

PERT Chart EXPERT

Quick Reference Guide

Installation Instructions, Getting Started Guide
and Tutorials for the PERT Chart EXPERT
software

The complete PERT Chart EXPERT User's Guide can be
found on the installation CD (PERTDoc.PDF) or can be
downloaded from our website at www.criticaltools.com/doc

PERT Chart EXPERT

Copyright © 1994-2010 Critical Tools, Inc. All rights reserved.

Information in this document is subject to change without notice. The software described in this document is furnished under a license agreement. It may be used only in accordance with the terms of the agreement. It is against the law to copy the software on any medium except as specifically allowed in the license agreement.

No part of this manual may be reproduced or transmitted in any form without the express written permission of Critical Tools, Inc.

Critical Tools, Inc.

7308 West Rim Drive
Austin, Texas 78731 USA
+1 512 342 2232 phone
+1 512 342 2234 fax

Visit our website at www.criticaltools.com

Send your comments, questions or suggestions to
support@criticaltools.com

PERT Chart EXPERT is a trademark of Critical Tools, Inc. Microsoft Project and Microsoft Windows are registered trademarks of Microsoft Corporation.

PERT Chart EXPERT – Quick Reference Guide

Table of Contents

Installation	4
Installing PERT Chart EXPERT for Standalone use	4
Installing PERT Chart EXPERT for use with MS Project.....	4
Installing PERT Chart EXPERT on a Network	5
Downloading the software from our website.....	6
Troubleshooting Installation Problems	6
Getting Started	9
Terminology and Basic Concepts.....	9
Creating projects in PERT Chart EXPERT.....	10
Creating PERT charts from Microsoft Project.....	12
Working with PERT charts	13
Tutorials	19
Tutorial #1 - Creating a new PERT chart	19
Tutorial #2 - Creating a PERT chart from MS Project	23

Installation

Installing PERT Chart EXPERT for Standalone use

To use PERT Chart EXPERT standalone (without the interface to Microsoft Project), insert the CD and follow the installation instructions. When prompted to modify Microsoft Project, choose **No**.

If the Setup program does not start automatically when the CD is inserted, doubleclick the Setup file on the CD.

Do you have a Product ID?

If you have a Product ID, enter this number when prompted during Setup. This will activate the full version of the software.

No Product ID – Use as Demo

If you do not have a Product ID, the software can only be installed as demo software on a 50 task/30 day trial basis. If you purchase the software and obtain the Product ID, there is no need to reinstall, just start PERT Chart EXPERT, select Help-About PERT Chart EXPERT and select Register to enter the ID.

With the exception of the 30 day and 50 task limit, the Demo software functions just like the full version.

Installing PERT Chart EXPERT for use with Microsoft Project

To configure PERT Chart EXPERT to work with Microsoft Project, Setup asks if you wish to Modify Microsoft Project. Answer **Yes** to configure Microsoft Project to work with PERT Chart EXPERT.

Note: If you configure PERT Chart EXPERT to work with Microsoft Project it adds a PERT Toolbar button, a Macro, a few Views and a few Tables to the Global.mpt file of Microsoft Project. It will not overwrite any existing items in the Global.mpt file nor will it add or overwrite data in any existing Microsoft Project (.mpp) file.

If you have Microsoft Project installed on your local computer you should see a PERT Chart EXPERT toolbar button in Microsoft Project after installation. Click this button to create a PERT chart of a Microsoft Project plan.

The PERT Chart EXPERT toolbar button within MS Project looks like this:



If you do not see the PERT button in Microsoft Project, see the section on Troubleshooting Installation Problems.

Installing PERT Chart EXPERT on a Network

PERT Chart EXPERT can be installed on a network and can be used with Microsoft Project installed on a local computer or on a network.

Named User vs. Concurrent

PERT Chart EXPERT supports Named User licensing when installed on a network. This means that if a user will be using the software they must have a license. Concurrent Use Licensing where any number of users can access the software but not more than a certain number at one time is not supported.

Steps to install PERT Chart EXPERT on a network:

1. Run Setup and install PERT Chart EXPERT on the network drive. Enter the Product ID when prompted.
2. Assign access rights to the PERT Chart EXPERT folder on the network for each user.

