The Digital Library Agenda for the 21st Century Research Library

Envisioning a Strategic and Collaborative Digital Research Library

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Use of Copyrighted Materials

- “Open Access” to copyrighted materials
- Ownership of materials to be digitized and “born digital”
- Create and implement University-wide accepted “Open Access” to copyrighted materials resolution statements
- Conduct regularly scheduled copyright users-instruction workshops for faculty, students, staff, and patrons
Use of Copyrighted Materials – A Creative Commons Approach

- Creative Commons gives new meaning to the term creative license.
- Creative Commons allows copyright owners the flexibility and manageability to control the use of their copyrighted works by allowing a mix of licensing options from which to choose and share their creative works.
- Digital Library Initiatives must incorporate Creative Commons approaches into project implementations and thereby educate faculty, student, staff, and patrons in the process (lead by example).
21st Century Digital Library Agenda

- Define the goals and characteristics of the digital preservation repositories
- Establish administrative and technical models for digital preservation repositories
- Convey how preservation repositories metadata will be encoded, stored, and managed
- Provide user-centered access to digital repositories
Goals and Characteristics of Developing a Digital Repository – U. Minn. Libraries Case File

- **Organization:** U. Minn. Libraries
- **Location:** Minnesota
- **Goals:** Digital Collections Unit needed to digitize, describe, and provide access via searchable database to over 6,000 oversized World War posters
- **Issues considered:** Physical conditions, copyright, duplicates
- **Equipment Used:** Power Phase FX Digital Camera System
- **Image File Format:** High-resolution 24-bit, uncompressed TIFF, min. res. 300 pixels per inch; derivatives thumbnail and screen-size images saved as JPEG at 120 pixels per inch
- **Storage:** Wrote each image to durable optical storage media
- **Time spent digitizing:** 4,000 hours (100 weeks)
- **What’s next:** Enhanced database search features
Digital Preservation Repository Metadata Elements

- Unique Digital Identifier
- Other Identifier(s)
- Title
- Series
- Caption
- Creator
- Publisher
- Other contributors
- Year of creation
- Owning repository
- Object location
- Ownership History
- Medium
- Media
- Original Dimensions
- Descriptions
- Subject Terms
- Use/Rights
- Notes
- File Format
- Bit Depth
- Resolution
Digital Preservation Repository – Search Result (May 2005)

Your search for found 22 results.
Currently displaying results 1 through 15.
Digital Preservation Repository – World War Poster Digital Image Example with Metadata

- Knowledge Wins: public library books are free…
- **Title:** Knowledge wins: public library books are free
- **Creator:** Smith, Dan. 1865-1934
- **Contributor:** American Library Association
- **Period:** World War I
- Description: Soldier moving from trenches to city over bridge of books
- **Series:** War Posters [Patriotism]
- **Related Sites:** (Relationship="IsPartOf")
- **Medium:** Poster; **Dimensions:** 71 * 48 cm
- **Holding:** University of Minnesota Libraries
- **Provenance:** Digital image created with IMLS support.
- **Published:** U.S.; ALA; Designed and Printed by Thomsen-Ellis Co.
- **Language:** eng
- **Record Number:** msp01047
- **Other Identifier:** OCLC10586556
- **Copyright:** Subject to US and International copyright laws.
Digital Preservation Repository – LOC Digital Movie Digitization Example

- **CREATED/PUBLISHED**: United States: Selig, 1907.
- **SUMMARY**: During this short film the cameraman photographed many different people in varied walks of life, all of whom are wearing roller skates.
- **NOTES**: Copyright: Selig; 09Aug07, H97845.
- **Duration**: 0:18 at 16 fps.
- **Source**: used Niver, Kemp R., Early motion pictures, 1985.
- **Received**: 2/2000 from LC lab; ref prints and dupe neg; preservation; Paper Print Collection.
- **SUBJECTS**: Roller-skating. Actuality-Shorts.
- **RELATED NAMES**: Selig. Paper Print Collection (Library of Congress)
- **Medium**: 1 reel of 1 (18 ft): si., b&w; 16 mm. Ref print. 1 reel of 1: si., b&w; 35 mm. Ref print. 1 reel of 1 (18 ft): si., b&w; 16 mm. dupe neg.
- **CALL NUMBER**: FLA 4410 (ref print); FEC 1863 (ref print); FRA 1535 (dupe neg)
- **REPOSITORY**: Library of Congress Motion Picture, Broadcasting and Recorded Sound Division, Washington, D.C. 20540USA
- **DIGITAL ID**: awal 1396 urn.hdl.loc.mbrsmi/awal.1396 http://hdl.loc.gov/loc.mbrsmi/awal.1396
Digital Preservation Repository – Technical Information

