



THE ART INSTITUTE OF CHICAGO
DEPARTMENT OF ARCHITECTURE AND DESIGN

Constructing Sustainability

Implementing a Born-Digital Architecture and Design Archive at the Art Institute of Chicago

SAA Annual Meeting
Thursday, August 30th, 2007
Carissa Kowalski Dougherty
The Art Institute of Chicago
ckowalski@artic.edu

Collecting, Archiving, and Exhibiting Digital Design Data

Study published in 2004, in collaboration with Kristine Fallon Associates

- International survey
- Case studies
- Research
- Recommendations
- Design charette



Recommendation: Two-Tiered Collection Approach

First tier:
“Native” files

- 3ds Max (.max)
- ABVENT Art-lantis (.atl)
- AccuRender (.dwg)
- Adobe Acrobat (.pdf)
- Adobe Acrobat Distiller (.ps)
- Adobe After Effects
- Adobe Illustrator (.ai)
- Adobe InDesign (.indd)
- Adobe Pagemaker (.pmd)
- Adobe Photoshop (.psd)
- Adobe Premiere (.prproj)
- Alias Power Animator
- Alias Sketchbook Pro (.jpg, .tiff)
- Alias Studio (.wire)
- AlphaGraphics E-Z Pix (.jpg, .tiff)
- ARCHIBUS (.dbf – Oracle database)
- ARRIS CAD
- AutoCAD (.dwg, .dxf)
- Autodesk Architectural Desktop (.dwg)
- Autodesk Architectural Studio (.asw)
- Autodesk Inventor (.idw, .ipt, .iam)
- Autodesk MAP (.dwg)
- Autodesk Revit (.rvt)
- Autodesk VIZ (.max)
- Camtasia Recorder (.avi)
- CorelDRAW (.cdr)
- DESTINI V1.0
- DOE-2
- Electric Image Universe
- Filemaker (.fmp, .fpt)
- formZ (.fmz)
- Graphisoft ArchiCAD (.pln)
- Graphite (.vc6)
- Lightwave 3D (.lw, .lwo, .lws)
- Macromedia Director (.dir, .dcr)
- Macromedia Flash (.fla, .swf)
- Macromedia Freehand (.fh10)
- Maya (.ma, .mb)
- Media 100 (.mov)
- Microsoft Access (.mdb)
- Microsoft Excel (.xls)
- Microsoft PowerPoint (.ppt)
- Microsoft Word (.doc)
- MicroStation (.dgn)
- MicroStation TriForma (.dgn)
- Nemeteck Allplan (.000)
- NuGraf (.bdf)
- Pro/Engineer (.asm, .prt)
- QuarkXPress (.qxd)
- Rhinoceros (.3dm)
- SketchUp (.skp)
- Solidworks (.slddrw, .sldprt, .sldasm)
- Surfware SURFCAM (.dsn)
- VectorWorks (.mcd)

.pdf
.tif

Line drawings,
vector-based graphic files,
text documents,
PowerPoints

Renderings,
Digital photographs


Second tier:
“Output” files



DAArch: Digital Archive for Architecture

24-month project with Kristine Fallon Associates and Art Institute staff
Based largely on recommendations and research from 2004 study

Goals:

- Establish workflow
 - Produce pilot archive of born-digital materials
 - Develop software program (DAArch)
 - Update recommendations to design firms
- 

DAArch Born-Digital Accessions



Garofalo Architects

Manilow Residence, 2001–2003

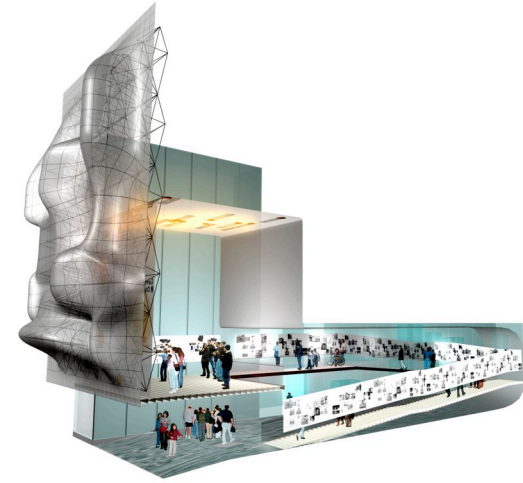
Digital tools extremely important to design (and construction) process

