

INDSR

BOSTON

**National Digital Stewardship Residency
Program
2015-2016 Cohort**

NDSR Program History

IMLS-funded national program

Developed by Library of Congress

Piloted in Washington DC in 2013

Expanded to include projects in Metro New York and Boston



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 Structure

Residents work on a digital preservation project at a host institutions (80%)

Residents pursue professional development, personal interests, attend conferences and network with peers (20%)



Boston Residents 2015-16

JFK Presidential Library

- Digital preservation planning



MIT Libraries

- Preservation storage for digital content



UMass Boston

- Digital preservation planning



Massachusetts State Library

- Digital preservation workflows



Harvard Libraries

- TDR Self Assessment based on ISO 16363



NDSR 2016-17

Hosts – Public Broadcasting organizations located across the country

New York; Baton Rouge; St. Paul; Hollywood; Washington DC; Madison, WI; Yellow Springs, OH



[AAPB NDSR Overview](#) [Application Information](#) [Project News and Updates](#) [Frequently Asked Questions](#) [Contact Us](#)



NDSR BOSTON

NDSR Links

NDSR Boston Website

http://projects.iq.harvard.edu/ndsr_boston

NDSR Boston Residents' Blog

<https://ndsrboston2015.wordpress.com>

Library of Congress NDSR Website

<http://www.digitalpreservation.gov/ndsr>

NDSR AAPB Website

<http://ndsr.americanarchive.org>

UMass Boston
University Archives and Special
Collections
NDSR 2015-16 Project

Jeffrey Erickson

Digital Commonwealth 2016 Annual Conference , April 5,
2016



NDSR Project

Digital Preservation Planning and Implementation using ArchivesDirect

*ArchivesDirect: a hosted digital preservation solution
combining the Archivemática workflow tool and the
DuraCloud storage service*

The Archivemática logo features a blue square containing a white '@' symbol, followed by the word 'archivemática' in a white, lowercase, sans-serif font.

The DuraCloud logo consists of a blue, stylized cloud shape above the word 'DURACLOUD' in a blue, uppercase, sans-serif font.



Mass. Memories Road Show

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



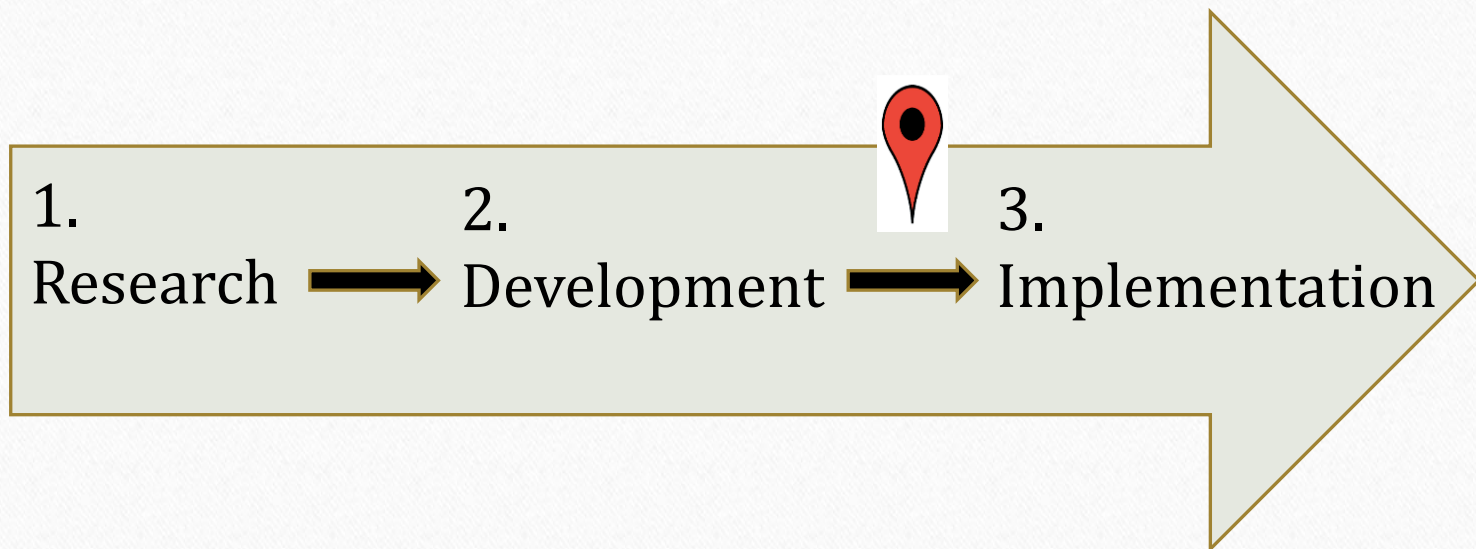
Mass. Memories Road Show at UMass Boston

Your Place in Massachusetts History



Project Phases

Three phased approach to digital preservation planning





Work Product

- Created file inventory and digital content review
 - Identify scope, growth and preservation needs of collection

- Documented existing MMRS workflows
 - Understand existing practices

- Performed a GAP Analysis
 - Identify where digital preservation efforts and resources should be concentrated

Gap Analysis

Identify where digital preservation efforts should be concentrated

Open Archival Information System (OAIS) reference model (ISO-STD 14721)

