Syllabus

Title: Electronic Records Management
Course Number: INLS 525
Meeting Time: Mon/Wed 11:00 a.m. – 12:15 p.m. @ Global Center 3024
Instructor: Richard Marciano
Website: http://inls525fall2013.web.unc.edu (login required)

Course Description:

- The management and preservation of electronic records is essential for maintaining institutional accountability; protecting the rights of citizens, employees and customers; supporting the efficient operation of contemporary organizations; perpetuating valuable forms of social memory; and helping individuals to integrate aspects of the past into their sense of identity.
- Current electronic recordkeeping is in a state of relative neglect. At their most basic level, electronic records problems are related to proper configuration and management of computer components (hardware and software). The good news is that actual and potential solutions to the technological issues abound. The bad news is that the behavioral, organizational, institutional and professional underpinnings are generally not yet in place to implement the technological solutions. This places a profound set of challenges and opportunities in the hands of SILS students about to enter the workforce.
- In this course, we will develop a set of concepts, tools and strategies that information professionals can use to help shape more appropriate, valuable and sustainable recordkeeping systems.

Course Objectives:

- Gain awareness of trends and practices in contemporary recordkeeping environments.
- Understand the nature of electronic records in different organizational, technological, legal, cultural, and business environments.
- Be aware of social, legal, and policy implications for individuals and organizations keeping records in electronic form.
- Be able to analyze a variety of problems related to electronic records and propose solutions that are appropriate in particular contexts.
- Understand the differences between recordkeeping systems and other types of information systems.
- Be able to evaluate the effectiveness of different approaches, methods, and technologies for managing electronic records.
- Understand the technical and institutional requirements associated with long-term retention and preservation of electronic records.
- Be able to evaluate various electronic recordkeeping strategies.

Course Requirements:
1. Class participation (10%)
2. Speaker blogging - 3 speakers (10%)
3. Mini presentation on a tool (15%)
4. Group presentation on questions of the day (15%)
5. Paper about available tools (30%)
6. Final essay in class on course theme (20%)

Overview of the Field

For a general overview of the e-records management field, you should consult the following works:

1. Dollar, Charles M., *Authentic Electronic Records: Strategies for Long-Term Access*, Chicago, IL: Cohasset Associates, 1999.
2. David Bearman, Diplomatics, Weberian Bureaucracy, and the Management of Electronic Records in Europe and America, in *Electronic Evidence: Strategies for Managing Records in Contemporary Organizations*. Pittsburgh: Archives and Museum Informatics, 1994, pp. 254-277.
3. Ambacher, Bruce I., ed. *Thirty Years of Electronic Records*. Lanham, MD: Scarecrow Press, 2003.
4. Frank Upward. 1996. Structuring the Records Continuum. Part One, Post-custodial Principles and Properties. *Archives and Manuscripts* 24(2): 268-285. Available online at http://infotech.monash.edu/research/groups/rcrg/publications/recordscontinuum-fupp1.html.
5. Frank Upward, Structuring the Records Continuum, Part Two: Structuration Theory and Recordkeeping, 1997. *Archives and Manuscripts* 25(1): 10-35. Available online http://infotech.monash.edu/research/groups/rcrg/publications/recordscontinuum-fupp2.html.
6. Duranti, Luciana. "Archives as a Place." *Archives and Manuscripts* 24 (1996): 242-55.
7. Stephens, David O. *Records Management: Making the Transition from Paper to Electronic*. Lenexa, KS: ARMA, 2007.

Other Syllabi

There are some wonderful related classes taught at other universities. In particular:
- School of Information at the University of Michigan (David Wallace)
- School of Information at the University of Texas, Austin (Ciaran Trace, Patricia Galloway)
- College of Information Studies at the University of Maryland (Bruce Ambacher)

I incorporated a few of the excellent references from these syllabi.

Grades

Grades will be determined on the basis of four primary activities in which you will engage:

1. Class participation (10%)
2. Speaker blogging - 3 speakers (10%)
3. Mini presentation on a tool (15%)
4. Group presentation on questions of the day (15%)
5. Paper about available tools (30%)
6. Final essay in class on course theme (20%)

Letter grades will be: H:100-95, P+:94-90, P:89-85, P-:84-80, L:79-70, <69:F.

Participation, blogs, mini-presentation, tool paper, and the final essay will be graded individually. For the group presentation, you will be graded as a group.

