Archiving the Built Environment: the collective challenge

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DPC

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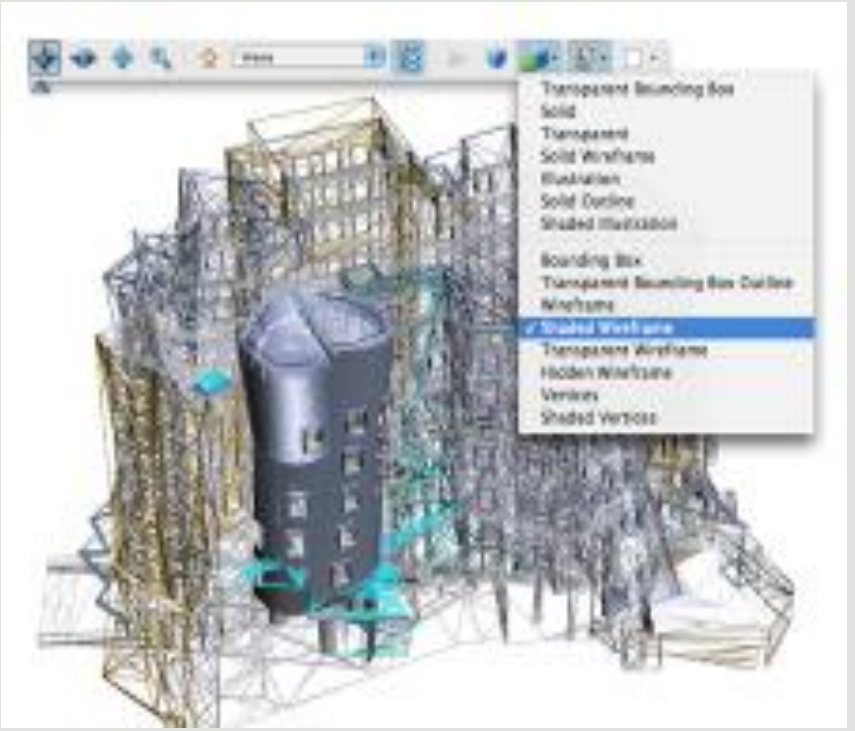
The CAD Challenge

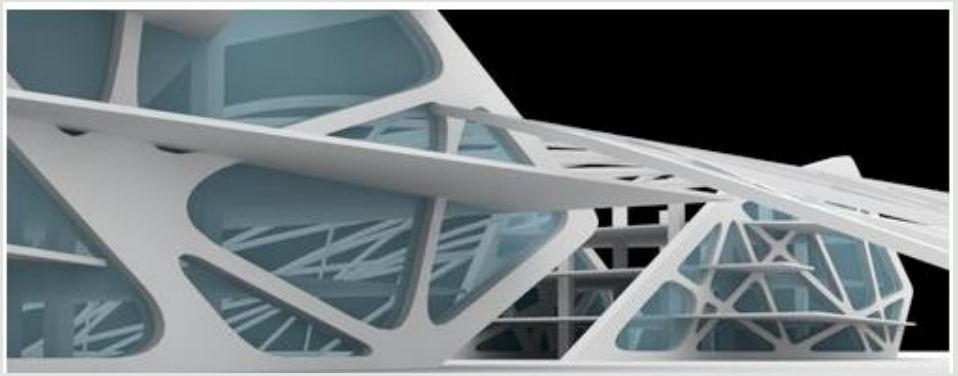
- CAD is volatile, constantly changing
- Relies on mathematical algorithms
- Encrypted, proprietary
- Obsolescence of software
- Use of multiple types of software in design
- Volume of files



Challenges for archivists

- Few collecting institutions are preserving design files
  - Barriers:
    - Infrastructure
    - Staff skills
    - Acquisition of technology
    - Technological support
    - Institutional support (understanding and $$)

