GSLIS Research Showcase
March 29, 2013

Graduate School of Library and Information Science
501 E. Daniel St.
Champaign, IL 61801

Schedule of Events

12:00-1:30 pm – Lunch (East Foyer) and Poster Session 1 (131 LIS)

1:30-3:30 pm – Presentations (126 LIS)

3:30-4:30 – Reception (East Foyer), Poster Session 2 (131 LIS), and Demonstrations (126 LIS)

Overview of Sessions

12:00-1:30 pm – Lunch (East Foyer) and Poster Session 1 (131 LIS)

Mix IT Up! - Youth Advocacy Through Library and Information Science
Jeanie Austin

On the Effect of Name Ambiguity on Measures of Large-Scale Co-Authorship Networks
Brent D. Fegley & Vetle I. Torvik

What is Family History? : Using Multidisciplinary Research to Re-Think Everyday Information Practices of Family Historians
Noah Lenstra

Location-Based Navigation: Combining OPAC Searching and 3D Visualization in a High-Density Storage Facility
Fredrick Kiwuwa Lugya & Michael B. Twidale

Behind the Screen: Unveiling the Digital Labor of Online Content Moderation
Sarah T. Roberts
A Familiar Face? A Critical Analysis of Microsofts 'Ms. Dewey'
Miriam Sweeney

When You Wish upon a Blog: How Collaborative Information Seeking can Interleave with CSCW
Aiko Takazawa & Michael B. Twidale

Completeness, Coverage, & Equivalence in Scientific Data Records
Andrea Thomer, Karen S. Baker, Simone Sacchi, & David Dubin

Can Public Libraries Become Public Computing Libraries? A Digital Divide Study of Beijing Communities
Sufang Wang, Kate Williams, Abdul Alkalimat, Hui Yan, & Shenglong Han

Frontier Libraries on the 1885 Kansas State Census
Cherie’ L. Weible

Extending the Systematic Assertion Model for Humanities Research
Karen Wickett, David Dubin, Bridget Almas, & Megan Senseney

The History of Chicago Public Library as Public Computing Library
Kate Williams

Research Center Posters (Displayed during Poster Sessions 1 and 2)

Center for Children's Books
Deborah Stevenson, Director

Center for Digital Inclusion
Jon Gant, Director

Center for Informatics Research in Science and Scholarship
Carole L. Palmer, Director

HathiTrust Research Center
J. Stephen Downie, Director

1:30-3:30 pm – Presentations (126 LIS)

Reading Practices and Intellectual Freedom Research
Emily J. M. Knox

Site-Based Data Curation at Yellowstone National Park
BUILDING DIGITAL COMMUNITIES, CDI AS A CATALYST FOR CHANGE  
Jon Gant, LaEisha Meaderds, & Shavion Scott

A 'Mixed' Bag: Searching for Hapa Characters in Youth Literature  
Karla Lucht

CONNECTING: ADDING AN AFFECTIVE DOMAIN TO A COGNITIVE INFORMATION BEHAVIOR THEORY  
Nicole Cooke

HathiTrust Research Center: New Frontiers in Digital Scholarship  
J. Stephen Downie, Craig Willis, & Kahyun Choi

The Significance of Time and Place: Preserving Virtual Worlds and Carmen Sandiego  
Rhiannon Bettivia

GSLIS at the Text RETrieval Conference – Retrieving and Filtering Real-Time Data  
Miles Efron

Children, Critics, Comics, & the Researcher  
Carol Tilley

3:30-4:30 – Reception (East Foyer), Poster Session 2 (131 LIS), and Demonstrations (126 LIS)

Poster Session 2

Identifying Claims in Social Science Literature  
Shameem Ahmed, Catherine Blake, Kate Williams, Noah Lenstra, & Qiyuan Liu

Describing the Quality of Research Datasets Across Disciplines: A Comparative Study  
Tiffany C. Chao

Music Mood Tag Prediction with Dimension Reduced Tag Space  
Kahyun Choi

Sustainable Software  
Craig Evans & Jerome McDonough

She-books: The Virtual Vault and Value-added E-Books for Women's Studies Curricula  
Valerie Hotchkiss, Brad Tober, & Kenton McHenry
ENHANCING CULTURAL HERITAGE COLLECTIONS BY SUPPORTING AND ANALYZING PARTICIPATION IN FLICKR
Jacob Jett, Megan Senseney, & Carole L. Palmer

SITE-BASED DATA CURATION AT YELLOWSTONE NATIONAL PARK

FIELD STRENGTH: ENHANCING COLLABORATION IN LIS EDUCATION THROUGH ACADEMIC LIBRARY FIELD EXPERIENCES
Sue Searing & Linda C. Smith

EVERYDAY INFORMATION SEEKING AND INFORMATION WORLD OF BLIND AND VISUALLY IMPAIRED PEOPLE IN CHINA
Sufang Wang

STATEWIDE ILLINOIS BROADBAND RESEARCH: BASELINE DATA ON TECHNOLOGY USE IN THE BTOP ERA
Kate Williams, Abdul Alkalimat, & Brian Zelip

COMMUNITY INFORMATICS STUDIO: A MODEL OF INFORMATION SCHOLARSHIP IN ACTION
Martin Wolske, Colin Rhinesmith, Jennie Archer, Emily Bayci, Ryne Leuzinger, & Lucas McKeever

Demonstrations

THE LOCAL FAB LAB NETWORK AS COMMUNITY INFORMATICS: AVENUES FOR LIS-ORIENTED INQUIRY
Jeff Ginger

THE ILLINOIS DISTRIBUTED MUSEUM PROJECT: ENGINEERING AND TECHNOLOGY INNOVATIONS AT THE UNIVERSITY OF ILLINOIS AT URBANA CHAMPAIGN
Michael B. Twidale, Susan Frankenberg, Tom Ackerman, & Kelsey Heffren

EXPLOITING STRUCTURAL DATA FOR MUSIC EXPLORATION
Craig Willis, J. Stephen Downie, Kahyun Choi, & David Bainbridge
Presentation Abstracts

READING PRACTICES AND INTELLECTUAL FREEDOM RESEARCH
Emily J. M. Knox

This study discusses reading as a social practice that has changed over time and encompasses different physical modalities and interpretive strategies. In order to understand why people challenge books, it explores differing understandings of how reading works, what it means to read a text, and especially how one constructs the idea of appropriate reading materials. Data for the study consists of discourse from 13 challenge cases to books in American public libraries and schools that took place between 2007 and 2011. Three sources of discourse from the cases were used in the study. The first consisted of documents, obtained via Freedom of Information Act requests to governing bodies, produced in the course of challenge cases. Recordings of book challenge public hearings constituted the second source of data. Finally, the third source of data was interviews with challengers.

