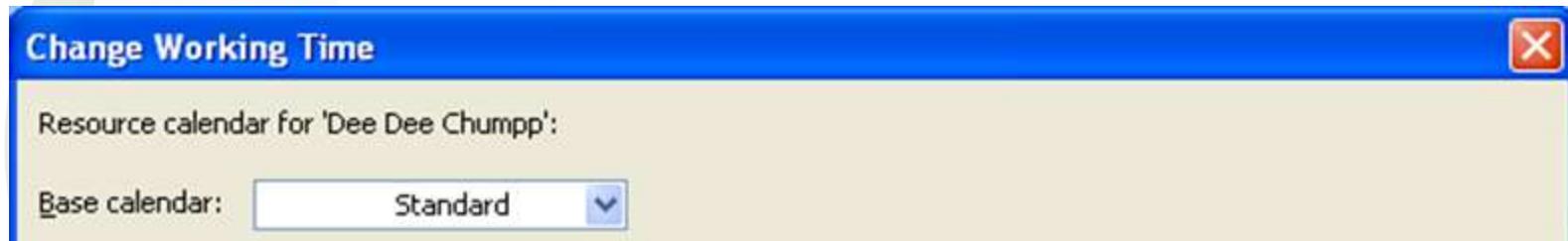
Note that you can also assign a note about the resource by clicking on the Notes tab. This is similar to a Task Note. An icon shows up in the Information column indicating that there is a note about the resource.

Creating Resources (continued)

Recall that we set up a new calendar, called the *YourCompany Standard* calendar. That base calendar is the calendar we selected when creating our resources on the Resource Sheet (except for Interns who are on the *24 Hours* calendar...tee-hee!).

One thing that might be bothering you at this point is: what do I do if one of my resources, heaven forbid, takes a vacation? Should I update the *YourCompany Standard* calendar for every resource? No. In fact, each resource is associated with his/her own calendar based on the *YourCompany Standard* calendar. This is done automatically for you so you don't have to make one calendar per resource...which would be very time-consuming.

In order to update a particular resource's calendar, go back to the Resource Sheet (View ⇒ Resource Sheet) and double-click on the name of the resource whose calendar you want to change. This will bring up the Resource Information dialog box. Next, click on the *Change Working Time...* button to bring up the Change Working Time dialog box. You will notice, as you see below, that at the top of the dialog box is a message like this: *Resource Calendar for 'Dee Dee Chumpp'*. This indicates that this calendar you are about to modify is for Dee Dee Chumpp. Fill in this calendar just as we did in the section *Looking at Project Calendars* above.



Now that we've defined resources, updated one or more calendars, etc., it is now time to assign a resource to a particular task.

1. Let's go back to the Gantt Chart view (View ⇒ Gantt Chart).
2. Click somewhere on the row having a task you want to assign.
3. Click Tools ⇒ Assign Resources. (This will bring up the Assign Resources dialog box.)
4. Select the resource you want to assign to the task. The Resource Name should appear in the text box at the top of the dialog box to indicate which resource you want to assign.
5. If you are using Project Server 2007, in the R/D cell, enter either an "R" to request a resource with the appropriate skills be assigned, enter a "D" to demand a particular resource be assigned. We will leave this field blank.
6. In the units column, enter in the percentage of the resource's time you to have devoted to the task. This should be a percentage, but you do not need to enter a percentage sign. If you enter 100, that means the resource will be devoted to the task 100% of the time for the duration of the task. Project 2007 defaults to 100%, so you don't have to enter that in.
7. Do not enter data in the cost field. It will be calculated for you based on the resource's hourly standard rate.
8. Click the Assign button to assign the resource.



Creating Resources (*continued*)

Find Client Who Will Talk 1 day Mon 11/3/08 Mon 11/3/08 Bud Gump

Assign Resources

Task: Find Client Who Will Talk to Us

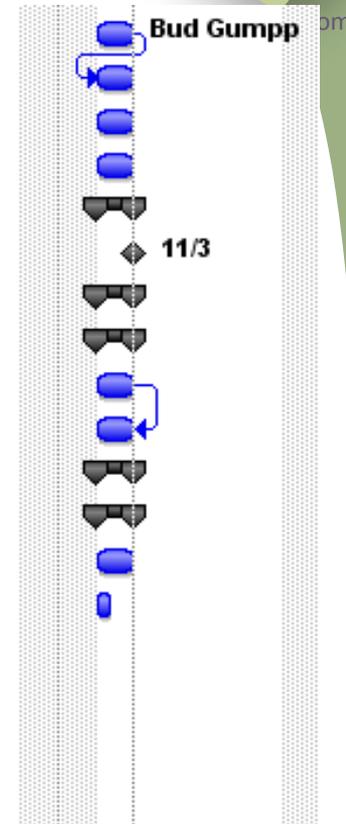
+ Resource list options

Resources from ZestyProjectPlan.mpp

Resource Name	R/D	Units	Cost
<input checked="" type="checkbox"/> Bud Gump		100%	\$2,400.00
<input type="checkbox"/> Dee Dee Chumpp			
<input type="checkbox"/> Display Unit			
<input type="checkbox"/> Harry Bump			
<input type="checkbox"/> Joe Lump			
<input type="checkbox"/> Lowly Intern			
<input type="checkbox"/> Mary Frumpp			

Buttons: Assign, Remove, Replace..., Graphs..., Close, Help

Hold down Ctrl and click to select multiple resources



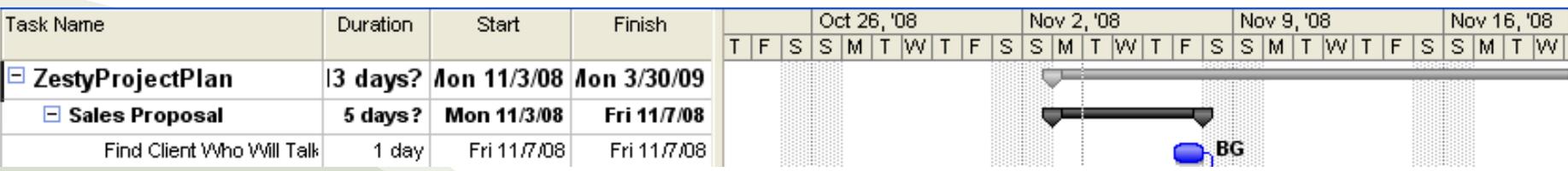
Note above that the Cost field is computed at \$2400. That is Bud Gump working 8 hours for the 1 day the task will take: $8 \times \$300/\text{hr} = \2400 .

You can display the resource's initials instead of the name by clicking on the blue bar to the left of the resource name to display the Format Bar dialog box. Then, change the text Resource Name to Resource Initials from the drop-down box associated with the row labeled *Right*. You can display the name or initials to the left, bottom, top, and inside.



Creating Resources (continued)

Recall that creating a cost/budget resource, Display Unit in our example, was a bit different than for a work resource. Assigning a cost/budget resource is differ as well. Ensure that the project summary task is showing by clicking on Tools ⇒ Options... to bring up the Options dialog box. Next, on the View tab, ensure that the checkbox to the left of *Show project summary task* is checked. The project summary task appears at the top of the Gantt Table and Gantt Chart, as you see below labeled ZestyProjectPlan (the name of the Project file):



Next, click anywhere on the project summary task, then choose Tools ⇒ Assign Resources to open the Assign Resources dialog box. Click the name of the budget resource and click Assign. You will see the name of the budget resource appear, as you see below:

Task Name	Duration	Start	Finish	Predecessors	Resource Names	Oct 26, '08			
						S	M	T	W
<input checked="" type="checkbox"/> ZestyProjectPlan	13 days?	Mon 11/3/08	Mon 3/30/09		Display Unit	[Gantt bar for ZestyProjectPlan]			
<input checked="" type="checkbox"/> Sales Proposal						[Gantt bar for Sales Proposal]			
Find Client Who Will Talk						[Gantt bar for Find Client Who Will Talk]			
Convince Client to Buy						[Gantt bar for Convince Client to Buy]			
Send Client Box of Samples						[Gantt bar for Send Client Box of Samples]			
Get Client's Go-Ahead						[Gantt bar for Get Client's Go-Ahead]			
<input checked="" type="checkbox"/> Business Rules						[Gantt bar for Business Rules]			
Client Business Rule						[Gantt bar for Client Business Rule]			
<input checked="" type="checkbox"/> Template Design P						[Gantt bar for Template Design P]			

Assign Resources [Close]

Task: ZestyProjectPlan

Resource list options

Resources from ZestyProjectPlan.mpp

Resource Name	R/D	Units	Cost
<input checked="" type="checkbox"/> Display Unit			

Assign Remove

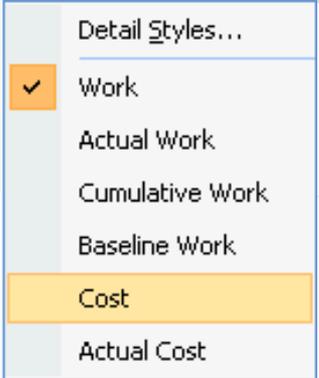


Creating Resources (continued)

Unfortunately, you cannot assign a value to a budget resource. To do that, you switch to the Task Usage view (View ⇨ Task Usage), as you see below:

Task Name	Work	Details	Nov 2, '08					Nov 9, '08						
			T	F	S	S	M	T	W	T	F	S	S	
<input checked="" type="checkbox"/> ZestyProjectPlan	8 hrs	Work										8h		
Display Unit		Work												
<input checked="" type="checkbox"/> Sales Proposal	8 hrs	Work										8h		
<input checked="" type="checkbox"/> Find Client Who WI	8 hrs	Work										8h		
Bud Gump	8 hrs	Work										8h		
Convince Client to	0 hrs	Work												

Sadly, you only see the Work rows on the Task Usage view. To add the Budget Cost rows, right-click on the right pane and click on Cost:



This will show additional rows labeled Cost. Note that this is the cost for the resources like Bud Gump and not the Display Unit. You will not be able to enter in fixed costs for the Display Unit on the Cost rows.

To add the Budget Cost rows, right click on the right pane and click on Detail Styles... to bring up the Detail Styles dialog box. Locate the field labeled *Budget Cost* in the list box labeled *Available Fields*. Click on Budget Cost and then click on the *Show >>* button to add it to the *Show these fields* list box.



Creating Resources (continued)

You will now see this modified Task Usage view:

Task Name	Details	Nov 2, '08						
		T	F	S	S	M	T	W
ZestyProjectPlan	Work							
	Cost							
	Budget Cost					\$0.00	\$0.00	\$0.00
Display Unit	Work							
	Cost							
	Budget Cost					\$0.00	\$0.00	\$0.00

Note the addition of the row Budget Cost next to the Display Unit row. You can now enter in values on the Budget Cost rows. Let's enter in \$125 from November 3rd to November 7th.

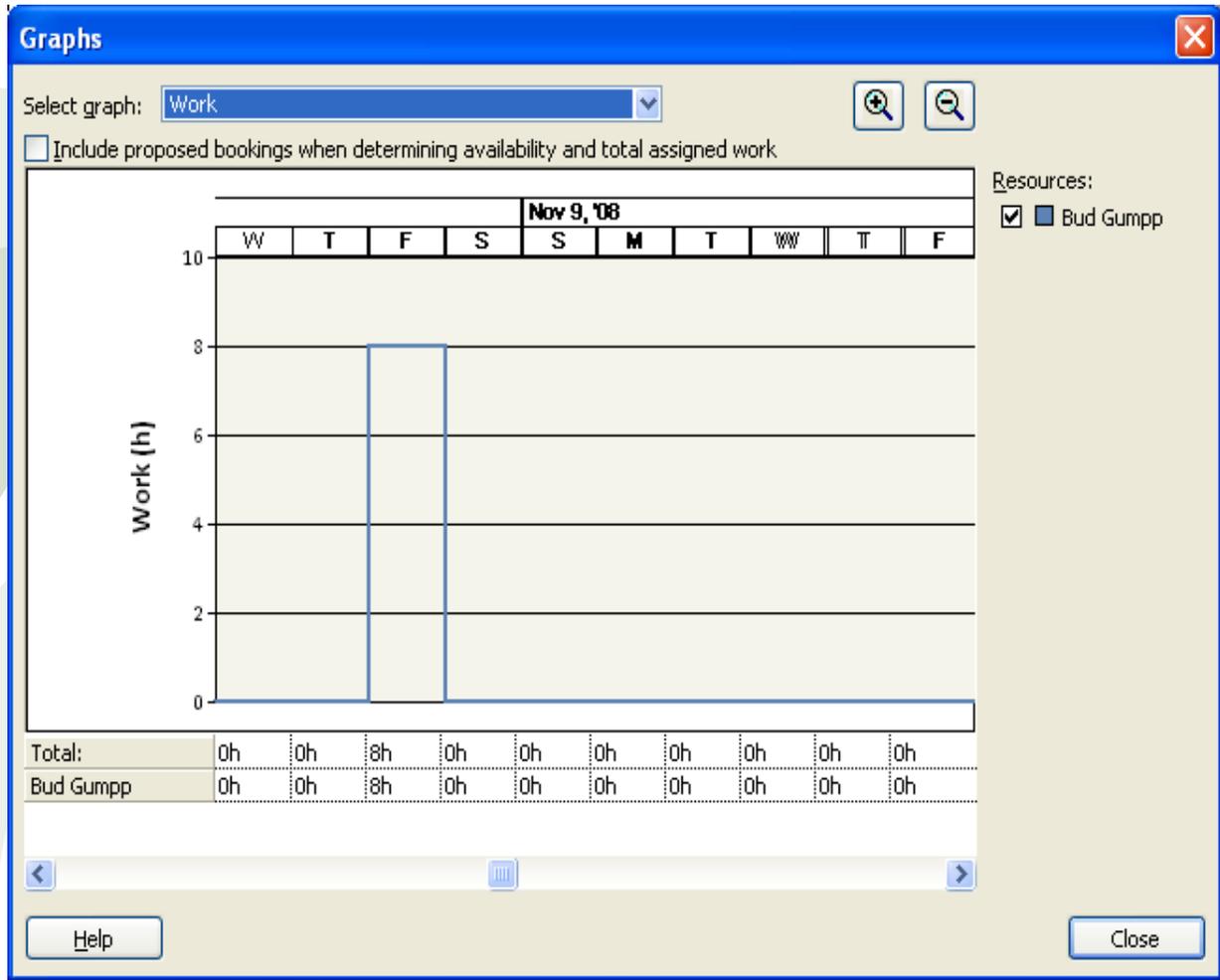
Task Name	Details	Nov 2, '08										
		T	F	S	S	M	T	W	T	F	S	
ZestyProjectPlan	Work											8h
	Cost											\$2,400.00
	Budget Cost					\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00
Display Unit	Work											
	Cost											
	Budget Cost					\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00

Note that the Budget Cost values are also added to the project summary task line ZestyProjectPlan.



