

**Author(s):** Paul Conway, Ph.D., 2010

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## SI 640 DIGITAL LIBRARIES AND ARCHIVES: FALL 2010 READINGS

### Digital Libraries and Archives – Definitions

The first course module explores various perspectives on the idea of libraries and archives, digital or otherwise, establish a shared definition of a digital library, and frame this definition within the broader notion of “convergence culture,” the functional convergence of libraries, archives, and museums, and the emergence of a worldwide cyberinfrastructure. The module also covers the major sources of information on digital libraries and archives.

#### 7 September – Definitions: Evolution and Context

##### *Required Readings*

Borgman. [2000] “Is It Digital?” *Gutenberg to Global Information Infrastructure*, Chapter 2, pp. 33-52. [CTools]

Dempsey. [2006] “The (Digital) Library Environment: Ten Years After.”  
<http://www.ariadne.ac.uk/issue46/dempsey/>

Jenkins. [2006] *Convergence Culture: Where Old and New Media Collide*. Introduction, pp. 1-24. [CTools]

Lagoze. [2005] “What Is a Digital Library Anymore, Anyway? Beyond Search and Access in the NSDL.”  
<http://www.dlib.org/dlib/november05/lagoze/11lagoze.html>

Zorich, et al. [2008] “Beyond the Silos of the LAMs: Collaboration among Libraries, Archives, and Museums.” OCLC, pp. 10-15. Skim remainder.  
<http://www.oclc.org.proxy.lib.umich.edu/programs/publications/reports/2008-05.pdf>.

##### *Resources*

Bearman. [2007] “Digital Libraries.” *Annual Review of Information Science and Technology* 41. Information Today, Inc. [CTools]

Fox, & Urs. [2002] “Digital Libraries.” *Annual Review of Information Science and Technology* 36. Information Today, Inc. [CTools]

PADI: Preserving Access to Digital Information. <http://www.nla.gov.au/padi/>

What’s New in Digital Preservation: <http://www.dpconline.org/newsroom/whats-new>

#### 14 September – Definitions: The Archival Dimension

##### *Required Readings*

Garrett & Waters. [1996] *Preserving Digital Information*. <http://www.clir.org/pubs/abstract/pub63.html> [CTools]

Gilliland-Swetland. [2000] *Enduring Paradigm, New Opportunities: The Value of the Archival Perspective in the Digital Environment*. <http://www.clir.org/pubs/abstract/pub89abst.html>

*It's About Time: Research Challenges in Digital Archiving and Long-term Preservation*. [2003] National Science Foundation & Library of Congress, read pp. i-xix, skim remainder. [CTools]  
<http://www.digitalpreservation.gov/partners/resources/pubs/index.html>

Levy. [1998] "Heroic Measures." <http://www.acm.org/pubs/citations/proceedings/dl/276675/p152-levy/> [CTools]

Ross. [2007] "Digital Preservation, Archival Science and Methodological Foundations for Digital Libraries" [http://www.ecdl2007.org/Keynote\\_ECCL2007\\_SROSS.pdf](http://www.ecdl2007.org/Keynote_ECCL2007_SROSS.pdf) [CTools]

### *Resources*

Flecker. [2000] "Harvard's Library Digital Initiative: Building a First Generation Digital Library Infrastructure." *D-Lib Magazine* 6 (November 2000).  
<http://www.dlib.org/dlib/november00/flecker/11flecker.html>

Fox. [1993] Digital Library Sourcebook. <http://fox.cs.vt.edu/DLSB.html>

JISC: Joint Information Systems Committee. <http://www.jisc.ac.uk/>

Keller, Reich, and Herkovic. [2003] "What is a library anymore, anyway?"  
[http://www.firstmonday.org/issues/issue8\\_5/keller/index.html](http://www.firstmonday.org/issues/issue8_5/keller/index.html)

Lavoie and Dempsey. [2004] "Thirteen Ways of Looking at...Digital Preservation."  
<http://www.dlib.org/dlib/july04/lavoie/07lavoie.html>

Lynch. [2000] "Authenticity and Integrity in the Digital Environment."  
<http://www.clir.org/pubs/reports/pub92/lynch.html>

National Digital Information Infrastructure Preservation Program.  
<http://www.digitalpreservation.gov/index.html>

Rusbridge. [2006] "Excuse Me... Some Digital Preservation Fallacies?"  
<http://www.ariadne.ac.uk/issue46/rusbridge/>

## **21 September – Definitions: Cyberinfrastructure**

### *Required Readings*

American Council of Learned Societies. [2006] *Our Cultural Commonwealth*.  
<http://www.acls.org/cyberinfrastructure/cyber.htm>

