

Curating Architectural 3D CAD Models

FACADE

Future-proofing Architectural Computer-Aided Design

Tom Rosko

Head, Institute Archives & Special Collections
MIT Libraries

Society of American Archivists Meeting
Architectural Records Roundtable, August 12, 2009

In conjunction with:



SA+P

Department of Architecture

Problem Statement

- ❑ Current architectural data is being lost.
- ❑ CAD (3D) is complex!
 - Highly proprietary, non-standard, backwards incompatibilities, obsolescence of software and formats
- ❑ 3D digital preservation new territory
 - Lack of tools, standards, approaches

FACADE Project

- IMLS grant
 - 2-year (Sept. 2007 – Sept. 2009)

<http://facade.mit.edu>

FACADE Project Staff

- William Reilly (wreilly@mit.edu)
 - Technical Projects Manager, MIT Libraries
- MacKenzie Smith
 - Associate Director for Technology, MIT Libraries
- Ann Whiteside
 - Head, Rotch Library for Art and Architecture, MIT Libraries
- William Mitchell
 - (former) Dean, MIT School of Architecture and Planning

FACADE Project Proposal

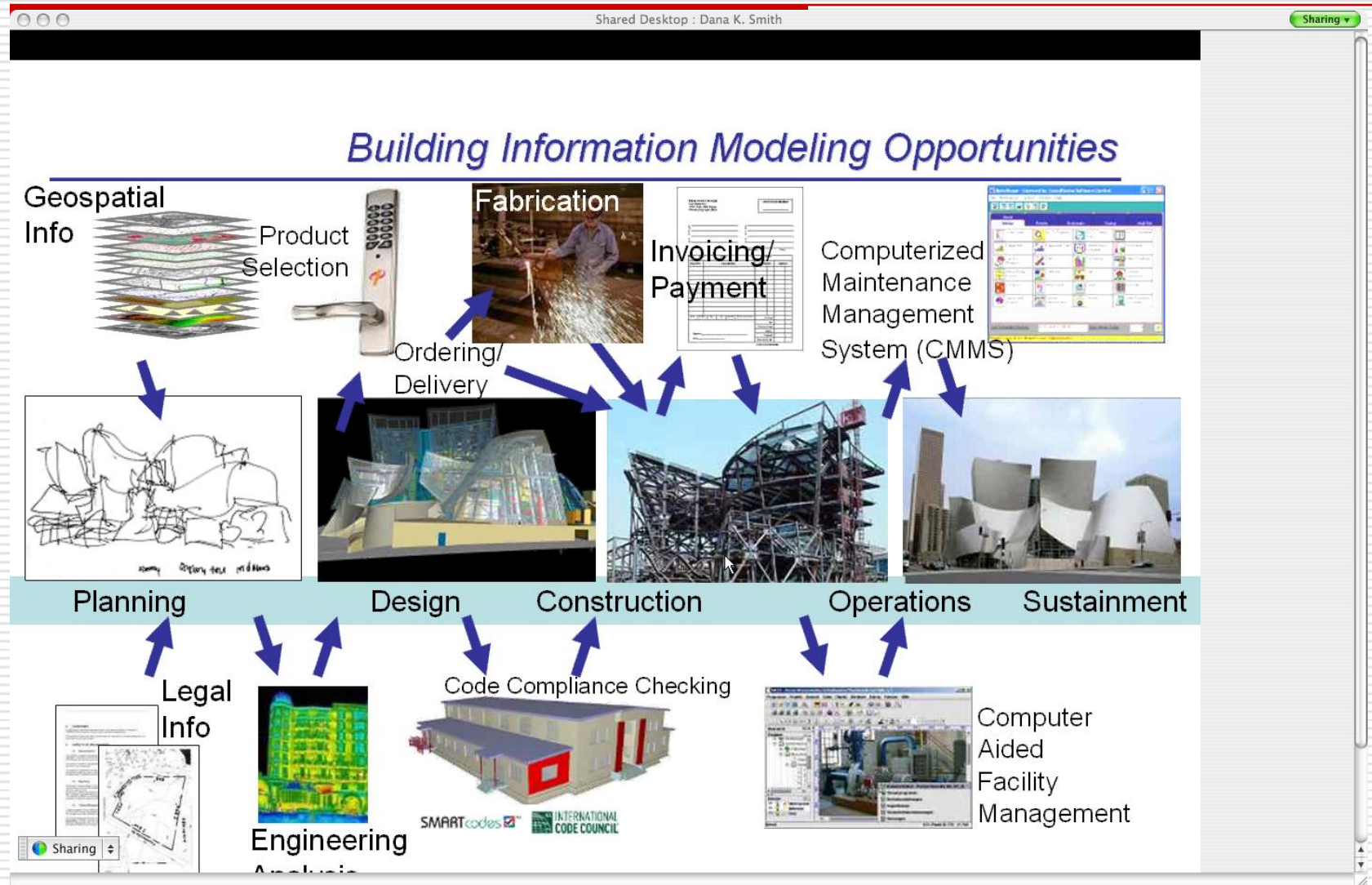
- Develop optimal long-term archiving strategy for digital architectural data
 - Especially 3D CAD models
- Demonstrate in DSpace digital archive
 - With SIMILE user interface discovery tools
- Use Frank Gehry MIT Stata Center dataset
 - Advanced 3D CAD tool CATIA

Architecture Data Producers: the landscape

Data Producers: Architecture Firms

- Technology
 - Design
 - Communications, Management
- 3D CAD increasing in complexity
 - “BIM” recent initiative (Building Information Modeling)
 - Lacking standards for use, naming, interoperation

Building Information Modeling



What are Firms Doing, re: CAD, digital data?

- Not So Good (status quo):
 - Creating lots more CAD every day, but unorganized
 - Continuing to rely on proprietary formats for current and mid-term purposes
 - Not archiving for long-term
 - Not preparing (don't know how) materials for archive

What are Firms Doing, re: CAD, digital data?

- Good (progress):
 - (Beginning to) recognize the issues
 - Attempting to make data interchange standards work
 - Trying to embrace BIM: richer CAD might aid interchange efforts, heighten need for longer-term archive solution

Data Consumers: Audiences

- Practice (Architects, Designers, Engineers)
- Research (Historians, Scholars)
- Teaching (Instructors, Students)
- General (Public, Casual)

Use Cases

Blue signifies *future* use cases

- Practice (Architects, Designers, Engineers)
 - (Internal) Perform current work; re-use recent work
 - (External) Data interoperation with partner firms
 - (“Read Only”) Consult own work
- Research (Historians, Scholars)
 - (Design) Study history of design, “design intent”
 - (Business) Study process, techniques, economics
- Teaching (Instructors, Students)
 - (Design) Study history of design, “design intent”
 - (Practice) Study models to learn, extend CAD
 - (Computation) Capabilities, constraints, on design
- General (Public, Casual, Educational)
 - Study architectural history; view buildings, designs

Audiences Consulted

- Advisory Board
 - Architectural historian
 - 3D engineer
 - World cultural heritage
 - Architecture faculty
 - Practicing architects
 - CAD researcher
 - Architecture CAD platform CIO
 - Architecture IT consultant

Audiences Consulted

- ☐ MIT School of Architecture Faculty and Students
- ☐ Architecture firms (architects and librarians)
- ☐ DCC 3D preservation seminars
- ☐ AIA Congress workshops
- ☐ CAD vendors discussions

The Content (Data)

Datasets for Project

- ☐ Frank Gehry, MIT Stata Center
 - Cambridge, Mass. (2004)
 - CATIA

- ☐ Moshe Safdie, U.S. Institute of Peace
 - Washington, D.C. (2009)
 - Revit

- ☐ Thom Mayne, Caltrans
 - Los Angeles, Calif. (2004)
 - Microstation



- 
- STATA CENTER

REQUEST FOR INFORMATION

AREA REF:

RFI #: 7 REV #:

SUBS RFI #

SUB: _____

-----R: Leblanc, Claude

uest

Provide a response to the following

CONFIRMATION needed by

current_master_model_list.xls

[illegible]

Entire data set

Entire architecture/design ***project***

- Initial sketches
- 3D CAD models, 2D CAD drawings
- Formal outputs (e.g. client presentations)
- Correspondence, RFIs, ASIs, etc.
- Consultant reports, obligatory certificates, documents
- Images, video, other media files
- Every client issuance

