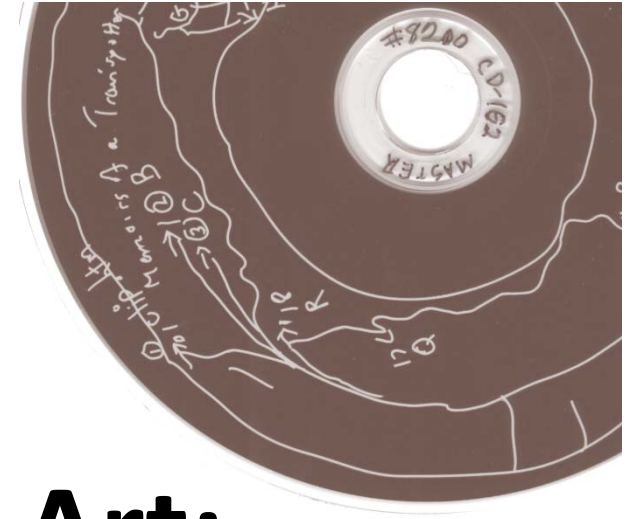




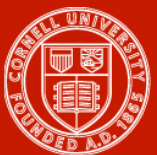
In the Service of Art: Metadata for Preservation of Interactive Digital Artworks

Jason Kovari | Head of Metadata Services & Web Archivist
jak473@cornell.edu | Cornell University Library

ALCTS-PARS Preservation Metadata Interest Group
ALA Annual | 2015.06.27

(very brief) Background : PAFDAO

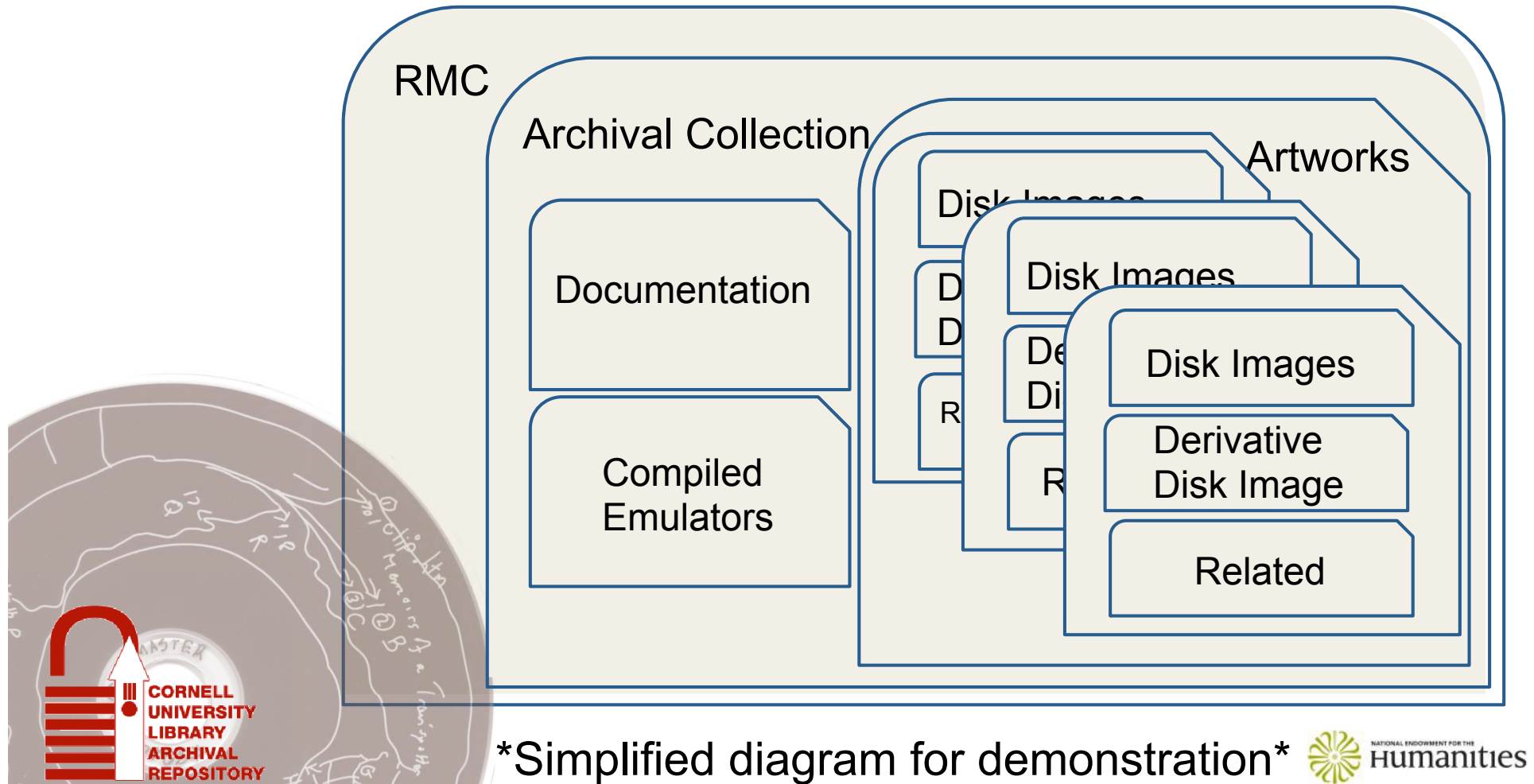
- Interactive new media art preservation
- NEH funded project R&D (2013-2015)
 - user survey
 - disk imaging
 - **metadata**
 - emulation
 - ingest
 - more...