Berman and Brady [2005] "Final Report: NSF SBE-CISE Workshop on Cyberinfrastructure and the Social Sciences," <http://vis.sdsc.edu/sbe/>

National Science Foundation. [2003] *Revolutionizing Science and Engineering Through Cyberinfrastructure*. <http://www.nsf.gov/od/oci/reports/toc.jsp>

NSF Cyberinfrastructure Council. [2006] *NSF's Cyberinfrastructure Vision for 21<sup>st</sup> Century Discovery*. <http://www.nsf.gov/od/oci/ci-v7.pdf>

#### Resources

Data Document Initiative. <http://www.ddalliance.org/index.html>

National Science Foundation. Cyberinfrastructure Office. *Reports and Workshops Relating to Cyberinfrastructure and Its Impacts*. <http://www.nsf.gov/od/oci/reports.jsp>

## Digital Content – Creation and Management

In spite of the fact that the manufacture of paper continues unabated, we are living in a digital world. This module explores alternative scenarios for describing the landscape of digital content, using as a point of departure a seminal 2003 (+ 1999 and 2009 versions) study that attempts to measure the volume of information created annually. The module also presents a handful of case studies to demonstrate the variety of digital content and how such content "lives" and is represented in digital libraries and archives.

### 28 September – Content: Frameworks for "How Much?"

#### Required Readings

Borgman. [2007] "Disciplines, documents, data," in *Scholarship in the Digital Age*, Chapter 8, pp. 179-226. [CTools]

Conway. [2008] "Modeling the Digital Content Landscape in Universities." *Library Hi Tech* 26 (3): 342-358. [CTools]

*How Much Information?* [2009] Report on American Consumers. Global Information Industry Center, UCSD. [http://hmi.ucsd.edu/howmuchinfo\\_research\\_report\\_consum.php](http://hmi.ucsd.edu/howmuchinfo_research_report_consum.php)

Lyman and Varian. [2003] *How much information? 2003*. <http://www2.sims.berkeley.edu/research/projects/how-much-info-2003/>

O'Toole. [1994] "On the Idea of Uniqueness." *American Archivist*

#### Resources

Digital Library Federation. Registry of Digital Masters. <http://www.diglib.org/collections/reg/reg.htm>

Digital Library Federation. DLF Aquifer. <http://www.diglib.org/aquifer/>

Levy. [2003] "Documents and Libraries," in Bishop, et al. *Digital Library Use*, Chapter 2, pp. 25-42. [CTools]

## **5 October – Content: Transformations and Representations**

### *Required Readings*

Bolter & Grusin. [1996] "Remediation." *Configurations* 4. <http://muse.jhu.edu/journals/configurations/v004/4.3bolter.html> [CTools]

Chapman. [2003] "Managing Text Digitization." *Online Information Review* 27 (1): 17-28. [CTools]

Cohen. [2006] "Transgenic Deformation: Literary Translation and the Digital Archive." *MLA Convention Presentation*. <http://www.whitmanarchive.org/about/articles/anc.00165.html>

Dalbello. [2004] "Institutional Shaping of Cultural Memory: Digital Library as Environment for Textual Transmission." *Library Quarterly*. [CTools]

Holz. [2006] "Technologically Enhanced Archival Collections: Using the Buddy System." *Journal of Archival Organization* 6. [CTools]

### *Resources*

California Digital Library. Online Archive of California. <http://www.oac.cdlib.org/>

California Digital Library. Online Archive of California. Technical Information. <http://www.cdlib.org/inside/projects/oac/tech.html>

Library of Congress. American Memory. <http://memory.loc.gov/ammem/index.html>

Library of Congress. American Memory. Technical Information. <http://memory.loc.gov/ammem/about/techIn.html>

Walt Whitman Archive. <http://www.whitmanarchive.org/>

Walt Whitman Archive. About the Archive. <http://www.whitmanarchive.org/about/index.html>

Barney et al. [2005] "Ordering Chaos" *Library and Linguistic Computing*. [Whitman] [CTools]

Chandler. [2002] "Museums in the Online Archive of California (MOAC): Building Digital Collections Across Libraries and Museums," *First Monday* [http://firstmonday.org/issues/issue7\\_5/chandler/index.html](http://firstmonday.org/issues/issue7_5/chandler/index.html) [OAC]

.