Key Dates

October 2: Turn in paper about available tools
November 18 & 25: Mini presentation on a tool
December 2: Timed essay in class

Class Schedule

		Monday	Wednesday	Schedule as of 8/23/12
AUG	Week 1:		8/21: INTRODUCTION	
	Week 2:	8/26: INTRODUCTION… cont.	8/28: *Richard & Class:* Research Records	
SEP	Week 3:	9/02: LABOR DAY	9/04: * *Meg Tuomala::* University Records	
	Week 4:	9/9: COMPLIANCE & AUDITING	9/11: * *Tanya Marshall:* State Records	
	Week 5:	9/16: RETENTION & LIFECYCLE **Group A**	9/18: * *Jeff Pirtle:* Corporate Records	
	Week 6:	9/23: LEGAL REQUIREMENTS **Group B**	9/25: : * *Caryn Wojcik:* ER Management	
	Week 7:	9/30: TRUST	10/02: * *Mark Conrad:* Trustworthy Records	
OCT	Week 8:	10/7: PRESERVATION I	10/09: *Greg Jansen:* Digital Curation	
	Week 9:	10/14: PRESERVATION II **Group C**	10/16: *Kelly Eubank:* Web & Social Media	
	Week 10:	10/21: * *Liana Diesendruck:* Historical Records	10/23: ACCESS	
	Week 11:	10/28: * *Glen McAninch:* Cloud Preservation	10/30: CLOUD **Group D**	
NOV	Week 12:	11/04: * *Cal Lee:* Digital Forensics	11/06: FORENSICS	
	Week 13:	11/11: SPECIAL TOPICS	11/13: * *Jennifer Young:* Tribal Records	
	Week 14:	11/18: *Student Presentations*	11/20: * *Jeff Heard:* Big Records	
	Week 15:	11/25: *Student Presentations*	11/27: THANKSGIVING	
DEC	Week 16:	12/02: *Essay in class*	12/04: *Wrap-up*	

WEEK 1 (Aug. 21)

▪ **Wed., Aug. 21: Fall speaker line-up & introduction**

WEEK 2 (Aug. 26 & Aug. 28)

▪ **Mon., Aug. 26: Introduction to electronic records (cont.)**
Readings:
- "Appendix 2, The Concept of Record in Interactive, Experiential and Dynamic Environments: the View of InterPARES", Luciana Duranti, Kenneth Thibodeau: http://www.interpares.org/ip2/display_file.cfm?doc=ip2_book_appendix_02.pdf
- "Knowledge and Skills Inventory", New Skills for a Digital Era, May 31, June 2, 2006, DC, Richard Pearce-Moses and Susan E. Davis, pages 1-31, http://www.archivists.org/publications/proceedings/NewSkillsForADigitalEra.pdf

Questions of the day:
(1) What are the characteristics of records in electronic systems
(2) Is there a fundamental difference between an e-Record and a paper record? How so?
(3) How does your skillset measure up against the New Skill inventory and what is your critical assessment of this inventory?

▪ **Wed., Aug. 28: Research Records**
Topics:
- Demonstrations & discussion of research records management

WEEK 3 (Sep. 2 & Sep. 4)

▪ **Mon., Sep. 2: LABOR DAY**

▪ **Wed., Sep. 4: University Records**
Guest Speaker: Meg Tuomala, Electronic Records Archivist at UNC Archives & Records Mgt.
Bio:
Meg Tuomala (MSLS 2010) began as electronic records archivist in the University Archives and Records Management Services of the University of North Carolina at Chapel Hill Libraries on

Dec. 1, 2012.

In her new position, Tuomala will lead efforts within the Archives to manage and preserve born-digital materials, and will assist other special collections units at UNC in doing so. She will also support UNC faculty, students and staff in depositing digital materials into the Carolina Digital Repository (CDR), and will work with other library staff to define and implement repository policies, workflows, and capabilities.

Tuomala was most recently digital archivist at the University Archives of Washington University in St. Louis, MO. She worked previously at UNC as the records service archivist.

In addition to her MSLS from SILS, she holds a B.A. in Comparative Literature and Romance Languages from UNC at Chapel Hill.

Topics:

- Records management at UNC
- Schedules
- Training
- Outreach
- Cooperation with stakeholders on campus

Readings:

- University Archives and Records Management Services: http://www.lib.unc.edu/mss/uars/
- College and University Archives Section of SAA: http://www2.archivists.org/groups/college-and-university-archives-section
- Guidelines for College and University Archives: http://www2.archivists.org/standards/guidelines-for-college-and-university-archives
- Campus Case Studies: http://www2.archivists.org/publications/epubs/Campus-Case-Studies
- Christopher J. Prom and Ellen D. Swain, College and University Archives: Readings in Theory and Practice (Chicago: SAA, 2008)
  http://search.lib.unc.edu/search?R=UNCb5675873

    "Collection of 13 essays gives those charged with creating or maintaining college and university archives inside knowledge about ever-changing, the importance of collaboration and cooperation, and the necessity of a proactive approach in acquiring materials. Articles describe the changing roles of such archives, such as their importance in future planning and to institutional memory, techniques for capturing campus histories, including oral histories and documentation of activity and diversity, ways of setting up systems that track with acquisitions and needs, and innovative ways of serving users and potential users."

