



Microsoft Project Custom Formula Guide

Custom formula fields and graphical indicators can be used with any version of the desktop Microsoft Project application, as well as with Project Server.



Have a suggestion for a graphical indicator or a question about customizations?

Join the conversation with Ira Brown in the

[**MPUG Customization Discussion Forum**](#)



Created by your friends at MPUG and Project Widgets



How to Use This Guide

Custom formula fields and graphical indicators can be used with any version of the desktop Microsoft Project application, as well as with Project Server.

The following steps will help you get started with creating your own custom fields and graphical indicators. You can refer to the examples included in this document for the specific field settings required to define a custom field and associated graphical indicator.

To create a custom field in the “standalone” version of Microsoft Project, do the following:

1. Start the Microsoft Project application.
 - If you are using Microsoft Project 2003 or 2007, from the menu, select **Tools...Customize...Fields**.
 - If you are using Microsoft Project 2010 or 2013, from the ribbon, select the **Project** tab, and click the **Custom Fields** button.
2. From the **Type** drop down, select the type of custom field you want to create (Text, Flag, etc.).
3. From the **Field** options, select **Task** or **Resource**. All of the examples in this document pertain to Task custom fields.
4. From the **Field** list, select the field you want to define (Text1, Text2, etc.).
5. Click the **Rename** button to assign a meaningful name to the custom field (e.g., **Should Have Started**).
6. Click the **Formula** button, and a dialog box will be displayed.
7. Type the formula as shown in this document, and click **OK**.
8. Click the **Graphical Indicators** button, and select the options as shown with the examples in this document.
9. To create a custom field for Project Server, from the Server Settings page in the Project Web App, select **Enterprise Custom Fields and Lookup Tables**. Click the **New Field** button, and enter all of the field settings as described in this document.

The examples in this guide will help you get started with creating custom fields in Microsoft Project.

If you have any suggestions for other useful fields that the MPUG community would benefit from, please email them to customization@mpug.com. Each month, we will publish some of the best submissions, and the number one suggestion will be awarded the prestigious “Top Field” award!

Display Red, Yellow, or Green Light Indicator Based Upon Finish Variance Threshold

Why It's Important:

Allows you to see the degree to which a task's Finish date is later than its Baseline Finish date.

Type of Field: Duration

Formula:

[Finish Variance]

Custom Fields

Field

Task Resource Project Type: Duration

Field

- Finish Indicator (Duration1)
- Duration2
- Duration3
- Duration4
- Duration5
- Duration6
- Duration7
- Duration8

Rename... Delete Add Field to Enterprise... Import Field...

Custom attributes

None Lookup... Formula...

Calculation for task and group summary rows

None Rollup: Maximum Use formula

Calculation for assignment rows

None Roll down unless manually entered

Values to display

Data Graphical Indicators...

Help OK Cancel

Graphical Indicators for "Finish Indicator"

Indicator criteria for

Nonsummary rows
 Summary rows
 Summary rows inherit criteria from nonsummary rows

Project summary
 Project summary inherits criteria from summary rows

Cut Row Copy Row Paste Row Insert Row Delete Row

Test for 'Finish Indicator'	Value(s)	Image
is greater than	5d	
is greater than	0d	
is less than or equal to	0d	

To display graphical indicators in place of actual data values, specify the value range for each indicator and the image to display. Tests are applied in the order listed and processing stops at the first successful test.

Show data values in ToolTips

Help Import Indicator Criteria... OK Cancel

Task Needs To Be Baselined

Why It's Important:

A baseline allows a user to compare a task's current Start and Finish dates to the originally planned Start and Finish Dates.

Type of Field: Flag

Formula:

[Baseline Start] = ProjDateValue("NA")

Custom Fields

Field

Task Resource Project Type: Flag

Field
Not Baselined (Flag1)
Flag2
Flag3
Flag4
Flag5
Flag6
Flag7
Flag8

Rename... Delete Add Field to Enterprise... Import Field...

Custom attributes

None Lookup... Formula...

Calculation for task and group summary rows

None Rollup: OR Use formula

Calculation for assignment rows

None Roll down unless manually entered

Values to display

Data Graphical Indicators...

Help OK Cancel

Graphical Indicators for "Not Baselined"

Indicator criteria for

Nonsummary rows Summary rows Project summary

Summary rows inherit criteria from nonsummary rows Project summary inherits criteria from summary rows

Cut Row Copy Row Paste Row Insert Row Delete Row

Test for 'Not Baselined'	Value(s)	Image
equals	Yes	

To display graphical indicators in place of actual data values, specify the value range for each indicator and the image to display. Tests are applied in the order listed and processing stops at the first successful test.