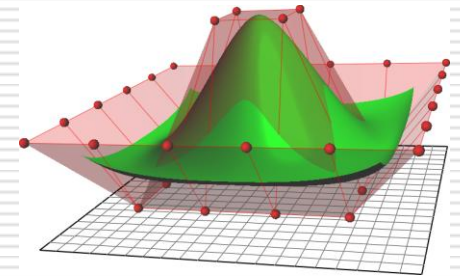
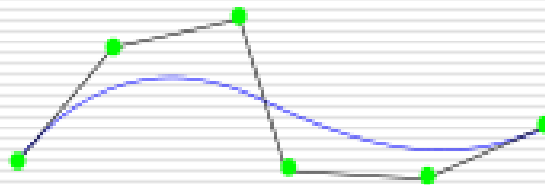
3D CAD

- Data Formats; Standards; CAD Tools
- Preservation Strategies

Terminology: Geometry

□ **NURBS** “Non-Uniform Rational Basis Splines”

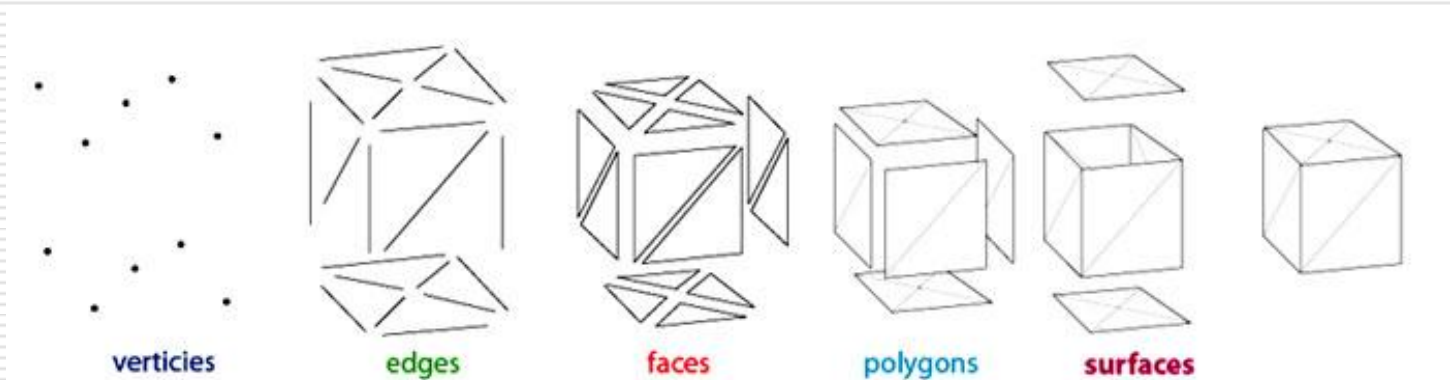
Freeform curves, surfaces. Weighted points



□ **Mesh** Collection of vertices, edges and faces

<http://en.wikipedia.org/wiki/Nurbs>

http://en.wikipedia.org/wiki/Polygon_mesh

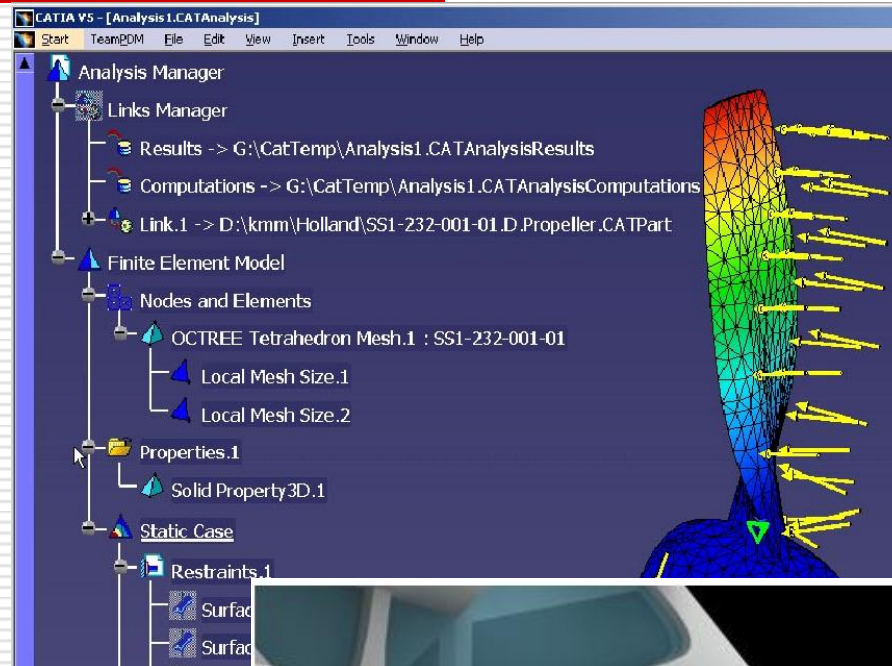


Terminology: Parametric

- Parametric
 - CATIA
 - Revit
 - Microstation

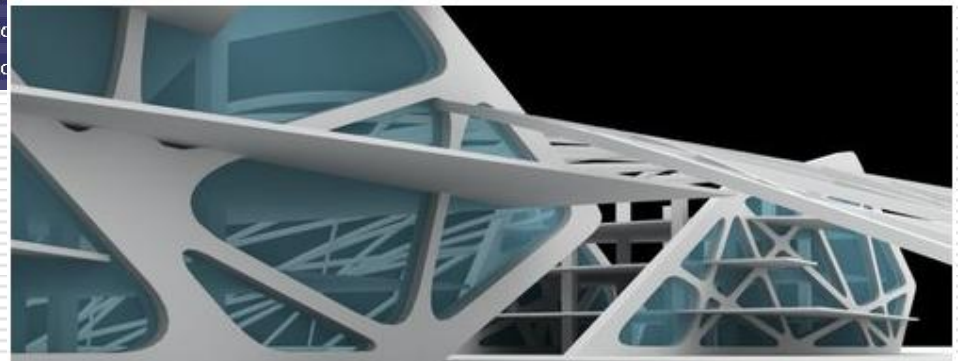
- Non-Parametric

- Rhino
- Maya



“Features”
vs. just
underlying
geometry

Freeform
surface
modeller...



3D CAD Systems in Architecture

- ❑ Dassault Systemes' **CATIA** (Stata Center)
- ❑ Autodesk's **Revit** (U.S. Inst. Peace)
- ❑ Bentley's **MicroStation** (Caltrans)

- ❑ Vary in **parametric** modeling v. inert geometry support
- ❑ Vary in complex (**NURBS**) v. simple geometry (**Mesh**) support

How CAD products encode geometric and parametric models is unique and proprietary

- ❑ Project deliverable: format representation information
-

Data Exchange Formats

- Open, Standards-Based

- Model Information

- **STEP (ISO 10303)**

- **IFC (ISO 16739)**

- Geometry Information

- **IGES**

- VRML

- STL

- Display formats (generally available)