WEEK 4 (Sep. 9 & Sep. 11)

- **Mon., Sep. 9: Compliance and auditing**

Readings:

- Stephens, David O. Records Management: Making the Transition from Paper to Electronic. Lenexa, KS: ARMA, 2007, Chapter 5 – Retention Implementation, Auditing, and Compliance.
- Kahn, Randolph A. "Records Management & Compliance: Making the Connection,"*Information Management Journal* 38 (No. 3, May/June 2004).
- Gable, Julie, "Navigating the Compliance Landscape," Information Management Journal 39 (No. 4, July/August 2005).
- McLeod, Julie, Sue Childs, Susan Heaford, "Records Management Capacity and Compliance Toolkits: A Critical Assessment," Records Management Journal 17 (No. 3, 2007): 216-232.
- TRAC: Trustworthy Repositories Audit & Certification: Criteria and Checklist, http://www.crl.edu/sites/default/files/attachments/pages/trac_0.pdf
- DRAMBORA: Digital Repository Audit Method Based on Risk Assessment, http://www.dcc.ac.uk/sites/default/files/DRAMBORA_Interactive_Manual%5B1%5D.pdf

- **Wed., Sep. 11: Records management for state employees**

Guest speaker: Tanya Marshall, State Archivist, Vermont State Archives & Records Administration (VSARA)

Bio:

Tanya Marshall is an appointee to the Advisory Committee on the Rules of Public Access to Court Records. She was a leader in establishing a collaborative framework for VSARA and the Department of Information and Innovation to address records issues in a digital world. Ms. Marshall also oversaw the consolidation of Vermont's records management program with the state archives. In addition to her Vermont work Ms. Marshall is vice-president of the National Association of Government Archives and Records Administrators (NAGARA); serves on the executive committee of the Council of State Archivists (COSA); and is a member of a standards committee on records and information management with ARMA International, a professional organization for records and information managers. Ms. Marshall developed a groundbreaking classification system that focuses on functional analysis and macro-appraisal. The implementation of the system has led Ms. Marshall to forge strong ties with members of the Vermont state government, technologists, legal experts, and others. Her adoption of this collaborative approach has resulted in unprecedented support for the archives in her state.

WEEK 5 (Sep. 16 & Sep. 18)

- **Mon., Sep. 16: Records retention and lifecycle issues**

Working Group A: presentation.

Questions of the day:

(1) What are the differences between retention schedules, rules, trigger events, departmental vs. functional vs. process-based schedules?

(2) How do retention schedules address electronic records?

(3) What are some of the shortcomings of retention schedules?

(4) Where do retention schedules fit in the information life cycle?

Readings:

- David O. Stephens, Records Management: Making the Transition from Paper to Electronic, Chapter 3: "Records Retention: Managing the Information Life Cycle", p. 33-51.
- Barsoum, Mark, "Records Management Mistakes to Avoid," *edoc Magazine,*May/June 2006, http://www.aiim.org/Resources/Archive/Magazine/2006-May-Jun/31405
- Diers, Fred V., "The Bankruptcy of Records Retention Schedules," *Records Management Quarterly* 26:2 (April 1992), pp. 3-10,.
- Montana, John, "Records Retention Schedules in Court: the Pitfalls," *Records Management Quarterly,* 30:4 (October 1996), pp. 32-36, 65.
- Fischer, Laurie. "Condition Critical: Developing Records Retention Schedules," *Information Management Quarterly*40:1 (January/February 2006), pp.26-35. http://www.arma.org/bookstore/files/Fischer1.pdf
- Myler, Ellie, "The ABCs of Records Retention Schedule Development," *e-doc Magazine,* May/June 2006. http://www.aiim.org/Resources/Archive/Magazine/2006-May-Jun/31458
- Torres, Tina. "Creating a Process-Focused Retention Schedule," *Information Management Quarterly*40:5 (September/October 2006), pp. 62-64. http://www.arma.org/bookstore/files/Torres.pdf

- **Wed., Sep. 18: Corporate Records**

Guest speaker: Jeff Pirtle, Archives and Collections Director, NBC Universal, Los Angeles, CA.

Bio:

Jeff Pirtle, Director of Archives & Collections, is responsible for the collection, preservation, and exhibition of NBCUniversal's significant historical records, photographs, and artifacts according to professional archival and museum standards. His department is the central reference source for historic information, and he serves as spokesperson for the history of NBCUniversal, as well as the company's productions.

Pirtle belongs to the Society of American Archivists, currently acting as Past Chair of the Business Archives Section. He also serves on the board of Campo de Cahuenga's Historical Memorial Association, and as President of the Texas Tech Alumni Association's Los Angeles Chapter. Pirtle also volunteers as a Specialist with the California State Military Reserve's Center for Military History Unit.

Pirtle joined Universal Studios in July 2002 as Archivist for Manuscripts and Special Collections. Before Universal, Pirtle served as Museum and Archives Project Manager for the J.C. Penney Company headquartered in Plano, Texas. Pirtle has also worked for the Amon Carter Museum in Fort Worth, and served as a graduate intern with the Getty Research Institute in Los Angeles. Jeff holds a BA in History as well as an MA in Museum Science, both from Texas Tech University.

Readings:
Websites created for the 100th Anniversary of Universal Pictures. The Tumblr site was specifically created to feature assets from the Archives & Collections department.
http://universal100.tumblr.com/
http://www.universal100th.com/

WEEK 6 (Sep. 23 & Sep. 25)

- **Mon., Sep. 23: Legal requirements**

Working Group B: presentation.