3. The first time each user starts PERT Chart EXPERT from their workstation they will be in Demo mode. Go to Help-About PERT Chart EXPERT, select Register and enter the Product ID.

Downloading the software from our website

The latest version of PERT Chart EXPERT is always available on our website. Upgrading within the same major version is free (from version 2.4 to 2.5, for example). Download the software if you have an earlier version on your CD, if you have lost your CD or it is damaged. Use the same ID that was sent to you to activate the full version during Setup.

After downloading from our website, if you receive an error message when installing that is similar to the following:

“Corrupt Installation Detected”

it may mean that you have a firewall or other security software in place that is damaging the file when downloading. Turn the firewall and/or security software off and download again.

Troubleshooting Installation Problems

The following are common installation problems and solutions.

Setup did not add the PERT Chart EXPERT button to a local version of Microsoft Project

If you chose to modify Microsoft Project during Setup and you do not see a PERT toolbar button within Microsoft Project, try the following:

1. Start Microsoft Project.
2. Select Tools-Macro-Security and set it to Medium.
3. Click OK.
4. Go to File-Open and open the folder where you installed PERT Chart EXPERT (C:\Program Files\PERT Chart EXPERT by default).

5. Select the file SetupPERTxxxx (where xxxx is the version of Microsoft Project you are using).
6. Select Open.
7. Select Enable Macros if prompted.
8. Close this file without saving.

If you see the PERT toolbar button now, close Microsoft Project and start it again. If the PERT button in Microsoft Project is still there then you should be OK.

If you do **not** see the PERT Chart EXPERT toolbar button within Microsoft Project, make sure you have rights to access the global.mpt file. This is a Microsoft Project file where items such as toolbar buttons and macros are stored. You need access rights to this file to install PERT items into Microsoft Project. Get access rights to this file and try again.

If you see the PERT Chart EXPERT button in Microsoft Project but it does not work, close Microsoft Project and run the PERT Chart EXPERT Setup program.

Setup did not add the PERT Chart EXPERT button to a Network version of Microsoft Project

This is most likely due to the fact that you do not have access rights to modify Microsoft Project. If you are granted access rights to modify Microsoft Project on the Network, try the 8 steps listed earlier to add the PERT Chart EXPERT toolbar button.

Microsoft Project displays a “Visual Basic” error message during Setup

If, during Setup, you receive a “Visual Basic” message or any message from Microsoft Project with the words “Visual Basic”, try adding the PERT button using the 8 steps listed earlier.

If you still receive a “Visual Basic” message after using the 8 steps described earlier this probably means that Microsoft Project is having trouble with its Visual Basic component. Try running a Microsoft Project macro to confirm this. If it fails you should reinstall Microsoft Project.

The message “You Have Modified a Signed Project...” is displayed during Setup

The message “You have modified a signed project. You do not have the right to sign this project. The signature will be discarded”, may appear after PERT Chart EXPERT modifies Microsoft Project. This is a Microsoft Project message and appears when you are the first one to modify Microsoft Project’s global.mpt file (where the PERT items are copied). You can disregard this message. It does not affect the operation of Microsoft Project or PERT Chart EXPERT and will not appear again.

Getting Started

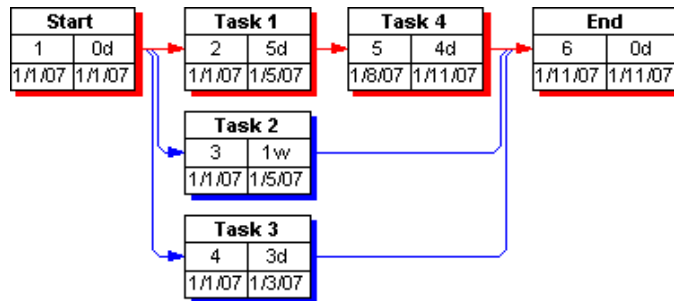
Terminology and Basic Concepts

A PERT Chart

A PERT chart (sometimes referred to as a Network Diagram or Precedence Diagram) is a way of creating and displaying a project based on defining tasks as boxes and dependencies between tasks as lines between these boxes.