MIT FACADE project



Focus of the work

- CAD file management
- Preservation
- Dissemination practices using DSpace as archival platform
- Analyze and recommend processes for documentation of file relationships and annotation of files. (Project Information Model = PIM)

Preservation Recommendations

- Original (the originally submitted version of the CAD model)
- Display (an easily viewable format to present to users, normally 3D PDF)
- Standard (full representation in preservable standard format, normally IFC or STEP
- Dessicated (simple geometry in a preservable standard format, normally IGES)

Lessons learned

- The volume of digital
- Conversations with designers
- It takes a team
- Open source software doesn’t necessarily solve the problem
- Librarians/archivists need digital skills
- Collecting institutions need technology and technology support

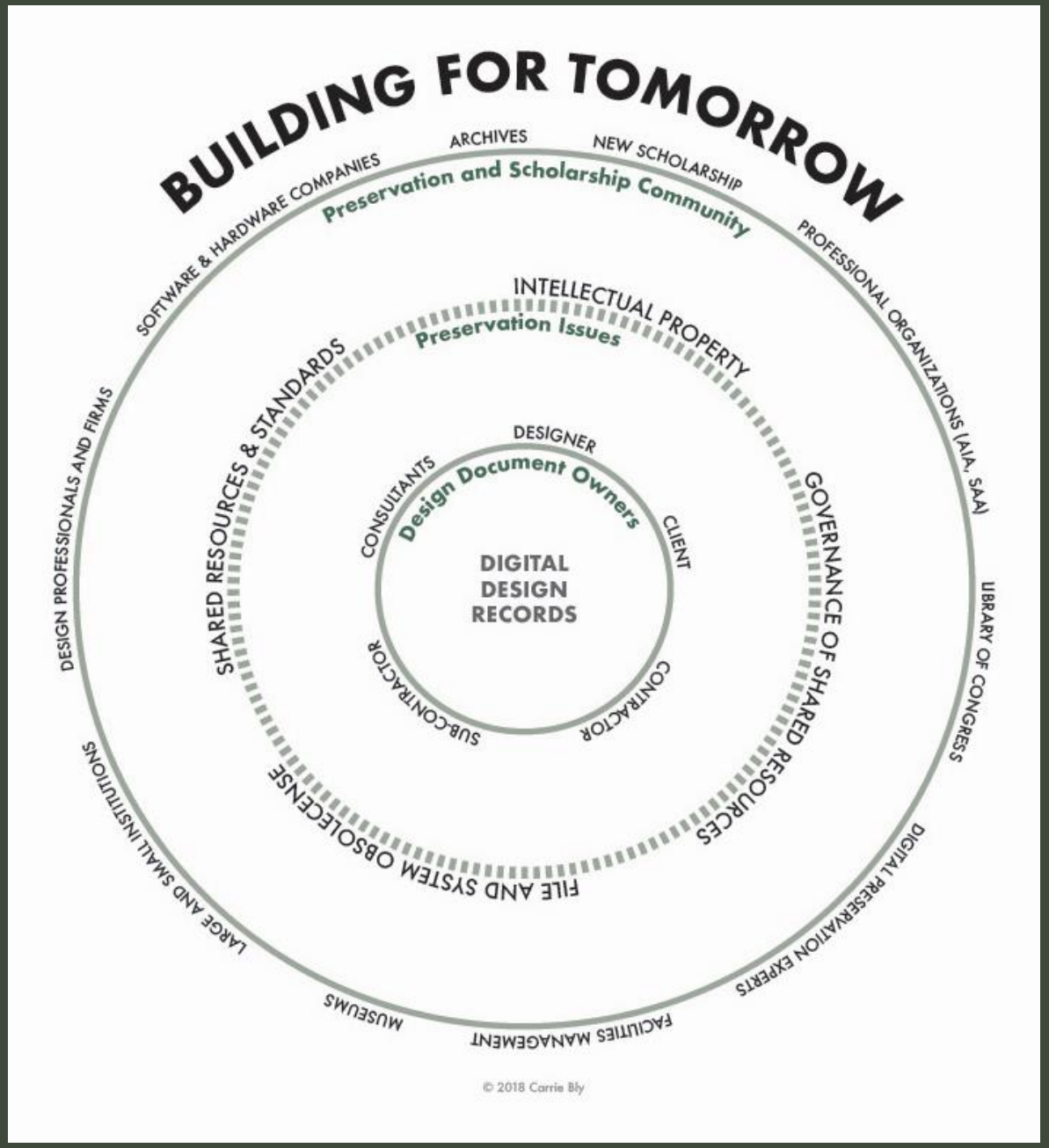
2009-2017

- Society of American Archivists Design Records Section
  - CAD BIM Task Force
  - TF Report
  - Born Digital Studies Bibliography
  - Digital Design Holdings Survey
- 2014 International Confederation of Architecture Museums conference
- 2017 Library of Congress Designing the Future Landscape Symposium

http://digitalpreservation.gov/meetings/ade/ade2017.html

SOCIETY OF American Archivists
Design Records Section

icam17
Montreal_New York
21–28 September 2014



Advance the preservation of digital design data by making it available to a variety of types and sizes of architectural museums, archives and next generation users.

April 2018 Forum

- 29 representatives:
