Care & Feeding of Digital Assets: Migration, Preservation & Access

Lynda Schmitz Fuhrig

11/20/2014
What type of media is it?

Museum Of Obsolete Media


Digital Audio Tape (DAT) was a digital magnetic audio tape format, initially designed for audio. It was introduced by Sony in 1987.

It used 4mm tape in a cassette, roughly half the size of a Compact Cassette. DAT tapes are between 15 and 180 minutes in length, a 120-minute tape being 60 meters in length.

The Recording Industry Association of America (RIAA) unsuccessfully lobbied against the introduction of DAT devices into the US, but a tax was imposed on DAT recorders and blank media from 1992.

It was never widely adopted by consumers due to its cost, but saw use in professional recording and as a data storage medium (called Digital Data Storage or DDS).

A small number of albums were commercially released on DAT in the first few years of the format.

In 2005, Sony discontinued its remaining DAT recorders.

Sources / Resources
## What do you have?

<table>
<thead>
<tr>
<th>Location</th>
<th>Wright's Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Description of media</td>
<td>CDs, DVDs, zip disk, mini DV</td>
</tr>
<tr>
<td>EREC Asset Description</td>
<td>JPG, DOC, PPT, PDF, TIF, EPS, XLS, HTM, text, video - VOB, MOV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Box Number</th>
<th>Folder Label</th>
<th>EREC Assessment</th>
<th>Other Notes from EREC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Jason Presentation Images, 2003 (1 CD)</td>
<td>1 CD in jewel case with handwr</td>
<td>D1 Label: All Jason Fotos. Vol.</td>
</tr>
<tr>
<td>2</td>
<td>Jason XV, Rainforests at the Crossroads, 2003-2004 - Images (1)</td>
<td>1 CD in jewel case with pre-pri</td>
<td>D1 Label: Smithsonian IMAGE F</td>
</tr>
<tr>
<td>2</td>
<td>Culebra Video Rough Cut, July 16, 2008 (1 DVD)</td>
<td>1 DVD in jewel case with pre-pri</td>
<td>D1 Label: EFT-STR_Culebra Rc</td>
</tr>
<tr>
<td>2</td>
<td>STRI Poster, January 2004 (1 CD)</td>
<td>1 CD in jewel case with handwr</td>
<td>D1 Label: STRI Poster 1/04 .cp</td>
</tr>
<tr>
<td>2</td>
<td>Scans for STRI Postcards (1 CD)</td>
<td>1 CD in jewel case with handwr</td>
<td>D1 Label: Scans for postcards 1</td>
</tr>
<tr>
<td>2</td>
<td>The Habitable Planet: A Systems Approach to Environmental</td>
<td>4 CDs in cases with pre-printed</td>
<td>Commercial CDs - not for duplic</td>
</tr>
<tr>
<td>2</td>
<td>The Open University, S328 Ecology, &quot;The Conundrum of Coexis</td>
<td>1 CD in jewel case with pre-pri</td>
<td>Commercial CD - not for duplic</td>
</tr>
<tr>
<td>2</td>
<td>&quot;Operation Jungle,&quot; BBC Program about Barro Colorado Island</td>
<td>1 CD in jewel case with handwr</td>
<td>Not transferred due to copyrig</td>
</tr>
<tr>
<td>2</td>
<td>Paleontological Treasures Images, 2003-2004 (1 CD)</td>
<td>1 CD in jewel case with handwr</td>
<td>D1 Label: Tesoros Paleontolog</td>
</tr>
<tr>
<td>2</td>
<td>Cofrins Visiting Panama and Touring STRI - Video and Slidesh</td>
<td>1 CD in jewel case with pre-pri</td>
<td>D1 Label: Panama DVD Jan 20C</td>
</tr>
<tr>
<td>2</td>
<td>Ocelot Attack at Barro Colorado Island - Video (1 CD)</td>
<td>1 CD in jewel case with pre-pri</td>
<td>D1 Label: Ocelot Attack at BCI</td>
</tr>
<tr>
<td>2</td>
<td>Educators Connecting Research to the K-16 Classroom, 2002-2</td>
<td>1 CD in jewel case with handwr</td>
<td>D1 Label: ECRC/STRI-C [illegib</td>
</tr>
<tr>
<td>2</td>
<td>&quot;A Global Program of long-term Tropical Forest Research Tour</td>
<td>1 CD in jewel case with handwr</td>
<td>D1 Label: STRI Powerpoint Stud</td>
</tr>
</tbody>
</table>
Do no harm

