

**Cyber Synergy: Seeking Sustainability through Collaboration Between
Virtual Reference and Social Q&A Sites**

A Funding Proposal Submitted to
the Institute of Museum and Library Services (IMLS)

by

Rutgers University and OCLC Online Computer Library Center, Inc.

Originally Submitted February 2011

Revised 30 September 2011



Revision – 30 September 2011

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Cyber Synergy: Seeking Sustainability through Collaboration Between Virtual Reference and Social Q&A Sites

Two Year Project - requested start date October 1, 2011, end date September 30, 2013.

Abstract (150 words)

This project proposes a new model that enables Virtual Reference Services (VRS) to remain viable despite today's environment of reduced resources. It will investigate the possibility of seamless collaboration between knowledge institutions such as libraries and the Social Q&A (SQA) community. Use statistics indicate that VRS continues to grow as most libraries now offer VRS as popular alternatives to traditional face-to-face reference.

The project's three phases will identify VRS system enhancements to help achieve sustainability and to collaboratively leverage subject knowledge to meet user needs and heightened expectations. Phase I (*Transcript Content Analysis*) consists of a longitudinal analysis of 500 randomly selected VRS transcripts and 1000 SQA site transcripts. Phase II (*Telephone Interviews and Analysis*) includes in-depth phone interviews with 150 subjects from key user and information provider populations. Phase III (*Constructing Design Specifications*) focuses on creating design specifications to link VRS and SQA to explore solutions for VRS sustainability.



Revised Statement of Work 9/30/11

Grants.gov Tracking Number: GRANT10784069

Grant Title: Cyber Synergy: Seeking Sustainability through Collaboration Between Virtual Reference and Social Q&A Sites

Co-Principal Investigators: Marie L. Radford, Rutgers University; Lynn Silipigni Connaway, OCLC; and Chirag Shah, Rutgers University

Duration: Two Year Project - requested start date October 1, 2011, end date September 30, 2013.

Description: This project proposes a new model that enables Virtual Reference Services (VRS) to remain viable despite today's environment of reduced resources. It will investigate the possibility of seamless collaboration between knowledge institutions such as libraries and the Social Q&A (SQA) community. VRS are evolving, with new developments coming at a quickening pace to enhance the user experience, and recently allowing access to library services through text-messaging mobile devices and social networking sites. Empirical data are needed, however, to assess the effectiveness of these services. The reduction of library budgets increases the need to determine opportunities to share resources and generate revenue through collaboration. SQA services provide such an opportunity. The proposed research will provide evidence for modeling new library collaborative services. The project's three phases will identify VRS system enhancements to help achieve sustainability and to collaboratively leverage subject knowledge to meet user needs and heightened expectations. Each phase is described below:

Phase I (*Transcript Content Analysis*): In Phase I, we will conduct a longitudinal analysis of 500 randomly selected transcripts from OCLC Question Point's (QP) VRS and 1000 randomly sampled Q&A pairs from Yahoo! Answers. The 500 VRS transcripts will include 300 live chat and 200 Qwidget (QW) Instant Messaging (IM) session transcripts, collected from June 2010 through December 2010. A sample of Q&A pairs from Yahoo! Answers will include data collected from September 2007 through February 2010. The analysis will build on methods and coding schemes developed for *Seeking Synchronicity* (Radford & Connaway, 2005-2008) and results will be compared to chat transcript analysis from that project. The QP and QW transcripts will undergo the following analyses: (1) Evidence of collaboration, instruction, and referrals; (2) Evidence of impact of geographic dispersion; (3) Ready reference accuracy; (4) Interpersonal communication; (5) Query clarification; (6) Subject, (7) Types of questions, (8) Duration and other time factors; (9) Type of library, and (10) Type of user, when self-disclosed. We also will analyze a sample of Q&A pairs from the large sample collected from Yahoo! Answers to understand: (1) what type of questions are asked; (2) what is the nature of the answers considered as most satisfactory and/or relevant; (3) which types of questions do not receive any answers and why; and (4) accuracy of answers. This analysis is expected to continue for approximately 12 months, from October 2011 to September 2012.

Phase II (*Telephone Interviews and Analysis*): In this phase, we will develop data collection instruments and conduct in-depth phone interviews with 150 subjects composed of: (a) users of QP live chat and QW, (b) users and expert users of SQA services (expert users are those who provide more and better answers compared to regular users) and (c) VRS librarians. VRS users will be recruited through a variety of methods, including posting to university and professional library listservs, paper flyers posted at libraries and universities and on social networking sites such as Facebook and pop-up invitations that appear at the end of VRS sessions. We will also reach out to SQA users by sending them recruitment messages using the contact information available on their public profiles. Recruitment will begin early and will continue throughout the grant period. The interviews and their analyses are expected to take about 15 months, from January 2012 to March 2013.

Phase III (Constructing Design Specifications): Phase III focuses on creating design specifications to link VRS and SQA to explore solutions for VRS sustainability of the proposed research project, the Co-PIs will plan, schedule, recruit participants, and conduct 2 participatory design sessions with policy makers, designers, system experts, and librarians. These designers will be invited to Rutgers University (or via video conferencing) for two sessions lasting an hour to two hours. These design sessions will be developed and conducted over a period of three months from April 2013 to June 2013.

Reporting: In addition to the reports required by IMLS, the Co-PIs will present the results of the three phases of the research in both oral presentations and written papers from January 2012-September 2013 at scholarly and professional LIS conferences. The period of July 2013-September 2013 will be used for concluding analysis, finalizing results, writing and revising articles for publication, as well as for preparing the final report for IMLS.

Intended Results: The three phases of the project will have the following results.

- Develop an alternative model for librarians facing tight budgets to fund collaborative VRS.
- Raise awareness of the importance of professional librarians in the broader population.
- Create a model for subject specialists to better utilize their specialized information.
- Longitudinally compare VRS chat, IM (QW), and SQA sites' accuracy and communication effectiveness.
- Suggest ways to improve VRS services.
- Enable researchers to develop guidelines for practice and recommendations to evaluate VRS.
- Provide a possible venue for libraries in the social networking environment.

Management Plan: The three Co-PIs will share equal responsibility for the project management. A team approach will ensure effective co-ordination of all activities. All research protocols and instruments will be developed by the PIs in consultation with the OCLC Internal Advisory Board. Transcripts and individual telephone interviews will be analyzed by the research team under the direction of the PIs. Additionally, the PIs will jointly administer the budget and coordinate the research phases, logistics and dissemination of results. All interim target dates and schedules will be developed and monitored by the PIs to assure that all deadlines are met. The PIs will take full responsibility for keeping in close contact with IMLS and for delivering all required project reports and updates.

Original Submission – February 2011



PROGRAM INFORMATION SHEET – PAGE ONE

1. Applicant Information

a. Legal Name (5a from Face Sheet): Rutgers, The State University of New Jersey

b. Organizational unit (If different from Legal Name) : School of Communication and Information

c. Organizational Unit Address

Street1: 4 Huntington Street

Street2:

City: New Brunswick

County: Middlesex

State: NJ

Zip+4/Postal Code: 08901

d. Web Address: <http://www.rutgers.edu>

e. Type of Institution (Check one):

- ☐ Academic Library
- ☐ Aquarium
- ☐ Arboretum/Botanical Garden
- ☐ Art Museum
- ☐ Children's/Youth Museum
- ☐ Community College
- ☐ Four-year College
- ☐ General Museum*
- ☒ Graduate School of Library and Information Science
- ☐ Historic House/Site
- ☐ Historically Black College or University
- ☐ History Museum

- ☐ Library Association
- ☐ Library Consortium
- ☐ Museum Library
- ☐ Museum Services Organization/ Association
- ☐ Native American Tribe/Native Hawaiian Organization
- ☐ Natural History/Anthropology Museum
- ☐ Nature Center
- ☐ Planetarium
- ☐ Public Library
- ☐ Research Library/Archives

- ☐ School Library or School District applying on behalf of a School Library or Libraries
- ☐ Science/Technology Museum
- ☐ Special Library
- ☐ Specialized Museum **
- ☐ State Library
- ☐ State Museum Agency
- ☐ State Museum Library
- ☐ Zoo
- ☐ Institution of higher education other than listed above
- ☐ Other, please specify:

*A museum with collections representing two or more disciplines equally (e.g., art and history)

**A museum with collections limited to one narrowly defined discipline (e.g., textiles, maritime, ethnic group)

2. Grant Program or Grant Category

☐ a. 21st Century Museum Professionals

☐ b. American Heritage Preservation Grants

☐ c. Congressionally Directed Grants

☐ d. Connecting to Collections: Statewide Grants

- ☐ Planning
- ☐ Implementation

☐ e. Conservation Project Support

- ☐ General Conservation Survey
- ☐ Detailed Conservation Survey
- ☐ Environmental Survey
- ☐ Environmental Improvements
- ☐ Treatment
- ☐ Research
- ☐ Training

☐ f. Laura Bush 21st Century Librarian Program

Select Funding Category:

- ☐ Project Grant
- ☐ Collaborative Planning Grant Level 1
- ☐ Collaborative Planning Grant Level 2

Select Project Category:

- ☐ Master's-level Programs
- ☐ Doctoral-level Programs
- ☐ Pre-professional Programs
- ☐ Research (early career development)
- ☐ Research (other than early career development)
- ☐ Continuing Education
- ☐ Programs to Build Institutional Capacity

☐ g. Museum Grants for African American History and Culture

☐ h. Museums for America

- ☐ Engaging Communities
- ☐ Building Institutional Capacity
- ☐ Collections Stewardship

☐ i. National Leadership Grants

Select Museum or Library:

- ☐ Museum
- ☒ Library

Select Funding Category:

- ☐ Project Grant
- ☐ Collaborative Planning Grant Level 1
- ☐ Collaborative Planning Grant Level 2

Select Project Category:

- ☐ Advancing Digital Resources
- ☐ Demonstration
- ☐ Library Museum Collaboration
- ☒ Research

☐ j. Native American/Native Hawaiian Library Services

- ☐ Basic Grant only
- ☐ Basic Grant with Education/ Assessment Option
- ☐ Enhancement Grant
- ☐ Native Hawaiian Library Services

continued on next page...

PROGRAM INFORMATION SHEET – PAGE TWO

2. Grant Program or Grant Category (cont'd)

k. Native American/Native Hawaiian

Museum Services

- ☐ Programming
☐ Professional Development
☐ Enhancement of Museum Services

l. Sparks! Ignition Grants

Select Museum or Library:

- ☐ Museum
☐ Library

3. Request Information

a. IMLS funds requested: \$997,843.82

b. Cost share amount: \$832,432.10

4. Museum Profile (Museum Applicants only)

a. Is the institution either a unit of state or local government or a private not-for-profit organization that has tax-exempt status under the Internal Revenue Code and that is organized on a permanent basis for essentially educational or aesthetic purposes? ☐ Yes ☐ No

b. Does the institution own or use tangible objects, whether animate or inanimate? ☐ Yes ☐ No

c. Does the institution care for tangible objects whether animate or inanimate? ☐ Yes ☐ No

d. Are these objects exhibited by the institution to the general public on a regular basis through facilities the institution owns or operates? ☐ Yes ☐ No

e. Is the institution open and exhibiting tangible objects to the general public at least 120 days a year through facilities the institution owns or operates? ☐ Yes ☐ No

Institution's attendance for the 12-month period prior to the application: Onsite: Offsite:

Year the institution was first open and exhibiting to the public:

Total number of days the institution was open to the public for the 12-month period prior to application:

f. Does the institution employ at least one professional staff member, or the fulltime equivalent, whether paid or unpaid, who is primarily engaged in the acquisition, care, or exhibition to the public of tangible objects owned or used by the institution? ☐ Yes ☐ No

Number of full-time paid institution staff:

Number of full-time unpaid institution staff:

Number of part-time paid institution staff:

Number of part-time unpaid institution staff:

g.

Fiscal year	Revenue/ Support Income	Expenses/ Outlays	Budget deficit (if applicable)*	Budget surplus (if applicable)*
Most recently completed FY				
Second most recently completed FY				

*If institution has a budget deficit or surplus for either of the two most recently completed fiscal years, please explain the circumstances of this deficit or surplus in the Text Responses section of the application.

5. Project Partners

In the space below, please list the names of any organizations that are official partners in the project. All official partners must include a completed Partnership Statement Form in this package.

OCLC

6. Native Hawaiian Organization Eligibility (Native American/Native Hawaiian Programs only)

Is the institution an eligible not-for-profit organization that primarily serves and represents Native Hawaiians (as defined in Title 20 U.S.C. Section 7517; if yes, see Proof of Eligibility requirements)? ☐ Yes ☐ No

PROGRAM INFORMATION SHEET – PAGE THREE

7. Institutional Profile (Native American Library Services Grants only)

- a. Number of hours per week the library collection is accessible to patrons:
- b. Number of staff dedicated full-time to library operations:
- c. Number of staff with part-time library duties:
- d. Number of items in the collection (books, journals, media):
- e. Number of items checked out per year:
- f. Does library staff have access to the Internet? ☐ Yes ☐ No
- g. Does the library provide public access to the Internet? ☐ Yes ☐ No
- h. Amount of operating budget for library services in most recently completed fiscal year:
- i. Identify which of the following activities will be supported by grant funds (check all that apply):
 - ☐ Expand services for learning and access to information and educational resources.
 - ☐ Develop library services that provide all users with access to information.
 - ☐ Provide electronic and other linkages between and among all types of libraries.
 - ☐ Develop public and private partnerships with other agencies and community-based organizations.
 - ☐ Target library services to help increase the access and the ability to use information resources for individuals of diverse backgrounds, with disabilities, or with limited functional literacy or information skills.
 - ☐ Target library and information services to help increase the access and the ability to use information resources for persons having difficulty using a library, and for underserved urban and rural communities.
- j. Maintenance of Effort (check the appropriate response):
 - ☐ FY 2010 expenditures will equal or exceed previous 12 month grant period. Maintenance of effort is assured.
 - ☐ FY 2010 expenditures will not equal or exceed previous 12 month expenditure. Maintenance of effort is not assured.
 - ☐ Maintenance of effort does not apply.

8. Collection and Material Information (Conservation Project Support Grants only)

a. Type of Collection

- ☐ Non-living
- ☐ Natural history/Anthropology
- ☐ Animals, living
- ☐ Plants, living

b. Types of Materials. Use a scale from 1 (primarily affected) to 4 (minimally affected) to show which collection types are primarily affected by the project:

aeronautics, space/airplanes	horological (clocks)	photography, negatives
animals, live	landscape features, constructed	photography, prints
animals, preserved	machinery	physical science projects
anthropologic, ethnographic	maritime, historic ships	plants, live
archaeological	medals	plants, preserved
books	medical, dental, health,	sculpture, indoor
Ceramics, glass, metals, plastics	pharmacological	sculpture, outdoor
documents, manuscripts	military, including weapons	textiles and costumes
furniture/wooden objects	motion picture, audiovisual	tools
geological, mineral,	musical instruments	toys and dolls
paleontological	numismatics (money)	transportation, excluding
historic building	paintings	airplanes
historic sites	philatelic (stamps)	works of art on paper



Cyber Synergy: Seeking Sustainability through Collaboration Between Virtual Reference and Social Q&A Sites

Abstract

This project will result in development and testing of a prototype Virtual Reference Services (VRS) system enhancement to inform library services software and interface design. VRS, such as live chat and Instant Messaging (IM), have established themselves as popular alternatives to the traditional face-to-face format of reference. Most libraries now offer VRS links on their websites, and statistics indicate that their use continues to grow. Led by co-principals Radford (Rutgers University) and Connaway (OCLC Online Computer Library Center Inc.), the IMLS-funded *Seeking Synchronicity* (2005–2008) project evaluated VRS from the perspectives of users, nonusers, and librarians.

Since that study, a national economic crisis has dramatically impacted funding to libraries and library consortia. Although many institutions have worked to leverage their individual resources through state and regional VRS cooperatives, a number of these services have closed or are in danger of closing due to budget reductions. A new project, *Cyber Synergy: Seeking Sustainability through Collaboration Between Virtual Reference and Social Q&A Sites*, will extend the findings of *Seeking Synchronicity* and discover innovative ways to ensure that collaborative VRS projects remain sustainable. The new model of VRS will adapt to the current environment of reduced budgets through a seamless collaboration among services and between knowledge institutions such as libraries and the Social Q&A (SQA) community.

Cyber Synergy's audiences include library users, practitioners, and managers, and its outcomes will be relevant to academic, public, special, and school libraries. The study's impact will be global, as 20 percent of the 2,000 libraries participating in OCLC's VRS are located outside the US. Results will be of interest to those libraries looking to make evidence-based decisions regarding the sustainability of online services in the face of budget shortfalls; the enhancement of VRS through improved collaboration, accuracy, and effectiveness; and the deployment of librarians' subject expertise more effectively to meet user demands.

The 28-month project will be divided into four phases: Phase I – *Transcript Content Analysis* (10/2011 – 2/2013); Phase II – *Telephone Interviews and Analysis* (11/2011 – 12/2012); Phase III – *System Design* (9/2012 – 6/2013); and Phase IV – *System Implementation and Evaluation* (8/2013 – 1/2014). During Phase I (*Transcript Content Analysis*), the researchers will conduct a longitudinal analysis of 500 randomly selected VRS transcripts and 1000 SQA site transcripts. Phase II (*Telephone Interviews and Analysis*) includes in-depth phone interviews with 150 subjects from three populations: VRS users; SQA site users, and expert users, where an expert user is defined as someone who also answers questions; and VRS librarians. In Phase III (*System Design*) focuses on development of design specifications and construction of a system prototype to link VRS and SQA services. Phase IV (*System Implementation and Evaluation*) involves implementing and evaluating the designed system(s) and service(s) in a real-life, case study setting. Analysis, writing, and dissemination continue until the end of the project which will be 9/2014.

The co-principal investigators of *Cyber Synergy* are Marie L. Radford, Ph.D., Associate Professor (lead applicant) at Rutgers University, School of Communication and Information; Lynn Silipigni Connaway, Ph.D., Senior Research Scientist, OCLC Research; and Chirag Shah, Ph.D., Assistant Professor at Rutgers University, School of Communication and Information.

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Cyber Synergy: Seeking Sustainability through Collaboration Between Virtual Reference and Social Q&A Sites

1 Assessment of Need

1.1 Current Research Context

The proposed project is at the intersection of two major areas of research: virtual reference service (VRS), and social Q&A (SQA). Its major goal is to create a synergic collaboration within and between VRS and SQA services to provide higher quality content to their users and a higher level of sustainability to their respective institutions. This project will result in development and testing of a prototype Virtual Reference Services (VRS) system enhancement to inform library services software and interface design.

VRS, including live chat and Instant Messaging (IM) formats, have become well-established offerings now found on the great majority of library websites. Including email reference, VRS have existed for more than 20 years (Sloan, 2006) and libraries have offered live chat for more than 10 years, with IM reference entering the mainstream in 2008 (e.g., *Introducing Qwidget*, 2008) (See Attachment A for Cited References) . The ability of libraries to continue offering VRS to users in their offices and homes is seriously threatened.

A growing body of research examines the quality of VRS, including attention to accuracy, interpersonal dimensions, and ability to effectively provide instruction. Radford and Mon (2008) and Ross, Nilsen, and Radford (2009) provide overviews of these findings. (See Attachment B for Additional Related Literature). While numerous works look at usage and effectiveness of various VRS services, most are based on the assumption of single user/patron and single source of information. Many professionals in the field are challenging this assumption as we look for innovative ways to address the needs of information seekers in the rapidly changing information landscape, as well as to provide a more effective and sustainable model for VRS services. For instance, Shachaf (2010) asserts that existing reference models that assume “dyadic interaction” (between two people) are limited. She describes “social reference,” as a collaborative endeavor that “may differ significantly from the traditional (and digital) reference encounter by its social and collaborative nature that involves group effort and open participation” (p. 67). She believes SQA sites to be virtual communities within which social reference encounters could occur.