Questions of the day
- What is the significance and meaning of Sarbanes-Oxley?
- How to summarize and contrast other regulations (SOX, HIPAA, USA Patriot Act, etc.?
- How to explain and summarize efforts from the Sedona Conference?
- How and what legal guidance would you formulate for records managers?

Readings
- David O. Stephens, Records Management: Making the Transition from Paper to Electronic, Chapter 3, p. 44-48, section on **"Laws and regulations cited in schedules"**.
- Lessig, Lawrence, "What Things Regulate." In *Code and Other Laws of Cyberspace*, p. 85-99. New York: Basic Books, 1999 — author of *"The Future of Ideas"*, *"Free Culture"*, and*"Remix."*
- Baron, Jason R., "The PROFS Decade: NARA, E-mail, and the Courts," in Bruce I. Ambacher ed., Thirty Years of Electronic Records, 2003. See ERPAnet presentation at:
- Martins, Christine and Martins, Sophia. "The Impact of the USA-PATRIOT Act on Records Management," Information Management Quarterly 39:3 (May/June

2005), pp. 52-59.
http://findarticles.com/p/articles/mi_qa3937/is_200505/ai_n13638967/

- David O. Stephens, Records Management: Making the Transition from Paper to Electronic, Chapter 6: "Business Recordkeeping and the law", p. 83-102.
- Duff, Wendy, "Harnessing the Power of Warrant," American Archivist, Volume 61, Number 1 / 1988: p. 88-105.
- Sedona Conference
  http://www.thesedonaconference.org/content/miscFiles/publications_html
  - *The Sedona Guidelines: Best Practice Guidelines & Commentary for Managing Information & Records in the Electronic Age Second Edition* (November 2007): i—10
  - *The Sedona Principles: Second Edition*
    Best Practices,Recommendations and Principles for Addressing Electronic Document Production, June 2007
  - The Sedona Conference *Commentary on ESI Evidence & Admissibility*, March 2008.
  - Sedona Conference Journal, Volume 11 – Fall 2010, *Commentary on Legal Holds: The Trigger and the Process*, p. 265-287
- Uniform Electronic Transactions Act. In 1999, UETA establishes the legal equivalence of electronic records and signatures with paper writings and manually-signed signatures, removing barriers to electronic commerce. http://www.nccusl.org/Act.aspx?title=Electronic%20Transactions%20Act

- **Wed., Sep. 25: Setting up a RM program from scratch**

Guest speaker: Caryn Wojcik, Government Records Archivist, State of Michigan, Records Management Services

- Electronic Records Management
- Document Management
- Record Reproduction
- Destruction of Physical Records
- Litigation and Discovery
- Records Preservation

Readings:

- 2009 Cohasset survey, http://www.cohasset.com/retrievePDF.php?id=10
- CoSA State Electronic Records Initiative-Phase I report, http://www.statearchivists.org/seri/SERI%20Phase%20One%20Report%20-%20final%20review%20draft%20-%202012-06.pdf
- DoD 5015.02-STD RMA Design Criteria Standard, http://jitc.fhu.disa.mil/cgi/rma/standards.aspx

WEEK 7 (Sep. 30 & Oct. 2)

- **Mon., Sep. 30: Trust in records and recordkeeping systems**
Readings
  - http://www.library.cornell.edu/dlit/MathArc/web/StoryFrameset.html
  - CCSDS Reference Model for an Open Archival Information System (OAIS), http://public.ccsds.org/publications/archive/650x0b1.PDF
  - Lee, Christopher A. "Open Archival Information System (OAIS) Reference Model." In Encyclopedia of Library and Information Sciences, Third Edition, edited by Marcia J. Bates and Mary Niles Maack, 4020-4030. Boca Raton, FL: CRC Press, 2009. http://www.ils.unc.edu/callee/p4020-lee.pdf
  - Trustworthy Repositories Audit & Certification: Criteria and Checklist, Version 1.0, February 2007, OCLC, CRL, NARA, http://www.crl.edu/sites/default/files/attachments/pages/trac_0.pdf
  - Digital Repository Audit and Certification Wiki, http://wiki.digitalrepositoryauditandcertification.org/bin/view
  - Audit and Certification of Trustworthy Digital Repositories, Draft Recommended Practice, CCSDS 652.0-R-1 (Red Book), Issue 1, October 2009, http://public.ccsds.org/sites/cwe/rids/Lists/CCSDS%206520R1/Attachments/652x0r1.pdf Requirements for Bodies Providing Audit and Certification of Candidate Trustworthy Digital Repositories, Draft Recommended Practice, CCSDS 652.1-R-1 (Red Book), October 2010, http://public.ccsds.org/sites/cwe/rids/Lists/CCSDS%206521R1/Attachments/652x1r1.pdf