Note: The term **PERT** (short for Program Evaluation and Review Technique) comes from a technique used to calculate the most likely outcome of a project using Optimistic, Pessimistic, and Most Likely durations of tasks. This is **not** what PERT Chart EXPERT does. The origin of the name PERT Chart EXPERT comes from Microsoft Project's use of the term PERT chart used to describe these types of charts in versions prior to Project 2002. Microsoft Project now refers to PERT charts as Network Diagrams.

Here is an example of a PERT chart:



Creating dependencies defines the order in which tasks occur. Task schedules (start and finish dates) are based on these relationships. PERT Chart EXPERT also displays the Critical Path of the project. The Critical Path is the longest chain of

tasks such that a delay in any one task on the Critical Path would delay the end of the project. The Critical Path is displayed in red. The Non-Critical tasks, or those that can be delayed, are shown in blue.

It is recommended that you avoid entering dates in tasks except where needed to start a chain of tasks. In other words, you should create the tasks and dependencies to define the relationships between tasks. Then, enter a Duration to define how long a task will take. This determines a start and finish date for each task based on its dependencies and duration.

Creating projects in PERT Chart EXPERT

Starting PERT Chart EXPERT displays a blank planning screen. Following are the various ways to add tasks and dependencies:

1. To create your first task, click and drag anywhere in the chart.
2. To add another task that is dependent on the first task, click within the first task box and drag to white space outside of this box. This creates a new task that is dependent on the first task.
3. To create a task that is not dependent on another, click and drag in white space in the chart.
4. To make a dependency between two tasks, click and drag from within a task box to within another task box.

Note: The order in which you create the dependency defines the Predecessor and Successor relationship between tasks. The task you click on first is the predecessor and the task you click second is the successor. The schedule of the predecessor impacts the schedule of the successor.

To modify or delete a dependency, doubleclick the dependency line between any two tasks. This displays the Dependency form where you can change the type of dependency, add lag or delete the dependency.

Change information about a task by clicking the field in the task box or doubleclick a task to display the Task Information form. An example of the Task Information form is below:

A few of the key fields in this form are:

Name - Enter a description for the task in the Name field. You can also type this directly into the task box on the screen.

Duration - The duration is the amount of time it takes to complete a task. A duration can be entered into the Duration field using the following formats:

M = Minutes
 H = Hours
 D = Days
 W = Weeks
 MO = Months
 Y = Years

For example, for a 10 day task enter 10d in the duration field. For a 2 week task, enter 2w.

Note: PERT Chart EXPERT supports non-English Duration Units. Type the first letter of your language translation of the Duration units listed on the previous page.

Start – When possible, the Start date should be determined by a task's predecessor. If a task has no predecessor you can enter a Start date here or directly into the task box on the screen.

Finish – The Finish date is determined by adding the Duration of the task to the Start date of the task.

Resources – You can assign Resources to tasks using this form. If the Resources>> button is not available it means you have not defined your resources for this project. Go to Tools-Resources to define the project's resources.

See the Tutorials for step by step instructions on how to create a project in PERT Chart EXPERT.

Creating PERT charts from Microsoft Project

To create a PERT chart from an existing plan in Microsoft Project, open a plan in Microsoft Project and click the PERT Chart EXPERT toolbar button.

This starts PERT Chart EXPERT and creates a PERT chart of the current plan.

If you do not see the PERT Chart EXPERT toolbar button in Microsoft Project see the Installation section of this guide.

When you create a PERT chart of a Microsoft Project plan you are dynamically linked to this plan. This means that any

changes you make in the PERT chart are automatically and immediately reflected back in Microsoft Project.

Filtering and Collapsing Tasks in Microsoft Project

In your Microsoft Project plan, if you apply a filter or collapse tasks and click the PERT Chart EXPERT toolbar button it will create a PERT chart of only those tasks that are currently displayed in Microsoft Project. This is useful for large charts where you only want to view a certain subset of tasks in a PERT chart.

Saving PERT charts created from Microsoft Project plans

If you create a PERT chart from a Microsoft Project plan and save the PERT chart it saves the PERT chart **and** the corresponding Microsoft Project file. It also creates a link from the PERT chart file to the Microsoft Project plan.

Note: It is important to remember that the PERT chart itself does not contain your project data. The project data is stored in Microsoft Project (in the *.mpp file). The PERT chart (the *.PCE file) only contains the PERT chart formatting.