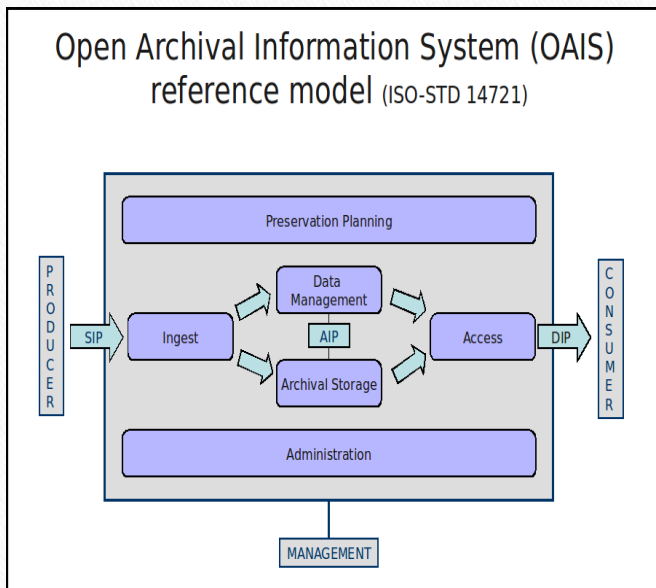


Table 1: Summary of the Levels of Digital Preservation

	Level 1 (Protect your data)	Level 2 (Show your data)	Level 3 (Monitor your data)	Level 4 (Repair your data)
Storage and Geographic Location	<ul style="list-style-type: none"> - Two complete copies that are not collocated - For data on heterogeneous media (optical discs, hard drives, etc.) get the content off the medium and into your storage system 	<ul style="list-style-type: none"> - At least three complete copies - At least one copy in a different geographic location - Document your storage systems and storage media and what you need to use them 	<ul style="list-style-type: none"> - At least one copy in a geographic location with a different disaster threat - Check/monitor/monitoring process for your storage systems and media 	<ul style="list-style-type: none"> - At least three copies in geographic locations with different disaster threats - Have a comprehensive plan in place that will keep files and metadata on currently accessible media or systems
File Fidelity and Data Integrity	<ul style="list-style-type: none"> - Check file fidelity on ingest if it has been provided with the content - Create fidelity info if it wasn't provided with the content 	<ul style="list-style-type: none"> - Check fidelity on all ingests - Use write blockers when working with original media - Virus-check high risk content 	<ul style="list-style-type: none"> - Check fidelity of content of fixed intervals - Maintain logs of file info; supply audit on demand - Ability to detect corrupt data - Virus-check all content 	<ul style="list-style-type: none"> - Check fidelity of all content in response to specific events or activities - Ability to replace/repair corrupted data - Ensure no one person has write access to all copies
Information Security	<ul style="list-style-type: none"> - Identify who has read, write, move and delete authorization to individual files - Restrict who has these authorizations to individual files 	<ul style="list-style-type: none"> - Document access restrictions for content 	<ul style="list-style-type: none"> - Maintain logs of who performed what actions on files, including deletions and preservation actions 	<ul style="list-style-type: none"> - Perform audit of logs
Metadata	<ul style="list-style-type: none"> - Inventory of content and its storage location - Store backup and non-collocation of inventory 	<ul style="list-style-type: none"> - Store administrative metadata - Store transformative metadata and log events 	<ul style="list-style-type: none"> - Store standard technical and descriptive metadata 	<ul style="list-style-type: none"> - Store standard preservation metadata
File Formats	<ul style="list-style-type: none"> - When you can give input into the creation of digital files encourage use of a limited set of known open formats and codecs 	<ul style="list-style-type: none"> - Inventory of the formats in use 	<ul style="list-style-type: none"> - Monitor the format obsolescence issues 	<ul style="list-style-type: none"> - Perform format migrations, emulations and similar activities as needed

Trustworthy Repositories
Audit & Certification:
Criteria and Checklist





Gap Analysis - Summary

- Ingest preparation
 - Archival storage implementation
1. Generate checksums
 2. Screen for duplicate and unwanted files
 3. Create/assign unique IDs to files
 4. Store files in multiple locations
 5. Include descriptive metadata in archival storage
 6. Create/manage administrative, technical and preservation metadata



Adjustments to Existing Practices

-
- Generate checksums – protect authenticity and data integrity
 - Digitize registration forms – improve intellectual control
 - Teracopy file copy tool – preserves creation dates



File Processing Adjustments

- Data cleaning, remove duplicate files and weed unwanted files

- Incorporate standard terminology
 - “original” **➡** preservation masters
 - “edited masters” **➡** production masters

- Adjust file naming conventions to identify file versions
 - *.f0* suffix indicates preservation master files
 - *.f1* suffix indicates production master files



Archivematica – Pros

- Verifies fixity information of submissions to ensure objects aren't corrupted during upload

- Manages metadata in METS.XML file
 - Extracts technical metadata from objects
 - Produces administrative and preservation metadata

- Accepts descriptive metadata exported from DAM and includes it in the METS.XML file



Archivematica – Cons

- Problems processing large submission packages
 - Requires modifying composition of submission packages to manage processing limitations of large video files

- Default normalization rules create of duplicate files
 - TIF files are normalized to new TIF files



Next Steps

- Complete testing and review of Archivematica workflows
- Begin processing collection through Archivematica
- Continue data clean-up
- Document new digital preservation workflows and train staff



Thank You

Jeffrey Erickson

Contact me:

- jeffreyk.erickson@gmail.com
- www.linkedin.com/in/jeffreykerickson



INVESTIGATING DIGITAL PRESERVATION STORAGE OPTIONS AND WORKFLOWS FOR MIT LIBRARIES

ALEXANDRA CURRAN

Digital Commonwealth Annual Conference
April 5, 2016

SCOPE

- Personal Background
- Host
- Project Description
- Project Activities
- Moving Forward
- Challenges
- Professional Development



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 gather information on possible storage options
- Contribute to the collaborative assessment process
- Outcomes will contribute to future preservation storage planning and an upcoming preservation storage initiative

PROJECT ACTIVITIES

1. Analyze relevant digital preservation standards for preservation storage
2. Define review criteria for preservation storage options
3. Identify preservation storage options to consider
4. Gather information about possible preservation storage options
5. Coordinate with Content Curators about their content to preserve
6. Suggest additions to Preservation Storage in Managing Digital Content workflow

PAST ACTIVITIES

1. Analyze relevant digital preservation standards for preservation storage
2. Define review criteria for preservation storage options
3. Identify preservation storage options to consider
4. Gather information about possible preservation storage options
5. Coordinate with Content Curators about their content to preserve
6. Suggest additions to Preservation Storage in Managing Digital Content workflow

PRESENT ACTIVITIES

1. Analyze relevant digital preservation standards for preservation storage
2. Define review criteria for preservation storage options
3. Identify preservation storage options to consider
4. Gather information about possible preservation storage options
5. Coordinate with Content Curators about their content to preserve
6. Suggest additions to Preservation Storage in Managing Digital Content workflow

FUTURE ACTIVITIES

1. Analyze relevant digital preservation standards for preservation storage
2. Define review criteria for preservation storage options
3. Identify preservation storage options to consider
4. Gather information about possible preservation storage options
5. Coordinate with Content Curators about their content to preserve
6. Suggest additions to Preservation Storage in Managing Digital Content workflow

CHALLENGES

- Extending my understanding of digital collections beyond access concerns
- Educating myself about digital preservation standards and practice
- Organizing documentation framework