Not write-protected

Write-protected
Extreme damage from an adhesive label
File transfer
Fixity

- Have the files remained stable? No bits have changed during transfer or over time.
- Just because integrity is sound does not mean file is accessible though.
## Storage

<table>
<thead>
<tr>
<th>Name</th>
<th>Date modified</th>
<th>Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-001_R</td>
<td>11/15/2012 11:12 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-002_R</td>
<td>11/8/2012 11:04 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-003_R</td>
<td>11/19/2012 2:32 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-004_R</td>
<td>11/29/2012 4:37 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-005_R</td>
<td>11/27/2012 10:26 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-006_R</td>
<td>11/15/2012 12:32 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-007_R</td>
<td>11/1/2012 2:17 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-009_U</td>
<td>7/14/2014 3:24 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-017_R</td>
<td>1/9/2014 2:59 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-024_U</td>
<td>7/22/2014 10:49 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-036_U</td>
<td>1/18/2013 3:26 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-037_U</td>
<td>1/23/2013 5:14 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-038_U</td>
<td>1/30/2013 2:34 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-039_U</td>
<td>1/30/2013 2:53 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-040_U</td>
<td>2/7/2013 1:02 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-041_U</td>
<td>2/27/2013 10:05 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-042_U</td>
<td>2/27/2013 10:55 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-043_U</td>
<td>2/27/2013 12:50 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-044_U</td>
<td>2/27/2013 4:49 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-045_U</td>
<td>2/28/2013 4:56 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-046_U</td>
<td>2/20/2014 11:37 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-047_U</td>
<td>5/29/2013 10:50 AM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-048_U</td>
<td>4/3/2013 5:28 PM</td>
<td>File folder</td>
<td></td>
</tr>
<tr>
<td>13-049_U</td>
<td>4/1/2013 3:44 PM</td>
<td>File folder</td>
<td></td>
</tr>
</tbody>
</table>
Next steps

- Can you view the file? WordStar vs. PDF?
  - Migration – converting the file usually when at risk
  - Normalization – converting the file regardless to preservation formats when ingesting/taking in

Files

- Word processing and text documents
- Spreadsheets
- Images and graphics
- Audio and video
- Websites/social media
- Email
- Computer Assisted Design
- Databases
# Format Identification

<table>
<thead>
<tr>
<th>Resource</th>
<th>Extension</th>
<th>Size</th>
<th>Last Modified</th>
<th>Idx</th>
<th>Format</th>
<th>Version</th>
<th>Mime Type</th>
<th>PIDC</th>
<th>Method</th>
<th>Hash</th>
</tr>
</thead>
<tbody>
<tr>
<td>BARCORY.BBC</td>
<td>rec</td>
<td>1.9 KB</td>
<td>7/22/93 9:44 AM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>a7c6b0e9c65f3ba0038ed4...</td>
</tr>
<tr>
<td>BARCORY.TXT</td>
<td>txt</td>
<td>2.2 KB</td>
<td>8/17/93 15:58 PM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>6e0f6781668563286b8f...</td>
</tr>
<tr>
<td>BENNETCH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOSWORTH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CALDWELL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHAFFEE.MMT</td>
<td>mmt</td>
<td>1.4 KB</td>
<td>7/9/93 12:05 PM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>31399d9f81ace934076d0...</td>
</tr>
<tr>
<td>COHEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRESWELL.CH</td>
<td>ch</td>
<td>1.5 KB</td>
<td>7/28/93 16:18 PM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>8615071873edc8866a1c...</td>
</tr>
<tr>
<td>CRESWELL.RC</td>
<td>r</td>
<td>902 bytes</td>
<td>7/12/93 5:09 AM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>a2f0b050c9f9e69d8d2d...</td>
</tr>
<tr>
<td>DAVS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAVS.TXT</td>
<td>txt</td>
<td>4.4 KB</td>
<td>7/28/93 5:27 PM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>c1f2a4f68f63b398b1...</td>
</tr>
<tr>
<td>DURING.T.F</td>
<td>txt</td>
<td>3.7 KB</td>
<td>7/20/93 11:06 AM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>1a632d0e624c5b6e5a...</td>
</tr>
<tr>
<td>FABRIAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAZIO.IRC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAZIO.IRC</td>
<td>rec</td>
<td>2.6 KB</td>
<td>7/12/93 10:01 AM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>5e988d85e5d7e84...</td>
</tr>
<tr>
<td>FORMAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRIEDMAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEORGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEORGE.TXT</td>
<td>txt</td>
<td>3.7 KB</td>
<td>7/20/93 1:09 PM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>5e988d85e5d7e84...</td>
</tr>
<tr>
<td>GEORGE.ZTXT</td>
<td>txt</td>
<td>3.6 KB</td>
<td>7/30/93 3:18 PM</td>
<td></td>
<td>WordPerfect for MS-DOS/...</td>
<td>5.1</td>
<td>vnd.wordperfect</td>
<td>x-fmt-3/4</td>
<td></td>
<td>6503e570e6c88e5a2...</td>
</tr>
<tr>
<td>GOLDE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOLDFR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HARRUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JOSEPH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LESSER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEWIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATTHEWS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATTIE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table shows various files with different file extensions, sizes, last modified dates, and associated details such as format, version, MIME type, and PIDC information.
File
Jill
20 April 1993