- **Digital Preservation Process**
  - State-of-the Art Digital Cameras
  - Scanning
  - Wrap digital reproduction and digitized content with self-identifying metadata

- **Technology Standards Used**
  - Z39.50 protocol standard
  - XML, SGML, TEI, ETD METS, DC, DDI, MARC, MARCXML, DocBook, RDF, MODS, and other metadata standards

- **File Formats & Special Viewers**
  - **Sound Recordings**
    - .ra, .ram, .mp3, .wav
  - **Text and Page Images**
    - .tif, .tiff, .pcx, .pdf, .sid, .sgm
  - **Maps**
    - .sid, .jp2
  - **Prints and Photographs**
    - .tif, .tiff
  - **Video**
    - .mpg, .mpeg, .mov, .rm, .ram
Providing Access – Z39.50 compliant
Common Gateway Interface (CGI)

- Databases
- Multimedia Files
- XML Files
- Images Repositories
- Catalog

Metadata Standards:
DC, MARC, EAD, TEI, ETD, METS, DDI, etc.

Local User

Remote User

Search

CGI
An Illustrative Research Library Business Model

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Objectives</th>
<th>Measurements</th>
<th>Targets</th>
<th>Initiatives</th>
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<tbody>
<tr>
<td>Funding</td>
<td>Scholarly value</td>
<td>30% CAGR*</td>
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<td>Budget revenue</td>
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<td>Digital project costs</td>
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<td>Increased RD</td>
<td>LibQual+ rating</td>
<td>No. 1</td>
<td>Quality Management Usability testing program</td>
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<tr>
<td>Lower Costs</td>
<td>User ranking (user survey)</td>
<td>No. 1</td>
<td></td>
<td></td>
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<tr>
<td>Deployment</td>
<td>Rapidly applied development</td>
<td>Within projection</td>
<td>Applications testing program</td>
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<td>New Services</td>
<td>Development time</td>
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<td></td>
<td>Timely deployment</td>
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<tr>
<td>Internal Processes</td>
<td>% staff stakeholders</td>
<td>Yr. 1: 70%</td>
<td>ESOP &amp; Benefits</td>
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<tr>
<td></td>
<td>% staff trained</td>
<td>Yr. 3: 90%</td>
<td>Staff training</td>
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<td></td>
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<td>Yr. 5: 100%</td>
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*CAGR = compound annual growth rate
Reference: South West Airlines’ Balanced Scorecard (2005)
Areas of Interests – Research Libraries

- Are you educating your users on copyright issues along with your open access and digitization projects?
- How will your current data storage infrastructure handle current and future digitization projects?
- Are you and your partners’ digitized assets and digitization projects protected against disaster?
Areas of Interests – Research Libraries

- Google Library Project
  - Current library digitization project
- Google Scholar
  - Scholarly publication search
- Google Print
  - Allows content owners to publish content
- Google Video
  - Multi-video database search
- Yahoo! Search Creative Commons

http://www.technologyreview.com/featuredstory/404002/the-infinite-library/
Future

- Can you envision combined semantic interoperability and data visualization of enhanced data, image, and multimedia search?
References

- National Diet Library
- Creative Commons
- Science Commons
- Library of Congress American Memory
- U. Minn. Univ. Libraries
- Los Alamos National Library
- Council on Library and Information Resources
- Technology Review
- FSU D-Scholarship Repository
- AHDS Case Studies
- MetaArchive
- LOCKSS
- THINKMAP
- JISC i-skills project
- eWeek, ComputerWorld, Communications in ACM, Triangle Tech Journal
- Forrester
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Thank you

- Please send comments, suggestions, and provide feedback to psmith@moc.edu