Combine BIM to Develop Intelligent Building Fire Prevention Monitoring System

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Abstract

Fire prevention is an important issue for building construction. It directly affects the safety of residents. Recently, the fire prevention has integrated information and communication technology, as well as intelligent building concept to improve the safety, comfort and convenience for living environment. Through the help of intelligent application, the fire facilities can accurately monitor related fire information, prevent disaster occurrence and reduce the degrees of damage to protect life and property safety of resi-dents. This study introduce Building Information Modeling (BIM) integrating with sensors and monitors to construct fire control system. When the sensors are activated, the system can determine the authenticity, eliminate the mischief of false alarm and prevent unnecessary distress caused by false alarms. This study has constructed the sensor and monitor locations in BIM's 3D model. When the sensor is activated, the system can instantly show floor and the room plan of fire point in the 3D model and connect to monitors which are assigned to watch the suspected fire area to determine the authenticity of fire alarm.