Stage 900 Tools

Version V3.20.05: 10 August 2012

Tools overview

Stage 900 tools in this release of **iProjects** are:

PF91 Earned Value Worksheet

Management tools can be used in any project stage.

Features common to most **iProjects** ProForm tools

Typically, ProForm tools have one or more of three types of on-screen help, as indicated below.

- Control panel: Upper right, just outside the form printable area, is a graphic that contains three to seven standard commands, appropriate to the ProForm function. For details on how to use this control panel, refer UserGuide 1.1: Login & Navigation. "Dupe" means "duplicate this record".
- Margin UserGuides: On many ProForm templates, there are notes – always in green text, providing advice in using the ProForm. An example is shown right.
- On-form User Notes: Many templates include notes within the printable area of the template, as shown right.

These notes mean that most templates will be selfexplanatory, particularly as they are designed to "mirror" the way most practices operate. For inexperienced users, the following details will help explain the use of the Stage templates listed.

What is Earned Value?

Email Preview Print Save As PDF Zoom New Dupe

NOTE: This form is designed to be partially completed digitally (first 3 columns), then printed as a blank distribution template for multiple issues of documents.

USER NOTES:

1. You must have completed Task level pricing on PF18 in order to use this form.

2. Entry earned value data at the Task level, not the Stage level.

3. Obtain "Allowance used to date" values from accounting (hours used x charge rate).

4. All values on this form EXCLUDE GST or other sales taxes.

Many inexperienced design professionals (and some senior designers as well) are unsure what "Earned Value" means. Some think it must be the same as the amount of money spent on the project at any point; others are sure it must equal the amount invoiced. Earned Value is neither – it is simply the amount of work you've done at any point in time, as a percentage of the total work of the project. That percentage is usually expressed in dollar amounts eg the project fee multiplied by the % of work completed.

The reason why this concept confuses so many designers is that they typically have not figured out the value of the various components of project scope, and so have no good way of assessing the value of the work completed. This is one of the reasons why "percent of construction cost" design fees are a bad idea – and so often lead to scope creep and consequential cost over-runs.

The **iProjects** Earned Value tools

PF91 Earned Value Worksheet

Tracking earned value is the *only* simple and easy way to keep projects on time and on budget.

Projects

Most of the major practice management systems say they perform earned value calculations, but none, in our opinion, have achieved the standard set by PSMJ Resources' version of the concept.

Why? It's because constructing a true Earned Value dynamic model is straightforward (if macro-intensive) in Excel, but more difficult in a database. We set our programmers the task of emulating the PSMJ model in FileMaker, which they've done.

Let's look at the top of P91. This template is used to calculate earned value at weekly or monthly intervals using the selected DDNA process structure, with any variations added. It is used to create a composite earned value amount, which is then plotted along with project costs (from accounting) on a version of the PF17 Schedule to graphically show Budget Status and Schedule Status.

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но.	225A		Prince	0 25(3(12	lasuer 18/3/	12	d value workshi	set
	EV No. 1	U Week e	ending		0	Month ending	Mar 2011	
Stag	es WBS Stage Titles	Lump sum	EV amo	ount	Allowance	Used to date	Total EV amount	t
100	Initiation	\$10,000.00	\$10,000	0.00			\$10,000.00	-
200	Schematic Design	\$37,500.00	\$8,250	.00	\$15,000.00	\$10,000.00	\$18,250.00	
300	Design Development	\$68,000.00						1
400	Coordination	\$20,000.00						1
500	Documentation	\$95,000.00						1
600	Procurement	\$7,500.00						1
700	Delivery	\$46,000.00			\$25,000.00			1
800	Completion	\$10,000.00						1
900	Management	\$25,000.00						1
E00	Expenses							1
S00	Subconsultants	\$100.00	\$50	.00			\$50.00	1
V00	Variations	\$500.00						7
I	nternal fees & allowances:	\$319,600.00	\$18,30	0.00	\$40,000.00	\$10,000.00	\$28,300.00	í
Task	s - detail pricing		0519	Percer	t EV	Total	Allowance	
ID	WBS Task Titles		Lump sum	comple	te amour	t Allowand	e used to date	
210	Site analysis #		\$2,500.00	50%	\$1,250.00	0		-
240	Architectural concept design #		\$30,000.00	20%	\$6,000.00	0		┮
250	Project budget and program #		\$5,000.00	20%	\$1,000.00	0		1
270	Development application proce	SS				\$15,000.0	\$10,000.00	1
								1
								7
								1
								1
		Totale	\$37,500,00		\$8,250.00	\$15,000.0	0 \$10,000,00	

Here we are looking at entries for the first Earned Value (EV) report – No. 1. Stages, WBS Stage Titles, Lump sum amounts and Allowances are auto-entered from PF17, as are the Task breakdowns below. Clicking on any Stages colors that Stage Title green and displays the selected Tasks for that Stage in the table below.

