

Computer-aided construction materials management system

Many management-oriented problems exist amongst various construction organizations in the world, especially in developing countries. Problems vary in nature and intensity, but are usually associated with insufficient management of construction resources including materials, labour, plant and subcontractors. Among these materials has been an interesting issue in the construction industry. All organizations are continuously involved in procurement, storage, and stock replenishment of different types of production materials. In construction industry the cost of materials input ranges from 50-85% of construction cost. Thus the slightest efficiency in the materials management release substantial absolute advantages. Due to such a strategic role, materials management has assumed greater importance in the modern management. This research aims to provide an effective computer aided Construction Materials Management System (CMMS), which assist the proper management of materials.

CMMS has been developed and some features of the system are presented in this paper. It is an effective, practice-oriented, and automated materials management system. CMMS consists of five main modules 1) materials purchase 2) materials delivery 3) reports generation 4) materials requisition and 5) system maintenance. CMMS was developed after studying in detail, three competent general contractors (ICTAD - M1) operating in the Colombo metropolitan area to ensure its ability to address materials management needs.

Some features of CMMS are; decision support for material requisitions (Request Vs Estimated, Stock in hand & total quantity issued), automation of preparation of Purchased Order, ability of keeping track of the various deliveries (Agent delivery, direct supply, store delivery and good return etc), reports on purchases occurred, requisitions requested and materials reconciliation on project wise and inquires about any supplier etc.

This system can be further expanded to facilitate the financial side and getting connection of Email facilities for placing purchase orders. The information retrieved from CMMS can be used by estimators, accountants, project managers, and materials managers. Continued use of this system will contribute to the efficiency and profitability of contractors.