PROFESSIONAL DEVELOPMENT



SHARING UPDATES & OUTCOMES

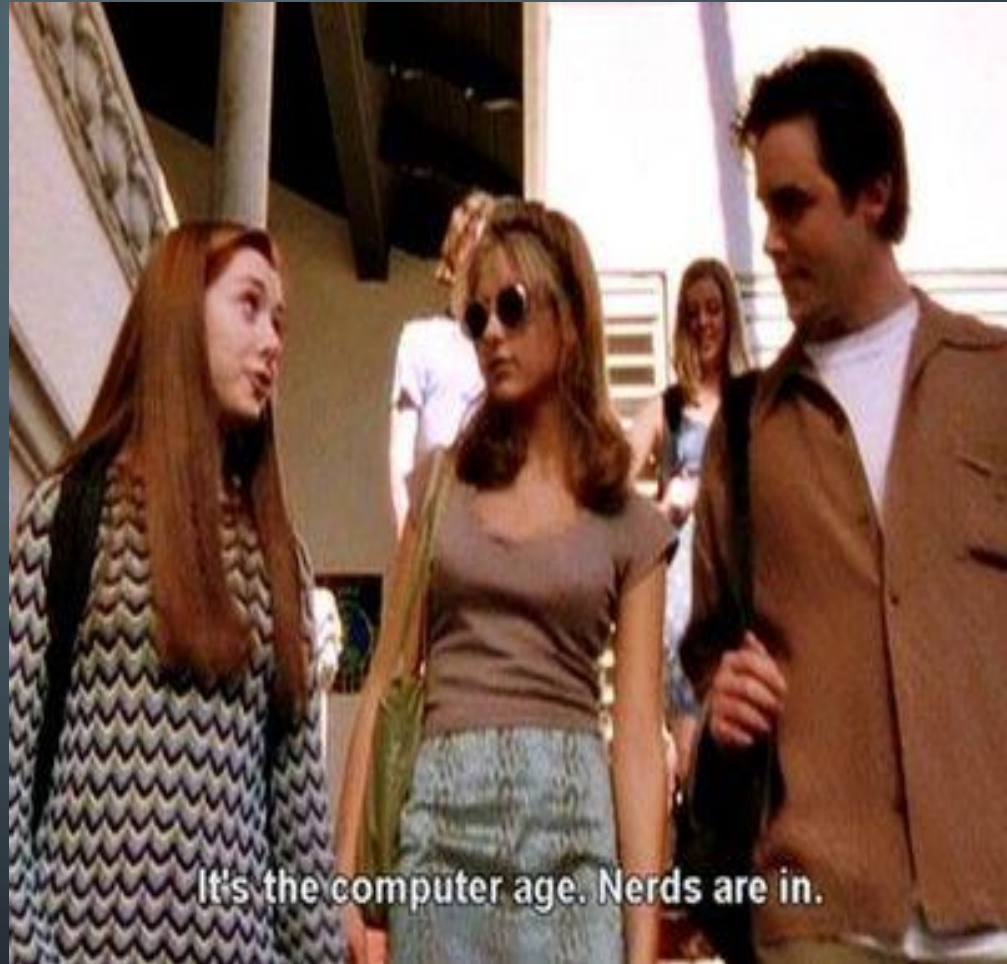
- The Signal blog post
 - <http://goo.gl/HLzp5u>
- NDSR Boston blog
 - <https://goo.gl/h0Uao3>
- Digital Preservation website at MIT Libraries
 - <http://goo.gl/pfHUya>

THANK YOU!

Alexandra Curran

acurran@mit.edu

@ArchiveTea



Digital Preservation at the JFK Library

Alice Prael
alicesaraprael@gmail.com
@AlicePrael

The Goals

“Develop a long-range digital preservation strategy for born-digital and digitized archival assets in our holdings.”

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



Currently...

The Systems

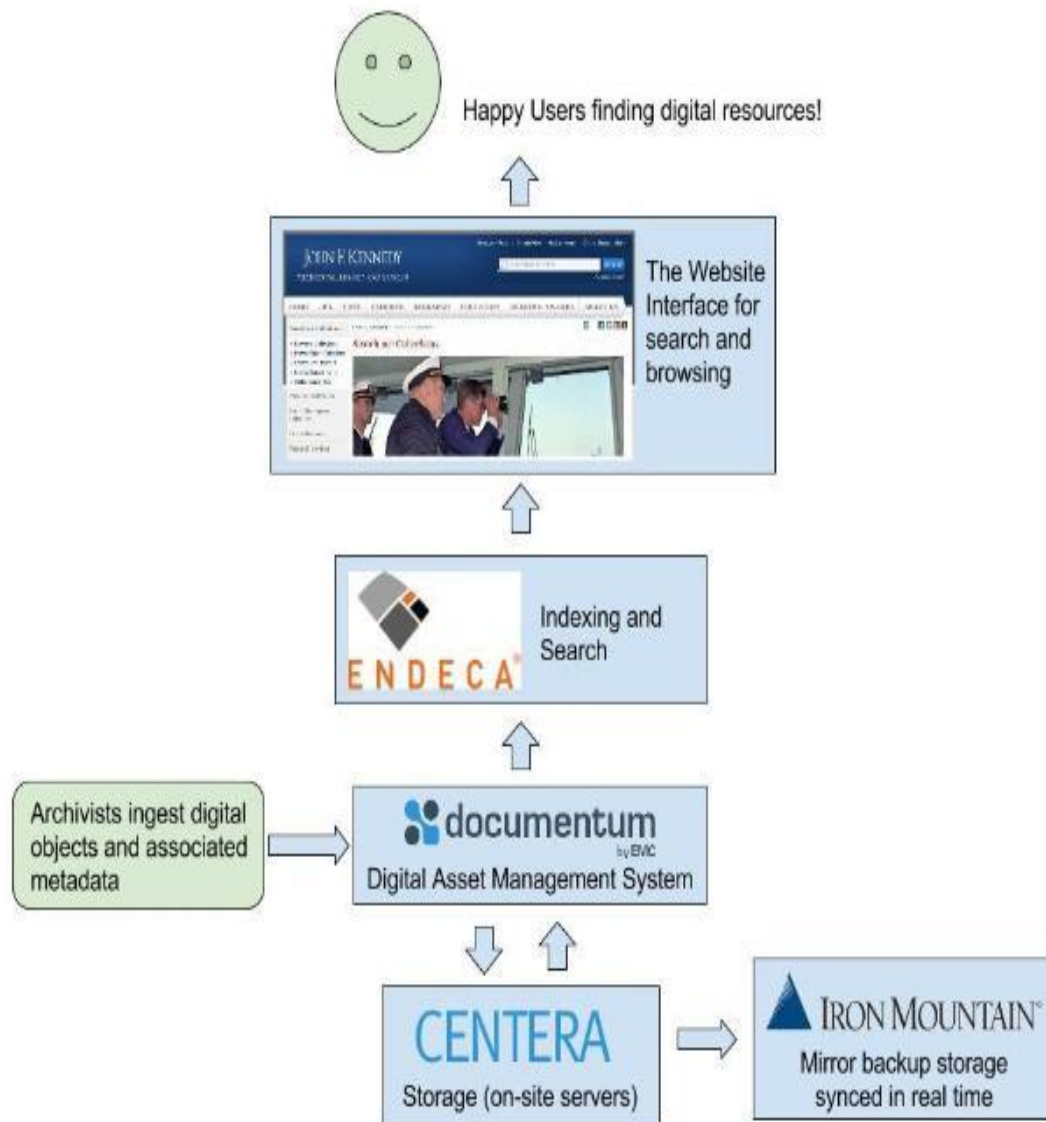
Documentum
Centra
Iron Mountain
Endeca
The Website

The Documentation

Help Guide from EMC
Internal Policies

The Bigger Picture

The Library
The Foundation
National Archives (NARA)



How to Measure Up

Which standard do you start with?