Pomerantz (2006) agrees that VRS must become more collaborative, although he asserts that library reference has always been a collaborative effort between the librarian and the user, and that reference referrals have typified ongoing and common collaboration between librarians. National VRS cooperatives (like QP) have grown from 300 members in 2002 to more than 2000 today. According to Pomerantz (2006), today’s users want answers, and if VRS does not become a more collaborative effort to provide these answers, users will go elsewhere. Twidale and Nichols (1996) state that: “The use of library resources is often stereotyped as a solitary activity, with hardly any mention in the substantial library science and information retrieval literature of the social aspects of information systems” (p.177). Levy and Marshall (1994) also note that “support for communication and collaboration is ... important for information-seeking activities, and ... indeed, support for the former is needed to support the latter” (p.164). Hansen (2009) asserts that in these difficult budget times there is an imperative to find the right collaboration model.

Given that an effective solution for creating better and more sustainable VRS is collaboration, a natural question is how we should/could achieve it. Hertzum (2008) asserts that there is a need to establish common ground and information sharing for collaborative work to take place. In the communication field, Gibson and Gibbs (2006) studied virtual teams, collaboration, and innovation and found that there were barriers to collaboration at a distance. These barriers included: Geographical dispersion (being physically distant); electronic dependence (reliance on computer-mediated communication, with little or no FtF contact), structural dynamism (frequent change in personnel), and national diversity (being from different nations or nationalities). One barrier they

identified was geographic dispersion, which was also studied with regard to email reference (Porttree, Evans, Adams, & Doherty, 2008) and a factor in increasing the length of time spent on live chat queries (Radford & Connaway, 2005-2008).

In library and information science (LIS), Pomerantz (2006) asserts that it is imperative to sustainability that VRS collaborate to insure that users receive answers, not just to provide referrals or instruction on how to find answers themselves. A seemingly natural choice for VRS is to collaborate with SQA, which has several components similar to VRS, with the major difference being that the answers could be provided by virtually anyone in the world. SQA, according to Shah, Oh, and Oh (2009), consists of three components: a mechanism for users to submit questions in natural language, a venue for users to submit answers to questions, and a community built around this exchange. Despite this short history SQA has already attracted a great deal of attention from researchers investigating information-seeking behaviors (Kim, Oh, & Oh, 2007), selection of resources (Harper, Raban, Rafaeli, & Konstan, 2008), social annotations (Gazan, 2008), user motivations (Shah et al., 2008), comparisons with other types of question-answering services (Su, Pavlov, Chow, & Baker, 2007), and a range of other information-related behaviors. Pomerantz (2008a) wrote about the “Slam the Boards” effort in which librarians voluntarily pick up questions from SQA services, answer them, and declare themselves to be librarians in order to educate the public about quality answers from information professionals.

From the standpoint of user satisfaction – with both the answer and the site – it would be a benefit to SQA sites for there to be a mechanism to triage questions between sites. The question’s topic would be one factor in such a mechanism, but other factors in evaluating quality of answers also could be valuable for this purpose. This sort of triage is comparatively simple for a human to perform – and while time-consuming is in fact commonly performed by librarians for digital reference services (Pomerantz, 2008a; Pomerantz, 2008b; Pomerantz, Nicholson, Belanger, & Lankes, 2004) The QP reference service (<http://questionpoint.org>), an application for managing a global collaborative of library reference services, also performs this sort of triage automatically, by matching questions to profiles of individual libraries (Kresh, 2000). The level of complexity that such triage systems are capable of performing pale in comparison to the complexity that a human triage can manage.

Cyber Synergy will explore how various library services, especially VRS, could (1) better employ existing and frequently underutilized services (e.g., Naylor, Stoffel, & Van Der Laan, 2008), as well as subject expertise of librarians through virtual collaborations; and (2) connect with potential users and information seekers with SQA services and social media sites, to create a more open, innovative, and sustainable pathway for the future.

1.2 Problem Statement and Research Questions

This project includes four main activities: (1) assessment of the quality of VRS (including accuracy, interpersonal communication effectiveness, and providing subject expertise as needed) as well as SQA services (including user’s motivation and satisfaction, and content quality); (2) exploration of constructing a VRS system that allows for greater virtual collaboration and use of subject expertise; (3) investigation of how SQA sites could help in the sustainability of VRS; and (4) collaborative system design and implementation.

The current model of VRS is often monolithic, in the sense that it works as a black-box, with questions going in and answers coming out, without an easy way to extend the existing services or combine them with other sites or services. This model is becoming difficult to support, especially in the current economic environment, which has negatively impacted library funding across the country (“Branch Closings and Budget Cuts Threaten Libraries Nationwide,” 2008; Goldberg, 2010; Henderson & Bosch, 2010), threatening and often implementing “devastating service reductions” (“State Budgets Hammer Public Libraries Nationwide,” 2009, p.19). The promise of high-quality, accurate, and effective 24/7 365 reference is now endangered by difficult economic times that continue to negatively impact library funding, with predictions that “2011 may be worse than 2010 for many libraries, and that any recovery in library budgets will be slow” (Hersberger, 2010, p. 12). Standalone VRS offered by individual libraries are more difficult to fund and staff and some have stopped operating, including Carmel Clay Public, IN, and Colgate University, Hamilton, NY, in 2010 (see also Radford & Kern,

2006). Collaborative VRS, although they effectively leverage consortia resources, have been discontinued or are in imminent danger of doing so. The “Ask Montana” (<http://askmontana.org/>) statewide academic and public consortia and California’s “Ask Now” (<http://www.asknow.org/>) public library group closed in 2010, and Connecticut’s InfoAnytime VR project (<http://www.ctlibrarians.org/>) also has ceased operation.

VRS are evolving, with new developments coming at a quickening pace to enhance the user experience, and recently allowing access to library services through text-messaging mobile devices and social networking sites (e.g., Cassell, 2010; Cassell & Hiremath, 2009; Cole & Krkoska, 2011). Empirical data are needed, however, to assess the effectiveness of these services. The reduction of library budgets increases the need to determine opportunities to share resources and generate revenue through collaboration. SQA services provide such an opportunity. The proposed research will provide evidence for modeling new library collaborative services.

Cyber Synergy will address the following major research questions (RQs), and specific sub-questions:

RQ1. What is the current state of VRS quality compared to longitudinal data and to Q&A Sites?

One of the first major questions that *Cyber Synergy* will tackle is the effectiveness of various VRS and SQA services, quality of content provided, and their relative merits and shortcomings. Specific sub-questions under this RQ are given below, some of which are partially answered by previous works, including those resulted from the *Seeking Synchronicity* grant.

- How do live chat and IM (QW) transcripts compare in accuracy and interpersonal dimensions?
- What differences are there when transcripts are compared longitudinally to a sample collected in 2006-2007 (from *Seeking Synchronicity*)?
- How does accuracy compare between VRS and SQA sites?
- How does interpersonal communication compare between VRS and SQA sites?

RQ2. How can VRS become more collaborative, within and between libraries, and tap more effectively into librarian’s subject expertise?

Reference desks (physical or virtual) are sometimes underutilized, or the kinds of information requests coming to them are not appropriate for a given reference service or available staff (Naylor, et al., 2008). Creating an on-demand collaborative among participating reference services at the same or even different institutions may allow us not only to best utilize library resources, but also provide a more effective service to the patrons. The PIs have recently started investigating the feasibility of this approach at Rutgers and a few nearby institutions. An MLIS student, working with PI Shah, has interviewed reference librarians and policymakers to obtain feedback on this idea. The proposed project will commence at a very appropriate time to use the findings from this feasibility study and start exploring real solutions by addressing the following sub-questions.

- How can VRS subject experts be brought together with users who have questions requiring expertise?
- How can VRS better utilize existing and often idle subject expertise of VRS librarians on duty at any one time for subject-specific questions?
- What is the best way to leverage subject expertise of the large numbers of VRS librarians available at any one time?

RQ3. Can VRS be more sustainable through collaboration with SQA services?

VRS offer in-depth expert answering to information seekers, whereas SQA services, such as Yahoo! Answers (<http://answers.yahoo.com>), provide quick answers using crowdsourcing. The former is expected to have better quality, whereas the latter has the advantage of a large volume. An interesting avenue to explore is how VRS can collaborate with SQA services to provide more in-depth information when needed. Such collaboration may allow SQA services to offer premium (paid) content to their large user-base, and VRS to create a new revenue stream to support their sustainability. PI Shah has established several connections with researchers and policymakers at Yahoo! Answers, AnswerBag, and WikiAnswers over the past several years, which will serve

as useful leads for exploring collaboration between these services and libraries. The specific sub-questions to study under this RQ are the following:

- Would it be possible to review unanswered questions from SQA sites to determine if they could best be answered by subject librarians?
- If so, would it be possible to find a way to push these to library chat or IM reference services for subject experts to address?
- Would it be possible to generate revenue from these pushed questions by a fee-based system for professional library help?

RQ4. How can we design systems and services within and between VRS and SQA for better quality and sustainability?

Our investigations and findings for the previous RQs will provide us with guidelines for creating collaborations within and between VRS and SQA services. These guidelines will be used to design and implement systems and services that could help increase content and service quality, as well as create a new revenue stream for sustaining the struggling library services. The specific sub-questions to address under this RQ are the following:

- Is it possible to utilize computer-based triage systems to automatically sort by subject or by level of difficulty for VRS?
- How can libraries move from a “pull” (users come to us) to a “push” (system going to their familiar and convenient environment) to increase use of VRS?
- How can libraries effectively incorporate social networking media (like Twitter, Facebook, etc.) into the VRS environment to better serve users?
- What system design lessons can be learned from SQA sites?
- How can a system aid virtual collaboration?
- How can a system aid automatic routing of questions to VR librarian experts?
- What lessons can be learned from SQA sites (like Yahoo! Answers, AnswerBag, etc.)?

1.3 Intended Audience

End-users and librarians alike will benefit from the project’s resulting knowledge, models, and systems. The results of *Cyber Synergy* will be of special interest to library consortia or VRS managers looking for new models of sustainability or for enhanced subject expertise during budget cutbacks. In particular, the results of this research will be of special interest to reference librarians, VRS managers, and library administrators across all different types of libraries, who are either experiencing budget shortfalls and are looking for innovative ways to assure sustainability of online services, or who are interested in enhancing service by improving collaboration, accuracy, and effectiveness, as well as in better utilizing the subject expertise of librarians to meet users’ demands. It also will be important to those who may be contemplating the addition of IM to their reference service offerings or who are already involved in IM VRS and are seeking to improve service and who want to make resource allocation decisions based on evidence.

The audience for this research is the global LIS community, since approximately 20 percent of the 2000 libraries participating in OCLC’s QP are outside the U.S., including Canada, the United Kingdom, Australia, the Netherlands, and China. If funded, this study will provide valuable quantitative and qualitative data for VRS managers to make informed decisions for the development of enhanced subject-related reference services. Also, scholars in LIS have called for more research and the development of theoretical models for VRS (e.g., Lankes, 2004; Pomerantz, 2005; Pomerantz, et al., 2004; Saxton & Richardson, 2002; Shachaf, 2010).

The LIS research community will be another audience of *Cyber Synergy* since their work will be informed by its findings. The *Cyber Synergy* project will develop a service model and a system allowing various VRS services within and between institutions to collaborate seamlessly. A process model also will be proposed and

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tested for connecting SQA to VRS for generating a new stream of revenue for both the services. Thus, the proposed project will be directly related to the users and administrators of both VRS and SQA services.

2 National Impact and Intended Results

The project will provide a valuable contribution to our national goal of making information more accessible and applicable to larger audiences. It will produce transformative research with innovative models, services, and tools. The proposed project will investigate ways in which a new and more sustainable model can be created by seamlessly providing collaboration among the services within and between knowledge institutions. This may result in collaborations among libraries to optimize use of their information servicing resources, and collaboration between a library's VRS and an SQA community to generate a new stream of revenue for each institution. Below is a summary of *Cyber Synergy's* National Impact and Intended Results.

2.1 National Impact

- Explore new revenue streams and increase the viability of VR library services, increasing VRS sustainability.
- Develop library services that meet the specific needs of users, especially those with difficult or subject-based questions (e.g., medicine, law, business, etc.).
- Develop and field test a prototype to inform software development and interface design for library services.
- Develop guidelines for practice and recommendations for evaluation of VRS.
- Build on findings from *Seeking Synchronicity* grant related to comparison of chat vs. IM reference.

2.2 Intended Results

- Develop an alternative model for librarians facing tight budgets to fund collaborative VRS.
- Raise awareness of the importance of professional librarians in the broader population.
- Enable subject specialists to better utilize their specialized information to better help users.
- Longitudinally compare VRS chat, IM (QW), and SQA sites' accuracy and communication effectiveness.
- Have a positive impact on library users who will benefit from the development of improved services.
- Enable researchers to develop guidelines for practice and recommendations for evaluation of VRS.
- Have a major impact on library services' viability and future library-development grant funding.
- Provide a possible venue for libraries in the social networking environment.

3 Project Design and Evaluation Plan

3.1 Description of Project Phases

The project addresses the above research questions and will be divided into four phases: Phase I, Transcript Content Analysis; Phase II, Telephone Interviews; Phase III, System Design, and Phase IV, System Implementation & Evaluation. See Attachment C, Schedule of Completion, for a timeline of these phases. For data analysis across phases I and II, NVivo qualitative software (<http://www.qsrinternational.com/>) will be used. All identifying characteristics will be stripped from the VRS and SQA sites such as Yahoo! Answers, thus assuring confidentiality and anonymity for participants. QP is used by approximately 2,000 libraries in 31 countries to answer approximately over 1 million VR questions per year (1,112,102 in 2010 of which 562,719 were live chat). In 2010, approximately 840 libraries conducted instant messaging sessions using QP's QW, to answer approximately 144,167 questions from 16 countries, including the US. We have an existing collection of Q&A pairs from Yahoo! Answers that includes more than 2,000,000 questions with more than 15,000,000 answers, as well as about 1,000,000 user profiles (without any personally identifying information).

We also plan on obtaining more data through our collaboration with Yahoo! Labs on this project. This large population will allow the researchers to recruit a sufficient sample of IM VRS users for telephone interviews, as well as transcripts for analysis. The insights obtained from these two phases will inform the design of new services and systems in phase III, which will be implemented and evaluated during phase IV.

Phase I – Transcript Content Analysis. Phase I consists of a longitudinal analysis of 500 randomly selected transcripts from QP's VRS and 1000 randomly sampled Q&A pairs from Yahoo! Answers. The 500 VRS transcripts include 300 live chat and 200 QW, Instant Messaging (IM) transcripts, collected from 6/2010 through 12/2010. A sample of Q&A pairs from Yahoo! Answers will be collected from 9/2007 through 2/2010. (See Attachment D for Examples of live chat, QW, and Yahoo!Answers Transcripts.) This analysis will start in 10/2011 and is expected to continue for 16 months (until 2/2013). The analysis will build on methods and coding schemes developed for *Seeking Synchronicity* (Radford & Connaway, 2005-2008) and results will be compared to chat transcript analysis from that project. The QP and QW transcripts will undergo the following analyses: (1) Evidence of collaboration and referrals; (2) Evidence of impact of geographic dispersion; (3) Ready reference accuracy; (4) Interpersonal communication; (5) Query clarification; (6) Subject, (7) Types of questions, (8) Duration and other time factors; (9) Type of library, (10) Type of user, when self-disclosed, and (11) Presence and type of library use instruction. We will also analyze a sample of Q&A pairs from the large sample collected from Yahoo! Answers to understand: (1) what type of questions are asked; (2) what is the nature of the answers considered as most satisfactory and/or relevant; (3) which types of questions do not receive any answers and why; and (4) accuracy of answers.

Phase II – Telephone Interviews. In this phase, we will conduct in-depth phone interviews with 150 subjects composed of: (a) users of QP live chat and QW, (b) users and expert users of SQA services (expert users are those who provide more and better answers compared to regular users) and (c) VRS librarians. VRS users will be recruited through a variety of methods, including posting to university and professional library listservs, paper flyers posted at libraries and universities and on social networking sites such as Facebook and pop-up invitations that appear at the end of VRS sessions. We will also reach out to SQA users by sending them recruitment messages using the contact information available on their public profiles. Recruitment will begin early and will continue throughout the grant period. The \$30 honorarium budgeted for participation will aid recruitment of participants. The interviews and analyses are expected to take 13 months (11/2011 to 12/2012).

Phase III – System Design. The major goal of this phase is to develop design specifications and a prototype of a system that will link VRS as well as SQA services. The researchers will conduct four participatory design sessions (one per week) with system developers and other experts (9/2012 to 12/2012). Participants will be systems designers, and may include Rutgers PhD students and faculty as well as designers from the industry. Sessions may be in-person or through video conferencing. These designers will be invited to Rutgers every week for a session lasting one to two hours. The software developer from OCLC will join these sessions using video conferencing. The developer also will travel to Rutgers to attend the last session in person and finalize the design specifications generated through these sessions.

Next, we will create prototype design mockups (12/2012 to 2/2013) and conduct cognitive walkthroughs (4/2013 to 6/2013). Cognitive walkthrough of a system/interface is a kind of heuristic evaluation, a systematic inspection of a user interface design for usability (Nielsen, 1993, p.155). We will conduct these walkthroughs with the help of a few select (6 to 10) experts and policy makers, which will include information technology implementers, library administrators, and other decision makers.

Phase IV – Implementation and Evaluation. The final phase of this project will involve implementation and evaluation of the designed system(s) and service(s). The prototype developed in the previous phase will be field tested (7/2013 to 8/2013), and implemented in a real-life practical application as a case study using a select number of QP service groups (9/2013 to 1/2014).

3.2 Evaluation Plan, Criteria, and Outcomes

Ultimately, the evaluation of the project will be measured by the extent to which researchers and practitioners in LIS and developers of SQA sites use the results. The specific planned outcomes for this project include:

- Interim and final reports from the four research phases described above.
- A minimum of three juried papers per year, each designed to serve both as national and international conference presentations and as journal article submissions. (See Communication section for details.)
- Guidelines and a prototype system for establishing and maintaining collaborations between VRS and SQA.
- Visits and downloads from the project web site and blog.

Evaluation of impact will include quantitative measures tracking the number of visits and downloads to the project website, which will be hosted at OCLC. This gauge has been an effective indicator of impact of the recently concluded IMLS-funded research project, *Seeking Synchronicity*, for which there have been a total of 10,000+ views of or downloads from that website. In addition, the researchers will document invitations to speak, responses to blog and listserv postings, and libraries who request permission to duplicate recommendations for practice, training materials, and other project products. Evidence that demonstrates how VRS providers are using results for training, evaluation, and system design will be identified and documented. These methods of assessment will provide quantitative evaluation data to assess project outcomes.

The project's internal and external advisory boards will be given a report on the outcomes and progress of the research every six months and will be asked to evaluate the accomplishments to date and to suggest ways to improve productivity. They also will be consulted on any problems or obstacles that have been encountered, to suggest ways to overcome them.