- **Wed., Oct. 2: Trustworthy Records**
Guest speaker: Mark Conrad, NARA Information Services/Applied Research, Rocket Center, WV
Bio:
   Mark Conrad is currently an archives specialist working in the Applied Research Division of the National Archives and Records Administration's (NARA) Office of Information Services. In this position he works with computer scientists and engineers from around the world and NARA staff to ensure that NARA takes advantage of the latest relevant technological developments in carrying out its mission.
   From September 1998 through 2003 Mark was the Director for Technology Initiatives at the National Historical Publications and Records Commission (NHPRC). From 1991 to 1998 he was an appraisal and accessioning archivist in NARA's Center for Electronic Records. From September 1995 to June 1996, Mark was a Visiting Fulbright Scholar in the Archives Department of University College Dublin, Ireland, where he taught courses on electronic

records issues. From 1990 to 1991 he was the first electronic records archivist at Penn State University.

Mark is a Past-Chair of SAA's Electronic Records Section, and Past-Chair and current member of NAGARA's Committee on Electronic Records and Information Systems (CERIS). He helped develop and has taught SAA's Electronic Records Summer Camps. He is also an Honorary Teaching Fellow and author of and tutor for the Electronic Records Management course at the University of Dundee, Scotland.

URL for Applied Research Facebook page: http://www.facebook.com/NARACAST

WEEK 8 (Oct. 7 & Oct. 9)

- **Mon., Oct. 7: Preservation I**
  - Archiving conference: http://www.imaging.org/ist/conferences/archiving/
  - Digital Preservation Analyst (Archives NZ): http://www.bfound.net/detail.aspx?jobId=108628&CoId=164&rq=6
  - Job opportunity: Admin. Digital Preservation System: http://www.tib-hannover.de/fileadmin/Stellenangebote/TIBUB-Stellenauschreibung-2012-37-Administrator-Digital-Preservation-System-E13.pdf
  - Preservation and Archiving Special Interest Group (PASIG): http://www.preservationandarchivingsig.org/events/2012/program.html
  - APARSEN DP project newsletter: http://www.alliancepermanentaccess.org/
  - SCAPE project newsletter on DP: http://www.scape-project.eu/category/newsletters
  - Digipres: "Wayne State University — Learning about Digital Preservation": http://wsustudentndsa.wordpress.com/
  - ERECS-L@listserv.albany.edu: listserv.
  - Best Practices Exchange: call for session proposals on "acquiring, preserving, and providing access to government information in the digital era": http://bpexchange.org/
  - The Memory of the World in Digital age: Digitization and Preservation, 26o28 Sep. 2012, Vancouver, BC: http://www.unesco.org/new/en/communication-and-information/events/calendar-of-events/events-websites/the-memory-of-the-world-in-the-digital-age-digitization-and-preservation/
  - Digital Preservation Coalition: release of the DPC Technology Watch Report 'Intellectual Property Rights for Digital Preservation': http://dx.doi.org/10.7207/twr12-02

- **Wed., Oct. 9: Digital Curation with the Curator's Workbench**
Guest speaker: Greg Jansen, Lead Developer, Library Systems, UNC

Readings:

- About the Curator's Workbench: http://www.lib.unc.edu/blogs/cdr/index.php/about-the-curators-workbench/
- YouTube Video by Gegenbach
- Download the stable version 3.0 on this page: http://www.lib.unc.edu/software

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WEEK 9 (Oct. 14 & Oct. 16)

- **Mon., Oct. 14: Preservation II**

Working Group C: presentation.

Questions of the day

- Should public records preservation be outsourced?
- What would the individual person's point of view be on custodianship?
- Is there a case for emulation?
- Format conversion versus abstracting format?

Readings

- Jeff Rothenberg, "Ensuring the Longevity of Digital Information," http://www.clir.org/pubs/archives/ensuring.pdf
- Luciana Duranti, "Archives as a Place,"Archives and Manuscripts 24(2): 242-255 (1996).
- Library of Congress, "How to preserve your own digital materials," http://www.digitalpreservation.gov/you/
- The Multivalent Browser: A Platform for New Ideas, T. Phelps, R. Wilensky, DocEng '01, Proceedings of the 2001 ACM Symposium on Document Engineering,

- **Wed., Oct. 16: Archiving Web and Social Media**
  - **Guest speaker:** Kelly Eubank, Electronic Records Archivist with the North Carolina Archives and Records

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WEEK 10 (Oct. 21 & Oct. 23)

- **Mon., Oct. 21: Historical Records**

Guest speaker: Liana Diesendruck, Research Scientist, NCSA, UIUC

Talk:

The 1940 US Census was composed of millions of spreadsheet-like images, comprising roughly 10 billion units of information

(http://www.slideshare.net/NARACAST/ncsa-posterhandout). We will briefly describe our Computer Vision approach to providing initial searchable access to the collection and then focus on the passive crowdsourcing strategies we employ to improve the system's accuracy over time. The main idea is to get feedback on the quality of the results by keeping track of the users' interactions with the system. The process starts when the user is presented with a list of possible matches to a query. Information is gathered about the user's interactions with this list, from clicked results to the amount of time spent on a page. The acquired data provides invaluable feedback on the accuracy of the presented results and it is used later to improve the system's responses.