Medal Award Letter

Yesterday morning I had a phone call from Bob. He told me that Irwin told him that he sent a letter in for file "yesterday" and that I needed to look for it and fax it to Keith. I hunted the office piles of filing and the files. I asked Billy if it sounded familiar, which it didn't.

Yesterday afternoon Mark came out of his office, handing me the above mentioned letter, asking me to fax it to Bob, which I did.
J

JPEG
- JPEG, JPEG Image Encoding Family
  - JPEG_DCT_BL, JPEG DCT Compression Encoding, Baseline
  - JPEG_DCT_PROG, JPEG DCT Compression Encoding, Progressive
  - JPEG_DCT_EXT, JPEG DCT Compression Encoding, Extensions
  - JPEG_orig_4L, JPEG Original Lossless Compression (ISO/IEC 10918)
  - JPEG_LS, JPEG Lossless Compression (ISO/IEC 14995)
  - JPEG_1_02, JPEG File Interchange Format, Version 1.02
  - SPINF, Still Picture Interchange Format
  - JPEG_EXIF, JPEG Encoded File with Exif Metadata

JPEG 2000 Encodings
- J2K_C, JPEG 2000 Part 1, Core Coding System
- J2K_C_LL, JPEG 2000 Part 1, Core Coding, Lossless Compression
- J2K_C_LSY, JPEG 2000 Part 1, Core Coding, Lossy Compression
- J2K_C_Profile_0, JPEG 2000 Part 1, Core Coding, Profile 0
- J2K_C_Profile_1, JPEG 2000 Part 1, Core Coding, Profile 1
- J2K_C_Profile_3, JPEG 2000 Part 1, Core Coding, Profile 3
- J2K_C_Profile_4, JPEG 2000 Part 1, Core Coding, Profile 4
- J2K_C_BIIF_01_00, JPEG 2000 Part 1, Core Coding, BIIF Profile (v. 01.00)
- J2K_C_NDNP, JPEG 2000 Part 1, Core Coding, NDNP Profile
- J2K_EXT, JPEG 2000 Part 2, Coding Extensions

JPEG 2000 File Formats
- JP2_F, JPEG 2000 Part 1 (Core) jp2 File Format
- JPX_F, JPEG 2000 Part 2 (Extensions) jpx File Format
- JPM_F, JPEG 2000 Part 6 (Compound) jpm File Format

JPEG 2000 File Formats with Encoded Bitstreams
- JP2_J2K_C_Profile_0, JP2 File Format with JPEG 2000 Core Coding, Profile 0
- JP2_J2K_C_Profile_1, JP2 File Format with JPEG 2000 Core Coding, Profile 1
- JP2_J2K_C_BIIF_01_00, JP2 File Format with JPEG 2000 Core Coding, BIIF Profile (v. 01.00)

JSON
- JSON, JSON (Javascript Object Notation)

K

KDC
- KDC included in CAM_RAW, Camera Raw Formats (Group Description)

KML
- KML, Version 2.2
Smithsonian
National Museum of Natural History

News

Media only:  Randall Kremer  (202) 633-2950
Michele Urie  (202) 633-2950

Public only:  (202) 633-1000

May 4, 2006

“Lewis & Clark: The National Bicentennial Exhibition” Opens May 12 at the Smithsonian’s National Museum of Natural History

In 1804, at the request of President Thomas Jefferson, Captains Meriwether Lewis and William Clark set out from St. Louis to explore the vast, newly acquired Louisiana Territory. The president hoped the pair would find a water route to the Pacific Ocean. Along the way, they also were to map the interior of the country; collect plant, mineral and animal specimens for science; and, most significantly, develop relationships with the Native American tribes they encountered.