OAIS

ISO 16363

NDSA Levels of Digital Preservation

Table 1: Version 1 of the Levels of Digital Preservation

	Level 1 (Protect your data)	Level 2 (Know your data)	Level 3 (Monitor your data)	Level 4 (Repair your data)
Storage and Geographic Location	<ul style="list-style-type: none"> - Two complete copies that are not collocated - For data on heterogeneous media (optical discs, hard drives, etc.) get the content off the medium and into your storage system 	<ul style="list-style-type: none"> - At least three complete copies - At least one copy in a different geographic location - Document your storage system(s) and storage media and what you need to use them 	<ul style="list-style-type: none"> - At least one copy in a geographic location with a different disaster threat - Obsolescence monitoring process for your storage system(s) and media 	<ul style="list-style-type: none"> - At least three copies in geographic locations with different disaster threats - Have a comprehensive plan in place that will keep files and metadata on currently accessible media or systems
File Fixity and Data Integrity	<ul style="list-style-type: none"> - Check file fixity on ingest if it has been provided with the content - Create fixity info if it wasn't provided with the content 	<ul style="list-style-type: none"> - Check fixity on all ingests - Use write-blockers when working with original media - Virus-check high risk content 	<ul style="list-style-type: none"> - Check fixity of content at fixed intervals - Maintain logs of fixity info; supply audit on demand - Ability to detect corrupt data - Virus-check all content 	<ul style="list-style-type: none"> - Check fixity of all content in response to specific events or activities - Ability to replace/repair corrupted data - Ensure no one person has write access to all copies
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The NDSA Levels

Full Report of Findings
<https://goo.gl/HbmhJv>

Strengths

- Information Security
 - Recommendations: Audit logs of who performed what actions on files, including deletions and preservation actions

- Metadata
 - Recommendations: Improve preservation metadata

- File Formats
 - No Recommendations

Information Security	<ul style="list-style-type: none"> - Identify who has read, write, move and delete authorization to individual files - Restrict who has those authorizations to individual files 	<ul style="list-style-type: none"> - Document access restrictions for content 	<ul style="list-style-type: none"> - Maintain logs of who performed what actions on files, including deletions and preservation actions 	<ul style="list-style-type: none"> - Perform audit of logs
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Weaknesses

Storage and Geographic Location

- Recommendations:
 - monitoring for obsolescence
 - creation of digital preservation storage
 - move all digital content off physical storage media

Storage and Geographic Location	<ul style="list-style-type: none"> - Two complete copies that are not collocated - For data on heterogeneous media (optical discs, hard drives, etc.) get the content off the medium and into your storage system 	<ul style="list-style-type: none"> - At least three complete copies - At least one copy in a different geographic location - Document your storage system(s) and storage media and what you need to use them 	<ul style="list-style-type: none"> - At least one copy in a geographic location with a different disaster threat - Obsolescence monitoring process for your storage system(s) and media 	<ul style="list-style-type: none"> - At least three copies in geographic locations with different disaster threats - Have a comprehensive plan in place that will keep files and metadata on currently accessible media or systems
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File Fixity

- Recommendations:
 - check file fixity at regular intervals and create and maintain fixity logs
- Currently working with limited born-digital media

File Fixity and Data Integrity	<ul style="list-style-type: none"> - Check file fixity on ingest if it has been provided with the content - Create fixity info if it wasn't provided with the content 	<ul style="list-style-type: none"> - Check fixity on all ingests - Use write-blockers when working with original media - Virus-check high risk content 	<ul style="list-style-type: none"> - Check fixity of content at fixed intervals - Maintain logs of fixity info; supply audit on demand - Ability to detect corrupt data - Virus-check all content 	<ul style="list-style-type: none"> - Check fixity of all content in response to specific events or activities - Ability to replace/repair corrupted data - Ensure no one person has write access to all copies
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Documentation

New Policies

- Digital Preservation Policy
- Selection Policy for Digitization
- Disaster Recovery Procedures for Digital Archives
- Born Digital Standard Operating Procedures

Policies Requiring Update

- Access Policy
- Inventory of File Formats in Use
- Acquisition Workflow for Born Digital Files

Possible Tools for

- Digital Preservation Storage
- File Fixity

The logo for libnova, featuring the word "libnova" in a blue, lowercase, sans-serif font. Above the letter "o" is a blue icon of an open book.The logo for avps Fixity, featuring the letters "avps" in a yellow, lowercase, sans-serif font. A yellow circle is positioned above the "v" and "p". Below the letters is the word "Fixity" in a smaller, black, lowercase, sans-serif font.The logo for MetaArchive cooperative, featuring a stylized umbrella icon above the text "MetaArchive" in a blue, sans-serif font, with "cooperative" in a smaller, black, lowercase, sans-serif font below it.The logo for Preservica Digital Preservation, featuring the word "Preservica" in a large, bold, blue, sans-serif font, with "Digital Preservation" in a smaller, black, sans-serif font below it.The logo for ORACLE Cloud, featuring the word "ORACLE" in a red, uppercase, sans-serif font, with "Cloud" in a smaller, black, lowercase, sans-serif font to its right.The logo for ExLibris Rosetta, featuring a rainbow-colored arc above the text "ExLibris" in a black, sans-serif font, with "Rosetta" in a red, sans-serif font to its right.

—
Tape Backup

Thank
You!