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PAFDAO Deposit Structure



NATIONAL ENDOWMENT FOR THE
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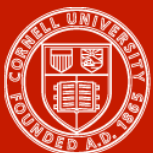
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Descriptive Metadata

MARCXML

- legacy bibliographic records
- first-pass technical & artistic understanding
 - `<marc:datafield tag="538" ind1=" " ind2=" ">`
`<marc:subfield code="a">`System requirements
(MS Windows 95 or higher): IBM-compatible PC,
80486; 8 MB RAM (16 MB recommended); 256-
colour VGA (640x480); CD-ROM drive (8x). `</`
`marc:subfield></marc:datafield>`



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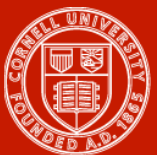
Technical Metadata

DFXML

- derived from command line utilities
- concern: HFS-specific information
 - `<mods:note type="HFS_entry_type">`
 - `<mods:note type="HFS_filetype_creator">`
 - `<mods:note type="HFS_resource_fork_size">`

A CD-ROM is shown in the bottom left corner. It has handwritten notes in white ink, including 'P1', 'P2', 'P3', 'P4', 'P5', 'P6', 'P7', 'P8', 'P9', 'P10', 'P11', 'P12', 'P13', 'P14', 'P15', 'P16', 'P17', 'P18', 'P19', 'P20', 'P21', 'P22', 'P23', 'P24', 'P25', 'P26', 'P27', 'P28', 'P29', 'P30', 'P31', 'P32', 'P33', 'P34', 'P35', 'P36', 'P37', 'P38', 'P39', 'P40', 'P41', 'P42', 'P43', 'P44', 'P45', 'P46', 'P47', 'P48', 'P49', 'P50', 'P51', 'P52', 'P53', 'P54', 'P55', 'P56', 'P57', 'P58', 'P59', 'P60', 'P61', 'P62', 'P63', 'P64', 'P65', 'P66', 'P67', 'P68', 'P69', 'P70', 'P71', 'P72', 'P73', 'P74', 'P75', 'P76', 'P77', 'P78', 'P79', 'P80', 'P81', 'P82', 'P83', 'P84', 'P85', 'P86', 'P87', 'P88', 'P89', 'P90', 'P91', 'P92', 'P93', 'P94', 'P95', 'P96', 'P97', 'P98', 'P99', 'P100'. The CD is labeled 'MASTER' in the center.[illegible]

- derived from command line utilities
- concern: HFS-specific information
 - `<mods:note type="HFS_entry_type">`
 - `<mods:note type="HFS_filetype_creator">`
 - `<mods:note type="HFS_resource_fork_size">`



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Preservation Metadata

GUYMAGER ACQUISITION INFO FILE

GuyMager

```
Version : 0.7.4-1
Compilation timestamp: 2014-09-11-10.35.59
Compiled with : gcc 4.7.2
libewf version : 20100226
libguytools version : 2.0.2
Host name : ubuntu
Domain name : (none)
System : Linux ubuntu 3.13.0-40-generic #69-Ubuntu SMP Thu Nov 13 17:53:56 UTC 2014 x86_64
```