SITE-BASED DATA CURATION AT YELLOWSTONE NATIONAL PARK

The Site-Based Data Curation (SBDC) project at the University of Illinois at Urbana-Champaign is developing a framework of policies and processes for the curation of research data generated at scientifically significant sites. SBDC, funded by an Institute of Museum and Library Services National Leadership Grant, will advance the professional work of curation by articulating skills and principles for site-based curation, and exploring the inter-institutional relationships essential to scientific data curation.

Project goals are to:
• Develop guidelines and processes for curation of diverse digital data, in response to the needs of scientists and site professionals.
• Test and document effective processes for transferring curated data into repositories for preservation and access.

Use cases built around systems geobiology research at Yellowstone National Park (YNP) will guide framework development. The project will explore how to provide curation upstream in the research process and examine the following research questions:
• What series and aggregations of data are valuable to resource managers and scientists?
• What parameters are most valuable in defining such groupings? What are the key kinds of sub-sites and how should they be represented and related to other sites?
• How should groups of datasets be appraised, and how does this differ from appraisal of individual datasets?
• How should continuing series be curated and managed?

Relevant inter-institutional dynamics will be examined with the following research questions:
• What principles should underpin policies and processes of site-based curation, from various stakeholder perspectives?
• What repository expertise should inform site-based curation?
• What site expertise should inform repository operations?
• How can site and repository policies and processes be aligned for optimal workflows and economies of scale?

We will report on responses to a questionnaire distributed prior to a workshop for YNP stakeholders, and present key challenges.

BUILDING DIGITAL COMMUNITIES, CDI AS A CATALYST FOR CHANGE
Jon Gant, LaEisha Meaderds, & Shavion Scott

If the twenty-first century is indeed aptly characterized as the Information Age and the Networked Society, far too many people are left out of the networks, people who are unable to access, evaluate, and create knowledge in a world that has excluded them for too long. CDI and its affiliates are committed to fostering inclusive and sustainable societies through research, teaching, and public engagement about information and communication technologies and their impacts on communities, organizations, and governments. As with any technology, information and communication technologies are sociotechnical in nature; thus CDI combines rigorous social science with technical innovations to address social inequities and digital divides.

The Center is committed to weighing the tangible and intangible costs and benefits of information and communication technologies (ICT) for marginalized people around the world and directing research toward ameliorating the most serious crises that threaten us, including poverty, violence, food insecurity, climate change and disease. Our work focuses on policy as well as practice, examining ways in which factors combine to create or impede broad social impacts. Understanding barriers to technology adoption can serve as a catalyst to get more people digitally engaged.

Digital inclusion encompasses not only access to the Internet but also the availability of hardware and software; relevant content and services; and training for the digital literacy skills required for effective use of ICTs. This presentation will highlight the many projects and initiatives within CDI, which have local, national and global implications, as well as demonstrate applications of ICTs and their social and economic impacts. Projects include
A 'MIXED' BAG: SEARCHING FOR HAPA CHARACTERS IN YOUTH LITERATURE

Karla Lucht

To gain a richly nuanced understanding of multicultural literature for children, it is important that there are no barriers when identifying books that offer reflection and complexity around race and ethnicity. What a book may actually represent is richer than the subject headings allow. I study the ever-growing community of multiracial Asians in North America, who may go by identifiers such as hapa, Eurasian, or blasian (to name a few). For young people, it is essential to introduce these terms early to give them a language to help bridge the disconnect that some may feel as a result of their multiethnic makeup; providing young people with books in which they see themselves represented is an important strategy to achieve this goal. Through my research, I hope to identify and analyze titles that feature North American protagonists with a mixed-race Asian identity. Early challenges that have arisen include the limits with online and print resources when trying to access the depth of cultural patterns in potential titles and in titles found thus far. This presentation documents early findings in my research and reflects on the challenges of searching for hapa characters in youth literature.

CONNECTING: ADDING AN AFFECTIVE DOMAIN TO A COGNITIVE INFORMATION BEHAVIOR THEORY

Nicole Cooke

This study brings a new perspective to the literature because it examines the online learning environment of graduate students from an information behavior perspective. Todd’s Information Intents (1997), gives the phenomenon of online learning gives depth to the interactions and learning that occur in online graduate classrooms. Information Intents emerges out of the Information utilization subgenre of information behavior research, addresses the cognitive view of information science, and seeks to discover what happens when people acquire information and how that information is used.

By examining online learning, specifically threaded discussions, through the lens of the Information Intents theory, the goal of this study was to provide a detailed examination and analysis of the nature and dynamics of information behaviors in an asynchronous online classroom and identify factors that shape these behaviors. The insights gained from this research benefit not only the discipline of library and information science, but all others that utilize distance education technologies, that is, e-learning. Distance education is not just about delivering course content in an online format, but rather a way to put the learner first in the course design process by considering how they learn best.
and facilitating the development of connected and constructivist learning environments.

**HathiTrust Research Center: New Frontiers in Digital Scholarship**

*J. Stephen Downie, Craig Willis, & Kahyun Choi*

This presentation will introduce the HathiTrust Research Center (HTRC). Over 10 million volumes have been ingested into the HathiTrust digital archive from sources including Google Books, member university libraries, the Internet Archive, and numerous private collections. The HTRC is dedicated to facilitating scholarship using this enormous corpus through enabling access to the corpus, developing research tools, fostering research projects and communities, and providing additional resources such as enhanced metadata and indices that will assist scholars to more easily exploit the HathiTrust corpus. We will present a brief introduction to the HTRC current research and development initiatives including collection building for digital scholarship and improving book retrieval on a collection of 10 million volumes.

