Review Paper on an Innovative Time-Cost-Quality Tradeoff Modeling of Building Construction Project Based on Resource Allocation

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Abstract: *The time, quality, and cost are three important but contradictive objectives in a building construction project. It is a tough challenge for project managers to optimize them since they are different parameters. Tradeoffs between project duration, total cost, quality and risk are extensively discussed in the project scheduling. This paper tries to develop a Time, Cost and Quality optimization model that enables managers to optimize multi objectives. The model is from the project break down structure method where task resources in a construction project are divided in to series of activities and further in to construction labors, materials, equipment and administration. Quality is an important parameter correlating highly with time and cost parameters .But it is not a quantitative in nature , practical time cost , quality tradeoff models are seldom developed from previous research works of the literature. Although the objectives of cost and time must be mentioned frequently by natural numbers. This paper will present a new solution for solving time, cost, and quality tradeoff problem based on project break down structure method and task resource allocation. The resource utilized in a construction activity would eventually determine its construction time, cost, quality tradeoff model is finally generated based on correlations between construction activities.*

Keywords: Modeling of Building Construction

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