

## The Missing % Complete sorted

When working independently from Milestone, my go-to under-the-hood expert is Allan Murray. He built this utility in Lockdown just for fun. It would be nice to monetise it! It demonstrates how one of what I think are omissions in P6 can be coded around. The omission I have in mind here is the lack of what Spider Project calls 'Volume % Complete', that is a percentage progress through budgeted units. Here is a chart illustrating this omission.

Percent Complete Type	Updates Cost	Updates Time	Updates Resources	Updates Earned Value
Duration		X		If required
Physical				If required
Units	X			If required

REMEMBER if you want to control Remaining Manhours, Remaining Duration, and Earned value analysis separately, you have no choice in P6 but to use Physical % complete. If an activity is ten days long, has one hundred manhours of effort, and the only reported progress is that we are forty percent through the effort, P6 has no native way of recording that.

Many clients use the sequence of Global Changes I wrote to overcome this. These Global Changes are discussed in another document...

### Automation of Global Changes:

Two restrictions in P6's Global Change cause a lot of frustration

1. You cannot address the Activities Table and the Resource assignment table in a single Global Change, as P3 could in the 1980's
2. You cannot batch-run Global changes, some of you have to run several Global Changes one after the other before you start work, typically after an overnight download of SAP/Maximo data. As P3 could in the 1980's.

We have put together a utility to demonstrate how this can be done relatively inexpensively.

The example we have chosen addresses an environment where:

- All activities are Physical % complete
- We want to apply that Physical % complete to the duration of the activity AND the budgeted resources

This would require three Global Changes, which must be run one after the other.... Or else!

We have taken these three Global changes:

The image displays three screenshots of the 'Modify Global Change' dialog box in Primavera P6, each showing a different configuration for a global change.

**Global Change #1 - save the b...**  
Subject Area: Activity Resource Assignments  
If: (All of the following)  
Where: Actual Start is not equal to  
And: Actual Finish equals  
Then:  
User\_number\_01 = Budgeted Labor Units  
And: User\_number\_02 = Actual Regular Labor Units  
And: User\_number\_03 = Actual This Period Labor Units  
And: Budgeted Labor Units = 1h

**Global Change #2 - EV change...**  
Subject Area: Activities  
If: (All of the following)  
Where: Activity Status equals In Progress  
Then:  
Duration % Complete = Physical % Complete  
And: Units % Complete = Physical % Complete

**Global Change #3 - Calculate Resources**  
Subject Area: Activity Resource Assignments  
If: (All of the following)  
Where: Actual Start is not equal to  
And: Actual Finish equals  
Then:  
Budgeted Labor Units = User\_number\_01  
And: Remaining Labor Units = Budgeted Labor Units \* Units % Complete  
And: Remaining Labor Units = Remaining Labor Units / 100  
And: Actual Regular Labor Units = Budgeted Labor Units - Remaining Labor Units  
And: Actual Regular Labor Units = User\_number\_02  
And: Actual This Period Labor Units = User\_number\_03

And turned them into a utility. Note that two of the above Global Changes alter the Resource Assignments table, and one alters the Activities table.

Here is our sample data:

**Activities**

Layout: allan test Filter: All Activities

Activity ID	Activity Name	Activity Status	Original Duration	Remaining Duration	Duration Type	Percent Complete	Activity % Complete	Physical % Complete	Duration % Complete	Budgeted Labor Units	Remaining Labor Units
A1070	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
A1050	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
A1000	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
<b>Physical</b>			<b>5.00</b>	<b>5.00</b>					<b>0%</b>	<b>2395</b>	<b>2395</b>
A1510	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1500	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1490	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1440	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1430	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1420	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1370	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1360	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	46%	46%	0%	80	80
A1350	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	23%	23%	0%	80	80
A1300	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	75%	75%	0%	80	80
A1290	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	42%	42%	0%	120	120
A1280	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	25%	25%	0%	120	120
A1250	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	34%	34%	0%	120	120
A1240	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	60%	60%	0%	140	140

General Status Resources Codes Relationships Notebook Steps Feedback WPs & Docs Risks Expenses Summary

Activity: A1240 New Activity

Resource ID Name	Budgeted Units	Actual Units	Remaining Units	Remaining Units / Time
testres.testres	40	10	40	8/d
testres2.testres 2	60	10	60	12/d
testres3.testres 3	40	10	40	8/d