- **3D PDF**

- Flash

Blue signifies formats under study

- *Various Industry Data Exchange Solutions*

- *Navisworks*

- *Collada*

- *DXF / DWF*

- *DWG / DGN*

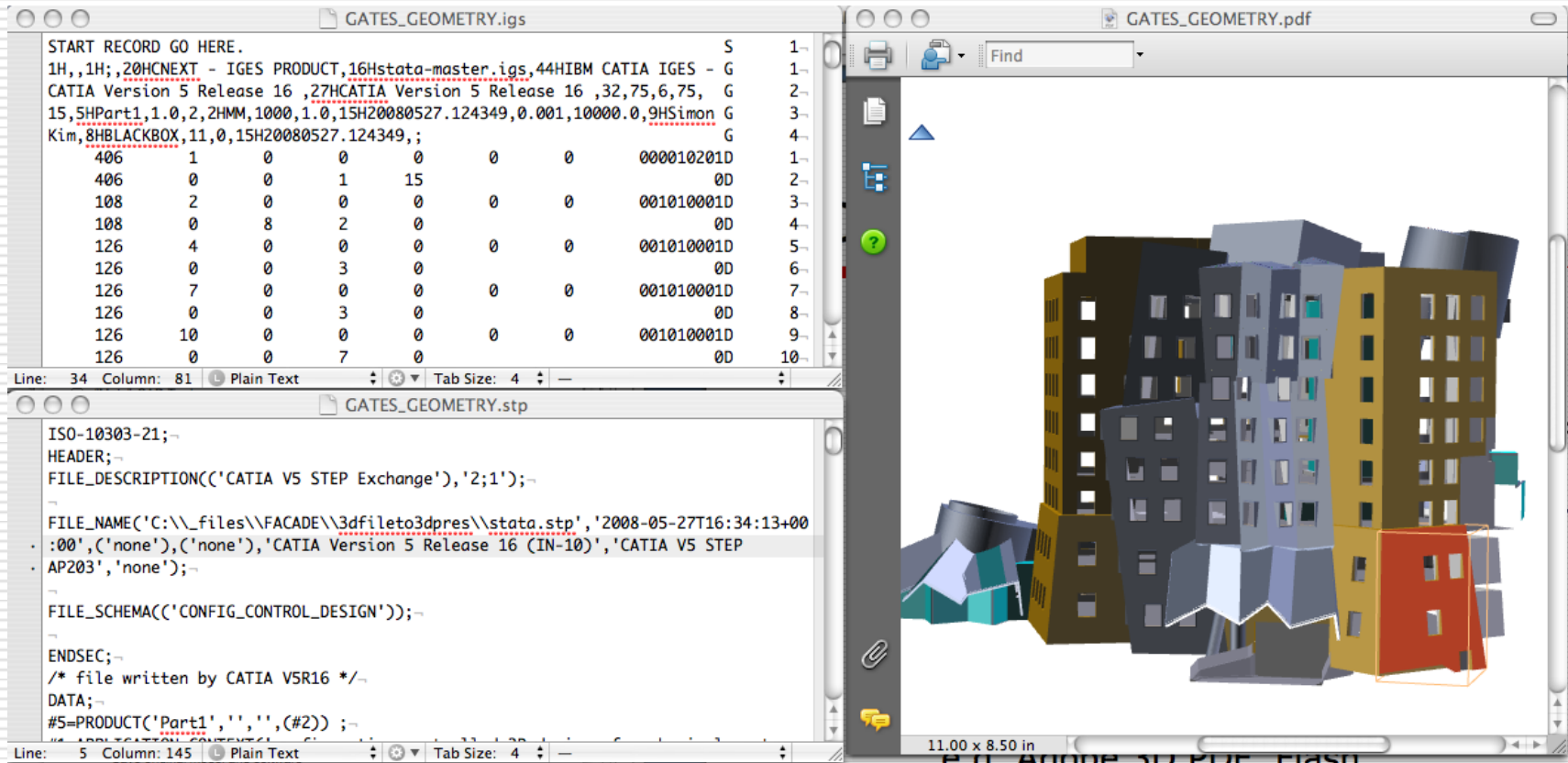
- *Viewers*

- ...

“Viewing” of data

- In native-format with user’s CAD software
- As “static” PDF

3 Derivative Formats: IGES, STEP, 3D-PDF



IFC Viewer: Solibri

Solibri Model Viewer – USIP-50 DD file.rvt-deriv

Model Checking Presentation

Model Tree

- USIP-50 DD file.rvt-deriv
 - Building.b-1.1
 - SEWER INVERT
 - Level 0
 - PEC LEVEL
 - LEVEL P2
 - LEVEL P1
 - LEVEL 1
 - Stair
 - Furniture
 - Roof
 - Curtain Wall
 - Curtain Wall.4.1
 - Curtain Wall.4.2
 - Plate
 - Member
 - Door
 - Door.82
 - Door.83
 - Column
 - Column.4.1
 - Column.4.2
 - Column.4.3
 - Column.4.4
 - Column.4.5

Info

Door.82

Identification Location Quantities Relations

Property	Value
Model	USIP-50 DD file.rvt-deriv
Name	Curtain Wall Dbl Glass:Curtain Wall
Type	Curtain Wall Dbl Glass:Curtain Wall
Operation	Double Door Single Swing
GUID	1P7GRZJ45CEgbFjOI7YKbp
Layer	A-GLAZ
Geometry	Boundary Representation

Identification Location Quantities Relations PSet_Revit_Identity Data PSet_Revit_Type_Dimensions PSet_Revit_Type_Identity Data Pset_DoorCommon

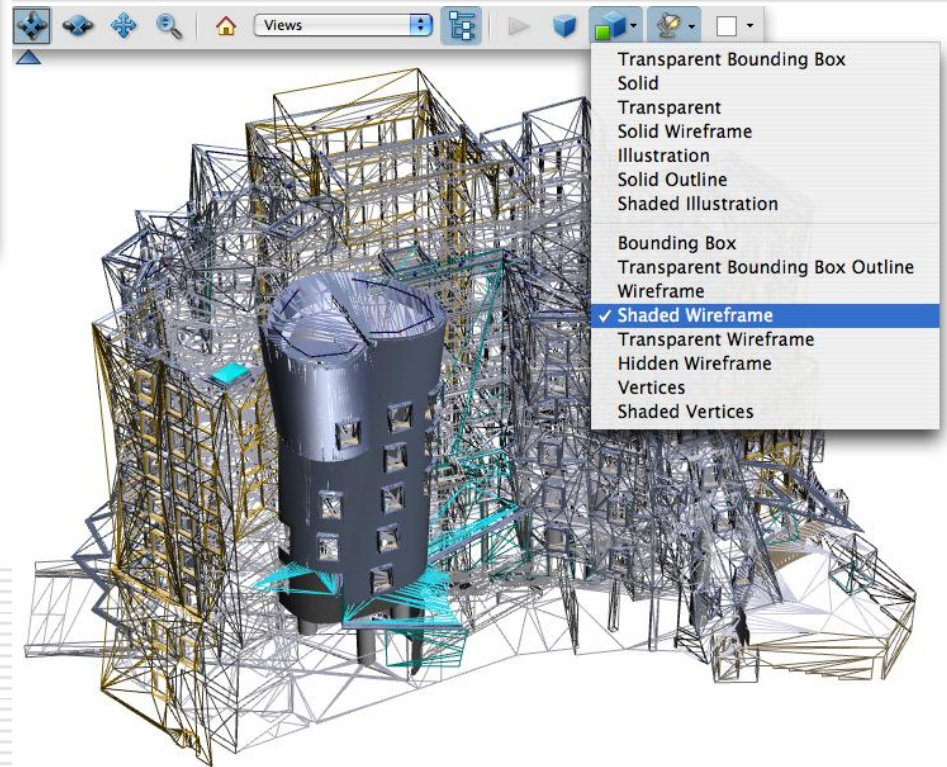
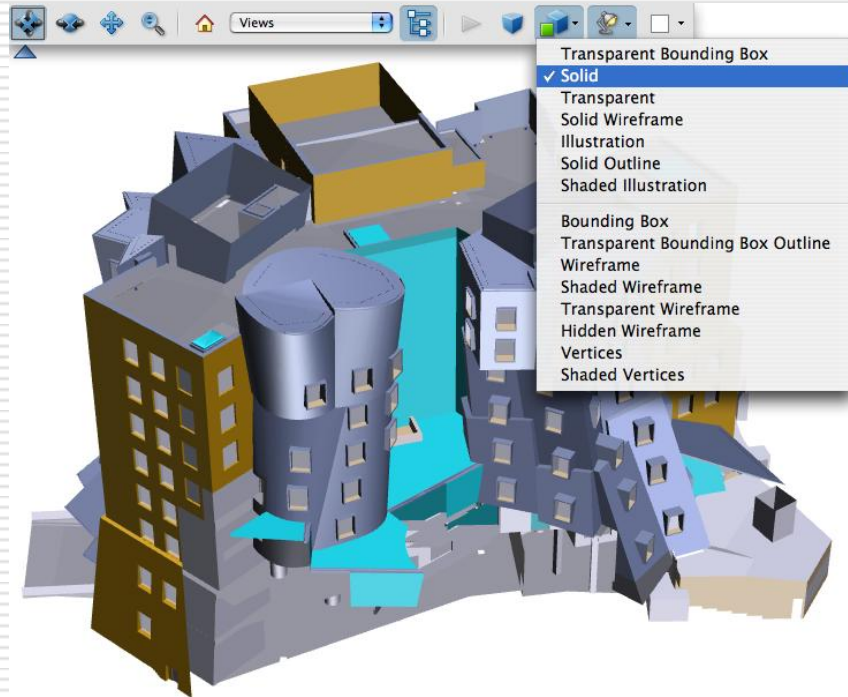
3D

Spin Info

Drag with mouse left button down to spin.

