Research in Progress Abstract - Construction Practice (Non-Pedagogical Content)

A Mobile Construction Progress Documentation and Reporting Tool

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This study presents a mobile device application that documents and reports progress in construction sites. As part of a Capstone project, five Information technology students teamed up with a Construction Management graduate student to develop a mobile devise application to document and report daily activities in a construction site. The mobile application consists of a reporting and a documenting component. The reporting component allows superintendents and project managers in the field to report the progress in a construction site in real-time. In this component, an interactive interface and a voice recognition tool allow users to input information regarding weather data, manpower, field testing, material deliveries, change orders, as well as the main project activities on a daily bases. The documentation component allows users to upload documents and pictures from the construction filed directly to a server. When a picture is needed to be taken, the application activates both the GIS and the camera in the mobile device to take pictures and locate it into a pre-defined site plan drawing which is imbedded in Google maps. After taking the picture, a mark will appear on the site plan that shows: the exact location from which the picture was taken, the date/ time, and the person who took the picture. Users also have the option to manually mark the location of a picture on the project site plan. All the reports and documentations are stored in a searchable database that can be conveniently accessed by users in the field and from the office in real time. The database can also generate a printout of the daily reports or other necessary reports. The application was sponsored by a General Contractor who also tested it during the development stages in actual construction projects. Input from the general contractor was used to refine the scope of work and to debug the application.

Key Words: Mobile Application, Construction Management, Reporting, Documentation.