Primavera P6 Professional 18 : bigger-2 (allantest)

File Edit View Project Enterprise Tools Admin Help

Schedule ... F9  
Level Resources... Shift+F9  
Apply Actuals...  
Update Progress...  
Recalculate Assignment Costs...  
Summarize  
Job Services...  
Store Perigd Reorganization...  
Disable Auto-Reorganization Shift+F12  
Global Change...  
Monitor Thresholds...  
Issue Navigator...  
Visualizer  
Reports  
Report Wizard...  
Publish  
Top Down Estimation...  
PpcW  
Ppc  
PpcConfig  
Schedule Comparison  
Update Baseline

Activities

Layout: allan test

Activity ID	Activity Name	Activity Status	Original Duration	Remaining Duration	Duration Type	Percent Complete	Activity % Complete	Physical % Complete	Duration % Complete	Budgeted Labor Units	Remaining Labor Units
A1070	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
A1050	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
A1000	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
<b>Physical</b>			<b>5.00</b>	<b>5.00</b>					<b>0%</b>	<b>2395</b>	<b>2395</b>
A1510	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1500	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1490	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1440	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1430	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1420	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1370	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1360	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	46%	46%	0%	80	80
A1350	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	23%	23%	0%	80	80
A1300	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	75%	75%	0%	80	80
A1290	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	42%	42%	0%	120	120
A1280	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	25%	25%	0%	120	120
A1250	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	34%	34%	0%	120	120
A1240	New Activity	In Progress	5.00	5.00	Fixed Duration & Units	Physical	60%	60%	0%	140	140

General Status Resources Codes Relationships Notebook Steps Feedback WPs & Docs Risks Expenses Summary

Activity: A1240 New Activity

Resource ID Name	Budgeted Units	Actual Units	Remaining Units	Remaining Units / Time
testres.testres	40	10	40	8/d
testres2.testres 2	60	10	60	12/d
testres3.testres 3	40	10	40	8/d

The utility lives under the "Tools" menu. Of course, it uses Primavera's API, so you cannot do anything with the utility that your keyboard security privileges would not let you do.

This is a fairly simple example. I know some clients who have to run quite a lot of Global changes in perfect sequence.

After I remember to press F5 to refresh:

**Activities**

Layout: allan test Filter: All Activities

Activity ID	Activity Name	Activity Status	Original Duration	Remaining Duration	Duration Type	Percent Complete	Activity % Complete	Physical % Complete	Duration % Complete	Budgeted Labor Units	Remaining Labor Units
A1070	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
A1050	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
A1000	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Duration	0%	0%	0%	50	50
<b>Physical</b>			<b>5.00</b>	<b>5.00</b>				<b>0%</b>		<b>2395</b>	<b>1801</b>
A1510	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1500	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1490	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1440	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1430	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1420	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1370	New Activity	Not Started	5.00	5.00	Fixed Duration & Units	Physical	0%	0%	0%	80	80
A1360	New Activity	In Progress	5.00	2.70	Fixed Duration & Units	Physical	46%	46%	46%	80	43
A1350	New Activity	In Progress	5.00	3.85	Fixed Duration & Units	Physical	23%	23%	23%	80	62
A1300	New Activity	In Progress	5.00	1.25	Fixed Duration & Units	Physical	75%	75%	75%	80	20
A1290	New Activity	In Progress	5.00	2.90	Fixed Duration & Units	Physical	42%	42%	42%	120	70
A1280	New Activity	In Progress	5.00	3.75	Fixed Duration & Units	Physical	25%	25%	25%	120	90
A1250	New Activity	In Progress	5.00	3.30	Fixed Duration & Units	Physical	34%	34%	34%	120	79
A1240	New Activity	In Progress	5.00	2.00	Fixed Duration & Units	Physical	60%	60%	60%	140	56

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Activity: A1300 New Activity

Resource ID Name	Budgeted Units	Actual Units	Remaining Units	Remaining Units / Time
testres.testres	40	10	10	8/d
testres.2.testres 2	40	10	10	8/d

Although we have used Physical % complete to update Remaining Duration, and Remaining Units, these can be adjusted manually.

Job done. We are working on the "Schedule a run" option, where you pick a time for the utility to work server-side.

We are open for business! But your suggestions are also welcome.

Stay Safe