Contents

Chapter 7

Customizing Reports and Dashboards

Lesson 3: Working with Visual Reports

Visual reports are graphical type reports that are available in Project 2010. These reports are defined using a template in Project 2010 and use either a Visio PivotDiagram or Excel PivotTable technology to generate the final report. Once a report is generated, changes and fine-tuning of the report can be performed through Visio or Excel.

Since Visual Reports use Pivot table technology, knowledge of Pivot tables is helpful for the project manager to gain the greatest benefit from these reports.

In this lesson we will discuss:

- Overview of Visual Reports
- The Anatomy of Pivot Tables
- Viewing a Visual Report
- Creating a Visual Report template

Overview of Visual Reports

Visual Reports are reports based on dimensions and measures that produce graphs using Pivot Tables. Pivot Tables will be discussed in the next lesson. When a Visual Report is run, an On-line Analytical Processing (OLAP) cube of data is built based on the metrics stated in the specifications for the Visual Report. After the cube is built, Project 2010 connects to either Visio or Excel to display the report. If an Excel-based report is selected, the report will be based on Pivot Tables. If a Visio-based report is selected, a Visio Pivot Diagram will be produced.

Once a report is generated, it can be manipulated as a Pivot Table and tailored to fit your needs. Types of manipulations include expanding and contracting outline levels, changing field values, selecting options, adding totals and changing the appearance of graphs. After the Visual Reports are generated, they can be saved or published to a reporting website.

Project 2010 provides multiple Visual Report definition templates found in the Visual Reports - Create Report dialog box. Options are available to filter the Excel templates from the Visio templates. All templates are contained in the All tab within the dialog box.

Sub tabs are provided for various report categories, and contain the following report options:

Table 7.1 Task Summary `Tab`

Report	Content	Excel or Visio
Critical Tasks status report (Metric)	Work and Work remaining for critical and non-critical tasks.	Visio
Critical Tasks status report (US)	Work and Work remaining for critical and non-critical tasks.	Visio

Table 7.2 Resource Summary `Tab`

Report	Content	Excel or Visio
Resource remaining work report	Work, Remaining Work, total Work for work resources.	Excel

Table 7.3 Assignment Summary `Tab`

Report	Content	Excel or Visio
Resource status report (Metric)	Work and Cost values per resource.	Visio
Resource status report (US)	Work and Cost values per resource.	Visio

Table 7.3 Assignment Summary `Tab`

Report	Content	Excel or Visio
Task status report (Metric)	Work and percent of work completed by WBS level.	Visio
Task status report (US)	Work and percent of work completed by WBS level.	Visio

Table 7.4 Task Usage `Tab`

Report	Content	Excel or Visio
Cash flow report	Timephased task cost data.	Excel

Table 7.5 Resource Usage `Tab`

Report	Content	Excel or Visio
Cash flow report (Metric)	Baseline Cost vs Actual Cost over time by resource type.	Visio
Cash flow report (US)	Baseline Cost vs Actual Cost over time by resource type.	Visio
Resource Availability report (Metric)	Total capacity, Work and remaining availability per. resource	Visio
Resource Availability report (US)	Total capacity, Work and remaining availability per resource.	Visio

Table 7.5 Resource Usage Tab

Report	Content	Excel or Visio
Resource cost summary report	Resource costs per resource type.	Excel
Resource work availability report	Work and remaining availability over time.	Excel
Resource work summary report	Work, Actual Work and Remaining Availability per resource.	Excel

Table 7.6 Assignment Usage Tab

Report	Content	Excel or Visio
Baseline Cost Report	Compares Baseline Cost, Actual Cost and Cost.	Excel
Baseline Report (Metric)	Baseline, Actual Work and Cost over time.	Visio
Baseline Report (US)	Baseline, Actual Work and Cost over time.	Visio
Baseline Work Report	Baseline Work, Baseline Cost, and Actual Work.	Excel
Budget Cost Report	Budget Cost, Baseline Cost, Cost and Actual Cost.	Excel
Budget Work Report	Budget Work, Baseline Work, Work, Actual Work.	Excel

Table 7.6 Assignment Usage Tab

Report	Content	Excel or Visio
Earned Value Over Time Report	Timephased – Actual Cost of Work performed, baseline values and Earned Value.	Excel

Anatomy of a Pivot Table

To understand Visual Reports, some understanding of Pivot Tables is helpful. Pivot Tables are flexible tables based on measures and dimensions. The information below is an overview of a Pivot Table based report. Additional information regarding Pivot Tables can be found in any Excel reference book, through software Help, or online.