  - Architectural practice, history, librarians/archivists, technologists, digital preservation, digital repositories
- 1.5 day workshop
  - Focused on challenges, partner communities, lifecycle models, and a roadmap

Forum Outcomes

Strategic Directions and Priorities

- Synthesis
- Coordination
- Governance & Sustainability
- Improve ability and capacity

Specific activities include

- Efforts Map
- Literature Review
- Collecting Policies
- Topologies of collection practices
- Communities Engagement and Research Toolkit
- Identify funding opportunities
- Good Practice guidelines
- Professional development programming
- Facilitate access to preservation tools
- Work with providers of digital preservation tools, repositories and software

Recent Work, 2018-2019

Interviews with software vendors and influential individuals

AutoDesk, Vector Works, SketchUp, Phil Bernstein

- Versioning
- Continuous updating
- Forward compatibility
- Cloud storage and distribution
- Vendors maintain earlier versions

Recent Work, 2019-2020

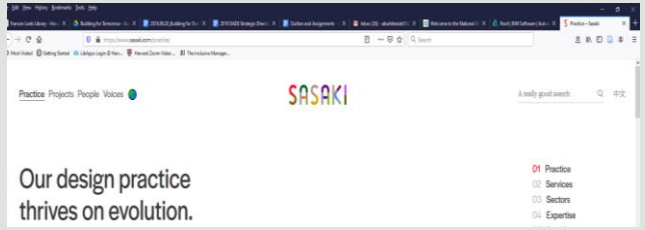
- London Symposium
  - The Future of the Library - Architectural Information in a Post-Digital Era

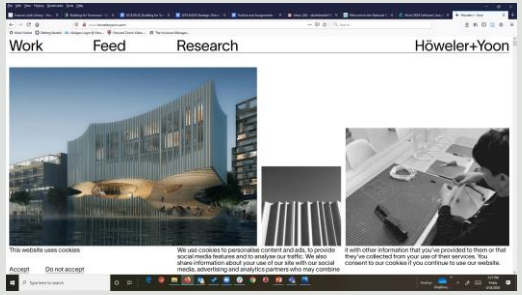
- Pilot project between Harvard and two design firms
    - Harvard team
      - Ann Whiteside - GSD
      - Sara Rogers - Digital Archivist, GSD
      - Stephen Abrams - Head of Digital Preservation, Harvard Library

    - Sasaki Associates – large international design firm
      - Sarah Bush, Archivist
      - two teams of architects

    - Howeler+Yoon, small Boston design firm
      - Eric Howeler, Principal
      - Kyle Coburn