Selected: 1

3D PDF: Quick Look



3D Model Interactivity

If CAD software only exports *inert geometry*,
the original parametric model is lost – i.e.
the preservable artifact is not authentic

Does that matter? To the project
audience...probably not... *to us...yes?!?*

- Doesn't fully represent design intent
- Can recreate a parametric model later
- Can manipulate the model view (e.g. 3D PDF)

How to sort through and manage all that data?

The Project Work and Tools

- Project Information Model, Workflow
- Metadata, “Curators Workbench”
- DSpace Archive

Managing the data intellectually

Ontology

Working from BIM Idea

Created a project information model utilizing RDF

RDF: Resource Description Framework

<http://www.w3.org/RDF/>

An ontology system using XML to exchange knowledge on the Web (part of the semantic web movement)

PIM - Project Information Model

Entire architecture/design ***project***

- Initial sketches
- 3D CAD models, 2D CAD drawings
- Formal outputs (e.g. client presentations)
- Correspondence, RFIs, ASIs, etc.
- Consultant reports, obligatory certificates, documents
- Images, video, other media files
- Every client issuance

Linked together in a ***relationship map***

the Project Information Model

_sort and classify all the available data - 2d, 3d and construction administration (RFI's, change orders) - and map their relations. Model this as an ontology that can be called in an environment such as DSpace or the semantic web.

this formalization of building components is required so that they can be linked/represented in a predictable structure. In this manner, a reasoning methodology can be applied to other works.



Moshe Safdie Associates, Institute of Peace

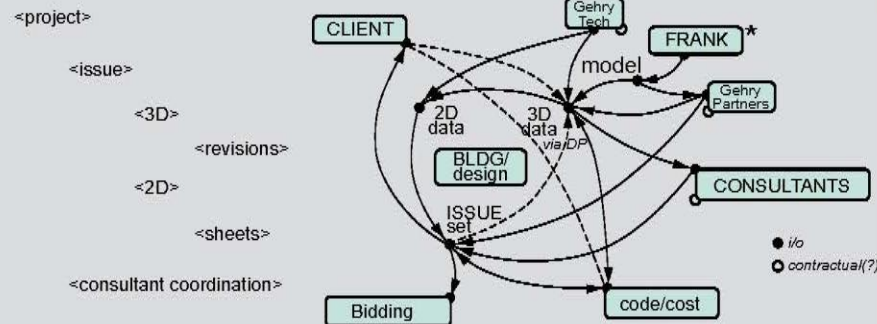


Gehry Partners, Stata Center

systematics / hierarchies

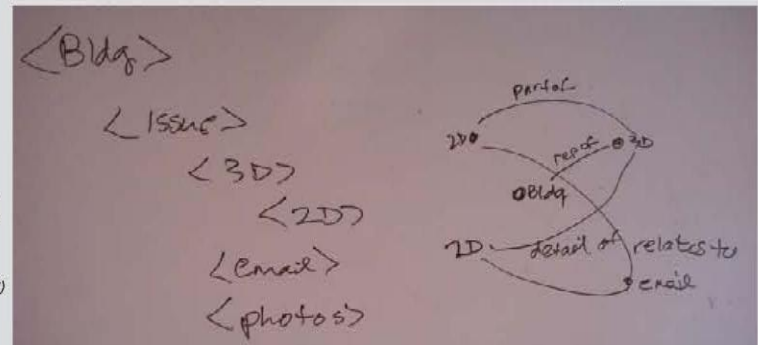
ex. 1

(incomplete)



* F. Gehry establishes and maintains his own contract separate from Gehry Partners

PIM representations

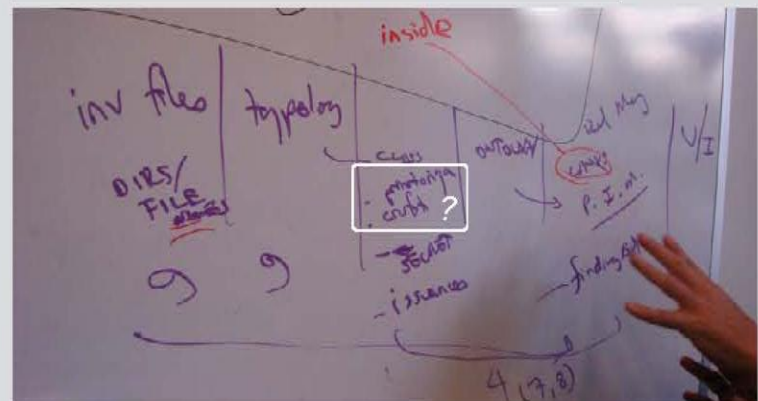


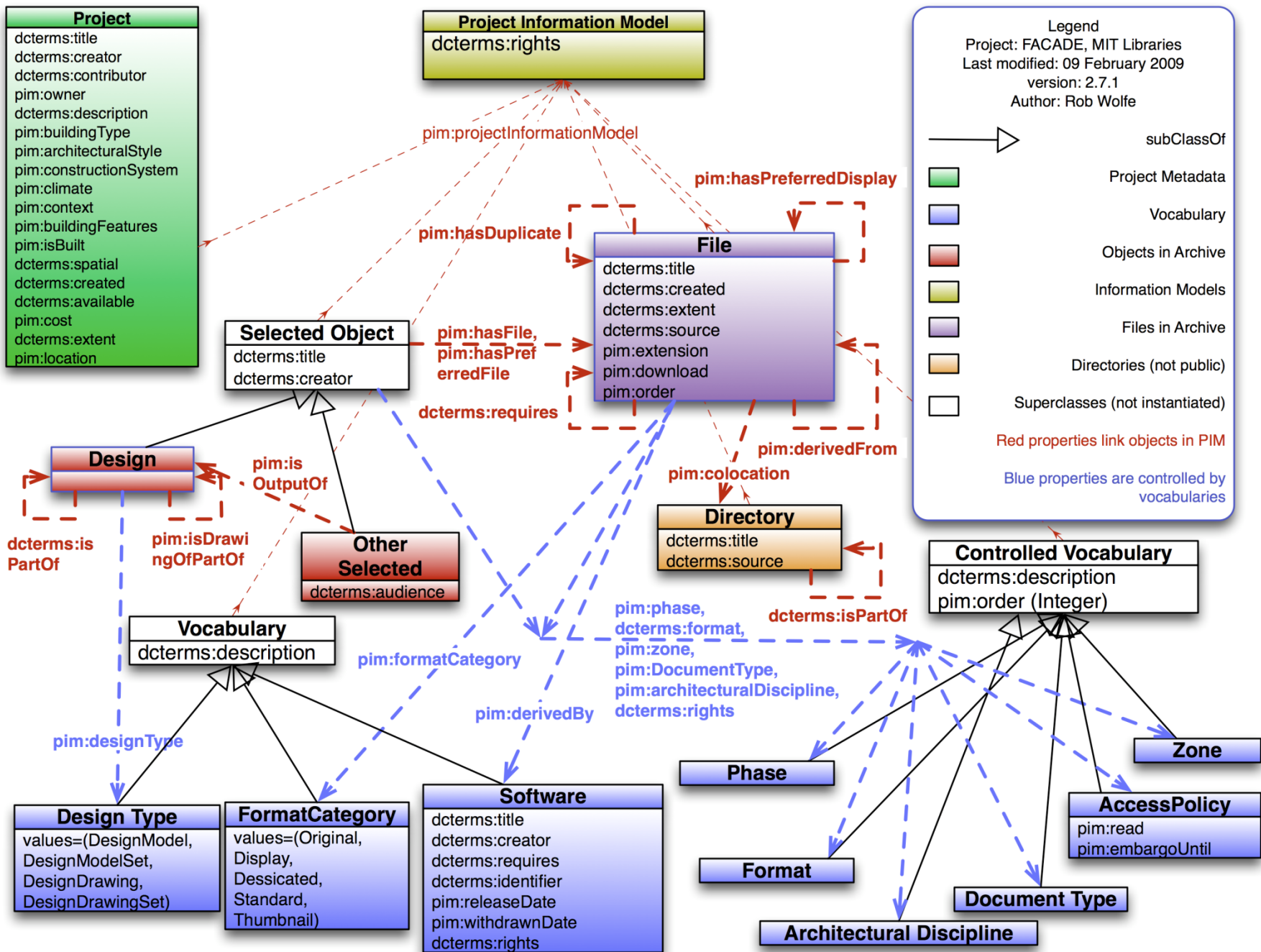
workflow

hierarchies	example	ontology	mapping
directories	architectural _ (3d, 2d, renderings) consultants _ (struct, mech, etc) minutes	_element _instance _class _attributes	_office building _admin suite _senior, executive, support,... _arch'l, struct., mech, energy efficiency,...
files	3d model _ exterior cladding	_relations _events	_issue sets _evaluation (client review, code compliance cost analysis)
data	reference files _ steel profiles _ assemblies _ mat'l specs _ cost spreadsheet		

