

Intelligent BIM record model for effective asset management of constructed facility

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ABSTRACT

Asset management is a continuous process that runs throughout the lifecycle of a constructed facility. The current practice of asset management is paper-based consisting of manual inspection and proves to be time consuming, tedious, and prone to human error. Building Information Modelling (BIM) has been found to be an emerging technology and core of information management for the design, construction, operation and maintenance (O&M) process. Though the usefulness of BIM has been greatly realized in the AEC (Architecture, Engineering and Construction) industry, its use for O&M, particularly in asset management, is still in its infancy. This research describes a framework of an intelligent BIM record model that can capture all the assets in BIM during the construction of a building facility. All the information necessary for operation and maintenance along with the location would be stored in a database integrating with the BIM. The database library can be interrogated with BIM and serves as a repository of asset management for the built facility. The BIM record model would help to take informed decisions regarding operations, maintenance, servicing, repair and replacement of an asset hence saving labour-intensive asset inventory, time and money, and preventing the wastage of unnecessary tools acquisition.

KEYWORDS:

BIM; Constructed facility; Operation and Maintenance (O&M); AEC (Architecture, Engineering and Construction)