Bio:

Liana Diesendruck is part of the Image, Spatial, and Data Analysis (ISDA) group at the National Center for Supercomputing Applications (NCSA) at the University of Illinois. She currently applies her background in computer vision to various projects related to the digital preservation of documents. Recently, she has been working on ways to provide searchable access to the 1940's US Census data without using human transcribers. Liana holds a M.Sc. and a B.Sc. in Computer Science and a B.Sc. in Physics, all from Ben-Gurion University in Israel. Currently her interests lie in applied computer vision, information retrieval, data analysis and visualization, and cognitive systems.

Readings:

- "Toward Free and Searchable Historical Census Images", http://spie.org/x57241.xml?ArticleID=x57241

- **Wed., Oct. 23: Access requirements and constraints**

Readings:

Media Access to Government Information Conference (MAGIC), Apr. 12, 2011 at NARA http://www.archives.gov/applied-research/events/magic.html. **MAGIC** was a collaborative, one-day conference sponsored by the National Archives and Records Administration (NARA) and Duke University's DeWitt Wallace Center for Media and Democracy that:

- Explored obstacles and opportunities for access to government information by journalists and others writing about public affairs in the digital age;
- Included government officials, reporters, scholars, and Non Government Organization (NGO) leaders who can contribute insights into how journalists can better discover, access, and use digital government information; and
- Informed government professionals about the use of technology to provide better access to government information

New Access:

- ARC Catalog:
    - http://www.archives.gov/research/arc/
- Digital Vaults

- ▪ http://www.digitalvaults.org
  - ▪ http://www.archives.gov/press/press-kits/digital-vaults/
- ▪ Docs Teach
  - ▪ http://docsteach.org/
  - ▪ http://www.archives.gov/publications/prologue/2010/fall/docsteach.html

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WEEK 11 (Oct. 28 & Oct. 30)

- ▪ **Mon., Oct. 28: Cloud preservation**

Guest speaker: Glen McAninch, Manager of Technology Analysis and Support Branch, Kentucky Department for Libraries and Archives

Readings:
  - ▪ **Kentucky Department for Libraries and Archives**, "Cloud Computing: Implications and Guidelines for Records Management in Kentucky State Government" (August 2012), http://kdla.ky.gov/records/Documents/Cloud%20Computing%20Guidelines%20Version%201.pdf
  - ▪ **National Association of State Central Information Officers (NASCIO).** "Capitals in the Clouds" Part I – V. (October 2012 – April 2013), http://www.nascio.org/publications/
  - ▪ **National Archives and Records Administration** – "National Archives and Records Administration Issues Guidelines on Cloud Computing", NARA Bulletin 2010-05. (September 2010), http://www.archives.gov/press/press-releases/2010/nr10-148.html

- ▪ **Wed., Oct. 30: Records in the cloud**

Working Group D: presentation.

Questions of the day:
  - ▪ Can you try to define cloud computing?
  - ▪ What does data in the cloud mean?
  - ▪ Where is records management in the cloud at?
  - ▪ Pros and cons of records in the cloud?
  - ▪ Guidance for records managers?

Readings: (courtesy of Lori Richards & Lew Hassell)
  - ▪ Statute on technology hosting on state-owned servers (2011 Appropriation Bill):
    - ▪ *SECTION 6A.2.(f) Information Technology Hosting. – State agencies developing and implementing information technology projects/applications shall use the State infrastructure to host their projects. An exception to this requirement may be granted only if approved by both the State Chief Information Officer on the basis of technology*

requirements and by the Office of State Budget and Management based on cost savings, subject to consultation with the Joint Legislative Commission on Governmental Operations and a report to the Joint Legislative Oversight Committee on Information Technology.

Projects/applications currently hosted outside the State infrastructure shall be returned to State infrastructure not later than the end of any current contract.

By October 1, 2011, the State Chief Information Officer shall report to the Joint Legislative Oversight Committee on Information Technology regarding projects currently hosted outside State infrastructure and a schedule to return those projects to State infrastructure.

- NARA's Bulletin 2010-05 offering guidance on managing federal records in the cloud: http://www.archives.gov/records-mgmt/bulletins/2010/2010-05.html
- JISC's Cloud Computing and the Law Toolkit: http://www.jisclegal.ac.uk/ManageContent/ManageContent/tabid/243/ID/2135/JISC-Legal-Cloud-Computing-and-the-Law-Toolkit-31082011.aspx
- e-Discovery in light of The Federal Rules of Civil Procedure in the Cloud: http://www.clearwellsystems.com/e-discovery-blog/2010/09/03/e-discovery-and-the-cloud-possession-custody-and-control/
- Jaeger, P. T., Lin, J., Grimes, J. M., & Simmons, S. (2009). Where is the cloud? geography, economics, environment and jurisdiction in cloud computing. First Monday, 14(5) http://www.firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2456/2171
- Moving to the Cloud: An Introduction to Cloud Computing in Government, David C. Wyld, IBM Center for the Business of Government, E-Government Series, 2009.
- ACM Tech Pack on Cloud Computing, Doug Terry, Microsoft Research.

