NDSR Mission

... to develop the next generation of stewards to collect, manage, preserve, and make accessible our nation’s digital assets

... to provide residents with a combination of hands-on learning and expert guidance

... to develop the professional community through group activities involving residents, hosts and alumni
NDSR Program Spread

1) NDSR DC (LC)
2) NDSR NY (METRO NY)
3) AAPB NDSR (WGBH) (Nationwide virtually)

1) NDSR DC (LC)
2) NDSR NY (METRO NY)
3) AAPB NDSR (WGBH) (Nationwide virtually)
Common to NDSR Programs

• Cohort model (residents and hosts)
• Resident eligibility
• Mentorship
• Residency structure (80% time on projects, 20% time for professional development)
• Real-world strategic projects designed by hosts
• Core curriculum
NDSR
Boston Hosts
2014-2015
NDSR
Boston
Hosts
2015-2016
NDSR
Boston
Hosts

2014-2015
2015-2016

Tufts
Harvard
MIT
WGBH
MA State Library
Northeastern
JFK Library
UMass Boston
Boston Residents 2014-15

Samantha DeWitt (Tufts resident)
  • Harvard Library: Access Services Assistant, Cabot and Fine Arts Libraries
  • Participating in a CLIR evaluation of NDSR programs

Rebecca Fraimow (WGBH resident)
  • WGBH: Digital Archivist, PBCore Project Lead, Program Coordinator for AAPB NDSR

Joey Heinen (Harvard resident)
  • Northeastern University Library: Digital Production Coordinator

Jen LeBarbera (Northeastern resident)
  • Lambda Archives of San Diego: Head Archivist

Tricia Patterson (MIT resident)
  • Harvard Library: Digital Preservation Analyst
Boston Residents 2015-16

Alice Prael (JFK Library resident)
  • Digital preservation planning

Alexandra Curran (MIT Libraries resident)
  • Preservation storage for digital content

Jeffrey Erikson (UMass Boston resident)
  • Digital preservation planning

Stefanie Ramsay (MA State Library resident)
  • Digital preservation workflows

Julie Seifert (Harvard Library resident)
  • Self-assessment based on ISO 16363
Digital Preservation at the John F. Kennedy Presidential Library

An NDSR Project Update by Alice Sara Prael
A Little About Me

Recent MLS graduate from University of Maryland, College Park - specialization in Curation and Management of Digital Assets

Graduate Assistant at Digital Programs and Initiatives at UMD Libraries

Intern at National Archives and Records Administration (NARA), Freedom of Information Act (FOIA) and Special Access Department
"Access to a Legacy" is a public-private partnership between the John F. Kennedy Presidential Library and Museum and the John F. Kennedy Library Foundation.

Digitize, index, and permanently retain millions of presidential documents, photographs, and audiovisual recordings
Provide online access to materials and facilitate discovery through metadata
Protect historical assets through remote replication
Minimize the deterioration of unique and irreplaceable records and artifacts
Project Summary

“To develop a long-range digital preservation strategy for born-digital and digitized archival assets in our holdings.”
Break it down...

Research current infrastructure and identify challenges and problems
  - Report on Findings - by December

Explore potential management systems and solutions for digital assets
  - Report on multiple possible paths forward - by March

Conduct In-depth analysis of one of the solutions examined in report #2
  - Cost-benefit analysis and detailed action plan - by June
Getting a Lay of the Land

The Systems
- Documentum
- Centera
- Iron Mountain
- Endeca
- The Website

The Documentation
- Help Guide from EMC
- Internal Policies

The Bigger Picture
- The Library
- The Foundation
- NARA
How to Measure Up

Which standards and guidelines do you start with?

ISO 14721: OAIS

ISO 16363: Audit and certification of trustworthy digital repositories

NDSA Levels of Digital Preservation
NDSA Levels of Preservation

- Visual representation of progress
- Easy to understand, even for those unfamiliar with digital preservation
- Sets clear benchmarks

The report also included the recommendations of OAIS and ISO 16363 to determine more specific steps forward.
NDSA Levels of Preservation

Full Report of Findings

https://goo.gl/HbmhJv

Green = all criteria completed or planned
Yellow = some criteria completed
Red = no criteria completed

