

Critical Activity Effect on Project Duration in Precedence Diagram Method

Authors : Salman Ali Nisar, Koshi Suzuki

Abstract : Precedence Diagram Method (PDM) with its additional relationships i.e., start-to-start, finish-to-finish, and start-to-finish, between activities provides more flexible schedule than traditional Critical Path Method (CPM). But, changing the duration of critical activities in PDM network will have anomalous effect on critical path. Researchers have proposed some classification of critical activity effects. In this paper, we do further study on classifications of critical activity effect and provide more information in detailed. Furthermore, we determine the maximum amount of time for each class of critical activity effect by which the project managers can control the dynamic feature (shortening/lengthening) of critical activities and project duration more efficiently.

Keywords : construction project management, critical path method, project scheduling, precedence diagram method

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