# Best Practices for Baselining and Variance Analysis

Presented by Dale Howard

Director of Education for
Sensei Project Solutions

# About Your Presenter: Dale Howard

- Director of Education at Sensei Project Solutions
- One of only 39 Microsoft Project MVPs (Most Valuable Professionals) in the entire world
- Co-author of 21 books on Microsoft Project, Project Online, and Project Server
- Have used every version of Microsoft Project since 4.0 for Windows 95 and every version of the Microsoft PPM tool since Project Central in 2000
- Work out of an office in my home in Ellisville, MO (suburb of St. Louis)

# About Sensei Project Solutions

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- Microsoft's PPM Partner of the Year Winner in 2014; Finalist in both 2015 and 2017
- 500+ Microsoft PPM deployments
- 5,000+ Microsoft PPM users trained
- Global impact

Microsoft Partner
Gold Project and Portfolio Management
Gold Application Development
Silver Collaboration and Content

2017 Partner of the Year Finalist
Project and Portfolio Award

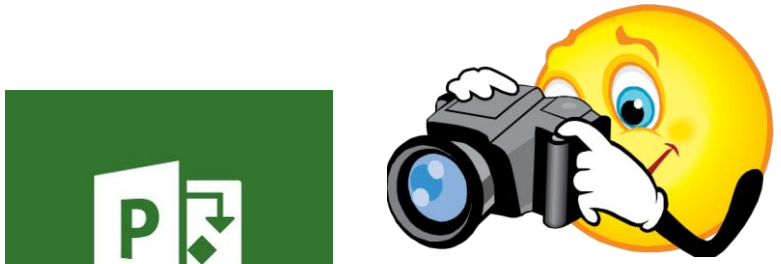
Microsoft Partner of the Year
2015 Finalist
Project and Portfolio Management

Microsoft Partner
2014 Partner of the Year Winner
Project and Portfolio Management

Microsoft Partner
Gold Project and Portfolio Management

# What Is a Baseline?

- Saving a baseline is like taking a “snapshot” of important values in your project
- Captures the original schedule, work, and cost for every task, resource, and assignment in the project
- Microsoft Project measures progress against the baseline to calculate variance during the Execution stage of the project
- Without a baseline, you ***cannot*** analyze variance during the life of your project



# What Data Is In a Baseline?

- For every task, Microsoft Project captures the current values in the following major fields:
  - Start
  - Finish
  - Duration
  - Work
  - Cost
- For every resource, Microsoft Project captures the current values in the following fields:
  - Work
  - Cost

# What Data Is In a Baseline?

- For every assignment (visible in the Task Usage and Resource Usage views), Microsoft Project captures the current values in the following fields:
  - Start
  - Finish
  - Work
  - Cost
- In the Task Usage and Resource Usage views, Microsoft Project also captures the timephased Work and Cost values for each task, resource, and assignment

# What Data Is In a Baseline?

- For every task, Microsoft Project also captures the current values in the following minor fields:
  - Budget Cost
  - Budget Work
  - Deliverable Start (only used with Project Online)
  - Deliverable Finish (only used with Project Online)
  - Fixed Cost
  - Fixed Cost Accrual
- Baseline **does not** include information such as the task name, dependencies, Deadline dates, constraints, Task Type setting, or Effort Driven setting

# Using a Baseline Process

Sensei Project Solutions recommends you use the following process for saving a baseline:

1. Save the original baseline for the entire project in the Baseline set of fields (aka Baseline0).
2. Back up the original baseline into one of the ten additional sets of baseline fields (Baseline1 through Baseline10).

