UTILITY OF INTERNET-BASED APPLICATIONS IN CONSTRUCTION

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Abstract
This paper presents the state of the art and the adoption of Internet-based applications by the construction industry. Even though considered as the laggard in adopting Internet-based services in construction project activities, many construction companies have now entered the Internet age. The variety of options available to construction companies to enter the Internet era, research in academia on exploring the use of Internet services for construction activities, and related commerce products are also discussed. However, to implement Internet-based services in construction project activities successfully, the services should be acceptable in the construction environment and the utility assessment of such services is needed. An assessment model to measure the utility of Internet-based services in construction project activities is then presented. The assessment will determine whether the Internet-based services in the construction industry can perform as intended and may provide an optimal configuration of Internet-based services for supporting construction project activities.

Keywords
project communication, information retrieval, Internet, utility assessment

INTRODUCTION

The explosive growth of various Internet-based technologies in virtually all areas of industry and commerce has only begun to make inroads into the construction industry practice. Basic Internet-based services, such as electronic mail, remote login, file transfer, newsgroups, and the Web have already become familiar tools for some construction managers. The already existing Internet technologies make Internet-based project management services available to construction companies, while ongoing research in academia offers new opportunities that can be used to improve construction processes.

However, efforts to implement Internet-based in construction activities should be preceded by the assessment of their utility in specific application scenarios. The scenarios are likely to be different in each project delivery system due to the different natures and the extent of teamwork required from all the project participants. An assessment model to measure the utility of Internet-based services to support activities in a particular project delivery system is needed (Abduh and Skibniewski 1999).

This paper presents the state of the art of Internet-based applications for the construction industry, relevant research in academia, and the main features of various Internet-based commercial products. A study by the authors provides an assessment tool to determine the utility of Internet-based services and the considerations in evaluating the Internet-based applications to support construction activities.