Opening the PERT chart file at a later time will open the corresponding Microsoft Project plan. Conversely, opening the Microsoft Project plan and clicking the PERT Chart EXPERT toolbar button will open the previously saved PERT chart so you can continue working exactly where you left off.

Working with PERT charts

Whether you create a PERT chart from scratch or one from an existing Microsoft Project plan here are some tips for working with a PERT chart.

Repositioning Tasks

As you click and drag to create tasks and dependencies, tasks are automatically placed in the PERT chart relative to their Predecessors. If a task does not have a Predecessor then that

task is placed near the task with the ID previous to it relative to its Finish date.

You can reposition tasks in the chart by clicking and dragging tasks to a new location in the chart.

To move a task to a new location on the chart, place the cursor on the edge of the task until you see a left/right/up/down arrow and then click and drag the task to the new location.

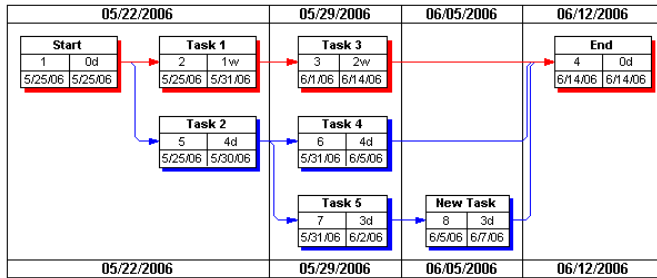
Manually positioning tasks in this manner will “lock” the chart so tasks are no longer automatically positioned. When the chart is locked you will see that the Lock icon is selected on the toolbar.

To Unlock the chart so that all tasks are automatically positioned relative to Predecessors and ID's, press the Lock button on the toolbar.

To Unlock certain tasks in the chart so that only the selected tasks are automatically repositioned, click and drag around a set of tasks to highlight the desired tasks, choose the Format menu and then Layout Selected. This will automatically reposition the selected tasks while leaving the other tasks in the chart Locked.

Timescale

To add a Timescale to a chart select the Format menu and then Timescale. Applying a timescale to a chart allows you to display tasks that Start or Finish within certain time periods. Display time units such as Days, Weeks, Months, Quarters or Years (or every 3 days, every two weeks, etc...). You can specify different time units and whether you want to view tasks that Start in this time period or Finish in this time period.



Note: The Task box is placed in the timeband based on whether it starts or finishes in that time period but it does not stretch across timebands.

You can also use the Timescale button on the toolbar to turn the Timescale on and off.

The Timescale toolbar button looks like this:



Grouping

Grouping tasks in PERT Chart EXPERT creates horizontal bands based on certain fields. Tasks can be grouped by Resource Names, Resource Groups, Resource Initials, Text fields (Text 1 thru Text 30) and by Outline (the Summary Tasks in your Microsoft Project plan or the levels of a WBS chart).

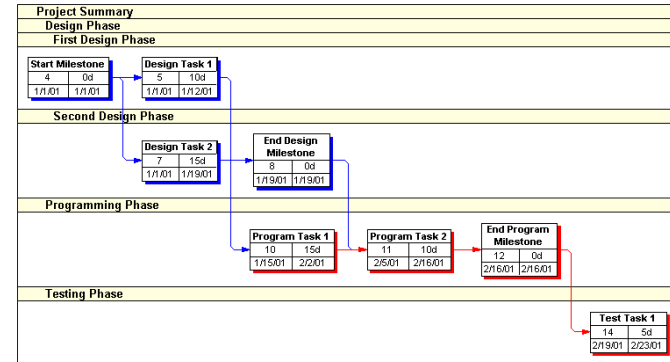
When grouped, you can add tasks within a group by clicking and dragging to create a task within a specific group. You can also drag tasks across groups to reassign them to a different group. To do this, move your cursor to the edge of a task box until you see the up/down/left/right arrow then click and drag the task to a new group.

To Group the chart, select the Format menu and then Group. You can also use the Group button on the toolbar to turn the Grouping on and off.