4 Project Resources: Personnel and Management

a. Personnel

The proposed project involves collaboration between researchers at Rutgers, The State University of New Jersey and OCLC Research. The researchers at each location have expertise in the following: (a) interpersonal and computer-mediated communication, emerging technologies, information needs assessment, interdisciplinary research, qualitative and quantitative research methods, qualitative assessment of information programs and services, VR and SQA sites, and information system development and design; (b) research methodologies of user-oriented inquiry, survey research, in-depth interviewing, transcript analysis, and system design and evaluation; and (c) extensive experience managing large, multi-year, interdisciplinary grant-funded projects. The project team will hire one full-time project manager, preferably a post-doctoral student in the field of LIS or communication recruited from Rutgers, who will oversee budgetary requirements and processes and perform a liaison function between the Rutgers Internal Review Board and members of the research team.

The research and support team at Rutgers University will start with one doctoral research assistant and one masters' student in LIS (MLIS), then increase to two doctoral research assistants in years two and three of the grant as data collection and assessment increases. The MLIS student will contribute across all three years of the grant. In partnership with OCLC, contributing to the project on site at that location will be two masters students appointed as research assistants, a programmer, and technical assistants. The post-doctoral project manager will largely oversee the workloads of the graduate research assistants and help to structure the project data collection and evaluation to build the students' intellectual and analytical abilities over the course of the research project.

Additional goals for employing graduate students are to offer them invaluable first-hand access to research and have them provide knowledge of the current LIS field. In addition, OCLC will provide 20% of a software engineer's time to coordinate all technical aspects, including the construction of a Web-based survey instrument and travel for the Co-PI to 5 professional conferences during the 3-year project. The Co-PIs, the project manager, and graduate students at Rutgers and OCLC will form a team to carry out research initiatives, analyze data, and develop findings, and prepare documentation for dissemination to the wider LIS community.

Since this project is global in scope and application, we have sought to identify other members of the LIS and research community to contribute their ideas. To this end, a group of Rutgers University faculty and OCLC personnel with expertise in digital environments, evaluation, system design and development, information retrieval, communication, social networking, and virtual collaboration will serve as an expert Internal Advisory Board (IAB) for the research project. These experts, selected for their proficiency in research methods and ability to contribute to the project goals include: Nicholas Belkin, Michael Lesk, Mor Naaman, Jacek Gwizdka, and Jennifer Gibbs from Rutgers. These IAB members will contribute 5% of their time to the project, which is equivalent to two hours per week for the academic year. They will actively serve in a consultative capacity throughout the project, providing intellectual guidance, administrative advice, alternative perspectives, and suggesting additional ways to increase the impact of the project's results and dissemination of ideas. A weekly two-hour team meeting will be held, bringing in IAB members regularly as needed. At OCLC, IAB members include Paula Rumbaugh and Susan McGlamery. The OCLC IAB members will contribute approximately 5 percent of their time to the project, equivalent to two hours per week for thirty-six months. These members have an extensive background in the area of VRS, and have been leaders in VRS software and interface development.

In addition to the IAB, an External Advisory Board (EAB) has been appointed because of the practical application of this research and importance in the area of LIS services. The EAB includes practitioners and researchers from the LIS community with expertise in the development, administration, and evaluation of Web-based library services and systems including VRS and social software integration. Members include: Joseph Janes, Associate Professor, University of Washington; Julie Strange, Statewide Coordinator, Maryland AskUsNow!; R. David Lankes, Associate Professor, Syracuse University; Jeffrey Pomerantz, Associate Professor, University of North Carolina – Chapel Hill; Rich Gazan, Assistant Professor, University of Hawaii; and Frederick Kenneth Schmidt, Director, Academic Relations, Yahoo! Labs. (See also Supporting Documentation for External Support Letters).

The qualifications for the proposed co-principal investigators (Co-PIs), Marie L. Radford, Lynn Silipigni Connaway, and Chirag Shah are briefly summarized below. It should be noted that Radford and Connaway were Co-PIs of the *Seeking Synchronicity: Evaluating Virtual Reference Services from User, Non-User, and Librarian Perspectives*, IMLS grant-funded project (2005-2008).

Marie L. Radford, Ph.D., is an Associate Professor at Rutgers University, School of Communication & Information. Previously she was Acting Dean of Pratt Institute's School of Information and Library Science. She holds a Ph.D. from Rutgers and an MSLS from Syracuse University. A frequent speaker and prolific author, her latest book is *Reference Renaissance: Current & Future Trends* (Neal-Schuman, 2010) co-edited with Dave Lankes. She received the 2010 Isadore Gilbert Mudge award for distinguished contributions to reference librarianship given by ALA/RUSA. She will devote 20 percent (one eight-hour day per week) of her time during September through May and two months during the summer to this project.

Lynn Silipigni Connaway, Ph.D., is a Senior Research Scientist at OCLC's Office of Research. Prior to joining OCLC Research, she was the Vice-President of Research and Library Systems at netLibrary. She has been on the faculty of two LIS programs and the director of the Library and Information Services program at the University of Denver. She has published in numerous journals, has co-authored the book, *Basic Research Methods for Librarians* (2010), 5th edition, and is an active member of LIS professional associations. She has supervised 11 national and international research grants in the US, UK, and New Zealand. She was a co-investigator of an IMLS grant awarded to Ohio State University and of an IMLS grant awarded to Rutgers University. She will devote 33 percent (13.5 hours per week) of her time for each year of the three-year project.

Chirag Shah, Ph.D., is an Assistant Professor, Rutgers University, School of Communication & Information. Shah has a strong background in building and evaluating information systems through his MTech in Computer Engineering at IIT Madras, India, and MS in Computer Science at UMass Amherst. He has been working in the field of SQA for several years, resulting in several substantial contributions and recognitions, including a recent

award from OCLC/ALISE for studying modalities, motivations, and methods for online Q&A. He will devote 20 percent (one eight-hour day per week) of his time during September through May and two months during the summer to this project.

Résumés of the proposed co-principal investigators, the Internal Advisory Board from Rutgers University and OCLC QP, and the External Advisory Board are included for additional information (See Resumes.pdf).

b. Management Plan

The three Co-PIs will share equal responsibility for the project management. A team approach will ensure effective co-ordination of all activities. The project manager (post-doctoral student to be recruited) will help to coordinate and distribute the workload in consultation with the PIs. All research protocols and instruments will be developed by the PIs in consultation with the Rutgers and OCLC Internal Advisory Board. The PIs will conduct all participatory design sessions and cognitive walkthrough sessions. Transcripts and individual telephone interviews will be analyzed by the research team under the PIs' and project manager's direction. The PIs will jointly administer the budget and coordinate the research phases, logistics and dissemination of results with guidance from the Internal and External Advisory Boards. All interim target dates and schedules will be developed and monitored by the PIs to assure that all deadlines are met. The PIs will take full responsibility for keeping in close contact with IMLS and for delivering all required project reports and updates.

5 Communication Plan

Results will be widely disseminated to the global LIS community, and more broadly to different academic and research disciplines, to government and industry, and to the general public. More specifically, the results will be communicated through three presentations per year at relevant conferences and workshops at national and international LIS professional and scholarly conferences such as: the American Library Association (ALA), the Public Library Association (PLA), the Association of College and Research Libraries (ACRL), the Association for Information Science and Technology (ASIST), ACM Special Interest Group on Information Retrieval (SIGIR), and ACM Computer-Supported Cooperative Work (CSCW). Articles in juried LIS journals and conference proceedings of at least three papers per year to be submitted to publications such as *Reference and User Services Quarterly (RUSQ)*, the *Journal of the Association for Information Science and Technology (JASIST)*, *Library and Information Science Research (LISR)*, *Journal of Human-Computer Interactions (HCI)*, and *The Library Quarterly (LQ)*. Please note that:

- Articles will explain the research methods, results, implications for practice, and recommendations for development and evaluation of library services and systems.
- A project website will be created, designed, and hosted by OCLC to disseminate project reports, periodic updates, and research findings. All findings, presentations, and article pre-prints will be available on the web site. The data will be available to other researchers by request. The Rutgers' web site will link to this site. OCLC Research has an open access policy to post pre-prints of all reports on its home page.
- Listserv and blog postings to disseminate research findings to library professionals with invitations to attend conference presentations or to visit the website. Listserv and blogs are among the most frequently used communication venues for librarians and are seen as a critical means for disseminating findings. The School of Communication & Information (SC&I) at Rutgers and OCLC have dedicated public relations staff to disseminate information about important projects, publications, and recognitions to various lists, such as JESSE (listserv for LIS researchers and educators,), research communities, as well as government bodies.

6 Sustainability

This project will be sustained in numerous ways. The results and prototype will be made available for other researchers to implement and test. As the research is made available and cited, it will influence the development of library VRS and Social Q&A sites. In addition, the inclusion of chat reference practitioners, LIS scholars, and a representative from Yahoo! Answers on the External Advisory Board and QP staff and Communication

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and LIS scholars on the Internal Advisory Board will both assure cooperation between researchers and practitioners throughout the project, and increase the probability that project findings will be implemented in the ongoing design of VRS. Also, the pool of VRS and Yahoo! Answers transcripts that have been cleansed of identifying information will be available to other researchers upon request.

The project will make the developed systems available freely not only for end-users but also for developers via an open-source distribution model. This will help in ensuring the long-term viability for system development. The system developed as a part of *Cyber Synergy* will employ a flexible, plugin-based architecture, allowing it to be easily modified and employed into a number of situations and institutions without any specialized technical skills. The findings and the products of this project will thus become applicable beyond Rutgers and OCLC. The users of the systems developed through this project will be supported throughout the project, and beyond, through the creation of proper infrastructure, such as online user forums hosted by OCLC.

This project also would serve as a catalyst for subsequent funded research opportunities for the co-investigators to build on this research, as is demonstrated by their previous IMLS-funded research. One of the most functional demonstrations of sustainability would be the development of a system that would provide a new revenue stream for librarians facing tight budgets to find a way to fund collaborative VRS. Another is to provide an effective means to connect users with subject-related questions to specialists. OCLC, and perhaps other library Web service providers, will use the results of this research to develop or improve VRS that will serve to sustain and build upon the findings.

As can be seen in the above discussion, the proposed grant is vitally important to the sustainability and continued relevance of virtual library reference initiatives in this time of economic upheaval and budget cuts. It is designed to have a significant impact on the quality and sustainability of digital library services.

Abbreviated Curriculum Vitae of Marie L. Radford, Ph.D.

Prepared January 12, 2011

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Education

1985-1993	Ph.D. in Communication, Information, and Library Studies. Rutgers, the State University of New Jersey, New Brunswick, NJ.
1974-1975	M.S.L.S. Syracuse University, Syracuse, NY.
1969-1973	B.A. in English Education, College of New Jersey (formerly Trenton State College), Ewing, NJ.

Recent Professional Experience

2004-Pres	Associate Professor (tenured July 2007). School of Communication & Information, Rutgers, The State University of NJ, New Brunswick, NJ
2002-2004	Acting Dean, School of Information and Library Science, Pratt Institute, NY, NY
1996-2004	Associate Professor (tenured 2001). School of Information and Library Science, Pratt Institute, NY, NY.
1984-1996	Head of Curriculum Materials (tenured 1991). Sarah Byrd Askew Library, The William Paterson University of New Jersey, Wayne, NJ.

Publications

Books (Selected)

- Radford, M. L. & Lankes, R. D. (Eds.) (2010). *Reference Renaissance: Current & Future Trends*. NY: Neal-Schuman.
- Ross, C. S., Nilsen, K., & Radford, M. L. (2009). *Conducting the Reference Interview*, 2nd ed., NY: Neal-Schuman.
- Radford, M. L. & Snelson, P. (Eds.) (2008). *Academic Library Research: Perspectives and Current Trends*. Chicago: Association of College & Research Libraries, a Division of the American Library Association. (Publications in Librarianship #59)
- Lankes, R.D., Nicholson, S., Radford, M. L., Westbrook, L., Silverstein, J., & Nast, P. (Eds.) (2008). *Virtual Reference Service: From Competencies to Assessment*. NY: Neal-Schuman.
- Radford, M. L., Barnes, S. B., & Barr, L. (2006). *Web Research: Selecting, Evaluating, and Citing*. (2nd ed.). Boston: Allyn and Bacon Publishers.
- Radford, M. L. (1999). *The Reference Encounter: Interpersonal Communication in the Academic Library*. Chicago: Association of College & Research Libraries, A Division of the American Library Association. (Publications in Librarianship #52).

Articles in Refereed Journals (Selected)

- Radford, M. L., Radford, G. P., Connaway, L. S. & DeAngelis, J. A., (in press, July 2011). On virtual face-work: An ethnography of communication approach to a live chat reference interaction. *The Library Quarterly*.
- Radford, M. L., Connaway, L. S., Confer, P., Sabolski-Boros, S., & Kwon, H. (in press, spring 2011). "Am I getting warmer?" Query clarification in live chat virtual reference. *Reference & User Services Quarterly* 50(3).
- Connaway, L. S. & Radford, M. L. (June, 2010). Virtual reference service quality: critical components for adults and the net-generation. *Libri* 60(2), 165-180.
- Connaway, L. S., Radford, M. L., Dickey, T. J., Williams, J. D., & Confer, P. C. (June, 2008). Sense-making and synchronicity: Information-seeking behaviors of Millennials and Baby Boomers. *Libri* 58(2), 123-135.
- Radford, M. L. & Kern, M. K. (winter, 2006). A multiple-case study investigation of the discontinuation of nine chat reference services. *Library & Information Science Research* 28(4), 521-547.
- Radford, M. L. (June, 2006). Encountering virtual users: A qualitative investigation of interpersonal communication in chat reference. *Journal of the American Society for Information Science and Technology* 57(8), 1046-1059.

Grants & Awards (Selected)

- 2010 Received the Isadore Gilbert Mudge Award for distinguished contributions to reference librarianship given by the American Library Association, Reference and User Services Association, in the amount of \$5000.
- 2005 "Seeking Synchronicity: Evaluating Virtual Reference Services from User, Non-User, and Librarian Perspectives," From the Institute for Museum and Library Services (IMLS), for the period of 10/01/05 to 3/31/08, in the amount of \$684,996. Role: co-principal investigator.
- 2004 "Public Urban Library Service Education (PULSE)," Brooklyn Public Library in partnership with Pratt Institute-SILS from the IMLS in the amount of \$516,732 for recruiting diverse librarians for the 21st Century. Role: Acting Dean, member of grant writing team, and trainer.

Recent Scholarly Activities (Selected)

- 2010-2011 Vice-Chair, Chair- Elect, National Executive Board, Beta Phi Mu Honor Society
- 2010-2011 Vice-Chair, Research Coordinating Committee, Association of College and Research Libraries (ACRL)
- 2009-2011 Co-Chair, Contributed Papers Committee, ACRL National Convention, 2011, Philadelphia, PA
- 2009-2010 Co-Chair, Conference Program Reference Renaissance 2010: Current & Future Trends, Denver, CO.

CURRICULUM VITAE

Lynn Silipigni Connaway

Education:

Ph.D., 1992, University of Wisconsin - Madison. Degree in Library and Information Studies.

M.L.S., 1988, University of Arizona, Tucson.

Elementary Education/Media Specialist Certificate, 1982, Western State College, Gunnison, CO.

B.S.L.S., 1977, Edinboro State University, Edinboro, PA.

Selected Publications:

- Connaway, L. S., & Dickey, T. J. (2010). *Towards a profile of the researcher of today: The digital information seeker: Report of findings from selected OCLC, RIN, and JISC user behavior projects*. [Available: <http://www.jisc.ac.uk/media/documents/publications/reports/2010/digitalinformationseekerreport.pdf>]
- Connaway, L. S., & Dickey, T. J. (2010). *Towards a profile of the researcher of today: What can we learn from JISC projects? Common themes identified in an analysis of JISC Virtual Research Environment and Digital Repository Projects*. [Available: http://ie-repository.jisc.ac.uk/418/2/VirtualScholar_themesFromProjects_revised.pdf]
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- Connaway, L.S., & Powell, R.L. (2010). *Basic Research Methods for Librarians*, 5th ed. Littleton, CO: Libraries Unlimited.
- Connaway, L. S., & Radford, M. L. (2010). Virtual reference service quality: Critical components for adults and Net-Generation. *Libri*, 60(2), 165-180.
- Radford, M. L., & Connaway, L. S. (2010). Getting better all the time: Improving communication and accuracy in virtual reference. In M. L. Radford, & R. D. Lankes (Eds.), *Reference renaissance: Current & future trends* (pp. 39-54). New York: Neal-Schuman.
- Radford, M. L., & Connaway, L. S. (2010). "I stay away from the unknown, I guess." Measuring impact and understanding critical factors for Millennial Generation and adult non-users of virtual reference services. In *Online proceedings of the Fifth Annual iConference, University of Illinois at Urbana-Champaign, February 3-6, 2010*. [Available: http://ncra.lis.uiuc.edu/images/iConferences/2010/papers2_Page-Zhang.pdf]
- Radford, M. L., Connaway, L. S., Confer, P., Sabolski-Boros, S., & Kwon, H. (2010). "Am I getting warmer?" Query clarification in live chat virtual reference. Accepted for publication in *RUSQ*.
- Radford, M. L., Radford, G. P., Connaway, L. S., & DeAngelis, J. A. (in press). On virtual face-work: An ethnography of two live chat reference interactions. *The Library Quarterly*.
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- Prasse, M.J. & Connaway, L.S. (in press, 2009). Usability testing: Method and research. In Radford, M.L., & Snelson, P. (Eds.) *Academic Library Research: Perspectives and Current Trends*. Chicago: Association of College and Research Libraries, a Division of the American Library Association.
- Connaway, L.S. (October 2008). Make room for Millennials. *NextSpace*, 10, p.18-19. [Available: <http://www.oclc.org/nextspace/010/research.htm>]
- O'Neill, E.T., Connaway, L.S., & Dickey, T.J. (2008). Estimating the audience level for library resources. *Journal of the American Society for Information Science & Technology*, 59(13), 2042-2050.
- Connaway, L.S., Radford, M.L., Dickey, T.J., Williams, J.D., and Confer, P. (2008). Sense-making and synchronicity: Information-seeking behaviors of Millennials and Baby Boomers. *Libri*, 58(2), 123-135.
- Connaway, L.S., Radford, M.L., & Dickey, T.J. (2008). On the trail of the elusive non-user: What research in virtual reference environments reveals. *ASIST Bulletin*, 34(2), 25-28. [Available: http://www.asis.org/Bulletin/Dec-07/Bulletin_DecJan08.pdf]
- Connaway, L.S. & Radford, M.L. (2007). The thrill of the chase in cyberspace: A report of focus groups with live chat librarians. *Informed Librarian Online*. [Available: <http://www.informedlibrarian.com/guestForum.cfm?FILE=gf0701.html>]
- Radford, M.L. & Connaway, L.S. (2007). "Screenagers" and live chat reference: Living up to the promise. *Scan*, 26(1), 31-39.

