

# Integration of Research & Development Project Management with Computer Aided Tools for Fast Innovation of Construction Technologies

余文德, 吳誌銘

Construction Engineering & Project Management

Architecture

wenderyu@chu.edu.tw

## Abstract

Innovation of construction technologies have been slow compared with other industries due to lack of fast innovation tools and systematic approach. Previous researchers have exploited many technology innovation methods; however a systematic and common approach is still desired. This paper presents the preliminary result of a recent work on development of a fast innovation method for construction technologies, namely Systematic Technology Innovation Process (STIP), in Chung Hua University, Taiwan. The proposed STIP method founds its foundation on three building blocks: a product research and development procedure, an inventive problem-solving method, and a computer aided innovation tool. A case study of building pipeline leakage repairing technology is conducted to demonstrate the applicability and feasibility of the proposed STIP method. It is concluded that the proposed STIP method provide a promising framework for fast innovation of construction technologies.

Keyword : Construction Technology, Innovation, TRIZ, Patent Analysis, Product Research and Development.