A special traveling exhibition commemorating the 200th anniversary of this legendary journey, “Lewis & Clark: The National Bicentennial Exhibition,” will be on view at the Smithsonian’s National Museum of Natural History from May 12 through Sept. 10. This is the final stop in the exhibition’s five-city tour. More than 80 objects in the exhibition are part of the Smithsonian’s collections.

The exhibition examines both the successes and failures of this monumental expedition. Simply reaching the Pacific and returning to St. Louis in 1806 with only one life lost was an astounding accomplishment, and the storehouse of knowledge Lewis and Clark acquired on their journey transformed their countrymen’s image of the West. But there was no feasible water route
Smithsonian
National Museum of Natural History

Media only:  Randall Kremer  (202) 633-2950
           Michele Urie  (202) 633-2950
Public only:  (202) 633-1000

May 4, 2006

“Lewis & Clark: The National Bicentennial Exhibition” Opens May 12 at the Smithsonian’s National Museum of Natural History

In 1804, at the request of President Thomas Jefferson, Captains Meriwether Lewis and William Clark set out from St. Louis to explore the vast, newly acquired Louisiana Territory. The president hoped the pair would find a water route to the Pacific Ocean. Along the way, they also were to map the interior of the country; collect plant, mineral and animal specimens for science; and, most significantly, develop relationships with the Native American tribes they encountered.

A special traveling exhibition commemorating the 200th anniversary of this legendary journey, “Lewis & Clark: The National Bicentennial Exhibition,” will be on view at the Smithsonian’s National Museum of Natural History from May 12 through Sept. 10. This is the final stop in the exhibition’s five-city tour. More than 80 objects in the exhibition are part of the Smithsonian’s collections.

The exhibition examines both the successes and failures of this monumental expedition. Simply reaching the Pacific and returning to St. Louis in 1806 with only one life lost was an astounding accomplishment, and the storehouse of knowledge Lewis and Clark acquired on their journey transformed their countrymen’s image of the West. But there was no feasible water route
Smithsonian
National Museum of Natural History

May 4, 2006

Media only: Randall Kremer
Michele Urie

Public only: (202) 633-1000

“Lewis & Clark: The Expedition that Pioneers May 12
at the Smithsonian

In 1804, at the request of the president, William Clark set out from St. Louis to map the interior of Louisiana Territory. The president hoped the pair would also be to map the interior of the river and collect specimens for science; and, most significantly, develop relationships with the Native American tribes they encountered.

A special traveling exhibition commemorating the 200th anniversary of this legendary journey, “Lewis & Clark: The National Bicentennial Exhibition,” will be on view at the Smithsonian’s National Museum of Natural History from May 12 through Sept. 10. This is the final stop in the exhibition’s five-city tour. More than 80 objects in the exhibition are part of the Smithsonian’s collections.
Revision of Some Polychaetes (Polynoidae) of the Subfamily Polynoinae Kinberg, Restricted, and the New Subfamily Enipinae

ABSTRACT

Pettibone, Marian K. Revision of Some Polychaetes (Polynoidae) of the Subfamily Polynoinae Kinberg, Restricted, and the New Subfamily Enipinae. Smithsonian Contributions to Zoology,

Included in this paper are new distributional records and descriptions of 24 species of Polynoidae referred to two Subfamilies: Polynoinae, Restricted, with three genera: Polynoe Savigny, Grubendorpax Pettibone, and Goradia Bergström, and new Subfamily Enipinae, with five genera: Enipe Malmgren, Nemidia Malmgren, Paranemidia, new genus, Venneropax, new genus, and Phyllalbertia Pettibone. Most of the species have a less close ecological or communal association with other polychaetes, such as terbellids, malenids, sabellids, ampharetids, chaetopterids, eunicids, nereids, and glyceraids.