- Connaway, L.S. (2007). Mountains, valleys, and pathways: Serials users' needs and steps to meet them. Part I: Identifying serials users' needs: Preliminary analysis of focus group and semi-structured interviews at colleges and universities. *Serials Librarian*, 52(1/2), 223-236.
- Prabha, C., Connaway, L.S., Olszewski, L., & Jenkins, L. (2007). What is enough? Satisficing information needs. *Journal of Documentation*, 63(1), 74-89. [Available: <http://www.oclc.org/research/publications/archive/2007/prabha-satisficing.pdf>]

Grants:

- JISC, Information Environment Programme 2009-11, 2009. "Towards a Profile of the Researcher of Today: What Can We Learn from JISC Projects? Common Themes Identified in an Analysis of JISC Virtual Research Environment and Digital Repository Projects." Lynn Silipigni Connaway, OCLC Research, Project Manager. Project Website URL: <http://www.jisc.ac.uk/whatwedo/programmes/infl1/researchbehaviourstudy.aspx> Project Report URL: http://ie-repository.jisc.ac.uk/418/2/VirtualScholar_themesFromProjects_revised.pdf
- JISC, report, 2010. "Digital Information Seekers: Report of Findings from Selected OCLC, RIN, and JISC User Behaviour Projects." Lynn Silipigni Connaway and Timothy J. Dickey, OCLC Research. Project Website URL: <http://www.jisc.ac.uk/publications/reports/2010/digitalinformationseekers.aspx> Project Report URL: <http://www.jisc.ac.uk/media/documents/publications/reports/2010/digitalinformationseekerreport.pdf>
- Institute for Museums and Library Services Research Grant, 2005-2007. "Seeking Synchronicity: Evaluating Virtual Reference Services from User, Non-User, and Librarian Perspectives." Lynn Silipigni Connaway and Marie L. Radford, Rutgers University. Co-Principal Investigators. \$684,996.00. Project Website URL: <http://www.oclc.org/research/projects/synchronicity/>.
- Institute for Museums and Library Services Research Grant. 2003-2005. "Sense-making the Information Confluence: The Hows and the Whys of College and University User Satisficing of Information Needs." Brenda Dervin, Ohio State University. Principal Investigator; Lynn Silipigni Connaway and Chandra Prabha, Co-Investigators. \$480,542, plus matching from OCLC and OSU. Project Website URL: <http://www.oclc.org/research/projects/imls/default.htm>
- University of Denver, Social Science Foundation Grant, 1998. "Identifying and Representing Electronic Engineering Resources: A Case Study in Knowledge Management." \$2,850.
- Engineering Information, Inc., 1997-98. Organization of the International House included in the Ei Village web site. Select, index and abstract sites for the International House. \$25,000.
- University of Waikato, Computer Science Department. 1996. "Identifying the Research Needs and Information-Gathering Behaviors of Computer Science Scholars in New Zealand," Sally Jo Cunningham, University of Waikato, Co-Investigator. \$3,000.
- University of Missouri-Columbia, Alumni Faculty Development Incentive Award, 1995. "Organized Access to Engineering Internet Resources Using Indexing Principles." \$1000.
- Carroll Preston Baber Research Grant, American Library Association, 1995. "Organized Access to Engineering Internet Resources Using Indexing Principles," Danny Wallace, Louisiana State University, Co-Investigator, \$7,500. Project Website URL: <http://www.du.edu/~cbrown/baber/>
- University of Missouri-Columbia, Summer Research Fellowship and Research Council Grant, 1994. "Decision-Making in Academic Library Technical Services." \$6,000.
- Mountain Plains Library Association, Professional Development Grant, 1987, 1990, and 1997.

Work Experience:

- July 2003 to Present: OCLC Online Computer Library Center – Dublin, OH. Senior Research Scientist.
- August 1999 to June 2003: netLibrary, a division of OCLC Online Computer Library Center – Boulder, CO. Vice President, Research and Library Systems.
- Fall 1995 to August 1999: University of Denver - Denver, CO. Library and Information Services Department, University College. Director and Associate Clinical Professor.
- Winter 1993 to Summer 1995: University of Missouri - Columbia, Columbia, MO. School of Library and Information Science. Assistant Professor.
- Spring 1992: University of Wisconsin - Madison, Madison, WI. School of Library and Information Studies (SLIS). Instructor.
- Fall 1990 to Spring 1992: University of Wisconsin - Madison, Madison, WI. SLIS. Teaching Assistant.
- 1989 to 1990: University of Wisconsin - Madison, Madison, WI. Instructional Materials Center. Reference and Catalog Librarian.
- 1986 to 1989: Mesa State College Library, Grand Junction, CO. Head of Technical Services and Cataloging.
- 1984 to 1986: Mesa State College Library, Grand Junction, CO. Assistant Cataloger.
- 1977 to 1978: Big Beaver Falls Area School District, Beaver Falls, PA. Elementary School Librarian.

Chirag Shah

Professional Preparation:

DDIT, India	Computer Engineering	BE, 2000
Indian Institute of Technology Madras, India	Computer Science & Engineering	MTech, 2002
University of Massachusetts, Amherst	Computer Science	MS, 2006
University of North Carolina, Chapel Hill	Information & Library Science	PhD, 2010

Appointments:

Assistant Professor, Rutgers School of Communication & Information (SC&I), Fall 2010-present.
ASIST Member, 2008-present.
ACM Member, 2000-present.
IEEE Student Member, 1997-2002.
Microsoft Certified Professional, 1999-present.
Chairman of IEEE Student Branch at Nadiad, India, 1998-1999.

Five Related Publications:

1. Shah, C. and Marchionini, G (2010). Awareness in Collaborative Information Seeking. *Journal of American Association of Information Science and Technology (JASIST)*, 61(10), 1970-1986.
2. Shah, C. & Gonzalez-Ibanez, R (2010). Exploring Information Seeking Processes in Collaborative Search Tasks. *Proceedings of American Society of Information Science and Technology (ASIST)*. Pittsburgh, PA, October 22-27, 2010.
3. Shah, C. (2010a). *A Framework to Support User-Centric Collaborative Information Seeking*. PhD Dissertation. School of Information & Library Science (SILS), UNC Chapel Hill. Retrieved from http://comminfo.rutgers.edu/~chirags/papers/Shah_Dissertation.pdf.
4. Shah, C. (2010b). Working in Collaboration - What, Why, and How? *Proceedings of Collaborative Information Retrieval workshop at CSCW 2010*. Savannah, GA.
5. Shah, C., Marchionini, G., & Kelly, D (2009). Learning Design Principles for a Collaborative Information Seeking System. *Proceedings of ACM SIGCHI Conference 2009*. Boston, MA. April 4-9, 2009. Pages 3419-3424.

Five Other Significant Publications:

1. Shah, C., Oh, S., & Oh, J. S. Research agenda for Social Q&A (2009). *Library & Information Science Research (LISR)*, 31 (4), 205-209.
2. Shah, C (2010). Supporting Research Data Collection from YouTube with TubeKit. *Journal of Information Technology & Politics (JITP)*, 7 (2-3), 226-240.
3. Shah, C., & Marchionini, G (2008). Hunting for Hip, Hipsters, and Happenings on YouTube. *Proceedings of ASIST 2008 Annual Meeting*. Columbus, OH. October 24-29, 2008. Pages 1-16.
4. Shah, C., Oh, J. S., & Oh, S. (2008). Exploring characteristics and effects of user participation in online social Q&A sites. *First Monday*, 13(9). <http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2182/2028>
5. Shah, C. and Marchionini, G (2008). Capturing Relevant Information for Digital Curation. *Bulletin of IEEE Technical Committee on Digital Libraries*, 4(1), Spring 2008. <http://www.ieee-tcdl.org/Bulletin/v4n1/shah/shah2.html>

Synergistic Activities:

- Organizer of Workshop on Collaborative Information Seeking at ACM Group 2010 conference.
- Chair for the Information Retrieval track at HLT-NAACL 2009 Student Research Workshop.
- Program committee member for SIGIR Conferences (2009-2011).
- Program committee member for JITP 2009 and JITP 2011 Conferences.
- Developer of tools such as ContextMiner, TubeKit, and Coagmento for supporting individual and collaborative information seeking, mining, and analysis.
- *Awards and honors received:*
 - Best Political Science Software Award to ContextMiner by American Political Science Association.
 - 3rd prize (\$500) for the paper at YouTube and 2008 Elections Cycle conference.
 - Best paper award (\$1000) at ACM SIGIR 2008 Conference.
 - Invited keynote speaker at the workshop on Social IR at University of Holguin's International Conference, Cuba.

Collaborators and Co-Editors:

Nick Belkin (Rutgers); Robert Capra (UNC Chapel Hill); W. Bruce Croft (UMass Amherst); Jonathan Foster (University of Sheffield); Xin Fu (Google); Gary Geisler (University of Texas at Austin); Gene Golovchinsky (Fuji Xerox Palo Alto Lab - FXPAL); Roberto Gonzalez-Ibanez (Rutgers); David Jensen (UMass Amherst); Paul Jones (UNC Chapel Hill); Diane Kelly (UNC Chapel Hill); Eguchi Koji (Kobe University), Japan; Cal Lee (UNC Chapel Hill); Gary Marchionini (UNC Chapel Hill); Richard Marciano (UNC Chapel Hill); Sanghee Oh (Florida State University); Jung Sun Oh (University of Pittsburgh); Jeremy Pickens (Fuji Xerox Palo Alto Lab - FXPAL); Jeffrey Pomerantz (UNC Chapel Hill); Marie Radford (Rutgers); Terrell Russell (UNC Chapel Hill); Dhavan Shah (University of Wisconsin-Madison); Helen Tibbo (UNC Chapel Hill)

Graduate Advisors: W. Bruce Croft (University of Massachusetts, Amherst); Gary Marchionini (University of North Carolina, Chapel Hill).

Resume**Susan McGlamery****QuestionPoint Senior Product Manager****OCLC, Inc.**

January 19, 2011

Education

1981 B.A. in Political Science — University of North Carolina, Chapel Hill, NC

1984 J.D. — Mercer Law School, Macon, GA

1987 Masters in Library Science—St. John's University, NY

Employment2004 – Present OCLC Online Computer Library Center, Inc. Dublin, OH
Global Product Manager, QuestionPoint

1996 – 2004 Metropolitan Cooperative Library System, Pasadena, CA

1999 - 2004 – Director, 24/7 Reference

1996 – 1999 – Reference Supervisor, MCLS Reference Center

1993 – 1995 Reference Librarian, RAND Corporation, Santa Monica, CA

1989 – 1993 Reference Librarian, University of Southern California Law School, Los Angeles,
CA

1987 – 1989 Reference Librarian, Paul, Weiss, Rifkind & Garrison, New York, NY

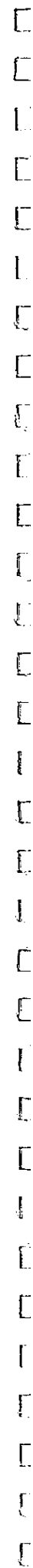
1985 – 1987 Librarian, King's County District Attorney's Office, Brooklyn, NY

1984 – 1985 Attorney, Altman, Krietzer & Levick, Atlanta, GA

Professional Organizations

American Library Association, Reference and User Services Division

Committee work: Reference Services Section, Cooperative Reference Committee



Paula Rumbaugh
614-764-6433
rumbaugh@oclc.org

Education

1964 – 1968

Ohio Northern University – Ada, Ohio
Bachelor of Science in Music Education

1982 – 1983

Ball State University, Muncie, Indiana
Masters in Library Science
Research paper on self-censorship in public libraries

Experience

1968 – 1976

Frederick Ungar Publishing Co., New York, NY
Book editor
Frederick Ungar published primarily bio-literary criticism reference works, such as the 4-volume *Encyclopedia of 20th-Century Literature* and the Modern Literature Monograph series.

1977 – 1985

Lima/Allen County Public Library, Lima, OH
Reference Librarian
Assisted with walk-in and telephone information needs
Initiated ILL requests via the OCLC ILL service
Oversaw introduction of the first patron PCs in the library

1985 – Present

OCLC Online Computer Library Center, Inc., Dublin, OH

1985 – 1987: User Documentation Department, writer

1987 – 1990: Reference Services Division, Support Analyst for this newly formed division

1990 – 2000: FirstSearch, Product Manager

2000 – present: QuestionPoint, a 24/7 Reference Service, product manager/analyst.

In July of 2000, as part of the OCLC strategic planning process, worked with a team of researchers, librarians, developers, and marketing individuals to study the environment and needs of reference librarians and users in the context of the World Wide Web.

Worked with Library of Congress staff on integrating its global reference network, the Collaborative Digital Reference Service (CDRS) with an OCLC in-progress virtual reference desk cooperative toolset.

In June 2002, the QuestionPoint service, a virtual reference management service and world-wide collaborative network, was introduced.

In 2006, QuestionPoint merged with the 24/7 Reference Service to provide 24-hour live chat service in the United States and at various points around the globe.

Also at OCLC: Inclusion Council member 2004-2008.

Organized all-staff program on software accessibility for the visually impaired, October 2006.

Organized week-long visit for Dr. Scott Nicholson, Syracuse University, consisting of presentations, seminars, brainstorming session, and meetings relating to data- and bibliomining.

Professional Organizations

American Library Association.

Cooperative Reference Services Committee (RUSA Division, Reference Services Section), 2002 - 2006

Publications and Presentations

"Is Reference Really Quick and Easy?" *Reference Renaissance* 2010, Inventing the Future, Denver, CO

"An International Comparison of Virtual Reference Services." *Reference & User Services Quarterly*, Summer 2010, Vol. 49 Issue 4, p360-368

"Knowledge Management in Today's Library Reference: Does the Knowledge Base Fill the Bill?" LIDA 2008 Conference, Dubrovnik, Croatia.

<http://www.flos.hr/lida/lida2008/program/>

"Are Librarians Missing a Continuing Education Opportunity? An International Comparison of Virtual Reference Services," IFLA 2007 Conference, Durban, South Africa. http://www.ifla.org/IV/ifla79/papers/151_Olszewski_Rumbaugh-en.pdf

"Moving from Virtual to Collaborative Reference Service Models," with Lorraine Normore. Proceedings of the Virtual Reference Desk Conference, 2001

Numerous presentations on QuestionPoint and the QP knowledge bases at ALA and VRD conferences, local library conferences, CO-ASIS&T, OCLC Members Council, and OCLC advisory committees

Research Projects

Current

Reference Extract. OCLC/Syracuse University Information Institute/Washington University Information School collaborating with Zepheira, Inc. on a McArthur Foundation funded project to prototype an Internet "credibility search engine." Early prototyping and research are based on librarian-answered questions as evidenced in QuestionPoint transcripts.

Data- and Bibliomining of completed Q&A transactions, ongoing

Past

Analysis of QuestionPoint e-mail question/answer transactions from 23 non-U.S. countries, with Larry Olszewski. Current primary focus is on comparison of 2006 and 2008 data. Earlier, the 2006 study focused on identifying differences among the cultures and secondarily on the use of completed transactions for library training purposes, 2006-2009

Assist Lynn Connaway and Marie Radford in their current research, "Seeking Synchronicity: Evaluating Virtual Reference Services from User, Non-User, and Librarian Perspectives"

Survey on the use of the QuestionPoint knowledge bases, 2006

Study on knowledge management in library reference departments, 2004-2005

Reference in Context, with Lorraine Normore and others, 1998.

BIOGRAPHICAL SKETCH – Mor Naaman

School of Communication and Information
Rutgers, The State University of New Jersey
4 Huntington Street, New Brunswick, NJ 08901
mor@rutgers.edu (732) 932-7500x8284

Professional Preparation

Tel Aviv University, Ramat Aviv, Israel
B.A. in Computer Science and Business Management (1999)

Stanford University, Stanford, CA
Ph.D. in Computer Science (2005)

Appointments

Assistant Professor, 2008--Present
Rutgers, The State University of New Jersey
School of Communication and Information
Department of Library and Information Science
With courtesy appointment at the Department of Computer Science.

Research Team Lead / Research Scientist, 2005-2008
Yahoo! Research Berkeley, Berkeley, CA

Publications (Recent)

- (2010) Nicholas Diakopoulos, Mor Naaman, and Funda Kivran-Swaine. Diamonds in the rough: Social media visual analytics for journalistic inquiry. In Proceedings, VAST '10.
- (2007) Shane Ahern, Mor Naaman, Rahul Nair, Jeannie Yang. World Explorer: Visualizing Aggregate Data from Unstructured Text in Geo-Referenced Collections. In proceedings, JCDL '07.
- (2011) Nicholas Diakopoulos and Mor Naaman. Towards Quality Discourse in Online News Comments. In Proceedings, CSCW '11.
- (2009) Lyndon Kennedy and Mor Naaman. Less Talk, More Rock: Automated Organization of Community-Contributed Collections of Concert Videos. In Proceedings, WWW '09.
- (2010) Mor Naaman, Jeff Boase and Chih-Hui Lai. Is it Really About Me? Message Content in Social Awareness Streams. In Proceedings, CSCW '10.
- (2007) Morgan Ames and Mor Naaman. Why We Tag: Motivations for Annotation in Mobile and Online Media. In Proceedings, CHI '07.
- (2010) Hila Becker, Mor Naaman and Luis Gravano. Learning Similarity Metrics for Event Identification in Social Media. In Proceedings, WSDM '10.
- (2006) Cameron Marlow, Mor Naaman, danah boyd, Marc Davis. HT06, Tagging Paper, Taxonomy, Flickr, Academic Article, ToRead. In Proceedings, HYPERTEXT '06.
- (2004) Mor Naaman, Yee Jiun Song, Andreas Paepcke, Hector Garcia-Molina. Automatic Organization for Digital Photographs with Geographic Coordinates. In proceedings, JCDL '04.
- (2007) Tye Rattenbury, Nathan Good, Mor Naaman. Towards Automatic Extraction of Event and Place Semantics from Flickr Tags. In Proceedings, SIGIR '07.

Synergistic Activities

- Led the development and research activities of prototypes like ZoneTag, Zurfer, TagMaps, and Fire Eagle that were publicly deployed and adopted by thousands of users; extensively published and talked about the work in various forums.
- Actively transferred to Yahoo! product teams (Image Search, Yahoo! Local, Flickr) technologies with a potential to affect the lives of millions. For example, the Fire Eagle location-sharing platform is now an official Yahoo! product.
- Performed ongoing service for the academic community, including Program Chair at JCDL 2008, Associate Chair at CHI 2011, CSCW 2010 and 2011; Initiated the ACM Multimedia Grand Challenge and lead the first MMGC at Multimedia 2009.
- Reached out to bio-diversity researchers during Stanford PhD work; developed a collaboration that later became BioACT, a NSF-funded project (PI: Hector Garcia-Molina).
- *Awards and Honors Received:*
 - Vannevar Bush Best Paper Award, Joint Conference on Digital Libraries (2004)
 - Vannevar Bush Best Paper Award, Joint Conference on Digital Libraries (2007)
 - Best Paper Award, International Conference on Weblogs and Social Media (2009)
 - Rutgers SC&I Library and Information Science Department Faculty Research Award (2010)
 - Designated mentor for Computing Innovations Fellow Nicholas Diakopoulos (2009, 2010)
 - Keynote speaker at SAGEO 2010, SSTD 2009, SAMT 2008; Northeast DB/IR Day 2008.

Collaborators

Past 48 Months:

Morgan Ames (Stanford), Shane Ahern (current affiliation: Rearden Commerce), Hila Becker (Columbia), Jeffrey Boase (Rutgers), Jose Borbinha (Instituto Superior Técnico, Lisboa), danah boyd (UC Berkeley), Tag Seng Chua (National University of Singapore), Marc Davis (Invention Arts), Nicholas Diakopoulos (Rutgers), Dean Eckles (Stanford), Nathaniel Good (independent), Simon King (Yahoo!), Funda Kivran-Swaine (Rutgers), Priya Govindan (Rutgers), Luis Gravano (Columbia), Amy Hwang (Microsoft), Mohamed Ismail (NJIT), Alexander Jaffe (Washington), Quentin Jones (NJIT), Vlad Kaplun (unknown), Lyndon Kennedy (Yahoo!) Chih-Hui Lai (Rutgers), Jessica Lingel (Rutgers), Cameron Marlow (Facebook), Sara Motahari (NJIT), Rahul Nair (Yahoo!), Oded Nov (NYU Polytechnic), Tye Rattenbury (Intel), David Ayman Shamma (Yahoo!), Mirjana Spasojevic (Nokia), Tamir Tassa (Open University of Israel), Nancy van House (UC Berkeley), Jeannie Yang (Yahoo!), Tayebah Yazdani (Rutgers), Chen Ye (University of Illinois-Chicago), Ron Yeh (Cooliris), Zihao Yu (Rutgers), Sotirios Ziavras (NJIT).