PIM
Project
Information
Model

organization modules





Properties on Objects [1 of 2]

*Prototype Two
(latest approach)*

Every *File* gets five properties

- ☐ Project Phase
e.g. concept, design, construction, etc.
- ☐ Building Zone/System
e.g. Stata Center, Gates Tower, 4th floor
- ☐ Architectural Discipline
e.g. architectural, electrical, mechanical, structural
- ☐ Document Type
e.g. presentation, drawing, communication
- ☐ File Format
e.g. CATIA, AutoCAD, Word, PDF

Properties on Objects [2 of 2]

- *Important files* further tagged
 - Specially curated “[Selected Objects](#)”
 - 3D models and 2D drawing sets
 - Client presentations, etc.
 - Privileged access in user interface

Managing the data “physically”

- Metadata
- Storage



navigation

- [Main Page](#)
- [Community portal](#)
- [Current events](#)
- [Recent changes](#)
- [Random page](#)
- [Help](#)
- [Donations](#)

search

toolbox

- [What links here](#)
- [Related changes](#)
- [Upload file](#)
- [Special pages](#)
- [Printable version](#)
- [Permanent link](#)

ConcordFormats

- [Concordance "How To" Page](#)

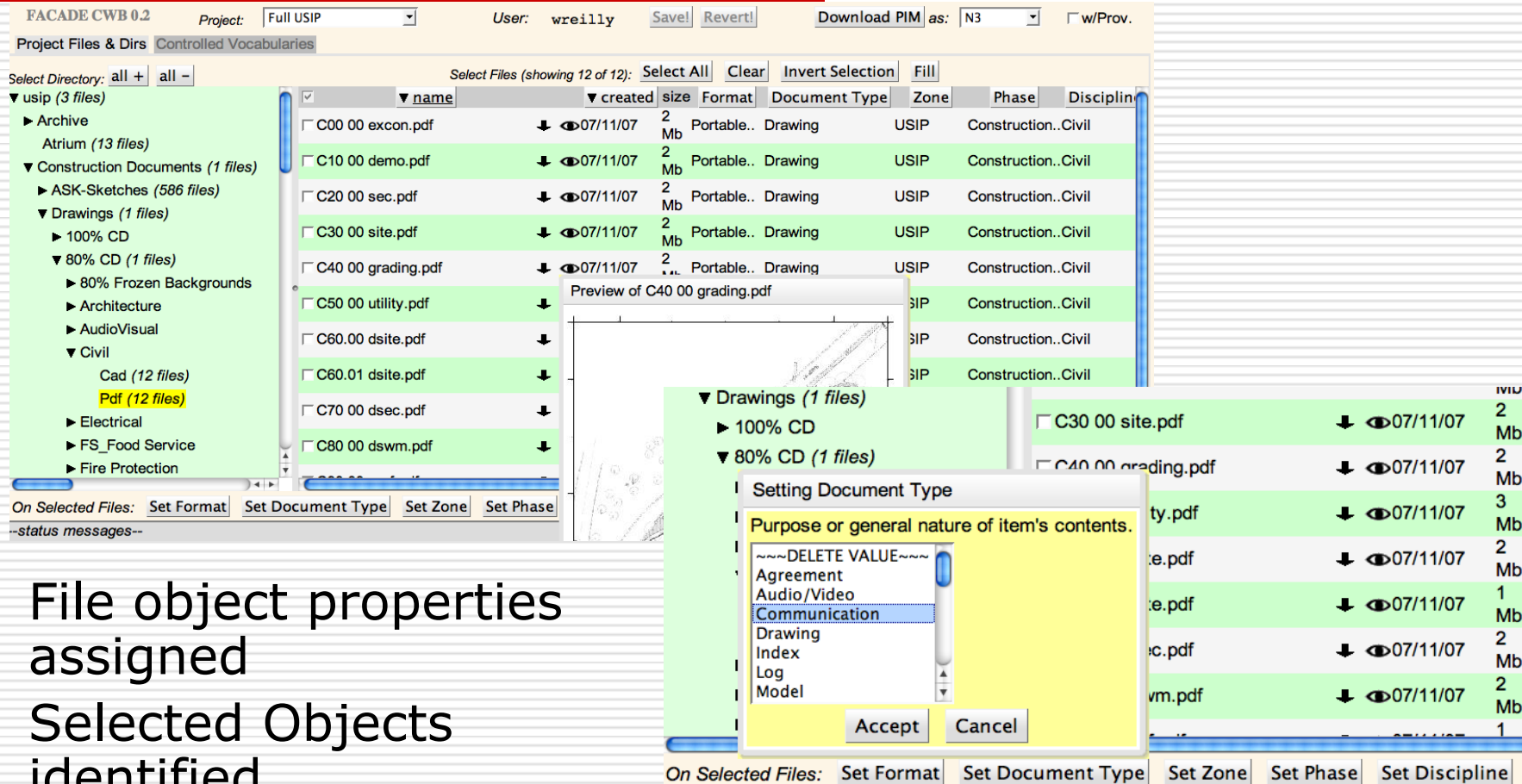
Merged Format Concordance for FOG/A

[\[edit\]](#)

Frank O. Gehry's Stata Center

ID	Format Description	File ext	Format type	File count	Status
1	JPEG image data	jpg	JPEG image data	671	keep
2	AutoCAD DWG	dwg	AutoCAD DWG	18683	keep
3	AutoCAD shape or font file	shx	data	1047	maybe
4	TrueType font data	ttf	TrueType font data	59	keep
5	AutoCAD plotter configuration files (compressed)	pc3	PC pointer image data	74	trash
6	AutoCAD plotter configuration files (compressed)	ctb	PC pointer image data	78	trash
7	AutoCAD font map	fmp	ASCII text	86	trash
10	CATIA model	model	data	107	keep
11	Excel Spreadsheet	xls	Microsoft Office Document	94	keep
12	Unknown .project -- maybe related to FOGA stuff?	project	data	8	maybe
15	TAR archive	tar	tar archive	3	keep
17	PDF	pdf	PDF document	1338	keep
18	SDNF (Steel Detailing Neutral File)	sdnf	ISO-8859 text; with CRLF line terminators	69	keep
19	MS Word	doc	Microsoft Office Document	121	keep
21	ASCII text	txt	ASCII text	1191	keep
24	Empty	sdnf	empty	16	trash

Curators' Workbench (CWB)



The screenshot displays the FACADE CWB 0.2 interface. The top bar shows the project name 'Full USIP', user 'wreilly', and options to 'Save!', 'Revert!', and 'Download PIM as: N3'. The left sidebar shows a tree view of project files and directories, including 'Archive', 'Construction Documents (1 files)', 'ASK-Sketches (586 files)', 'Drawings (1 files)', '100% CD', '80% CD (1 files)', '80% Frozen Backgrounds', 'Architecture', 'AudioVisual', 'Civil', 'Cad (12 files)', 'Pdf (12 files)', 'Electrical', 'FS_Food Service', and 'Fire Protection'. The main window shows a table of files with columns for name, created date, size, format, document type, zone, phase, and discipline. A preview of 'C40 00 grading.pdf' is shown. A 'Setting Document Type' dialog box is open, showing a list of document types: 'DELETE VALUE', 'Agreement', 'Audio/Video', 'Communication', 'Drawing', 'Index', 'Log', and 'Model'. The 'Communication' option is selected.

