

FACADE: Future-proofing Architectural Computer-Aided Design

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Abstract: The MIT Libraries, in conjunction with the MIT Department of Architecture, are working on a project called “FACADE: Future-proofing Architectural Computer-Aided Design.” The FACADE project is investigating methods and best practices to capture, describe, manage, preserve, and make available digital CAD models that are created by architects during building projects. The research data includes 3D CAD models produced for major building projects including the MIT Stata Center (Frank Gehry), the U.S. Institute of Peace (Moshe Safdie), and the Caltrans Headquarters (Thom Mayne). The project will capture these models for archiving in DSpace, MIT’s digital archive system, and will further develop Dspace’s digital preservation capabilities to support the storage and use of this type of digital material for future use by architects, architectural historians, and design and architecture instructors.

The FACADE project has the following objectives:

- Analysis, identification and description of native digital formats produced by CAD software used by architects (e.g., CATIA, Revit, MicroStation, and AutoCAD)
- Analysis, design and implementation of CAD file ingestion, management, preservation and dissemination practices, and development of necessary modules for the DSpace digital archive system.
- Analysis and recommendation related to building process documentation (relationships between various CAD files and versions, and between CAD files and other project communication and documentation) in Building Information Models.
- Analysis and recommendations related to other building project materials (e.g., 2D drawings, associated images and video, project correspondence, business documents).

The FACADE project’s progress to-date will be presented.

About the author:

MacKenzie Smith is the Associate Director for Technology at the MIT Libraries, where she oversees the Libraries' use of technology and its digital library research program. At MIT she was the project director for the DSpace Project, an open source software platform for digital archives, and has lead a number of other research projects examining new modes of scholarly communication and digital preservation, including SIMILE and FACADE. Prior to joining MIT she was the Digital Library Program Manager for the Harvard University Library, and has held library IT positions at both Harvard and the University of Chicago. Her academic background is in Library and Information Science, and her research interests are in applied technology for digital libraries and archives.