Dissertation Adviser, other advisers (Stanford University)

Graduate Advisor: Hector Garcia-Molina. Graduate advisor and thesis reader: Andreas Paepcke.
Thesis Reader: Terry Winograd.

Students supervised or directed (last five years)

[Including Master's Thesis students, and PhD students advised outside of their thesis] Hrishikesh Bakshi, Smriti Bhagat, Priya Govindan, Funda Kirwan-Swaine, Sarah Legins, Jessica Lingel, Zihao Yu (Rutgers).

BIOGRAPHICAL SKETCH

Jacek Gwizdka, Assistant Professor

Department of Library and Information Science
School of Communication and Information, Rutgers University
4 Huntington St., New Brunswick, NJ 08901, USA

+1 732 932 7500 x8236 [jacekg \[at\] rci.rutgers.edu](mailto:jacekg[at]rci.rutgers.edu) <http://www.comminfo.rutgers.edu/~jacekg/>

Education

University of Toronto, Canada	Psychology	Post Doc 2004-2005
University of Toronto, Canada	Industrial Engineering (Human-Computer Interaction)	Ph.D. 2004
University of Toronto, Canada	Industrial Engineering (Information Systems)	M.A.Sc. 1998
Technical University of Łódź, Poland	Electrical Engineering (Control Systems)	M.Eng. 1985

Academic and Research Experience

- 2005 – present: Assistant Professor, SC&I, Rutgers University, New Brunswick, NJ
2004 – 2005: Adjunct Professor at the Faculty of Information Studies, University of Toronto, Canada
1999 & 2000: Research Intern, Xerox PARC, Palo Alto, CA
1999: Knowledge Engineer and Software Designer, Personification Inc., Toronto, Canada
1998: Research Intern, HP Labs, Palo Alto, CA
1997: Research Intern, FXPAL, Palo Alto, CA
1995-1998: Research Assistant, Enterprise Integration Laboratory, University of Toronto, Canada
1990-1994: Software Engineer, Lanworks Technologies Inc. & All Computers Inc., Toronto, Canada

Publications (15 selected)

1. Gwizdka, J. (2010). Distribution of cognitive load in web search. *Journal of the American Society for Information Science and Technology*, 61(11), 2167–2187.
2. Liu, C., Gwizdka, J., Liu, J., Xu, T., & Belkin, N.J. (2010). Analysis and evaluation of query reformulations in different task types. *Proceedings of the 73rd Annual Meeting of the American Society for Information Science & Technology (ASIS&T 2010)*.
3. Liu, J., Gwizdka, J., Liu, C., & Belkin, N.J. (2010). Predicting task difficulty for different task types. *Proceedings of the 73rd Annual Meeting of the American Society for Information Science & Technology (ASIS&T 2010)*.
4. Cole, M.J., Gwizdka, J., Bierig, R., Belkin, N.J., Liu, J., Liu, C., & Zhang X. (2010). Linking search tasks with low-level eye movement patterns. In W-P Brinkman & M. Neerincx (Eds.) *Proceedings of the 28th European Conference on Cognitive Ergonomics*. (pp. 109-116). Delft: Mediamatica.
5. Gwizdka, J. (2010b). Using Stroop task to assess cognitive load. In W-P Brinkman & M. Neerincx (Eds.) *Proceedings of the 28th European Conference on Cognitive Ergonomics (ECCE 2010)*. (pp. 219-222). Delft: Mediamatica.
6. Liu, C., Gwizdka, J., & Liu, J. (2010). Helping identify when users find useful documents: Examination of query reformulation interval. *Proceedings of the 3rd Information Interaction in Context Symposium (IIIX'2010)*, New Brunswick, NJ. August 18-22, 2010. (pp. 215-224).
7. Gwizdka, J. & Lopatovska, I. (2009). The role of subjective factors in the information search process. *Journal of the American Society for Information Science and Technology*, 60(12), 2452-2464.
8. Gwizdka, J. (2009a). What a difference a tag cloud makes: Effects of tasks and cognitive abilities on search results interface use. *Information Research*, 14(4), paper 414. Available online at <<http://informationr.net/ir/14-4/paper414.html>>.
9. Gwizdka, J. (2009b). Assessing cognitive load on web search tasks. *Ergonomics Open Journal*, 2, 114-123.

BIOGRAPHICAL SKETCH

10. Gwizdka, J. (2008). Revisiting search task difficulty: Behavioral and individual difference measures. *Proceedings of the 71st Annual Meeting of the American Society for Information Science and Technology*: Vol. 45. Silver Spring, MD: (ASIS&T).
11. Gwizdka, J., Spence, I. (2007). Implicit Measures of Lostness and Success in Web Navigation. *Interacting with Computers*. 19(3). 357-369.
12. Gwizdka, J. Chignell, M.H. (2007). Individual Differences. In W. Jones and J. Teevan (Eds.) *Personal Information Management*. (pp. 206-220). University of Washington Press: Seattle and London.
13. Gwizdka, J., Chignell, M.H. (2004). Individual Differences and Task-based User Interface Evaluation: A Case Study of Pending Tasks in Email. *Interacting with Computers*. 16 (4). 769-797.
14. Gwizdka, J. (2002). TaskView-Design and Evaluation of a Task-based Email Interface. *Proceedings of the IBM Centers for Advanced Studies Conference: CASCON'2002*. Toronto, Canada. 136-145.
15. Kuchinsky, A., Pering C., Freeze, D., Creech, M., Serra, B., Gwizdka, J. (1999). FotoFile: A Consumer Multimedia Organization & Retrieval System. *Proceedings of the ACM Conference on Human Factors in Computing Systems CHI'99*. ACM Press. 496-503.

Selected Research Grants and Awards

- 2011: Implicit Detection of Relevance Decisions and Affect in Web Search (\$71,579). Google Research Award
- 2008-2010: Personalization of the digital library experience (\$964,887). Institute of Museum and Library Services (IMLS). Co-Principal Investigator, with Dr. Nick Belkin (PI) & Dr. Xiangmin Zhang (Co-PI).
- 2008-2010: Mobile iThinking – Mobile tablet computers for active learning (\$83,720). 2008 Hewlett Packard Teaching Grant. Principal Investigator, with Dr. Claire McInerney (Co-PI).

Research Highlights

Dr. Jacek Gwizdka conducts research in human-information interaction with a particular focus on the relationship between a user's cognitive and affective characteristics in their interactions with computer-mediated information environments. This includes the study of searching for information, navigating the Web, and other activities. His research objectives include both the characterization and the enhancement of these interactions. His past research includes examination of effects of cognitive abilities on information finding, pen-based interfaces (a.k.a. tablet PC) for information capture, and email interfaces for pending task awareness. Dr. Gwizdka's current research interests include personalization, implicit user profiling based on rich interaction data and on physiological signals, and application of cognitive neuroscience to information seeking. Dr. Gwizdka is a member of ACM, ACM-SIGCHI and ASIS&T.

Graduate Advisors

Dr. Ian Spence, Postdoctoral Advisor, University of Toronto
Dr. Mark Chignell, Doctoral Advisor, University of Toronto
Dr. Mark Fox, Master Thesis Advisor, University of Toronto

Biographical Sketch, Nicholas J. Belkin

(a) Professional Preparation

Institution	Major	Degree & Year
University of Washington (Seattle)	Russian Language & Literature	BA, 1968
University of Washington (Seattle)	Librarianship	MLib., 1970
University College, University of London	Information Studies	Ph.D., 1977

(b) Appointments

Dates	Employer	Position
7.98-date	Rutgers University, New Brunswick, NJ	Professor II of Information Science
7.07-6.08	Rutgers University, New Brunswick, NJ	Director, Ph.D. Program in Communication, Information & Library Studies
7.02-6.05	Rutgers University, New Brunswick, NJ	Chair, Department of Library and Information Science
7.99-6.02	Rutgers University, New Brunswick, NJ	Director, Ph.D. Program in Communication, Information & Library Studies
4.94-1.95	Institute of Systems Science, National University of Singapore	Visiting Scientist
5.85-6.98	Rutgers University, New Brunswick, NJ School of Communication, Information & Library Studies	Professor of Information Science, Member of the Ph.D. Program in Communication, Information & Library Studies; from 9.94 to date, Affiliate of the Rutgers Center for Cognitive Science; from 7.96 to date, Member of the Rutgers Graduate Program in Psychology
9.82-4.83	Free University, Berlin, Germany Faculty of Communication	Senior Research Fellow
9.79-8.80	University of Western Ontario, London, Canada, School of Library and Information Science	Visiting Associate Professor, Information Science
9.75-8.85	The City University, London, England Department of Information Science	Lecturer in Information Science, from 10.81, Senior Lecturer
2.75-7.75	Hatfield Polytechnic, Hatfield, England	Temporary Lecturer, Linguistics

(c) Selected Recent Publications

Publications Closely Related to the Proposed Project

- BELKIN, N.J. (2010) On the evaluation of interactive information retrieval systems. In: B. Larsen, J.W. Schneider & F. Åström (Eds.) *The Janus Faced Scholar. A Festschrift in Honour of Peter Ingwersen* (pp. 13-21). Copenhagen: Royal School of Library and Information Science.
- LI, Y. & BELKIN, N.J. (2010) An exploration of the relationships between work task and interactive information search behavior. *Journal of the American Society for Information Science and Technology*, v. 61: 1771-1789.
- LIU, J. & BELKIN, N.J. (2010) Personalizing information retrieval for multi-session tasks: the roles of task stage and task type. In *Proceedings of the 2010 ACM SIGIR International Conference on Research and Development in Information Retrieval (SIGIR 2010)* (pp. 26-33). New York: ACM.
- LIU, J., COLE, M.J., LIU, C., BIERIG, R., GWIZDKA, J., BELKIN, N.J., ZHANG, J., ZHANG, X. (2010) Search behaviors in different task types. In *Proceedings of the 2010 ACM/IEEE Joint Conference on Digital Libraries (JCDL 2010)* (pp. 69-78). New York: ACM.

2010 at <http://staff.science.uva.nl/~kamps/ireval/program.html>

YUAN, X. & BELKIN, N.J. (2010) Evaluating an integrated system supporting multiple information-seeking strategies. *Journal of the American Society for Information Science and Technology*, v. 61: 1987-2010.

YUAN, X. & BELKIN, N.J. (2010) Investigating information retrieval support techniques for different information seeking strategies. *Journal of the American Society for Information Science and Technology*, v. 61: 1543-1563.

BELKIN, N.J., COLE, M., & LIU, J. (2009) A model for evaluation of interactive information retrieval. In: *Proceedings of the SIGIR 2009 Workshop on the Future of IR Evaluation*. Retrieved on January 26

LI, Y. & BELKIN, N.J. (2008) A faceted approach to conceptualizing tasks in information seeking. *Information Processing & Management*, v. 44 (6): 1822-1837

KELLY, D. & BELKIN, N.J. (2004) Display time as implicit feedback: understanding task effects. In J. Allan, P. Bruza & K. Järvelin (Eds.) *SIGIR '04. Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (pp. 377-384). New York: ACM.

KELLY, D. & BELKIN, N.J. (2002) A User Modeling System for Personalized Interaction and Tailored Retrieval in Interactive IR. In *Proceedings of ASIST 2002* (pp. 316-325). Medford, NJ: Information Today.

(d) Synergistic Activities

President, American Society for Information Science and Technology, 2005-2006.

Chair, ACM Special Interest Group on Information Retrieval, 1995-1999.

American Society for Information Science and Technology, Award of Merit, 2003

American Society for Information Science (ASIS) Award for Excellence in Research in Information Science, 1997.

ASIS Outstanding Information Science Teacher Award, 1990

e. Thesis Advisor and Postgraduate-Scholar Sponsor in Previous Five Years

Ralf Bierig, Postdoctoral-Scholar, Rutgers University; Michael Cole (in progress); Jeonghyun Kim, University of North Texas; Hyuk-Jin Lee, Texas Womens University; Yuelin Li, Nankai University, China; Chang Liu (in progress); Jingjing Liu, Southern Connecticut State University; Irene Lopatovska, Pratt Institute; Jeanette de Richmond (in progress); Mark Sharp (in progress); Muh-Chyun Tang, National Taiwan University; Xiaojun Yuan, University at Albany

Total Ph.D. Students advised: 27

Total Postgraduate –Scholars advised: 1

Michael E. Lesk

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Home

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Employment

Michael Lesk is Professor at Rutgers University and former chair of the Library and Information Science Department. From 1998 to 2002 he was Division Director for Information and Intelligent Systems at the National Science Foundation, and has consulted for them on occasion. From 1995 to 1998 he was a Chief Research Scientist at Bellcore, while from 1983 until September 1995 he was Executive Director of the Computer Science Research Department (under various names). Earlier (1969-1983) he had been a member of staff in the Computing Science Research Center at Bell Laboratories. From 1983-1985 he was also adjunct lecturer in Computer Science at Columbia University. During most of 1987 he was visiting University College London as a Senior Research Fellow of the British Library. During 2009-10 he was a visiting faculty member at Google.

Awards

1. National Academy of Engineering, elected 2005.
2. Usenix Lifetime Achievement Award "The Flame" for UUCP; presented at the Usenix Conference, San Francisco, January 1994;
3. Usenix card deck, 7 of Clubs; one of 52 "founders" of Unix recognized by Usenix;
4. ACM Fellow, named 1995.
5. Distinguished MTS award. Bell Laboratories, 1983.

Research Grants

1. NSF 0915871: *Assessing Technology Requirements For Preventing Teamwork Errors in Safety-Critical Settings*, with Aleksandra Sarcevic, Randall Burd, Ivan Marsic, David Stockwell, and Meredith Tinti (collaborative proposals) total \$300,000, 9/15/2009-8/31/2012.
2. NSF IIS-0441172: HCI (SGER): *Finding Happiness: Indexing Emotions in Digital Video*, with Aleksandra Sarcevic, \$58,530, 9/1/04-8/31/05.
3. Rutgers Academic Excellence Fund, *Mobile Knowledge*, with Kaan Ozbay and Christopher Rose; \$125,000 for one year, 7/1/07-6/30/08.
4. NSF IIS-0414557: IDM: *A Better Book Browser: How to Read a Million Books*, with Nina Wacholder, \$315,000 for 3 years, 10/1/04-9/30/07.

Education

1. Ph.D in Chemical Physics, Harvard University, 1969.
2. B. A. in Physics and Chemistry, Harvard College, 1964.

Research Interests:

My research interests recently have been in digital libraries; for several years I managed the funding of this research at NSF. Before that I worked on an online chemistry library supporting both text and image representations of journals, and studying its use by chemists. I also studied

access to old newspapers, scanning standards, and digital preservation. Other interests include access to data bases, including use of online dictionaries to improve document retrieval, a program to do computerized route finding and give driving directions, and an experiment comparing menu-oriented and command-oriented human interfaces to a library catalog system. I've also worked on computer typesetting tools, electronic mail, computer networking, compiler generators, and technical tools for intellectual property protection. Areas of research have included artificial intelligence, information retrieval, compilers, human factors, networking, data bases, and intellectual property law. Among software tools written are the original versions of the Unix utilities UUCP, TBL, and LEX.

Patent: 5,905,505 for copy-protection of on-screen text.

Ten selected publications.

1. Michael Lesk, *Understanding Digital Libraries*, MorganKaufmann, San Francisco (2004). This is the second edition of a book originally entitled *Practical Digital Libraries*, 1997.
2. Aleksandra Sarcevic, Ivan Marsic, M. E. Lesk, and R. S. Burd, "Transactive memory in trauma resuscitation," *Proc. 2008 ACM Conf. On Computer Supported Cooperative Work*, pp 215-224, San Diego, CA.
3. Aleksandra Sarcevic, M. E. Lesk, I. Marsic, and R. S. Burd, "Quantifying adaptation parameters for information support of trauma teams," *Proc. ACM SIGCHI Conference on Human Factors in Computing Systems (CHI 2008)*, pp. 3303-3308 Florence, Italy (April 5-10, 2008).
4. Michael Lesk, "Easy 3D: User Opinions," *EVA London Conference*, pp. 39.1-39.10 (2007).
5. Aleksandra Sarcevic and M. E. Lesk, "Searching for emotional content in digital video," *CHI-2006 Workshop "HCI and the Face"*, pp. 39.1-39.10, Montreal, Canada (April 22-27, 2006).
6. R. Entlich, L. Garson, M. Lesk, L. Normoré, J. Olsen, and S. Weibel, "Making a Digital Library: the Contents of the CORE Project," *ACM Trans. on Inf. Sys.*, 15, 2, pp. 103-123, (April 1997).
7. M. E. Lesk, "Going Digital," *Scientific American*, 276, 3, pp. 58-60, 1984.
8. M. Lesk, "Digital libraries meet electronic commerce: on-screen intellectual property," *Proc. ADL '96*, 14, 4, pp. 58-65, Washington, DC (1996).
9. M. E. Lesk, "Automatic Sense Disambiguation Using Machine Readable Dictionaries: How to Tell a Pine Cone from an Ice Cream Cone," *Proc. 1986 SIGDOC Conference*, 1, 4, pp. 65-74, Toronto (June, 1986).
10. R. J. Elliott and M. E. Lesk, "Route Finding in Street Maps by Computers and People," *Proc. Nat'l Conf. on Artificial Intelligence*, 251, 3, pp. 258-261, Pittsburgh, Pa. (August 1982).

Organizational (excerpt):

Chair, National Academies Board on Research Data and Information (2008-2010).
Chair, ACM SIGIR (Special Interest Group on Information Retrieval), 1983-1985;
Chair, ACM SIGLASH (Special Interest Group on Language Analysis and Studies in the Humanities), 1973-1975;

Biographical Sketch: Jennifer L. Gibbs

(a) Professional Preparation

Pomona College	Philosophy	B.A., 1992
University of Southern California	Communication	M.A., 1999
University of Southern California	Communication	Ph.D., 2002
University of California, Irvine	Globalization of E-Commerce	2002-2004

(b) Appointments

2010 – Present	Associate Professor, Department of Communication, Rutgers University
2004 – 2010	Assistant Professor, Department of Communication, Rutgers University
2002 – 2004	Postdoctoral Research Fellow, Center for Research on Information Technology and Organizations (CRITO), University of California, Irvine

(c) Publications

Publications Related to Proposed Project

- Gibson, C. B., Gibbs, J. L., Stanko, T., Tesluk, P., & Cohen, S. G. (in press). Including the "I" in virtuality and modern job design: Extending the Job Characteristics Model to include the moderating effect of individual experiences of electronic dependence and co-presence. *Organization Science*.
- Gibbs, J. L. (2009). Dialectics in a global software team: Negotiating tensions across time, space, and culture. *Human Relations*, 62(6), 905-935. *Awarded Human Relations Paper of the Year 2009*.
- Gibbs, J. L. (2009). Culture as kaleidoscope: Navigating cultural tensions in global collaboration. In *Proceedings of the ACM International Workshop on Intercultural Collaboration (IWIC 2009)*.
- Gibbs, J. L., Nekrassova, D., Grushina, Y., & Abdul Wahab, S. (2008). Reconceptualizing virtual teaming from a constitutive perspective: Review, redirection, and research agenda. In C. S. Beck (Ed.), *Communication yearbook 32* (pp. 187-229). New York: Routledge.
- Gibson, C. B., & Gibbs, J. L. (2006). Unpacking the concept of virtuality: The effects of geographic dispersion, electronic dependence, dynamic structure, and national diversity on team innovation. *Administrative Science Quarterly*, 51, 451-495.

