

Application of Knowledge Discovery in Database Techniques in Cost Overruns of Construction Projects

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Abstract : Cost overruns in construction projects are considered as worldwide challenges since the cost performance is one of the main measures of success along with schedule performance. To overcome this problem, studies were conducted to investigate the cost overruns' factors, also projects' historical data were analyzed to extract new and useful knowledge from it. This research is studying and analyzing the effect of some factors causing cost overruns using the historical data from completed construction projects. Then, using these factors to estimate the probability of cost overrun occurrence and predict its percentage for future projects. First, an intensive literature review was done to study all the factors that cause cost overrun in construction projects, then another review was done for previous researcher papers about mining process in dealing with cost overruns. Second, a proposed data warehouse was structured which can be used by organizations to store their future data in a well-organized way so it can be easily analyzed later. Third twelve quantitative factors which their data are frequently available at construction projects were selected to be the analyzed factors and suggested predictors for the proposed model.

Keywords : construction management, construction projects, cost overrun, cost performance, data mining, data warehousing, knowledge discovery, knowledge management

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