In the table below, sales data from The Chocolate Company shows that sales of different products have occurred in multiple locations. The Chocolate Company also keeps track of the customer type and products sold. We might want to know total sales by customer type, product or location. Pivot Tables have the flexibility to process any of these report requests quickly.

The data below is the source data that will be used to generate the Pivot Table:

Table 7.7 Chocolate Company Sales

Customer	Customer type	Location	Product	Quantity in bars	Price
Customer A	Retail	Chicago	Dark	48	120

Table 7.7 Chocolate Company Sales

Customer	Customer type	Location	Product	Quantity in bars	Price
Customer B	School	Rome	Milk	24	60
Customer C	Vending	Sydney	White	12	30
Customer D	Retail	Chicago	Dark almonds	36	45
Customer E	School	Rome	Milk almonds	48	120
Customer F	Vending	Sydney	White peanuts	24	60
Customer G	Retail	Chicago	Dark	12	30
Customer H	School	Rome	Milk	36	45
Customer I	Vending	Sydney	White	48	120
Customer J	Retail	Chicago	Dark almonds	24	60
Customer K	School	Rome	Milk almonds	12	30
Customer L	Vending	Sydney	White peanuts	36	45
Customer M	Retail	Chicago	Dark	48	120

In the view below, a Pivot Table has been created using the above data. The data below is consolidated to show sales by Customer type:

Table 7.8 PLACEHOLDER

Customer Type	Sum of Price
Retail	480
School	180
Vending	90
Wholesale	135
Grand Total	885

In the next example, the table was changed to show sales by Location:

Table 7.9 PLACEHOLDER

Location	Sum of Price
Chicago	375
Rome	255
Sydney	255
Grand Total	885

In the next example, sales by Product:

Table 7.10 PLACEHOLDER

Product	Sum of Price
Dark	270

Table 7.10 PLACEHOLDER

Product	Sum of Price
Dark almonds	105
Milk	105
Milk almonds	150
White	150
White peanuts	105
Grand Total	885

Pivot Tables are easily changed to create the type of report necessary for your reporting needs, based on the values contained in the Pivot Table data. Visual Reports will be used to create the Pivot Diagram or Pivot Table but the project manager will need to customize the generated report.

Viewing Visual Reports

Project 2010 comes with built in Visual Report templates to report on cost, work and resource data. Having a specific goal in mind for the type of report you want will help generate more meaningful report data.

To open the Visual Reports – Create Report dialog box:

- Project → Visual Reports

To create a report:

- Select any report.
- Change timeframe for assignment (usage) data.
- Click **View**.