**The Significance of Time and Place: Preserving Virtual Worlds and Carmen Sandiego**

*Rhiannon Bettsiva*

The Preserving Virtual Worlds II project sought to examine issues of significance in video games with an end goal of long-term preservation. Early research suggested, unsurprisingly, that significance is highly situated and dependent on the eye of the beholder. Determining what is significant about a video game so that it can be preserved is a challenging and contextual task, and this work uses the Carmen Sandiego game franchise to further explore these difficulties.

Carmen is very much a product of a particular place and time; she is also a highly mediated subject. As such, even finding out what (or who) Carmen is was an intriguing issue that called into question how we can determine the boundaries of digital objects: in preserving Carmen, how much do we get from merely saving the bit streams and how much beyond the code is necessary for future generations to understand what made Carmen so financially lucrative and widely popular across different media types and populations? Examining the character across both the game franchise and her other mediated expressions provides us with a striking case study to aid in understanding significance and how to preserve video games and virtual worlds.
GSLIS at the Text REtrieval Conference – Retrieving and Filtering Real-Time Data

Miles Efron

Each year the Federal Government's National Institutes for Standards and Technology organizes the Text REtrieval Conference (TREC). GSLIS has an ongoing leadership role in TREC, an opportunity that allows our community to define and participate in the newest research problems in the domain of information retrieval (IR). This talk will focus on the GSLIS TREC team's 2012 contributions. At TREC 2012, GSLIS focused on improving IR effectiveness by considering temporal evidence. We tackled two problems by participating in two "tracks": microblog retrieval and "knowledge base acceleration" (KBA). Both tasks required us to monitor an incoming stream of documents and identify texts that would be useful for a particular person at a particular time. Both problems involved decision-making under uncertainty, demanding statistical prediction over enormous volumes of data. This work allowed us to posit novel models for predicting the relevance of "tweets" to a standing query, and to identify web documents that contain "edit-worthy" information about a given Wikipedia page. The models performed well in comparison to models developed by peer institutions. In this talk I will give an overview of our approach to relevance-related prediction in the face of change in massive data streams.

Children, Critics, Comics, & the Researcher

Carol Tilley

In April 1953, eleven-year old Brian McLaughlin wrote to psychiatrist Fredric Wertham in response to the latters article in Readers Digest, Comic Books Blueprints for Delinquency. The boy asserted: Anybody that goes out and kills someone because he read a comic book is a simple-minded idiot. Sound silly? So does your item. McLaughlin was not the only young person to critique Wertham’s argument about comics: dozens more wrote him in 1953 and 1954.

In the late 1940s and culminating in 1954 with the publication of Wertham’s book Seduction of the Innocent and the televised hearings on comics held by a United States Senate subcommittee, comics were the most contested form of print. Young readers helped drive sales of new comics to more than one billion copies a year in the early 1950s. Adult critics such as Wertham feared that, by reading these four-color pamphlets full of stories of superheroes, cowboys, and jungle queens, young people would stunt their cultural development, ruin their eyesight, and fall into lives of depravity.

This presentation draws from Wertham’s manuscript collection at the Library of Congress and the archival record of the 1954 Senate hearings to document and analyze some of the ways young readers challenged and protested adults
understanding of comics. These letters, together with the interviews I have conducted with some of their writers, can serve as potent evidence to enrich scholarship in children's print culture.

**Poster and Demonstration Abstracts**

**Poster Session 1**

**Mix IT Up! - Youth Advocacy Through Library and Information Science**  
*Jeanie Austin*

Mix IT Up! aims to increase the information technology (IT) skills of youth and library school students and shift attitudes about the traditional roles of librarians and libraries by positioning library and information services at the center of mutually beneficial and dynamic student-community partnerships.

Mix IT Up! actively recruits underrepresented library students to act as youth advocates through planned coursework in community informatics and in youth librarianship and mentorship in and oversight of long-term community-student partnerships, with the goal of creating a model for increasing the presence of information professionals engaged in youth advocacy.

Mix IT Up! was launched at the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign with support from the Institute of Museum and Library Services in 2011. Community partners have included Champaign County Juvenile Detention Center, Don Moyer Boys and Girls Club, Puerto Rican Cultural Center, TAP In Leadership Academy, and UP Center of Champaign County.

**On the Effect of Name Ambiguity on Measures of Large-Scale Co-Authorship Networks**  
*Brent D. Fegley & Vetle I. Torvik*

The typical construction of a co-authorship network presupposes a one-to-one mapping between a vertex and a name. Such a mapping cannot be assured when two different authors share the same name (homonymy) or when one author has multiple names (polysemy). Here we test the degree to which the magnitude of these two types of errors affect a variety of measures (e.g., clustering and assortativity) of real-life large-scale co-authorship networks. Two large algorithmically disambiguated bibliographic databases, PubMed (Torvik & Smallheiser, 2009) and USPTO (Lai, DAmour, & Fleming, 2009), are used as a baseline for a topology change simulation. Each step in the simulation is a randomized splitting or lumping operation constructed such that the algorithm converges on the network defined by the unique name assumption. Networks are sampled at regular intervals to calculate network...
statistics. Our results show in dramatic and counterintuitive ways that assumptions about the mapping between vertex and name affect network measures.