Folsom. [2007] "Database as Genre: The Epic Transformation of Archives." *PMLA* 122.5 [CTools]

## 12 October – Content: Large-scale Repositories

### *Required Readings*

Gevinson, A. [2010] [Quality Assessment Summary], adjunct to "Ghostlier Demarcations," in CLIR 2010. <http://www.clir.org/pubs/reports/pub147/sumGevinson.pdf> [CTools]

Henry and Smith. [2010] "Ghostlier Demarcations." CLIR [CTools]

Rieger, O. (2008). *Preservation in the Age of Large-Scale Digitization: A White Paper*. Washington, DC: Council on Library and Information Resources. <http://www.clir.org/pubs/abstract/pub141abst.html>

Wheatley. [2004] *Institutional Repositories in the Context of Digital Preservation*. <http://www.dpconline.org/graphics/reports/index.html>

York, J.J. (2010). "Building a Future by Preserving Our Past: The Preservation Infrastructure of HathiTrust." IFLA paper preprint. [CTools]

### *Resources*

Crow. [2002] "The Case for Institutional Repositories: A SPARC Position Paper." <http://www.arl.org/sparc/IR/ir.html>

Lynch. [2003] "Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age." <http://www.arl.org/resources/pubs/br/br226/br226ir.shtml>

Lynch and Lippincott. [2005] "Institutional Repository Deployment in the United States as of Early 2005." <http://www.dlib.org/dlib/september05/lynch/09lynch.html>

Markey et al. [2007] Census of Institutional Repositories in the United States: MIRACLE Project Research Findings. CLIR pub 140. See, particularly, Executive Summary and Literature Review. <http://www.clir.org/pubs/abstract/pub140abst.html>

Rusbridge. [2005] "Information Life Cycle and Curation." PowerPoint. [CTools]

Rusbridge. [2006] "Excuse Me... Some Digital Preservation Fallacies?" <http://www.ariadne.ac.uk/issue46/rusbridge/>

Smith. [2001] *Strategies for Building Digitized Collections*. <http://www.clir.org/pubs/abstract/pub101abst.html>

Waters. [2006] "Managing Digital Assets in Higher Education." <http://www.arl.org/resources/pubs/br/br244.shtml>

## 19 October – Study Break

## Metadata for Digital Libraries and Archives

What you see isn't necessarily what you get. This module explores the distinction between the user interface and the underlying structure of information used to describe, structure, and administer a digital archive or repository. The module covers the origins and development of METS (Metadata Encoding and Transmission Standard), PREMIS (PREservation Metadata Implementation Strategies), and OAI (Open Archives Initiative) and its kin.

### 26 October – Metadata: Getting to METS

#### *Required Readings*

EU-NSF Working Group on Metadata. Metadata for Digital Libraries: a Research Agenda. [1999]  
<http://www.ercim.org/publication/ws-proceedings/EU-NSF/metadata.html>

Gartner. [2008]. "Metadata for Digital Libraries: State of the Art and Future Directions." *JISC TechWatch Report*, TSW0801.  
<http://www.jisc.ac.uk/whatwedo/services/techwatch/reports/horizonscanning/hs0801.aspx>

McDonough [2006] "METS: standardized encoding for digital library objects," *International Journal on Digital Libraries* 6(2):148-158. [CTools]

#### *Resources*

METS: Metadata Encoding and Transmission Standard. <http://www.loc.gov/standards/mets/>

METS Primer. <http://www.loc.gov/standards/mets/METSPrimerRevised.pdf>

METS Overview & Tutorial. <http://www.loc.gov/standards/mets/METSOverview.v2.html>

### 2 November – Metadata: OAIS and PREMIS

#### *Required Readings*

Caplan and Guenther. [2005] "Practical Preservation: the PREMIS Experience." *Library Trends*  
[http://www.loc.gov/standards/premis/caplan\\_guenther-librarytrends.pdf](http://www.loc.gov/standards/premis/caplan_guenther-librarytrends.pdf)

Dappert and Enders. [2008] "Using METS, PREMIS and MODS for Archiving eJournals" *DLib Magazine*, (September/October) <http://dlib.org/dlib/september08/dappert/09dappert.html>

Guenther. [2008] "Battle of the Buzzwords: Flexibility vs. Interoperability When Implementing PREMIS with METS" *DLib Magazine*, July. <http://www.dlib.org/dlib/july08/guenther/07guenther.html>

Higgins and Semple. [2006] *OAIS Five-year Review*. [CTools]

Lavoie. [2004] *Open Archival Information System: Introductory Guide*.  
<http://www.dpconline.org/graphics/reports/index.html>

#### Resources

OAIS. [2002] *Reference Model for an Open Archival Information System (OAIS)*. CCSDS 650.0-B-1, *Blue Book* (the full ISO standard). <http://public.ccsds.org/publications/archive/650x0b1.pdf>.