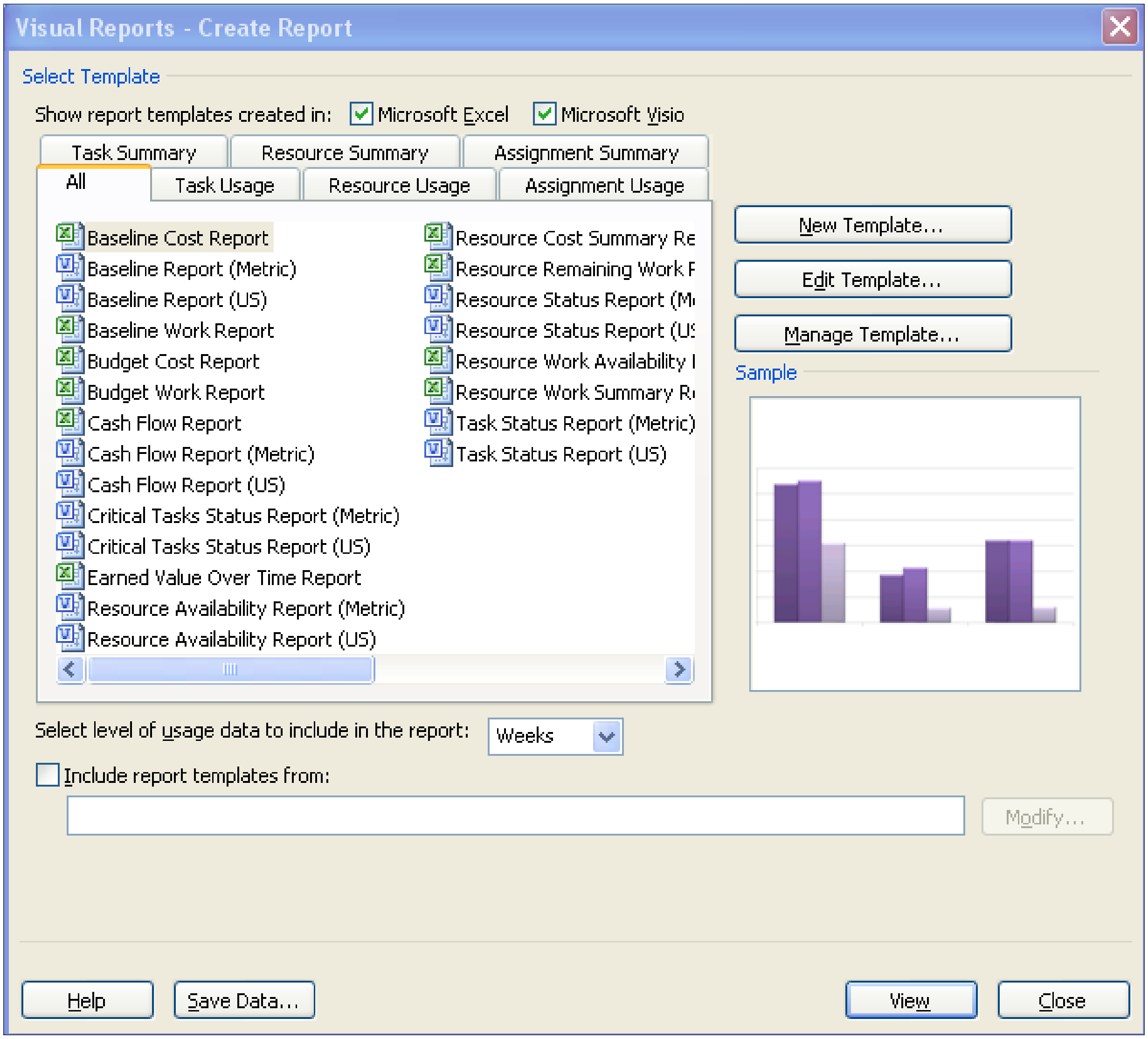

Figure 7-1 PLACEHOLDER

The report will generate by creating an OLAP cube and will open either Visio or Excel. In the generated Pivot Table select the data to be viewed on the report. Notice that the data viewed on the table can also be viewed in chart format.

Options are available for saving the generated OLAP cube or creating an Access database from the data by clicking the Save Data… button.

Creating Visual Report Templates

Creating customized Visual report templates will allow inclusion of customized fields in Visual Reports. Standard templates can also be edited to include or exclude selected data.

To edit a standard template:

- Project → Visual Reports.
- Select any report.
- Click **Edit**.
- See instructions for field choices below.

To create a new Visual report template:

- Project → Visual Reports.
- Click **New Template**.

Visual Reports – New Template dialog box opens:

- Select Application: Visio or Excel.
- Select Data Type (destination for completed template).
  - Task Usage
  - Resource Usage
  - Assignment Usage
  - Task Summary
  - Resource Summary
  - Assignment Summary

