

## Who Defines What Is Critical Path Method?

There are so many important questions raised by this week's cover story on the way scheduling is done in construction that it's hard to know from where the answers will come (see p. 30). Four scheduling experts, project management consultants James J. O'Brien, Fredric Plotnick, and Stuart Ockman and Attorney Jon Wickwire, say there is a two-part crisis in schedule writing: First, PDM schedules drawn up today often are flawed; Second, Primavera Systems Inc. and its competitors should limit or change the flexible features in their software or include warnings that make it apparent when some features have been used. Primavera counters that it makes a flexible tool that meets the needs of its customers and it isn't responsible for abuses.

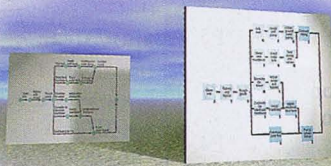
At issue is the definition of what is considered critical path method scheduling; how it is

taught in schools; whether it is used as a planning tool or legal record. Also at issue is whether a software company with market dominance, together with its users, or a scheduling "priesthood"—one that by implication may be decidedly old-school—determine the future of this subject.

The Project Management Institute's new College of Scheduling has an ambitious agenda and we hope it will provide a lively forum for discussing these issues. Partly because the college's directors include three of the four critics named above and Dick Faris, president of Primavera, it doesn't at first seem like the place where these issues can be resolved. But at least the parties are all at the same table.

The answer to some of these questions will probably be provided in future specifications and contract terms of federal public works agencies as they relate to schedules. There are a lot of good PDM schedules being written and that can't be overlooked. But there may be a future for a version of PDM that has some of the transparency of ADM or at least contains warnings in the form of an asterisk when some of the flexible PDM features have been used.

At some point, courts and state legislatures may end up distinguishing between undiluted critical path method scheduling and more flexible PDM schedules. Perhaps there is a place for software that supports "classic" CPM or PDM of the type that would satisfy purists. Such a multitiered software market, stimulated by demand from owners, contractors and consultants, and informed by new standards, would be the best possible answer to some of these questions about the state of CPM scheduling. But that may not be possible in the real world, where the widespread use of personal computers and a *de facto* PDM standard seem to have changed the very meaning of the words "critical path method."



## NIST Must Clarify Findings On World Trade Center

Every time the National Institute of Standards and Technology holds a briefing related to its investigation of the World Trade Center destruction, the mass media takes the opportunity to mislead the public into thinking the study is a fault-finding, not a fact-finding, mission. Recently, the media noted the twin towers were possibly "untested for major fire" during design more than 30 years ago, and that may have had something to do with their collapse on Sept. 11, 2001 (ENR 5/19 p. 16). The implication is that the design of the towers was at fault. This does a major disservice to the designers, the owner, the victims' families and the general public.

It is time that the industry, including NIST, and its major organizations like the American Society of Civil Engineers and the American Institute of Architects, gets the message out to the press and the general public that nothing about fire tests or fireproofing applied to floor trusses or other members could have saved the towers from collapse.

Further, we believe that the media would better serve the public by relying on science, rather than desperately searching for a smoking gun. In at least two newspapers, a headline says that the structural steel's fireproofing was not tested. It doesn't matter whether it was tested or not. Not only did the planes' impact knock much of the fireproofing off the steel, says the ASCE-FEMA report on the disaster, but the ensuing fire was not one considered by the code.

At a recent homeland security summit, design experts agreed that it would be futile to create a "terror code" to try



to out-design the terrorist. It was not the "job" of the buildings to protect their occupants during the disaster. But on 9/11, the twin towers did so beautifully. Despite being subjected to stresses that never could be anticipated, the buildings' design kept them standing long enough for more than 20,000 people to evacuate. The buildings "saved" tens of thousands of lives and minimized injuries. This is stated in the ASCE-FEMA report.

The NIST investigation is supposed to increase the knowledge of how buildings behave under extreme events. That is why the findings cannot be used in lawsuits or other actions. But the press is using it to fuel the ambulance chasers.

It is time for NIST to start pounding the message home: The buildings performed admirably on 9/11 and if there is any silver lining to the cloud of death and destruction that the terrorists created, it is that researchers can use the living laboratory to further the knowledge of design and engineering. We hope they won't have such an opportunity again.