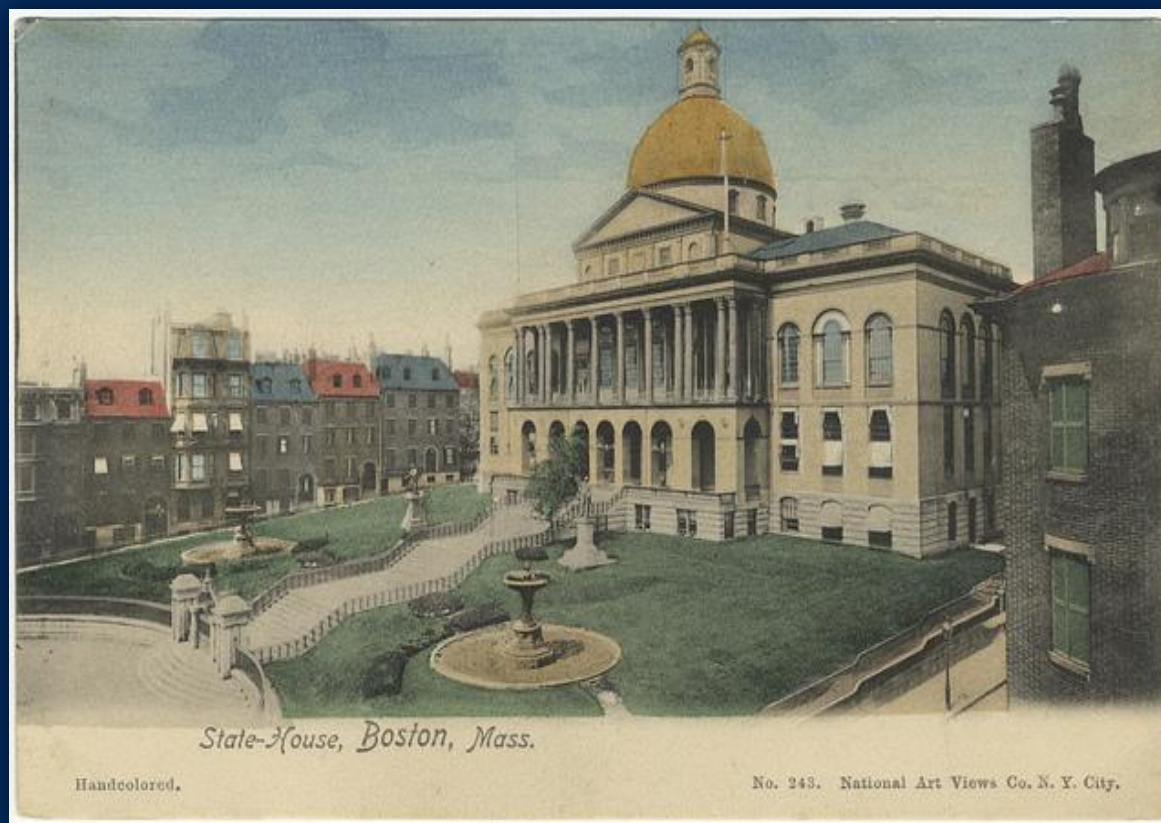
Alice Sara Prael

John F. Kennedy Presidential Library

alicesaraprael@gmail.com

@AlicePrael

ANALYZING DIGITAL PRESERVATION WORKFLOWS AT THE STATE LIBRARY OF MASSACHUSETTS



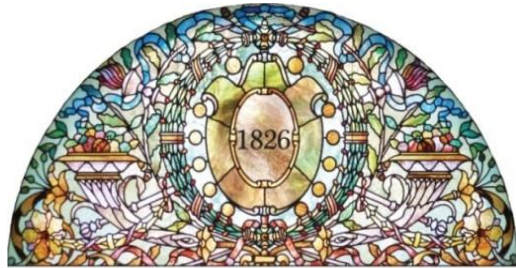
Stefanie Ramsay
NDSR Boston

My Background

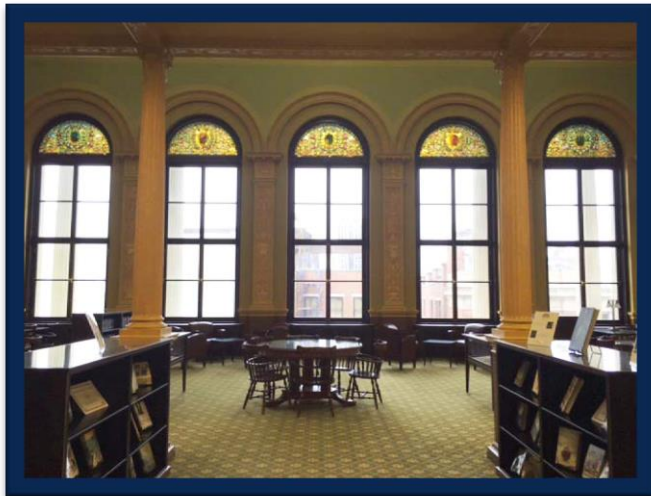
- MLIS from the University of Washington
- Experience in digital collections for academic and corporate archives
- NDSR provides continuing education with hands-on experience in a supportive community



The State Library



State Library of Massachusetts




- Located in the State House
- Collects and preserves state documents and historical materials
- Early stages of digital preservation

Project Context



- State agencies produce thousands of digital 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?

A decorative horizontal bar at the bottom of the slide, consisting of a long light blue segment followed by a shorter white segment on the right.

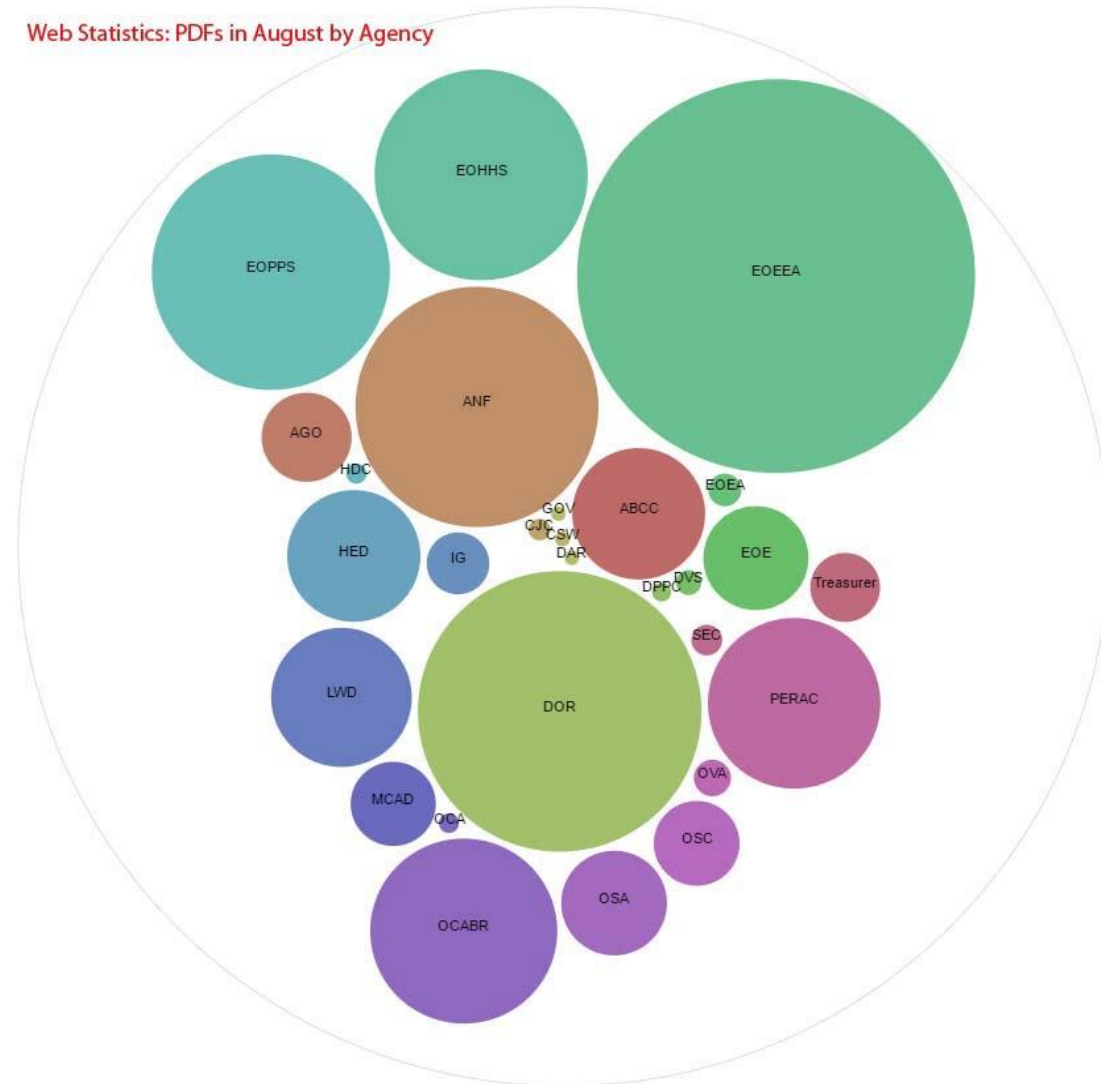
Project Highlights

- Web statistics to assess content types and scope
- Incorporating Archive-It into workflow
- Agency outreach