**WHAT IS FAMILY HISTORY? : USING MULTIDISCIPLINARY RESEARCH TO RE-THINK EVERYDAY INFORMATION PRACTICES OF FAMILY HISTORIANS**  
*Noah Lenstra*

More Americans practice family history than any other form of historical research. Around the world appears similar trends, spurred in part by the development of global databases created to support information-mediated family history activities. This poster brings together interdisciplinary, empirical research on family history practices in order to extend theories about family history information behaviors developed in the library science and archival studies literatures. I draw particularly on research literature from Anthropology, Heritage Studies, Computer Science, Science & Technology Studies, Sociology, Media & Cultural Studies, Cultural Geography, History, and Literary Studies. Within LIS the dominant paradigm used to think about family history derives from Stebbins' "Serious Leisure" theory. In contrast, the interdisciplinary literature I analyze frequently foregrounds the profoundly mundane -- "casual" to use Stebbins' term -- information behaviors associated with everyday family history. In addition, this literature blurs the boundary between local and family history, suggesting family historians become the individuals that maintain local, community archives. Finally, these perspectives illustrate how class, ethnic identities, gender, age, national locations, socio-economic status, government policies, the political economy of information, and the global circulation of media images all inform the local, personal practices of family historians of all types. In a 2010 overview of information behavior research, Barbara Wildemuth and Donald O. Case see an emerging foci in the literature foregrounding "broader contextual studies that consider technological, physical and political contexts." This poster contributes to this search for context by using inter-disciplinary perspectives to discern the global, national and local contexts shaping everyday family history information behaviors.

**LOCATION-BASED NAVIGATION: COMBINING OPAC SEARCHING AND 3D VISUALIZATION IN A HIGH-DENSITY STORAGE FACILITY**  
*Fredrick Kiwuwa Lugya & Michael B. Twidale*

Traditionally libraries use text, still-maps, signage, images, labels and verbal directions to provide simple cues to complement the users existing spatial knowledge to identify routes and discover object locations in the library. Wayfinding and navigation within the physical library spaces using location-based systems supported by WiFi access points, sensor devices and intelligent mobile computing applications are being tested as some of the possible ways that will allow library users to find the route to locations where library
materials are shelved. However, implementation of this technology could be a challenge in low-income communities and libraries in the developing countries because the use of these technologies requires the existence and well established internet infrastructure, uninterrupted power supply, strong signal strength as well WiFi enabled mobile devices that may not be existing in low-income communities. In this project we propose to combine next-generation discovery catalogues with 3D visualization and navigation to not only simply allowing users to arrive at a location, but to support them in the creation of a sense of place and spatial awareness as they navigate through library spaces.

BEHIND THE SCREEN: UNVEILING THE DIGITAL LABOR OF ONLINE CONTENT MODERATION
Sarah T. Roberts

Online content moderation is the practice of screening user-generated content posted to Internet sites, social media and other online outlets that encourage and rely upon such material to generate visits to and participation in their platforms. Despite being essential to the media production cycle for commercial websites and social media platforms, commercial content moderation is largely unknown outside its own industry and those that rely on it. This research endeavors to unveil the practice of commercial content moderation in the context of contemporary trends of globalization, outsourcing and other economic and geospatial reconfigurations facilitated by the increasingly networked nature of the world. Content moderation tasks vacillate from the mind-numbingly repetitive and mundane to exposure to images and material that can be violent, disturbing and, at worst, psychologically damaging, and it requires these tasks of workers that are frequently relatively low-status and low-wage. This research connects commercial content moderation with digital media economics, digital media practices and their sociopolitical, economic and ethical implications. It reports and describes the experiences of content moderators in a number of different contexts and situations, working around the globe. It maps content moderation on theoretical grounds to other scholarship on digital work, aligning it in the greater context of the ecology of social media to the end of recognizing, acknowledging and improving the conditions under which the workers labor.

A FAMILIAR FACE? A CRITICAL ANALYSIS OF MICROSOFTS 'MS. DEWEY'
Miriam Sweeney

This project uses content analysis, critical discourse analysis, and visual methods to analyze the representation, performance, and reception of Microsoft’s Ms. Dewey. This project frames Ms. Dewey as an anthropomorphized virtual agent and interrogates how her representation as an information provider interplays with hegemonic narratives of labor, race, and gender. This project demonstrates that stereotypes about information professionals, women, and people of color remain central to the representation
of anthropomorphized virtual agents, and explores broader implications for using gendered/sexualized/raced agents as information science artifacts.

**When You Wish upon a Blog: How Collaborative Information Seeking can Interleave with CSCW**

*Aiko Takazawa & Michael B. Twidale*

In this poster, we share our preliminary analyses of a particular case of a self-organizing group that responded to the 2011 Great Tohoku Earthquake and Tsunami disaster in Japan. The way this group managed to send aid from Finland to Japan is a fascinating case study in computer supported cooperative work (CSCW).

However, we also see in it many cases of various kinds of collaborative information seeking (CIS), both computer supported and using more traditional resources. Simultaneously, we find it challenging to look at some of these activities from familiar CIS frameworks. Unlike more straightforward CIS activities, this particular group’s project tightly interleaves information seeking and working. This is not a typical case of CIS where the group identifies an information need, does some CIS activity to meet it, and then ends the CIS as they proceed to act informed by the information obtained. Instead, the group is continually mixing up these typical steps of CIS, finding out things, doing things, and then needing to find out more things.

The fact that they managed to get aid to the point of need can be seen as a success. But they had to both discover what to do and how to do it as they went along. The group was self-organizing and learning as they went. Given that they were novices at relief work, that information had to be sought, requiring a lot of collaboration in that seeking.

These are early days in our research, but we are finding that looking at the issues in this case from both CSCW and CIS perspectives is productive, if also rather confusing. It is forcing us to reexamine what we mean by CIS and how it plays out in rather amorphous, ad hoc, or messy settings. The fact that the group in our case was in the process of coming into being meant that they developed many different interrelated and constantly evolving information needs.

**Completeness, Coverage, & Equivalence in Scientific Data Records**

*Andrea Thomer, Karen S. Baker, Simone Sacchi, & David Dubin*

Previously we asked, "When is a record data and when is it a fish?" (Wickett et al., 2012). In this work, we ask, "when and in what contexts are a record and a fish equivalent?" We describe and compare a collection of potentially equivalent records describing a Mola mola, or Ocean Sunfish, specimen. We calculate the Metadata Coverage Index (MCI) of each record and explore the
use the Systematic Assertion Model (Dubin, 2010) to support investigation of the assertions contained in these data records.

This poster was previously presented at the 2012, ASIS&T conference in Baltimore, Maryland, and some of the authors are presently preparing a submission expanding on this work for ASIS&T 2013.