<table>
<thead>
<tr>
<th>Slide No/Photo</th>
<th>Description</th>
<th>digitized</th>
<th>filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Cross section through a fossil oak tree. Miocene-Holocene. Quercus sp. Oregon.</td>
<td>yes</td>
<td>quercus_sp_plant.jpg</td>
</tr>
</tbody>
</table>

A common stream-side tree during the Paleocene and Eocene in North America. Living relatives of this species are native only to East Asia. *Cercidiphyllum geniculatum.*

Relatives of the living sycamores (*Acer* and *Cercidiphyllum*) were common trees on Paleocene woodlands. The dawn redwood (*Metasequoia*) was an important tree in swamps. Dawn redwood was first described on the basis of fossil remains, then later identified as a living species.
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Slide No.</td>
<td>Description</td>
<td>digitized filename</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>No number</td>
<td>Fossil Rose - Oligocene USNM #192338 Rose bullae Lesequeaux</td>
<td>yes</td>
</tr>
<tr>
<td>5</td>
<td>65-6530</td>
<td>Cretaceous Plant Cat. #1367 Fossil leaves carpopodium</td>
<td>yes</td>
</tr>
<tr>
<td>6</td>
<td>65-6533</td>
<td>Carboniferous seed from USNM # P93657 Fossilaeolus</td>
<td>yes</td>
</tr>
<tr>
<td>7</td>
<td>65-6610</td>
<td>Fossil cone Laeviastra pyriformis Age?</td>
<td>yes</td>
</tr>
<tr>
<td>8</td>
<td>65-6627</td>
<td>Fossil leaves Carboniferous</td>
<td>yes</td>
</tr>
<tr>
<td>9</td>
<td>65-6645</td>
<td>Fossil leaves Carboniferous Cat. # 367249</td>
<td>yes</td>
</tr>
<tr>
<td>10</td>
<td>65-6631</td>
<td>Pennsylvania (early Angiosperm) Cat. # 407170 Stenidia schefinheim</td>
<td>yes</td>
</tr>
<tr>
<td>11</td>
<td>N/A</td>
<td>Angiospermae microphytes v. tenonobals - fossil leaf - Eocene</td>
<td>yes</td>
</tr>
<tr>
<td>12</td>
<td>N/A</td>
<td>modern leaves</td>
<td>yes</td>
</tr>
<tr>
<td>13</td>
<td>65-6932</td>
<td>Carboniferous seed/nut Cat. # 24834</td>
<td>yes</td>
</tr>
<tr>
<td>14</td>
<td>10 Fs</td>
<td>Woloids confinis Dasycladum alga-Cambrian</td>
<td>yes</td>
</tr>
<tr>
<td>15</td>
<td>23 Fs</td>
<td>Woloids confinis Dasycladum alga-Cambrian</td>
<td>yes</td>
</tr>
<tr>
<td>16</td>
<td>Italian</td>
<td>Cyclics trunks on display in exhibits. USNM 42379, Late Cretaceous, about 100 Myr. Laurel Race Track, Laurel, Prince Georges County, MD.</td>
<td>yes</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>Cyclics manylabeled (cyclics trunks on exhibit) Early Cretaceous, Anne Arundel County, MD.</td>
<td>yes</td>
</tr>
<tr>
<td>18</td>
<td>Jonathan</td>
<td>Cross section through a fossil oak tree. Miocene-Holocene. Quercus sp. Oregon</td>
<td>yes</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>A common stream-side tree during the Paleocene and Eocene in North America. Living relatives of this species are native only to East Asia. Cercidiphyllum japonicum, W.</td>
<td>yes</td>
</tr>
</tbody>
</table>

View in Open Office
Images

Digitized image
SIA2007-0176 from 02-082
Digital scans of text and images

- Uncompressed TIFF with 6,000 pixels on the long axis of the image
- Minimum value is 600 ppi, increasing resolution in intervals of 25 ppi as necessary to achieve a minimum of 6,000 pixels along the long axis resolution.
- For color images, a 24-bit RGB setting is used, yielding 8 bits per color channel.
- For black and white images, a 24-bit RGB setting is used.