<table>
<thead>
<tr>
<th>Table 1: Version 1 of the Levels of Digital Preservation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage and Geographic Location</strong></td>
</tr>
<tr>
<td>- Two complete copies that are not collocated</td>
</tr>
<tr>
<td>- For data on heterogeneous media (optical discs, hard drives, etc.) get the content off the medium and into your storage system</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 1 (Protect your data)</th>
<th>Level 2 (Know your data)</th>
<th>Level 3 (Monitor your data)</th>
<th>Level 4 (Repair your data)</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Integrity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Check file integrity on ingest if it has been provided with the content</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Create file integrity if it wasn’t provided with the content</td>
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<td></td>
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<tr>
<td>- At least three complete copies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- At least one copy in a different geographic location</td>
<td></td>
<td></td>
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<tr>
<td>- Document your storage system(s) and storage media and what you need to use them</td>
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<tr>
<td>- At least one copy in a geographic location with a different disaster threat</td>
<td></td>
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</tr>
<tr>
<td>- Obsolescence monitoring process for your storage systems and media</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Have a comprehensive plan in place that will keep files and metadata on currently accessible media or systems</td>
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<tr>
<td>Information Security</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Identify who has read, write, move and delete authorization to individual files</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Restrict who has those authorizations to individual files</td>
<td></td>
<td></td>
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<tr>
<td>- Maintain logs of who performed what actions on files, including deletions and preservation actions</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Perform audit of logs</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Metadata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Inventory of content and its storage location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Ensure backup and non-collocation of inventory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Store administrative metadata</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Store transformative metadata and log events</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Store standard technical and descriptive metadata</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Store standard preservation metadata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>File Formats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- When you can give input into the creation of digital files encourage use of a limited set of known open formats and codecs</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Inventory of file formats in use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Monitor file format obsolescence issues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Perform format migrations, emulation and similar activities as needed</td>
<td></td>
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</tr>
</tbody>
</table>
Storage and Geographic Location

1. Third complete copy in a geographic location with a different disaster threat

2. Obsolescence monitoring for storage systems and media

3. Transfer digital content from physical media to the Digital Asset Management System (Documentum)
File Fixity and Data Integrity

1. Check Fixity of Content at Fixed Intervals

2. Maintain logs of fixity information, supply audit on demand

3. Ensure that no one person has write access to all copies
Information Security

1. Restrict who has authorizations to individual files

2. Maintain and perform audit on logs of who performed what actions on files, including deletions and preservation actions.

3. Introducing preservation storage will require new policies for managing information security
## Metadata

1. Store standard preservation metadata
   - ISO 16363 and PREMIS for determining which fields constitute ‘standard preservation metadata’

2. Creating a third copy for Preservation Storage will require new location metadata

<table>
<thead>
<tr>
<th>Metadata</th>
<th>- Inventory of content and its storage location</th>
<th>- Store administrative metadata and non-collocation of inventory</th>
<th>- Store standard technical and descriptive metadata</th>
<th>- Store standard preservation metadata</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tr>
</tbody>
</table>
The digital preservation policy provides guidance for how migration or emulation should be carried out if necessary.

| File Formats | - When you can give input into the creation of digital files encourage use of a limited set of known open formats and codecs | - Inventory of file formats in use | - Monitor file format obsolescence issues | - Perform format migrations, emulation and similar activities as needed |
Next Steps

- Research Specific Systems and Strategies for Digital Preservation Storage and File Fixity
- Planning for Preservation Metadata
- Continue organizing and creating documentation
Digital Preservation Tasks

Disaster Recovery Procedures
  How would we respond to a disaster in the digital archives?

Exit Strategy
  What would we theoretically do if funding or support for Centera and Documentum went away?

Born Digital Procedures
  Edward M. Kennedy Papers include floppy disks and magnetic tape reel that will require new tools and procedures
Digital Preservation UnConference

February 23rd, 2016

Attendees propose and lead sessions

Sessions are decided on by attendees the morning of the conference

All are welcome!

@jfkdigipres
Thank You!

Alice Sara Prael
alicesaraprael@gmail.com
@AlicePrael
INVESTIGATING DIGITAL PRESERVATION STORAGE OPTIONS AND WORKFLOWS FOR MIT LIBRARIES

ALEXANDRA CURRAN
SCOPE

• Personal Background
• Host
• Project Description & Objectives
• Project Framework
• Moving Forward
• Challenges
• Professional Development
• Sharing Updates & Outcomes
PERSONAL BACKGROUND

• Moved from Tarpon Springs, Florida

• B.S. Digital Cinema from DePaul University

• MLIS from University of South Florida
  • Graduate Certificate in Museum Studies
DIGITAL PRESERVATION
@ MIT LIBRARIES
PROJECT DESCRIPTION

• Identify and evaluate possible options for improving preservation storage

• Contribute to the collaborative assessment process

• Options will hopefully contribute to future policies for preservation storage.
OBJECTIVES

• Knowledge of digital preservation standards and practices

• Understand digital preservation in the context of MIT Libraries

• Current storage needs for the Libraries’ digital collections.
THREE-LEGGED STOOL

