

Construction Management Software for Contractors

The use of software by contractors increases productivity, provides useful information for management decision-making and thus increases the profitability of organizations. A construction site is a very dynamic place and it is an almost impossible task to judge the profitability status of the project during construction. This is due to difficulties in integrating the estimate and usage of resources for construction activities and other associated costs. Many contractors get a picture of a project only after completion and on the presentation of final accounts. Incurring a loss or achieving a very much lower profit margin than expected is a common occurrence in the construction industry. To avoid this situation the preparation of an accurate estimate and the capturing and processing of construction cost information is very important. Software available from other countries generally cannot be used for this purpose, primarily due to differences in data structures. Further, many software for estimating and management information systems are quite expensive and not within the reach of an average contractor.

BILLEST is a computer aided estimating system developed for contractors by the Department of Civil Engineering at the University of Moratuwa. It increases the accuracy of bids submitted by contractors while providing necessary information from the estimate for the proper management of the project. An accurate estimate is the most important factor to reduce the mark-up loss. Studies have shown that mark-up loss can be 3% for estimating inaccuracy of 5%. BILLEST is a very user-friendly system and can be mastered within two days of training. It provides a systematic way of keeping prices of resources, mainly labour, plant, material and subcontractors' prices. When a project is priced the library prices will be copied initially and project specific prices can be

incorporated. Since all the construction activity prices can be based either on an operational basis or on the use of historical data, the prepared estimate will have good accuracy, while offering the engineers and managers the resource requirements of each activity. Many contractors do last minute adjustments based on forecast competition and this can be done easily in BILLEST.

Estimating information is used in planning and cost control activities. BILLEST provides the necessary information for planning as well as for cost control activities. CostCon is a software package developed to integrate estimating, planning and cost control activities of a project. This enables contractors to track information regarding suppliers and processing of purchases in addition to planning and cost control activities. CostCon provides the mechanism to prepare a schedule of construction activities together with resource requirements. Further it provides facilities to enter daily use of resources such material, labour and plant. The capture of daily information enables the contractor to obtain up to date information on the profitability level of the project. The integration of this information to standard accounts of the company is in progress.

Many organizations including contractors sometimes possess good software but fail to use those effectively due to poor training and bad initial setup. Good training is essential, as is the setting up of libraries for the proper use of estimating and cost control software. The use of good software together with proper training will increase the profitability of organizations as well as their productivity. For more information contact Dr. Asoka Perera (ajp@civil.mrt.ac.lk)

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