

## Levels of Representation and Curatorial Implications

Lead instructor: Cal Lee

### Main topics

- Issues of meaningful information
- Nature of digital objects
- Layers and abstraction
- Technology obsolescence
- Digital preservation approaches and strategies
- Significant properties
- Persistent identifiers
- Cost-benefit analysis of digital preservation approaches
- Place of access and use considerations within digital curation
- Trends and patterns of user behavior
- Major use types to consider
- Access restrictions (e.g. intellectual property, confidentiality)

By the end of this unit you should know or be able to:

1. Understand the fundamental challenges and concerns associated with long-term digital preservation
2. Become familiar with the main technological strategies for addressing digital preservation
3. Understand and appreciate the role of determining the significant properties of digital objects
4. Understand how digital preservation strategies can be applied in particular situations
5. Identify the main access and use considerations that are likely to be most important in your work context
6. Devise a strategy for addressing those considerations

### Highlighted readings:

Brown, Adrian. "Legal Issues." In *Archiving Websites: A Practical Guide for Information Management Professionals*, 146-162. London: Facet, 2006.

Moore, Reagan. "Towards a Theory of Digital Preservation." *International Journal of Digital Curation* 1, no.3 (2008): 63-75.

<http://www.ijdc.net/index.php/ijdc/article/view/63/42>

Pardo, Theresa A., Sharon S. Dawes, and Anthony M. Cresswell. "Opening Gateways: A Practical Guide for Designing Electronic Records Access Programs." Albany, NY: Center for Technology in Government, 2002.

<http://www.ctg.albany.edu/publications/guides/gateways/gateways.pdf> [See especially p.2 and Appendices]

Rothenberg, Jeff. "Ensuring the Longevity of Digital Information." Washington, DC: Council on Library and Information Resources, 1999.

<http://www.clir.org/pubs/archives/ensuring.pdf>

Sawyer, Donald. "Persistent Preservation Challenge: Experience and Recommendations." Presented at DigCCurr 2009: Digital Curation Practice, Promise and Prospects, Chapel Hill, NC, April 1-3, 2009. <http://www.ils.unc.edu/digccurr2009/5d-sawyer.pdf>

## **For further reading:**

### ***Preservation Issues***

Anderson, Byron. "A Primer on Copyright Law and the DMCA." *Reference Librarian* 93 (2006): 59-71.

Aschenbrenner, Andreas, and Andreas Rauber. "Mining Web Collections." In *Web Archiving*, edited by Julien Masanès, 153-76. New York, NY: Springer, 2006.

Besek, June M., Jessica Coates, Brian Fitzgerald, Wilma Mossink, William G. LeFurgy, Adrienne Muir, Mary Rasenberger, and Christopher D. Weston. "Digital Preservation and Copyright: An International Study." *International Journal of Digital Curation* 2, no.3 (2008): 103-111. <http://www.ijdc.net/index.php/ijdc/article/viewFile/90/61>

Bradley, Kevin, ed. "Access." In *Guidelines on the Production and Preservation of Digital Audio Objects*. Second edition: IASA Technical Committee, 2009. <http://www.iasa-web.org/tc04/access>

Chavez, Robert, Gregory Crane, Anne Sauer, Alison Babeu, Adrian Packel, and Gabriel Weaver. "Services Make the Repository." *Journal of Digital Information* 8, no.2 (2007). <http://journals.tdl.org/jodi/article/view/195/179>

Committee on Best Practices and Standards, Working Group on Access. "Principles of Access to Archives." International Council on Archives, 2011. <http://www.ica.org/?lid=9400>

Cresswell, Anthony M. "Exemplary Practices in Electronic Records and Information Access Programs." Albany, NY: Center for Technology in Government, 2004. [http://www.ctg.albany.edu/publications/reports/exemplary\\_practices/exemplary\\_practices.pdf](http://www.ctg.albany.edu/publications/reports/exemplary_practices/exemplary_practices.pdf)

Dissemination Information Packages (DIPS) for Information Reuse (DIPIR). <http://dipir.org/>

Dryden, Jean. "Copyfraud or Legitimate Concerns?" Presented at DigCCurr 2009: Digital Curation Practice, Promise and Prospects, Chapel Hill, NC, April 1-3, 2009. <http://www.ils.unc.edu/digccurr2009/2a-dryden.pdf>

Dryden, Jean. "Educating Archivists about Copyright: How Can We Do It Better?" In *Proceedings of DigCCurr2009: Digital Curation: Practice, Promise, and Prospects*, edited by Helen R. Tibbo, Carolyn Hank, Christopher A. Lee, and Rachael Clemens, 19-23. Chapel Hill, NC: University of North Carolina, School of Information and Library Science, 2009.

Dunn, Christopher S., and Erik W. Austin. "Protecting Confidentiality in Archival Data Resources." *IASSIST Quarterly* 22, no. 2 (1998): 16-24.

Hedstrom, Margaret L. "Privacy, Computers, and Research Access to Confidential Information." *Midwestern Archivist* 6, no. 1 (1981): 5-18.