@ DIGITAL PRESERVATION MANAGEMENT WORKSHOP
TDR – Trusted Digital Repository

OAIS - Reference Model for an Open Archival Information System

TRAC – Trustworthy Repositories Audit & Certification: Criteria and Checklist

ISO 16363 – Audit & Certification of Trustworthy Digital Repositories
SOME ASSESSMENT CRITERIA

• Whether the service is open source or proprietary
• How storage nodes are managed
• What type of preservation security services are used and how they work
• What disaster recovery policies and procedures they have implemented
• How their exit strategy, if they have one, works.
• Possible cost models for storage services and partners
MOVING FORWARD

• Contribute to the collaborative assessment process

• Coordinate with Content Curators

• Recommend steps for moving content into preservation storage

• Determine if additions to the digital content workflow will be necessary
CHALLENGES

• Extending my understanding of digital

• Educating myself about digital preservation standards and practice

• Applicability and availability of tools
PROFESSIONAL DEVELOPMENT
SHARING UPDATES & OUTCOMES

• The Signal blog post
  • http://goo.gl/HLzp5u

• NDSR Boston blog
  • https://goo.gl/h0Uao3

• Digital Preservation website at MIT Libraries
  • http://goo.gl/pfHUya
THANK YOU!

Alexandra Curran
acurran@mit.edu
@ArchiveTea
UMass Boston
University Archives and Special Collections
NDSR Project

Jeffrey Erickson

NDSR Boston Mid-Year Event
January 26, 2016
About Me

Graduate Simmons College School of Library and Information Science

Former IT professional in banking and healthcare

Apply technical skills and knowledge to digital stewardship issues to ensure cultural heritage remains available to future generations
UMass Boston

University Archives and Special Collections (UASC), Healey Library

UASC collects materials related to the University’s history and mission, which includes dedication to community service.

UASC uses hosted technical systems and services when possible.
NDSR Project

Digital Preservation Planning and Implementation using ArchivesDirect

ArchivesDirect: a complete hosted digital preservation solution combining the Archivematica workflow tool and the DuraCloud storage service
A community-based digital humanities project that captures Massachusetts history as told by the residents of each community

Mission: Build communities and create a collection of images and videos for educational purposes

Currently 6,000+ images & 2,000+ videos in collection
Project Phases

Digital Preservation Planning and Implementation using ArchivesDirect

1. Research ✓
2. Development
3. Implementation
## Research Phase

Digital Preservation Planning and Implementation using ArchivesDirect

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Research</td>
<td>UMass Boston’s digital stewardship landscape</td>
</tr>
<tr>
<td>2. Development</td>
<td>Existing digitization practices and workflows</td>
</tr>
<tr>
<td>3. Implementation</td>
<td>Digital preservation good practices, tools &amp; services</td>
</tr>
</tbody>
</table>
Development Phase

Digital Preservation Planning and Implementation using ArchivesDirect

1. Research ✓  Further develop workflows to prepare for future digitization projects
2. Development  Develop new policies and procedures for long-term digital preservation
3. Implementation  Review and test new policies and procedures
Implementation Phase

Digital Preservation Planning and Implementation using ArchivesDirect

1. Research ✓  New digital preservation policies and procedures will be applied to MMRS digital objects
2. Development  Collection will be uploaded to DuraCloud service
3. Implementation  Prepare a final report documenting the project, the procedures and my recommendations
Outcomes To Date

Research:
Digital preservation concepts, good practices, tools and services
Mass. Memories Road Show workflows and assets, UASC’s DAM

Tasks:
Created file inventory and digital content review
Documented MMRS workflows
Performed a GAP Analysis based on OAIS Reference Model
## GAP Analysis

Digital Preservation Planning and Implementation using ArchivesDirect

<table>
<thead>
<tr>
<th>Ingest preparation</th>
<th>1. Perform virus scans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Generate checksums</td>
</tr>
<tr>
<td>Archival storage implementation</td>
<td>3. Associate unique IDs with individual files</td>
</tr>
<tr>
<td></td>
<td>4. Improve storage practices</td>
</tr>
<tr>
<td></td>
<td>5. Screen for duplicate files</td>
</tr>
<tr>
<td></td>
<td>6. Extract, collect and manage administrative, technical and preservation metadata</td>
</tr>
</tbody>
</table>
Next Steps

1. Fixity issues- checksums, virus scans
2. System integration – Archivematica, CONTENTdm and DuraCloud
3. Local storage options – server storage, external HDs
4. Metadata – technical and preservation
5. Exit strategy – uncertain availability of hosted systems/services
Challenges – System Integration