Web Statistics

- From Mass.gov
- Provide URL by agency

Web Statistics: PDFs in August by Agency



Web Statistics & Priority Documents

- Categorized by agency
- Reviewed over 45,000 documents to date
- Instituted ranking process
 - High priority documents: reports, meeting material
 - Low priority documents: forms, event information
- Collection policy statement
- Used priority rankings to create information page for agencies

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 staff time and resources.
- All of this is done at no charge to your agency.
- It's the law! [M.G.L. ch.6 §39B](#) 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:

Advisories	Bulletins
Reports (including Preliminary, Interim, and Annual)	Executive summaries
Brochures	Guidelines
Inaugural addresses	State published serials
Handbooks, guides, and manuals	Meeting minutes and other meeting materials
Reference guides	Proclamations
Summaries of reports, meetings, and projects	Task Force findings and recommendations
Project reviews	Publications relating to significant events in MA history (e.g., the Boston Marathon Bombing, the Big Dig)

Online Services

[DSpace Digital Repository](#)

[Find a Database](#)

[Ask a Librarian](#)

[Apply for a Library Card](#)

[Request a Book](#)

[Request a Journal Article](#)

[MA eBooks Pilot Project](#)

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:

Agendas	Applications
Meeting or event announcements	Legal documentation
Regulations	Forms
RFPs	Public notices
Posters	Transcripts of hearings
Sample documents	Publications intended for internal agency use only

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?

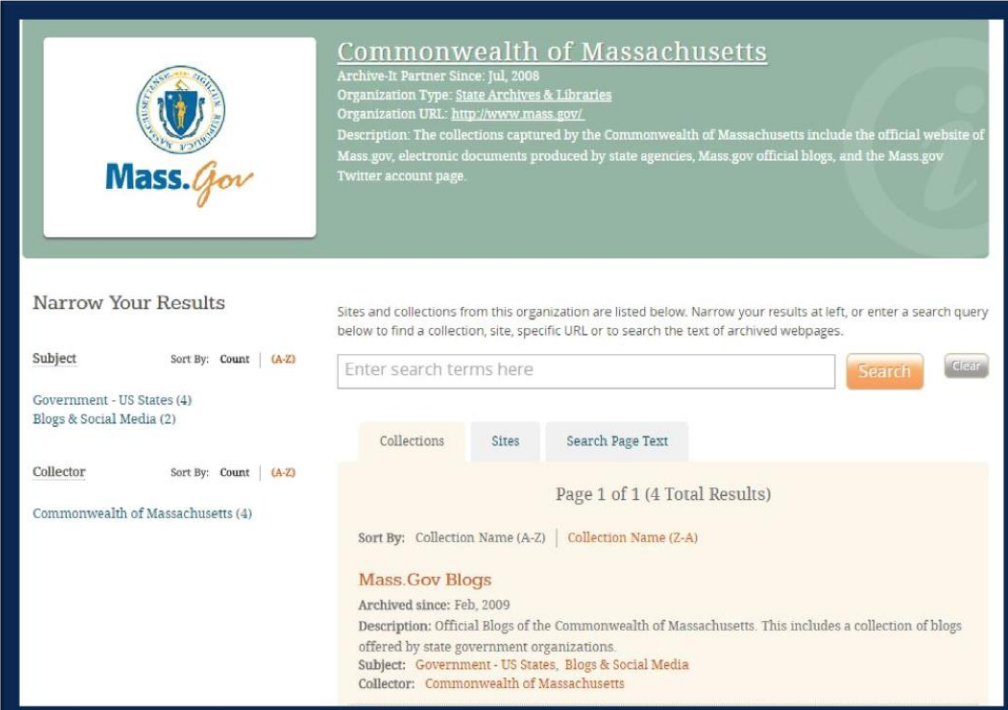
If your agency published both a print and digital copy of a publication, please send us both versions. If the document is only available in print, please send us the print copy. If the document is only available digitally, please send us the digital copy, with no need to also include a printed version.

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.

Archive-It

- Collaborated with MassIT to customize Archive-It
- Highlight the site on our webpage
- Use as another discovery platform with DSpace



The screenshot displays the Archive-It interface for the Commonwealth of Massachusetts. At the top left is the Mass.gov logo. To its right, the title "Commonwealth of Massachusetts" is followed by metadata: "Archive-It Partner Since: Jul, 2008", "Organization Type: State Archives & Libraries", "Organization URL: <http://www.mass.gov/>", and a description of the collections. Below this is a "Narrow Your Results" section with filters for Subject (Government - US States (4), Blogs & Social Media (2)) and Collector (Commonwealth of Massachusetts (4)). A search bar with "Search" and "Clear" buttons is present. The main results area shows "Page 1 of 1 (4 Total Results)" and a "Sort By" dropdown set to "Collection Name (A-Z)". The first result is "Mass.Gov Blogs", with details on its archival date, description, subject, and collector.

Commonwealth of Massachusetts
Archive-It Partner Since: Jul, 2008
Organization Type: State Archives & Libraries
Organization URL: <http://www.mass.gov/>
Description: The collections captured by the Commonwealth of Massachusetts include the official website of Mass.gov, electronic documents produced by state agencies, Mass.gov official blogs, and the Mass.gov Twitter account page.

Narrow Your Results

Subject Sort By: Count | (A-Z)
Government - US States (4)
Blogs & Social Media (2)

Collector Sort By: Count | (A-Z)
Commonwealth of Massachusetts (4)

Enter search terms here Search Clear

Collections Sites Search Page Text

Page 1 of 1 (4 Total Results)

Sort By: Collection Name (A-Z) | Collection Name (Z-A)

Mass.Gov Blogs
Archived since: Feb, 2009
Description: Official Blogs of the Commonwealth of Massachusetts. This includes a collection of blogs offered by state government organizations.
Subject: Government - US States, Blogs & Social Media
Collector: Commonwealth of Massachusetts

Agency Outreach

- Informational materials
- Video production
- Sending content to webmasters



What's Ahead

- Refining cataloging workflow
- Continued outreach efforts
- Developing final report

Thank you!

stefanie.ramsay@gmail.com

<https://ndsrstatelibraryofma.wordpress.com>



“Preparing for a Trustworthy Repository Certification of Harvard Library’s DRS”



Julie Seifert



NDSR BOSTON



Overview

- About Me
- About the Digital Repository Service
- The Project
- The Certification standard: ISO16363
- Project Procedure & Next Steps
- Challenges & Lessons Learned

About Me

- From Tampa, Florida
- Started working in archives as an undergraduate at the University of Florida
- Continued studying and working in archives at UNC, got more interested in digital
- Lived in Maine and worked as a Project Manager for massive online course
- Excited to be in Boston! Lots of rowing!

About Harvard DRS

- Provides long-term preservation and access to digitized and born-digital content
- In production for almost 15 years
- Used by about 50 libraries, archives, and museums across Harvard

The Project

- Prepare Harvard DRS for trustworthy repository certification
- Self-assessment based on ISO 16363 – high standard for digital preservation
- Inventory DRS documentation & organize.
- Documentation = proof
- Identify areas needing improvement and change. Determine what documentation is needed – and how to most effectively fill the gaps.

