



COM-2976
Planning & Scheduling
Subcommittee Midyear Meeting

Construction CPM Conference

San Diego, CA

January 22, 2019

web.aacei.org

AACE
INTERNATIONAL

- Please scan your bar code, we are going to use that as an attendance sheet!

● WHO we are & WHAT we do....

- Sponsored by Technical Board, AAACE International
- Meets at least once a year at AAACE Annual Meeting
- Has its own community page on AAACE website
 - <https://communities.aacei.org/communities/community-home?CommunityKey=cbb7311a-7e8e-44a9-b42a-971844a141c7>
- Posts/participates in on-line technical discussions
- Elects a Chair (Moderator), Secretary, & RP Coordinator
- Sponsor technical papers for annual meeting
- Create and develop Recommended Practices

- The Stats...
 - **1,221** Planning & Scheduling Professional (PSP) Certifications
 - **108** Certified Scheduling Technician (CST) Certifications
 - **401** Members of P&S AAACE Community
 - **105** Discussions on Community page since its launch in 2017

- 25 published RP's since 2004
- 1 RP submitted to Technical Board in 2018
 - 95-R18 – Construction Photography – Ron Winter
- 2 RP's Released by Tech Board for Public Review
 - 90-R18 – Trending & Forecasting – Fred Plotnick
- 5 RP's published by Tech board in 2017/2018
 - 89R-16 – Management Summary Schedule - Maryam Mirhadi Fard, Seyyed Amin Terouhid
 - 92R-17 – Analyzing Near Critical Paths - Maryam Mirhadi Fard, Seyyed Amin Terouhid
 - 90R-17 – Stating the CPM Schedule – Ron Winter
 - 91R-16 – Schedule Review / Schedule Development -Maryam Mirhadi Fard, Seyyed Amin Terouhid
 - 93R-17 – Schedule Logs – Paul Levin, Chris Carson, Mark Doran
- 6 RP's currently under development
 - PS-05 - Schedule Change Management – Ted Douglas, Brian Furniss
 - PS-11 - Planning for Performance Measurement & Assessment – Amr Radwan, Alejandro Rivera-Artigas (returned Scoping Document August 2018)
 - PS-17 - Schedule Management & Control – Brian Wilcox
 - PS-19 - Linear Scheduling - Maryam Mirhadi Fard
 - PS-22 - Schedule Narratives – Jeff Milo
 - PS-28 - Construction Progress Measurement – Syd Daneshyar



RE-DEFINING CRITICAL

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- A paper submitted by Mark Sanders and Mark Nagata, PS-2842 Proposing a Better Definition of Critical Path, at the AAACE Conference & Expo this past June prompted a significant debate over the terms Critical Path, Longest path and Critical Activity.
- The purpose of this meeting is to analyze the existing and proposed definitions and try to reach a consensus on a new definition to propose to the AAACE Tech Board.

● Critical Path

- Current Definition from 10S-90 [1, p. 34]

CRITICAL PATH – The longest continuous chain of activities (may be more than one path) which establishes the minimum overall project duration. A slippage or delay in completion of any activity by one time period will extend final completion correspondingly. The critical path by definition has no “float.” See also: LONGEST PATH (LP). (June 2007)

- Proposed Definition – Nagata, Sanders

CRITICAL PATH – The longest path of activities through the project schedule from the data date to a contract completion milestone. See: LONGEST PATH. (July 2018)

● Longest Path

– Definition from 10s-90: [1, p.69]

LONGEST PATH (LP) – Longest continuous path of activities through a project, which controls project early completion. It is possible for otherwise defined critical path activities to not be on the longest path and longest path activities to not show calculated critical float. The longest path analysis is unaffected by activity calendars. The longest path is determined by the string of activities, relationships, and lags that push the project to its latest, early finish date. The longest path is calculated by first performing a CPM ‘forward pass’ to determine driving relationships and the project’s latest, early finish date. The activity (or activities) with the latest, early finish dates are then identified and all predecessor driving relationships traced back to the project start date. These activities constitute the project's longest path. The longest path depends upon relationships driving the timing of activity starts, thus use of constraints and resource leveling can interrupt and invalidate longest path analysis. Use of interruptible activities can also result in false longest path indications. For complete accuracy, longest path analysis should take place absent of constraints, resource leveling, and/or interruptible activities. (June 2007)

– Proposed Definition – Nagata, Sanders

LONGEST PATH – The path of activities through the project schedule that determines the project’s duration. See: CRITICAL PATH. (July 2018)

● Critical Activity & Near Critical Activity

- Definition from 10S-90: [1,p.34]

CRITICAL ACTIVITY – An activity on the project’s critical path. A delay to a critical activity causes a corresponding delay in the completion of the project. Although some activities are “critical,” in the dictionary sense, without being on the critical path, this meaning is seldom used in the project context. (June 2007)

- Proposed Definitions – Nagata, Sanders

CRITICAL ACTIVITY – An activity on the critical path. (July 2018)

NEAR-CRITICAL ACTIVITY – An activity not on the critical path that could become critical and could delay the project if delayed during an update period. (July 2018)