Current workflow without Archivematica and DuraCloud

- Producers
- Preservation Masters
- Production Masters
- SIP Prod Master
- Submission Information Package
- CONTENTdm client project
- CONTENTdm repository
- DIP Dissemination Information Package
- Consumers
Challenges – System Integration

New workflow with Archivematica and DuraCloud
Lessons Learned

There is not one right approach to digital preservation

Digital preservation is complex

It is easy to become side-tracked by small details

It is necessary to get started as soon as possible
Professional Development

Group activities – tours, host events, educational meetings

Speaking, presenting and blogging

Conferences
Thank You

Jeffrey Erickson
jeffreyk.erickson@gmail.com

Links and contact information is available on the handout
ANALYZING DIGITAL PRESERVATION WORKFLOWS AT THE STATE LIBRARY OF MASSACHUSETTS
About Me

- Recent graduate from the University of Washington
- Experience in digital collections with academic and corporate archives
- NDSR provides continuing education with hands-on experience in a supportive community
The State Library

- Alix Quan, Assistant Director
- Collects and preserves state documents and historical materials
- Early stages of digital preservation
Frameworks

1. Acknowledge
2. Act \textit{initiating digital preservation projects}
3. Consolidate
4. Institutionalize
5. Externalize
Project Context

- State agencies produce thousands of publications for the public
- State Library mandated to collect and preserve them
- Agencies mandated to send the Library copies...
How can we efficiently and effectively collect thousands of electronic state publications, posted to individual websites without consistency or notification to State Library staff?
Objectives

1. To assess the scope of existing state publications
2. To refine the types of publications to which we provide access
3. To survey practices at other state libraries and similar institutions
4. To capture, describe, and preserve documents collected in assessment
5. To establish best practices and procedures
6. To share knowledge
1. To assess the scope of existing state publications

- Used web statistics from Mass.gov
- Show where publications live on agency websites
- After itemization process, see types of documents
2. To refine the types of publications to which we provide access

- Established priority ranking system
  - High priority documents: reports, meeting material
  - Low priority documents: forms, event information
- Used priority rankings to create information page for agencies
- Developing collection policy statement
Information For State Agencies Regarding The Submission of Documents

The mission of the State Library of Massachusetts is to provide long-term access to a comprehensive repository of state publications. In order to help us achieve this, please regularly submit your state agency's print and electronic publications to us.

Why should my state agency submit publications to the State Library of Massachusetts?

- Publications are preserved for long-term access and use in our digital repository.
- It enables the creation of a complete and centralized historical record of Massachusetts.
- The Library provides reference services, which saves your agency's staff time and resources.
- All of this is done at no charge to your agency.
- It's the law (M.G.L. ch.6 §23B) requires that each state agency send eight copies of their publications to the Library for long-term storage and distribution to regional libraries and the Library of Congress.

What kinds of publications should my agency submit?

We aim to preserve valuable, informative publications intended for public use, including reports, guides, Executive Orders, and meeting minutes. Please note that we prefer PDF files. Some examples of other documents we'd like you to send us include:

<table>
<thead>
<tr>
<th>Advisories</th>
<th>Bulletins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reports (including Preliminary, Interim, and Annual)</td>
<td>Executive summaries</td>
</tr>
<tr>
<td>Brochures</td>
<td>Guidelines</td>
</tr>
<tr>
<td>Inaugural addresses</td>
<td>State published serials</td>
</tr>
<tr>
<td>Handbooks, guides, and manuals</td>
<td>Meeting minutes and other meeting materials</td>
</tr>
<tr>
<td>Reference guides</td>
<td>Proclamations</td>
</tr>
<tr>
<td>Summaries of reports, meetings, and projects</td>
<td>Task Force findings and recommendations</td>
</tr>
<tr>
<td>Project reviews</td>
<td>Publications relating to significant events in MA history (e.g., the Boston Marathon Bombing, the Big Dig)</td>
</tr>
</tbody>
</table>
Publications that you do not need to send us include ephemeral items, documents for internal agency use, RFPs, or state regulations. Some examples of other documents we do not need include:

<table>
<thead>
<tr>
<th>Agendas</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting or event announcements</td>
<td>Legal documentation</td>
</tr>
<tr>
<td>Regulations</td>
<td>Forms</td>
</tr>
<tr>
<td>RFPs</td>
<td>Public notices</td>
</tr>
<tr>
<td>Posters</td>
<td>Transcripts of hearings</td>
</tr>
<tr>
<td>Sample documents</td>
<td>Publications intended for internal agency use only</td>
</tr>
</tbody>
</table>

Feel free to contact the State Library staff for a consultation if you're unsure about whether or not to submit a publication. Our contact information is below.