Creating Resources (continued)

When assigning a resource to a task, you may be concerned that the resource is over-allocated. To see what percentage of the resource's time is allocated, go to the Gantt Chart view, click Tools ⇒ Assign Resources to display the Assign Resources dialog box. Click on the resource name you are concerned about, then click on the *Graphs...* button. The Graphs dialog appears for Bud Gumpp:

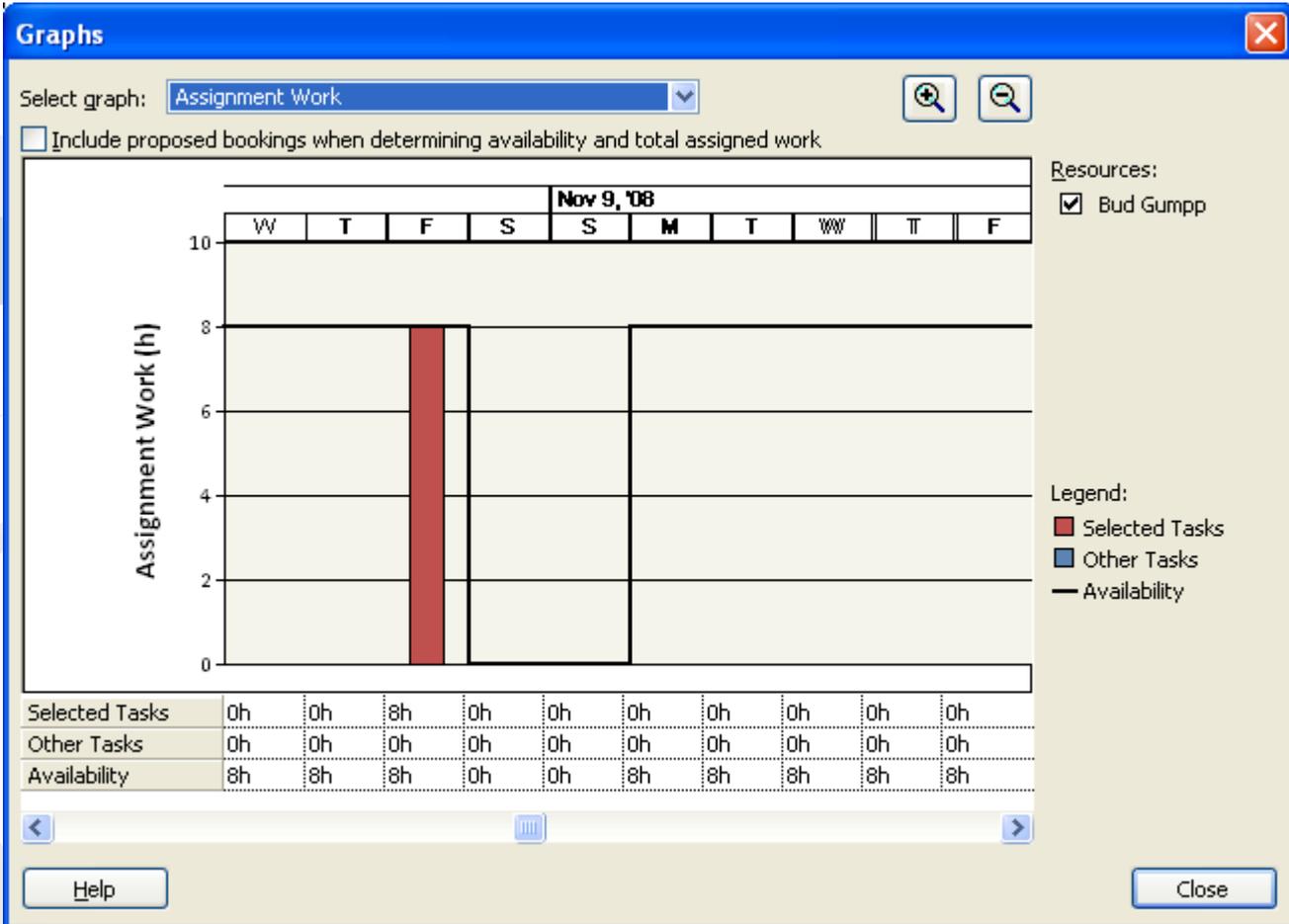


There are three graph types in the Select graph drop-down box: Remaining Availability, Work, and Assignment Work. The Work graph, shown to the left, shows the amount of hours the employee is assigned to a task for each day.



Creating Resources (continued)

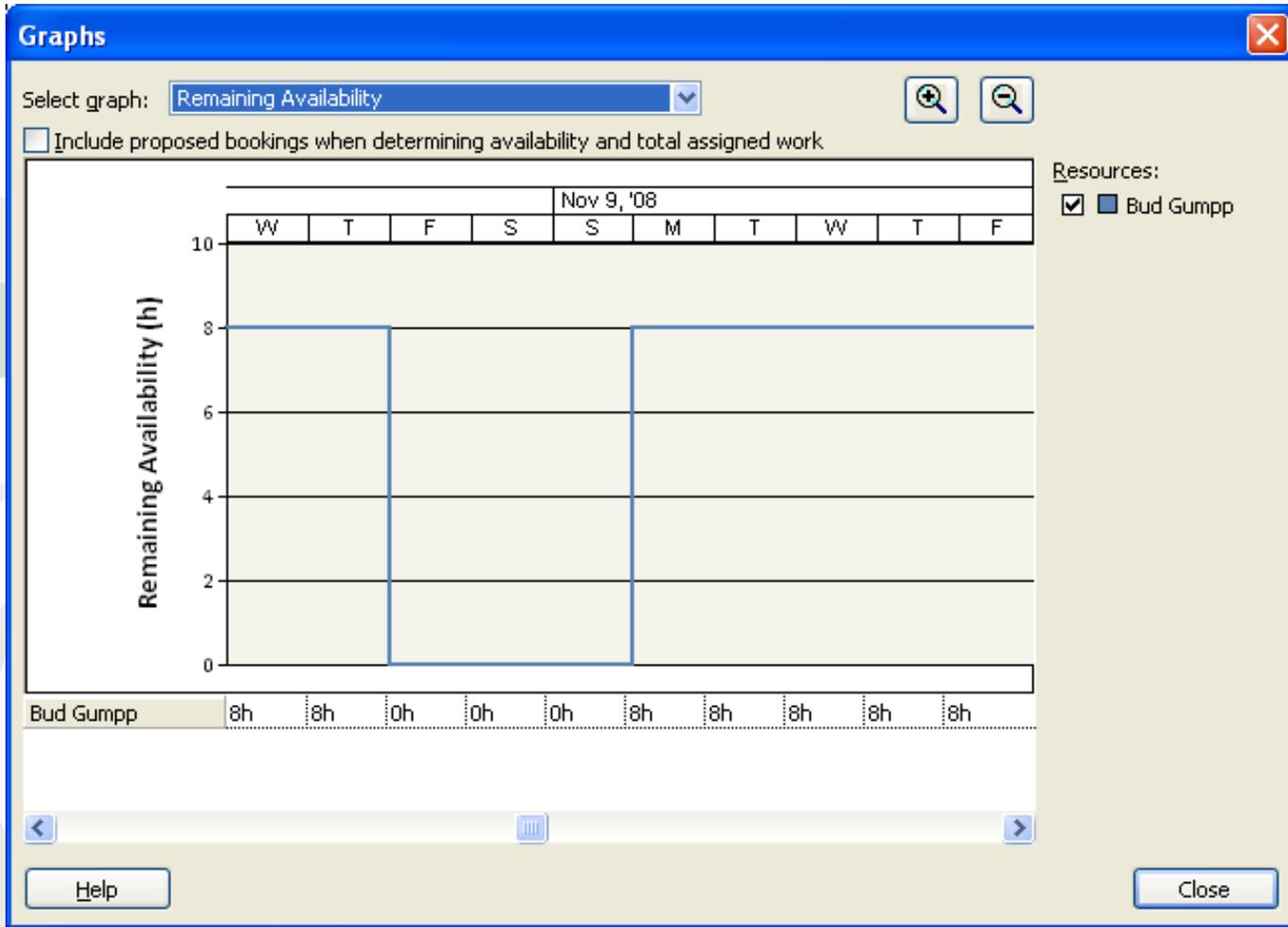
The Assignment Work graph, shown below, shows the hours assigned to selected tasks, other tasks, as well as a line showing the availability for the resource. The Availability line – the black line in the graph – shows when the resource is slated to be in work. Note the drop, that would be Saturday and Sunday and this particularly bad employee is not working on those days!





Creating Resources (continued)

The Remaining Availability graph, shown below, shows the hours the resource has left to be assigned. By looking at this particular graph, the Project Manager will know how much time the resource has available.





Creating Resources (continued)

To get a whole-project summary of duration, start date, end date, costs, etc., you can look at the project statistics. From the Gantt Chart view, click on Project ⇒ Project Information to bring up the Project Information dialog box. Next, click on the *Statistics...* button at the bottom. You will see the project statistics, as shown below:

Project Statistics for 'ZestyProjectPlan.mpp'

	Start	Finish
Current	Mon 11/3/08	Mon 3/30/09
Baseline	NA	NA
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	105.13d?	8h	\$2,400.00
Baseline	0d?	0h	\$0.00
Actual	0d	0h	\$0.00
Remaining	105.13d?	8h	\$2,400.00

Percent complete:

Duration: 0% Work: 0%



Creating Resources (continued)

Some tasks are fixed-cost tasks in that you know that the cost of a particular task stays the same regardless of the duration of the task or work performed. For example, our task *Send Client Box of Godiva Chocolate as a Bribe* is a fixed-cost task costing, say, \$250. To enter in this fixed cost, starting at the Gantt Table view (click somewhere on the Gantt Table itself!), click on View ⇒ Table:Entry ⇒ Cost. You will see the *Fixed Cost* column. Let's enter in that \$250 dollars:

Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost
<input type="checkbox"/> ZestyProjectPlan	\$0.00	Prorated	\$2,650.00
<input type="checkbox"/> Sales Proposal	\$0.00	Prorated	\$2,650.00
Find Client Who Wi	\$0.00	Prorated	\$2,400.00
Convince Client to	\$0.00	Prorated	\$0.00
Send Client Box of	\$250.00	Prorated	\$250.00

As you see, the project summary task line shows the Total Cost reflecting the Fixed Cost as well as the costs for the resources performing work.



Understanding Basic Views

Up to now, we've mostly been using the Gantt Chart view. A *view* is a way to examine your project and there are *many* views available in *Project 2007* which allow you to focus on different aspects of the project.

For the most part, views are either charts or tables. Be aware that if a view contains a table, you can use the Select All button to quickly switch to a different table. The Select All button is the upper left most cell in a table, as shown below on the Gantt Table:

Select All button →

		Task Name	Duration	Start
0	<input type="checkbox"/>	ZestyProjectPlan	105.13 days?	Mon 11/3
1	<input type="checkbox"/>	Sales Proposal	5 days?	Mon 11/3
2		Find Client Who Will Talk to Us	1 day	Fri 11/3
3		Convince Client to Buy	1 day?	Fri 11/3
4		Send Client Box of Godiva Chocol	2 days	Mon 11/3
5		Get Client's Go-Ahead	1 day?	Mon 11/3
6	<input checked="" type="checkbox"/>	Business Rules	1 day?	Mon 11/3
11		Client Business Rule Sign-Off	1 day?	Mon 11/3
12	<input checked="" type="checkbox"/>	Template Design Phase	1 day?	Mon 11/3
15	<input type="checkbox"/>	IT Programming	1 day?	Mon 11/3

For many of the tables (sheets) you see in Project 2007, there may be more columns of information hidden especially if there is a chart in the right pane. To see the additional columns, either move the pane divider to the right, or use the left-right scrollbar at the bottom of the application to reveal more columns.

Understanding Basic Views (continued)



While we cannot go into every single view there is in *Project 2007*, we will mention list most of them below and go through a few of the more important ones on the next few slides. Note that some of these are available from the View ⇒ More Views... menu. Also note that some of these views only make sense when you have baselined your project and are in the tracking phase.

- Bar Rollup
- Calendar
- Descriptive Network Diagram
- Detail Gantt
- Gantt Chart
- Leveling Gantt
- Milestone Date Rollup
- Milestone Rollup
- Multiple Bases Gantt
- Network Diagram
- PA_Expected Gantt
- PA_Optimistic Gantt
- PA_PERT Entry Sheet
- PA_Pessimistic Gantt
- Relationship Diagram
- Resource Allocation
- Resource Form
- Resource Graph
- Resource Name Form
- Resource Sheet
- Resource Usage
- Task Details Form
- Task Entry
- Task Form
- Task Name Form
- Task Sheet
- Task Usage
- Tracking Gantt



Understanding Basic Views (continued)

View: Calendar

Month Week Custom

November 2008

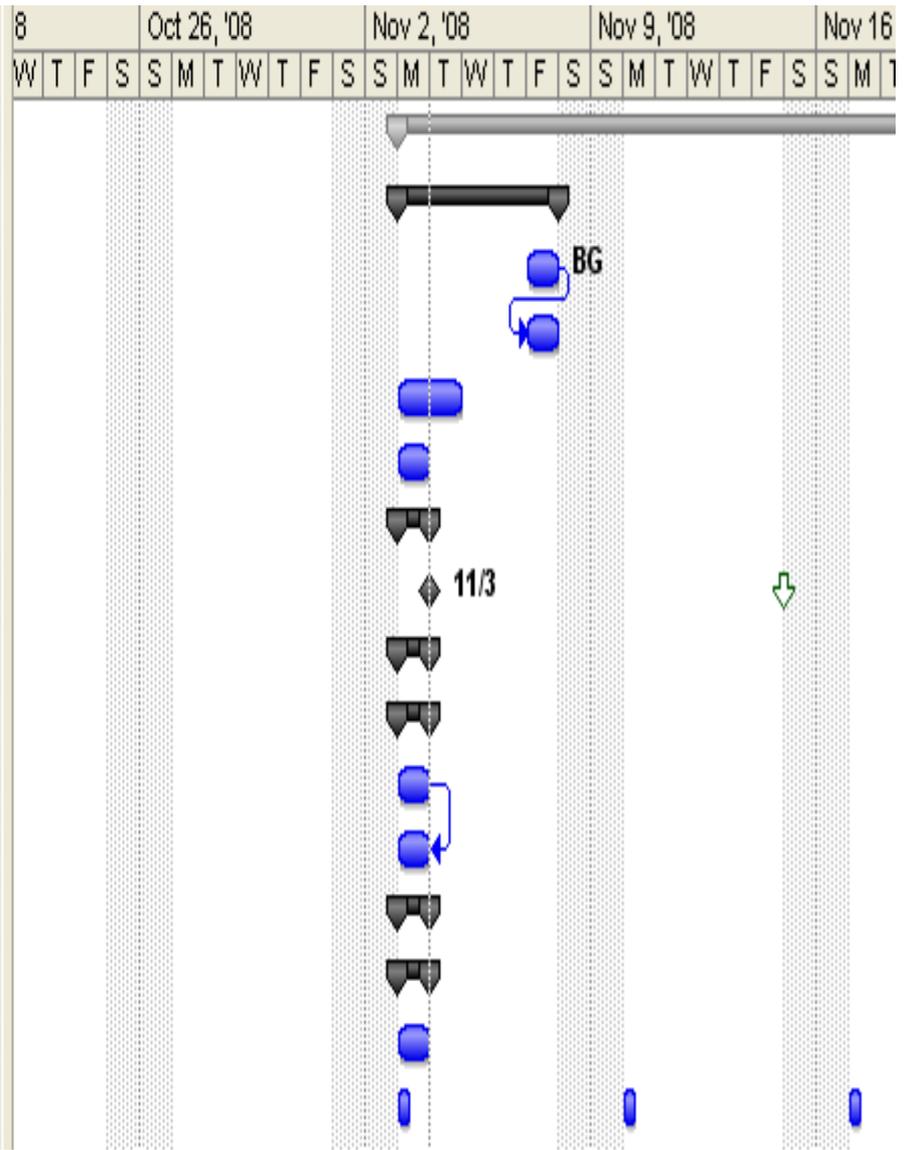
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2	3	4	5	6	7	8
ZestyProjectPlan, 105.13 days?						
	<ul style="list-style-type: none"> Send Client Box of Godiva Chocolate as a Bribe, Get Client's Go-Ahead Client Business Rul RTN Walk-Through, 1 c Program Views Phase 				<ul style="list-style-type: none"> Find Client Who Will Ta Convince Client to Buy 	
9	10	11	12	13	14	15
ZestyProjectPlan, 105.13 days?						
16	17	18	19	20	21	22
ZestyProjectPlan, 105.13 days?						



