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

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Digital Library Federation

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Rose Goldsen Archive of New Media Art

Founded in 2002

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_ingest/ingest/eclipse/appdata/ingest/LEPPReports_0703_20130329_1364592001/LEPPReports/CLNS/1979/CLNS97-1457/fig2.ps">
    <reportingModule release="1.3" date="2006-09-05">ASCII-hul</reportingModule>
    <lastModified>1997-02-03T09:19:14-05:00</lastModified>
    <size>13562</size>
    <format>ASCII</format>
    <status>Well-Formed and valid</status>
    <mimeType>text/plain; charset=US-ASCII</mimeType>
  </repInfo>
  <properties>
    <property>
      <name>ASCIIIMetadata</name>
      <values arity="List" type="Property">
        <property>
          ...
        </property>
      </values>
    </property>
  </properties>
</jhove>
Structuring Deposit: the obvious

Structure predictably ordered & extensible

Metadata indexing

Resource

Aggregate

Metadata

Individual Work

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

MARCXML

Disk Image

Related

Derivatives (as needed)
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
Classification realities

- HTML/Browser
- VRML
- Plugins
- Applications
Structuring Deposit

Clarity for stewards
Facilitate future research
Assist in future emulation strategies

- Documentation
- Compiled Emulators
  - Images
  - Executables
  - ROMs
- Artworks
  - Individual Work
    - Disk image
    - Derivative
    - Related

Documentations, Artworks, Compiled Emulators, ROMs, Executables, Images, Derivative, Disk image, Related, Executables, Images, ROMs, Individual Work, Disk image, Derivative, Related.
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)

- 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/)