**Where should we send our electronic publications?**

Please email your publications to us at electronic.documents@state.ma.us

**Where should we send our print publications?**

Please send them to us or drop them off with us at:

State Library of Massachusetts
24 Beacon Street
State House, Room 341
Boston, MA 02133

**How many copies should we send?**

Please send eight copies of your print publications.

**Do we still need to send print copies of electronic documents?**

If your agency published both a print and digital copy of a publication, please send us both versions. If the document is only available in print, please send us the print copy. If the document is only available digitally, please send us the digital copy, with no need to also include a printed version.

**What will the Library do with these copies?**

- Print copies will be distributed to depository libraries around the state and the Library of Congress, and will be saved in our stacks for public use.
Agency Outreach

- Raise awareness of information page
- Meet with webmasters
- Developing outreach tools to send to agencies
3. To survey practices at other state libraries and similar institutions

- Best Practices Exchange 2015
- Survey sent to state libraries
- Meetings with State Archives, UMass Amherst, MassIT
Challenges

- Conditional variations of content
- Agency cooperation
- Evergreen and DSpace workflows
- Library and Archives operate under separate agencies
Objectives Review

✓ To assess the scope of existing state publications
✓ To refine the types of publications to which we provide access
✓ To survey practices at other state libraries and similar institutions

4. To capture, describe, and preserve documents collected in assessment
5. To establish best practices and procedures
6. To share knowledge
Final Deliverables

- Report with findings and recommendations
- Draft policy statements
- Updated documentation
- A more comprehensive collection of digital state publications for public access
20%

- Conference attendance and presentations
- Webinars and Codecademy
- Special Collections Exhibits Committee
- Blogs
Thank you!

stefanie.ramsay@gmail.com
“Preparing for a Trustworthy Repository Certification of Harvard Library’s DRS”

Julie Seifert
Overview

- About Me & My Host
- The Project – Goals and Impact
- Procedure & Deliverables
- Next Steps
- Challenges & Lessons Learned
- 20% Time
- Conclusion
About Me

• From Tampa, FL

• Started out working in archives as an undergraduate at University of Florida

• Went to grad school at UNC Chapel Hill – More archives, more digital

• Lived in Maine before this, worked as a project manager for massive online class

• Excited to be in Boston! Lots of rowing!
About My Host

- Harvard’s Digital Repository Services (DRS)

- Provides long-term preservation and access to digitized and born-digital content

- Used by about 50 libraries, archives, and museums across Harvard

- In production for almost 15 years
Overview

• About Me & My Host
• The Project – Goals and Impact
• Procedure & Deliverables
• Next Steps
• Challenges & Lessons Learned
• 20% Time
• Conclusion
Project – Goals

• Prepare Harvard DRS for trustworthy repository certification & eventual audit

• Self-assessment based on ISO 16363 – high standard for digital preservation

• Over 100 metrics, on everything from storage to financial planning

• Inventory DRS documentation & organize. Documentation = proof.

• Identify areas needing improvement and change.
Project – Impact

• Opportunity to improve

• Increase confidence among stakeholders: users, curators, repository staff.
Overview

- About Me & My Host
- The Project
- Procedure & Deliverables
- Challenges & Lessons Learned
- Next Steps
- 20% Time
- Conclusion
Procedure

- Information gathering, example of CLOCKSS self-assessment process
- Attended iPRES workshop on auditing
- Review existing documentation
- Initial walk-through of metrics
Procedure

- Getting organized
- Interviewing staff
- Gap analysis & data visualization
Deliverables

- Wiki

- Excel sheets matching metrics with possible documentation

- ISO16363 translation

- CLOCKSS Documentation comparison

- Documentation inventory
3) Organizational Infrastructure

Created by Julia Elizabeth Bullitt, last modified on Oct 27, 2015

3.1 Governance and Organizational Viability

- 3.1.1 The repository shall have a mission statement that reflects a commitment to preservation of, long-term retention of, management of, and access to digital information.
- 3.1.2 The repository shall have a Preservation Strategy Plan that defines the approach the repository will take in the long-term support of its mission.
- 3.1.2.1 The repository shall have an appropriate succession plan, contingency plans, and disaster recovery plans in place in case the repository ceases to operate or the governing or funding institution substantially changes its scope.
- 3.1.2.2 The repository shall monitor its organizational environment to determine when to execute its succession plan, contingency plans, and/or disaster recovery plans.
- 3.1.3 The repository shall have a Collection Policy or other document that specifies the type of information it will preserve, retain, manage, and provide access to.