Understanding Basic Views (continued)

View: Gantt Chart (with Gantt Table)

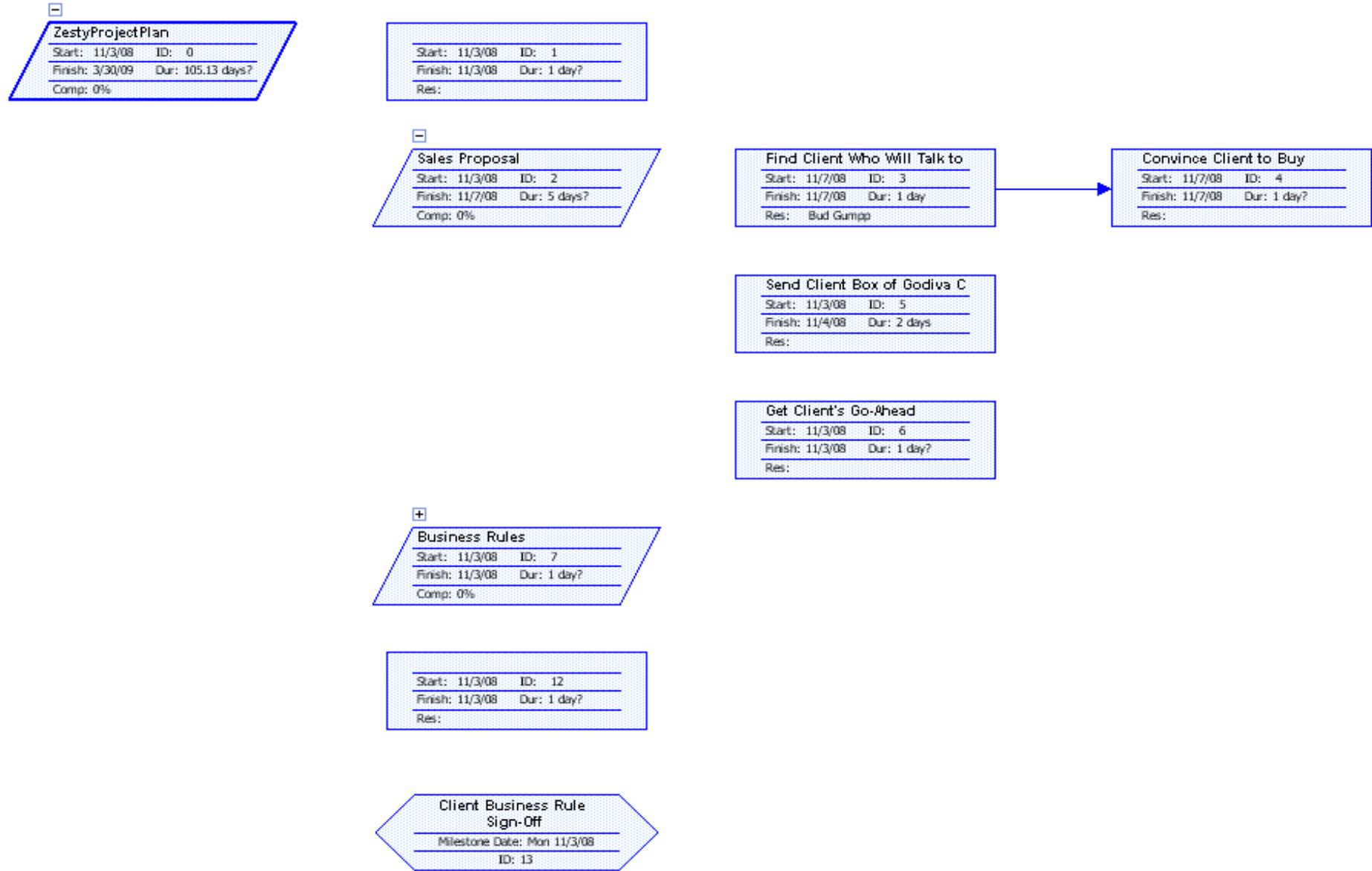
		Task Name	Duration	Start
0		ZestyProjectPlan	105.13 days?	Mon 11/3/0
1		Sales Proposal	5 days?	Mon 11/3/0
2		Find Client Who Will Talk to Us	1 day	Fri 11/7/0
3		Convince Client to Buy	1 day?	Fri 11/7/0
4		Send Client Box of Godiva Chocol	2 days	Mon 11/3/0
5		Get Client's Go-Ahead	1 day?	Mon 11/3/0
6		Business Rules	1 day?	Mon 11/3/0
11		Client Business Rule Sign-Off	1 day?	Mon 11/3/0
12		Template Design Phase	1 day?	Mon 11/3/0
15		IT Programming	1 day?	Mon 11/3/0
16		RTN Walk-Through	1 day?	Mon 11/3/0
17		Program Views Phase	1 day?	Mon 11/3/0
18		Quality Control Phase	1 day?	Mon 11/3/0
20		Product Delivery	1 day?	Mon 11/3/0
21		FTP Template to Client's FTP Site	1 day?	Mon 11/3/0
22		Weekly Status Meeting	105.13 days	Mon 11/3/0





Understanding Basic Views (continued)

View: Network Diagram (see also *Descriptive Network Diagram* and *Relationship Diagram*)



Understanding Basic Views (continued)



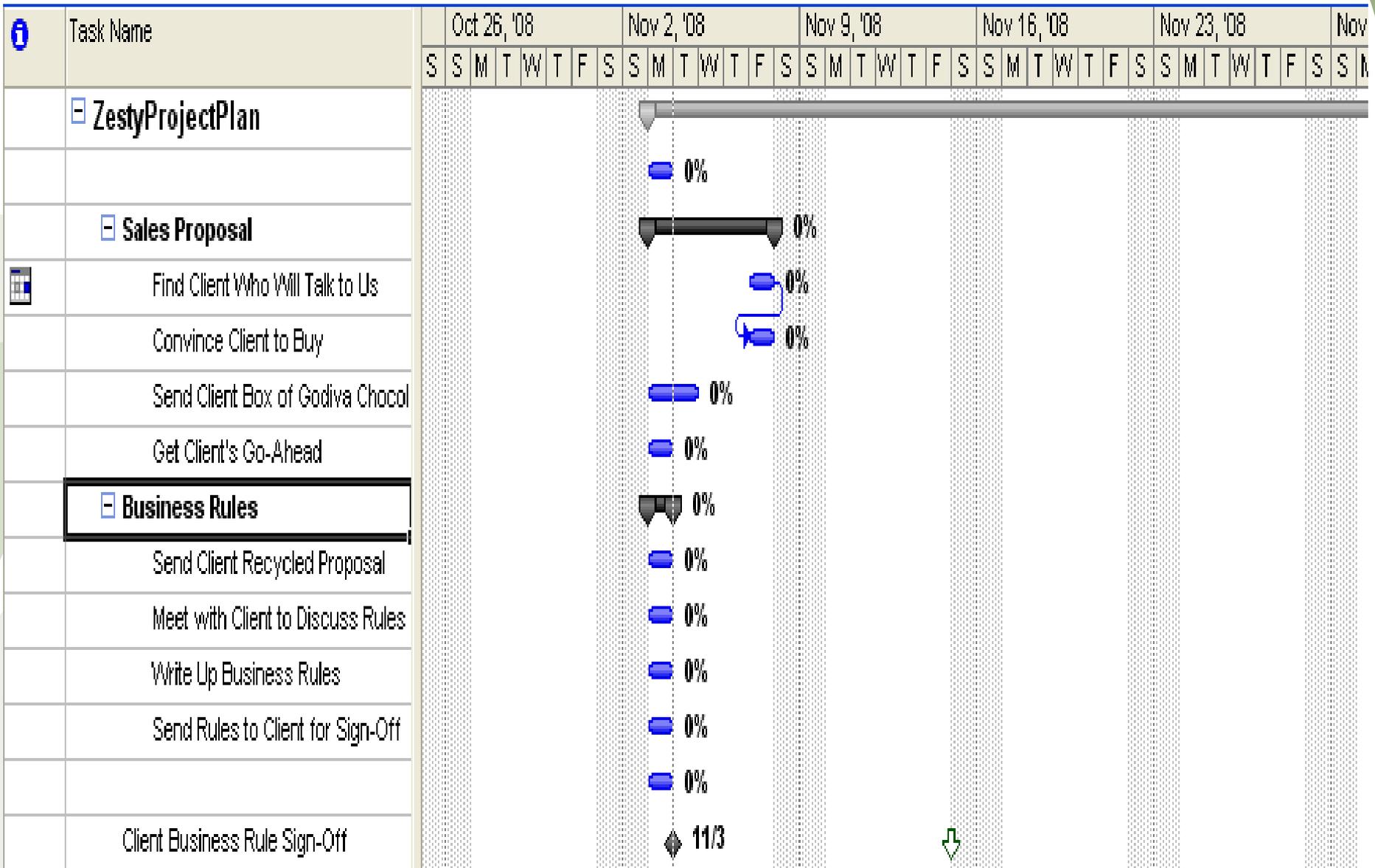
View: Task Usage

	Task Name	Details	Nov 2, '08									
			T	W	T	F	S	S	M	T	W	
0	ZestyProjectPlan	Work										
		Cost							\$125.00	\$125.00		
		Budget Cost							\$125.00	\$125.00	\$125.00	
	Display Unit	Work										
		Cost										
		Budget Cost							\$125.00	\$125.00	\$125.00	
1		Work										
		Cost										
		Budget Cost										
2	Sales Proposal	Work										
		Cost							\$125.00	\$125.00		
		Budget Cost										
3	Find Client Who W	Work										
		Cost										
		Budget Cost										



Understanding Basic Views (continued)

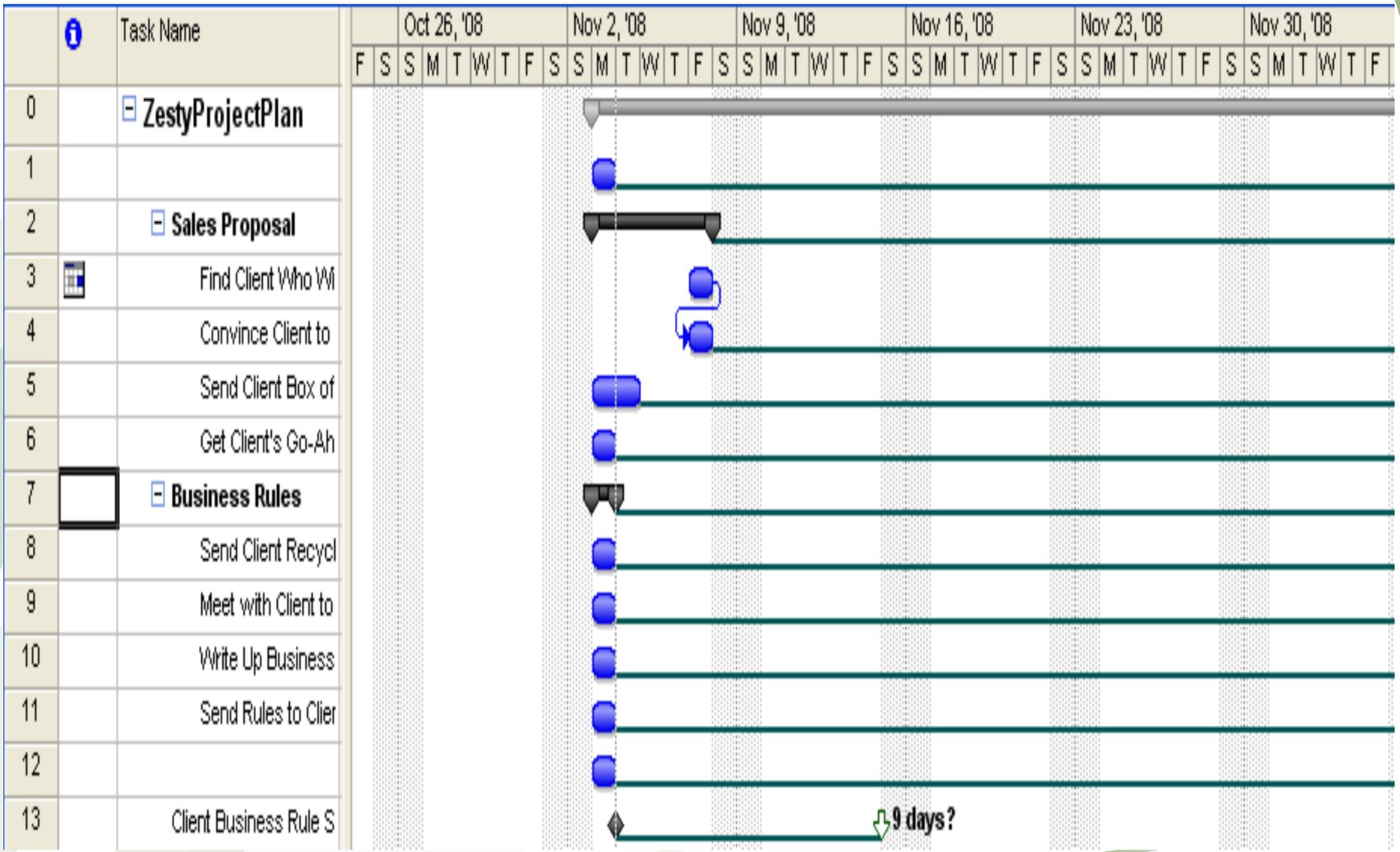
View: Tracking Gantt





Understanding Basic Views (continued)