The Group toolbar button looks like this:



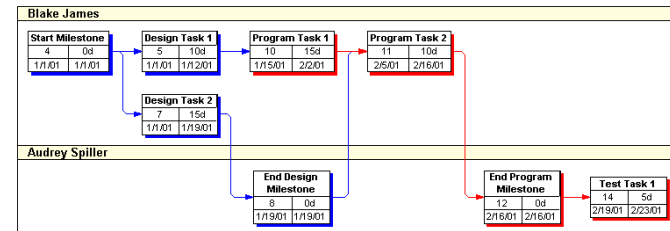
One example of grouping is by the Summary Tasks you have created in MS Project or WBS Chart Pro:



To group on the Summary Tasks in a plan, choose the Format menu and then Group. Select Group by Outline Level and click OK. This will display groups based on the Outline Levels in MS Project or the levels you created in WBS Chart Pro.

Note: You cannot create outline levels in PERT Chart EXPERT. These must come from MS Project or WBS Chart Pro.

Another example of grouping is by Resource:



Note: When grouped by Resources and there are multiple resources assigned to a task, the task box is displayed in the group of the first Resource assigned to that task.

While grouped you can use the outlining buttons on the toolbar to work with the groups.



Click the — (minus) button to collapse the tasks within the current group to display only the heading.

Click the + (plus) button to expand and display Tasks that were collapsed.

Click the ++ button to expand all of the groups in the PERT chart.

Click the -- button to collapse all of the groups in the PERT chart.

Select the up/down arrow button (focus) to display only the selected heading and all tasks below it. This is useful for working on one section of your plan. Select the Focus button again to remove the focus.

Note: You can also hide a group by right-clicking that group and selecting Hide Group. Go to Format-Group and place a checkmark next to that group to display it.

Views

There are many ways to display a PERT chart and you can create **Views** to display the same project in different ways. PERT Chart EXPERT includes several Views that show various fields of information and various arrangements of tasks. You can choose a View you like, modify an existing View or create a new View.

Switch Views using the Previous View and Next View arrows or choose a specific View from the drop down list.



Tutorials

The following tutorials are intended to introduce you to the basic functionality of PERT Chart EXPERT using two approaches; first, how to create a PERT chart from scratch and second, how to create a PERT chart from Microsoft Project. The tutorials will show you how to use the most popular features of PERT Chart EXPERT. Refer to the PDF User's Guide or Help within the software for a complete explanation of **all** of the features of PERT Chart EXPERT.

Tutorial #1 - Creating a new PERT chart


When you start PERT Chart EXPERT a blank screen is displayed for you to begin planning a project.

Click and drag with your mouse to create your first task. It will look like this:

New Task	
1	1d
5/9/06	5/9/06

To add another task that is dependent on the first task, click within the first task box and drag to white space outside of this box, like this:

New Task	
1	1d
5/9/06	5/9/06



When you let go of the mouse it will create a second task that follows the first, like this:

New Task		New Task	
1	1d	2	1d
5/9/06	5/9/06	5/10/06	5/10/06

Note: The number you see below and to the left of the task name is the ID. This ID is automatically created based on where you add new tasks. If you add a new task dependent on another it will create a new task that is one more than its predecessor. If you add a task that is not dependent on another then it uses the next available ID based on the last task in the chart.

To create a task that is not dependent on another, click and drag in white space in the chart. In this case, click and drag below the first two tasks to create a task that is not dependent on another.


New Task		New Task	
1	1d	2	1d
5/9/06	5/9/06	5/10/06	5/10/06

New Task	
3	1d
5/9/06	5/9/06

To make a dependency between two tasks, click and drag from within a task box to within another task box. To make task #3 a predecessor to task #2, click within task 3 and drag over task 2 to create a chart like this:

New Task		New Task	
1	1d	2	1d
5/9/06	5/9/06	5/10/06	5/10/06

New Task	
3	1d
5/9/06	5/9/06



Task #2 now has two predecessors which means it will start after the latest finish of Task #1 and Task #3.

Note: The order in which you create the dependency defines the Predecessor and Successor relationship between tasks. The task you click on first is the predecessor and the task you click second is the successor. The schedule of the predecessor drives the schedule of the successor.

Entering Task Information

To enter information for a task, doubleclick the task to display the Task Information form. This form is where you enter information such as Duration, Cost, Work, etc.