PREMIS: Preservation Metadata Maintenance Activity. <http://www.loc.gov/standards/premis/>

### 9 November – Metadata: OAI and ORE

#### Required Readings

OAI for Beginners – Tutorial. <http://www.oaforum.org/tutorial/>

"Repository to Repository Transfer of Enriched Archival Information", Priscilla Caplan, *DLib Magazine*, November/December 2008 <http://www.dlib.org/dlib/november08/caplan/11caplan.html>

Lagoze and Van de Sompel. [2007] *Compound Information Objects: The OAI-ORE Perspective*. ORE Technical Committee. May 2007. <http://www.openarchives.org/ore/documents/CompoundObjects-200705.html>

McDonough, Jerome. "[Structural Metadata and the Social Limitation of Interoperability: A Sociotechnical View of XML and Digital Library Standards Development](#)." *Proceedings of Balisage: The Markup Conference 2008*.

#### Resources

Open Archives Initiative. <http://www.openarchives.org/>

Van De Sompel Briefing (10 min.). [2009] Object Reuse and Exchange (ORE): A Quick Overview [10 min. video]. YouTube <http://www.youtube.com/watch?v=6KUgCN2HLL8>

The Open Archives Initiative Protocol for Metadata Harvesting.  
<http://www.openarchives.org/OAI/openarchivesprotocol.html>

Implementation Guidelines for the Open Archives Initiative Protocol for Metadata Harvesting.  
<http://www.openarchives.org/OAI/2.0/guidelines.htm>

OAIster. <http://www.oclc.org/oaister/>

## User Experience in Digital Libraries

This module is focused on the use of digital libraries and archives, particularly efforts to evaluate their value and impact, the evolution of tools for using, viewing, and manipulating digital content (beyond



search and retrieval), and the fundamental role that trust/credibility plays in the viability of the digital library paradigm.

### **16 November – User Experience: Evaluation**

#### *Required Readings*

Borgman. [2003] "Designing Digital Libraries for Usability," in *Digital Library Use: Social Practice in Design and Evaluation*, pp. 117-168. [CTools]

Goncalves, et al. [2007] "What is a good digital library? A quality model for digital libraries," *Information Processing and Management* 43: 1416-1437. [CTools]

Saracevic. [2005] "How Were Digital Libraries Evaluated?" [CTools]

Snow, et al. [2008] "Considering the User Perspective: Research into Usage and Communication of Digital Information. *D-Lib Magazine*. <http://www.dlib.org/dlib/may08/ross/05ross.html>

### **23 November – User Experience: Trust and Collaboration**

#### *Required Readings*

Green & Gutmann. (2007) "Building partnerships among social science researchers, institution-based repositories and domain specific data archives," *OCLC Systems & Services*, Vol. 23 (1): 35 – 53. [CTools]

Kelton, et al. [2007] "Trust in Digital Information," *JASIST* 59 (3): 363-374. [CTools]

TRAC: Trustworthy Repositories Audit & Certification: Criteria and Checklist.  
<http://www.crl.edu/content.asp?l1=13&l2=58&l3=162&l4=91>

Van de Sompel, et al. [2004] "Rethinking Scholarly Communication," *D-Lib Magazine* 10 (9).  
<http://www.dlib.org/dlib/september04/vandesompel/09vandesompel.html>

### **30 November – User Experience: Tools Grab Bag**

This session is an opportunity for demonstration and discussion of digital library tools for viewing, manipulating, and otherwise making use of digital library content. No required readings this week.

### **7 December – Summation: Sustainability**

The final week of the course focuses on long-term sustainability, particularly new attention being given to business models and the economics of sustainability. This week is a final chance to re-consider some of the archival theories underpinning future digital library development.

#### *Required Readings*

Assmann, A. [2008] "Canon and Archive," in *Cultural Memory Studies*, edited by Astrid Erll and Ansgar Nunning. Berlin: Walter de Gruyter. [CTools]

BRTF. [2010] *Sustainable Economics for a Digital Planet: Ensuring Long Term Access to Digital Information: Final Report of the Blue Ribbon Task Force on Sustainable Digital Preservation and Access*. Read Chapter 1, Purpose, and Chapter 5, Recommendations. Skim remainder. [CTools]

Lavoie. [2008] "The Fifth Blackbird: Some Thoughts on Economically Sustainable Digital Preservation." *D-Lib Magazine* 14. <http://www.dlib.org/dlib/march08/lavoie/03lavoie.html>