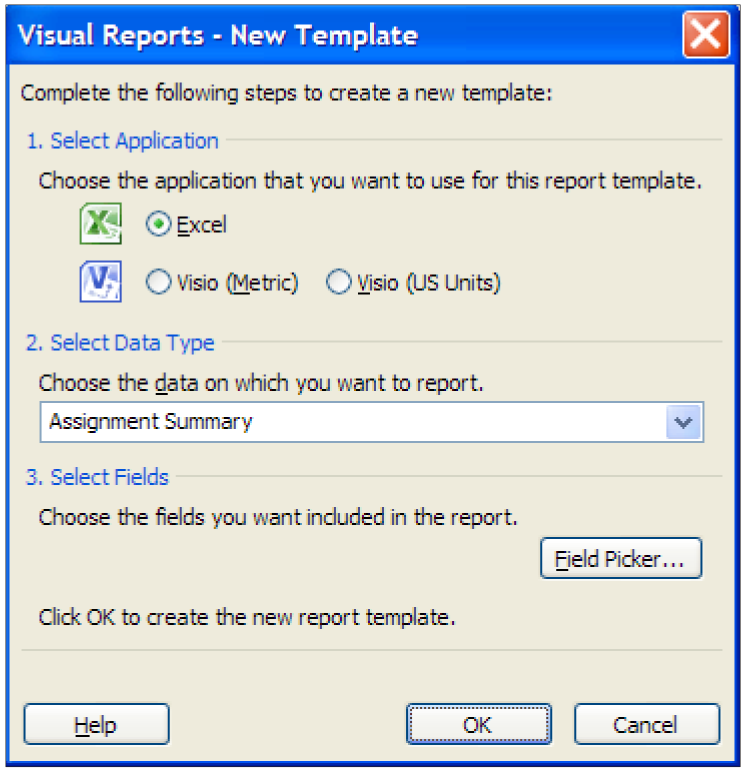

Figure 7-2 PLACEHOLDER

- Click on the **Field Picker** button.
- Add and remove fields from the report:
  - Select fields to add to the report on the left side and click Add.
  - Select fields to remove from the report on the right side and click Remove.
- Click **OK** when field selection is completed.
- Click **OK** to create the new template.

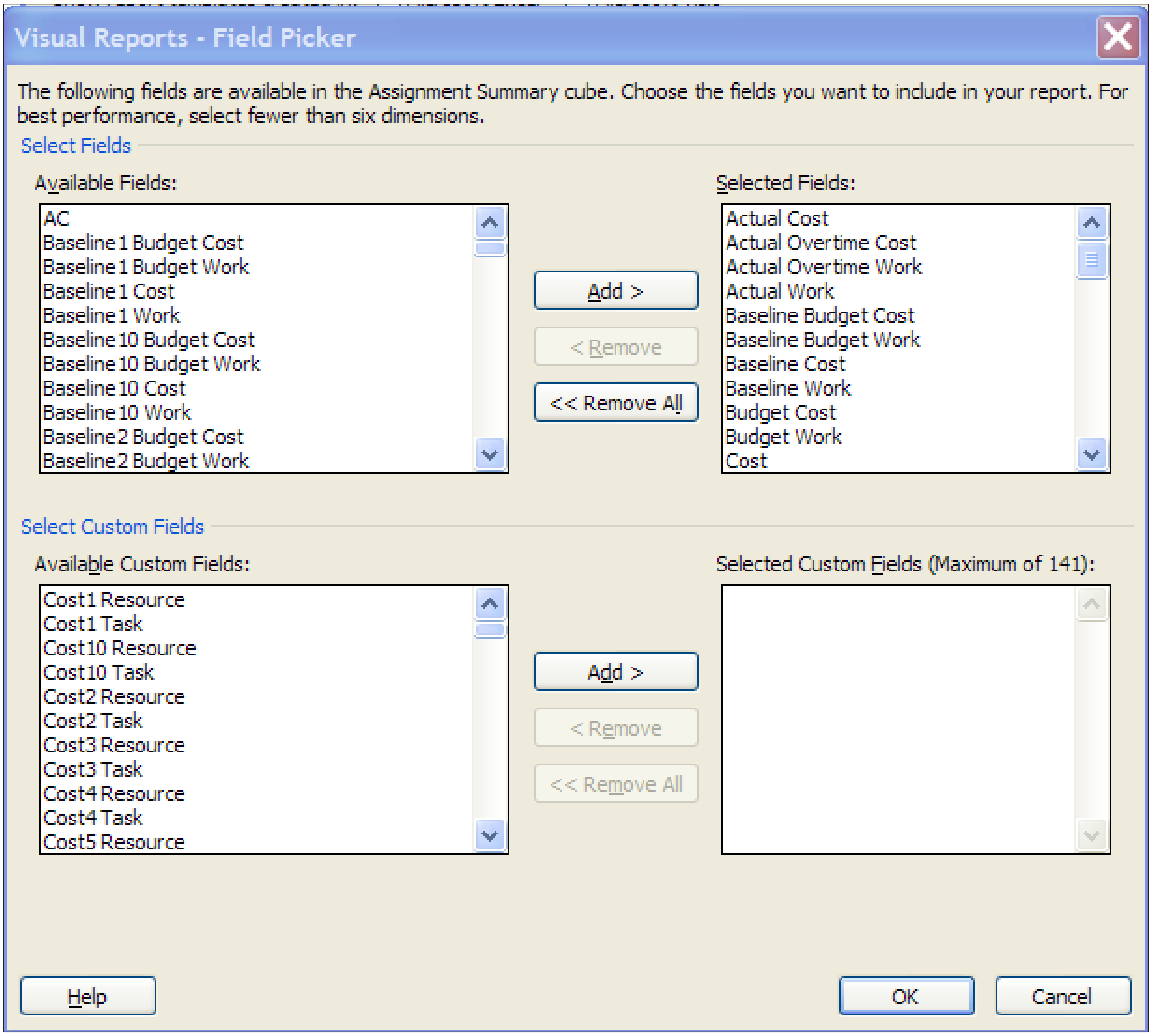

Figure 7-3 PLACEHOLDER

An OLAP cube will be generated and the will open in either Excel or Visio.

