

An Application Service Provider (ASP) Based Project Management System

Tai Sik Lee¹, Young Hyun Kim², Dong Wook Lee³, and Saumya R Swain⁴

¹ Professor, Dept of Civil & Env Engg, Hanyang University Ansan, Korea 425791
cmtsl@hanyang.ac.kr

² Candidate PhD, Dept of Civil & Env Engg, Hanyang University Ansan, Korea 425791
covolt@cmnet.hanyang.ac.kr

³ Research Professor, Dept of Civil & Env Engg, Hanyang University Ansan, Korea 425791
dwlee@hanyang.ac.kr

⁴ Graduate Student, Dept of Civil & Env Engg, Hanyang University Ansan, Korea 425791
saumya@ihanyang.ac.kr

Abstract. The construction industry has continuously tries to improve the productivity of construction projects through Information Technologies (IT). It is not easy for the subcontractor to apply IT towards their projects due to the smaller scale of operations and the problem of the cost of equipment, programmer, and operator to introduce IT. To overcome the high investment risk we need a device. This paper presents IT outsourcing for subcontractors that effectively accommodates the demand of project information management. The purpose is the conceptual design of an Application Service Provider (ASP) based project management system. This paper offers the conceptual proposal for the mutual communication and information collection between the construction industry subjects through collaboration and the coordination.

1 Introduction

Computer integrated construction (CIC) and automation were the main issues for couple of decades. More recently it is, Project Management Information System (PMIS), which integrates all applications related to the project, systematically manages information on the project life cycle and leads to smooth communication. PMIS based construction industry aims to optimize the value chain of companies. Using it they can control the project information and the historical data. Therefore, the choice of project management tools and systems used is an important factor in improving the productivity and core competencies of a construction project. Construction industries need systematic management tools and communication systems such as PMIS. The Korean government is driving the Construction Continuous Acquisition & Life cycle Support (CALS) as the strategy to be adopted for change of environment under information and knowledge intensive. Due to lack of information management system, Subcontractors experience difficulties. Apart from developing a model PMIS for subcontractors (to be evaluated), the existing ASP based system comprise a simple document management function called EDMS.

Subcontractors are unable to invest directly in information infra because they typically have more inclination for field work (unlike general contractors).

The current study in to management of project and information have certain limitations such as, the technical and administrative unification has never been completed, it is totally focused on the management system of big projects from the point of view of orders, there is in fact no conception of a management system for subcontractors and small projects, there is a lack of analyses about cases of success or failure, as it is at the beginning of project management systems based on internet, the conception for collaboration between the main bodies joining in projects is still incomplete, there is no proper method to make administration of information more efficient. Therefore we need to approach the system for inducement of information intensive subcontractors and study the models that can administer the project information which needed by the contractors for small projects, which will also harmonize the conversations between those who join in the project.

2 ASP and Project Information Management System

In the information part Centralization, Specialization and Standardization for information management have been continuously developed in every industry region. Even though there are lots of trials of information classifications in the construction field, but useful standardization has never been emerged. Standardization of information and its classification are essential in project and development of the company, its efficient management will reduce the cost.

2.1 Information Intensive e-Business of Subcontractor

Information and e-Business requires digitization of information, purchase, and contract. In addition it will help the company to survive and even gain competitive power by increasing production. As seen on Fig.1. It can be the main body for the construction industry.

e-Project management system: e-PMS is an internet based system of real time management. The productivity and management of project needs to be part of the e-Business for project based industry such as construction.

e-Procurement: It is a part of electronic procurement that includes bidding, cost estimating, contract, and material supply. Construction CALS is a representative sample of public section in Korea. Korean government is driving an electronic procurement system. It is important to reduce the procurement cost and time.

e-Information Management: It is an efficient plan of managing digitalized information. In a situation of progressive information intensification, the efficient management acts as a tools for risk, claims and swift decision making.

IT Outsourcing: It is a mean of procuring information infra. Companies that try to develop their own IT have lots of risk on direct investment construction companies need to consider off the shelf, partnered systems, and lease systems such as ASP on the way to an efficient solution.