On Selected Files: Set Format Set Document Type Set Zone Set Phase

--status messages--

On Selected Files: Set Format Set Document Type Set Zone Set Phase Set Discipline

- ☐ File object properties assigned
- ☐ Selected Objects identified

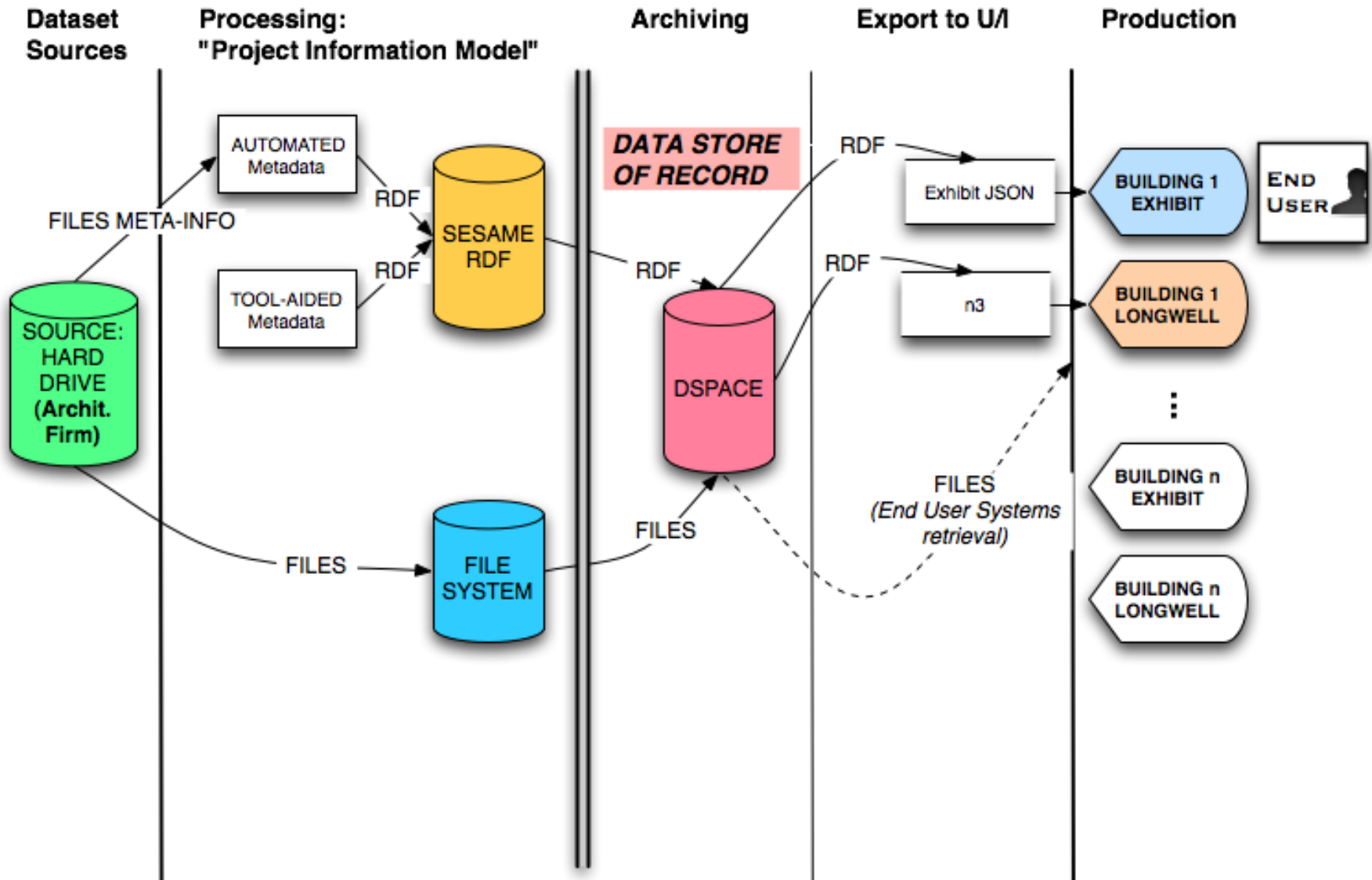
DSpace Archive

- ❑ Preservation, dissemination, access control
- ❑ FACADE UI external to DSpace
- ❑ Bulk ingest tools (e.g. Curators' Workbench; DSpace "packager" importer)
- ❑ Format registry integration for technical curation (GDFR, PRONOM, DSpace internal)



FACADE Data Stores, Data Flows

Last mod.: April 30, 2009 DRAFT



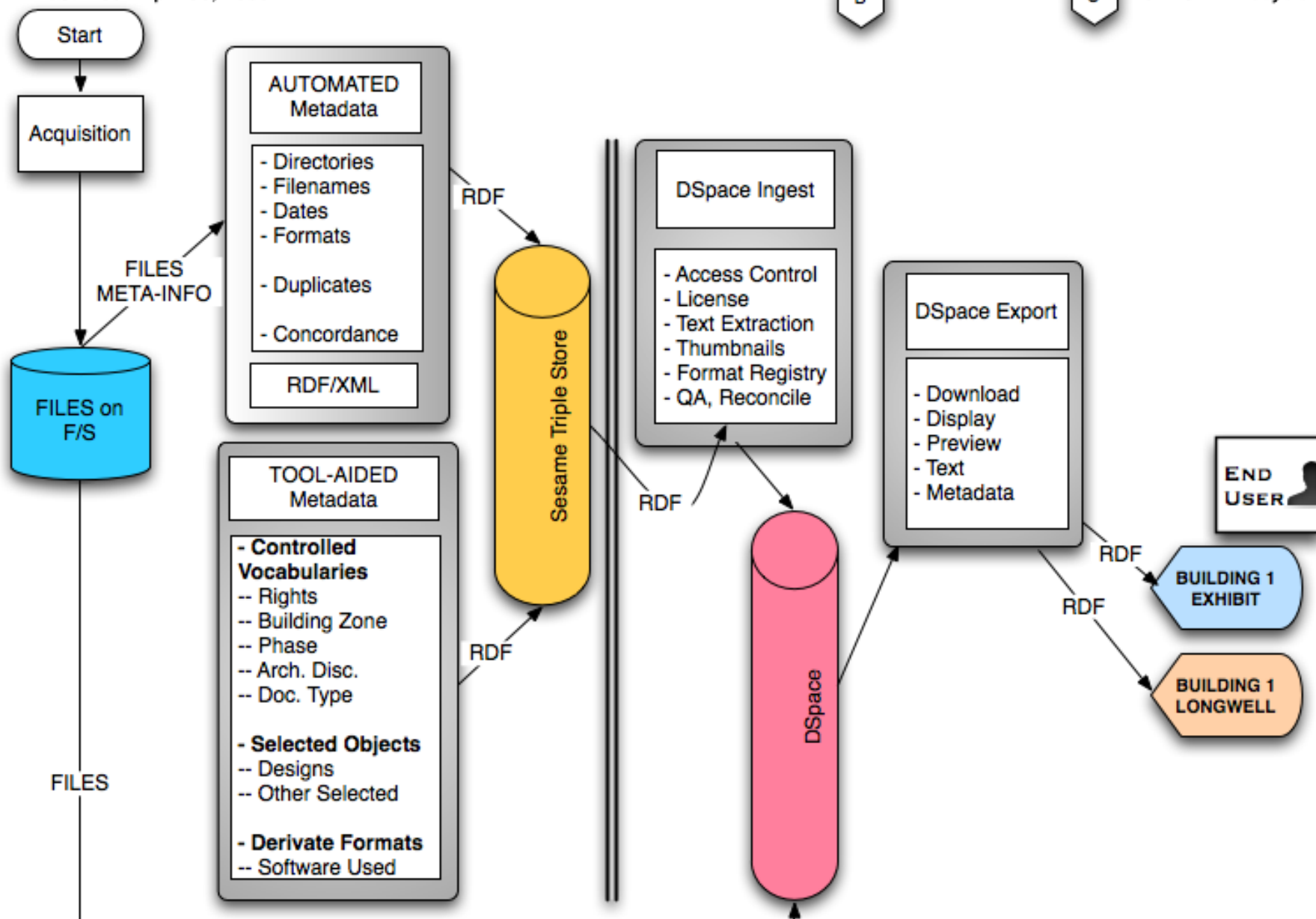
FACADE Data Processes

Last mod.: April 30, 2009 DRAFT

Publish Workflow

TODO Preview Workflow

TODO Re-Constitute Workflow / Lifecycle



The “Archive”

Result of current work:

Creating a research/teaching
archival collection, not a records
repository.