To save the template:

- In either Excel or Visio click the Office button → Save As .
- Give the template a name and leaving the template file extension of .xltx for Excel or .vsd for Visio.
- Click OK to create and save the template.

The following message will appear when an Excel template is created:

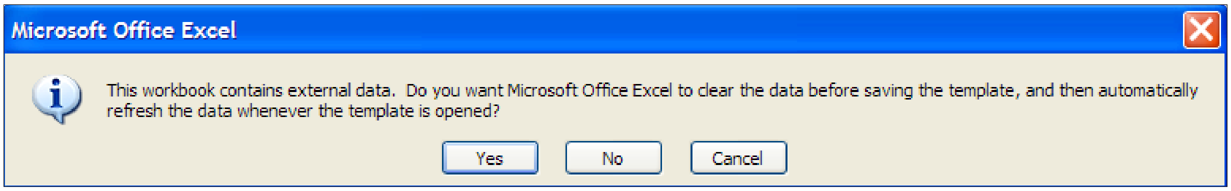

Figure 7-4 PLACEHOLDER

- Click Yes to refresh or create new data when the template is run.

The new template will be added to the list of already available Visual Report templates. In the example below, a new template called New Visual Report Template was created.

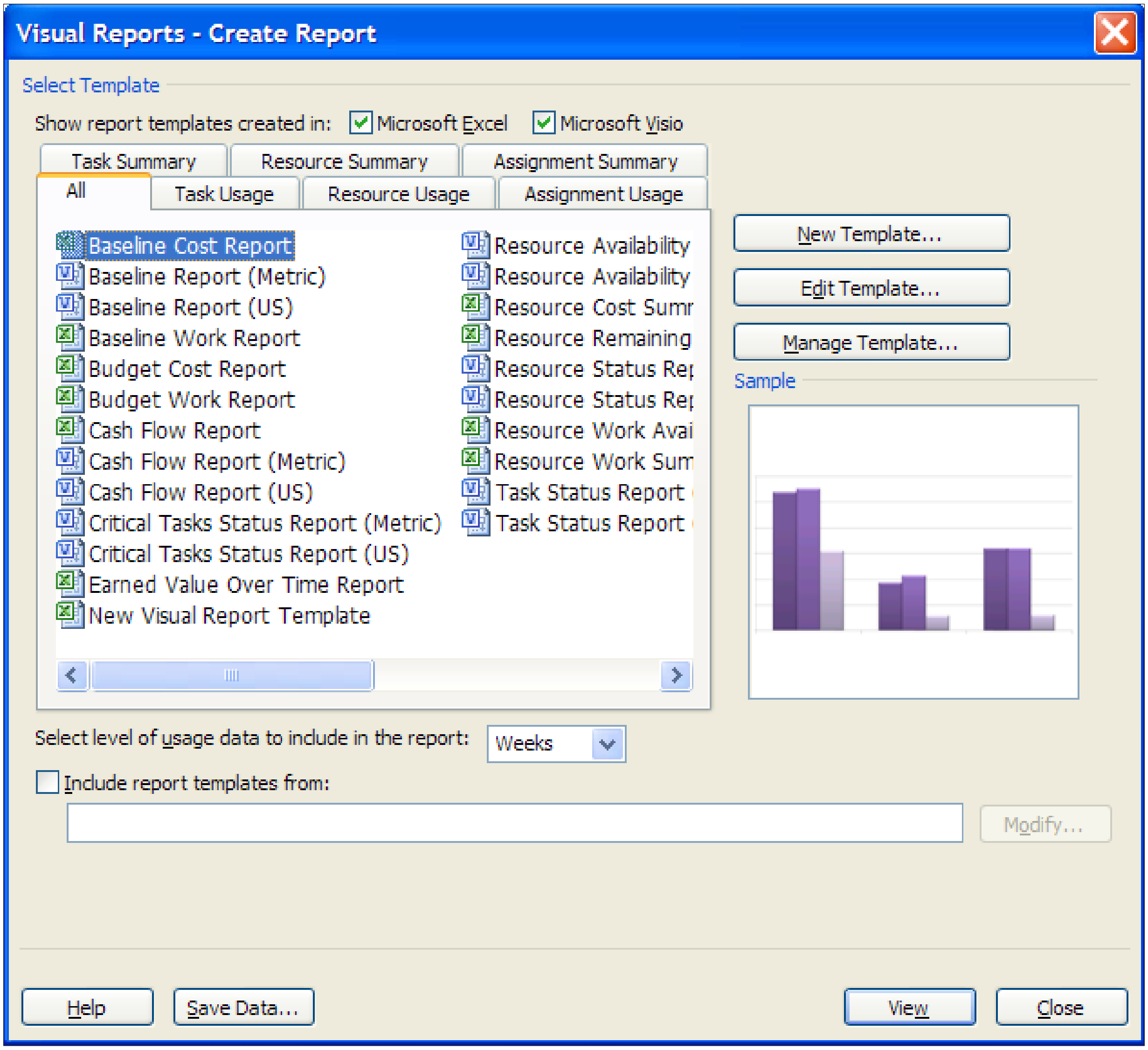

Figure 7-5 PLACEHOLDER

To rename or delete an existing template:

- Click the template to be renamed or deleted.
- Click **Manage Template**.
- Right-click the file.
- Select **Rename** or **Delete**.

Dashboard reports

What are Dashboard Reports?