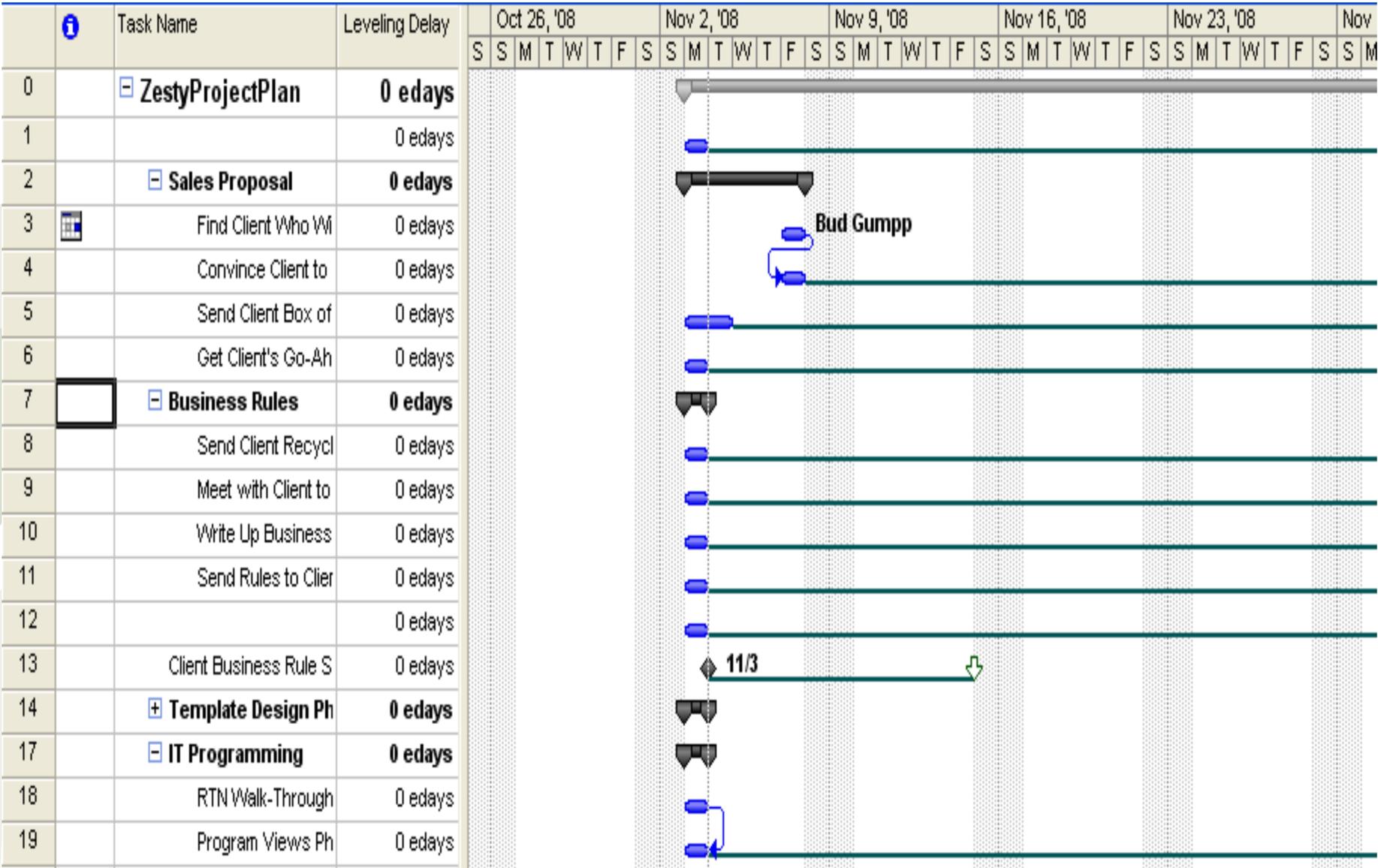
View: Detail Gantt (used to evaluate slippage)





Understanding Basic Views (continued)

View: Leveling Gantt (used to evaluate delays)





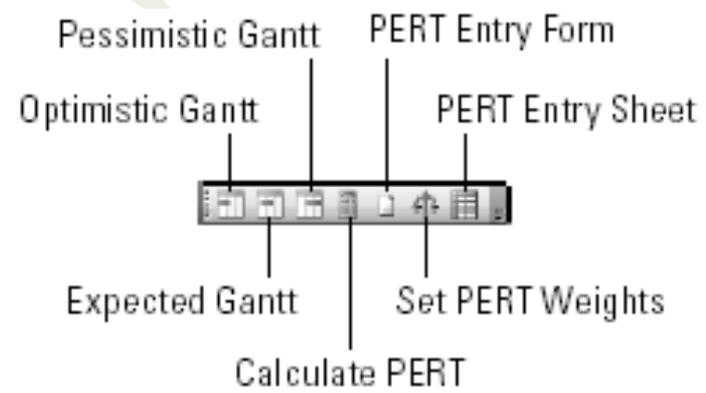
Understanding Basic Views (continued)

View: PERT Analysis

PERT or Program Evaluation and Review Technique is a method of tracking the flow of tasks and was developed by the U.S. Navy in the late 1950s.

PERT Analysis is sometimes compared to *what-if analysis*, and many Project Managers use this approach to estimate a probable outcome. The probable outcome you estimate may be the duration of a task, its start date, or its end date. As a function of the estimation process, you specify the optimistic, pessimistic, and expected durations of tasks in your project. Then *Project 2007* calculates a weighted average of the three durations to give you an estimate. You can use the following PERT views to help you make your estimates: PA_PERT Entry Sheet, PA_Optimistic Gantt, PA_Expected Gantt, and PA_Pessimistic Gantt.

To help you out, Project 2007 has a special PERT Toolbar. To display it click on View ⇒ Toolbars ⇒ PERT Analysis. You will see the following toolbar:



Note that if you do not see an entry for PERT Analysis on the Toolbars menu, go to Appendix A and follow the instructions there to display this toolbar.



Understanding Basic Views (continued)

View: PERT Analysis (continued)

In order to use PERT, you must click on the PERT Entry Sheet Toolbar button. The sheet is shown below:

	Task Name	Duration	Optimistic Dur.	Expected Dur.	Pessimistic Dur.
0	<input type="checkbox"/> ZestyProjectPlan	105.13 days?	0 days	0 days	0 days
1		1 day?	0 days	0 days	0 days
2	<input type="checkbox"/> Sales Proposal	5 days?	0 days	0 days	0 days
3	Find Client Who Will Talk to Us	1 day	0 days	0 days	0 days
4	Convince Client to Buy	1 day?	0 days	0 days	0 days
5	Send Client Box of Godiva Chocolate as a Bribe	2 days	0 days	0 days	0 days
6	Get Client's Go-Ahead	1 day?	0 days	0 days	0 days
7	<input type="checkbox"/> Business Rules	1 day?	0 days	0 days	0 days
8	Send Client Recycled Proposal	1 day?	0 days	0 days	0 days
9	Meet with Client to Discuss Rules	1 day?	0 days	0 days	0 days
10	Write Up Business Rules	1 day?	0 days	0 days	0 days
11	Send Rules to Client for Sign-Off	1 day?	0 days	0 days	0 days
12		1 day?	0 days	0 days	0 days
13	Client Business Rule Sign-Off	1 day?	0 days	0 days	0 days

On this sheet, you enter in your optimistic, expected and pessimistic number of duration days for each task you want a PERT estimate on. Then, you click the Calculate PERT button on the PERT Toolbar. Next, you can click the Optimistic Gantt button on the PERT Toolbar to obtain optimistic estimates; click the Expected Gantt button to obtain expected estimates; click the Pessimistic Gantt button to obtain pessimistic estimates. Using these estimates may help you create a more realistic project plan.



Understanding Basic Views (continued)

View: Resource Form

Name: Initials: Max units:

Costs

Std rate: Per use: Base cal:

Ovt rate: Accrue at: Group:

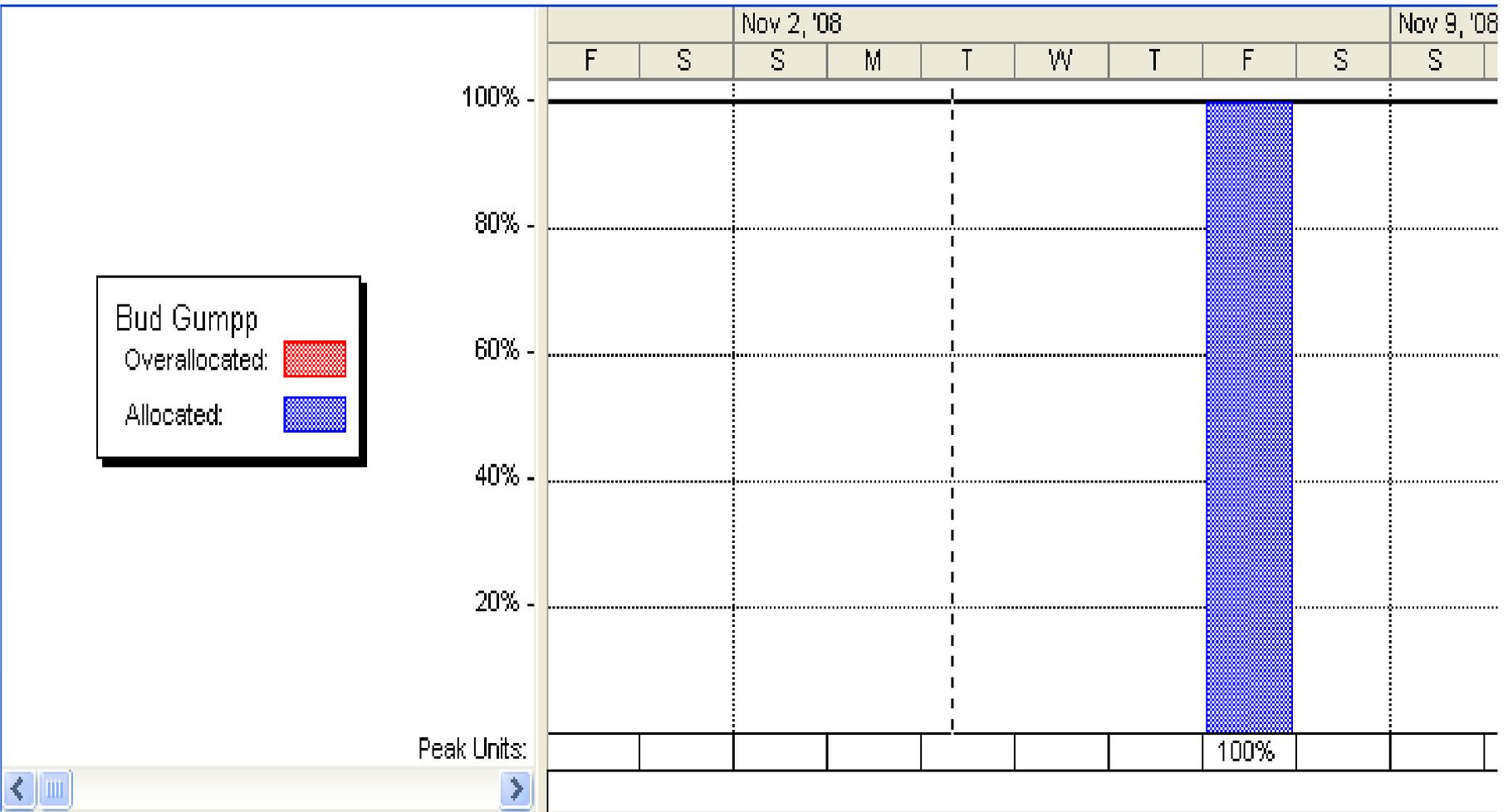
Code:

Project	ID	Task Name	Work	Leveling Delay	Delay	Start	Finish
ZestyProjectPl	3	Find Client Who Will Talk to Us	8h	0d	0d	Fri 11/7/08	Fri 11/7/08

	Task Name	Leveling Delay	8				Oct 26, '08				Nov 2, '08				Nov 9, '08				Nov 16, '08											
			W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T					
3	Find Client Who Will Talk to Us	0 edays																												



View: Resource Graph



		Nov 2, '08							Nov 9, '08		
		F	S	S	M	T	W	T	F	S	S
3	Find Client Who Will Talk to Us										



Work Breakdown Structure (WBS) and Outline Codes

Work Breakdown Structure (WBS) is a U.S. Department of Defense described numbering scheme for each task in the project. The numbering scheme for a task changes if you move the task around to a different point in the project plan. Please see *Appendix B* for more on WBS.

Outline numbers are similar to WBS codes except that they are static. That is, if you move your tasks around, the numbers do not change. You can get creative with outline numbers by including, say, a department code number within the outline number so that you can view the project organized by department. Outline codes work as you would expect: you define codes at the highest level "Level 1", and then additional codes at various subordinate levels, "Level 2", "Level 3", etc. Each row in the project plan will be assigned an outline code and this is what it will look like:

	SDIOutlineCode		Task Name	Duration	Start	Finish	P
0	SALES		<input type="checkbox"/> ZestyProjectPlan	105.13 days?	Mon 11/3/08	Mon 3/30/09	
1	SALES-SPK		<input type="checkbox"/> Sales Proposal	5 days?	Mon 11/3/08	Fri 11/7/08	
2	SALES-SPK		Find Client Who Will Talk to Us	1 day	Fri 11/7/08	Fri 11/7/08	
3	SALES-SPK		Convince Client to Buy	1 day?	Fri 11/7/08	Fri 11/7/08	2
4	SALES-SPK		Send Client Box of Godiva Chocol	2 days	Mon 11/3/08	Tue 11/4/08	
5	SALES-SPK		Get Client's Go-Ahead	1 day?	Mon 11/3/08	Mon 11/3/08	
6	OPS		<input type="checkbox"/> Business Rules	1 day?	Mon 11/3/08	Mon 11/3/08	
7	OPS		Send Client Recycled Proposal	1 day?	Mon 11/3/08	Mon 11/3/08	
8	OPS		Meet with Client to Discuss Rules	1 day?	Mon 11/3/08	Mon 11/3/08	



To define outline codes, follow these instructions:

1. Choose Tools ⇒ Customize ⇒ Fields... The Customize Fields dialog box displays.
2. From the *Type* drop-down box, select *Outline Code*
3. Select an outline code, from the Field list, by clicking on the outline code once.
4. Click the *Rename...* button to rename this outline code. Note that it is this name that will appear as an additional column on the Gantt Table allowing you to select the outline code values. For this example, enter OutlineCode and click OK to dismiss the Rename Field dialog box.



5. Next, click the *Lookup...* button to bring up the *Edit Lookup Table for OutlineCode* dialog box.
6. You enter your outline codes within the grid in the Lookup Table section. Each row in the grid is a separate outline code along with a description. Under the Value column you would enter in the following on each row: Sales, HR, IT, OPS, QC and PM. Next, enter in an appropriate description for each row in the grid. On the next slide, we show what the grid should look like:



Work Breakdown Structure (WBS) and Outline Codes (continued)

Edit Lookup Table for OutlineCode

Code mask (optional)

You can edit the mask for the lookup table, including adding or deleting levels. Edit Mask...

Code preview: *

Lookup table

Row	Value	Description
1	SALES	Sales Department
2	HR	Human Resources Department
3	IT	Information Technology Department
4	OPS	Operations Department
5	QC	Quality Control Department
6	PM	Project Management Department

Move

Display indenting in lookup table

Use a value from the table as the default entry for the field

Set Default (Click button after selecting a value above)

Display order for lookup table

Data entry options

Help Import Lookup Table... Close

As the outline codes stand now, they are very generic: Sales, OPS, etc. You can make your outline codes more detailed if you want. For example, you would enter in the initials, say, of each sales person under the Sales outline code (shown on Row 1 to the left). Click the insert button (the fourth button from the left) to leave an additional row, enter in the salesperson's initials in the Value column as well as his/her name in the Description column. Next, click the right arrow (seventh button from the left) and it will be indented. The next slide shows an example.



