Can Metrics Measure Schedule Quality?

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The scheduling industry has seen a recent interest in using automated metrics to measure schedule quality. In fact one company is proposing that both sides of a construction contract just agree to use their metric software to 'objectively' determine the validity of all future schedule inputs.

So what is this thing called, 'Metrics'? A standard definition of Metrics involves a set of measurements that quantify results. In particular, Project Metrics tells you whether the project is meeting its goals. In short, metrics is a measurement of outputs.

The people who say that they are using metrics to measure schedule quality are not measuring outputs but inputs instead. They are counting things such as the number of Start-to-Start relationships and drawing conclusions as to the quality of the schedule. In fact, there is no study available that shows the validity of assuming certain project outputs are the direct result of specific schedule inputs. Like the Blind Man who was holding the tail of the elephant and declaring it to be like a rope, we are measuring the wrong 'end.'

Another problem with relying on the use of metrics to determine schedule quality is that our industry does not have agreed-upon metrics. There is no industry standard for the number of allowable Finish-to-Finish relationships or even consensus upon if a constraint should be allowed.

What a scheduling metrics program does is to measure a scheduler's efforts against one person's prejudices, not facts. Why are negative lags 'bad' while Start No Earlier Than constraints are 'good'? How much float should be in a schedule? In the end, we just start eliminating things based upon what one person thought without ever stopping to consider if this is warranted or not.

Schedule analysis software should look for specific instances of activity and relationship characteristics based upon experiences with the project outputs. We should be looking for the scheduling issues that could have signaled bad outcomes. We need to prepare the schedule to better respond to unexpected events. We need to recognize confusing or poorly designed scheduling structures to improve communication and reduce errors in using the schedule.

It is fine to identify odd or interesting issues but in the end, it is up to the scheduler to investigate the issue and determine if that particular instance is appropriate or not. Just because a bar is green, one cannot assume that there are no potential issues or problems lurking in the schedule. We should not reject a schedule and return it for 'correction' just because another bar is red.

You can automate some of the searching for issues and even highlight potential problems but in the end, you need an experienced Scheduler to understand and determine what that issue means to this schedule and this project. You can't just turn this over to a computer to decide for you.