Appendix A – Scheduling Options

Schedule Options   ✕

Use scheduling options from

| NEWPROJ-3 - make something new | ▼ |

| General | Advanced |

☐ Ignore relationships to and from other projects

☐ Make open-ended activities critical

☑ Use Expected Finish Dates

☐ Schedule automatically when a change affects dates

☐ Level resources during scheduling

☐ Recalculate assignment costs after scheduling

When scheduling progressed activities use

◉ Retained Logic   ○ Progress Override   ○ Actual Dates

Calculate start-to-start lag from

◉ Early Start   ○ Actual Start

Define critical activities as

◉ Total Float less than or equal to

    0h

○ Longest Path

Calculate float based on finish date of

◉ Each project   ○ Opened projects

Compute Total Float as

| Finish Float = Late Finish - Early Finish | ▼ |

Calendar for scheduling Relationship Lag

| 24 Hour Calendar | ▼ |

Close
Cancel
Default
Help

Every time you schedule, the options specified here apply, If you schedule more than one project, only one set of options is used. The project whose options are used is selected by the pick list at the top of the dialog.

<u>Use Scheduling Options from</u>

Every project has a list of options. When you have multiple Projects open, you have to pick a single list from one Project. In earlier versions of P6, this had to be set in the 'Default Project' option under the main Project menu.

<u>Ignore relationships to and from other projects</u>

In almost all circumstances the default, not to ignore such relationships, would be correct. An example of where this toggle switch is valuable is if all scope variations were held in a separate project. With both projects open, scheduling shows the combined projects. With just the original project open and this option switched on, the original scope only is scheduled. This is one of the simplest ways to switch between original scope and current scope. A full description is given in the document called 'Growth'.

<u>Make open ended activities critical</u>

This is a not just a display option, it changes the float on any path with an open end.

<u>Use Expected Finish dates</u>

Expected Finish is a controversial way to report progress. Effectively, rather than telling a P6 activity how much work has been done by reporting a per cent complete and allowing P6 to calculate when we can expect the activity to finish, we input an expected finish date and P6 calculates how much work has been done. Many project controls professionals think this is the wrong way round. Even if such dates have been added in the Status tab of the Activity screen, they will not be used if this option is unchecked. The arithmetic is NOT commutative. It will NOT put the original values back if you un-check this. Be careful.

<u>Schedule automatically when a change affects dates</u>

Switching "real-time" scheduling on such that the schedule recalculates with every significant change to the data is not advised. This feature is the preserve of light-weight single-user planning systems.

<u>Level Resources During Scheduling</u>

This is largely a matter of style. Some planners prefer to see the results of the schedule before resource levelling, others having satisfactorily set the levelling parameters would rather both processes were run together.

<u>Recalculate assignment costs after scheduling</u>

It is hard to imagine a scenario where one would NOT want to recalculate an activities costs based on the new dates that the activity may have once scheduled.

Retained Logic vs. Progress Override.