User Interface

- SIMILE “Exhibit”
- SIMILE “Longwell”

SIMILE tools

- SIMILE
 - <http://simile.mit.edu/>
 - Exhibit and Timeline tools
 - Publishing framework for web display
- Longwell
 - RDF-based faceted browser
 - <http://simile.mit.edu/wiki/Longwell>

FACADE Projects Catalog: Carousel View

FACADE PROJECTS

ITEMS • MAP • TIMELINE • CAROUSEL



Disney Concert Hall
Gehry Partners, LLP



The U.S. Institute of Peace
Headquarters
Moshe Safdie and
Associates



Ray and Maria Stata Center
Gehry Partners, LLP



The Peabody Essex Museum
Moshe Safdie

Search

Is Built?

false (3)
true (6)

Extent

1,050,000 sq. ft. (1)
111,000 square feet (1)
150,000 square feet (1)
18,000 sq. ft. (1)
200,000 sq. ft. (1)
258,333 sq. ft. (1)
6,000,000 square feet (1)
605,000 sq. ft. (1)
720,000 sq. ft. (1)

Creator

Gehry Partners, LLP (3)
Morphosis (3)
Moshe Safdie and Associates (3)

Context

Government Campus (1)
Small town (1)
Urban (4)
Urban University Campus (2)
Urban Waterfront (1)

Climate

Dry-Summer Subtropical Zone (2)
Humid Continental (2)
Humid Subtropical (2)
Mediterranean (1)
Oceanic (1)
Tropical rainforest (1)

Construction System

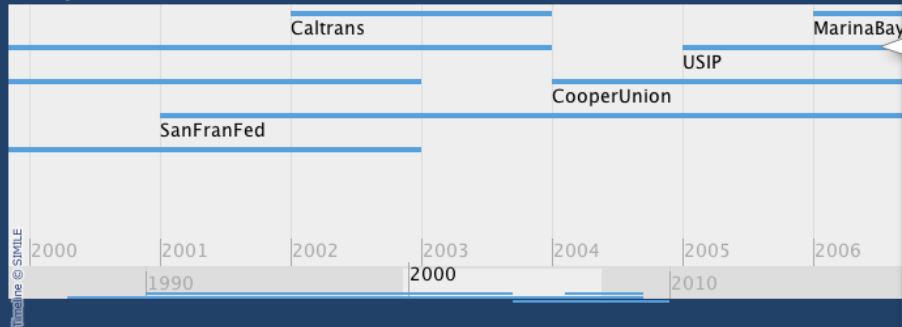
Custom perforated stainless steel panels attached to a tube steel frame bolted to concrete building frame. (1)
Poured-in-place concrete, custom steel frame, hand-set brick, custom

FACADE Projects Catalog: Timeline View

FACADE PROJECTS

ITEMS • MAP • TIMELINE • CAROUSEL

9 Projects



THE U.S. INSTITUTE OF PEACE HEADQUARTERS

Designed by renowned architects Moshe Safdie and Associates, the headquarters is a symbolic architectural statement of our nation's commitment to peace, visible along the capital skyline. The building will be environmentally-friendly and LEED certified. It will have three distinct sections linked together by atriums covered by a series of wing-like roof elements constructed of steel frames and white translucent glass.

Building Steel and glass
Features: roof feature intimating the wings of a dove.
Cost: \$65,000,000
Building Administrative
Type: Government Facility
Contributor: Unknown
Location Washington, D.C., U.S.A.

Architectural Expressionist
Style:
Alternative USIP
names:
Extent 150,000 square feet
Is built? false
Climate: Humid Subtropical

Creator: Moshe Safdie and Associates
Construction Steel, concrete and glass
System:
Context: Government Campus
Start Date: 2005
End Date: 2009

Construction System

Custom perforated stainless steel panels attached to a tube steel frame bolted to concrete building frame. (1) Poured-in-place concrete, custom steel frame, hand-set brick, custom

Caltrans Project "Exhibit": Tiles View



Caltrans District 7 Headquarters



Tiles • Table • Timeline

5 File filtered from 55 originally (Reset All Filters)

sorted by: labels; then by... • ☒ grouped as sorted



[Source Path](#) site model images/enhanced final images/axon1.jpg
[Architectural Discipline](#) Architecture
[Zone](#) Caltrans
[Phase](#) Competition
[Doc Type](#) Model
[Format](#) JPEG File Interchange Format 1.02
[Extension](#) jpg
[File Size](#) 193405
[Original Directory Location](#) enhanced final images
[Created](#) 2001-11-06T04:48:38





[Source Path](#) site model images/enhanced final images/axon2.jpg
[Architectural Discipline](#) Architecture
[Zone](#) Caltrans
[Phase](#) Competition
[Doc Type](#) Model
[Format](#) JPEG File Interchange Format 1.02
[Extension](#) jpg
[File Size](#) 178675
[Original Directory Location](#) enhanced final images
[Created](#) 2001-11-06T04:46:16



Search

Type

5 File

Original Location

1 02-08-06
 4 enhanced final images

Format

19 (missing this field)
 3 ASCII Text
 4 AutoDesSys Form.Z model
 3 Initial Graphics Exchange Standard
 5 JPEG File Interchange Format 1.02

Extension

5 jpg

Exhibit: Timeline, with Popup, Download



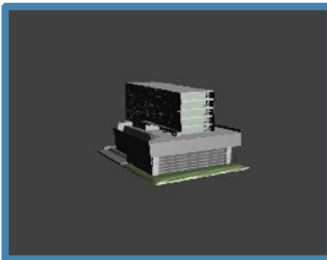
Caltrans District 7 Headquarters

55 Items

Tiles • Table • Timeline

1 result out of 55 cannot be plotted.

Filename: CAL-ZB-e01.f mz



Source Path Competition/01-10-18/C
 Architectural [Architecture](#)
 Discipline
 Zone [Caltrans](#)
 Phase [Competition](#)
 Doc Type [Model](#)
 Format [AutoDes](#)
 Extension fmz
 File Size 7582779
 Original [01-10-1](#)
 Directory
 Location
 Created 2001-10

Site Model Axon 1
 Site Model First Street
 Site Model Site Plan View
 Site Model Axon 2

Opening CAL-ZB-e01.f mz

You have chosen to open

☒ CAL-ZB-e01.f mz
 which is a: Binary File
 from: <http://facade-demo.mit.edu:8080>
 Would you like to save this file?

Cancel Save File

Search

Type

18 Design
 37 File

Original Location

19 (missing this field)
 9 01-10-18
 2 02-08-06
 17 3-cd
 4 enhanced final images
 4 For Thom's Lecture

Format

19 (missing this field)
 3 ASCII Text
 4 AutoDesSys Form.Z model
 3 Initial Graphics Exchange Standard
 5 JPEG File Interchange Format 1.02

Extension

19 (missing this field)
 8 dgn
 4 fmz
 3 igs
 5 jpg
 11 pdf

Design File

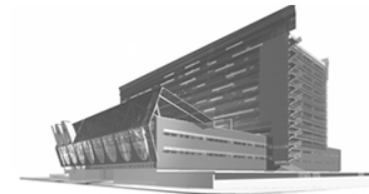
Caltrans "Longwell": "Starting Points" View

Caltrans District 7 Headquarters

FACADE Viewer // Data-set: CALTRANSv1 (12.16.2008)

Featured Data-Sets:

- [Design Drawings, Models and Sets](#)
- [Photographs](#)



🔍 Type here to search

Phases

- [\(missing\)](#) 13471
- [Construction Documents](#) 10373
- [Design Development](#) 1904
- [Competition](#) 512
- [Pre-Schematic Design](#) 506
- [Schematic Design](#) 380
- [\(missing\)](#) 164
- [Post-Construction Documents](#)
- [Does Not Apply](#) 2