Task Information (ID: 1)

General Custom Flags Hyperlink

Name: Design Task

Duration: 5d % Complete: 0% WBS: 1

Work: 0h Cost: \$0.00

Start: 5/9/2006 8:00 AM Finish: 5/15/2006 5:00 PM

Constraint Type: As Soon As Possible Constraint Date:

Resource Names: Resources >>

OK Cancel Help

If you enter a Duration for this task this will be used to determine the Finish date for this task and also to determine the Start date of the successor task (the task that follows this one).

In the above example, this task starts on Tuesday, May 9th and ends on Monday, May 15th. This is 5 working days since no work occurs on the weekend. By default, PERT Chart EXPERT uses a 5 day work week with no holidays.

Changing the Calendar

To adjust the Calendar to specify working days/non-working days and working times, select the Tools menu and then Calendar.

Calendar

Normal Working Hours

From: 8:00 AM To: 12:00 PM

1:00 PM 5:00 PM

Normal Working Days

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

OK

Cancel

Help

Set as Default

Reset

May 2006

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

For selected days:

From: 8:00 AM To: 12:00 PM

1:00 PM 5:00 PM

Reset to Normal

Set to Non-Working

Go to Today

As you change the Calendar the schedule will automatically adjust around the Non-Working days you define.

Printing the PERT chart

To print a chart it is always best to display it in Print Preview first. Select File-Print Preview to display the PERT chart in Print Preview.

While in Print Preview you can edit the layout of the page or set the Titles.

Transferring a PERT chart to Microsoft Project

To transfer a PERT chart to Microsoft Project click the Goto Project button within PERT Chart EXPERT. This will automatically start Microsoft Project and transfer the PERT chart to a Microsoft Project plan.

The Goto Project button within PERT Chart EXPERT looks like this:



Transferring a PERT chart to Microsoft Project moves all of the project data out of the PERT chart file (the .PCE file) and places it into a Microsoft Project file (the .MPP file). You will then have two files, a .PCE file that contains the PERT chart formatting and a .MPP file that contains the project data.

Note: Once you transfer a PERT chart to Microsoft Project the PERT chart no longer contains data but is dynamically linked to the Microsoft Project data. Any changes you make to the PERT chart are instantly reflected in the corresponding Microsoft Project plan where the data is now stored. After you transfer a PERT chart to Microsoft project, make sure you save the Microsoft Project plan to save your data!!

Tutorial #2 - Creating a PERT chart from Microsoft Project

If you have a Microsoft Project plan and wish to create a PERT chart from this plan, the following tutorial will show you how to accomplish this. It will also show you various features that you can use to manage your Microsoft Project plans using PERT Chart EXPERT.

Create a PERT chart from an existing Microsoft Project plan

For this tutorial we will use the sample Microsoft Project plan that is installed by PERT Chart EXPERT. To create a PERT chart from an existing Microsoft Project plan:

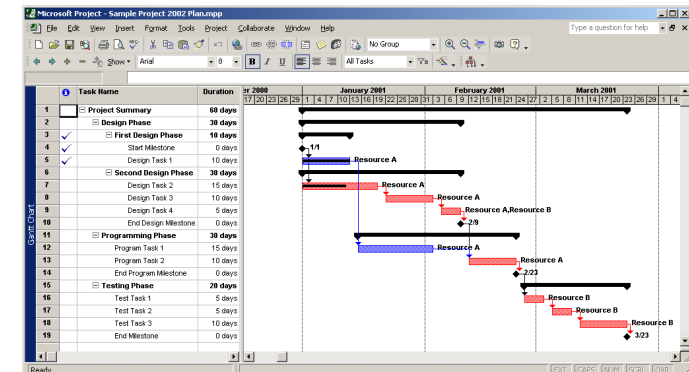
1. Start Microsoft Project.
2. Choose File-Open and locate the file called Sample Project xxxx Plan.mpp (where xxxx is the version of Microsoft project you are using). This file is located in the folder where you installed PERT Chart EXPERT (C:\Program Files\PERT Chart EXPERT by default).
3. Click the PERT Chart EXPERT toolbar button to create a PERT chart of this Microsoft Project plan.