Device information

```
Command executed: bash -c "search='`basename /dev/sr2`: H..t P.....d A..a de.....d' && dmesg | grep -A:
echo "No kernel HPA messages for /dev/sr2"
Information returned:
```

No kernel HPA messages for /dev/sr2.

```
Command executed: bash -c "smartctl -s on /dev/sr2 ; smartctl -a /dev/sr2"
Information returned:
```

```
smartctl 6.2 2013-07-26 r3841 [x86_64-linux-3.13.0-40-generic] (local build)
Copyright (C) 2002-13, Bruce Allen, Christian Franke, www.smartmontools.org
```

=== START OF ENABLE/DISABLE COMMANDS SECTION ===

```
unable to fetch IEC (SMART) mode page (unsupported field in scsi command)
A mandatory SMART command failed: exiting. To continue, add one or more '-T permissive' options.
smartctl 6.2 2013-07-26 r3841 [x86_64-linux-3.13.0-40-generic] (local build)
Copyright (C) 2002-13, Bruce Allen, Christian Franke, www.smartmontools.org
```

=== START OF INFORMATION SECTION ===

```
Vendor: PLEXTOR
Product: CD-R PX-W2410A
Revision: 1.04
User Capacity: 550,977,536 bytes [550 MB]
Logical block size: 2048 bytes
Device type: CD/DVD
Local time is: Tue Nov 25 11:54:39 2014 EST
SMART support is: unavailable - device lacks SMART capability
```

=== START OF READ SMART DATA SECTION ===

```
No bad sectors encountered during acquisition.
No bad sectors encountered during verification.
State: Finished successfully
```

```
MD5 hash : 0130337591fa35961e9e2aaf202ee16c
MD5 hash verified source : 0130337591fa35961e9e2aaf202ee16c
MD5 hash verified image : 0130337591fa35961e9e2aaf202ee16c
SHA1 hash : aa6d191e617fd671874f05b022128c12b1a89c43
SHA1 hash verified source : aa6d191e617fd671874f05b022128c12b1a89c43
SHA1 hash verified image : aa6d191e617fd671874f05b022128c12b1a89c43
SHA256 hash : 71c25934f13640bcc8f2f72aeb96a4c2343b4bd56e865136fe9795db1948d374
SHA256 hash verified source : 71c25934f13640bcc8f2f72aeb96a4c2343b4bd56e865136fe9795db1948d374
SHA256 hash verified image : 71c25934f13640bcc8f2f72aeb96a4c2343b4bd56e865136fe9795db1948d374
Source verification OK. The device delivered the same data during acquisition and verification.
Image verification OK. The image contains exactly the data that was written.
```



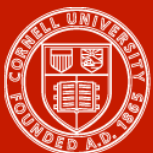
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Preservation Metadata