Other Significant Publications

- Gibbs, J. L., Ellison, N. B., & Lai, C. H. (2011). First comes love, then comes Google: An investigation of uncertainty reduction strategies and self-disclosure in online dating. *Communication Research*, 38(1), 70-100.

- Gibbs, J. L., Scott, C. R., Kim, Y. H., & Lee, S. K. (2010). Examining tensions in telework policies. In S. D. Long (Ed.), *Communication, relationships, and practices in virtual work* (pp. 1-25). New York: IGI Global.
- Heino, R. D., Ellison, N. B., & Gibbs, J. L. (2010). Relationshopping: Investigating the market metaphor in online dating. *Journal of Social and Personal Relationships*, 27(4), 427-447.
- Gibbs, J. L., Ellison, N. B., & Heino, R. D. (2006). Self-Presentation in online personals: The role of anticipated future interaction, self-disclosure, and perceived success in Internet dating. *Communication Research*, 33(2), 152-177.
- Gibbs, J. L. (2006). Decoupling and coupling in global teams: Implications for human resource management. In G. K. Stahl & I. Bjorkman (Eds.), *Handbook of research in international human resource management* (pp. 347-363). Northampton, MA: Elgar.

(d) Synergistic Activities

- Author of several publications examining virtual team collaboration
- Innovative teaching using virtual teams, including a graduate global teams project with MBA students from seven countries, several undergraduate online groups projects, and a graduate research project involving analysis of online data from these virtual groups
- Teaching several related courses, including graduate seminars (Dynamics of Global Organizations, Organizational Culture, Organizational Communication Research) and undergraduate courses (Organizational Communication, Intercultural Communication)
- Service to the engineering community through ethnographic research on global software teams at Xerox, including on-going consulting recommendations and training workshops to improve global team communication

(e) Collaborators & Other Affiliations

Collaborators in the Last 48 Months: Sally Abdul Wahab, Rutgers University; Seong Eun Cho, Rutgers University; Nicole Ellison, Michigan State University; Niclas Erhardt, Rutgers University; Cristina Gibson, University of California, Irvine; Yana Grushina, Rutgers University; Daniel Halpern, Rutgers University; Rebecca Heino, Georgetown University; Heewon Kim, Rutgers University; Young Hoon Kim, Rutgers University; Chih-Hui Lai, Rutgers University; Sun Kyong Lee, Rutgers University; Dina Nekrassova, Rutgers University; Craig Scott, Rutgers University; Taryn Stanko, University of California, Irvine; Paul Tesluk, University of Maryland; Alena Vasilyeva, Rutgers University

Graduate Advisor: Patricia Riley, University of Southern California

Postdoctoral Sponsor: Kenneth Kraemer, University of California, Irvine

Thesis Advisor: Sally Abdul Wahab, Seong Eun Cho, Young Hoon Kim

Total graduate students advised last 5 years (PhD only): 4

Frederick Kenneth Schmidt

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OBJECTIVE

Make tomorrow's world better, safer and smaller by bringing the best ideas from academia and industrial research to market. Connect brilliant minds with the talent and opportunities they need to be successful, test ideas and inventions against current realities and future market potential, and drive innovations from conception to market through leadership and persistence.

EXPERIENCE

Academic Relations Director

Yahoo! Labs

New York, NY May '07 - Present

- Led a team responsible for forging and maintaining deep relationships with faculty and staff at key universities in the US and around the world.
- Set up programs to increase and track research collaboration, engage with business leaders to use university researchers to address their problems. Programs included data sharing, student support, diversity outreach, faculty grants and access to scientists.
- Monitored and measured Yahoo!'s share-of-mind on campus vs major internet companies. Identified business opportunities from campus relationships and extended/modified programs to leverage business value from campus assets.
- Two patent applications filed.

Senior Technical Consultant

Yahoo! Labs

New York, NY Mar '06 - Apr '07

- Help set up new university relations program for Yahoo! Research. Set up database of top candidate universities, suggest strategy and approach for university contacts. Set up meetings, handle correspondence and handle follow-up after on-site visits. Manage relationships with universities for grants, internship programs, site visits, research collaborations and intellectual property management.
- Establish a new data sharing program for Yahoo!
- Establish a way to track and manage patent production within Yahoo! Labs.

Senior DoD Consultant

Rutgers University

Piscataway, NJ Mar '06 - Jan '07

- Provide insights into DoD funding processes. Identify sources of funding across various agencies and services. Highlight possible strategic approaches to connecting with agency/service projects and programs. Provide introductions to program managers and service leaders.

Technical Operations Consultant

DARPA Arlington, VA

May '02 - Apr '06

- Provide strategic planning advice to IPTO Director. Manage relationships with universities and other interested parties. Set up review process for office-wide BAA. Organize, plan and execute national Cognitive Systems Conference. Advise on PR and other external affairs matters. Advise Program Manager on ASSIST program, provide training, trial planning and software development people and process planning.

Business Development Director

AT&T Research Florham Park, NJ

Jan '95 - Mar '02

- Handle operations of AT&T's Research Laboratory. Set up and manage a full-spectrum customer visits program. Design, develop and execute a monthly Newsletter for all researchers, delivered on the web and in print. Manage several recognition programs for researchers. Set up internal incubator (the "eGarage") to connect researchers with business and customer needs. Member of an intellectual property review team to review and recommend patent proposals. Help researchers find the right 'story' to bring their research ideas to the public. Seven US patent applications approved.

EDUCATION

Master of Business Administration (Strategic Planning and Marketing)

New York University New York, NY May '81

- Supplemented with several continuing education programs each year during my career.

Master of Science (Mechanical Engineering)

Carnegie Mellon University Pittsburgh, PA May '73

- Focus in computer modeling and process design.

Bachelor of Science (Mechanical Engineering)

Carnegie Mellon University Pittsburgh, PA May '71

Highlights

- Engaging, Managing and Operating R&D Labs
- Research Operations and Strategy
- Project Management, Team Organization and Leadership
- Software Development Management
- DoD and Military Funding Agency Connections
- Top Secret Security Clearance

SUMMARY

R&D business leader with demonstrated results in innovation management, technology incubation and new product development. Accomplished technology communicator and idea leader in the IT, telecom and internet industries. Customer relationship professional focused on translating customer needs into vendor/developer requirements, and new technology capabilities into customer benefits. Leader of both business and software development teams, enabling self-directed groups to focus on strategic goals. Excellent communication skills demonstrated in customer presentations, trade shows and media interviews. A resourceful, results-driven, people person and a principle-centered consensus builder, bringing high energy and attention-to-detail to every endeavor.

EXPERTISE IN:

- R&D Strategy/Planning/Operations
- Technology Incubation/Transfer
- Government R&D Management
- Customer Account Management
- Messaging and Communications
- Product Marketing
- Project Management
- Software Development & Support
- Quality Improvement Process
- Operations Support Systems
- MS Office and other Productivity Tools
- TS Clearance, USAR w/ Hon. Discharge

Julie Strange, MLIS

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EDUCATION

Rutgers University, New Brunswick, New Jersey	October 2006
<i>Masters in Library and Information Science</i>	
Arcadia University, Glenside, Pennsylvania	May 2004
<i>B.A. in Liberal Studies. Minors in English & Women's Studies. Graduated with "Departmental Honors"</i>	

HONORS & AWARDS

• Chosen delegate, Self-Represented Litigation Network National Center for State Courts	January 2010
Conference on Public Libraries and Access to Justice	
• Library Society of the World, Shovers and Makers	Class of 2009
• American Library Association Emerging Leaders	Class of 2008
• Maryland Library Leadership Institute	Class of 2007
• The Gordon Family Award, Arcadia University for outstanding research and writing	May 2004
• The Distinguished Scholar Award, Arcadia University	August 2000

PROFESSIONAL INVOLVEMENT

Maryland Access to Justice Commission, Public Education Committee	June 2010 - Present
Reference Renaissance Conference	
<i>Planning, Communications, Evaluation and Marketing Committee</i>	2010
<i>Publicity Chair and Program Committee Member</i>	2008
Maryland Library Associates Training Institute (LATI) Planning Committee	2010 - Present
Maryland VisionQuest / 5 quarters Planning Committee	2009 - Present
Maryland Library Leadership Institute Planning Committee	2008 - Present
American Library Association	2004 - Present
<i>Invited Member, ALA Emerging Leaders Program Subcommittee</i>	August 2010 - Present
<i>Reference and User Services Association (RUSA)</i>	
<i>Virtual Reference Committee and Discussion Group (RUSA MARS)</i>	
<i>Liaison, Collaborative Virtual Reference Section</i>	2007 - 2009
Maryland Library Association	2006 - Present
<i>Public Services Division</i>	
New Jersey Library Association- Reference and Information Technologies Sections	2005 - 2008
<i>Co-editor of NJLA Reference Section's newsletter Reference Section Quarterly</i>	October 2006 - February 2008
"Usual Suspect," <i>T is for Training</i> podcast for library trainers	2008 - Present

WORK EXPERIENCE

Maryland AskUsNow!	
<i>Statewide Coordinator</i>	September 2008 - Present
<i>Operations Supervisor</i>	November 2006 - September 2008
Rutgers University	
<i>Douglass Library Information Assistant</i>	September 2006 - November 2006
<i>Alexander Library Reference Assistant</i>	September 2005 - October 2006
Seeking Synchronicity: Evaluating Virtual Reference Services from User, Non-User, and Librarian Perspectives	
<i>Research Assistant to Dr. Marie L. Radford</i>	February 2006 - November 2006

INVITED PRESENTATIONS & TALKS

<i>Customer Service as Advocacy</i>	October 19, 2010
United States Army Medical Research and Materiel Command Library Workshop	

<i>Tuesday Tech Talk on Twitter</i> Presented with Amy Kearns at Princeton Public Library	November 8, 2009
<i>Tweet What? 6 Sweet Ways to Connect with Your Customers in 140 Characters or Less</i> Presented with Amy Kearns at South Jersey Regional Library Cooperative	August 25, 2009
<i>Using Web 2.0 to strengthen External Support for VR Services</i> Opening Speaker for the American Library Association (ALA) Reference and User Services Association (RUSA) Machine Assisted Reference Section (MARS) Virtual Reference Discussion Group at ALA Annual, Chicago	July 11, 2009
<i>Tweet What? 6 Sweet Ways to Connect with Your Customers in 140 Characters or Less</i> Presented with Amy Kearns at New Jersey Library Association Annual Conference	April 29, 2009
<i>Chat Reference 101</i> Montgomery County Public Library, Staff Day	October 13, 2008
<i>Best Practices in Cooperative Virtual Reference: Management Tips for a Successful Service</i> Presented with Beth Cackowski (QandANJ.org) and Mark Beatty (AskAway Wisconsin) at American Library Association Annual Conference, Anaheim, CA	June 28, 2008
<i>Emerging Leaders Poster Session: Best Practices for Business Libraries and Centers</i> Presented with Vincci Kwong (Indiana University South Bend), Adriana Trujillo (Texas A&M University Libraries), and Julie Yen (University of Illinois at Urbana-Champaign) at American Library Association Annual Conference, Anaheim, CA	June 27, 2008
<i>Pecha Kucha, Tuesday Tech Talk</i> Presented with Peter Bromberg, Romina Gutierrez, Janie Hermann, Robert Keith, and John LeMasney at Princeton Public Library	June 3, 2008
<i>Accessible Online Book Sources</i> Presented with Donna Crenza and Catherine Durivage at Online Programming for All Libraries (OPAL) webinar	September 20, 2007
<i>Eliminating Barriers to Service with Lightweight Chat</i> Presented with Catherine Durivage, Heather Muller and Joe Thompson at QuestionPoint webinar	September 17, 2007
<i>Reaching Out Beyond the Walls: Virtual Reference, MySpace and Second Life</i> Presented with Maryann Sheehan and Gale Zasada at Computers in Libraries Conference, Crystal City, VA	April 17, 2007

COMPETITIVE PRESENTATIONS & PAPERS

Trujillo Gonzalez, Adriana, Vincci Kwong, Julie Strange, and Julie Yen. <i>A Guide to Excellent Creative Business Libraries and Centers</i> . Reference and User Services Quarterly. 48.3 (2009): 232-238. http://bit.ly/haVh39	
<i>This is Why I Got Into Library Work: How Virtual Reference IS The Future of Libraries.</i> Presented with Stephanie Petruso (Anne Arundel County Public Library), Kendra Frost (Harford County Public Library), & Jess Chaiken (National Rehabilitation Information Center) at Maryland Library Association Annual Conference, Ocean City	May 15, 2009
<i>Now! That's What I Call Customer Service!</i> Presented with Cathay Crosby (Maryland AskUsNow!) at Maryland Library Association Annual Conference, Ocean City	May 15, 2009
<i>Tweet What? 6 Sweet Ways to Connect with Your Customers in 140 Characters or Less</i> Presented with Amy Kearns at Internet Librarian, Monterey, CA	October 26, 2009
<i>Ready, Set, Go! 90 Minutes to a Collaborative Virtual Reference Service Panel</i> Presented with Beth Cackowski, Laura Osterhout, Vince Mariner at A Reference Renaissance, Denver, CO	August 4, 2008

TEACHING & TRAINING

<i>Basic Reference Interview and Resources including Maryland AskUsNow!</i> Presented with Bob Burke and Helen Blumberg at Maryland Library Associates Training Institute	October 13, 2010
<i>Maryland AskUsNow!: An Introduction to Virtual Reference</i> University of Maryland, iSchool. Masters level Reference class	October 13, 2010
University of Maryland, iSchool. Masters level Information Access class	November 9, 2010
<i>Virtual Communication Skills</i> Online Class for CJRLC Technology Group presented with Beth Cackowski (Q&ANJ.org)	March 17, 2009
<i>What is Twitter?</i> Online Class, How to Develop and Deliver Synchronous Training	April 30, 2008

JEFFREY POMERANTZ

Education

Syracuse University	Information Studies	Ph.D.	2003
Simmons College	Library & Information Science	M.S. (L.I.S.)	1997
University of Massachusetts at Amherst	Communication	B.A.	1993

Appointments

2009 -- Present	Associate Professor
2003 -- 2009	Assistant Professor
	School of Information and Library Science
	University of North Carolina at Chapel Hill

Publications related to this proposal

Pomerantz, J. (in press). Identifying Reusable Resources in Digital Reference Responses. *Reference & User Services Quarterly*, 51(1).

Eakin, L., & Pomerantz, J. (2009). Virtual Reference, Real Money: Modeling Costs in Virtual Reference Services. *portal: Libraries and the Academy*, 9(1), 133-164.

Pomerantz, J. (2008). Digital (Library Services) and (Digital Library) Services. *Journal of Digital Information*, 9(2). journals.tdl.org/jodi/article/view/227

Pomerantz, J., Mon, L., & McClure, C. R. (2008). Evaluating Remote Reference Service: A Practical Guide to Problems and Solutions. *portal: Libraries and the Academy*, 8(1), 15-30.

Pomerantz, J. (2008). Evaluation of Online Reference Services. *Bulletin of the American Society for Information Science and Technology*, 34(2), 15-19. www.asis.org/Bulletin/Dec-07/pomerantz.html

Other significant publications

Pomerantz, J., Abbas, J., & Mostafa, J. (2009). Teaching Digital Library Concepts Using Digital Library Applications. *International Journal on Digital Libraries*, 10(1), 1-13.

Wildemuth, B. M., Pomerantz, J., Oh, S., Yang, S., & Fox, E. A. (in press). The Variety of Ways in which Instructors Implement a Modular Digital Library Curriculum. In *Proceedings of the 9th ACM/IEEE-CS Joint Conference on Digital Libraries*. New York: Association for Computing Machinery.

Pomerantz, J., Wildemuth, B. M., Oh, S., Yang, S., & Fox, E. A. (2008). Evaluation of a Curriculum for Digital Libraries. In *Proceedings of the 8th ACM/IEEE-CS Joint Conference on Digital Libraries* (pp. 462). New York: Association for Computing Machinery.

Pomerantz, J., Choemprayong, S., & Eakin, L. (2008). The Development and Impact of Digital Library Funding in the United States. In D. A. Nitecki & E. Abels (Eds.), *Advances in Librarianship* (Vol. 31, pp. 37-92). New York: Academic Press.

Pomerantz, J., Oh, S., Wildemuth, B., Hank, C., Tibbo, H., Fox, E. A., et al. (2009). *Comparing Curricula for Digital Library and Digital Curation Education*. Paper presented at the DigCCurr 2009: Digital Curation Practice, Promise and Prospects, Chapel Hill, NC.

Synergistic Activities

2008 – 2009	Workshop: Coordinating EU-US Digital Library Education
2006 – 2008	Curriculum Development: Digital Libraries
2006 – 2007	State Library of North Carolina Library Services and Technology Act Program Evaluation
2006	The Return on Investment of Collaborative Virtual Reference Service
2003 – 2005	Evaluation of the State Library of North Carolina's Statewide Virtual Reference Service

Recent Collaborators

Edward A. Fox, Department of Computer Science, Virginia Tech

Charles R. McClure, College of Information, Florida State University

Lorri Mon, Charles R. McClure, College of Information, Florida State University

Michael Seadle, Berlin School of Library and Information Science / Institut für Bibliotheks- und Informationswissenschaft

Seth van Hooland, Sciences de l'information et de la communication, Université Libre de Bruxelles

Barbara M. Wildemuth, School of Information and Library Science, UNC Chapel Hill

Rich Gazan
Assistant Professor
Department of Information & Computer Sciences
Library & Information Science Program
University of Hawaii
1680 East-West Road, POST 314B
Honolulu, HI 96822
gazan@hawaii.edu

Bio

Rich Gazan (PhD UCLA 2004, MLIS University of Hawaii 1998, BA Sociology UC Berkeley 1987) holds a dual-culture faculty position at the University of Hawaii, at the intersection of Information & Computer Sciences and Library & Information Science. His research interests include how people integrate diverse types of knowledge, from collections of diverse documents to the work of people with different kinds of expertise.

He studies information integration in interdisciplinary scientific collaborations as a Co-Investigator with the NASA Astrobiology Institute at UH, and in social computing environments with the Answerbag question answering community. He is a Co-Investigator on Water and Habitable Worlds, a 5-year, \$8 million NASA grant awarded to the University of Hawaii NASA Astrobiology Institute, where he works with scientists from a wide range of disciplines studying life beyond Earth.

He helped develop the Answerbag social Q&A site in 2004, which now attracts in excess of 12 million unique visitors per month and still serves as his primary research testbed. Answerbag is built around a "one question—multiple answers" architecture, allowing users to see the range of diverse answers on a single page, ranked by user ratings and enhanced by comment threads around each answer. The collected answer pages serve as boundary objects, or common spaces in which novices and experts can share opinions, allowing users to integrate the ideas of a wide range of contributors. His social Q&A research addresses questions of how online community members produce, evaluate and synthesize diverse content, virtual social capital, online identity and aggregate peer authority.

Publications and Presentations (abridged)

- Rich Gazan (2011) Redesign as an Act of Violence: Disrupted Interaction Patterns and the Fragmenting of a Social Q&A Community. ACM CHI Conference on Human Factors in Computing Systems (CHI 2011).
- Rich Gazan (2010). Microcollaborations in a Social Q&A Community. Information Processing & Management 46(6), 693-702.
- Rich Gazan (2010). AIRFrame: Integrating Diverse Digital Collections in Astrobiology. ACM/IEEE Joint Conference on Digital Libraries, 21-25 June 2010, Gold Coast, Queensland, Australia.