Project Impact

- Good opportunity to examine your organization & improve
- Increase confidence from stakeholders
- Contribute to community

About the Standard

- ISO 16363
- Over 100 metrics
- Covers variety of topics, such as business planning, financial risk management, technical infrastructure, rights management, ingest workflows, etc.
- Broken down into three sections: Organizational Infrastructure, Digital Object Management, & Infrastructure and Security Risk Management
- Process for getting certified is still in progress



The Consultative Committee for Space Data Systems

Recommendation for Space Data System Practices

**AUDIT AND
CERTIFICATION OF
TRUSTWORTHY DIGITAL
REPOSITORIES**

RECOMMENDED PRACTICE

CCSDS 652.0-M-1

MAGENTA BOOK
September 2011

3 ORGANIZATIONAL INFRASTRUCTURE

3.1 GOVERNANCE AND ORGANIZATIONAL VIABILITY

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.

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 a 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.

3.1.2 The repository shall have a Preservation Strategic Plan that defines the approach the repository will take in the long-term support of its mission.

Supporting Text

This is necessary in order to help the repository make administrative decisions, shape policies, and allocate resources in order to successfully preserve its holdings.

Examples of Ways the Repository Can Demonstrate It Is Meeting This Requirement

Preservation Strategic Plan; meeting minutes; documentation of administrative decisions which have been made.

Project Procedure

- Information gathering – what have other organizations done? Example of CLOCKSS Internal audit
- Review existing documentation
- Getting organized & finding gaps– wiki and Excel documents



DRS Audit

Pages

Blog

SPACE SHORTCUTS

Here you can add shortcut links to the most important content for your team or project. Configure sidebar.

PAGE TREE

- 3) Organizational Infrastructure
 - 3.1) Governance and Organizational Viability
 - 3.2) Organizational Structure and Staffing
 - 3.3) Procedural Accountability and Preservation Policy Framework
 - 3.4) Financial Sustainability
 - 3.5) Contracts, Licenses, and Liabilities
- 4) Digital Object Management
- 5) Infrastructure and Security Risk Management
- Document Locations Key

3) Organizational Infrastructure

Created by Julie Elizabeth Seifert, 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 Strategic 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/or escrow arrangements 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 escrow arrangements.
- 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 all functions and services.
 - 3.2.1.3 The repository shall have in place 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 Designated 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 as 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 actions 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 territorial legal 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 those rights transferred shall be documented.
 - 3.5.1.2 The repository shall have specified all appropriate aspects of acquisition, maintenance, access, and withdrawal in written agreements with depositors and other relevant parties.
 - 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 ownership/rights.
- 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.

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PAGE TREE

- 3) Organizational Infrastructure
 - 3.1) Governance and Organizational Viability
 - 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.**
 - 3.1.2. The repository shall have a...
 - 3.1.3 - The repository shall have a...
 - 3.2 Organizational Structure and St...
 - 3.3) Procedural Accountability and F...
 - 3.4) Financial Sustainability
 - 3.5) Contracts, Licenses, and Liabil...
- 4) Digital Object Management
- 5) Infrastructure and Security Risk Man...
- Document Locations Key

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 Julie Elizabeth Seifert, last modified on Jan 11, 2016

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 a 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 viable 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 object's 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 OIS web site at <<http://hul.harvard.edu/ois/systems/>>.

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://hul.harvard.edu/ois/systems/drs/policyGuide/wwhelp/wwhimpl/js/html/wwhelp.htm>



	A	B	C	D	E	F	G
1	Key: white = We have it. Red = We need it.						
2							
3	Standard	(Possible) Supporting Document	Person to talk to (if any)				
4	3.1.1 Mission Statement	Harvard library portal					
5	3.1.1 Mission Statement	DRS Policy Guide					
6	3.1.2 Preservation Strategic Plan**	Dig Preservation Roadmap					
7	3.1.2 Preservation Strategic Plan	Format Migration Plan					
8	3.1.2 Preservation Strategic Plan	New document - what?					
9	3.1.3 Collection policy	DRS Policy Guide					
10	3.2.1 Established duties, adequate staff with adequate skills**	DRS Policy Guide					
11	3.2.1 Established duties, adequate staff with adequate skills	DRS Roles and responsibilities					
12	3.2.1 Established duties, adequate staff with adequate skills	New document - what?					
13	3.2.1 Established duties, adequate staff with adequate skills	Professional development committee					
14	3.2.1 Established duties, adequate staff with adequate skills	Harvard library portal					
15	3.2.1 Established duties, adequate staff with adequate skills	Library HR Portal					
16	3.3.1 Defined designated community, definition available**	Harvard Library Portal - check this, nothing found					
17	3.3.1 Defined designated community, definition available	Mission Statement - checked this, nothing found					
18	3.3.2 Preservation policies in place to ensure preservation strategic plan will be met	General preservation - in process					
19	3.3.2 Preservation policies in place to ensure preservation strategic plan will be met	DRS Policy Guide					
20	3.3.3 Documented history of changes to operations, procedures, software, hardware	old documentation					
21	3.3.4 Tranparency and accountability in all actions	Harvard Financial endowment					
22	3.3.4 Tranparency and accountability in all actions	@	Anne Swartzell				
23	3.3.5 information integrity mesaurements	@	Tom Scorpa				
24	3.3.5 information integrity mesaurements	DRS check					
25	3.3.6 Regular schedule of self-assessment and external certification	New document - what?					
26	3.4.1 Short and long term business planning processes	@	Anne, Sharon				
27	3.4.1 Short and long term business planning processes	Library budgets					
28	3.4.2 Finanical practices and procedures are transparent	Harvard library portal					
29	3.4.3 Ongoing commitment to analyze and report financial risk, benefit, investment, expenditure	@	Anne				
30	3.5.1 Appropriate contracts or deposit agreement	DRS Policy Guide					
31	3.5.1 Appropriate contracts or deposit agreement	@	Wendy				
32	3.5.2 Track and manage intellectual property rights and restrictions	New document - what?					
33	4.1.1 Identify Content Information that repository will preserve	Content Guide					
34	4.1.1 Identify Content Information that repository will preserve	Content Model Guide					
35	4.1.2 Record of Content informaiton that repository will preserve	Batch builder guide					
36	4.1.3. Adequate specifications enabling recognition and parsing of SIPS	Content Model Guide					
37	4.1.4 Have mechanism to appropriately verify identity of Producer	Batch builder guide					
38	4.1.4 Have mechanism to appropriately verify identity of Producer	Metadata related to this, i.e. depositor name					