PREMIS

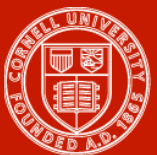
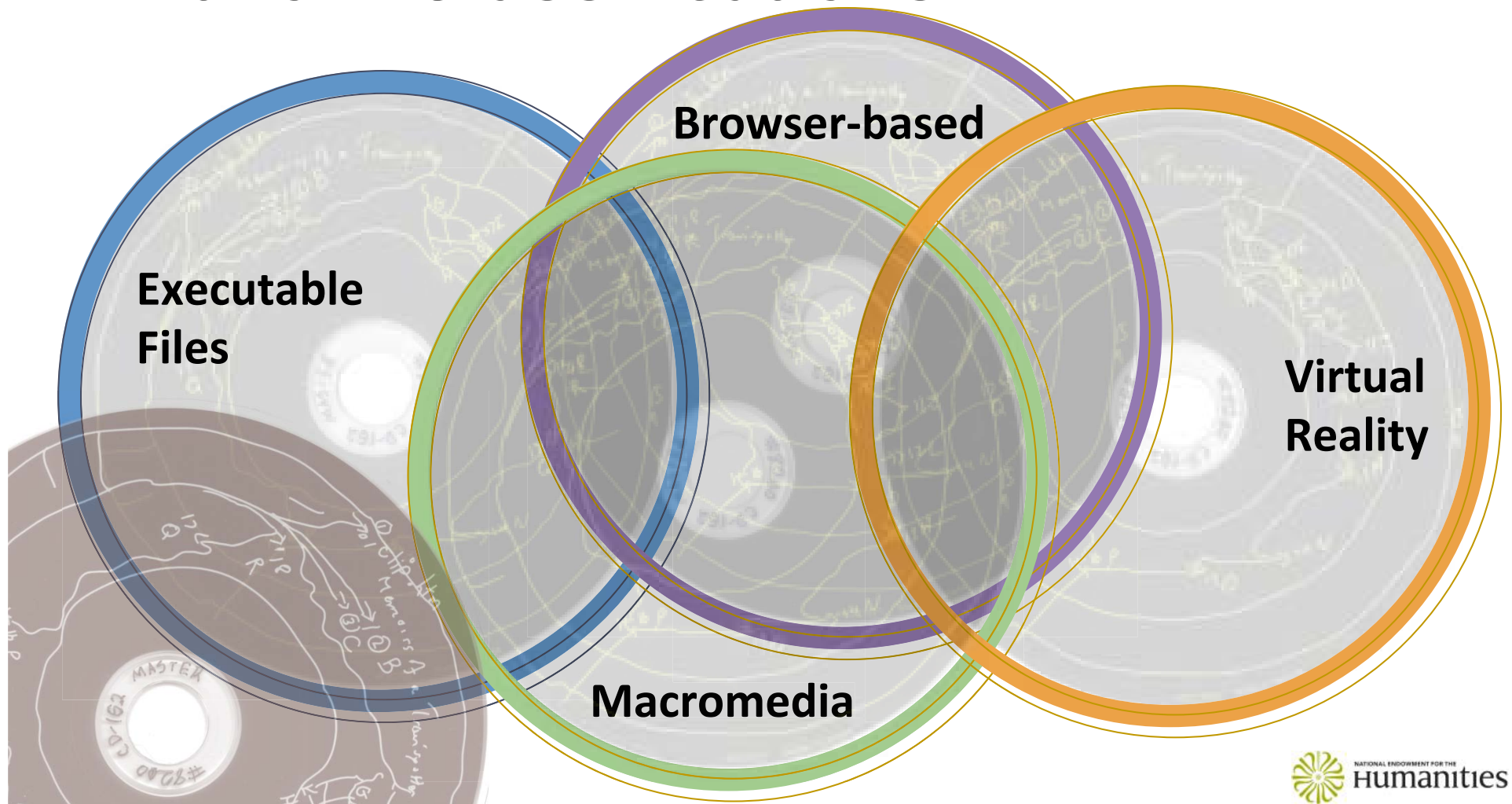
- Script pull from Guymager Info file
- References to classifications



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Artwork Classifications

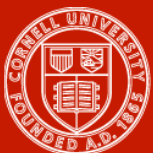


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Unstructured Metadata - Narratives

- Emulator Documentation
- Sector Notes Documentation

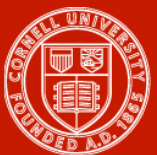


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Next plans

- White paper
- Review PREMIS v.3



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PAFDAO team:

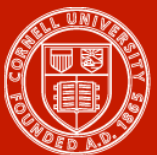
Grant PIs: Oya Rieger, Timothy Murray

Team: Desiree Alexander, Madeleine Casad, Dianne Dietrich, Jason Kovari, Danielle Mericle, Liz Muller, Michelle Paolillo

Consultants (AVPreserve): Alex Duryee, Chris Lacinak, Kara VanMalssen

Advisory Board: Ben Fino-Radin, Jean Gagnon, Rebecca Guenther, Matthew Kirschenbaum, Jon Ippolito, Norie Neumark, Christiane Paul, Richard Rinehart, Simeon Warner

This work supported by a grant from the
National Endowment for the Humanities



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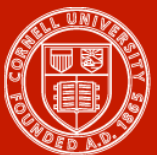
Thank you!

2 positions available:

- Metadata Librarian
- Web Archiving & Emerging Formats Librarian

<http://careers.hr.cornell.edu/>

Ask me about these positions! : jak473@cornell.edu



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