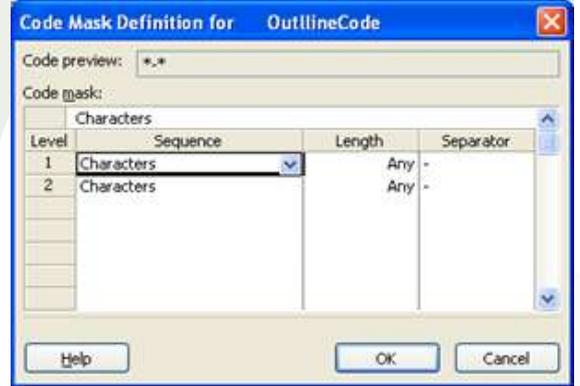
Work Breakdown Structure (WBS) and Outline Codes (*continued*)

Row	Value	Description
1	SALES	Sales Department
2	BS	Brett Saunders
3	SPK	Sean-Patrick Kelly
4	HR	Human Resources Department

As you see, under the Sales outline code you have two sales people the choose from. This is what you would see on the Gantt Table:

SDIOOutlineCode	Task Name
0 SALES	ZestyProjectPlan
1 SALES	Sales Proposal
2 SALES Sales Department	Find Client Who Will Talk to Us
3 BS Brett Saunders	Convince Client to Buy
4 SPK Sean-Patrick Kelly	Send Client Box of Godiva Chocol
5 HR Human Resources De	Get Client's Go-Ahead
6 IT Information Technolog	Business Rules
7 OPS Operations Departm	Send Client Recycled Proposal
8 QC Quality Control Depar	Meet with Client to Discuss Rules
9 PM Project Management	Write Up Business Rules

Note that in order to add the salesperson initials, you must click on the Edit Mask... button in the Code Mask section at the top of the dialog box (see left). Here is what it looks like:



By selecting *Characters* as the Sequence and *Any* as the Length, you can enter in any amount of characters in the Value column. If you specify a length, then *Project 2007* expects you to enter in exactly that many characters. If you don't, your Value is colored red and you will receive a warning message.



Finally, you need to add the new OutlineCode column to the Gantt Table. At the top of the Gantt Table, right click on any one of the columns and click on *Insert Column...* menu item from the popup menu. Next, from the *Field name* drop-down box, select OutlineCode and click OK. Your new outline code will now appear as a separate column on the Gantt Table. Next, click each cell at the intersection of the OutlineCode column and a row, click on the drop-down box and select your outline code.



Filtering and Grouping Views

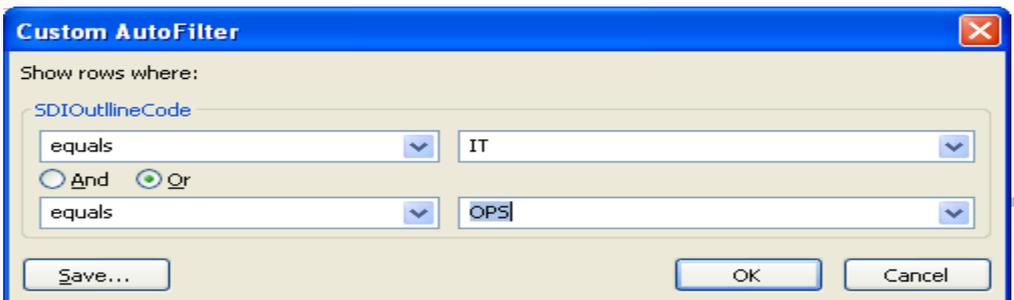
Recall that in Microsoft Excel, you can filter the rows of your spreadsheet by using the AutoFilter option. This creates a drop-down box at the top of each column containing the distinct values within that column. You can then select the distinct value you want and Excel will show you just those rows.

Project 2007 has a similar feature. Click on Project ⇒ Filtered for: All Tasks ⇒ AutoFilter. A down-arrow appears on each column indicating the filter is available.

	OutlineCode	Task Name	Duration
0	(All)	ZestyProjectPlan	105.13 days?
1	(Custom...)	Sales Proposal	5 days?
2	IT	Find Client Who Will Talk to Us	1 day
3	OPS	Convince Client to Buy	1 day?
4	PM	Send Client Box of Godiva Chocol	2 days
5	QC	Get Client's Go-Ahead	1 day?
6	SALES	Business Rules	1 day?
7	SALES-SPK	Send Client Revised Proposal	1 day?

Click on the down-arrow and click on the value you want to filter by; Project 2007 will then show only those rows of the project plan. Click All or turn off the filter to show all rows.

By clicking on the (Custom...) option in the drop-down box, you can make your filtering more complex.





Filtering and Grouping Views (continued)

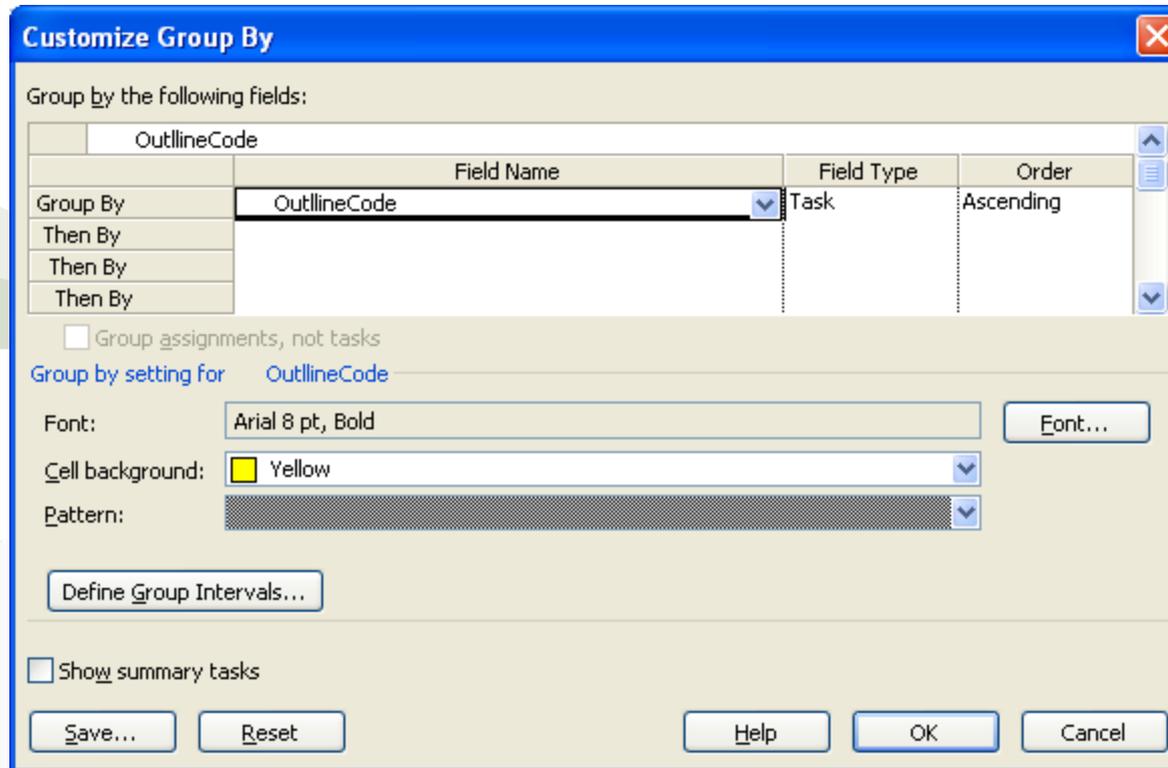
Grouping allows you to temporarily arrange your project plan so that common elements appear together. For example, in the screenshot below, we've grouped by the Outline code. Notice how all of the IT rows appear together, all of the OPS rows appear together, etc.

	OutlineCode		Task Name	Duration	Start	Finish	P
			OutlineCode: No Value	105.13 days	Mon 11/3/08	Mon 3/30/09	
	IT		OutlineCode: IT	1 day	Mon 11/3/08	Mon 11/3/08	
16	IT		RTN Walk-Through	1 day?	Mon 11/3/08	Mon 11/3/08	
17	IT		Program Views Phase	1 day?	Mon 11/3/08	Mon 11/3/08	1
	OPS		OutlineCode: OPS	1 day	Mon 11/3/08	Mon 11/3/08	
7	OPS		Send Client Recycled Proposal	1 day?	Mon 11/3/08	Mon 11/3/08	
8	OPS		Meet with Client to Discuss Rules	1 day?	Mon 11/3/08	Mon 11/3/08	
9	OPS		Write Up Business Rules	1 day?	Mon 11/3/08	Mon 11/3/08	
10	OPS		Send Rules to Client for Sign-Off	1 day?	Mon 11/3/08	Mon 11/3/08	
11	OPS		Client Business Rule Sign-Off	1 day?	Mon 11/3/08	Mon 11/3/08	
13	OPS		Design Views	1 day?	Mon 11/3/08	Mon 11/3/08	
14	OPS		Pre-Meeting with Report Developer	1 day?	Mon 11/3/08	Mon 11/3/08	
21	OPS		FTP Template to Client's FTP Site	1 day?	Mon 11/3/08	Mon 11/3/08	
	QC		OutlineCode: QC	1 day	Mon 11/3/08	Mon 11/3/08	
19	QC		Meeting with QC Team	1 day?	Mon 11/3/08	Mon 11/3/08	
	SALES-SPK		OutlineCode: SALES-SPK	5 days	Mon 11/3/08	Fri 11/7/08	
2	SALES-SPK		Find Client Who Will Talk to Us	1 day	Fri 11/7/08	Fri 11/7/08	
3	SALES-SPK		Convince Client to Buy	1 day?	Fri 11/7/08	Fri 11/7/08	2
4	SALES-SPK		Send Client Box of Godiva Chocolate	2 days	Mon 11/3/08	Tue 11/4/08	
5	SALES-SPK		Get Client's Go-Ahead	1 day?	Mon 11/3/08	Mon 11/3/08	



Filtering and Grouping Views (continued)

To group by Outline code, click on Project ⇒ Group by: No Group ⇒ Customize Group By... to bring up the *Customize Group By* dialog box. Click on the drop-down box under the column Field Name and on the row labeled Group By. Select OutlineCode.



Click OK to apply the grouping. To remove the grouping, click on Project ⇒ Group by: Custom Group ⇒ No Group. There are many more options to filter and group by, so feel free to explore!

Dealing with Scheduling Problems

Project 2007 provides several techniques that you can use to resolve scheduling conflicts:

- Adding Additional Resources to Tasks
- Using Overtime
- Adding Time to Tasks
- Adjusting Dependencies
- Splitting Tasks

Not every task must be done by one resource. To add additional resources to a task in the hopes that the additional resource will reduce down the time to complete the task: click on the relevant task row in the Gantt Table, click on Tools ⇒ Assign Resources... to bring up the Assign Resources dialog box, choose an additional resource at 100%, click Assign, click Close to dismiss the dialog box.

Before:

		Task Name	Duration	Start	Finish	Predecessors	Resource Names
0		 ZestyProjectPlan	105.13 days?	Mon 11/3/08	Mon 3/30/09		Display Unit
1		 Sales Proposal	5 days?	Mon 11/3/08	Fri 11/7/08		
2		Find Client Who Will Talk to Us	1 day	Fri 11/7/08	Fri 11/7/08		Bud Gump

After:

		Task Name	Duration	Start	Finish	Predecessors	Resource Names
0		 ZestyProjectPlan	105.13 days?	Mon 11/3/08	Mon 3/30/09		Display Unit
1		 Sales Proposal	5 days?	Mon 11/3/08	Fri 11/7/08		
2		Find Client Who Will Talk to Us	0.5 days	Fri 11/7/08	Fri 11/7/08		Bud Gump, Dee Dee Chump



Overtime in Project 2007 is defined as the amount of work that is scheduled beyond an assigned resource's regular working hours. Overtime hours are charged at the resource's overtime rate. Overtime work does not represent additional work on a task; instead, it represents the amount of time that's spent on a task outside regular hours. For example, if the task is assigned for 30 hours and you assign 12 hours of overtime, the task work is still 30 hours: 18 hours during regular working hours and 12 hours of overtime. While this may seem strange, it has the effect of shortening the time that a resource takes to complete a task. If the resource did not work the 12 hours of overtime, and instead worked those hours during regular working hours, it would be another day and a half ($8+4=12$) before the task is complete.

To assign overtime, follow these directions:

1. On the Gantt Chart, click Window ⇒ Split to reveal the Task Form in the bottom pane. Click the Task Form to make it the active window (the bar at the left will change from light blue to dark blue).
2. Click on Format ⇒ Details ⇒ Resource Work to get the overtime column to show up.
3. Click on the Gantt Table and select the row that you want to add overtime to (or use the Previous/Next buttons on the Task Form to navigate to the relevant task)
4. For each resource, use the spinners to add overtime hours on the Task Form
5. Click OK to apply this setting. The next slide shows the effect.



Dealing with Scheduling Problems (continued)

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
0	ZestyProjectPlan	105.13 days?	Mon 11/3/08	Mon 3/30/09		Display Unit
1	Sales Proposal	5 days?	Mon 11/3/08	Fri 11/7/08		
2	Find Client Who Will Talk to Us	0.38 days	Fri 11/7/08	Fri 11/7/08		Bud Gump, Dee Dee Chi
3	Convince Client to Buy	1 day?	Fri 11/7/08	Fri 11/7/08	2FS-1 day	
4	Send Client Box of Godiva Chocol	2 days	Mon 11/3/08	Tue 11/4/08		
5	Get Client's Go-Ahead	1 day?	Mon 11/3/08	Mon 11/3/08		
6	Business Rules	1 day?	Mon 11/3/08	Mon 11/3/08		
7	Send Client Recycled Proposal	1 day?	Mon 11/3/08	Mon 11/3/08		
8	Meet with Client to Discuss Rules	1 day?	Mon 11/3/08	Mon 11/3/08		
9	Write Up Business Rules	1 day?	Mon 11/3/08	Mon 11/3/08		
10	Send Rules to Client for Sign-Off	1 day?	Mon 11/3/08	Mon 11/3/08		
11	Client Business Rule Sign-Off	1 day?	Mon 11/3/08	Mon 11/3/08		
12	Template Design Phase	1 day?	Mon 11/3/08	Mon 11/3/08		
13	Design Views	1 day?	Mon 11/3/08	Mon 11/3/08		

Name: Find Client Who Will Talk to Us Duration: 0.38d Effort driven Previous Next
 Start: Fri 11/7/08 Finish: Fri 11/7/08 Task type: Fixed Units % Complete: 0%

ID	Resource Name	Units	Work	Ovt. Work	Baseline Work	Act. Work	Rem. Work
1	Bud Gump	100%	4h	1h	0h	0h	4h
4	Dee Dee Chump	100%	4h	1h	0h	0h	4h

As you can see, the Duration column shows .38 days instead of the .5 days before the overtime was applied. Initially, each resource is scheduled at 100% of the total Duration of 8 hours (since the task lasts for 1 day). Since there are two resources that's $8/2=4$ hours or .5 days for the task. But, both resources are working 1 hour or $1/8=.125$ days extra. The total duration is reduced by $.5-.125 = .375$ days (rounded to .38 days).