This **Tasks** schedule is where the user enters the estimates for completed work – in this case 50% of each of the Lump Sum items, which are auto—translated to dollar values under the EV amount column. The user also enters the value of any Allowances used to date under that column – information obtained from bookkeeping. The totals – in the yellow fields – are entered opposite their corresponding Stage in the **Stages** table.

The user repeats this for each of the Stages, building the EV report.

Now let's look at the rest of this page, which is a summary of all Allowances (for reference) and applicable User Notes.

List of Task Allowances	Values		
Initiation		۵	USER NOTES:
Schematic Design	\$15,000.00	Π	4 Mar 11
Design Development		1	1. You must have PE18 in order to a
Coordination		1	PT TO IT OIGET IO
Documentation		1	2. Entry earned v
Procurement]	the Stage level.
Delivery	\$25,000.00	1	
Completion]	3. Obtain "Allowa
Management		1	accounting (noun
Expenses]	4. All values on
Subconsultants		1	other sales taxe
Variations		-	
Total Task Allowand	S40.000.00		

 You must have completed Task level pricing on PF18 in order to use this form.

Entry earned value data at the Task level, not the Stage level.

3. Obtain "Allowance used to date" values from accounting (hours used x charge rate).

4. All values on this form EXCLUDE GST or other sales taxes.

Now look to the margin page, to the right:

<u>Emai</u> Previ Print	il iew		NOTE: To enter data on the left first create a record on the right (below) for the desired month. When the next month commences create a New record for it below and enter the updated data on the left. Use the 'View' button to see past month's data. ONLY LHS SECTION PRINTS										
Save	As	PDF 💦	You can jump to any related form by clicking the appropriate link below:										
Zoor	n	E	<u>PF11</u>	<u>PF17</u>	<u>PF18</u>	<u>PF23</u>	<u>PF24</u>	<u>PF91</u>					
1	EV N	o. Date	•	Tota EV Am	al ount	Тс	otal Fee	ہ Exp	Actual enditures	Total EV %	Budget Status	<u>New</u>	
<u>View</u>	1	Mar 2	011		\$28,300	\$3	59,600.00		\$25,000	8%	\$3,300.00	Û	^
<u>View</u>	2	Apr 20	011	5	\$67,060	\$3	59,600.00		\$70,000	19%	-\$2,940.00	Û	
<u>View</u>	3	May 20	011		\$87,560	\$3	59,600.00		\$86,500	24%	\$1,060.00	Û	
<u>View</u>	4	Jun 20	011	\$	141,060	\$3	59,600.00		\$135,000	39%	\$6,060.00	Û	

Here is where the user creates the next EV Report, using the <u>New</u> button at the right side. This displays a new EV Report form. In this example, we see that EV No. 1 is highlighted in green, indicating that is the one displayed on the PF91 form. Clicking on the <u>View</u> button, left, changes the PF91 display to that EV record.

Total EV Amount and Total Fee are auto-displayed, and the Total EV % is autocalculated. The only thing the user has to do is contact the bookkeeper, find out how much money was spent in the reporting period, and enter this number under Actual Expenditures. The software will then calculate the Budget Status, displaying it in red if the project is behind budget, or in black if the project is ahead of budget.

As you can see, this project has started more-or-less on track, running slightly under budget in the first month, slightly over budget in the second month, and pulling comfortably ahead by the fouth month.

Now, if you return to PF17 and click the <u>Graph</u> button in the upper left corner, you will see the results of these four EV Reports shown on the Project Plan (see next page).

i²rojects

UserGuide 4.4.6



The green line is Earned Value, the red line is expenditure. Note the two buttons upper right: After creating a new EV Report, you will need to click the <u>Update</u> button to refresh the graph to include the new data. Lastly, if you click the <u>Set For Home Screen</u> button, it will push this graph to the Home page, linked to the project:

Clicking the <u>View</u> button, lower left of the graph, takes you back to the relevant PF17 schedule; clicking the <u>Update</u> button lower right also refreshes and updates the graph.

This powerful feature provides, at a mouse-click, graphic visibility over current progress on any project that is listed on the *My Projects* section of the user's Home page. It also provides that same visibility to project directors and firm Principals.

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