As-Planned v As-Impacted v As-Built

FINDING THE CRITICAL PATH PDM schedules often are reviewed in bar chart form that some of the critics say makes it hard to find the critical path. The College of Scheduling may take up the issue.

schedule before a delay can hold up the entire job.

"That's like saying the grass is not green anymore to a classically trained scheduler from the 60s, 70s and maybe early 80s," says Ockman. Although he doesn't blame Primavera, he says, "The fact is that the primary *de facto* standard has prevented CPM from being practiced the way the inventors created it."

Faris answers that multiple calenders make scheduling more complicated but that users say they want them to match up with the different types of workweeks common today.

NO SUPPORT. A turning point came in 1994, when Primavera switched the platform for its programs to the Windows operating system, which Microsoft uses. When it made the change, Primavera stopped supporting the Arrow Diagramming Method (ADM) (see p. 30). Most users had already switched to drawing up their schedules using PDM.

O'Brien sent out an alarm to colleagues in 1997. "It appears that Primavera is trying (apparently with great success) to eradicate CPM as we know it," O'Brien wrote. Later, he added, "I have a sci-fi feeling that computers are being used to steal control of the art of planning and scheduling."

That feeling still lingers for O'Brien. "Some people want to wipe out the part of scheduling we grew up with, saying it's all software...you almost can't get a program on ADM, and it's frustrating," O'Brien says. As if to underscore the issue, the latest edition of O'Brien's book comes with a Primavera CD.

Under PDM, activities on a network diagram can be connected from either the activity's start or finish, and lag and lead factors can be used, allowing what some say is a cleaner, clearer diagram. But the logic behind the schedule then is not apparent on its face, as it is with ADM, and that's a step backward, says O'Brien.

Not everyone is displeased. "I think PDM is a much clearer representation of the logic of the schedule" and flow of work, says James L. Jenkins, assistant professor in the Dept. of Building Construction Management at Purdue University, West Lafayette, Indiana. "You know exactly once you finish an activity which activities can start."

One possible disadvantage of PDM involves the display of the time that elapses before the next activity. With PDM's time-scaled display, the information can be hard to read, says Scott Kramer, associate professor in the Building Science Dept. at Auburn University, Auburn, Ala. With time-scaled PDM, the display can start to look like "a plate of spaghetti," and so people often suppress the logic arrows and use the easy-to-read bar chart. "That's what I like about Primavera," says Kramer, who teaches both ADM and PDM.

Nothing epitomizes the changes in CPM scheduling more than the reappearance of bar charts as graphic summaries of the schedules. For many schedule experts raised on ADM, the critical path can't be as readily identified in a bar chart, and its return is one of O'Brien's biggest disappointments. During the recent meeting, he picked up a hand-drawn ADM diagram, something that is little seen any more.

There are other concerns. Instead of being a trustworthy planning tool, some of the new schedules are minefields, say the critics. Wickwire and Plotnick are especially concerned about the options in the software to override or retain logic or