Dealing with Scheduling Problems (continued)

You can also solve scheduling problems by simply adding time to tasks; that is, increasing the duration of a task. Although you may not have this luxury for your project! To increase the time for a task, double-click the task in the Gantt Table to bring up the Task Information dialog box. Increase the Duration using the spinner.

Task Information

General | Predecessors | Resources | Advanced | Notes | Custom Fields

Name: Find Client Who Will Talk to Us Duration: 1d Estimated

Resources:

Resource Name	Assignment Owner	Units	Cost
Bud Gumpp		100%	\$1,200.00
Dee Dee Chumpp		100%	\$1,200.00

Buttons: Help, OK, Cancel



By changing task dependencies, you can tighten the schedule and eliminate scheduling conflicts. If you inadvertently link tasks that don't need to be linked, you may create a situation in which you don't have the resources to complete the tasks and, as a result, the project falls behind. Using the Relationship Diagram, you can see the selected task and its predecessor and successor tasks. You can also show the Gantt Table/Chart at the same time as the Relationship Diagram by following these instructions:

1. Click on Windows ⇒ Split
2. Click on the bottom pane
3. Click on View ⇒ More Views, select Relationship Diagram and click Apply
4. Click on each task in the Gantt Chart to show the Relationship Diagram for the task (appearing in the center), its predecessor (shown to the left) and its successor (shown to the right).

Note that if there are tasks that are linked, but shouldn't be, you may be able to see them clearly using this method.

See the next slide for an example.



Dealing with Scheduling Problems (continued)

Microsoft Project (Trial) - ZestyProjectPlan.mpp

File Edit View Insert Format Tools Project Report Collaborate Window Help

Type a question for help

Program Views Phase

Task Name	Duration	Start	Finish
Template Design Phase	1 day?	Mon 11/3/08	Mon 11/3/08
Design Views	1 day?	Mon 11/3/08	Mon 11/3/08
Pre-Meeting with Report Develop	1 day?	Mon 11/3/08	Mon 11/3/08
IT Programming	1 day?	Mon 11/3/08	Mon 11/3/08
RTN Walk-Through	1 day?	Mon 11/3/08	Mon 11/3/08
Program Views Phase	1 day?	Mon 11/3/08	Mon 11/3/08
Quality Control Phase	1 day?	Tue 11/4/08	Tue 11/4/08
Meeting with QC Team	1 day?	Tue 11/4/08	Tue 11/4/08
Product Delivery	1 day?	Mon 11/3/08	Mon 11/3/08
FTP Template to Client's FTP Site	1 day?	Mon 11/3/08	Mon 11/3/08
Weekly Status Meeting	105.13 days	Mon 11/3/08	Mon 3/30/09

Relationship Diagram

```
graph LR; A[16: RTN Walk-Through] -- FF --> B[17: Program Views Phase]; B -- FS --> C[19: Meeting with QC Team]
```

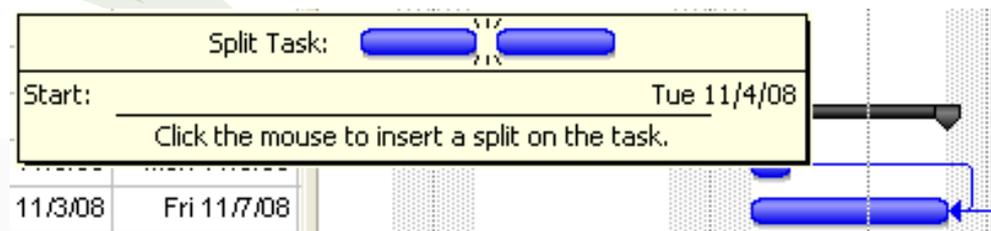
Ready



As much as it appeals to Project Managers to have tasks completed on consecutive days, it may not be realistic because resources may be scheduled to perform other tasks for another project or some other reason. One way to resolve a scheduling conflict is to split a task into two or more pieces. In *Project 2007*, you will see a gap between the pieces of the task.

To split a task, from the Gantt Table, choose Edit ⇒ Split Task. The mouse point will change into the split-task pointer, which looks like this: 

Next, move your mouse point to the blue bar on the Gantt Chart for the task you want to split. You will notice the popup information box displaying the date over which your mouse is pointing.



When you reach the correct split date, click your mouse. You will see something like this (notice the ellipses): 

At this point, you can adjust the duration of the split by moving the left or right most portion of the blue bar. To remove the split, move the right blue bar close to the left bar by clicking and dragging.



Finding the Critical Path

The *critical path* shows the tasks in your project that must be completed on schedule in order for the entire project to finish on schedule. Those tasks are called *critical tasks*. Most tasks in a project have some slack and if you delay those tasks it won't affect the project schedule. This is not true of critical tasks! Note that any task can become a critical task if it is allowed to slip too much!

To see the critical path, you can use the Gantt Chart Wizard. To start the Gantt Chart Wizard, click on Format ⇒ Gantt Chart Wizard and follow these instructions:

1. Click Next to move passed the welcome screen
2. Click the Critical Path radio button and click Next
3. Click the Resources and Dates radio button and click Next
4. Click the Yes radio button and click Next
5. Click the Format It button in the middle of the wizard.
6. Click Exit Wizard to dismiss the dialog box.

Critical tasks will show in red. You can also filter for critical tasks from the Project ⇒ Filtered For: All Tasks ⇒ Critical.

As the Project Manager, one of your jobs is to shorten the critical path by reducing the duration of critical tasks, if possible, or overlap critical tasks so that they occur in parallel.

Resolving Resource Problems



sheepsqueezers.com

As you assign resources to tasks, *Project 2007* checks the resource's calendar to make sure that the resource is working. But, *Project 2007* does not know if the resource is already obligated when you assign the resource to a task. Overallocation occurs when you assign more work to a resource than the resource can accomplish in the time allotted.

To spot resource conflicts, use either the Resource Sheet or the Resource Usage view. Overallocated resources appear in red and a caution icon appears in the Indicator column. To bring up the Resource Usage view from the Gantt Chart view, click on View ⇒ Resource Usage and the Gantt Chart view will be replaced by the Resource Usage view.

Another way to view resource usage is to split the window by clicking on Window ⇒ Split, clicking on the bottom pane, and clicking on View ⇒ Resource Usage.

You will notice that for the tasks *Find Client Who Will Talk to Us* and *Convince Client to Buy*, Dee Dee Chumpp is overallocated as shown in red.

See next slide for example.



Resolving Resource Problems (continued)

		Task Name	Duration	Resource Names
0		ZestyProjectPlan	105.13 days?	Display Unit
1		Sales Proposal	3.5 days?	
2		Find Client Who Will Talk to Us	1 day	Bud Gump,Dee
3		Convince Client to Buy	0.5 days?	Dee Dee Chump
4		Send Client Box of Godiva Chocol	2 days	
5		Get Client's Go-Ahead	1 day?	
6		Business Rules	4 days?	
7		Send Client Recycled Proposal	1 day?	
8		Meet with Client to Discuss Rules	1 day?	
9		Write Up Business Rules	1 day?	
10		Send Rules to Client for Sign-Off	1 day?	
11		Client Business Rule Sign-Off	1 day?	
12		Template Design Phase	2 days?	
13		Design Views	1 day?	

		Resource Name	Work
1		Bud Gump	8 hrs
		Find Client Who Will Talk to Us	8 hrs
4		Dee Dee Chump	12 hrs
		Find Client Who Will Talk to Us	8 hrs
		Convince Client to Buy	4 hrs

		Nov 9, '08			
		F	S	S	M
Details					
Work		8h			
Work		8h			
Work		12h			
Work		8h			
Work		4h			

As you can see, Dee Dee Chump is overallocated on November 7th. She is allocated to work 12 hours, 8 hours from *Find a Client...* and 4 hours from *Convince...* tasks.



Some other methods of resolving resource conflicts would be:

1. Adding a resource to the task
2. Switching resources from an overallocated resource to a one who is not
3. Scheduling Overtime
4. Staggering when the resources start on the task may reduce or eliminate the conflict
5. Leveling Resource Workloads
6. Contouring Resources

Bullets 1 to 4 above have already been discussed and will not be discussed here.

To spread out the demands you're making on your resources, you can have *Project 2007* level the resource's workloads by delaying or splitting tasks.

Leveling is the process of resolving resource conflicts by delaying or splitting tasks to accommodate the schedules of assigned resources.

Before you have *Project 2007* level your tasks, you must assign appropriate priorities to the tasks. In *Project 2007*, priorities range from 1 to 999, where 1 is the lowest priority and 999 is the highest priority. A priority of 1000 set on a task indicates that *Project 2007* will not consider delaying that task. To set a priority for a task, bring up the Task Information dialog box, click on the General tab, and assign a priority by adjusting the spinner. Priorities are used by *Project 2007's* leveling feature.

You can also set priorities by inserting the Priority column on the Gantt Table.



To level task automatically, follow these instructions:

1. Click on Tools ⇒ Level Resources to open the Resource Leveling dialog box
2. Click on radio button to the left of the text Automatic
3. Ensure that *Clear leveling values before leveling* is checked
4. Determine whether you want to level the entire project or just a date range
5. From the Leveling order drop-down box, select Standard
6. Ensure that both *Leveling can adjust individual assignments on a task* and *Leveling can create splits in remaining work* are checked.
7. You may or may not want to check *Level only within available slack*. If you do check this box, the project end date should not shift.
8. Click Level Now to apply leveling.
9. If you make any changes to the checkboxes, etc., click the *Clear Leveling...* button.

Note that the cells that were changed will be highlighted light blue. To undo your leveling, click Edit ⇒ Undo.

One nice feature is the Leveling Gantt view. This shows bars indicating pre-leveled tasks. You can compare these bars after you level to see the change. By clicking on CTRL-Z (to undo the level) and CTRL-Y (to re-apply the level), you can see what's being changed.



Resolving Resource Problems (continued)

Contour is the term Project 2007 uses to refer to the shape of a resource's work assignment over time. Normally, when a resource is assigned to a task, the resource starts working at full capacity, say, 8 hours per day, until the task is complete. This is called a *flat contour*. With *non-flat contouring*, you can gradually increase or decrease the resource's capacity up to the full time allocated to the task. The types of contours available are: Flat (the default), Back Loaded, Front Loaded, Double Peak, Early Peak, Late Peak, Bell, and Turtle.

To set a contour pattern for a resource's work assignment:

1. Click on View ⇒ Task Usage view.
2. In the Task Name column, double-click on the resource whose contour you want to change. This will bring up the Assignment Information dialog box.
3. Choose your *Work contour* from the drop-down box.
4. Click OK.

General		Tracking		Notes	
Task:	Send Client Box of Godiva Chocolate as a Bribe				
Resource:	Joe Lumpp				
Work:	40h	Units:	100%		
Work contour:	Bell				
Start:	Mon 11/10/08	Booking type:	Committed		
Finish:	Fri 11/14/08	Cost:	\$12,000.00		
Cost rate table:	A	Assignment Owner:			



Resolving Resource Problems *(continued)*

For example, Joe Lumppp is scheduled to work from November 10th to November 14th (five days, M-F) for 8 hours/day for a total of 40 hours. This is what it looks like *before* the bell contour:

	Resource Name	Work
3	Joe Lumppp	40 hrs
	<i>Send Client Box of Godiva Chocol</i>	<i>40 hrs</i>

Details	Nov 9, '08					
	S	M	T	W	T	F
Work		8h	8h	8h	8h	8h
Work		8h	8h	8h	8h	8h

The is what it looks like *after* the bell contour:

Details	Nov 9, '08								Nov 16, '08							
	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
Work	0.4h			1.2h	2.4h	4.8h	7.2h	8h			7.2h	4.8h	2.4h	1.2h	0.4h	
Work	0.4h			1.2h	2.4h	4.8h	7.2h	8h			7.2h	4.8h	2.4h	1.2h	0.4h	

Notice that the hours are in a bell shaped starting off small and gradually increasing in hours and then gradually decreasing. Unfortunately, the hours are spread over more than two weeks which may not be what you want.



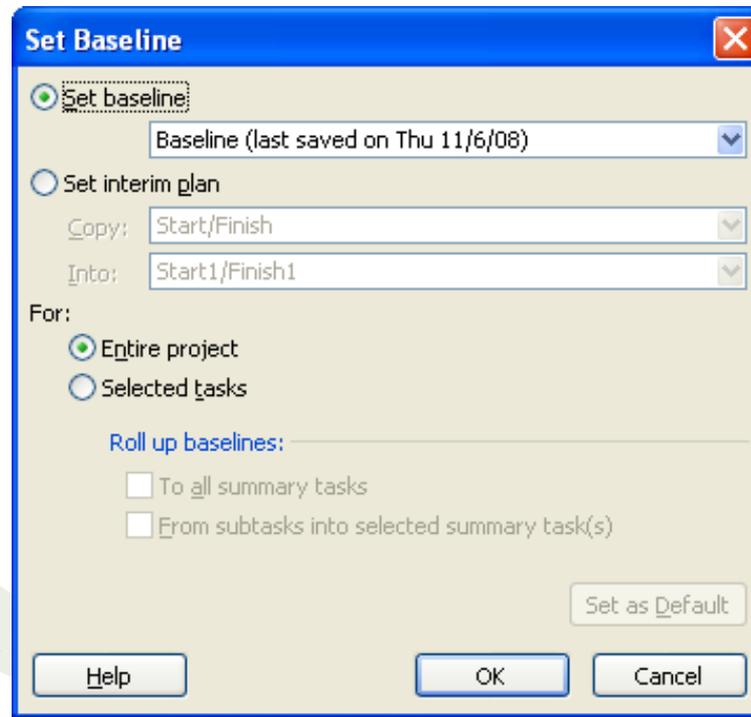
Tracking is the process of comparing what actually happens during your project to your estimates of what would happen. To track, you need to take a picture of your project schedule at the moment your planning is complete; this moment is called a *baseline*. So, up to this point, the project plan you've been building is an estimate of what can occur. It is your best guess at how long tasks may take, how they interact, etc. By comparing the estimates with the actuals, you can see where your estimate were off and then use this information to make your next plan more realistic.

Tracking in *Project 2007* consists of entering information about actuals: actual start date, actual finish date, actual duration of a task, etc. When you enter information about actuals, *Project 2007* shows you a revised schedule with projections of how the rest of the schedule is likely to play out. This tracking efforts enables you to generate reports that show management where your efforts stand at any point in time.

The first step in tracking your project is to set a baseline. To set a baseline:

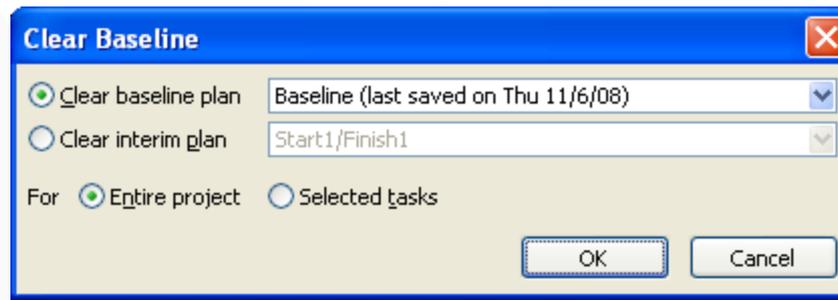
1. Click on Tools ⇒ Tracking ⇒ Set Baseline to open the Set Baseline dialog box.
2. Since Project 2007 allows you to save up to 11 baselines and 10 interim plans for your project, select *Baseline* from the Set Baseline drop-down box.
3. Ensure that Entire Project radio button is selected.