"International Study on the Impact of Copyright Law on Digital Preservation." Library of Congress National Digital Information Infrastructure and Preservation Program, Joint Information Systems Committee, Open Access to Knowledge (OAK) Law Project, and SURFfoundation, 2008.

[http://www.digitalpreservation.gov/library/resources/pubs/docs/digital\\_preservation\\_final\\_report2008.pdf](http://www.digitalpreservation.gov/library/resources/pubs/docs/digital_preservation_final_report2008.pdf)

Mestl, Thomas, Olga Cerrato, Jon Ølnes, Per Myrseth, and Inger-Mette Gustavsen.

"Time Challenges – Challenging Times for Future Information Search." *D-Lib Magazine* 15, no. 5/6 (2009). <http://www.dlib.org/dlib/may09/mestl/05mestl.html>

Niu, Jinfang and Margaret Hedstrom. "Documentation Evaluation Model for Social Science Data: An Empirical Test." In *Proceedings of DigCCurr2009: Digital Curation: Practice, Promise, and Prospects*, edited by Helen R. Tibbo, Carolyn Hank, Christopher A. Lee, and Rachael Clemens, 125-129. Chapel Hill, NC: University of North Carolina, School of Information and Library Science, 2009. [See also conference presentation: <http://www.ils.unc.edu/digccurr2009/6c-niu.pdf>]

Underwood, William. "Automatic Metadata Extraction for Archival Description and Access." In *Proceedings of the Society of American Archivists Research Forum*. Chicago, IL: Society of American Archivists, 2008.

<http://www.archivists.org/publications/proceedings/researchforum/2008/papers/WilliamUnderwood-SAA-ResearchPaper-2008.pdf>

Underwood, William E. "Speech Acts and Electronic Records." In *Proceedings of DigCCurr2009: Digital Curation: Practice, Promise, and Prospects*, edited by Helen R. Tibbo, Carolyn Hank, Christopher A. Lee, and Rachael Clemens, 135-142. Chapel Hill, NC: University of North Carolina, School of Information and Library Science, 2009. [See also conference presentation: <http://www.ils.unc.edu/digccurr2009/6d-underwood.pdf>]

Underwood, William, Sheila Isbell, and Matthew Underwood. "Grammatical Induction and Recognition of the Documentary Form of Records." Paper presented at DigCCurr2007: An International Symposium on Digital Curation, Chapel Hill, NC, April 18-20, 2007. [http://ils.unc.edu/digccurr2007/papers/underwood\\_paper\\_4-5.pdf](http://ils.unc.edu/digccurr2007/papers/underwood_paper_4-5.pdf) [See also conference presentation: [http://ils.unc.edu/digccurr2007/slides/underwood\\_slides\\_4-5.pdf](http://ils.unc.edu/digccurr2007/slides/underwood_slides_4-5.pdf)]

Lee, Christopher A., and Kam Woods. "Automated Redaction of Private and Personal Data in Collections: Toward Responsible Stewardship of Digital Heritage." In *Proceedings of Memory of the World in the Digital Age: Digitization and Preservation: An International Conference on Permanent Access to Digital Documentary Heritage, 26-28 September 2012, Vancouver, British Columbia, Canada*, edited by Luciana Duranti and Elizabeth Shaffer, 298-313: United Nations Educational, Scientific and Cultural Organization, 2013. <http://www.ils.unc.edu/callee/p298-lee.pdf>

Woods, Kam, Christopher A. Lee, and Simson Garfinkel. "Extending Digital Repository Architectures to Support Disk Image Preservation and Access." In *JCDL '11: Proceeding of the 11th Annual International ACM/IEEE Joint Conference on Digital Libraries*, 57-66. New York, NY: ACM Press, 2011. <http://dx.doi.org/10.1145/1998076.1998088> or <http://www.ils.unc.edu/callee/p57-woods.pdf>

## ***Access and Use Issues***

Ashley, Kevin. "Digital Preservation Research: A review of the Challenges." Presented at DigCCurr 2009: Digital Curation Practice, Promise and Prospects, Chapel Hill, NC, April 1-3, 2009. <http://www.ils.unc.edu/digccurr2009/5d-ashley.pdf>

Ashley, Kevin. "The Preservation of Databases." *VINE* 34, no. 2 (2004): 66-70.

Besser, Howard. "Digital Longevity." In *Handbook for Digital Projects: A Management Tool for Preservation and Access*, edited by Maxine K. Sitts. Andover, MA: Northeast Document Conservation Center, 2000. <http://www.gseis.ucla.edu/~howard/Papers/sfs-longevity.html>

Brown, Adrian. "Preservation." In *Archiving Websites: A Practical Guide for Information Management Professionals*, 82-126. London: Facet, 2006.

Buckley, Robert. "JPEG 2000 - a Practical Digital Preservation Standard?" Digital Preservation Coalition, 2008. <http://www.dpconline.org/docs/reports/dpctw08-01.pdf>

Caplan, Priscilla. "Building a Digital Preservation Archive: Tales from the Front." *VINE* 34, no. 1 (2004): 38-42.

