Development of Building Fire Control and Management System in BIM Environment

蕭炎泉, 蔡宜穎, 蕭瑞瑩, 張驄騰
Construction Management
Architecture
ycshiau@chu.edu.tw

Abstract

The quality of fire and disaster prevention is an important aspect within buildings and architectural structures because it directly affects the life, property, and safety of residents. By combining building fire control and prevention equipment, information and communication technologies, and intelligent building concepts, more secure, comfortable, and convenient residential environments can be provided. For this study, ER Studio, SQL, and Visual Studio were used as tools to create a Web-base "fire-control surveillance, and management system." Fire control equipment was integrated into the building using the building information model (BIM). When a fire detector was triggered, a surveillance monitor could determine whether the warning was accurate and immediately identify information regarding the personnel relevant to the area on fire. Fire-fighters could then determine the fire conditions, as well as the location and types of relevant fire-extinguishing tools through the network. Additionally, they can conduct fire control and rescue operations rapidly and effectively to protect the lives and property of residents.

Keyword：Fire control and management system, Building information modelling, Fire sensor, Monitor, Database.