

Keeping track of assumptions

By Mike Watson

@oldmanwatson

Many aspects of plans are based upon assumptions, but there is one simple way to make sure that if an assumption is proven invalid then the full implications can be identified and assessed almost immediately.

Most project managers compile a list of assumptions as they progress through the planning cycle. With a simple amendment to that list, the whole link between assumptions, estimates and the schedule can be tightened up.

Firstly, number your assumptions as you build the list. Secondly, as you develop the task list (the main spine of the project schedule), number the tasks. Then, as you use each assumption in the estimating, resource allocation or detailed specification of each task, note down in your assumptions list the task numbers affected.

Your assumptions cross-reference list for a small feasibility study might look like this:

	Assumption	Activities affected
1.	There are only three business functional areas to be included in this study	3, 4
2.	There are only three possible ways of achieving this business objective	6, 7, 8
3.	We do not have to write a report to corporate standard	10, 11

And the corresponding schedule might look like this:

	Task	Effort	Resource	Schedule
1	Agree terms of reference	1d	JS	
2	Plan the study	1d	JS	
3	Collect data from business areas	5d	KG, AD	
4	Agree business requirements	3d	KG, AD	
5	Agree selection criteria	2d	JS	
6	Identify possible solutions	2d	MM, DS	
7	Specify possible solutions	4d	MM, DS	
8	Select best fit	1d	JS	
9	Plan project	2d	JS	
10	Document recommendations	3d	KG, MM	
11	Complete and publish the report	2d	JS	

So the work on the study begins, and the project manager monitors actual progress against planned. Task 3 overruns dramatically, as it is discovered that actually there should be 6 business functional areas included in the scope of the study. Similarly, Task 6 also overruns, as 6 potential solutions are identified. In fact the tasks 3 and 6 have both taken twice as long as planned.

The simple progress report at this stage might state that the feasibility study is running 4 days late, but this is naive project management. From the data collected, and the assumptions cross-reference list, a firm prediction for the future of the study can also be made. The project manager knows from evidence that Tasks 3 and 6 have overrun, and that Tasks 4, 7 and 8 will overrun unless corrective action is taken. This advance knowledge should allow the project manager to recover from the present problems and manage the future problems with some confidence.

So, the cross-reference list allows the project manager to see the knock-on effect of a problem, even if the knock-on is some time in the future. A project manager is allowed to be surprised by an event once, but not three times (as Assumption 2 above might cause!), so the cross-reference is a useful monitoring and control tool.

However, the second use of the cross-reference list can now be demonstrated. Based upon the record so far, the project manager might be advised to make a proactive check on Assumption 3. If the project manager discovers that a report to company standard is required, and this will add another 2 or 3 days to the duration of Task 10, then this potential overrun can be acknowledged and managed now.

If it appears from the assumptions cross-reference list that a particular assumption has far-reaching implications if proven invalid, then the cautious project manager might instigate some research early during the project. If the assumption is invalid, the quicker this can be proven the more time available for corrective action. So, the cross-reference list will aid practical risk management, as the impact of an invalid assumption will be highly visible.

The assumptions list, when cross-referred to the tasks in the schedule, can become a very powerful monitoring and control mechanism. It needs no special tools or techniques to be effective, but it does need a clear understanding by the project manager of what is an assumption and what is fact.