**CAN PUBLIC LIBRARIES BECOME PUBLIC COMPUTING LIBRARIES? A DIGITAL DIVIDE STUDY OF BEIJING COMMUNITIES**

*Sufang Wang, Kate Williams, Abdul Alkalimat, Hui Yan, & Shenglong Han*

This study was carried out by 12 research teams in 2012 PKU-UIUC Community Informatics Summer School. It aimed to complement the theoretical knowledge in the classroom with practical knowledge working with and interviewing librarians and community members. Guided by a standard method, students investigated:

1. Community members digital skills and practices,
2. The state of public computing in community-level and other public libraries in Beijing, and
3. To what extent the libraries are or could play a role in bridging the community’s digital divides. 12 communities and 12 street or district libraries agreed to partner with the course.

Data collection included surveys and in-depth interviews with community members and library staff, observation, and short experiments in cybernavigating. (Cybernavigating is teaching or helping people with computers and the internet.)

Findings include:

1. Digital divides do exist in these communities, most visibly among older people, and the street libraries (smaller neighborhood libraries) are not yet a primary place to use computers and seek help.
2. Big differences exist between the two district libraries and the ten smaller libraries. Small libraries needed computers and good connectivity, or where there were machines there was a need for a regular plan for updating equipment and repair.
3. The libraries need better community relations and outreach. This included visibility and connections with other community institutions and leaders. This also included better signage to direct people to the library, better programming and outreach to connect with the activities of the community to invite people into the facilities.
4. As we have seen in the US, librarians as well as patrons need computer support and training; more cyber navigating experiments are warranted. Moreover, the student’s concept of librarianship was quite often transformed by the experience of research and teaching linked with service connected to new technologies.
FRONTIER LIBRARIES ON THE 1885 KANSAS STATE CENSUS
Cherie' L. Weible

In 1885, the state of Kansas conducted a census which included an enumeration of public and private libraries and the number of volumes they contained. Despite the fact that this information was gathered for the purposes of taxation, the data can be used to inform us about the availability of reading materials and the development of frontier libraries. The specific set of data being used for this study was obtained by searching the 146 microfilms containing the 1885 Kansas State Census for the 105 counties in existence in Kansas at that time. There were eleven different schedules for that census year; data was taken from Schedule 3. The census was conducted at the township level within each county. When placed in a spreadsheet file and combined with other data such as size of population and FIPS code we can use GIS as a way to visualize the data.

Data is still in the process of being collected, however, by using GIS as a tool for visualization, we can begin to see patterns based on geographic location within the state. This data is valuable for a quantitative study as well as a qualitative study when used in conjunction with other data. For example, we can ask: Does the size of the population in a community or a specific geographic area such as a township influence the availability of a public library? The data is also valuable if we want to investigate if the composition of the population of a new community influenced the establishment of a public library. In some areas, the census enumerators added names of residents to the numerical data on private libraries, thus we can connect specific people in the population to the ownership of books. This additional information allows us to identify specific individuals in the community and study their role within its development in conjunction with the development of the public library.

EXTENDING THE SYSTEMATIC ASSERTION MODEL FOR HUMANITIES RESEARCH
Karen Wickett, David Dubin, Bridget Almas, & Megan Senseney

The Libraries Transforming Humanities (LTH) project is focused on creating a network of resources in the humanities and building tools to facilitate contributions to research from a wide range of users. The Systematic Assertion Model (SAM) was developed as a framework to describe the provenance roles and agents essential to the identity of scientific data. SAM supports an explicit accounting of the events and roles that are essential to the creation of text-like resources, and contains classes and properties that can be used to define vocabularies to support translation, annotation and curation of textual resources.

In SAM, data are symbol structures that are the expressive form of certain kinds of assertion events. In a scientific context, the attention is on assertions
that are warranted by computations or observations of phenomena in the natural world. In the context of humanities research, attention is on the creation of texts or other intellectual works, as well as on assertions warranted by computations and observations of such works. The creation events for texts are a kind of indication event, where abstract structures are pointed to by some agent at a specific time and place. Since speech acts and other general kinds of indication events were not included in previous versions of SAM, applying the model to humanities research calls for an extension of the model.

This poster will present an example workflow from the LTH project to demonstrate the use of a RDF vocabulary based on this extended version of SAM. The section of text is connected to the original creative agent, while annotations of the text and a proposed translation are connected to users of the system. This use of SAM supports a unified account of the provenance roles and agents involved in textual research in the humanities.

THE HISTORY OF CHICAGO PUBLIC LIBRARY AS PUBLIC COMPUTING LIBRARY

Kate Williams

Public library history is typically seen as an outcome of forces outside the library (elites and mechanics, robber barons and immigrants) or inside the library (the rise of the profession). Two more theoretical constructs are helpful -- the industrial society/information society duality (Castells) and the idea of creative destruction (Schumpeter). The social libraries of Chicago the agro-commercial city and the public library of Chicago the industrial city each reflect these interactions. So does Chicago’s public computing library: First the outsiders experimented, then the insiders built systems.

In 1981 the computer-geek branch librarian went into action. Chicagoans invented the BBS in 1978; by 1981 North Pulaski Branch Library was running one at night off an Apple with two floppy drives and a modem. By day, the machine was the library’s first public access computer. The experiment caught on while library administrators were under political and budgetary siege and Chicago was losing industry, population, and tax dollars. Branch librarians were inventing the library of information-age Chicago.

By 1994, the second Mayor Daley and his library commissioner Mary Dempsey took the reins. A $50 million bond issue helped to set the stage for infrastructure investments. The library mobilized support from local and national elites in an Information Democracy campaign. Every branch got computers. Staff was trained. As-needed support for patrons on the computers became a new service delivered by temporary workers in more than half the branches. In 2012 (18 years later), a new library commissioner installed open source software system wide.
If library staff can understand and embrace their contentious but creative history and context, they and their patrons can better defend and further define the public computing library of the future. This study relies on library documents, interviews, and focus groups to tell the story.

Research Center Posters (displayed during Poster Sessions 1 and 2)

**CENTER FOR CHILDREN'S BOOKS**
*Deborah Stevenson, Director*

General poster describing the purpose and regular activities of the Center for Children's Books.