Show data values in ToolTips

Help Import Indicator Criteria... OK Cancel

Task Start Date or Finish Date Needs To Be Updated

Why It's Important:

Makes it easy to see when a task's Start is earlier than the current date, but still is 0 % Complete, or a task's Finish is earlier than the current date, but less than 100 % complete.

Type of Field: Text

Formula:

Switch(Date())>[Start] And [% Complete]=0,"Should Have Started", Date()<=[Finish] And [% Complete]<100,"Should Have Finished", Date ()<=[Start],",", Date()<=[Finish],""

Custom Fields

Field

Task Resource Project Type: Text

Field

Update Required (Text1)

Text2

Text3

Text4

Text5

Text6

Text7

Text8

Rename... Delete Add Field to Enterprise... Import Field...

Custom attributes

None Lookup... Formula...

Calculation for task and group summary rows

None Rollup: Use formula

Calculation for assignment rows

None Roll down unless manually entered

Values to display

Data Graphical Indicators...

Help OK Cancel

Graphical Indicators for "Update Required"

Indicator criteria for

Nonsummary rows

Summary rows

Summary rows inherit criteria from nonsummary rows

Project summary

Project summary inherits criteria from summary rows

Cut Row Copy Row Paste Row Insert Row Delete Row

Test for 'Update Required'	Value(s)	Image
equals	Should Have Started	☉
equals	Should Have Finished	☉

To display graphical indicators in place of actual data values, specify the value range for each indicator and the image to display. Tests are applied in the order listed and processing stops at the first successful test.

Show data values in ToolTips

Help Import Indicator Criteria... OK Cancel

Tasks That Do Not Have Dependencies

Why It's Important:

A task that does not have any predecessors or successors may not properly show its impact to other tasks in the schedule.

Type of Field: Flag

Formula:

$IIf([Predecessors]=""$ Or $[Successors]=""$) And $[Summary]=False, True, False)$

Custom Fields

Field

Task Resource Project Type: Flag

Field
No Dependencies (Flag1)
Flag2
Flag3
Flag4
Flag5
Flag6
Flag7
Flag8

Rename... Delete Add Field to Enterprise... Import Field...

Custom attributes

None Lookup... Formula...

Calculation for task and group summary rows

None Rollup: OR Use formula

Calculation for assignment rows

None Roll down unless manually entered

Values to display

Data Graphical Indicators...

Help OK Cancel

Graphical Indicators for "No Dependencies"

Indicator criteria for

Nonsummary rows
 Summary rows
 Summary rows inherit criteria from nonsummary rows

Project summary
 Project summary inherits criteria from summary rows

Cut Row Copy Row Paste Row Insert Row Delete Row

Test for 'No Dependencies'	Value(s)	Image
equals	Yes	

To display graphical indicators in place of actual data values, specify the value range for each indicator and the image to display. Tests are applied in the order listed and processing stops at the first successful test.