Dashboard reports are reports that display project data is tabular and graphic form. Each report displays different data and can be customized to tailor the reports for each users needs.

Below is an example of the Overallocated Resources Dashboard Report. Note that there are 2 charts each representing different resource data. The chart on the left represents Actual work v Remaining Work. The chart on the right is displaying resources that are Overallocated at the day level. Each of these reports may be altered to adjust the chart type, chart elements and details of the display data.

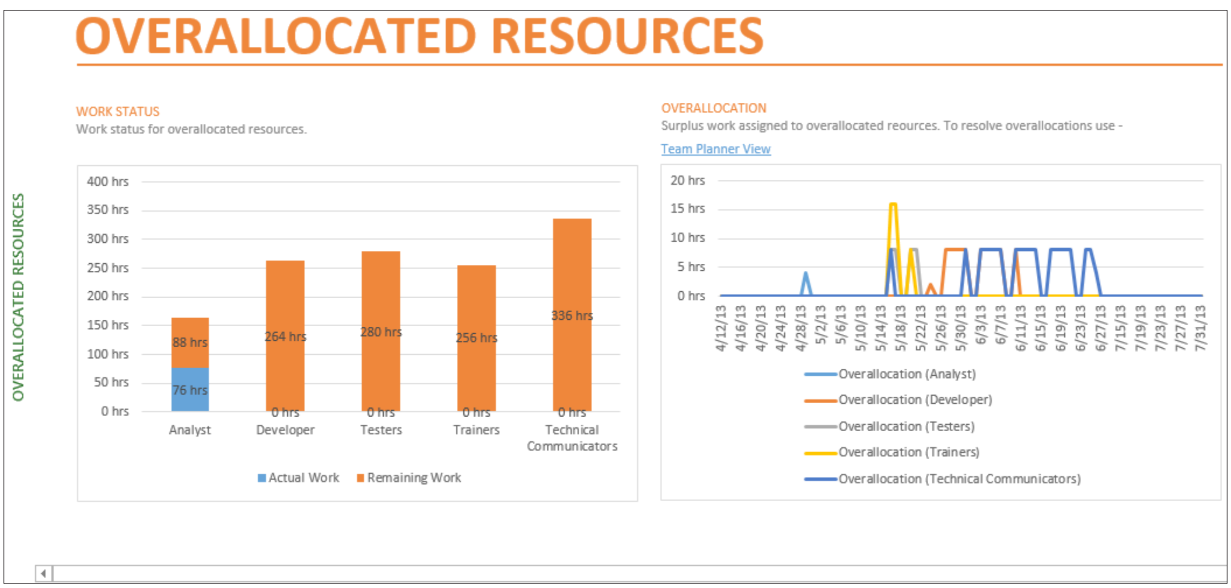

Figure 7-6 PLACEHOLDER

Data included in the Dashboard Reports

Dashboard Reports contain data relating to project progress, variance calculations, and critical path. Below are listed some of the data which are included in the reports. If you are not using the data needed to populate the reports, the reports will not display properly.