**CENTER FOR DIGITAL INCLUSION**
*Jon Gant, Director*

This poster corresponds with the Center for Digital Inclusion’s Research Showcase presentation, and it will highlight the many projects and initiatives within CDI, which have local, national and global implications, as well as demonstrate applications of ICTs and their social and economic impacts. Projects include Urbana-Champaign Big Broadband (UC2B), Inclusive Gigabit Libraries, News Know-How, US Ignite and more.

**CENTER FOR INFORMATICS RESEARCH IN SCIENCE AND SCHOLARSHIP**
*Carole L. Palmer, Director*

An overview of the activities of the GSLIS Center for Informatics Research in Science and Scholarship (CIRSS), including highlights of selected current projects. CIRSS conducts research on information problems that impact scientific and scholarly inquiry, with projects and activities that focus on how digital information can advance the work of scientists and scholars, the curation and analysis of research data, and the integration of information within and across disciplines and research communities. Within CIRSS, the Socio-technical Data Analytics (SoDA) Group design, develop, and evaluate new technologies in order to better understand the dynamic interplay between information, people and information systems.

Current projects include Site-Based Data Curation at Yellowstone National Park (SBDC); Developing a Model for Socio-Technical Data Analytics Education (SODA); Data Curation in Education Research Centers Program (DCERC); Open Annotation Collaboration (OAC); and Digital Collections and Content (DCC).
The HathiTrust Research Center (HTRC) is a collaborative research center launched jointly by Indiana University and the University of Illinois to act as the public facing research arm of the massive HathiTrust Digital Library. The HTRC is mandated to help digital humanities (DH) researchers from around the world surmount the difficulties associated with processing and analyzing terascale amounts of digital text. Thus, the scholarly developers at HTRC work to develop cutting edge software tools and cyber-infrastructure to enable advanced computational access to the growing digital record of human knowledge. This poster presents the HTRC's approach to supporting non-consumptive research on in-copyright materials.

Poster Session 2

IDENTIFYING CLAIMS IN SOCIAL SCIENCE LITERATURE
Shameem Ahmed, Catherine Blake, Kate Williams, Noah Lenstra, & Qiyuan Liu

Social Work Abstract Plus and Sociological Abstracts are two well-known databases that comprise hundreds of thousands of abstracts from thousands of social science journals. Natural Language Processing (NLP) methods have been explored to identify important concepts, cause-effect relationships and hypotheses from articles, but little work has explored how well such methods will generalize to such a large volume of social science abstracts. Moreover, since abstracts, 43 percent of the time on average, failed to reflect the content of research articles accurately, NLP methods become even more important when we start to consider full-text collections such as ERIC and JSTOR.

In 2010, Blake proposed the Claim Framework, as a domain-independent representation of how scientists communicate their findings in empirical studies. The framework defines claim as new finding from the articles that brings about an effect or a result. For instance, indeed, glycine prevented Wy-14643-stimulated superoxide production by Kupffer cells is a claim in biomedical literature. On the other hand, contrary to much rhetoric, even very poor people choose to have a phone is a claim collected from social science literature. Although the Claim Framework was developed for the life sciences, such as bioinformatics and clinical informatics, it is not clear how well the framework will generalize to findings reported in the social sciences.

Our goal is to explore the extent to which claims made by authors in the social sciences conform to the Claim Framework. This poster describes the first step towards that goal by identifying claims in eight full-text articles in two social science research domains: Community Informatics (CI) and Information and Communication Technologies for Development (ICT4D). This poster was also accepted for presentation at iConference 2013.
DESCRIBING THE QUALITY OF RESEARCH DATASETS ACROSS DISCIPLINES: A COMPARATIVE STUDY

Tiffany C. Chao

The quality of data plays an integral role in reuse decisions by citizens and scholars. However, quality characterizations vary across different research cultures where the use of formalized criteria to determine quality may be limited. Given the growing amount of different data types and formats used and produced in the research arena, this project investigates how quality is currently described for research datasets from three disciplinary areas in the Earth sciences and what patterns in description exist to inform potential cross-disciplinary reuse.

Dataset metadata records were examined from the disciplines of atmospheric sciences, geochemistry, and population science. Available descriptions were extracted from the <quality> field for each dataset record and evaluated based on prescribed Directory Interchange Format (DIF) standard definitions. The initial comparison of data quality descriptions between the three disciplines revealed similar information publicly conveyed, with a focus on how the data were generated and where to locate additional evidence (i.e. references, reports) to support the quality of the data. The overall amount of detail presented in these descriptions did vary within each discipline area and, to a certain extent, a number of the observed descriptions did not align with the definitions for quality set forth by the DIF standard but rather, attended to other data-related themes. These variations in description pose further considerations in understanding quality for scientific and curation purposes. This examination of disciplinary characterizations of data quality not only provides insight to those practices employed by different scientific researchers for description of data but also informs how datasets can be better represented for curation and reuse.

MUSIC MOOD TAG PREDICTION WITH DIMENSION REDUCED TAG SPACE

Kahyun Choi

Since there is need for music listeners to listen to music based on mood, many music recommendation systems suggest music having moods that listeners want. Though the social tags can be used as annotations for songs, only a small number of songs have mood tags. To annotate songs, researchers are working on developing music mood tag classification systems that capture relationships between mood tags and music. However, since music mood tag classification is basically a multi-label classification problem, it requires as many binary classifiers as the number of tags. The Music Information Retrieval Evaluation eXchange (MIREX), which hosts the Audio Mood Tag Classification task, grouped similar tags manually so that they reduced the number of classifiers. However, grouping tags manually has disadvantages such as non-scalability and missing nuance. To overcome the disadvantages,
the proposed method reduces dimension of labels by applying PLSI to the label matrix. The proposed method and MIREX grouping method are compared in this poster. Because the precision, recall, and F measure of two methods are similar to each other, the proposed method looks promising.

**Sustainable Software**

*Craig Evans & Jerome McDonough*

The Preserving Virtual Worlds 2 project is an example of funded research with a defined timeline. The outcomes from the project included a survey tool to continue gathering information. The general structure of the data collection is along the lines of a survey. Ongoing maintenance and accessibility of a system is not uncommon after a projects funding is complete. So how can this be achieved?