Show data values in ToolTips

Help Import Indicator Criteria... OK Cancel

Summary Tasks That Have Dependencies

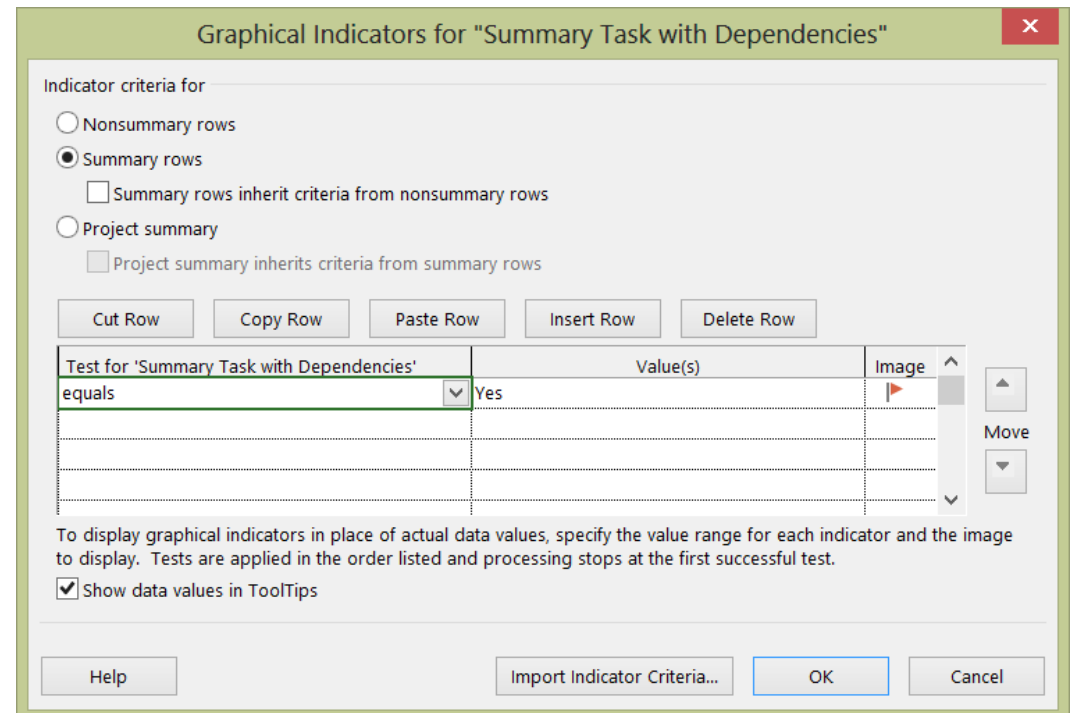
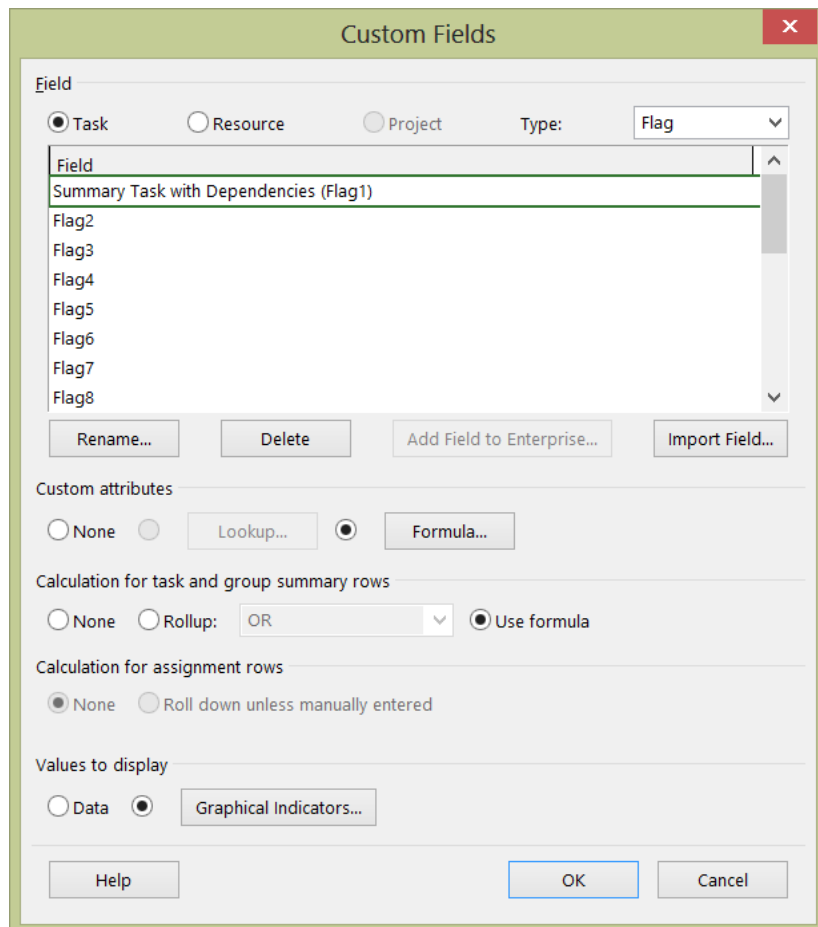
Why It's Important:

Obscures the detail of the critical path; you have less visibility as to what is driving the detailed tasks.

Type of Field: Flag

Formula:

Iif((([Predecessors]<>"" Or [Successors]<>"")) And [Summary]=True,True,False)



Summary Tasks That Have Resources Assigned

Why It's Important:

It is considered a best practice to not assign resources to summary tasks, and this complicates a task's rollup behavior.

Type of Field: Flag

Formula:

Iif([Summary]=True And [Resource Names]<>"",True,False)

Custom Fields

Field

Task Resource Project Type: Flag

Field

Summary Tasks with Resources (Flag1)

Flag2

Flag3

Flag4

Flag5

Flag6

Flag7

Flag8

Rename... Delete Add Field to Enterprise... Import Field...

Custom attributes

None Lookup... Formula...

Calculation for task and group summary rows

None Rollup: OR Use formula

Calculation for assignment rows

None Roll down unless manually entered

Values to display

Data Graphical Indicators...