- Note: for images from microfilm, a resolution of 300 ppi grayscale is acceptable.
Born-digital image
75_ButterflyGarden8Feb.jpg from SIA 11-281
In 1972, the golden lion tamarin was headed towards extinction with fewer than 100 in zoos that were breeding very poorly and an unknown number remaining in the wild; at the time, some suspected that there might have been fewer than 200 remaining.
Digital audio standards

• BWF (Broadcast Wave file) format or WAV with a minimum bit depth of 16 and sample frequency of 44.1 kHz for DATs.
• Uncompressed PCM (pulse coded modulation)
• 24-bit and 96 kHz considered optimal.
• AIFF (Mac) is also acceptable.
Audio
BWF MetaEdit
Born-digital video

- Authored video DVDs
- Can you view it? One player might work while others will not. Windows Media Player vs VLC
Format: MPEG-4
- Format profile: QuickTime
- Codec ID: qt
- File size: 818 MiB
- Duration: 51mn 10s
- Overall bit rate mode: Variable
- Overall bit rate: 2.234 Kbps
- Encoded date: UTC 2014-10-27 18:02:07
- Tagged date: UTC 2014-11-04 15:34:15
- Writing library: Apple QuickTime

Video
- ID: 2
- Format: AVC
- Format Info: Advanced Video Codec
- Format profile: Baseline@L3.0
- Format settings, CABAC: No
- Format settings, RefFrames: 3 frames
- Format settings, GOP: M=1, N=15
- Codec ID: avc1
- Codec ID Info: Advanced Video Coding
- Duration: 51mn 10s
- Bit rate mode: Variable
- Bit rate: 2 000 Kbps
- Maximum bit rate: 2 417 Kbps
- Width: 640 pixels
- Height: 360 pixels
- Display aspect ratio: 16:9
- Frame rate mode: Constant
- Frame rate: 29.970 fps
- Color space: YUV
- Chroma subsampling: 4:2:0
- Bit depth: 8 bits
- Scan type: Progressive
- Bits/(Pixel*Frame): 0.290
- Stream size: 734 MiB (90%)
Analog video

- Analog to digital easier than born-digital video
- Two SAMMA Solos for digitizing analog video tapes at Smithsonian Archives.
  - Done in real time
  - Four outputs – Two for preservation - Motion JPEG2000 in an MXF wrapper, and MPEG-2 in a 4.2.2 format. Two for access/reference -- Windows Media Video and MOV or QuickTime
Email

<table>
<thead>
<tr>
<th>Name</th>
<th>Size</th>
<th>Type</th>
<th>Date Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>GroupWiseSentSIA.pst</td>
<td>12,913 KB</td>
<td>Office Data File</td>
<td>10/24/2007 12:14 PM</td>
</tr>
<tr>
<td>GroupWiseSentSIAnew.pst</td>
<td>583,313 KB</td>
<td>Office Data File</td>
<td>12/27/2007 10:04 AM</td>
</tr>
<tr>
<td>GroupWiseSIA.pst</td>
<td>1,051,537 KB</td>
<td>Office Data File</td>
<td>12/27/2007 10:04 AM</td>
</tr>
<tr>
<td>SentItemsSIA.pst</td>
<td>1,009 KB</td>
<td>Office Data File</td>
<td>12/27/2007 10:04 AM</td>
</tr>
</tbody>
</table>

Windows cannot open this file:

File: [blank]

To open this file, Windows needs to know what program created it. Windows can go online to look it up automatically, or you can manually select from a list of programs on your computer.

What do you want to do?
- Use the Web service to find the appropriate program
- Select the program from a list

[OK] [Cancel]
# Databases

<table>
<thead>
<tr>
<th>Affil_title</th>
<th>Affil_city</th>
<th>Affil_stat</th>
<th>Affil_icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Jazz Museum</td>
<td>Kansas City</td>
<td>MO</td>
<td></td>
</tr>
<tr>
<td>Arena Stage</td>
<td>Washington</td>
<td>DC</td>
<td></td>
</tr>
<tr>
<td>Atlanta International Museum</td>
<td>Atlanta</td>
<td>GA</td>
<td></td>
</tr>
<tr>
<td>B&amp;O Railroad Museum</td>
<td>Baltimore</td>
<td>MD</td>
<td></td>
</tr>
<tr>
<td>Birthplace of Country Music Alliance</td>
<td>Bristol</td>
<td>TN</td>
<td></td>
</tr>
<tr>
<td>Bisbee Mining &amp; Historical Museum</td>
<td>Bisbee</td>
<td>AZ</td>
<td></td>
</tr>
<tr>
<td>Boys Harbor, Inc.</td>
<td>New York</td>
<td>NY</td>
<td></td>
</tr>
<tr>
<td>Centro Alameda</td>
<td>San Antonio</td>
<td>TX</td>
<td></td>
</tr>
<tr>
<td>Chabot Space &amp; Science Center</td>
<td>Oakland</td>
<td>CA</td>
<td></td>
</tr>
<tr>
<td>Dallas Museum of Natural History</td>
<td>Dallas</td>
<td>TX</td>
<td></td>
</tr>
<tr>
<td>Davenport Museum of Art</td>
<td>Davenport</td>
<td>IA</td>
<td></td>
</tr>
<tr>
<td>Florida International Museum</td>
<td>St. Petersburg</td>
<td>FL</td>
<td></td>
</tr>
<tr>
<td>Florida International University</td>
<td>Miami</td>
<td>FL</td>
<td></td>
</tr>
<tr>
<td>Freedom Museum</td>
<td>Manassas</td>
<td>VA</td>
<td></td>
</tr>
<tr>
<td>Heritage Harbor Museum</td>
<td>Providence</td>
<td>RI</td>
<td></td>
</tr>
<tr>
<td>Historical Society of Western Pennsylvania</td>
<td>Pittsburgh</td>
<td>PA</td>
<td></td>
</tr>
<tr>
<td>Hubbard Museum of the American West</td>
<td>Ruidoso Down</td>
<td>NM</td>
<td></td>
</tr>
</tbody>
</table>
Websites/Social media
Command line

