



## Integrating safety data into BIM models used in project design and construction

### **Near miss information visualization tool in BIM for construction safety**

*Xu Shen and Eric Marks. Journal of Construction Engineering and Management, April 2016.*

#### **Overview**

Building Information Modeling (BIM) is a platform that enables architects, engineers and builders to share information throughout the life cycle of a project. By integrating safety and health management elements, BIM could reduce jobsite injuries, illnesses and fatalities as well. The authors designed a BIM application that relies on near-miss reporting data to generate a visual map of near-miss locations, offering project teams a new opportunity to mitigate hazards before an injury event occurs.

#### **Key Findings**

- Using sample BIM representations generated for campus construction projects, the researchers tested the prototype by entering data from randomly generated near-miss events, then querying the data to generate visual maps of near-misses.
- Seven construction firm safety managers reviewed the near miss visualization tool. Most agreed that the tool would be easy to use, would be a useful enhancement of their safety program, and could readily be implemented on construction projects.
- Near-miss visualization technology is a promising avenue for employing leading indicators (near miss reports) to predict and abate hazards before an injury or fatality occurs.

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#### **See abstract:**

<http://bit.ly/2dKOWEk>

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