

FROM THE DIGITAL DARK AGES TO A DIGITAL RENAISSANCE



THE ROLE OF LONG-TERM STORAGE IN DIGITAL PRESERVATION

Part III. Store

QUICK POLL:

Did you attend The Art of Selecting Digital Content for Preservation webinar on 10/10?

- Yes
- No

MANAGING DIGITAL CONTENT OVER TIME

Identify - what digital content do you have?

Select - what portion of that content will be preserved?

Store - how should your content be stored for the long term?

Protect - what steps are needed to protect your digital content?

Manage - what provisions are needed for long-term management?

Provide - how should your content be made available over time?

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WHAT ARE STORAGE NEEDS?

- ▶ Archival storage manages content as objects
- ▶ Digital content (files + metadata = object)
 - ▶ May include any type of content (images, text, sound, video, etc.)
 - ▶ Requires some identification and description (captured as metadata)
 - ▶ Need at least two copies in at least two places



WELL MANAGED COLLECTIONS

- Make preservation easier with well-managed collections. You need:
 - Basic information about each deposit
 - Minimal metadata for objects (you define)
 - Common (or normalized) file formats
 - Controlled and known storage of content
 - Multiple copies in at least 2 locations

IMPORTANCE OF METADATA

Think about these questions:

- How do you know what an object is?
 - Metadata uniquely identifies digital objects
- How do you use content in the future?
 - Metadata makes digital objects understandable
- How do you know an object is authentic?
 - Metadata allows objects to be traced over time.

Metadata enables long-term preservation

OBJECT-LEVEL METADATA

Preservation Metadata

Content (what), Fixity (unchanged), Provenance (life story),
Reference (this thing), Context (relationships)

Administrative
(manage)

Structural
(understand, use)

Descriptive
(find, use)

Diagram courtesy DPM Workshops

OBJECT METADATA CHARACTERISTICS

More about preservation metadata-

- ▶ **Content:** preserve the substance
- ▶ **Fixity:** demonstrate content is unchanged
- ▶ **Reference:** identify as this content and no other
- ▶ **Provenance:** trace to its origin (or to deposit)
- ▶ **Context:** preserve linkages with other objects?

Original source: Preserving Digital Information Report, 1996

NUMBER OF COPIES

- ▶ **How many copies are enough for you?**
 - ▶ Minimum: two (2) copies
 - ▶ Optimum: six (6) copies
- ▶ **Examples of storage factors:**
 - ▶ Video files are too large to store 6 copies
 - ▶ Possible legal restrictions (e.g., storage locations)

STORAGE MEDIA OPTIONS

- Content (objects) are kept on storage media
- Options include: online, near-line, offline
- Factors for choosing options include:
 - **Cost:** available resources for preservation
 - **Quantity:** size and number of files
 - **Expertise:** skills required to manage
 - **Partners:** achieving geographic distribution
 - **Services:** outsourcing

STORAGE CONSIDERATIONS

- Multiple, geographically distributed copies
- Storage partners
- Hosted services, such as-



This is a service to make it easy for organizations to use cloud services to manage content over time

QUICK POLL

➤ Is your institution using any type of cloud service for file storage/backup?

- Yes
- No
- I don't know

REPOSITORY SELECTION

If you decide to use (build, join, buy) a repository

- Range of types to consider:
 - general (any content) to special (format-specific)
 - open source to proprietary
 - easy to advanced installation and management
- Each option has pros and cons
- No system is fully compliant to standards

Select best option for your content – for now

Digital preservation requires an organization to:

- Develop a storage management policy
 - E.g., number of copies, locations
- Specify storage service or partner agreements
- Monitor copies of content for errors/change
- Plan for media replacement

SELECT RESOURCES

- ▶ The Signal: Digital Preservation blog (Library of Congress)
 - ▶ <http://blogs.loc.gov/digitalpreservation/>
- ▶ Planning for Digital Preservation: 20 Questions for Providers of Digital Storage Services
 - ▶ <http://www.nedcc.org/resources/digital/downloads/QuestionstoAskProvidersofDigitalStoragefinal.pdf>
- ▶ Digital Preservation Metadata Standards
 - ▶ http://www.loc.gov/standards/premis/FE_Dappert_Enders_MetadataStds_isqv22no2.pdf

See PDF for additional resources.

THANK YOU!



Keep in touch!

And for those viewing the recorded version of this webinar on the ALCTS website, **we want to hear from you!** E-mail us to request the resource lists and ask questions.

- ▶ Laura Osterhout, Rochester Regional Library Council, losterhout@rrlc.org
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QUESTIONS?

What questions do you have for us?