Help OK Cancel

Graphical Indicators for "Summary Tasks with Resources"

Indicator criteria for

Nonsummary rows

Summary rows

Summary rows inherit criteria from nonsummary rows

Project summary

Project summary inherits criteria from summary rows

Cut Row Copy Row Paste Row Insert Row Delete Row

Test for 'Summary Tasks with Resources'	Value(s)	Image
equals	Yes	

To display graphical indicators in place of actual data values, specify the value range for each indicator and the image to display. Tests are applied in the order listed and processing stops at the first successful test.

Show data values in ToolTips

Help Import Indicator Criteria... OK Cancel

Tasks That Do Not Have Resources Assigned

Why It's Important:

Without a resource assigned, you will not know who will be performing a task, or how much Work that task will take.

Type of Field: Flag

Formula:

`IIf([Summary]=False And [Milestone]=False and [Resource Names]="",True,False)`

Custom Fields

Field

Task Resource Project Type: Flag

Field

Tasks without Resources (Flag1)

Flag2

Flag3

Flag4

Flag5

Flag6

Flag7

Flag8

Rename... Delete Add Field to Enterprise... Import Field...

Custom attributes

None Lookup... Formula...

Calculation for task and group summary rows

None Rollup: OR Use formula

Calculation for assignment rows

None Roll down unless manually entered

Values to display

Data Graphical Indicators...

Help OK Cancel

Graphical Indicators for "Tasks without Resources"

Indicator criteria for

Nonsummary rows

Summary rows

Summary rows inherit criteria from nonsummary rows

Project summary

Project summary inherits criteria from summary rows

Cut Row Copy Row Paste Row Insert Row Delete Row

Test for 'Tasks without Resources'	Value(s)	Image
equals	Yes	

To display graphical indicators in place of actual data values, specify the value range for each indicator and the image to display. Tests are applied in the order listed and processing stops at the first successful test.

Show data values in ToolTips

Help Import Indicator Criteria... OK Cancel

Tasks That Have Negative Total Slack

Why It's Important:

Tasks with negative Total Slack are not meeting the targeted schedule date.

Type of Field: Flag

Formula:

$\text{Iif}([\text{Total Slack}] < 0, \text{True}, \text{False})$

Custom Fields

Field

Task Resource Project Type: Flag

Field

Tasks with Negative Total Slack (Flag1)

Flag2

Flag3

Flag4

Flag5

Flag6

Flag7

Flag8

Rename... Delete Add Field to Enterprise... Import Field...

Custom attributes

None Lookup... Formula...

Calculation for task and group summary rows

None Rollup: OR Use formula

Calculation for assignment rows

None Roll down unless manually entered

Values to display

Data Graphical Indicators...

Help OK Cancel

Graphical Indicators for "Tasks with Negative Total Slack"

Indicator criteria for

Nonsummary rows

Summary rows

Summary rows inherit criteria from nonsummary rows

Project summary

Project summary inherits criteria from summary rows

Cut Row Copy Row Paste Row Insert Row Delete Row

Test for 'Tasks with Negative Total Slack'	Value(s)	Image
equals	Yes	

To display graphical indicators in place of actual data values, specify the value range for each indicator and the image to display. Tests are applied in the order listed and processing stops at the first successful test.

Show data values in ToolTips

Help Import Indicator Criteria... OK Cancel

Unfavorable Variance on Critical Path

Why It's Important:

If a task Finish date is scheduled later than the Baseline Finish date and the task is on the project's critical path, it is negatively impacting the Finish date of the project.

Type of Field: Flag

Formula:

$\text{Iif}([\text{Finish Variance}]>0 \text{ And } [\text{Critical}]=\text{True}, \text{True}, \text{False})$

Custom Fields

Field

Task Resource Project Type: Flag

Field

Unfavorable Variance on Critical Path (Flag1)

Flag2

Flag3

Flag4

Flag5

Flag6

Flag7

Flag8

Rename... Delete Add Field to Enterprise... Import Field...

Custom attributes

None Lookup... Formula...

Calculation for task and group summary rows

None Rollup: OR Use formula

Calculation for assignment rows

None Roll down unless manually entered

Values to display

Data Graphical Indicators...

Help OK Cancel

Graphical Indicators for "Unfavorable Variance on Critical Path"

Indicator criteria for

Nonsummary rows

Summary rows

Summary rows inherit criteria from nonsummary rows

Project summary

Project summary inherits criteria from summary rows

Cut Row Copy Row Paste Row Insert Row Delete Row

Test for 'Unfavorable Variance on Critical Path'	Value(s)	Image
equals	Yes	

Move

To display graphical indicators in place of actual data values, specify the value range for each indicator and the image to display. Tests are applied in the order listed and processing stops at the first successful test.

Show data values in ToolTips

Help Import Indicator Criteria... OK Cancel