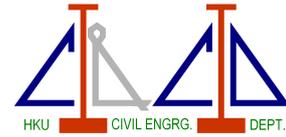




Department of Civil Engineering
The University of Hong Kong



Centre for Infrastructure and
Construction Industry Development

SEMINAR

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PLANNING THE DESIGN PROCESS USING DESIGN STRUCTURE MATRIX

by
Professor Koshy VARGHESE
Department of Civil Engineering,
Institute of Technology Madras, India

Date: April 11, 2008 (Friday)
Time: 4:30 - 5:30 p.m.
Venue: JG03, James Lee Science Building
The University of Hong Kong, Pokfulam Road, Hong Kong

ABSTRACT

To meet shorter project delivery times, numerous schedule compression strategies have been used. Fast-tracking- the overlap of design and construction phases was one of the initial strategies implemented. The success of fast-tracking pivoted on effectively planning and controlling the information exchange at the design-construction interface. To further shorten the project duration, the design phase can be compressed by overlapping of design activities. For successful implementation of this strategy it is critical to understand the information interfaces between the various design activities and plan/manage the overlaps appropriately. As design is a complex, inter-disciplinary, iterative process with a myriad of parameters, the identification, and representation of the information dependencies and subsequent analysis of the information flow to arrive at an optimal overlapping plan is a complex task.

The presentation will provide an overview of the issues in planning design and how the Design Structure Matrix (DSM) approach can be used to represent and analyze design information flows. In addition, recent work on extension of DSM to estimate durations of design iterations, as well as lessons learned on the application of DSM approach to two live projects will also be discussed.

ABOUT THE SPEAKER

Dr. Koshy Varghese is a Professor with the Department of Civil Engineering, Indian Institute of Technology Madras (IITM). Professor Varghese earned his Doctoral Degree at the University of Texas at Austin in 1992 and worked as a post-doctoral fellow with the Construction Industry Institute, USA for a year after which he joined IITM. Professor Varghese has been a Visiting Faculty at the University of Texas at Austin and a Visiting Eminent Scholar at the Del E. Webb School of Construction Arizona State University.

As one of the pioneers in the area of construction engineering and management education in India, Dr. Varghese was involved in establishing and coordinating an industry supported Masters program which has been a model program for Industry-University collaboration in India.

Professor Varghese' research is in the area of Computer Integrated Construction, he has guided numerous research scholars and published widely in refereed journals and conferences. He is a member of the editorial board of the International Journal of Automation and Robotics in Construction (AUTOCON) and recently organised the 24th International Symposium on Automation and Robotic in Construction (ISARC 2007).

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