- Rich Gazan and Lisa Miller (2010). The Practical Mechanics of Interdisciplinary Science. Astrobiology Science Conference, 26-29 April 2010, League City, TX.
- Lisa Miller and Rich Gazan (2010). Adaptation of an Open Source Semantic and Conceptual Retrieval Framework to the Astrobiological Domain. Astrobiology Science Conference, 26-29 April 2010, League City, TX.
- Rich Gazan (2009). When Online Communities Become Self-Aware. Hawaii International Conference on System Sciences (HICSS-42), 5-9 January 2009, Waikoloa, HI.
- Rich Gazan (2009). When Wrong is Right: Intentionally Bad Answers in a Social Q&A Community. American Society for Information Science & Technology Annual Meeting, 6-11 November 2009, Vancouver, BC.
- Rich Gazan (2009). Dimensions of Trust in Social Reference. American Society for Information Science & Technology Annual Meeting, 6-11 November 2009, Vancouver, BC.
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- Rich Gazan (2005). Imposing Structures: Narrative Analysis and the Design of Information Systems. Library & Information Science Research 27(3), 346-362.

Editorial and grant reviewer for:

- U.S. National Science Foundation; Science, Technology and Society Program
- U.S. National Science Foundation; Office of Cyberinfrastructure, Strategic Technologies for Cyberinfrastructure
- ACM Conference on Human Factors in Computing Systems (CHI)
- ACM Australasian Computer-Human Interaction Conference (OZCHI)
- Americas' Conference on Information Systems (AMCIS)
- Hawaii International Conference on Systems Sciences (HICSS)
- *Journal of the American Society for Information Science & Technology*
- *Journal of Digital Information*
- *Library Trends*
- *Journal of Education for Library & Information Science*

Curriculum Vitæ

Joseph W. Janes

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Education

A.B., Mathematics/Information & Library Science, 1982

M.L.S., 1983

Ph.D., Information Transfer, 1989 Dissertation title: *Toward a Search Theory of Information*
Syracuse University

Positions Held

University of Washington

The Information School

1999-

Associate Professor (Assistant Professor 1999-2003, Associate Dean for Academics 2004-2007)

University of Michigan

The Internet Public Library

1996-1998

Librarian, School of Information, and Director of the Internet Public Library Overall responsibility and authority for the administration and leadership of the IPL project; supervision of 6 full-time staff, students, interns, and other participants;

University of Michigan

School of Information & Library Studies

1989-1996

Assistant Professor

Selected Publications & Presentations

BOOKS

Janes, Joseph, *Introduction to Reference Work in the Digital Age*, New York: Neal-Schuman, 2003.

PUBLICATIONS (REFEREED)

"Anonymity in a World of Digital Books: Google Books, Privacy, and the Freedom to Read", *Policy & Internet*, in press (with Elisabeth Jones).

"The Thank You Study: User Feedback in E-mail 'Thank You' Messages", *Reference and User Services Quarterly* 46 (4), 2007, 53-59 (with Lorri Mon).

"Question Negotiation and the Technological Environment", *DLib* 9 (2), February 2003.
(www.dlib.org) (with Joanne Silverstein).

"Finger on the Pulse: Librarians Describe Evolving Reference Practice in an Increasingly Digital World", *Reference & User Services Quarterly* 42(1), 54-65, 2002. (with Chrystie Hill).

"Digital Reference: Reference Librarians' Experiences and Attitudes", *Journal of the American Society for Information Science & Technology* 53(7), 549-566, 2002.

"Ask-an-Expert Services Analysis", *Journal of the American Society for Information Science & Technology* 52 (13), 1106-1121, 2001 (with Chrystie Hill and Alex Rolfe).

"Digital Reference Services in Academic Libraries", in *Reference and User Services Quarterly* 39 (2), 145-150, Winter 1999 (with David Carter and Patricia Memmott).

"Other Peoples' Judgments: Users' and Others' Judgments of Document Relevance, Topicality, and Utility", *Journal of the American Society for Information Science* 45(3), 160-171, 1994.

"Relevance Judgments of Actual Users and Secondary Judges: A Comparative Study of Topicality", *Library Quarterly* 62(2), 150-168, 1992 (with Reneé McKinney).

"Relevance Judgments and the Incremental Presentation of Document Representations", *Information Processing and Management* 27(6), 629-646, 1991.

"Internet Librarian", *American Libraries*, monthly, September 2002 – present.

Grants

Online Computer Library Center (OCLC)/ALISE

Library and Information Science Research Grant Program \$15,000

(As PI, with Lori Mon) support for project entitled "The Thank You Study: User Satisfaction with Digital Reference Service", project dates 3/31/03-12/31/03

Library of Congress \$30,000

(as PI) support for projects, under common title "Digital Reference: Services, Attitudes and Evaluation", project dates 2/1/00-9/30/00

Andrew W. Mellon Foundation \$200,000

(as PI) support for development of Internet Public Library and exploration of mechanisms for economic viability and self-sustainability, awarded 3/96

United States Department of Education

College Library Technology and Cooperation Grants Program \$180,651

(co-PI with Carolyn Frost) support for project entitled "Integrating An Image Database into Gopher", project dates 10/1/93 - 9/30/95

Expert Testimony

American Library Association, et al., v. United States of America, et al.

Multnomah County Public Library, et al., v. United States of America, et al.

for the plaintiffs, 2001-2002.

Service

Information School, University of Washington

Chair, Library and Information Science Program, 2003-2004, 2010-

Associate Dean for Academics, 2004-2007

Honors

Isadore Gilbert Mudge Award for distinguished contributions to reference librarianship, 2006

Professional Associations

American Society for Information Science & Technology

American Library Association

Advisory Committee, Office of Information Technology Policy, 1998-2002

Committee on Accreditation, 2007-2011

R. David Lankes
Curriculum Vitae

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EDUCATION

- Ph.D. 1999 Syracuse University, School of Information Studies
Syracuse, NY. Information Transfer
Advisor: Michael B. Eisenberg
Dissertation: Building & Maintaining Internet Information Services
- M.S. 1999 Syracuse University
Syracuse, NY. Telecommunications
- B.F.A. 1992 Syracuse University
Syracuse, NY. Special Studies in Art (Multimedia Design)

TEACHING AND PROFESSIONAL EXPERIENCE

- 2009-Present Syracuse University, School of Information Studies, Syracuse, NY.
Director of the Library and Information Science Program. Oversee the Masters of Science in Library and Information Science. Duties include curriculum development, program promotion, scholarship decisions, new program development, and recruitment.
- 2007-2010 American Library Association's Office for Information Technology Policy, Washington, DC.
First OITP Fellow. Provided research input to the office and staff.
- 2005-Present Syracuse University, School of Information Studies, Syracuse, NY.
Associate Professor. Served as tenure track member of the faculty.
- 2002-2004 National Library of Canada, Ottawa, Canada
Visiting Fellow. Worked with National Library staff on digital reference projects.
- 2001-2004 OCLC Institute, Dublin, OH.
Adjunct Instructor. Reference curriculum redesign and delivery as part of OCLC's outreach effort.
- 2001-2002 Upstate Medical University, College of Health Professions, Syracuse, NY.
Adjunct. Worked with faculty to create joint research programs in technology, education and public health information.
- 2000-2001 Harvard University, School of Education, Cambridge, MA.
Visiting Scholar. Worked with the Gutman Library on library and education research.
- 2000 Syracuse University, Syracuse, NY.
Faculty Technology Associate. Worked with Faculty Computing to organize and deliver faculty development programs.
- 1998-2005 Syracuse University, School of Information Studies, Syracuse, NY.
Assistant Professor. Served as tenure track member of the faculty.

SELECTED JOURNAL ARTICLES AND SPECIAL ISSUES

- Stanton, J. M., Kim, Y., Oakleaf, M., Lankes, R. D., Gandel, P., Cogburn, D. & Liddy, E. D. (In press). Education for eScience Professionals: Job Analysis, Curriculum Guidance, and Program Considerations. *Journal of Education in Library and Information Science*.
- Lankes, R. David (2008). The ethics of participatory librarianship. *Journal of Library Administration*, 47(3/4), 233-241. Also published in Besnoy, A. L. (2009). *Ethics and integrity in libraries*. London: Routledge.
- Lankes, R. David (2008). Credibility on the Internet: Shifting from authority to reliability. *Journal of Documentation*, 64(5), 667-686. - 2009 Literati Outstanding Paper Award
- Lankes, R. David, Silverstein, J.L., Nicholson, S., & Marshall, T. (2007). Participatory networks: The library as conversation. *Information Research*, 12(4). [Available at <http://informationr.net/ir/12-4/colis/colis05.html>].
- Nicholson, S. & Lankes, R. David (2007). The Digital Reference Electronic Warehouse (DREW) project: Creating the infrastructure for digital reference research through a multi-disciplinary knowledge base. *Reference and User Services Quarterly*, 46(3), 45-59.
- Lankes, R. David, Gross, M., & McClure, C.R. (2006). Costing reference: Issues, approaches, and directions for research. *The Reference Librarian*, 46(95/96), 171-184.
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- Pomerantz, J., Nicholson, S., Belanger, Y., & Lankes, R. David (2004). The current state of digital reference: Validation of a general digital reference model through a survey of digital reference services. *Information Processing & Management*, 40(2), 347-363.
- Pomerantz, J., Nicholson, S., & Lankes, R. David (2003). Digital reference triage: An investigation using the Delphi Method into the factors influencing question routing and assignment. *The Library Quarterly*, 73(2), 103-120.
- Lankes, R. David, Gross, M., & McClure, C. (2003). Cost, statistics, measures, and standards for digital reference services: A preliminary view. *Library Trends*, 51(3), 410-413.

SELECTED BOOKS

- Lankes, R. David (2011). *The Atlas of New Librarianship*. Cambridge, Ma: MIT Press.
- Radford, M. & Lankes, R. David (Eds.) (2010). *Reference renaissance: Current and future trends*. New York: Neal-Schuman Publishers.
- Lankes, R. David (2009). *New concepts in digital reference*. San Rafael, CA: Morgan-Claypool
- McClure, C., Lankes, R. David, Gross, M., & Cholco-Devlin, B. (2007). *Statistics, measures and quality standards for assessing digital reference library services: Guidelines and procedures*. Beijing: Beijing Library Press. (also translated into Arabic)
- Lankes, R. David, Westbrook, L., Nicholson, S., Radford, M., & Silverstein, J. (Eds.). (2007). *Virtual reference service: From competencies to assessment*. New York: Neal-Schuman Publishers.
- Lankes, R. David, Abels, E., White, L., & Haque, S. (Eds.). (2005). *Creating a reference future*. New York: Neal-Schuman Publishers.

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Attachment B

Additional Related Literature

- Agosto, D. E., & Anderton, H. (2007). Whatever happened to "Always cite the source?": A study of source citing and other issues related to telephone reference. *Reference & User Services Quarterly*, 47(1), 44-54.
- Breitbach, W., Mallard, M., & Sage, R. (2009). Using meebo's embedded IM for academic reference services: A case study. *Reference Services Review*, 37(1), 83-98.
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- Connaway, L. S., Radford, M. L., Dickey, T. J., Williams, J. D., & Confer, P. C. (2008). Sense-making and synchronicity: Information-seeking behaviors of Millennials and Baby Boomers. *Libri*, 58(2), 123-135.
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- De Rosa, C., Cantrell, J., Hawk, J., & Wilson, A. (2006). *College students' perceptions of libraries and information resources: A report to the OCLC membership*. Dublin, Ohio: OCLC Online Computer Library Center, Inc. Retrieved from <http://www.oclc.org/reports/pdfs/studentperceptions.pdf>
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- Epperson, T. W., & Zemel, A. (2008). Reports, requests, and recipient design: The management of patron queries in online reference chats. *Journal of the American Society for Information Science and Technology*, 59(14), 2268-2283.
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- Harley, D., Henke, J., Lawrence, S., Miller, I., Perciali, I., Nasatir, D., Kaskiris, C., & Bautista, C. (2006). Use and users of digital resources: A focus on undergraduate education in the humanities and social sciences. Retrieved from <http://cshe.berkeley.edu/research/digitalresourcestudy/report/>
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- Janes, J., Hill, C., & Rolfe, A. (2001). Ask-an-expert services analysis. *Journal of the American Society for Information Science & Technology*, 52(13), 1106-1121.
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- Maximiek, S., Rushton, E., & Brown, E. (2010). Coding into the great unknown: Analyzing instant messaging session transcripts to identify user behaviors and measure quality of service. *College & Research Libraries*, 71(4), 361-373.
- Moeller, S. E. (2003). Ask-A-Librarian: An analysis of an e-mail reference service at a large academic library. *Internet Reference Services Quarterly*, 8(3), 47-61.
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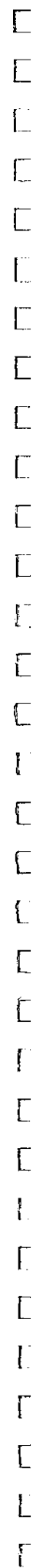
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- Radford, M. L. (2006a). Encountering virtual users: A qualitative investigation of interpersonal communication in chat reference. *Journal of the American Society for Information Science and Technology*, 57(8), 1046-1059.
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[illegible]

Attachment C: Schedule of Completion



Schedule of Completion

	Cost
	\$157,300
	\$190,000
	\$161,300
	\$197,620
	\$153,925
	\$137,700
	\$997,845

[illegible]

Attachment D: Example of Virtual Reference (live chat), Qwidget, and Social Q & A transcripts



Virtual Reference (Live Chat) Transcript Example

1 U Where can I find the leading drug companies in boston doing diabetes treatment/prevention R&D?

2 L [A librarian will be with you shortly, please hold.]

3 L [[Name]-BLC-UMass/Amherst - A librarian has joined the session]

4 L [Hello, I'm a reference librarian at the University of Massachusetts Amherst. How may I help you?]

5 U Where can I find the leading companies in boston doing diabetes treatment/prevention R&D?

6 L [Please hold on while I check a few sources.]

7 L I can probably give you a few sources to get started, but I may wind up referring you to a business and/or medial librarian specialist.

8 L Let's start witht eNortheastern library web page...

9 U ok great thanks

10 L [Page sent] <http://www.lib.neu.edu/>

11 U ok

12 L Are you a studnets or faculty member at Northeastern?

13 U student

14 L OK. I'm going to try the "co-browse" option -- that might let us see the same information at once...(if it's working!)

15 U wonderful

16 L since what you want to find are drug companies, I'll try to get you into a busienss database...

17 U perfect

18 U thank you

19 L [Page sent - subjectlist] <http://www.lib.neu.edu/gateway/subjectframe.htm>

20 L I clicked on article databases

21 U alright

22 L by the way, wht's your email address in case I need to send yo a transcript?

23 U [email]

24 L Business and Company ASAP and Business Source Premier both look good. I'll try business and company asap.

25 L [Page sent - Welcome to Business and Company ASAP]
<http://www.lib.neu.edu/gateway/dbases/businessandcompany.htm>

26 L [Page sent - <http://www.lib.neu.edu/gateway/remotehelp.htm>]
<http://www.lib.neu.edu/gateway/remotehelp.htm>

27 L [Page sent - Welcome to Business and Company ASAP]
<http://www.lib.neu.edu/gateway/dbases/businessandcompany.htm>

28 L [Page sent - Remote login for research databases] https://ilsprod.lib.neu.edu:443/validate/http://0-infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itweb/mlin_b_northeast?db=BCPM

29 L Could you please type in your last name and HUSKY barcode number? Thanks.

30 L [Page sent - Keyword search] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/0/1/1/purl=rc6_BCPM?sw_aep=mlin_b_northeast

31 L [Page sent - Citations 1 to 11] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc2_BCPM_1_diabetes+and+boston+and+research____&dyn=sigl1?sw_aep=mlin_b_northeast

32 L hmmm. I treid the keywords "diabetes and boston and research" and tht came up with soem possibilities...

33 L [Page sent - Article 4] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc1_BCP

Virtual Reference (Live Chat) Transcript Example

- M_0_A87582238&dyn=3!xm_4_0_A87582238?sw_aep=m!in_b_northeast
- 34 U uh huh, more specifically im looking for maybe some kind of list of who is doing what, for respective drug companies
- 35 L I'm looing at teh actual article and the links at the bottom. The SIC can be particularly helpful...
- 36 L [Page sent - Article 1] [http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc3_BCP_M_2__si+\(2830\)&dyn=4!lnk_A87582238+90?sw_aep=m!in_b_northeast](http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc3_BCP_M_2__si+(2830)&dyn=4!lnk_A87582238+90?sw_aep=m!in_b_northeast)
- 37 L [Page sent - Keyword search] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc6_BCP_M&dyn=5!start&bkm_5_1?sw_aep=m!in_b_northeast
- 38 L [Page sent - Error Message] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc2_BCP_M_1_sic+283_____&dyn=sig!2?sw_aep=m!in_b_northeast
- 39 L [Page sent - Article 1] [http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc3_BCP_M_2__si+\(2830\)&dyn=4!lnk_A87582238+90?sw_aep=m!in_b_northeast](http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc3_BCP_M_2__si+(2830)&dyn=4!lnk_A87582238+90?sw_aep=m!in_b_northeast)
- 40 L [Page sent - Keyword search] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc6_BCP_M&dyn=5!start?sw_aep=m!in_b_northeast
- 41 L Sorry, I thought there was a way you could search by sic code and get a ranked list of companies in a certian code.
- 42 U thats alright, seemed liek you were on the right track
- 43 L [Page sent - Entries containing the words: sic 2834] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=sig!4?sw_aep=m!in_b_northeast
- 44 L [Page sent - Article 1] [http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc3_BCP_M_2__su+\"pharmaceutical+preparations+\(sic+2834\)\"_____&dyn=9!sln_0+0?sw_aep=m!in_b_northeast](http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc3_BCP_M_2__su+\)
- 45 L [Page sent - Citations 1 to 20 (of 4238)] [http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc3_BCP_M_1__si+\(2834\)&dyn=10!lnk_D434+110?sw_aep=m!in_b_northeast](http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc3_BCP_M_1__si+(2834)&dyn=10!lnk_D434+110?sw_aep=m!in_b_northeast)
- 46 L What I'm gettign here is a nation-wide list....
- 47 U that is good too, It doesnt have to be just boston based companies
- 48 L [Page sent - Narrowing Search] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=11!narr?sw_aep=m!in_b_northeast
- 49 L [Page sent - Citations 1 to 20 (of 77)] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=sig!5?sw_aep=m!in_b_northeast
- 50 L ok. then I did a "limit" to boston or massachusetts and got 77 companies.
- 51 L By the way, the busienss Librarian is Business [[Librarian2 Name]]Tel: [Librarian2 Phone]
- 52 U and they are all in the process of Diabetes R&D?
- 53 U oh thank you very much
- 54 L no. They are not limited to diabetes. These are general drug companies... I veered off but I can bring the diabetes back in the search.
- 55 L [Page sent - Narrowing Search] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=13!narr?sw_aep=m!in_b_northeast

