Accessing Digital Art: Emulation and Preservation of Complex Digital Art Objects

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Digital Library Federation
Founded in 2002

Rose Goldsen Archive of New Media Art

Research Repository
Complexity of Works

Interactivity

Non-linear form

Visual, aural and textual interplay

Storage strategy of media
Preservation & Access Framework

- Develop methodology for analysis of works
- Define significant properties
- Develop metadata requirements

https://confluence.cornell.edu/display/pafdao/Home
Creating Disk Images

Sector-by-sector copy of CD-ROM

Retain disk structure and contents; separate from fragile media

Derive Guymager output
Preservation

Dark Archive

NDSA Level 1

Fedora storage:
3 types of objects:

Resource
Aggregate
Metadata
<?xml version="1.0" encoding="UTF-8"?>
<date>2013-03-29T17:20:05-04:00</date>
<repInfo uri="/cular_prod_0703_20130329_1364592001/LEPPReports/CLNS/1979/CLNS97-1457/fig2.ps">
<reportingModule name="ASCII-hul" release="1.3" date="2006-09-05"/>
<lastModified>1997-02-03T09:19:14-05:00</lastModified>
<size>13562</size>
<format.ASCII/>
<status>Well-Formed and valid</status>
</mimeType>
<mimeType>text/plain; charset=US-ASCII</mimeType>
<properties>
<property>
<name>ASCIIIMetadata</name>
<values arity="List" type="Property">
<property>
Structuring Deposit: the obvious

Resource
Aggregate
Metadata

Structure predictably ordered & extensible

Metadata indexing

Individual Work

MARCXML

Disk Image

Disk image 1
Disk image 2...
Guymager txt file

Derivatives (as needed)

Disk image 1
Disk image 2...
Documentation...

Related

Image files of cases, booklets, flyers, inserts, etc. associated with work
Metadata

DFXML & additional Utility outputs

Issues:
- HFS information
- non-automatically derivable
- over-description
Structuring Deposit: file information

Metadata indexed
- access points
- attributes & dependencies

Resource Aggregate Metadata

Individual Work

MARCXML

Disk Image
DFXML
PREMIS
Disk image 1
Disk image 2...
Guymager txt file

Derivatives (as needed)
DFXML
PREMIS
Disk image 1
Disk image 2...
Documentation...

Related
Image files of cases, booklets, flyers, inserts, etc. associated with work
Emulation

Interaction to fulfill research needs

Layers of the Stack

“Depth” of emulation

Mac vs. Windows

WINE compatibility layer
Classification fallacies

Compiled code & executables
- Emulation-dependent
- Difficult to provide access

Web files, markup languages
- Browser-based
- Easy to provide access
Structuring Deposit

Clarity for stewards

Facilitate future research

Assist in future emulation strategies
Project Team

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Discussion
Image credits (in order of appearance)

- The mid-90s is under this car. Picture taken by Dianne Dietrich.
- Physical CD – David Thomas; The Encoded Eye, The Archive, and its Engine House
- Rare and Manuscript Collections (interior) – http://rmc.library.cornell.edu/presidents/view_image.php?img=97
- Norie Neumark; Shock in the Ear – Screenshot from Contact Zones webpage: https://contactzones.cit.cornell.edu/artists/neumark.html/
- CULAR Logo – Carla DeMello
- Shattered CDs – photo by lydyth; http://www.pxleyes.com/photography-picture/4b58e0e25d4d1/Dreaded-Broken--amp--Damaged-CD-s.html/
- Yassine Bouhlel; A Nostalgic Rummage Through the History of Flash http://code.tutsplus.com/articles/a-nostalgic-rummage-through-the-history-of-flash--active-6733
Image credits (in order of appearance)

- Operating System Documentation Project; Mac System Software, [http://www.operating-system.org/betriebssystem/_english/bs-macos.htm](http://www.operating-system.org/betriebssystem/_english/bs-macos.htm)
- Selected screen captures – Norie Neumark, Shock in the Ear; Renate Ferro, Panic Hits Home; Yao Jui Chung, The Soul Is But One Instant; Mark Hansen, Ben Rubin, Listening Post; Reginald Woolery, Million Man March/World Wide Web (From Rose Goldsen Archive of New Media Art homepage, [http://goldsen.library.cornell.edu/](http://goldsen.library.cornell.edu/))