Section	Standard	Documentation/Comments	Link	Wiki Page	Color
<p>Key: Green: Is done and documented. Yellow: Done but not documented/Needs Improvement. Red: Not done, not documented. Blue: Documented but not done (?), White: TBD</p>					
3	3.1.1	Mission Statement	Harvard Library Portal, DRS Policy Guide	http://library.harvard.edu/vision-mission ; https://wiki.harvard.edu/confluence/pages/viewpage.action?pageid=1947733	Green
3	3.1.2	Preservation Strategic Plan**	DRS Road Map, Library IT Planning for FY17 presentation	G Drive: Preservation Services; Digital Preservation; DRS, Roadmaps	Green
3	3.1.3	Collection policy	DRS Policy Guide	https://wiki.harvard.edu/confluence/pages/viewpage.action?pageid=1947733	Green
3	3.2.1	Established duties, adequate staff with adequate skills	May need more documentation regarding skills training. DRS Roles and Responsibilities?	http://library.harvard.edu/preservation/staff-resources	Green
3	3.3.1	Defined designated community, definition available	DRS Policy Guide - "Who May Deposit into DRS?"	https://wiki.harvard.edu/confluence/pages/viewpage.action?pageid=1947734	Green
3	3.3.2	Preservation policies in place to ensure preservation strategic plan will be met	DRS Policy Guide	https://wiki.harvard.edu/confluence/pages/viewpage.action?pageid=1947734	Green
3	3.3.3	Documented history of changes to operations, procedures, software, hardware	Yes, these changes are documented throughout all the DRS documentation...however, documentation is all over the place. But working to fix that.	https://wiki.harvard.edu/confluence/pages/viewpage.action?pageid=1947734	Green
3	3.3.4	Transparency and accountability in all actions	Some policies are available online, but sometimes hard to find. Some are not available at all.	https://wiki.harvard.edu/confluence/pages/viewpage.action?pageid=1947734	Yellow
3	3.3.5	information integrity measurements	See interview with Tom - logs are kept. Is there something on system admin I-site. DRS Check? Need to investigate more.	https://wiki.harvard.edu/confluence/pages/viewpage.action?pageid=1947734	Yellow
3	3.3.6	Regular schedule of self-assessment and external certification		https://wiki.harvard.edu/confluence/pages/viewpage.action?pageid=1947734	Red

Procedure, Continued

- Determining things that are being done but not documented vs. things that are not done at all
- Filling in metric by metric
- Interviewing staff members



Microsoft Excel ribbon showing tabs: File, Home, Insert, Page Layout, Formulas, Data, Review, View, Acrobat. The Home tab is active, displaying options for Clipboard (Cut, Copy, Paste, Format Painter), Font (Calibri, 11, Bold, Italic, Underline, Text Color, Background Color), Alignment (Wrap Text, Merge & Center), Number (General, Currency, Percentage, Decimals, Thousands Separator), Conditional Formatting, and Styles (Normal, Bad, Good, Neutral, Calculation, Check Cell, Explanatory..., Hyperlink). The Cells group includes Insert, Delete, and Format. The Editing group includes AutoSum, Fill, Clear, Sort & Filter, and Find & Select.

B54 fx 5.2.3 Shall have delineated roles, responsibilities, and authorization related to implementing changes within systems

Audit2.xlsx

Row	Findings	Ref	Req	Exp
1	Review of the... [text]
2	Review of the... [text]
3	Review of the... [text]
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50	Review of the... [text]

Procedure: Next Steps

- How do we improve?
- How to characterize the gap areas? Any commonalities
- How do we best fill the gaps? Can one piece of documentation fill many gaps?
- Creating data visualizations

Double-dipping documentation in the CLOCKSS Audit

Document	Metrics used with
Mission statement	<ul style="list-style-type: none"> • 3.1.1
Preservation Strategy	<ul style="list-style-type: none"> • 3.1.2 • 3.3.2 • 3.4.1 • 4.3.1 • 4.3.3
Collection Development Policy	<ul style="list-style-type: none"> • 3.1.3
Governance and Organization	<ul style="list-style-type: none"> • 3.2.1 • 3.3.6 • 5.2.3
Mandatory Responsibilities	<ul style="list-style-type: none"> • 3.2.1
Designated Community	<ul style="list-style-type: none"> • 3.3.1 • 4.2.7 • 4.3.2 • 4.5.1
Polling and Repair Protocol	<ul style="list-style-type: none"> • 3.3.5 • 4.2.9 • 4.3.1 • 5.1.2
Logging and Records	<ul style="list-style-type: none"> • 3.3.5 • 3.3.6 • 4.1.5 • 4.1.7 • 4.1.8 • 4.2.1 • 4.2.10 • 4.3.4 • 4.4.2 • 5.1.2
Budget and Planning Process	<ul style="list-style-type: none"> • 3.3.6 • 3.4.1 • 3.4.3
Software Development Process	<ul style="list-style-type: none"> • 3.3.3 • 3.3.6 • 4.2.2 • 4.3.2 • 4.3.3
Hardware and Software Inventory	<ul style="list-style-type: none"> • 3.3.3
Board Minutes	<ul style="list-style-type: none"> • 3.3.3 • 3.4.1 • 4.3.4



Box Operations	<ul style="list-style-type: none"> • 3.3.3 • 4.1.6 • 4.2.9 • 4.3.1 • 4.3.2 • 4.6.1 • 5.1.2 • 5.2.3
Ingest Pipeline	<ul style="list-style-type: none"> • 3.3.3 • 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 • 5.1.2 • 5.2.2
Extracting Triggered Content	<ul style="list-style-type: none"> • 3.3.3 • 3.5.2 • 4.3.3 • 4.3.4 • 4.5.1 • 4.6.1 • 4.6.2
Property Server Operations	<ul style="list-style-type: none"> • 3.3.3 • 5.2.3
GuideStar	<ul style="list-style-type: none"> • 3.4.2
Threats and Mitigations	<ul style="list-style-type: none"> • 3.4.3 • 4.1.6 • 4.3.1 • 5.1.1 • 5.2.1 • 5.2.3 • 5.2.4
Publisher Agreement	<ul style="list-style-type: none"> • 3.5.1 • 3.5.2
Definition of SIP	<ul style="list-style-type: none"> • 4.1.1 • 4.1.2 • 4.1.3 • 4.1.4 • 4.2.3 • 4.2.6



	<ul style="list-style-type: none">• 4.2.8• 4.2.10• 4.5.1• 4.5.3
Definition of AIP	<ul style="list-style-type: none">• 4.1.3• 4.1.4• 4.1.5• 4.1.6• 4.2.2• 4.2.3• 4.2.4• 4.2.5• 4.2.6• 4.2.7• 4.2.8• 4.2.10• 4.4.1• 4.4.2• 4.5.2• 4.5.3
Extracting Bibliographic Metadata	<ul style="list-style-type: none">• 4.2.4• 4.5.1• 4.5.2• 4.5.3
Metadata Database	<ul style="list-style-type: none">• 4.2.4• 4.5.1• 4.5.3
Format Migration	<ul style="list-style-type: none">• 4.3.1• 4.3.3
2013-2018 Budget	<ul style="list-style-type: none">• 4.3.4
Access Policy	<ul style="list-style-type: none">• 4.6.1



Challenges & Lessons Learned

- Understanding the metrics
- Where to start?
- Where is the documentation?
- Matching the documentation to the metrics vs. matching metrics to documentation



Challenges & Lessons Learned

- Determining what's done but not documented vs. what's not done at all
- Knowing who to ask
- How to best display the information

Review

- About NDSR
- About Me
- About the Digital Repository Service
- The Project
- The Certification standard: ISO 16363
- Project Procedure & Next Steps
- Challenges & Lessons Learned

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?