None of the above settings creates as much discussion as this one. The controversy arises when there is out-of-sequence progress.
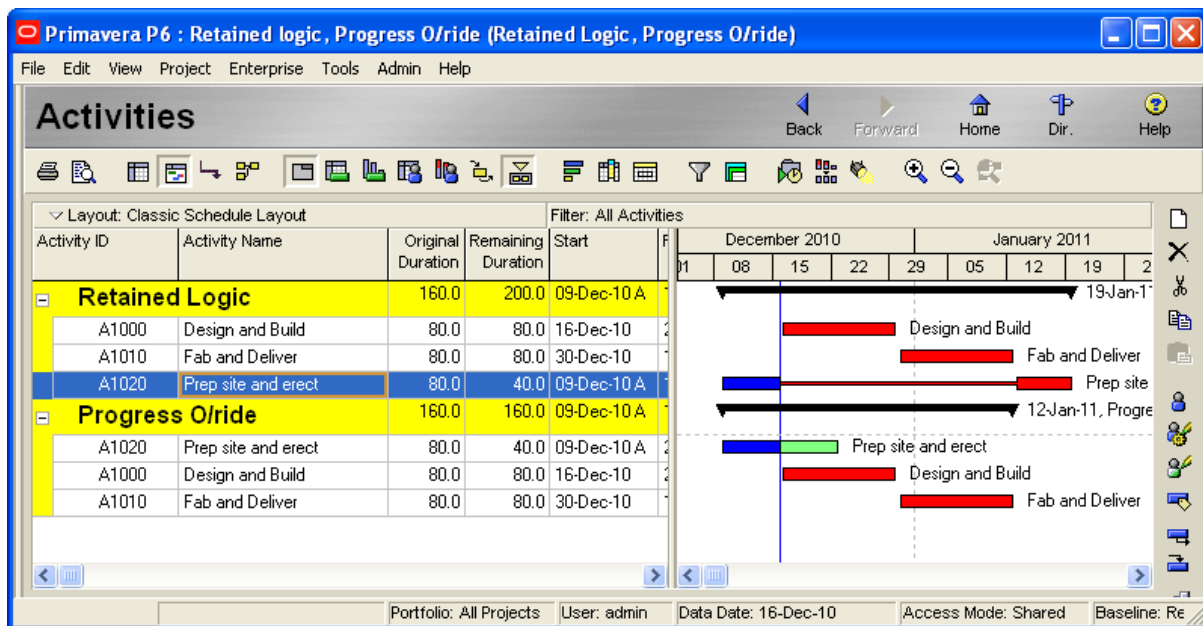
The above Barchart shows two projects which are identical in every respect except for that setting. The only progress that has been achieved is that the site has been prepared. Using Progress Override means that the remaining duration of the activity "Prep site and Erect" starts at the data date. This is clearly ludicrous. Note that the whole project now finishes earlier than the Retained Logic project which leaves the remaining duration in the position that its predecessors demand. What is going on here, why do these options exist?

In the real world most planners add relationships to a project for two reasons:

1) The laws of physics. If you are going to put a pipe in a trench, you must make the trench first.

2) Not enough resource information. If I need to machine two valve blocks, and I do not know all or any of:

⚔ Exactly how much machine time and labour time is required for each of them.

⚔ My resource dictionary does not properly describe the availability of the equipment and labour to do the job,

⚔ I do not have clear guidance from management about the priority for allocation of resources

⚔ BUT, I "know" I can only do one at a time – Then I add a finish to start relationship between the two activities.

In case 2) above it does not matter if we start the successor activity first, and if we did start it first we would need to finish it before starting on the predecessor. In a perfect world case 2) above is easily dealt with by resource levelling, but quite a lot more information is required to do it the correct way.

Calculate start to start lag from

Clearly Actual Start may calculate more realistic dates. Probably Early Start calculates more optimistic dates if the schedule is slipping.

Define Critical Activities as

The definition of Critical in textbooks of CPM methodology is where float is less than or equal to zero. 'Longest Path' has some interesting advantages. For example you have 10 days for a shutdown, and the longest path is nine days – you probably want to see those bars in red. Perhaps you have a schedule in 'a mess' with lots of different negative float values, use 'longest path' to organise your remedial actions.

Calculate Float based on Finish date of

When scheduling multiple projects – perhaps a portfolio that represents a single contract – how many float paths? Does each project have its "own" float, or is float "owned" by the whole portfolio of projects? Before considering this question, we would need to know how the projects' inter-project relationships are structured, how many open ends there are in how many of the projects, and an understanding of the commercial/contractual implications. It is unlikely that the planner on the project can answer this question alone.

Compute Total Float as

The author admits defeat here. Apparently in some circumstances an LoE or WBS Summary activity can have different Start and Finish Floats. There is no Primavera documentation that describes the circumstances or justifies the arithmetic. Chose Finish Float. If anyone out there knows the answer, I would love to hear from you! (15 years after I wrote this, no feedback!)

Calendar for calculating relationship lag

This is very important. Best practice is to always use 24hour, and always enter lags in hours. E.g. if the lag is 5 days, enter 120h into the lag dialogue. This way no changes in any calendar will change the wall-clock time of any lag.

The advanced page.

Sigh. This is useful if you do not have access to a probabilistic scheduling package. Answering 'What is most likely to go wrong' in a deterministic package is delusional. Very happy to engage in an email correspondence about this.