Some of the data needed for the reports includes the following project data values:

- Task Duration, Cost and Work.
- Resource Cost and Work.
- Baseline comparison.
- Status date.
- Status field: Late, On Time, Future

See below for a list of the Dashboard Reports and the data which is represented on each report. Use this as a guide to decide which reports would be useful for you.

Reports that come with MS Project 2013

Table 7.11 PLACEHOLDER

Included in Reports Section	Report Name	Data Shown on Report
Dashboard	Burndown	1) Remaining Cumulative Work v. Baseline Remaining Cumulative Work for active tasks; 2) Number of tasks completed and number left to be completed
	Cost overview	1) Cumulative Percent Complete, Cumulative Cost; 2) Remaining Cost, Actual Cost and Baseline Cost; 3) Cost outline summary level 1 tasks
	Project overview	1) Percentage complete of Outline level 1 tasks; 2) List of milestones and target dates; 3) Late tasks – tasks that are past due
	Upcoming Tasks	1) Work Percent complete is less than 100%, tasks starting within 5 days of system date; 2) Tasks starting soon list

Table 7.11 PLACEHOLDER

Included in Reports Section	Report Name	Data Shown on Report
	Work Overview	1) Remaining cumulative Work, Remaining Cumulative Actual Work, Baseline Remaining Cumulative Work; 2) Baseline work, actual work, remaining work at outline level 1; 3) Actual work v remaining work by resource and 4) Remaining availability by resource
Resources	Overallocated Resources	1) Actual work v Remaining work; 2) Hours assigned to overallocated resources
	Resource Overview	1) Remaining work, Actual work, Baseline work; 2) Percent work completed by resource; 3) Remaining work assigned by resource
Costs	Cash flow	1) Cost v Cumulative Cost, Cost Variance – Project Summary level; 2) Outline level 1 summaries Remaining cost, Actual Cost, Cost and Earned Value
	Cost Overruns	1) Task Cost Variance; 2) Resource Cost Variance

Table 7.11 PLACEHOLDER

Included in Reports Section	**Report Name**	**Data Shown on Report**
	Earned Value Report	1) Actual cost of work performed, Baseline cost of work performed, Baseline cost of work scheduled; 2) Cost Variance, Schedule Variance; 3) Cost Performance Index (CPI), Schedule Performance Index (SPI)
	Resource Cost Overview	1) Resource Remaining Cost, Actual Cost, Baseline Cost; 2) Cost distribution over resource types; 3) Cost details at the resource level
	Task Cost Overview	1) Cost status – Actual Cost, Remaining Cost, Baseline Cost; 2) Costs spread out amoungst tasks based on their status (On Schedule, Late, Future); 3) Cost Details – outlne level 1
In Progress	Critical Tasks	1) Chart – On Schedule, Late, Future 2) Table task level critical tasks
	Late Tasks	1) Chart – On Schedule, Late, Future; 2) Table task level – tasks that are late compared to status date.
	Milestone Report	Late Milestones, Milestone up next and Completed Milestones

Table 7.11 PLACEHOLDER

Included in Reports Section	Report Name	Data Shown on Report
	Slipping Tasks	1) Remaining Cumulative Work, Remaining Cumulative Actual Work; 2) Task list for tasks where finish date are past the baseline finish date.

To Display a Dashboard Report

1. Click on the **Reports** tab
2. Click on a Report Category: **Dashboards**, **Resources**, **Costs**, **In Progress**
3. Click on a Report to display

To change parameter values displayed on a Dashboard Report:

1. Click on the **Reports** tab
2. Click on a Report Category: **Dashboards**, **Resources**, **Costs**, **In Progress**
3. Click on a Report to display
4. Click inside of a graph. Options will appear on the right side of the view.
5. Change options as necessary. Close by options by clicking on the X in the upper left corner of the options box.
6. Other changes may be made by clicking on formatting changes on the Design ribbon which will appear when a Report is selected.

> Changes to Dashboard Reports will be remembered within the file.

Clicking on the **Page Breaks** button will display the page breaks as for printing the report. The separate report graphics and tables may be dragged to different pages for printing purposes.

Appendix A

Appendix

Ask the Expert: April, 2013

Ellen Lehnert, MVP, PMP, MCT, MCP – MS Project & MS Project Server. www.lehnertcs.com

Topic: MS Project 2013 certification tests – 74-343 and 74-344

Inquiry from MPUG Linkedin group: What can you tell us about the new MS Project 2013 certification tests? Any study tips?