Document Types

- [\(missing\)](#) 13485
- [Drawing](#) 10946
- [Photograph](#) 1641
- [Communication](#) 341
- [Specification](#) 301
- [Presentation](#) 132
- [Work File](#) 119
- [Unknown](#) 115
- [Model](#) 65
- [Product Brochure](#) 55
- [Rendering](#) 54
- [Sketch](#) 34
- [Other](#) 17
- [Circularly Filed](#) 3
- [Agreement](#) 2
- [Index](#) 2

Zones

- [\(missing\)](#) 13469
- [Caltrans](#) 12192
- [Core Building](#) 1344
- [Plaza](#) 172
- [Trellis](#) 131
- [Does Not Apply](#) 3
- [South Section](#) 1

File Formats

- [Microstation CAD Interchange Format 1.01](#) 8758
- [AutoCAD Drawing 2000-2002](#) 4708
- [AutoCAD Drawing R14](#) 3168
- [\(missing\)](#) 3055
- [ASCII Text](#) 1291
- [AutoCAD Shape/Font File](#) 1084
- [Tagged Image File Format 3](#) 906
- [ISO8859 Text](#) 496
- [Hewlett Packard Vector Graphic Plotter File](#) 488
- [Adobe TrueType Font data](#) 396
- [Portable Document Format 1.2](#) 285
- [AutoCAD Colour-Dependant Plot Style Table](#) 249
- [AutoCAD Colour-Dependant Plot Style Table](#) 245

Architectural Discipline

- [\(missing\)](#) 13482
- [Architecture](#) 13088
- [Structural](#) 412
- [Interiors](#) 102
- [Security](#) 67
- [Food Service](#) 38
- [Plumbing](#) 32
- [Mechanical](#) 26
- [Signage](#) 23
- [Landscape](#) 15
- [Lighting](#) 13
- [Audiovisual](#) 6
- [Civil](#) 3
- [Electrical](#) 2
- [Does Not Apply](#) 2
- [Info Tech](#) 1

Longwell: Table View, with Popup



Caltrans District 7 Headquarters

FACADE Viewer // Data-set: CALTRANSv1 (12.16.2008)

Featured Data-Sets:

2001-11-06T04:46:16

Download:



[\[external link\]](#)

Model Axon 1

18 items. < 1 next >

[auto-pick columns](#) | [add column...](#)

▼TABLE 

				✕ design type	✕ architectural discipline	✕ phase	✕ zone
	 external link			Model	Architecture	Competition	Caltrans
	Model Axon 1						
2.	Caltrans District 7 Headquarters Site Model Axon 2	axon2.jpg	axon2.jpg	Model	Architecture	Competition	Caltrans
3.	18 October 2001 Competition 3D Model Set	CAL-base-3dprint-02.stl	CAL-ZB-e01.f mz-deriv.igs • CAL-ZB-e01.f mz-deriv.pdf • CAL-ZB-e01.f mz • CAL-ZB-e01.f mz-deriv.stp • CAL-base-3dprint-02.stl • CAL-ZB-b01.f mz-deriv.igs • CAL-ZB-b01.f mz • CAL-ZB-b01.f mz-deriv.pdf • CAL-ZB-b01.f mz-deriv.stp	Model Set	Architecture	Competition	Caltrans
4.	Caltrans District 7 Headquarters Lobby 3D Model	cal-lobby-020806.f mz	cal-lobby-020806.jpg • cal-lobby-020806.f mz	Model	Architecture	Construction Documents	Core Building
5.	Caltrans District 7 Headquarters Geometry Plan	cal-s_010_0.d gn	cal-s_010_0.d gn • cal-s_010_0.d gn-deriv.pdf	Drawing	Structural	Construction Documents	Core Building

Text Search

Attribute Filters

▸ architectural discipline

▸ audience

▸ creator

▸ has file

▸ has index

▸ isPartof

▼ phase

10 ☒ Construction Document

7 ☒ Competition

1 ☒ Schematic Design

Done

Longwell: Tiles View, Full Text Search; MS-Word .DOC



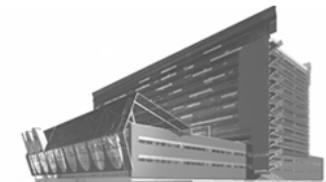
Caltrans District 7 Headquarters

FACADE Viewer // Data-set: CALTRANSv1 (12.16.2008)

Featured Data-Sets:

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21 item(s) in 3 pages.

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Complete S



Leed_Storage and Collection of Recyclables.doc

Architectural Discipline:

Architecture

Document Type:

Work File

Source:

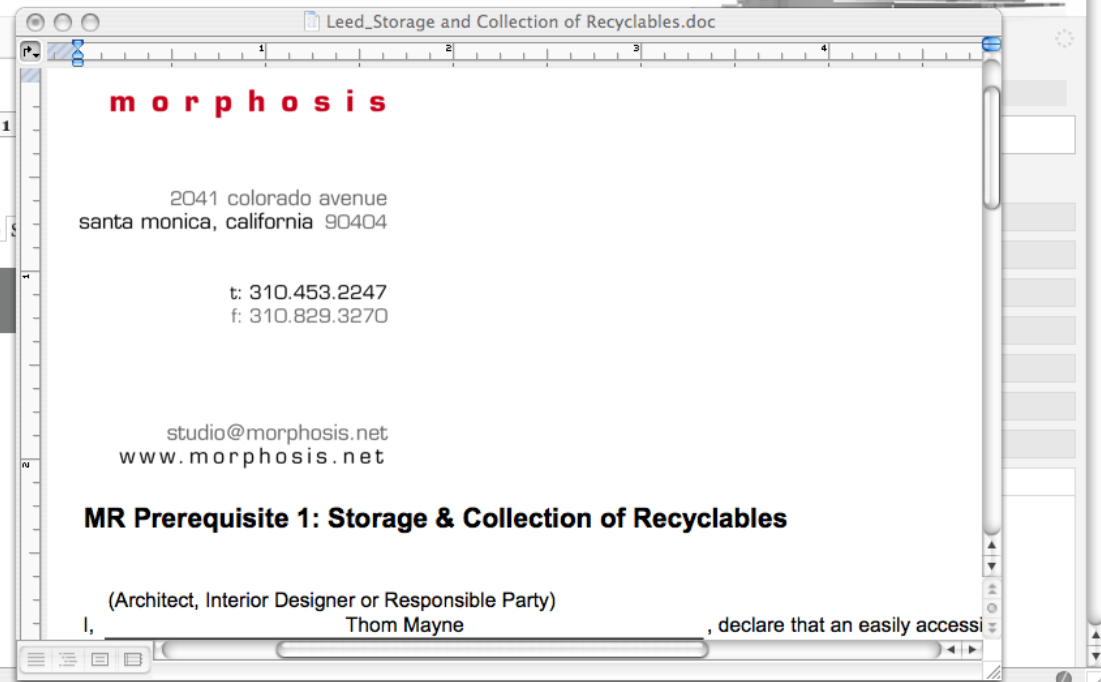
Caltrans LEED/Leed_Storage and Collection of Recyclables.doc

Format:

Microsoft Word for Windows Document 97-2003

Filesize:

108032



Outcomes of Project

(forthcoming...)

INSTITUTIONS:

- ☐ Open source, production quality software (repository; U/I)
- ☐ Preservation strategy, format info, for 3D CAD
- ☐ Ontology, workflow

USERS:

- ☐ Availability of materials
- ☐ Improvement over “File System” organization
- ☐ Some add’l. metadata

Challenges (an archivist's view)

- Intellectual Property
 - Rights, Restrictions
- Access, Display
 - What will work, how will it work?
- Long-term Preservation
 - Software; digital preservation in general
- Sustainability
 - How support?

Next Steps

Next for MIT

- ☐ Evaluating work products
- ☐ Pursue follow-up grant
 - ☐ Focus on digital preservation of 3-D CAD
- ☐ Pilot Fall 2009
 - ☐ Analyze resources needed
 - ☐ Cataloging/curating
 - ☐ Programming/tech support
 - ☐ Issues (Access, IP, ...)

Final Comments

- ❑ Opportunities
 - ❑ Tools (ex. Curator's Workbench) to address large "data" files
 - ❑ Interface developments
- ❑ Challenges
 - ❑ Scalability
 - ❑ I.P. hurdles
- ❑ Questions
 - ❑ wreilly@mit.edu; rosko@mit.edu

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The views and conclusions contained of this presentation are those of the author and should not be interpreted as representing the official policies, either expressed or implied, of the IMLS or the U.S. Government.

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