Note that if you were to open this dialog box again, the drop-down box for the Baseline will show the date you saved the baseline.



Note that there may be times when you need to re-set the baseline, especially if you added another task, etc. to the project plan. Just re-do the steps above to re-set the baseline.

To clear a baseline, click on Tools ⇒ Tracking ⇒ Clear Baseline to bring up the Clear Baseline dialog. Select the baseline you want to clear from the drop-down box and click OK.



Understanding Tracking (continued)



The initial baseline may quickly take on more historical than practical interest. You should not change the initial baseline because that record of your original planning process is important to retain. However, if timing shifts dramatically away from the baseline plan, all the little warning signs that *Project 2007* gives you about being off schedule becomes useless. A project that starts six months later than expected will show every task as late and every task as critical! To continue generating useful project information, you need to revise the schedule to better reflect reality. Only by setting interim plans can you see how well you're meeting your revised goals.

Remember that interim plans contain a set of task start and finish dates that you can compare with another interim plan or with a baseline plan, thus helping you to keep an eye on progress and slippage.

You can set interim plans for all the tasks in the project. However, you should usually set an interim plan only for tasks going forward! For example, if a labor strike pushes out a manufacturing project by two months, you should keep the baseline intact for all the tasks that were completed at the time the strike started and save an interim plan for all the tasks that must still be performed when the strike ends.

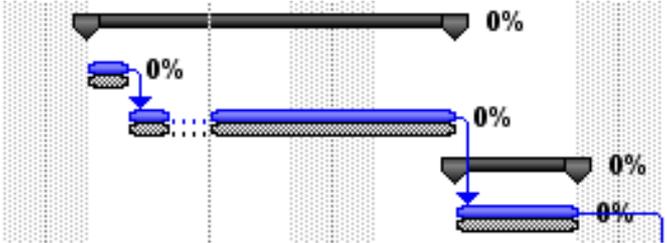
To set an interim plan, click on Tools ⇒ Tracking ⇒ Set Baseline to bring up the Set Baseline dialog box. Next, click on the *Set interim plan* radio button. Next, select *Start/Finish* in the *Copy* drop-down box, and select *Start1/Finish1* in the *Into* drop-down box. Ensure that the Entire Project radio button is selected. Click OK.



Understanding Tracking (continued)

Now that you are going to track actuals against your estimates, you can use the Tracking Gantt to view progress against your baseline estimates. To show the Tracking Gantt view, click on View ⇒ Tracking Gantt. You will notice that each task displays two bars on the Tracking Gantt Chart: an actual and a baseline. The top bar is the actual and the bottom bar is the baseline.

<input type="checkbox"/> IT Programming
RTN Walk-Through
Program Views Phase
<input type="checkbox"/> Quality Control Phase
Meeting with QC Team



On the Tracking Gantt Table, you may want to add additional variables having to do with the baseline and other information such as Actual Start, Actual Finish, Baseline Start, Baseline Finish, % Complete, etc. Right-click on any column on the Tracking Gantt Table and click Insert Column... and choose the column you want to add to the table. Repeat as necessary.

A nice addition to the Tracking Gantt is the Task Variance view. To bring up the Task Variance view, right-click on the Select All button and click the Variance menu item. This view shows the following columns: Start, Finish, Baseline Start, Baseline Finish, Start Variance and Finish Variance. Also, instead of the Task Variance, you can select Cost to bring up the Cost Variance view. And, finally, you can bring up the Task Work view to the number of hour put in by resources working on tasks.



Understanding Tracking (continued)

Task Variance View:

Task Name	Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish Var.
<input checked="" type="checkbox"/> ZestyProjectPlan	Mon 11/3/08	Mon 3/30/09	Mon 11/3/08	Mon 3/30/09	0 days	0 days
<input checked="" type="checkbox"/> Sales Proposal	Thu 11/6/08	Mon 11/24/08	Thu 11/6/08	Mon 11/24/08	0 days	0 days
Find Client Wf	Thu 11/6/08	Thu 11/6/08	Thu 11/6/08	Thu 11/6/08	0 days	0 days
Convince Clie	Fri 11/7/08	Fri 11/7/08	Fri 11/7/08	Fri 11/7/08	0 days	0 days
Send Client B	Fri 11/7/08	Fri 11/21/08	Fri 11/7/08	Fri 11/21/08	0 days	0 days
Get Client's G	Fri 11/21/08	Mon 11/24/08	Fri 11/21/08	Mon 11/24/08	0 days	0 days
<input checked="" type="checkbox"/> Business Rules	Mon 11/24/08	Fri 11/28/08	Mon 11/24/08	Fri 11/28/08	0 days	0 days
Send Client R	Mon 11/24/08	Tue 11/25/08	Mon 11/24/08	Tue 11/25/08	0 days	0 days
Meet with Clie	Tue 11/25/08	Wed 11/26/08	Tue 11/25/08	Wed 11/26/08	0 days	0 days
Write Up Busi	Wed 11/26/08	Thu 11/27/08	Wed 11/26/08	Thu 11/27/08	0 days	0 days

Task Cost View:

Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining
<input checked="" type="checkbox"/> ZestyProjectPlan	\$0.00	Prorated	\$18,250.00	\$18,250.00	\$0.00	\$0.00	\$18,250.00
<input checked="" type="checkbox"/> Sales Proposal	\$0.00	Prorated	\$18,250.00	\$18,250.00	\$0.00	\$0.00	\$18,250.00
Find Client Who Wi	\$0.00	Prorated	\$4,800.00	\$4,800.00	\$0.00	\$0.00	\$4,800.00
Convince Client to	\$0.00	Prorated	\$1,200.00	\$1,200.00	\$0.00	\$0.00	\$1,200.00
Send Client Box of	\$250.00	Prorated	\$12,250.00	\$12,250.00	\$0.00	\$0.00	\$12,250.00
Get Client's Go-Ah	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<input checked="" type="checkbox"/> Business Rules	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Send Client Recycl	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Meet with Client to	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Write Up Business	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00



Understanding Tracking *(continued)*

Task Work View:

Task Name	Work	Baseline	Variance	Actual	Remaining	% W. Comp.
<input checked="" type="checkbox"/> ZestyProjectPlan	60 hrs	60 hrs	0 hrs	0 hrs	60 hrs	0%
<input type="checkbox"/> Sales Proposal	60 hrs	60 hrs	0 hrs	0 hrs	60 hrs	0%
Find Client Who WI	16 hrs	16 hrs	0 hrs	0 hrs	16 hrs	0%
Convince Client to	4 hrs	4 hrs	0 hrs	0 hrs	4 hrs	0%
Send Client Box of	40 hrs	40 hrs	0 hrs	0 hrs	40 hrs	0%
Get Client's Go-Ah	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0%
<input type="checkbox"/> Business Rules	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0%
Send Client Recycl	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0%
Meet with Client to	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0%
Write Up Business	0 hrs	0 hrs	0 hrs	0 hrs	0 hrs	0%

Note that the three tables shown above allow you to enter in information, they are not just for display

Recording Actuals



sheepsqueezers.com

Actuals represent what has, in fact, occurred during your project. In *Project 2007*, you can record actual information about the cost of a task and about the time that was spent completing the task. By recording actual information, you accomplish the following:

1. You let *Project 2007* automatically reschedule the remainder of your project
2. You provide management with a way to measure how well your project is going
3. You provide yourself with valuable information on your estimating skills

You can record actual information for a project by filling in the following fields for each task that tracks the progress of your project: Actual Start Date, Actual Finish Date, Actual Duration, Remaining Duration, Percentage Complete. In some cases, when you enter information into one of these fields, Project 2007 updates the values for the other fields. For example, if you enter a percentage complete for a task, Project 2007 calculates and supplies a start date, an actual duration, a remaining duration and an actual work value.

Note that you may want to take a gander at the Calculation tab on the Tool ⇨ Options dialog box since there are several useful options to help you out.



To record actual start and finish dates, from the Gantt Chart view, click on Window ⇒ Split, click on the bottom pane, click on Views ⇒ More Views... and select Task Details Form. Next, ensure that you click the radio button to the left of the text *Actual!* This is very important! Finally, enter in the actual start and actual end dates. Click OK to save the actuals.

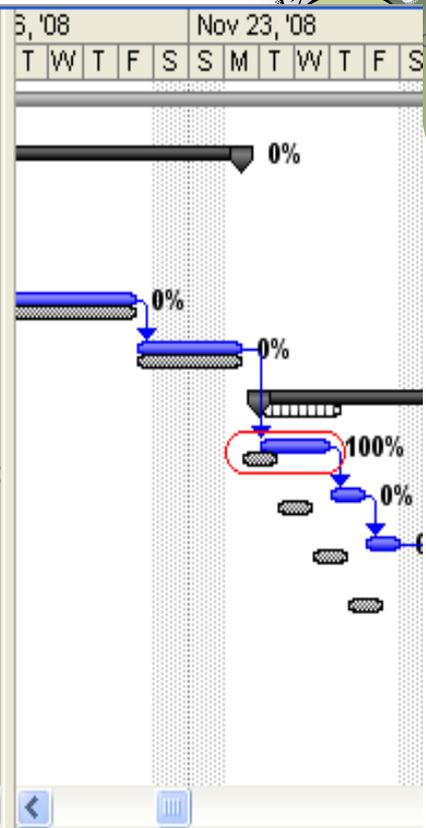
Rather than view the Gantt Chart in the top pane, it would be nice to see the Tracking Gantt, so click on the top pane and click on View ⇒ Tracking Gantt.

Refer to the Tracking Gantt Chart. To indicate what you will see when your baseline and actual differ, I have placed a red oval around the bars you should pay attention to. Recall that the bottom bar is the baseline and the top is the actual. Also, take a look at the Start Var. and Finish Var. These two fields will show you the number of days difference between the Baseline and Actual Start, and the Baseline and Actual Finish dates. See next slide.



Recording Actuals (continued)

Task Name	Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish Var.
ZestyProjectPlan	Mon 11/3/08	Mon 3/30/09	Mon 11/3/08	Mon 3/30/09	0 days	0 days
Sales Proposal	Thu 11/6/08	Mon 11/24/08	Thu 11/6/08	Mon 11/24/08	0 days	0 days
Find Client Wf	Thu 11/6/08	Thu 11/6/08	Thu 11/6/08	Thu 11/6/08	0 days	0 days
Convince Clie	Fri 11/7/08	Fri 11/7/08	Fri 11/7/08	Fri 11/7/08	0 days	0 days
Send Client B	Fri 11/7/08	Fri 11/21/08	Fri 11/7/08	Fri 11/21/08	0 days	0 days
Get Client's G	Fri 11/21/08	Mon 11/24/08	Fri 11/21/08	Mon 11/24/08	0 days	0 days
Business Rules	Tue 11/25/08	Mon 12/1/08	Mon 11/24/08	Fri 11/28/08	0.5 days	1.5 days
Send Client R	Tue 11/25/08	Wed 11/26/08	Mon 11/24/08	Tue 11/25/08	0.5 days	1.5 days
Meet with Clie	Thu 11/27/08	Thu 11/27/08	Tue 11/25/08	Wed 11/26/08	1.5 days	1.5 days
Write Up Busi	Fri 11/28/08	Fri 11/28/08	Wed 11/26/08	Thu 11/27/08	1.5 days	1.5 days
Send Rules to	Mon 12/1/08	Mon 12/1/08	Thu 11/27/08	Fri 11/28/08	1.5 days	1.5 days
Client Business R	Tue 12/2/08	Tue 12/2/08	Fri 11/28/08	Mon 12/1/08	1.5 days	1.5 days
Template Desig	Wed 12/3/08	Thu 12/4/08	Mon 12/1/08	Wed 12/3/08	1.5 days	1.5 days
Design Views	Wed 12/3/08	Wed 12/3/08	Mon 12/1/08	Tue 12/2/08	1.5 days	1.5 days



Tracking Gantt

Details Form

Name: Duration: Effort driven

Dates
 Start:
 Finish:

Constraint
 As Soon As Possible
 Date:

Task type:
 WBS code:
 Priority: % Complete:

ID	Resource Name	Units	Work	ID	Predecessor Name	Type	Lag
				5	Get Client's Go-Ahead	FS	0d



Recording Actuals (continued)

If so desired, you can record actual task durations and *Project 2007* will compute the start and end dates based on that value. If the task duration is less than the baseline duration, *Project 2007* assumes that the task is progressing smoothly and will assign the Actual Start Date to be the Baseline Start Date. *Project 2007* will compute the percentage complete and the remaining duration of the task.

To enter in task durations, click Tools ⇒ Tracking Update Tasks to display the Update Tasks dialog box. Next, using the spinner, adjust the Actual Dur. to the number of days to actually complete the task. If the task took longer than planned, *Project 2007* will adjust the remaining tasks in the project.



Yet another way to capture actual information is the enter in the Percent Complete value. An easy way to enter in this information is by using the Tracking Table starting from the Gantt Chart view. On the Gantt Table, right-click the Select All button and click on the Tracking menu item. You will see the Tracking Table and you will notice the *% Comp.* (Percentage Complete) column. You can enter in your percentage complete in this column using the spinner. Tab or click away from this cell and your actual start date is set. If you set the *% Comp.* to 100%, the actual finish date is also set.

4	Send Client Box of C	Tue 11/11/08	NA	90%	0%	9 days	1 day	\$11,985.00	39.2 hrs
---	----------------------	--------------	----	-----	----	--------	-------	-------------	----------



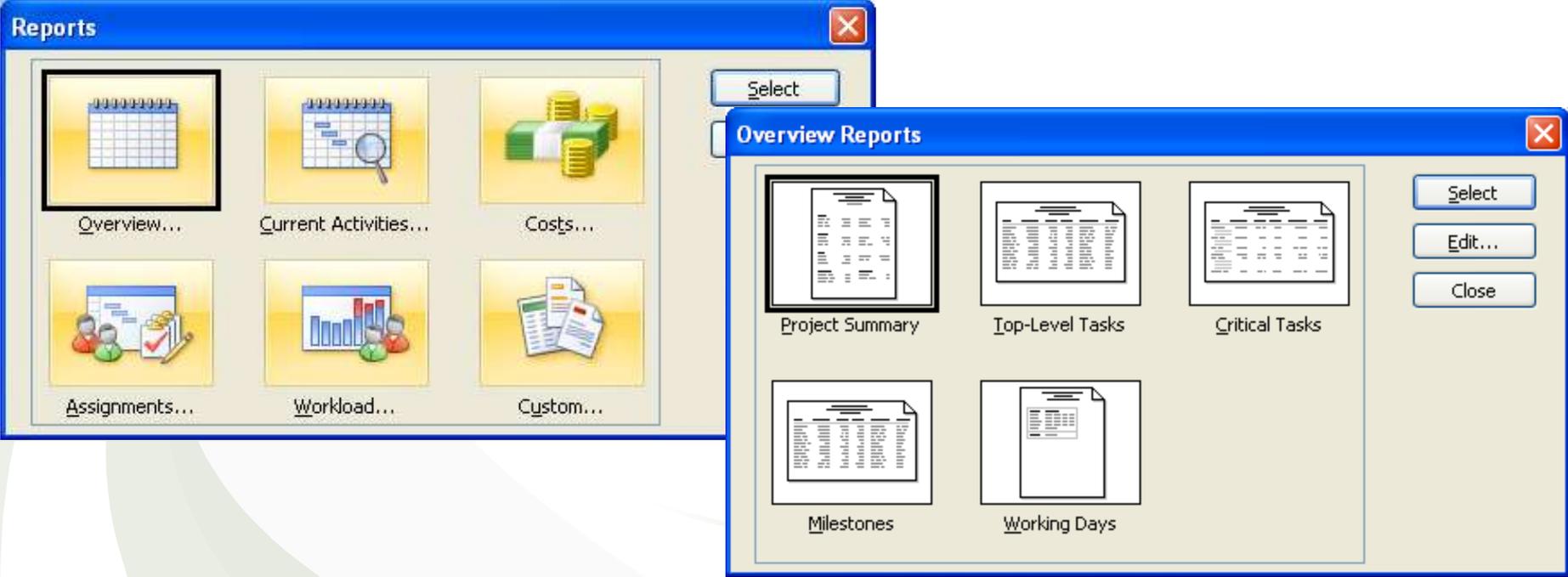
Reporting on Progress

So far, we've seen how to show, use and interpret views and tables. And while you can print these out, sometimes you need to present information in a format that is not available in any view.