We present a solution that is simple, lightweight, has low ongoing maintenance overhead, is secure, and can be sustained without the need for programming resources. Satisfying these goals for post project longevity, we turned to open source MediaWiki platform, providing software that can be customized with minimal effort. Using MediaWiki, we are able to create a database driven environment that is well supported by the user community, and receives regular maintenance from its developers. The inherent security model is another feature that means a dedicated systems administrator is not required for the server, and security is largely self-managed by the system.

With those major functions addressed, the third criterion to be addressed was flexibility. While not a standard feature, a readily available plugin for MediaWiki is an ability to use HTML and CSS within the pages. This allowed us to create flexible and dynamic survey forms that would normally require a webserver to host, and access to the file structure to maintain. By embedding HTML into MediaWiki, we are now able to update survey pages without the need for backend server access.

A further advantage is that data from the survey can write to the MediaWiki database, can dynamically pull information from the database (Wiki page content), and can use the MediaWiki interface to display data. This solution addressed a number of challenges that are not unique to PVW2. As an engineering and research task it created an environment that can live beyond the scope of the project.

**She-books: The Virtual Vault and Value-added E-books for Women's Studies Curricula**

*Valerie Hotchkiss, Brad Tober, & Kenton McHenry*

The Rare Book & Manuscript Library (RBML) of the University of Illinois at Urbana-Champaign and its collaborators are developing a pedagogic resource
based on primary resources in our world-renowned collections. The project will result in an innovative and expandable digital resource on the role of women in the history of books and printing. Furthermore, this work will provide a versatile platform for additional e-publications that will be able to emphasize the materiality of primary source documents and educate users about the intricacies of featured collection items. “ShE-books: Primary Source E-Books for Women’s Studies Curricula” provides open access to high resolution digital facsimiles of canonical texts used in women’s studies, literature, and history courses across America, combined with searchable transcriptions, examination of the physical book, and a commentary by a well-known teacher of the text. The series is aimed at undergraduate and advanced high school students and will be released as a web application specifically optimized for use on mobile tablet devices such as the iPad. We are collaborating on this pedagogic project with the National Center for Supercomputing Applications (NCSA), the Institute for Computing in Humanities, Arts, and Social Science (I-CHASS), the University of Illinois School of Art + Design, and the University of Illinois Press. The latter has agreed to lend its imprimatur and considerable publishing acumen to the series. The collaborative nature of the project is crucial to our success because it brings together experts in bibliography, digital humanities, literary criticism, academic publishing, design, content management systems, and technology.

**ENHANCING CULTURAL HERITAGE COLLECTIONS BY SUPPORTING AND ANALYZING PARTICIPATION IN FLICKR**

*Jacob Jett, Megan Senseney, & Carole L. Palmer*

Cultural heritage institutions can enhance their collections by sharing content through popular web services. Drawing on current analyses from the Flickr Feasibility Study, we report on the pronounced increase in use of the IMLS DCC Flickr Photostream in the past year, trends in how users are engaging with the content, and data provider perspectives on participation in Flickr through the DCC. In addition to users providing comments and tags for images, they are increasingly integrating historical images from libraries and museums into new digital objects and special collections. Intermediary services can fill a key role in lowering the burden for institutions to engage in Web 2.0 initiatives and broadening public access to cultural heritage content. To extend the scope of the current DCC services, we propose a feedback framework for transferring user-generated information to institutional data providers.

**SITE-BASED DATA CURATION AT YELLOWSTONE NATIONAL PARK**

*Carole L. Palmer, Virgil Varvel, Bruce Fouke, Ann Rodman, Sayeed Choudhury, Andrea Thomer, Karen Baker, Abby Asangba, & Karen Wickett*

The Site-Based Data Curation (SBDC) project at the University of Illinois at Urbana-Champaign is developing a framework of policies and processes for
the curation of research data generated at scientifically significant sites. SBDC, funded by an Institute of Museum and Library Services National Leadership Grant, will advance the professional work of curation by articulating skills and principles for site-based curation, and exploring the inter-institutional relationships essential to scientific data curation.

This poster corresponds with the SBDC presentation at Research Showcase, and it will also be presented at the Research Data Access and Preservation meeting.

**FIELD STRENGTH: ENHANCING COLLABORATION IN LIS EDUCATION THROUGH ACADEMIC LIBRARY FIELD EXPERIENCES**
*Sue Searing & Linda C. Smith*

This IMLS-funded study examines the impact of field experiences (e.g. practicum courses, graduate assistantships, volunteering) in academic libraries on LIS students' education and career entry. Field experience has long been recognized as a critical component of LIS education. While anecdotal evidence about the strengths and weaknesses of field experience programs abounds, the LIS field lacks the research found in complementary fields such as education and nursing that is required to identify and promote best practices for this important component of LIS education. Field Strength, a project led by the University Library at the University of Illinois at Urbana-Champaign in collaboration with the Graduate School of Library and Information Science, is identifying best practices in field experience in LIS education and documenting the outcomes. The iSchools and University Libraries at the University of Maryland and University of Washington are collaborating with Illinois on this planning grant. The study incorporates surveys, interviews, focus groups, and analysis of documents. The researchers are focusing in particular on the connection between the field experience and the preparation of new professionals for positions in the rapidly changing academic library workplace.

**EVERYDAY INFORMATION SEEKING AND INFORMATION WORLD OF BLIND AND VISUALLY IMPAIRED PEOPLE IN CHINA**
*Sufang Wang*

As of year 2010, there are more than 12 million blind and visually impaired people in China. They are socially excluded in multiple ways: employment, income and social status. What are their information needs, seeking and use in their daily lives? Two forms of data collection were employed: a telephone survey with a questionnaire in the first round (N=23); fieldwork and face-to-face interviews with a semi-structure topic guide in the second round (N=10). Simple statistics analysis and qualitative content analysis were used to make sense of the data. Chatman’s small world theory was used to analyze the state and cause of information world of visually impaired people. Key findings
include: Information needs of visually impaired people are pragmatic and focus on real life problems. They prefer broadcast sources, people, and networked sources for acquiring general information. They turn to people, personal experiences, organizational sources and the Internet in problematic situations. Blind and visually impaired people tend to have a small social network and lack of bridging social capital. They use usefulness, situation-relevance, and accessibility as criteria to judge the value of information accessed from the outside (that is, non-visually impaired) world. Their own experience, friends, co-workers, and family members are the primary resources in term of job opportunities, emotional support and other social support. Organizational sources, such as government agencies, are their last resort. ICT appears to connect blind and visually impaired people to the outside world, but also not break down their small world. Social exclusion and limited information empowerment built on each other to create the impoverished information world for the blind and visually impaired people in the study.