- Directory/file listings
- Run software like ffmpeg, Jhove, and Droid
Metadata standards

• Dublin Core
• METS
• PREMIS
• IPTC
• And many, many more

Seeing Standards:
A Visualization of the Metadata Universe

Poster of visualization (PDF, 36in x 108in)
Metadata standard glossary_poster form (PDF, 36in x 41in)
Metadata standard glossary_pamphlet form (PDF)

The sheer number of metadata standards in the cultural heritage sector is overwhelming, and their inter-relationships further complicate the situation. This visual map of the metadata landscape is intended to assist planners with the selection and implementation of metadata standards.

Each of the 105 standards listed here is evaluated on its strength of application to defined categories in each of four axes: community, domain, function, and purpose. The strength of a standard in a given category is determined by a mixture of its adoption in that category, its design intent, and its overall appropriateness for use in that category.

The standards represented here are among those most heavily used or publicized in the cultural heritage community, though certainly not all standards that might be relevant are included. A small set of the metadata standards plotted on the main visualization also appear as highlights above the graphic. These represent the most commonly known or discussed standards for cultural heritage metadata.

Content: Jana Riley
Design: Devin Becker
Work funded by the Indiana University Libraries White Professional Development Award
<?xml version="1.0" encoding="UTF-8"?>
<net:net xmlns:net="http://www.loc.gov/METS/
xmlns:idc="dublincore.org"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
Preservation format does not always equal access copy

- Where will access be provided?
- Preservation format may not be needed as the access format.
  - Audio in MP3 format may be acceptable to researcher rather than a higher quality uncompressed WAV or Broadcast WAV file
SIA Acc. 13-069, Smithsonian Institution, Website Records, 2012

Summary
Creator: Smithsonian Institution
Title: Website Records, 2012
Date: 2012
Summary: This accession consists of the primary domain of the Smithsonian Institution website as it existed on October 9, 2012. The website contains general information for visitors, volunteers, researchers, donors, and the general public and serves as a portal for other Smithsonian Institution websites. In addition, the domain includes specialized websites maintained by the Museum Conservation Institute; the Office of the Inspector General; the Marine Science Network; the Scientific Diving Program; the Office of Equal Employment and Minority Affairs; the Office of Fellowships and Internships; the Office of Policy and Analysis; and the Office of Sponsored Projects as well as the online Encyclopedia Smithsonian. Materials are in electronic format.
Topics: Fund raising, Museum visitors, Museums—Public relations, Research, Special events, Volunteers, Web sites
Subjects: Museum Conservation Institute, Smithsonian Institution Office of Equal Employment and Minority Affairs, Smithsonian Institution Office of Policy and Analysis, Smithsonian Institution Office of the Inspector General, Smithsonian Institution Marine Science Network, Smithsonian Institution Office of Fellowships and Internships, Smithsonian Institution Office of Sponsored Projects, Smithsonian Institution Scientific Diving Program
Form/Genre: Electronic records, Collection descriptions
Local Number: SIA Acc. 13-069

Finding Aids to Official Records of the Smithsonian Institution Archives

Table of Contents
Collection Overview
Descriptive Entry
Index Terms
Administrative Information
Container List

COLLECTION OVERVIEW
Repository: Smithsonian Institution Archives, Washington, D.C. Contact us at oslarc@si.edu.
Creator: Smithsonian Institution
Title: Website Records
Dates: 2012
Quantity:
BOWLING LEAGUE
TEAMS END YEAR

The Indians won the competition in the Smithsonian Institution Bowling League for the season, winning by five games. Second in line were the Athletics. The banquet to close the season was held on June 11th.

