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## Postprint: Research on Building Operation and Maintenance Management Based on BIM and Ontology

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### Abstract

To facilitate the implementation of building operation and maintenance management on the Semantic Web, an intelligent application framework based on BIM and ontology technology was established; a building operation and maintenance management ontology was constructed by integrating the DogOnt ontology; methods for BIM data extraction and creation of individuals and rules were proposed; and the framework program was implemented using Revit API, OWL API, and SWRL API technologies. The effectiveness of the framework, methods, and program was verified through an actual project. This work holds significant importance for advancing the development of BIM, ontology, and Semantic Web technologies, as well as for the networked and intelligent management of building operation and maintenance.

### Full Text

## Preamble

ChinaXiv partner journal

*Note: Figure translations are in progress. See original paper for figures.*

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