Completing the second step allows you to capture the "history" of your baselines over the life of the project

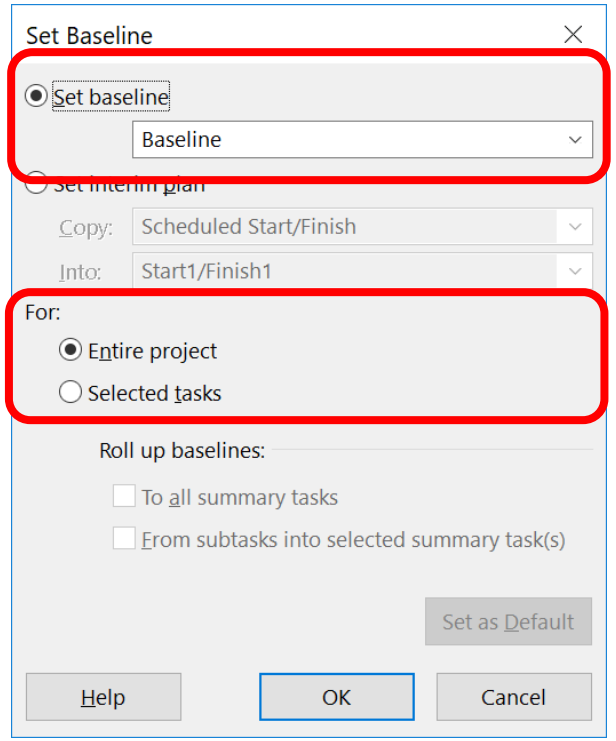
Important Note: You *must* use the Baseline set of fields (Baseline0) as the operating baseline throughout the life of the project.

# How Do You Save a Baseline?

1. Click the **Project** tab to display the *Project* ribbon.

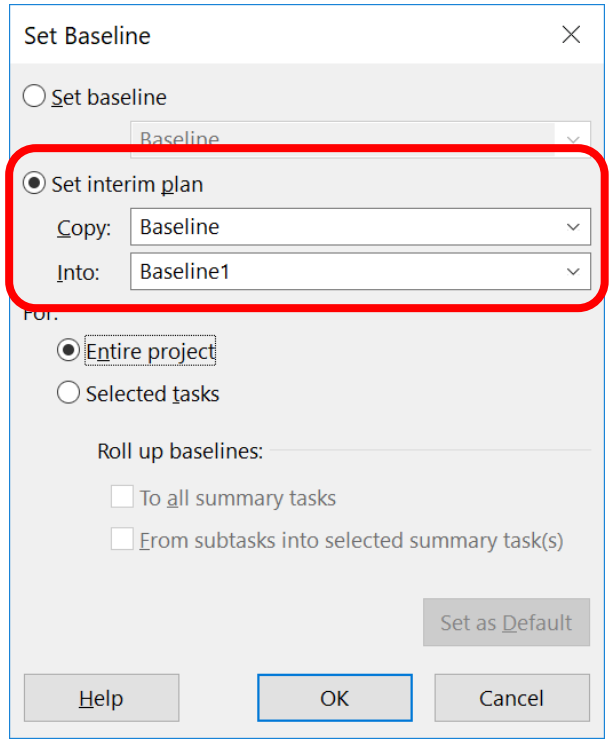
2. In the *Schedule* section of the *Project* ribbon, click the **Set Baseline** pick list button and select the **Set Baseline** item on the pick list.

3. In the *Set Baseline* dialog, leave all default options selected, and then click the **OK** button.



# How Do You Back Up a Baseline?

1. Click the **Project** tab to display the *Project* ribbon.
2. In the *Schedule* section of the *Project* ribbon, click the **Set Baseline** pick list button and select the **Set Baseline** item on the pick list.
3. In the *Set Baseline* dialog, select the **Set interim plan** option.
4. Click the **Copy** pick list and select the **Baseline** item.
5. Click the **Into** pick list and select the **Baseline1** item.
6. Leave the **Entire project** option selected and then click the **OK** button.



# Where Can You View the Baseline?

- Microsoft Project offers multiple locations for viewing the baseline:
  - Tracking Gantt view (displays the baseline schedule using gray Gantt bars)
  - Baseline table (displays all five baseline fields for tasks)
  - Variance table (displays the Baseline Start and Baseline Finish fields)
  - Cost table (displays the Baseline Cost field)
  - Work table (displays the Baseline Work field)
- No default view or table displays the other ten sets of baseline fields (Baseline1 through Baseline10)
  - If you want to view these additional baselines, you must create a custom table for each set of baselines

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# Questions?