Below are the names of the officers and members of the teams.

Officers—President, Harry Klotz; vice president, Adele Bock; secretary-treasurer, Vera Gabbert; statistician, Nadya Kayaloff.


SMITHSONIAN REGENT

Dr. Leonard P. Schultz (MNH-Z) contributed two chapters to the National Geographic’s recently published Wondrous World of Fishes. Dr. Alexander Wetmore, former Smithsonian Secretary, is the principal author of the National Geographic’s recently published book Song Birds of North America; the second volume is in press.

SI ATTENDS AAUP
ANNUAL MEETING

The Smithsonian was represented at the annual meeting of the Association of American University Presses by Paul H. Oehler, Louise Heske, and Al Ruffin (E & P). The meeting was held in Lexington, Ky., on May 23-25. Following the meeting the three visited the Kingsport Press at Kingsport, Tenn.

Vice President Humphrey opens “The Face of Poverty,” a special photographic exhibit prepared by the Office of Economic Opportunity, now showing in the gallery on the second floor of MHT.

Hubert H. Humphrey, elected Vice President of the United States on Nov. 3, 1964,
Demystifying Born Digital Reports

You've Got to Walk Before You Can Run: First Steps for Managing Born-Digital Content Received on Physical Media

By Ricky Erway, OCLC Research

This report is intended for anyone who doesn't know where to begin in managing born-digital materials. It errs on the side of simplicity and describes what is truly necessary to start managing born-digital content on physical media, and it presents a list of the basic steps without expanding on archival theory or the use of particular software tools. It does not assume that policies are in place or that those performing the tasks are familiar with traditional archival practices, nor does it assume that significant IT support is available.

Download the report (pdf: 46K/5 pp.)

Swatting the Long Tail of Digital Media: A Call for Collaboration

By Ricky Erway, OCLC Research

This report urges a collaborative approach for conversion of content on various types of digital media. As with First Steps, the document refers only to born-digital material on physical media. This essay is intended for managers who are making decisions on where to invest their born-digital time and money. It should help them understand that any expectations...
More information

- PSAP
- BitCurator
- BagIt
- Fixity tool
- Jhove
- Droid
- NDSA PDF/A 3 report
- BWF MetaEdit

Photo by Cory Doctorow
Chicago Tribune elevator, Chicago, Ill.
Creative Commons: Attribution-ShareAlike 2.0 Generic
And more information

- ffmpeg
- MediaInfo
- MIT’s FAÇADE
- The Art Institute of Chicago Digital Design Data report
- CERP
- ePADD
- Command line tutorial
- From Theory to Action: “Good Enough” Digital Preservation Solutions for Under-Resource Cultural Heritage Institutions -- POWRR
- Digipres Commons
If this server is busy, you may want to visit the Smithsonian mirror site in California.

Welcome

A brief video clip of the Secretary welcomes you to the Web. Audio only is also available but requires software that can simultaneously run audio and visual information or an audio player. Links to an Overview of Smithsonian Museums, a description of Navigating the Electronic Smithsonian, a search capability to explore all aspects of the Institution, the Encyclopedia Smithsonian (answers to frequently asked questions about the Smithsonian and other topics), and information on Planning a Visit to the Smithsonian are available here as well.

150th Anniversary

This section contains a message from the Secretary of the Smithsonian Institution, both in text and audio, and an electronic “celebration” of the Institution's first 150 years. The “virtual” site of the 150th Anniversary, it is dedicated to both the history and future of the Smithsonian.

What's New

This section includes information on new and temporary exhibitions for most of the Smithsonian’s museums and galleries and the National Zoo. It also includes new and recent additions to the Smithsonian Web Server. And a section which describes Electronic Smithsonian. Finally, press releases from the Smithsonian are available electronically.
Thank you!

• Contact me at SchmitzfuhrigL@si.edu

Two young boys stand on the National Mall holding lunchboxes as they look at the north front of the Smithsonian Institution Building.

-- Smithsonian Institution Archives