Conway, Paul. "Preservation in the Digital World." Washington, DC: Commission on Preservation and Access, 1996. <http://www.clir.org/pubs/reports/conway2/>

Cooper, Brian F., and Hector Garcia-Molina. "InfoMonitor: Unobtrusively Archiving a World Wide Web Server." *International Journal on Digital Libraries* 5, no. 2 (2005): 106-19.

Duretec, Kresimir, Luis Faria, Petar Petrov, and Christoph Becker. "Identification of Triggers and Preservation Watch Component Architecture, Subcomponents and Data Model." Scalable Preservation Environments (SCAPE) Project, 2012. [http://www.scape-project.eu/wp-content/uploads/2012/01/SCAPE\\_D12.1\\_TUW\\_V1.0.pdf](http://www.scape-project.eu/wp-content/uploads/2012/01/SCAPE_D12.1_TUW_V1.0.pdf)

Fanning, Betsy A. "Preserving the Data Explosion: Using PDF." Silver Spring, MD: Digital Preservation Coalition and AIIM, 2008. <http://www.dpconline.org/docs/reports/dpctw08-02.pdf>

Giaretta, David. "Preservation Workflows, Strategies and Infrastructure." In *Proceedings of DigCCurr2009: Digital Curation: Practice, Promise, and Prospects*, edited by Helen R. Tibbo, Carolyn Hank, Christopher A. Lee, and Rachael Clemens, 177-184. Chapel Hill, NC: University of North Carolina, School of Information and Library Science, 2009.

Hamm, Markus, and Christoph Becker. "Report on Decision Factors and Their Influence on Planning." Scalable Preservation Environments (SCAPE) Project, 2011. [http://www.scape-project.eu/wp-content/uploads/2012/03/SCAPE\\_D14.1\\_TUW\\_V1.1.pdf](http://www.scape-project.eu/wp-content/uploads/2012/03/SCAPE_D14.1_TUW_V1.1.pdf)

Heuscher, Stephan, Stephan Järman, Peter Keller-Marxer, and Frank Möhle. "Providing Authentic Long-Term Archival Access to Complex Relational Data." In *Proceedings PV-2004: Ensuring the Long-Term Preservation and Adding Value to the Scientific and Technical Data*, 241-61. Frascati, Italy: European Space Agency, 2004.

McGovern, Nancy Y., ed. *Aligning National Approaches to Digital Preservation*. Atlanta, GA: Educopia Institute, 2012. <http://educopia.org/publications/ANADP>

Pearson, David. "Preserve or Preserve Not, There is No Try: some dilemmas relating to Personal Digital Archiving." Presented at DigCCurr 2009: Digital Curation Practice, Promise and Prospects, Chapel Hill, NC, April 1-3, 2009.  
<http://www.ils.unc.edu/digccurr2009/6a-pearson.pdf>

Rosenthal, David S. H., Thomas Robertson, Tom Lipkis, Vicky Reich, and Seth Morabito. "Requirements for Digital Preservation Systems: A Bottom-up Approach." *D-Lib Magazine* 11, no. 11 (2005).  
<http://www.dlib.org/dlib/november05/rosenthal/11rosenthal.html>

Rosenthal, David S. H., Daniel C. Rosenthal, Ethan L. Miller, Ian F. Adams, Mark W. Storer, and Erez Zadok. "The Economics of Long-Term Digital Storage." Paper presented at Memory of the World in the Digital Age, Vancouver, British Columbia, Canada, September 26-28, 2012.  
<http://www.lockss.org/locksswp/wp-content/uploads/2012/09/unesco2012.pdf>

"SIARD Format Description." Berne, Switzerland: Swiss Federal Archives, 2008.  
<http://www.bar.admin.ch/dienstleistungen/00823/00825/index.html?lang=en>

Stanescu, Andreas. "Assessing the Durability of Formats in a Digital Preservation Environment: The Inform Methodology." *OCLC Systems & Services* 21, no. 1 (2005): 61-81.

Strodl, Stephan, Petar Petrov, and Andreas Rauber. "Research on Digital Preservation within Projects Co-Funded by the EU in the ICT Programme." Scalable Preservation Environments (SCAPE) Project, May 2011. <http://www.scape-project.eu/report/research-on-digital-preservation-in-the-ict-programme>

Toussaint, Mary Green, and Shawn Rounds. "Report on Digital Preservation and Cloud Services." St. Paul, MN: Instrumental, Inc., 2013.  
[http://www.mnhs.org/preserve/records/docs\\_pdfs/Instrumental\\_MHSReportFinal\\_Public\\_v2.pdf](http://www.mnhs.org/preserve/records/docs_pdfs/Instrumental_MHSReportFinal_Public_v2.pdf)

Webb, Colin, David Pearson, and Paul Koerbin. "'Oh, You Wanted Us to Preserve That?' Statements of Preservation Intent for the National Library of Australia's Digital Collections." *D-Lib Magazine* 19, no. 1/2 (2013). <http://www.dlib.org/dlib/january13/webb/01webb.html>

## Notes