# What is Variance?

- Variance is the difference between the current schedule and the original baseline schedule of the project
- General formula used by Microsoft Project to calculate variance is:

$$\text{Variance} = \text{Current Value} - \text{Baseline Value}$$

$$\text{Work Variance} = \text{Work} - \text{Baseline Work}$$

$$\text{Work Variance} = 64\text{h} - 40\text{h} = 24\text{h}$$

- Positive variance is bad, as this indicates the task is late or over budget
- Negative variance is good, as this indicates the task is early or under budget

# What is Variance?

- Microsoft Project tracks five types of variance for every task:
  - Start Variance
  - Finish Variance
  - Duration Variance
  - Work Variance
  - Cost Variance
- Software also calculates Work Variance and Cost Variance for each resource

# Where Can You View Variance?

- Microsoft Project offers multiple locations for viewing task variance:
  - Tracking Gantt view (displays schedule variance)
  - Variance table (displays date variance)
  - Cost table (displays cost variance)
  - Work table (displays work variance)
- No default table displays duration variance
  - If you want to analyze duration variance, you must create a custom table

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# Questions?

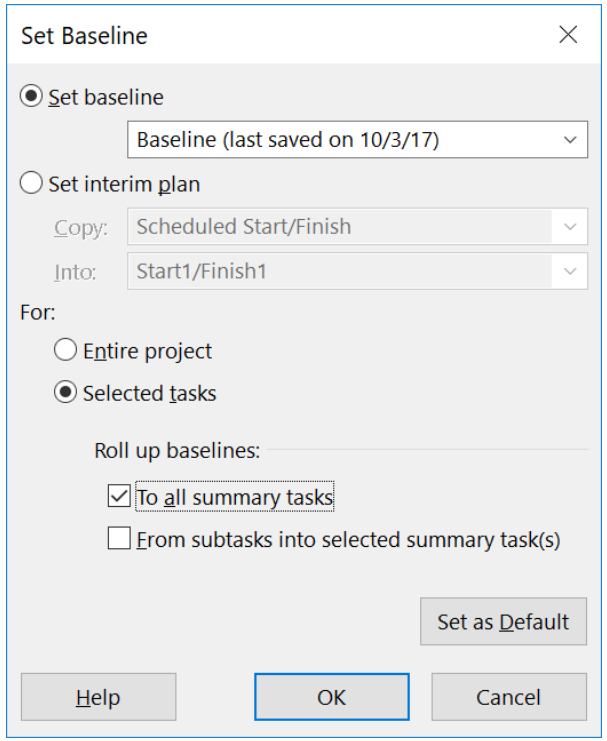
# About Updating the Baseline

- After adding new tasks through a change control process, you should update the baseline to capture the baseline information for the new tasks
- Should not rebaseline the entire project unless your company methodology allows you to do so
  - Rebaselining the entire project will destroy all historical variance up to that point and reset all variance back to 0
  - Makes it appear that the project is perfectly on schedule and on budget (even though it is not)
  - Makes it appear that you are managing your project perfectly!

# Updating the Baseline

Sensei Project Solutions recommends you use the following process for updating the baseline:

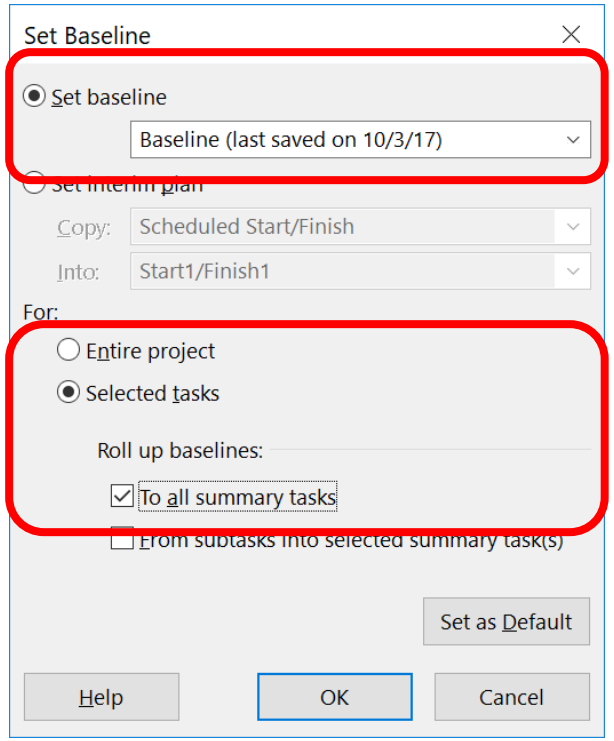
1. Insert the new tasks, set task dependencies, assign resources to the tasks, and estimate either Work or Duration for the tasks.
2. Format the new tasks using a unique cell background color.
3. Select the new tasks added to the project.
4. In the *Schedule* section of the *Project* ribbon, click the **Set Baseline** pick list button and then select the **Set Baseline** item on the pick list.



# Updating the Baseline

Sensei Project Solutions recommends you use the following process for updating the baseline:

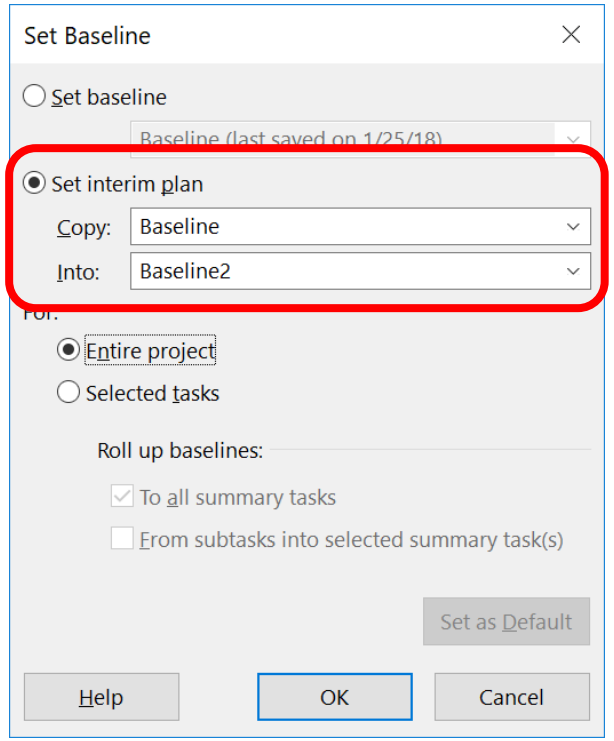
5. Leave the **Baseline** item selected in the **Set baseline** field at the top of the dialog.
6. In the *For* section of the dialog, select the **Selected tasks** item.
7. In the *Roll up baselines* section of the dialog, ***optionally*** select the **To all summary tasks** option.
8. Click the **OK** button.
9. When prompted in a warning dialog about overwriting the baseline, click the **Yes** button.



# Updating the Baseline

Sensei Project Solutions recommends you use the following process for updating the baseline:

10. In the *Schedule* section of the *Project* ribbon, click the **Set Baseline** pick list button and then select the **Set Baseline** item on the pick list.
11. In the Set Baseline dialog, select the **Set interim plan** option.
12. Click the **Copy** pick list and select the **Baseline** item.
13. Click the **Into** pick list and select the **Baseline2** item.
14. Leave the **Entire project** option selected and then click the **OK** button.



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# Questions?

# DO NOT Delete Baselined Data!

- After saving the original baseline for your project, ***do not*** delete unneeded tasks from the project
  - Deleting baselined tasks will destroy the baselined data
  - Will cause positive variance in the project with no way to explain why there is positive variance
- After saving the original baseline for your project, proper method to remove unneeded tasks is to ***cancel*** them using the Inactivate button
  - Using this method will preserve the baselined data
  - Will cause positive variance in the project with an "electronic paper trail" to explain why there is positive variance

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# Questions?

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# Thank you!