Answer: Microsoft has issued the availability of two new Microsoft Project 2013 certification tests. The tests are:

74-343 – Managing Projects with Microsoft Project 2013:

http://www.microsoft.com/learning/en/us/exam.aspx?id=74-343&locale=en-us#fbid=1b6yoYKFp6N

74-344 - Managing Programs and Projects with Project Server 2013:

http://www.microsoft.com/learning/en/us/exam.aspx?id=74-344#fbid=1b6yoYKFp6N

I took (and passed) the 74-343 desktop test last week and thought it would be helpful to pass along what I observed taking the test and a few study suggestions. The two tests have very similar formats and standards.

At the start of the test 74-343 test you will see a screen that will tell you that the test contains 54 questions and you are allowed 2 hours to take the test. You will then answer some questions regarding your current experience and knowledge level using MS Project 2013. There is also an optional tutorial for taking the test. The survey and tutorial do not take away from the time allotted to take the test.

Most of the questions are multiple choice formatted questions. There are a few questions where you will need to place answers in the order in which you would perform an operation.

The question style is from the point of few of problem solving. The questions are real usage situation oriented of how you would use the software. You will be given a problem condition and asked to supply the best resolution for the situation. An example of this type of question would be:

You need to make dinner. What should you do to achieve this?

1. Read a book
2. Call for hotel reservations
3. Have coffee with a friend
4. Get some food out and start cooking

To study for the test

- Start with the test objectives provided at the links above. If the topic is in the objectives it will be on the test.
- Seek out and learn the new features of the 2013 software as this information is usually part of the tests.
- You will be asked questions regarding the best practices of using MS Project – what is the best way to accomplish an objective. Usually a good reference book will include many of these concepts. Any reference book which includes the test objectives (which is most of the books) will be helpful.
- Know the standard software: views, tables, options, choices on menus, and choices in selection boxes, location of data, use of filters, groupings, existing reports, etc.

Taking the test:

- It is suggested that you arrive at the test facility at least 20 minutes before the scheduled test time. You will be required to empty your pockets and check your coat, backpack, computer, purse, etc. You are only permited to take your glasses and any writing materials they give you into the testing room. No food or drink is allowed.
- I was given a small white board and pen by the testing center to work through anything that I might want to write down during the test. I found this was unnecessary but some candidates might find it helpful.
- Keep your eye on the upper right corner of the screen at the countdown clock. Space your time out to make sure you can answer all of the questions. A question not answered is a wrong answer. You will have approximately 2 minutes and 22 seconds per question for the 74-343 test.
- Read the questions carefully. Understand what the question is asking you before you read the answer choices. You will be in a better frame of mind to select the correct answer.

- Some multiple choice questions will require more than one answer to fulfill the complete answer for a question. Make sure you supply all answers necessary to satisfy the requirements of the question.
- You can flag questions to return and review them at the end of the test before you indicate that you are finished taking the test. If a question is confusing or you are not sure of the answer, flag the question to return to it later.
- At the end of the test you will have an opportunity to comment of the quality and content of the questions. These comments will be allowed only AFTER you have indicated that the test is completed. During this time you will not be able to change any of your answers.

The test of offered through Prometric. The registration link is http://www.register.prometric.com/Menu.asp

At the Prometric website, click on:

1. **Locate a test center**
2. Select **Country**. Select **State/Province** (if applicable) There might be limited availability in some areas. Click **Next**.
3. Client – Select **Microsoft**.
4. Program – Select **Microsoft (070, 071, 074, MBX)**, click **Next**.
5. The page which starts with “Welcome to the Microsoft Certification Program” will contain some links. One of the links is titled “**Second Shot Offer**”. Click on this link.

   At times you can obtain a code which will allow for a second shot at the test if you do not pass the first time. This offer is not always available but it is worth a try to see if it is currently available. If it is available, you will be given a code which must to be entered when you sign up and pay for taking the test. You will not be able to take advantage of the second shot offer at a later time. If you entered the second shot code and failed the test, contact Prometric for your retake certificate. Click **Next** when ready.
6. Select the test you would like to take. At the writing of this article 74-343 and 74-344 are only offered in English. It will be translated into other languages in the future. You will also notice that the cost is $150.00 (USD) to register for the test.
7. Select your testing location
8. Sign into Prometric and complete the registration.

It is also my opinion that the MS Project 2013 tests are harder tests than what we have seen for earlier software versions. Passing these tests will show a thorough understanding of the software. The more experienced users of MS Project and MS Project Server will be able to pass the tests easier than newer users. Just memorizing the buttons is not enough to pass these tests.

Best of luck to you on the test.