3.2 Organizational Structure and Staffing

- 3.2.1 The repository shall have identified and established the duties that it needs to perform and shall have appointed staff with adequate skills and experience to fulfill these duties.
- 3.2.1.1 The repository shall have identified and established the duties that it needs to perform.
- 3.2.1.2 The repository shall have the appropriate number of staff to support its functions and services.
- 3.2.1.3 The repository shall have an active professional development program that provides staff with skills and expertise development opportunities.

3.3 Procedural Accountability and Preservation Policy Framework

- 3.3.1 The repository shall have defined its Provenance Community and associated knowledge base(s) and shall have these definitions appropriately accessible.
- 3.3.2 The repository shall have Preservation Policies in place to ensure its Preservation Strategic Plan will be met.
- 3.3.2.1 The repository shall have mechanisms for review, update, and ongoing development of its Preservation Policies as the repository grows and new technology and community practice evolve.
- 3.3.3 The repository shall have a documented history of the changes to its operations, procedures, software, and hardware.
- 3.3.4 The repository shall commit to transparency and accountability in all aspects supporting the operation and management of the repository that affect the preservation of digital content over time.
- 3.3.5 The repository shall define, collect, track, and appropriately provide its information integrity measurements.
- 3.3.6 The repository shall commit to a regular schedule of self-assessment and external certification.

3.4 Financial Sustainability

- 3.4.1 The repository shall have short- and long-term business planning processes in place to sustain the repository over time.
- 3.4.2 The repository shall have financial practices and procedures which are transparent, compliant with relevant accounting standards and practices, and audited by third parties in accordance with financial requirements.
- 3.4.3 The repository shall have an ongoing commitment to analyze and report on financial risk, benefit, investment, and expenditure (including assets, licenses, and liabilities).

3.5 Contracts, Licenses, and Liabilities

- 3.5.1 The repository shall have and maintain appropriate contracts or deposit agreements for digital materials that it manages, preserves, and/or to which it provides access.
- 3.5.1.1 The repository shall have contracts or deposit agreements which specify and transfer all necessary preservation rights, and these rights transferred shall be documented.
- 3.5.1.2 The repository shall have written policies that indicate when a deposit becomes the sole responsibility of the depositors and all rights are vested in them.
- 3.5.1.3 The repository shall have written policies that indicate when it accepts preservation responsibility for contents of each set of submitted data objects.
- 3.5.1.4 The repository shall have policies in place to address liability and challenges to external projects.
- 3.5.2 The repository shall track and manage intellectual property rights and restrictions on use of repository content as required by deposit agreement, contract, or license.
3.1.1 The repository shall have a mission statement that reflects a commitment to the preservation of, long term retention of, management of, and access to digital information.

Created by Alice Elizabeth Skelton, last modified on Jan 11, 2018

Supporting Text:
This is necessary in order to ensure commitment to preservation, retention, management and access at the repository's highest administrative level.

Examples of Ways the Repository Can Demonstrate It is Meeting This Requirement:
Mission statement or charter of the repository or its parent organization that specifically addresses or implicitly calls for the preservation of information and/or other resources under its purview, a legal, statutory, or government regulatory mandate applicable to the repository that specifically addresses or implicitly requires the preservation, retention, management and access to information and/or other resources under its purview.

Discussion:
The repository's or its parent organization's mission statement should explicitly address preservation. If preservation is not among the primary purposes of an organization that houses a digital repository then preservation may not be essential to the organization's mission. In some instances a repository pursues its preservation mission as an outgrowth of the larger goals of an organization in which it is housed, such as a university or government agency, and its narrower mission may be formalized through policies explicitly adopted and approved by the larger organization. Government agencies and other organizations may have legal mandates that require they preserve materials. In which case these mandates can be substituted for mission statements, as they define the purpose of the organization. Mission statements should be kept up-to-date and continue to reflect the common goals and practices for preservation.

Supporting Documents:
- Harvard Library Website - has mission statement:
  "Mission: The Harvard Library advances scholarship and teaching by committing itself to the creation, application, preservation and dissemination of knowledge."
  http://library.harvard.edu/vision-mission
- DRs policy guide:

1. What is the purpose of the Digital Repository Service?

The DRs provides professionally managed services to ensure the usability of stored digital objects over time. The DRs is both a preservation and an access repository. In other words, its obligations include assurances that stored digital content will remain both usable and accessible into the indefinite future despite a constantly changing technological environment. All objects managed in the DRs will receive the highest level of preservation service consistent with the objects characteristics and the current technical capabilities of the DRs and its staff.