Used primarily Microstation (2D), Maya (3D), and Adobe Suite (image editing/layout)

Project archive includes:

- over 200 “native” vector 2D files (.dxf, .dgn, .dwg)
- ~50 “native” composite 2D files (.psd, .ppt)
- ~60 “native” 3D or animation files (.mb, .avi)
- ~125 .jpg files
- ~145 .pdf files
- ~195 .tif files

DAArch Born-Digital Accessions



UrbanLab

Visitor Information Center Competition Entry, 2001

Unbuilt project with very little physical output

Used primarily AutoCAD (2D), Maya (3D), FormZ (3D), and Adobe Illustrator (layout)


Project archive includes:

- ~15 “native” vector 2D files (.dxf, .dwg)
- ~35 “native” 3D or animation files (.mb, .fmz, .igs)
- ~50.pdf files
- ~50 .tif files

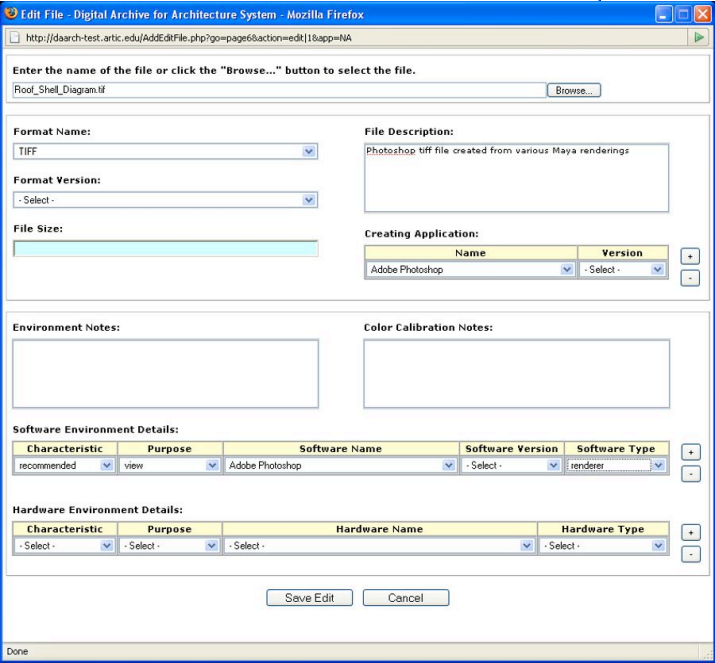
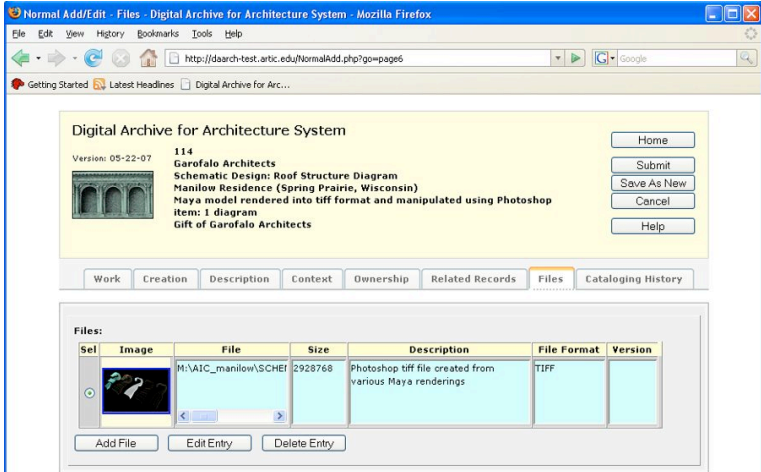
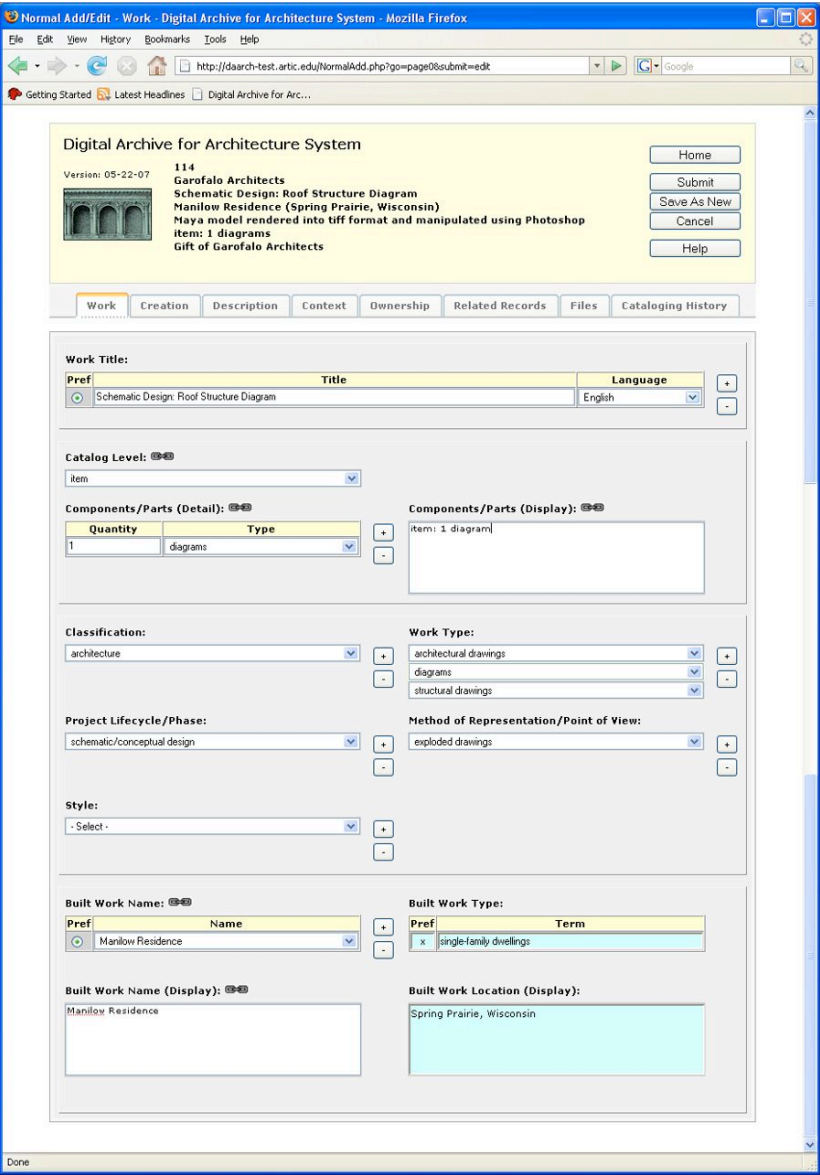


DAArch Software

Key features:

- Browser-based user interface
 - DSpace as back-end repository
 - Dublin Core augmented with CDWA and custom metadata in side tables
 - Incorporates authority records for Agents, Places, Concepts, and Built Works
 - Group- and item-level cataloging
 - Will be made available to open source community with BSD license via SourceForge
- 

DAArch Software: Some Screen Shots

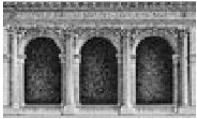


Recommendations versus Real-World “Standards”

Issues:

- File naming and organization
- Metadata for digital objects
- Software and migration tools
- Three-dimensional objects, BIM, animations, etc.





THE ART INSTITUTE OF CHICAGO
DEPARTMENT OF ARCHITECTURE AND DESIGN

Constructing Sustainability

Implementing a Born-Digital Architecture and Design Archive at the Art Institute of Chicago

SAA Annual Meeting
Thursday, August 30th, 2007
Carissa Kowalski Dougherty
The Art Institute of Chicago
ckowalski@artic.edu