WEEK 12 (Nov. 4 & Nov. 6)

- **Mon., Nov. 4: Digital forensics**

Guest speaker: Cal Lee, Associate Professor, SILS, UNC

- Motivation & Scope – applying digital forensics to digital curation
- Important technical background for understanding the principles, tools & techniques to follow – nature of digital objects, layers, components, representation, relationships (working up from the hardware level)
- Ensuring the completeness and evidential value of data when acquired- Gleaning information from what you have (working down from file level
- Professional & ethical considerations

Bio:

Christopher (Cal) Lee is Assistant Professor at the School of Information and Library Science at the University of North Carolina, Chapel Hill. He teaches archival administration, records management, digital curation, and information technology for managing digital collections. His research focuses on long-term curation of digital collections and stewardship (by individuals and information professionals) of personal digital archives. He is particularly interested in the practical and ethical implications of diffusing tools and methods into professional practice. Two major streams of his current research are personal digital archives and the application of digital forensics methods to the curation of digital collections.

Readings:

- Farmer, Dan, and Wietse Venema. "The spirit of forensic discovery," "Persistence of deleted file information," and "Appendix B: Data Gathering and the Order of Volatility." Forensic Discovery, 1-15, 145-160, 193-198. Upper Saddle River, NJ: Addison-Wesley, 2005.
- Kirschenbaum, Matthew G., Richard Ovenden, and Gabriela Redwine. "Digital Forensics and Born-Digital Content in Cultural Heritage Collections." Washington, DC: Council on Library and Information Resources, 2010. http://clir.org/pubs/reports/pub149/pub149.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

- **Wed., Nov. 6: Data recovery, forensics, and digital archaeology**

Readings:

- Technology Watch Report – '**Digital Forensics and Preservation'** by Jeremy Leighton John of the British Library. This report provides a ***broad overview of digital forensics*** with pointers to resources and tools that may benefit the preservation of digital cultural heritage. More specifically, the report focuses on the ***application of digital forensics to the curation of personal digital archives.*** 'Digital forensics is associated in many people's minds primarily with the investigation of crime. However, In recent years, digital forensics has also emerged as an essential source of tools and approaches for facilitating digital preservation, specifically for protecting and investigating evidence from the past,' explained the author. 'Institutional repositories and professionals with responsibilities for personal archives can benefit from using forensic tools and technique to address digital authenticity, accountability and accessibility.' 'Forensic technology makes it possible to identify privacy issues, establish a chain of custody, employ write protection for capture and transfer of data, and detect forgeries. It can extract relevant metadata and content, it enables efficient indexing and searching, and it facilitates the management of access rights –

http://www.dpconline.org/component/docman/doc_download/798-twrdigitalforensicspreviewoct2012

- T. Gloe, M. Kirchner, A. Winkler, R. Bohme, "Can We Trust Digital Image Forensics?", ACM Multimedia 2007.
- Don C. Skemer, "Diplomatics and Archives", American Archivist, Vol. 52, No. 3 / Summer 1989, pp. 376-372.
- Brezinski, Dominique, and Tom Killalea. "Guidelines for Evidence Collection and Archiving." Request for Comments 3227. 2002. http://www.ietf.org/rfc/rfc3227.txt.
- Ross, Seamus, and Ann Gow. "Digital Archaeology: Rescuing Neglected and Damaged Data Resources." London: British Library, 1999. http://www.ukoln.ac.uk/services/elib/papers/supporting/pdf/p2.pdf [Focus on: Executive Summary (iii-vi), 1.2 Recovery (17-19), Disaster and Data Recovery (19-24), Case Studies (39-42)]
- Underwood, William, "Advanced Decision Support for Archival Processing of Presidential Electronic Records: Final Scientific and Technical Report, Sep. 22, 2006 – Sep. 21, 2009 http://perpos.gtri.gatech.edu/publications/TR%2009-05-Final%20Report.pdf

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WEEK 13 (Nov. 11 & Nov. 13)

- **Mon., Nov. 11: Special Topics**

- **Wed., Nov. 13: Tribal Records**
Guest speaker: Jennifer Young, Acting Manager, Salt River Pima Maricopa Indian Community, Scottsdale, AZ

WEEK 14 (Nov. 18 & Nov. 20)