Harvard University
Graduate School of Design



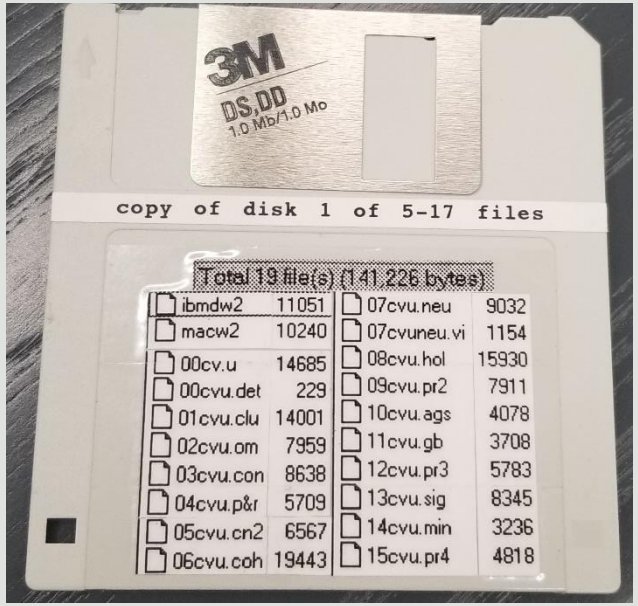


What we've learned from designers

- Use of multiple software products
- CAD becoming obsolete
- Cloud storage
- File structures
- Individual projects have unique workflows
- REVIT is the software of choice
- REVIT can be used for the documentation of an entire project.

- BIM
  - forward compatible
  - BIM Manager
  - BIM is a process, not a software
- Communication done through tools like SharePoint
- Issues for designers:
  - Collaboration or co-location
  - Data management rights
- Students/new practitioners
- Intellectual ownership

Harvard

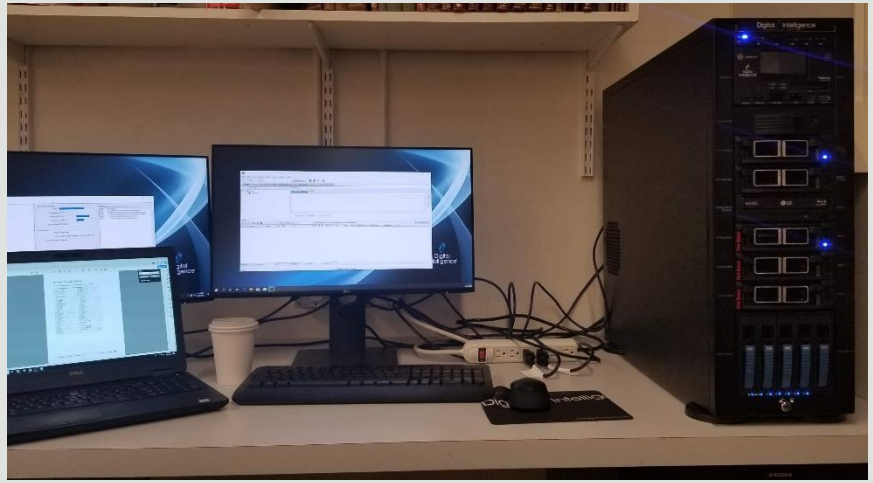


Diversity Fellow Digital Archivist, Sara Rogers

- Basic work accomplished
  - establishing relationships;
  - surveying our collections;
  - creating a workstation that makes sense within the Harvard landscape and the library;
  - testing workflows;
  - creating documentation;
  - processing materials in the collection

Current Work

- Developing workflows for acquisition flows
- Describing and providing access to hybrid collections
- Researching best methods for researchers to access files
- CAD content model



Incorporating Lessons

- Complexity of preservation is deep
- A broad toolkit is needed
- Intellectual property
- Donor relations
- Appraisal
- Digital design data is Big Data

Thank you

Ann Whiteside

What’s next?

- Develop a cohort of design firms and collecting repositories
- Model best practices in archiving digital design records
- Analyze intellectual property
- Analyze software preservation
- Develop template for education practice for students in design