The DRs is part of a suite of independent but cooperating services operated by HUL, that provide a comprehensive infrastructure for digital content management, discovery, and delivery. Further information about the HUL infrastructure is available on the HUL website at <http://harvard.edu/drs/systems/drs-policy-guide/what/what happens to the objects/>

Note that the DRs is not intended to function as a record management system or an institutional repository (i.e., it is not designed to capture all of the research output of the university).

http://library.harvard.edu/drs/systems/drs/policy-guide/what/what happens to the objects/
### Excel Sheet – Version 1.0

Red = Document needed. White = Already documented

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<thead>
<tr>
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<th>(Possible) Supporting Document</th>
<th>Person to talk to (if any)</th>
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<td>DRS Policy Guide</td>
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<td>3.6.2.1 Have mechanism to appropriately verify identity of producer</td>
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### Excel Sheet – Sorted by Supporting Document

Red = Document needed. White = Already documented

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<td>Documents about delivery systems on preservation website that say which formats for which delivery systems</td>
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*Note: The table contains a list of standards and requirements, along with links to supporting documents and responsible parties.*
# Excel Sheet – Version 2.0

Green – Done & documented. Yellow – Done but not documented.
Red – Not done, not documented

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<th>Section</th>
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<th>Wiki Page</th>
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<td>Some policies are available online, but sometimes hard to find. Some are not available at all.</td>
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</table>

*Note: The image shows a section of an Excel sheet with various standards and documentation comments, along with links and wiki pages for further information.*
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<thead>
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<th>Section</th>
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</table>
ISO in Translation

ISO16363 for non-rocket scientists

Section 3 Organizational Infrastructure

Section 3 is concerned with the setup of the repository. Before you start ingesting content, you have to make sure you have all the pieces in place to actually do the work. This section asks: What is your purpose? Who do you serve? How are you going to achieve these goals? Do you have the legal right to preserve content? Do you have the financial ability to do so? What's your business plan, and how are you going to uphold your plan over time? Do you make your plans clear to your stakeholders?

- 3.1.1 Mission Statement—what do you do?
- 3.1.2 Strategic plan - How are you going to achieve your mission?
- 3.1.3 Collection Policy - What do you collect?
- 3.2.1 Established duties, adequate staff with adequate skills—Who does what? Are they able to do it?
- 3.3.1 Definition of designated community—who do you serve?
- 3.3.2 Preservation policy and procedures that ensure the Plan will be met—How are you going to make sure the Plan actually happens?
- 3.3.3 Document history of changes to operations, procedures, hardware, software—If you change something, write it down so that people know what you did and can see your decision making process.
- 3.3.4 Transparency and accountability in all actions related to operation and management of repository that affect the preservation of digital content over time—Make information about your operations available at least to your designated community stakeholders.
- 3.3.5 Define, collect, track, and provide information integrity measurements—
- 3.3.6 Commit to a regular schedule of self-assessment—Continue to evaluate the repository over time
- 3.4.1 Need to have short term and long term business planning processes in place—Make sure you have a plan to operate your repository
- 3.4.2 Financial practices that are transparent, compliant with relevant standards and practices, and audited by third parties—Make sure you have the money to actually sustain your repository.
Have a way to anticipate risks that might prevent you from having the money to operate your repository

- 3.5.1 Have & maintain appropriate contract and deposit agreements - Make sure you have the right to collect and/or provide access to this material
- 3.5.2 Track and manage intellectual property rights and restrictions – Know the rights and restrictions on your digital objects

Possible documents – Mission statement, preservation plan, org chart, roles and responsibilities, financial statements, budgets, depositor agreements, policy guide.

Section 4 Digital Object Management

Section 4 is concerned with the ingest and preservation of the content. It asks: What properties of the content do you preserve? How do you ensure that the content is complete and that it is what you think it is? How do you communicate about the process with the producer & others? Then, how do you transform the SIP to AIP, and what happens to the SIP afterwards? How do you make the AIP discoverable and accessible to your designated community? How do you ensure the security and integrity of the AIP over time, and how do you mitigate risks?

- 4.1.1 Identify & record what content information & information properties the repository will preserve. What are you going to preserve? What are you NOT going to preserve?
- 4.1.2 Specify the information that needs to be associated with specific Content Information at the time of deposit – Tell the producer what information you need from them about their content
- 4.1.3 Have adequate specifications enabling the recognition and parsing of SIPS – Make sure you have a process for confirming that the content you take in is what it says it is. I.e. that a TIFF is really a TIFF and not just something with .TIFF at the end.
- 4.1.4 Have mechanism to verify the identity of producer of all materials – make sure that the person/org. that you say produced the content really produced it.
Example

- “3.3.1: The repository shall have defined its Designated Community and associated knowledge base(s) and shall have these definitions appropriately accessible”

- Translation: Know your audience, and make this information available.