Note: The PERT Chart EXPERT toolbar button within Microsoft Project looks like this:

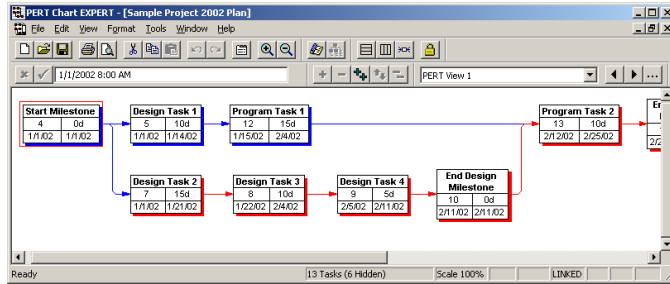


If you do not see this button, refer to the **Troubleshooting Installation Problems** section earlier in this guide.

The plan in Microsoft Project looks something like this:



The corresponding plan in PERT Chart EXPERT looks like:



The PERT chart shows tasks and dependencies from the current Microsoft Project plan. Summary Tasks from the Microsoft Project plan are not displayed unless they have a dependency.

Note: The PERT chart is linked dynamically to the existing Microsoft Project plan. This means that any changes you make to the PERT chart in PERT Chart EXPERT are instantly reflected in Microsoft Project.

Saving the PERT chart also saves the corresponding Microsoft Project plan.

Filtering and collapsing tasks

You can create a PERT chart of a part of your Microsoft Project plan by applying a Filter or collapsing Summary Tasks in Microsoft Project **before** you create the PERT chart. To create a PERT chart of a subset of tasks in Microsoft Project:

1. In Microsoft Project, apply a filter or click the – (minus) symbol on a Summary Task to hide the detail for a Summary Task.
2. Click the button within Microsoft Project to goto PERT Chart EXPERT.

Note: Switching to PERT Chart EXPERT by clicking the Task Bar at the bottom of your screen will not create a PERT chart of the filtered data from Microsoft Project. Use the PERT Chart EXPERT toolbar button within Microsoft Project to switch to PERT Chart EXPERT.

Making changes in the PERT chart

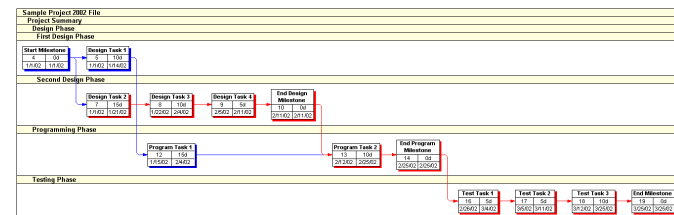
When you create a PERT chart from a Microsoft Project plan the PERT chart is dynamically “linked” to the corresponding Microsoft Project plan. Any changes you make in the PERT chart are **instantly reflected** in the Microsoft Project plan. If you click and drag to add tasks in your PERT chart you are effectively adding them in the Gantt Chart in Microsoft Project. If you doubleclick a task and change Duration, Work, Start, Finish, etc. this will be changed in Microsoft Project.

Grouping

Grouping can help you organize the tasks on the screen by displaying them in horizontal bands based on certain criteria. Group tasks by the Summary Tasks you created in Microsoft Project (Outline Levels), by Resources or by using the Text fields (Text1-Text30).

As an example, to Group by Summary Tasks, select the Format menu and Group. If Outline Level is displayed in the Group By section, click OK. If not, select the Change button and choose Group by Outline, click OK and then OK again.

The grouped chart looks like this:



When tasks are grouped you can click and drag tasks across groups to assign them to a new group. For example, to move the task Design Task 3 from its current group into the First

Design Phase group, click the edge of the Design Task 3 box and drag it into the First Design Phase group.

As another example, if you are grouped by Resources, dragging a task across the groups will assign that task to a new Resource.

To remove the group feature, click the Group toolbar button.

Saving the PERT chart

When you save a PERT chart that is linked to a Microsoft Project plan the corresponding plan in Microsoft Project is also saved. Saving a PERT chart saves to a *.PCE file type. The .PCE file does not contain any data, it only contains the formatting and a link to the Microsoft Project plan where the data resides.

Opening a saved PERT chart that is linked to a Microsoft Project will open the corresponding Microsoft Project file to display the data in the PERT chart.

You can also open the Microsoft Project file first and click the PERT Chart EXPERT button within Microsoft Project to go to the saved PERT chart of this plan.

Note: If you send a PERT chart file that was created from a Microsoft Project plan to someone you must also send the corresponding Microsoft Project file.