C-M. Kim, H-J. Son, C-W. Kim. ***An integrated system for automated construction progress visualization using IFC-Based BIM.*** *Gerontechnology 2012;11(2):77;* doi:10.4017/gt.2012.11.02.443.00

Purpose Accurate and timely visualization of the progress of a construction project is a critical element for success. Current methods of data collection for progress visualization tend to be manual. These manual methods are not only error-prone but also time-consuming. Remote sensing technology has been used to resolve those problems related to collecting the data related to construction progress. Studies have shown that data collected for construction progress visualization via remote sensing technology can be effective[1-3]. However, data corresponding to all as-built structural components must be collected in order to accurately visualize construction progress. This is impractical on real construction sites that usually are large, cluttered, and complex. This paper proposes an integrated system for the visualization of automated construction progress using IFC-based BIM and data which correspond to parts of as-built structural components acquired using remote sensing technology. **Method** The system integrates measurement, analysis, and visualization of the progress of construction projects in four main modules. The first module extracts geometric and schedule information from IFC and converts the extracted information into a format acceptable to the MATLAB. The second module measures project progress utilizing converted geometric information and 3D data acquired from construction sites. The third module analyzes, verifies, and updates project progress using schedule sequences and topological information in IFC. The last module compares the as-built and as-planned schedules and visualizes current project progress. **Results & Discussion** The proposed integrated system has been verified to demonstrate its robustness by using data corresponding to a part of as-built structural components acquired from real construction sites. The result reveal that the proposed integrated system can accurately and effectively visualize current project progress information from data which correspond to part of as-built structural components. The visualization results can be used as a decision-making tool by project stakeholders.

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