STATEWIDE ILLINOIS BROADBAND RESEARCH: BASELINE DATA ON TECHNOLOGY USE IN THE BTOP ERA
Kate Williams, Abdul Alkalimat, & Brian Zelip

The Statewide Illinois Broadband Research study provides a baseline snapshot of Internet use around the state as the federal Broadband Technology Opportunities Program (BTOP) launched. The project asked to what extent Illinois communities were aware of BTOP, and how they have adopted the Internet and broadband over time. Through interviews and surveys, technology history, current use, and Internet speed data were collected from 100 anchor institutions in 10 communities around Illinois. Our reach was into urban and rural settings from all regions around the state including Jackson County, Pike County, East St. Louis, Kankakee, Rockford, Champaign-Urbana, and four community areas of Chicago - Auburn-Gresham, Englewood, Humboldt Park, and Pilsen. Comparable anchor institutions in each community were studied, including libraries, city and county governments, primary and higher education, mainstream and community media, labor unions, Internet service providers, health care providers, churches, chambers of commerce, and a non-profit organization. Where applicable, the area's BTOP project was also interviewed. The project was funded by the Ford Foundation in partnership with the University of Michigan, and was done in parallel with another Community Informatics Research Lab study of anchor institutions in Champaign-Urbana.

COMMUNITY INFORMATICS STUDIO: A MODEL OF INFORMATION SCHOLARSHIP IN ACTION
Martin Wolske, Colin Rhinesmith, Jennie Archer, Emily Bayci, Ryne Leuzinger, & Lucas McKeever
This poster describes an educational research project we call Community Informatics Studio, which uses studio-based learning (SBL) to support enculturation into the field of community informatics. The SBL approach is rooted in the apprenticeship model of learning in which students study with master designers or artists to learn their craft and is closely related to John Dewey's inquiry-based learning. The poster reports on research from our Community Informatics Studio course, which uses experiential learning as a model of information scholarship in action. We highlight the guiding theoretical frameworks, research questions, methodological approaches, findings, and recommendations. The goal of our poster is to introduce an innovative model of LIS teaching, research, and practice using community informatics and studio-based learning as foundations.

Demonstrations

The Local Fab Lab Network as Community Informatics: Avenues for LIS-oriented Inquiry

Jeff Ginger

Historically, rapid fabrication and prototyping production facilities have been open only to highly privileged individuals such as designers, engineers and researchers in university and corporate settings. Recently, the Champaign-Urbana Community Fab Lab (CUCFL) has broken this mold to become a truly open maker space by partnering with three anchor education institutions in our local community: The Urbana Free Library, Stratton Elementary School and Tap In Leadership Academy.

Jeff Ginger has spent the last 8 months working with the Fab Lab putting community informatics theory into action by developing systems of documentation and archival, establishing a virtual-physical community-driven information commons, and by pioneering cutting-edge techniques to allow low-computer literacy learners to rapidly prototype 3D models with a variety of machines and software.

This demonstration will review the Fab Lab's current strategies for engaging community partners as well as some of the scholarly implications relevant to LIS, including critical and creative digital literacy, composite informal learning, and the democratization of production as an emergent social role of the public library. Not only is this Fab Lab engagement initiative an example of social and community informatics but it is also a superb illustration of the sorts of interdisciplinary roles information professionals will need to fill in the future.

The Illinois Distributed Museum Project: Engineering and Technology Innovations at the University of Illinois at Urbana Champaign

Michael B. Twidale, Susan Frankenberg, Tom Ackerman, & Kelsey Heffren
This project is focused on developing techniques to educate students, faculty, alumni, prospective students, and the general public on the historically significant inventions and developments by faculty and students of the College of Engineering at UIUC. At present there are many exhibits and artifacts on display about the engineering and technological innovations developed at UIUC. These are spread across the campus in locations including the Spurlock Museum, the Sousa Archives, and many individual departments lobbies and hallways. In addition, many more artifacts and exhibits are hidden in labs, offices, and closets. Finally, there are many innovations that have occurred at UIUC that have no physical artifacts or markers but are represented on the Internet or in books and documents. The ultimate goal of this project is to develop an Illinois Distributed Museum of Engineering and Technology Innovations using the latest web technology to give the user an experience as deep as being in a traditional physical museum even though the artifacts are distributed across multiple locations. Thus, the Distributed Museum will be part walking tour, part interactive encyclopedia, but totally devoted to showcasing the amazing discoveries that have occurred here at Illinois.

To our knowledge, nothing like this has been attempted on this scale. Thus we are working on the cutting edge of the field of museum informatics. We are still only at the prototype stage, but we are constantly experimenting and refining our work with whatever new technology we find.

You can check out our prototype at distributedmuseum.blogspot.com.

**EXPLOITING STRUCTURAL DATA FOR MUSIC EXPLORATION**

*Craig Willis, J. Stephen Downie, Kahyun Choi, & David Bainbridge*

This demonstration presents a music structure-based audio/visual interface for the navigation of very large-scale music digital libraries based on the Greenstone 3 digital library software. This work is a product of the Structural Analysis of Large Amounts of Music Information (SALAMI) project. Utilizing 250,000 hours of computing time donated by the National Center for Supercomputing Applications (NCSA) and state-of-the-art algorithms from the Music Information Retrieval Evaluation eXchange (MIREX), the SALAMI project analyzed over 250,000 music pieces representing a variety of styles and genres. Digital libraries of music can leverage music structure information to help users navigate, access, and interact with collections.