

# A BIM-compatible schema for architectural programming information

Ehsan Barekati, Mark J. Clayton and Wei Yan

Texas A&M University  
{ehsan.barekati, mark-clayton, wyan}@tamu.edu

**Abstract.** Architectural programming, although a key part of AECFM processes, has not been well integrated into Building Information Modeling (BIM). Having access to architectural programming information throughout the lifecycle of a building can add value to design evaluation, facility management, renovation and extension. There is not currently a comprehensive and standard data model to store architectural programming information. Our research is producing a universal format for an architectural program of requirements (UFPOR) that can connect the architectural programming information to the IFC BIM schema. The result is a data model for architectural programming that is inherently interoperable with BIM standard schema. A graphical user interface facilitates data creation and manipulation. The schema and effectiveness of the bridging fields has been tested by entering the content of three two different architectural programming documents into the UFPOR database.

**Keywords:** BIM, Architectural Programming, Data Modelling, Interoperability, IFC.