Project 2007 has two types of views:

- 1. Text reports in a typical row and column format
- 2. Visual reports presenting pictures of our project's data in the form of charts and diagrams. You can also export your project data to Excel and Visio.

To create a text report, click Report ⇒ Reports to open the Reports dialog box. This dialog box contains one button for each of the following categories: Overview, Current Activities, Costs, Assignments, Workload, and Custom.





Reporting on Progress

By clicking on an report category and clicking Select, another dialog box pops up with a list of available reports. Here is a list of available text reports:

Overview

- Project Summary
- Top-Level Tasks
- Critical Tasks
- Milestones
- Working Days

Current Activities

- Unstarted Tasks
- Tasks Starting Soon
- Tasks in Progress
- Completed Tasks
- Should Have Started Tasks
- Slipping Tasks

Costs

- Cash Flow
- Budget
- Overbudget Tasks
- Overbudget Resources
- Earned Value

Assignments

- Who Does What
- Who Does What When
- To-Do List
- Overallocated Resources

Workload

- Task Usage
- Resource Usage

Custom (editable reports)

- Base Calendar
- Budget Report
- Cash Flow
- Completed Tasks
- Critical Tasks
- Crosstab
- Earned Value
- Milestones
- Overallocated Resources
- Overbudget Resources
- Overbudget Tasks
- Project Summary
- Resource (material/work)
- Resource Usage (material/work)
- Should Have Started Tasks
- Slipping Tasks
- Task
- Task Usage
- Tasks In Progress
- Tasks Starting Soon
- To Do List
- Top Level Tasks
- Unstarted Tasks
- Who Does What
- Who Does What When



Reporting on Progress

For example, let's create a text report showing the Milestones. Click on Report ⇒ Reports to bring up the Reports dialog box. Next, click on the Overview... button and click Select. Next, click the Milestones button and click Select. Partial output of the report is shown below (there are three pages to this report):

Milestones as of Thu 11/6/08
ZestyProjectPlan.mpp

ID		Task Name	Baseline Start
11		Client Business Rule Sign-Off	Fri 11/28/08

Milestones as of Thu 11/6/08
ZestyProjectPlan.mpp

Actual Start	Actual Finish	Duration	Start
NA	NA	1 day?	Tue 12/2/08

Milestones as of Thu 11/6/08
ZestyProjectPlan.mpp

Baseline Duration	Finish
1 day?	Tue 12/2/08



Reporting on Progress

Project 2007 introduced a new kind of reporting called visual reporting. The visual reports you create use your project's data to build PivotTables in Excel and PivotDiagrams in Visio. To create a visual report, click on Report ⇒ Visual Reports to bring up the Visual Reports – Create Reports dialog box, shown below:

Visual Reports - Create Report

Select Template

Show report templates created in:

Microsoft Office Excel Microsoft Office Visio

Task Summary | Resource Summary | Assignment Summary

All | Task Usage | Resource Usage | Assignment Usage

- Baseline Cost Report
- Baseline Work Report
- Budget Cost Report
- Budget Work Report
- Cash Flow Report
- Earned Value Over Time Report
- Resource Cost Summary Report
- Resource Remaining Work Report
- Resource Work Availability Report
- Resource Work Summary Report

New Template...
Edit Template...
Manage Template...

Sample

Select level of usage data to include in the report: Weeks

Include report templates from:

Modify...

Help | Save Data... | View | Close



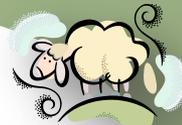
Reporting on Progress

Let's create a *Resource Work Availability Report*. Click on that report within the All tab and click on the View button. Project 2007 gathers the appropriate data and creates an Excel PivotTable. Excel opens up and the following graph is shown:





Appendix

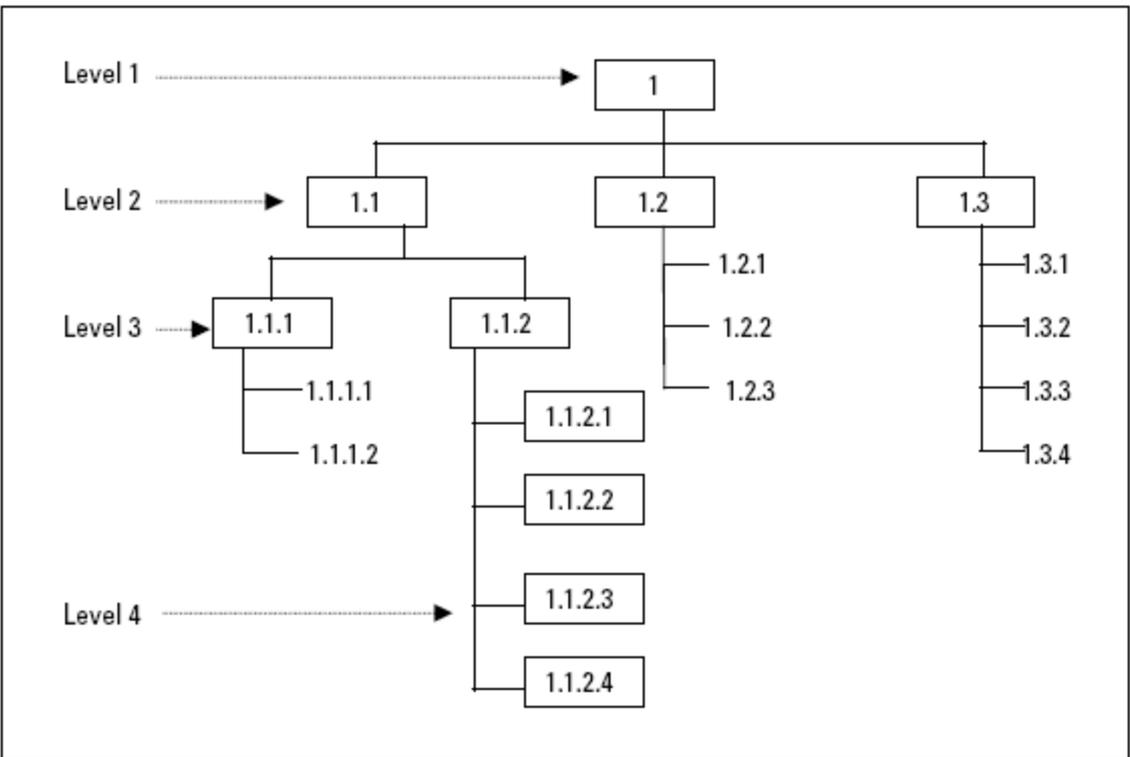


1. On the View menu, point to Toolbars, and then click Customize.
2. Click the Commands tab.
3. In the Categories box, click All Commands.
4. In the Commands box, click the ComAddInsDialog command and drag it to one of the toolbars currently displayed in the Project window. For example, click the ComAddInsDialog command and drag it to the end of the Standard toolbar. A line appears on the toolbar, indicating where the button for the command will be placed. Release the mouse button to add the ComAddInsDialog command to the toolbar.
5. Click Close on the Customize dialog box.
6. Click COM Add-Ins on the toolbar where it was added.
7. Clear the check boxes for the Adjust Dates, Copy Picture to Office, and PERT Analysis add-ins, and then click OK.
8. Click COM Add-Ins again.
9. Select the check boxes for the Adjust Dates, Copy Picture to Office, and PERT Analysis add-ins, and then click OK.
10. On the View menu, point to Toolbars, and then click Analysis to display the Analysis toolbar.



Appendix B – Defining Work Breakdown Structure (WBS) Codes

The U.S. Department of Defense developed the work breakdown structure (WBS) as a chart showing a numbered list of tasks that one must complete to finish a project. In *Project 2007*, you cannot create a WBS Chart (although you can obtain third-party tools to do so), you can assign WBS codes to each task. WBS codes can be letters and numbers (or combinations of the two) that help to identify the relationship among tasks and organize the project. You can use any numbering system you want for your WBS code structure. For example, given the WBS code 1.1.2.3, you might display the project's tasks as the following WBS graph:





To assign WBS numbers to a project, follow the instructions below:

1. Choose Project ⇄ WBS ⇄ Define Code. Project displays the WBS Code Definition dialog box. The Code preview box shows you the format of the WBS code that you're designing as you design it — and therefore remains blank until you make selections in this dialog box.
2. Use the Project Code Prefix box to apply a prefix to all WBS codes that you assign. For example, you may want to use the initials of the project name.
3. In the Sequence column at the bottom of the box, select the type of character that you want to use for each level of the WBS code. In Figure 7.22, I've selected Numbers (ordered) for both Levels 1 and 2, but you can also include Uppercase Letters or Lowercase Letters. If you choose Characters (unordered), Project inserts an asterisk at that position of the WBS code.
4. Open the list box in the Length column and choose the length for the level of the WBS code. In Figure 7.22, I set Level 1 to two digits, but I allowed any number of digits for Level 2. You can choose Any, select from the predefined list of numbers 1–10, or enter any other number.
5. In the Separator column, use the list box to select period (.), dash (–), plus (+), or slash (/), or enter any character that is not a number or a letter (such as =).
6. Repeat the previous steps for each level that you want to define.
7. Click OK when you finish.

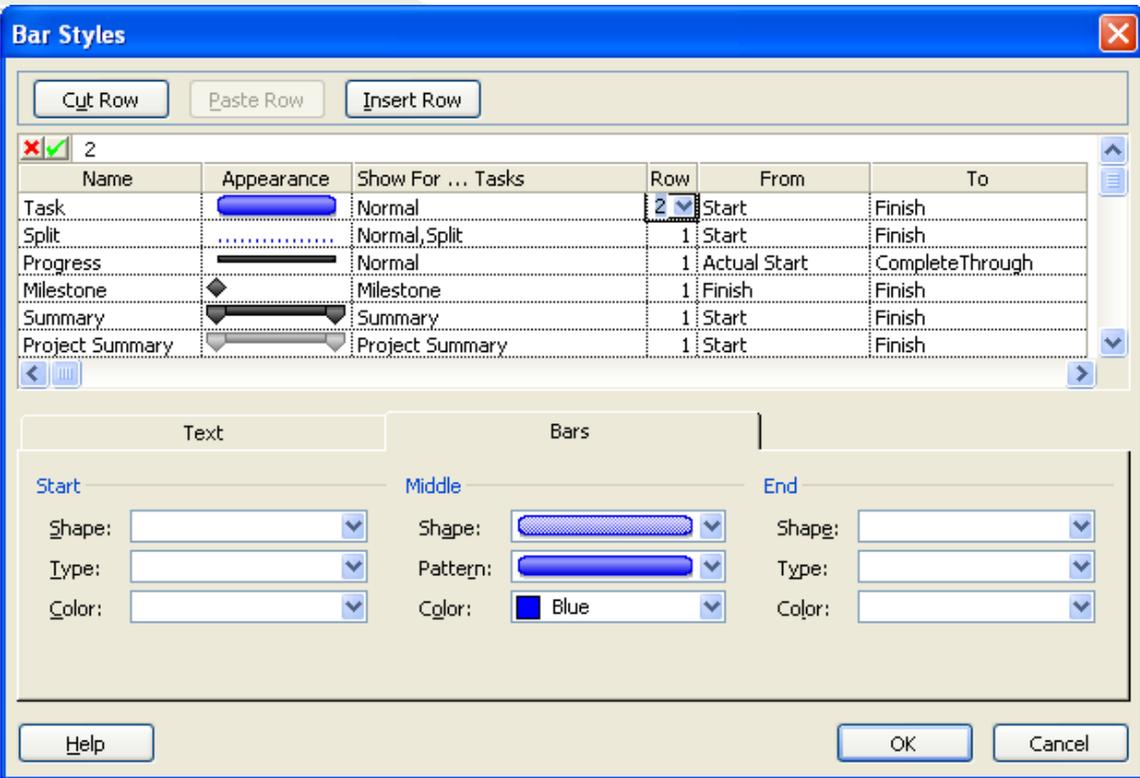
The WBS codes don't appear by default in the Gantt Chart view; to view the WBS codes, you must add the WBS column. To add the WBS column to the left of the Task Name column, right-click the Task Name column. Project selects the column and displays a shortcut menu. Choose Insert Column from the shortcut menu, and Project displays the Column Definition dialog box. Open the Field Name list box, and select WBS. If you want, you can change the alignment of data to Left. Then, click Best Fit to add the column to the worksheet portion of the Gantt Chart view, as shown in Figure 7.23.



Appendix C – Changing the Appearance of *Project 2007*

While there are many options to modify the colors, fonts, font sizes, layouts, etc. within Project 2007, we do not recommend that a Project Manager change these options especially if part of a larger Project Management Organization. Changing the appearance of a project from the defaults will serve to confuse other Project Managers if the need arises to take over your project.

With that said, we do recommend you look into the *Gantt Chart Wizard* to help change the appearance of your project plan's Gantt Chart. Click on Format ⇒ Gantt Chart Wizard to activate the wizard. To undo changes, you can click Edit ⇒ Undo.



Another nice formatting feature is allowing additional space between task rows on your project plan. Click on Format ⇒ Bar Styles and change the Row value from 1 to 2 on the Task row (see left). Click OK and you will have additional space between each task on the project plan.



1. [Microsoft Office Project 2007 Bible](#) by Elaine Marmel (ISBN-13: 978-0470009925)
2. [Microsoft Office Project 2010 Bible](#) by Elaine Marmel (ISBN-13: 978-0470501313)
3. Microsoft Office Project Help



Support sheepsqueezers.com

If you found this information helpful, please consider supporting sheepsqueezers.com. There are several ways to support our site:

- Buy me a cup of coffee by clicking on the following link and donate to my PayPal account: [Buy Me A Cup Of Coffee?](#).
- Visit my Amazon.com Wish list at the following link and purchase an item:
<http://amzn.com/w/3OBK1K4EIWIR6>

Please let me know if this document was useful by e-mailing me at comments@sheepsqueezers.com.