- Hoping to send this out to NDSR community & get feedback on it, and then share with larger community
One Document, Many Metrics

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<p>| Box Operations                     | 3.3.3             |
|                                   | 4.1.6             |
|                                   | 4.2.9             |
|                                   | 4.3.1             |
|                                   | 4.3.2             |
|                                   | 4.6.1             |
|                                   | 5.1.2             |
|                                   | 5.2.3             |
| Input Pipeline                     | 4.1.3             |
|                                   | 4.1.5             |
|                                   | 4.1.6             |
|                                   | 4.1.7             |
|                                   | 4.1.8             |
|                                   | 4.2.1             |
|                                   | 4.2.2             |
|                                   | 4.2.7             |
|                                   | 4.2.8             |
|                                   | 5.3.2             |
| Extracting Triggered Content       | 3.5.5             |
|                                   | 3.5.5             |
|                                   | 4.3.4             |
|                                   | 4.5.3             |
|                                   | 4.6.1             |
|                                   | 4.6.2             |
| Property Server Operations         | 3.3.3             |
|                                   | 5.2.3             |
| Guideline                          | 3.4.2             |
| Threats and Mitigations            | 3.4.3             |
|                                   | 3.1.6             |
|                                   | 4.5.1             |
|                                   | 5.1.1             |
|                                   | 5.2.1             |
|                                   | 5.3.3             |
|                                   | 5.2.4             |
| Publisher Agreement                | 3.5.2             |
| Definition of SDR                   | 4.3.3             |
|                                   | 4.1.2             |
|                                   | 4.1.3             |
|                                   | 4.1.4             |
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|                                   | 4.2.6             |</p>
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# Documentation Inventory

<table>
<thead>
<tr>
<th>File Name/Title</th>
<th>Location</th>
<th>Summary of Content</th>
<th>Date Created</th>
<th>Last Updated</th>
<th>Creator</th>
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<tbody>
<tr>
<td>DRS Policy Guide</td>
<td><a href="http://hul.harvard.edu/oir/systems/drs/policyguide/wwhelp/wwimpl/js/htmlhelp.htm">http://hul.harvard.edu/oir/systems/drs/policyguide/wwhelp/wwimpl/js/htmlhelp.htm</a></td>
<td>Purpose, type of objects, who may deposit, obligations of collections managers &amp; DRS, retention policies, discovery &amp; access policies, delivery services</td>
<td>TBA</td>
<td>TBA</td>
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<td>Organizational Charts</td>
<td><a href="http://library.harvard.edu/preservation/staff-resources">http://library.harvard.edu/preservation/staff-resources</a></td>
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<td>DRS Road Map</td>
<td>G Drive: Preservation Services; Digital Preservation; DRS; Roadmaps</td>
<td>DRS improvements for 2015-2020; FY 16 projects underway, FY 17 Projects planned, proposed timeline, framework</td>
<td>12/23/2015</td>
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<td>LTS FY 17 Planning Presentation (PP)</td>
<td>G Drive: Preservation Services; Digital Preservation; DRS; Roadmaps</td>
<td>Explanation of DRS Objects; metadata schemas; content model definitions</td>
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<td>DRS Content Guide</td>
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<td>Log of metadata cleanup actions in DRS 2</td>
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<td>DRS2 Migration Cleanup Log</td>
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</table>
Overview

- About Me & My Host
- The Project
- Procedure & Deliverables
- **Next Steps**
- Challenges & Lessons Learned
- 20% Time
- Conclusion
Next Steps

- Continuing filling in the Excel sheets, metric by metric

- Suggestions for new documentation – can one piece of documentation apply to several metrics?
Next Steps

• Documentation inventory

• Identify areas needing change/improvement

• Sharing information – excel sheets as templates?
Overview

- About Me & My Host
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- Conclusion
Challenges & Lessons Learned

- Understanding the metrics
- Where to start?
- Where is the documentation?
Challenges & Lessons Learned

• Matching the documentation to the metrics vs. matching metrics to documentation

• Determining what’s done but not documented vs. what’s not done at all

• How to best display the information
Overview

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20% Time

• Outreach & education

• ALA Preservation Week at Harvard

• Brown bag at Harvard

• Webinar with D.C. Resident
20% Time

- PREMIS Chapter on tools, book out next year
- OSS iPRES Session Summary
- Conferences: Volunteered at iPRES, Presented at NE Code4Lib and ALA, Attended METRO NY and will attend NEA
- Blogging
Overview

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Conclusion

• Value of identifying areas needing change

• Taking the time to think in detail about all aspects of repository

• Identify missing policies and practices

• Importance of sharing this experience – many people are facing the same challenges.
Thank you!
Questions?