- **Mon., Nov. 18: Student presentations**

- **Wed., Nov. 20: Big Records**
Guest speaker: Jeff Heard, Research Scientist, RENCI, UNC
**Bio:**
Jeff Heard has an M.S. from Illinois Tech, and a B.S. in Computer Science from the University of Central Arkansas, as well as 4 years of work towards a PhD in Computer Science from the Illinois Institute of Technology. He is currently a Senior Researcher with RENCI, developing

visualization with a strong bent toward scalable visualization systems. His research interests include visual analytics, information visualization, scalable interactive visualization systems, and geographic visualization and analytics. See: "Putting data in its place":

http://www.renci.org/news/features/putting-data-in-its-place
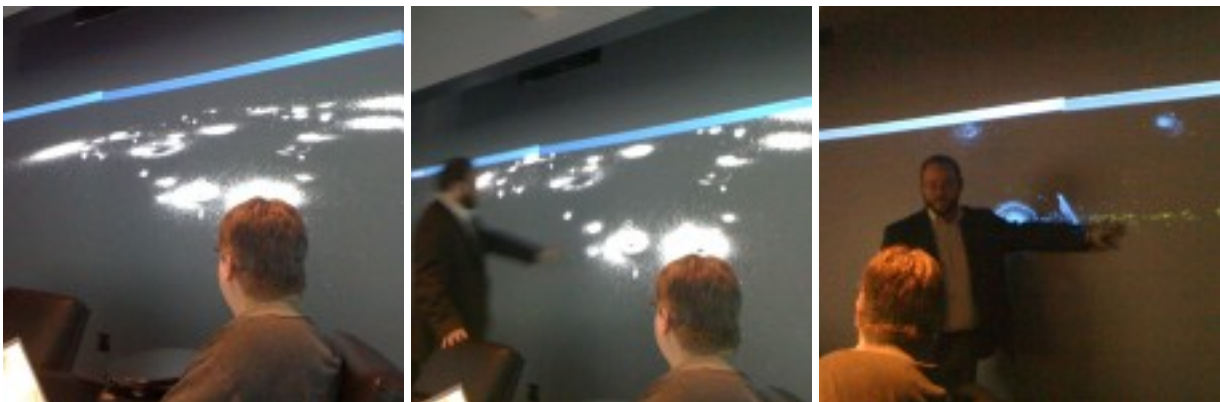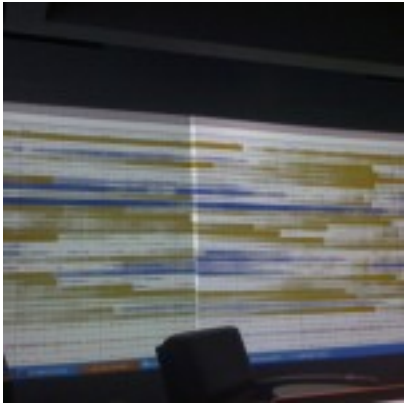
Work:

- Teleconferencing over maps:
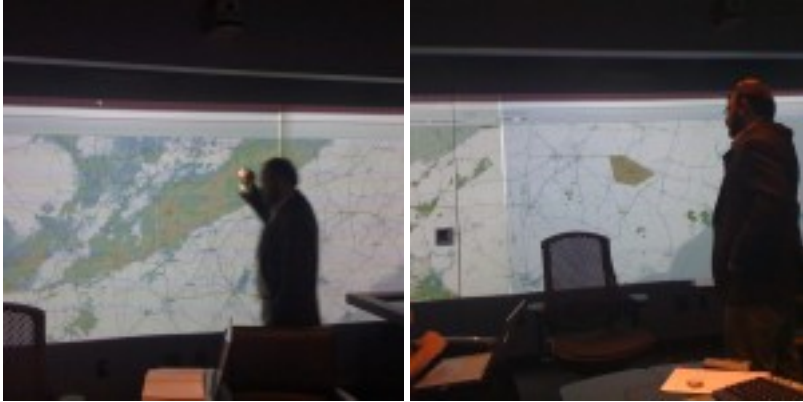
- ibiblio visualization:

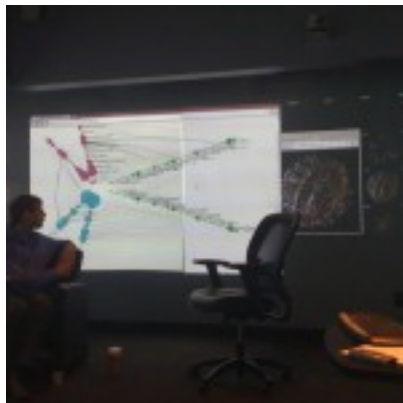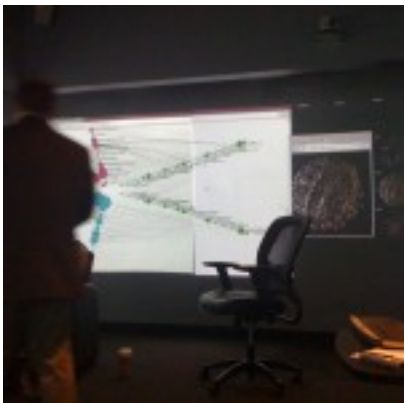- Galaxies of documents:

- Stock trade data:

- State and county data:

- World economic forum councils:

WEEK 15 (Nov. 25 & Nov. 27)

- **Mon., Nov. 25: Student presentations**

- **Wed., Nov. 27: THANKSGIVING**

WEEK 16 (Dec. 2 & Dec. 4)

- **Mon., Dec. 2: Essay in class**

- **Wed., Dec. 4: Wrap-up**