Virtual Reference (Live Chat) Transcript Example

- 56 L [Page sent - Narrowing Search] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=13!narr?sw_aep=m1in_b_northeast
- 57 L [Page sent - Error Message] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=sig!7?sw_aep=m1in_b_northeast
- 58 U ok great
- 59 L [Page sent - Subject guide search] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu/itw/infomark/500/948/55922826w2/purl=rc6_BCPM&dyn=14!start?sw_aep=m1in_b_northeast
- 60 L I don't know if its even possible, but Im looking for an article or list that kind of names the top drug companies that are doing a great deal is the R&D of diabetes drugs/treatment
- 61 L [Page sent - Subdivisions of: Diabetes] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu/itw/infomark/500/948/55922826w2/18!sln_1+0
- 62 L [Page sent - Citations 1 to 20 (of 188)] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=rc9_BCPM_Diabetes_research_____diabetes_____&dyn=19!sln_61+0?sw_aep=m1in_b_northeast
- 63 L looks like a search under "diabetes" might also be useful. Then I wnet to "narrow"
- 64 L [Page sent - Narrowing Search] [http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=20!msrch_sd_\"Diabetes_research\"?sw_aep=m1in_b_northeast](http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=20!msrch_sd_\)
- 65 L [Page sent - Narrowing Search] [http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=20!msrch_sd_\"Diabetes_research\"?sw_aep=m1in_b_northeast](http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=20!msrch_sd_\)
- 66 L [Page sent - Article 1] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=sig!11?sw_aep=m1in_b_northeast
- 67 L [Page sent - Entries containing the words: diabetes] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=sig!12?sw_aep=m1in_b_northeast
- 68 L [Page sent - Entries containing the words: diabetes] http://0-web2.infotrac.galegroup.com.ilsprod.lib.neu.edu:80/itw/infomark/500/948/55922826w2/purl=&dyn=sig!13?sw_aep=m1in_b_northeast
- 69 L I'm having trouble getting you such a list. It might be possible, but we need to play aroundn with our serach terms...
- 70 L or try other data bases for business...
- 71 U ok that sounds fine
- 72 L or contact the busienss librarian.
- 73 U im actually surprised that their isnt a published list in some kind of "big book of business" I know that they have such a list for top nanotechnology firms....
- 74 U perhaps the business librarian would be helpful, can i be connected through this same online format?
- 75 L yes, there might very well be a book in the Northeastern reference collection. Might be best to call them.
- 76 L No, I cannot connect you, but I can look up her email address.
- 77 U this online help is very convinient though, my roommate is actually sleeping, so a phone call would be tough
- 78 U ok, e-mail should be ok
- 79 L It's
- 80 L [email]

Virtual Reference (Live Chat) Transcript Example

81 L did you get that?
82 U alright thank you for your help, have a good day
83 L If she's not available, try the general reference desk at ...
84 L 373-2354
85 L you can also send reference an emial by using the online form at
<http://www.lib.neu.edu/reference/home/askref.htm>
86 L Sorry I couldn't get eh exact anser for you. good luck.
87 L well, if you wan to hang on, I can try some other things. Like I can try to aks OUR business librarian...
88 U that would be great actually
89 L ok, hold on...
90 L so far, I've asked one of our science librarians, who will call me back. I also sent an email to our
business librarian. If/when he respsnds, I can forwrd tht message to you at [Patron Email] [this is your
email address -- correct?]
91 U yes, thank you very much s
92 U orry im so slow
93 L one idea that came up is the Joslin Diabetes Center at harvard <http://www.joslin.harvard.edu/>
94 L [Page sent] <http://www.joslin.harvard.edu/>
95 L [Page sent - Joslin Diabetes Center - Diabetes, Diabetes Treatment, Diabetes Symptom, Diabetes
Research and Diabetes Education.] <http://www.joslin.harvard.edu/>
96 L [Page sent - Joslin Diabetes Center - Diabetes, Diabetes Treatment, Diabetes Symptom, Diabetes
Research and Diabetes Education.] <http://www.joslin.harvard.edu/main.shtml>
97 U ok, but where from here could i find the companies doign the most?
98 L there's also the american diabetes association research datbase , which is linked from
<http://www.diabetes.org/home.jsp>
99 L [Page sent] <http://www.diabetes.org/home.jsp>
100 L [Page sent - Forefront Research Magazine - Diabetes Research - American Diabetes Association]
<http://www.diabetes.org/diabetes-research/forefront.jsp>
101 L you might alo look at Other Diabetes Research Resources at <http://www.diabetes.org/diabetes-research/other-diabetes-research-resources.jsp>
102 L [Page sent - <http://www.diabetes.org/uedocuments/SumFall-2004-Forefront-new1.pdf>]
<http://www.diabetes.org/uedocuments/SumFall-2004-Forefront-new1.pdf>
103 L It might help if you could tell me the why you are lookign for these companies an dif you are only
interested in companies, as opposed to other types of organizations that might be doing reserachin
this area?
104 U for a paper I have to write... and just the drug companies.... it's a comparative analysis
105 L then I think you should go back to the business datbses and really look at the articles that come up
when you do search on keywords like "drug an dcompany and diabetes
106 L or diabetes and company and research
107 L or diabetes and research and analysis
108 L [Page sent - <http://www.diabetes.org/uedocuments/SumFall-2004-Forefront-new1.pdf>]
<http://www.diabetes.org/uedocuments/SumFall-2004-Forefront-new1.pdf>
109 L I thin I need to leave yo with this. Go into the databses for bussienss and you shold get osme good
sources for you r paper. Contact the busienss librarian if you get stuck.
110 L good bye and good luck.
111 Note to staff: XFERIN [[[Librarian Name]]]-BLC-UMass/Amherst - user has closed this session]

Qwidget Transcripts

Question Detail 3897287

Patron:	Anonymous Patron <No email provided>	Received:	2008/10/24 03:47:09
At:	[Library location]	Assigned:	[Librarian 1 full name] ([Librarian 1 ID number])
Status:	Closed	Type:	Chat Sessions
Wait Time:	5	Session Time:	1313
Resolution:	Answered		
Language:	English		
Descriptive Codes	Reference		
Referer:	[Library website]		
Browser/OS:	Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.8.1.16) Gecko/20080702 Firefox/2.0.0.16		
Cobrowse:	No		

Question History

Patron:	Qwidget: hello Librarian
03:47:09 2008/10/24 (GMT-5)	
Librarian:	Note: Patron's screen name: Library Patron
03:47:09 2008/10/24 (GMT-5)	
[Librarian 1 full name] ([Librarian 1 ID number] At [Library location]):	Librarian '[Librarian 1 first name]' has joined the session.
03:47:15 2008/10/24 (GMT-5)	
Patron:	I have a question for you :)
03:47:22 2008/10/24 (GMT-5)	
Patron:	It's a pretty hard one
03:47:29 2008/10/24 (GMT-5)	
[Librarian 1 full name] ([Librarian 1 ID number] At [Library location]):	Hello I am reading your question. I will be with you in a moment.
03:47:34 2008/10/24 (GMT-5)	
[Librarian 1 full name] ([Librarian 1 ID number] At [Library location]):	What is your question?
03:47:46 2008/10/24 (GMT-5)	
Patron:	We watched a movie this semester in class
03:48:08 2008/10/24 (GMT-5)	

Patron: pertaining to equine gait analysis
03:48:16 2008/10/24 (GMT-5)

Patron: i know it is available to students but I dont know the
03:48:31 2008/10/24 (GMT-5) title of the movie

Patron: it is edited and narrated by [User's professor's name]
03:48:39 2008/10/24 (GMT-5)

[Librarian 1 full name] What is your course code?
([Librarian 1 ID number] At
[Library location]):
03:48:44 2008/10/24 (GMT-5)

Patron: but i cannot find it :(
03:48:45 2008/10/24 (GMT-5)

Patron: Vets1018 I think
03:48:59 2008/10/24 (GMT-5)

Patron: i will check
03:49:02 2008/10/24 (GMT-5)

[Librarian 1 full name] I am just going to check, I will be back shortly, please
([Librarian 1 ID number] At wait.
[Library location]):
03:49:10 2008/10/24 (GMT-5)

Patron: 1021
03:49:33 2008/10/24 (GMT-5)

Patron: VETS 1021 is the course code
03:49:43 2008/10/24 (GMT-5)

Patron: sorry :S
03:49:45 2008/10/24 (GMT-5)

[Librarian 1 full name] I'll have a look. won't be long.
([Librarian 1 ID number] At
[Library location]):
03:51:04 2008/10/24 (GMT-5)

Patron: thankyou
03:51:30 2008/10/24 (GMT-5)

[Librarian 1 full name] Is it to do with laminitis ?
([Librarian 1 ID number] At
[Library location]):
03:52:25 2008/10/24 (GMT-5)

Patron: no its to do with assesment of gait
03:52:57 2008/10/24 (GMT-5)

Patron: gait analysis
03:53:01 2008/10/24 (GMT-5)

[Librarian 1 full name] OK. still looking. bear with me.
 ([Librarian 1 ID number] At
 [Library location]):
 03:53:24 2008/10/24 (GMT-5)

Patron: roar! like a bear
 03:53:36 2008/10/24 (GMT-5)

Patron: thanks for your help :)
 03:53:46 2008/10/24 (GMT-5)

[Librarian 1 full name] Could this be it? Equine foot studies [videorecording]
 ([Librarian 1 ID number] At [User's professor's name]. Publication info:
 [Library location]): [Publication location] : [Publisher], 1992. Physical
 03:59:43 2008/10/24 (GMT-5) descrip: 1 videocassette (VHS) (23 min.) : sd., col. ;
 1/2 in.

Patron: could well be
 04:00:08 2008/10/24 (GMT-5)

Patron: he has made alot of recordings
 04:00:17 2008/10/24 (GMT-5)

Patron: but that could be it?
 04:00:21 2008/10/24 (GMT-5)

Patron: it's worth a try anyway
 04:00:26 2008/10/24 (GMT-5)

[Librarian 1 full name] I don't see a copy in the library. It must be [User's
 ([Librarian 1 ID number] At professor's name]'s own copy, or one belonging to the
 [Library location]): faculty.
 04:01:04 2008/10/24 (GMT-5)

[Librarian 1 full name] Do you want a copy of it to view yourself?
 ([Librarian 1 ID number] At
 [Library location]):
 04:01:29 2008/10/24 (GMT-5)

Patron: could well be that also
 04:01:31 2008/10/24 (GMT-5)

Patron: yeah i just wanted to watch it otnight
 04:01:39 2008/10/24 (GMT-5)

Patron: no worries, i will ask the anatomy tutors on monday, I
 04:01:58 2008/10/24 (GMT-5) am sure there will be a copy floating around vet school

[Librarian 1 full name] I'll see if I can locate a copy. More bears would be
 ([Librarian 1 ID number] At good at this [pont.
 [Library location]):
 04:02:07 2008/10/24 (GMT-5)

Patron: ok i'll roar quietly
 04:02:22 2008/10/24 (GMT-5)

Patron: people in the biolsci library dont appreciate bears at
04:02:33 2008/10/24 (GMT-5) this time

[Librarian 1 full name] I understand. Biol sci is meant to be a silent pursuit.
([Librarian 1 ID number] At
[Library location]):
04:03:46 2008/10/24 (GMT-5)

[Librarian 1 full name] I don't see a copy of this in any library in [Library
([Librarian 1 ID number] At location]. It's likely to be the one you want, as it is the
[Library location]): only title I could locate. Your idea of talking to Vet
04:05:03 2008/10/24 (GMT-5) faculty is a good one. I might contact them re placing a
copy in the library also.

Patron: sounds like a plan
04:05:51 2008/10/24 (GMT-5)

Patron: i remember the lecturer talking about having copies
04:06:01 2008/10/24 (GMT-5) available

Patron: i assumed they were at the library here but they must
04:06:21 2008/10/24 (GMT-5) have been copies we could borrow from the vet faculty

Patron: not to worry
04:06:26 2008/10/24 (GMT-5)

[Librarian 1 full name] Okay. You should talk to the lecturer directly.
([Librarian 1 ID number] At
[Library location]):
04:06:28 2008/10/24 (GMT-5)

Patron: I will carry on and read a book instead
04:06:33 2008/10/24 (GMT-5)

Patron: I think i might :)
04:06:40 2008/10/24 (GMT-5)

[Librarian 1 full name] If the lecturer recommends them they should be in the
([Librarian 1 ID number] At library. We'll look into that.
[Library location]):
04:06:58 2008/10/24 (GMT-5)

[Librarian 1 full name] I couldnt find anything by [User's professor's name] at
([Librarian 1 ID number] At all.
[Library location]):
04:07:40 2008/10/24 (GMT-5)

Patron: no worries, i will talk to [Faculty member name] when
04:07:59 2008/10/24 (GMT-5) i see him next and discuss it

Patron: thanks for your help
04:08:03 2008/10/24 (GMT-5)

Patron: i have found a good book about horses to read anyway
04:08:10 2008/10/24 (GMT-5)

Patron: so that will do for now :)
04:08:13 2008/10/24 (GMT-5)

[Librarian 1 full name] You're welcome.
([Librarian 1 ID number] At
[Library location]):
04:08:14 2008/10/24 (GMT-5)

Patron: have a good night!@
04:08:17 2008/10/24 (GMT-5)

[Librarian 1 full name] Great! Hope you get your video as well.
([Librarian 1 ID number] At
[Library location]):
04:08:33 2008/10/24 (GMT-5)

[Librarian 1 full name] Cheers.
([Librarian 1 ID number] At
[Library location]):
04:08:42 2008/10/24 (GMT-5)

Patron: Patron ended chat session.
04:08:51 2008/10/24 (GMT-5)

[Librarian 1 full name] Note: Set Resolution: Answered
([Librarian 1 ID number] At
[Library location]):
04:09:04 2008/10/24 (GMT-5)

[Librarian 1 full name] Note: Set Description: Reference
([Librarian 1 ID number] At
[Library location]):
04:09:19 2008/10/24 (GMT-5)

Librarian: Closed by Librarian # [Librarian 5 ID number].
21:54:37 2008/10/26 (GMT-5)

Question Detail 3897343

Patron: Anonymous Patron <No email provided> Received: 2008/10/24 04:53:31
At: [Library location] Assigned: [Librarian 1 full name]
([Librarian 1 ID number])
Status: Closed Type: Chat Sessions
Wait Time: 8 Session Time: 2723
Resolution: Answered
Language: English
Descriptive Codes Reference , Electronic Resources
Referer: [Library website]
Mozilla/5.0 (Macintosh; U; Intel Mac OS X 10_4_11; en)
Browser/OS: AppleWebKit/525.18 (KHTML, like Gecko) Version/3.1.2
Safari/525.22
Cobrowse: No

Question History

Patron: Qwidget: hi. i am at home now. how can i download
04:53:31 2008/10/24 (GMT-5) PDFs from the internet?

Librarian: Note: Patron's screen name: Library Patron
04:53:31 2008/10/24 (GMT-5)

[Librarian 1 full name] Librarian '[Librarian 1 first name]' has joined the
([Librarian 1 ID number] At session.
[Library location]):

04:53:39 2008/10/24 (GMT-5)

[Librarian 1 full name] Hello I am reading your question. I will be with you in
([Librarian 1 ID number] At a moment.
[Library location]):

04:53:55 2008/10/24 (GMT-5)

[Librarian 1 full name] A particular pdf?

([Librarian 1 ID number] At
[Library location]):

04:54:16 2008/10/24 (GMT-5)

Patron: an article

04:54:28 2008/10/24 (GMT-5)

[Librarian 1 full name] Do you have the details?

([Librarian 1 ID number] At
[Library location]):

04:54:44 2008/10/24 (GMT-5)

Patron: 04:54:56 2008/10/24 (GMT-5)	I am looking for this article: Conversion and recovery of Puerto Rican mangroves: 200 years of change
[Librarian 1 full name] ([Librarian 1 ID number] At [Library location]): 04:55:09 2008/10/24 (GMT-5)	I am just going to check, I will be back shortly, please wait.
Patron: 04:55:19 2008/10/24 (GMT-5)	its in elsevier journal... just recently published
Patron: 04:55:21 2008/10/24 (GMT-5)	thanks
[Librarian 1 full name] ([Librarian 1 ID number] At [Library location]): 05:01:41 2008/10/24 (GMT-5)	I'm still looking ... do you have any other information?
Patron: 05:01:59 2008/10/24 (GMT-5)	wait.... i will get the authors
Patron: 05:03:26 2008/10/24 (GMT-5)	Sebastián Martinuzzi , William A. Gould, Ariel E. Lugo and Ernesto Medina
[Librarian 1 full name] ([Librarian 1 ID number] At [Library location]): 05:03:48 2008/10/24 (GMT-5)	Okay. I'll have another look. won't be long.
Patron: 05:05:58 2008/10/24 (GMT-5)	thanks
[Librarian 1 full name] ([Librarian 1 ID number] At [Library location]): 05:17:23 2008/10/24 (GMT-5)	I can't find anything by those authors with that exact title. Do you know the name of the journal?
Patron: 05:17:40 2008/10/24 (GMT-5)	nope...
Patron: 05:18:11 2008/10/24 (GMT-5)	the article was published online only last 17 October... maybe its not available for download yet
[Librarian 1 full name] ([Librarian 1 ID number] At [Library location]): 05:18:21 2008/10/24 (GMT-5)	Where did you hear about it?
Patron: 05:18:22 2008/10/24 (GMT-5)	ok.. i have another question
Patron: 05:18:37 2008/10/24 (GMT-5)	if i am overseas, how can i download PDFs?

Patron: 05:18:52 2008/10/24 (GMT-5) ive got an email from a friend referring to that article

[Librarian 1 full name] (Librarian 1 ID number] At [Library location]): 05:20:33 2008/10/24 (GMT-5) If you can locate the pdf you want, it won't matter where you are. You click on the article and it should download. eg. <http://www.esajournals.org/toc/fron/6/2> If you ckick where it says "PDF" the article should download.

[Librarian 1 full name] (Librarian 1 ID number] At [Library location]): 05:20:54 2008/10/24 (GMT-5) Did they send you a link?

Patron: 05:21:48 2008/10/24 (GMT-5) wait...

Patron: 05:23:05 2008/10/24 (GMT-5) Access Online Article
Conversion and recovery of Puerto Rican mangroves:
200 years of change

Forest Ecology and Management, In Press, Corrected Proof, Available online
17 October 2008,
Sebastián Martinuzzi, William A. Gould, Ariel E. Lugo and
Ernesto Medina View Abstract

Patron: 05:23:26 2008/10/24 (GMT-5) so... it is in Forest Ecology and Management journal

[Librarian 1 full name] (Librarian 1 ID number] At [Library location]): 05:23:32 2008/10/24 (GMT-5) Give me a minute .. I'll check again

[Librarian 1 full name] (Librarian 1 ID number] At [Library location]): 05:24:19 2008/10/24 (GMT-5) OK. We have that online : [Library website]

[Librarian 1 full name] (Librarian 1 ID number] At [Library location]): 05:24:41 2008/10/24 (GMT-5) Open another window and copy and paste the link.

[Librarian 1 full name] (Librarian 1 ID number] At [Library location]): 05:25:15 2008/10/24 (GMT-5) Do you have the library record for Forest Ecology and Management in front of you?

Patron: no
 05:25:27 2008/10/24 (GMT-5)
[Librarian 1 full name] Have you copy and pasted the link I sent you into
([Librarian 1 ID number] At another window?
[Library location]):
 05:26:03 2008/10/24 (GMT-5)

Patron: yes i did
 05:27:15 2008/10/24 (GMT-5)
[Librarian 1 full name] and it didn't work?
([Librarian 1 ID number] At
[Library location]):
 05:27:25 2008/10/24 (GMT-5)

Patron: but how can i download the PDF
 05:27:26 2008/10/24 (GMT-5)
[Librarian 1 full name] First ... Do you have the library record for Forest
([Librarian 1 ID number] At Ecology and Management in front of you?
[Library location]):
 05:27:53 2008/10/24 (GMT-5)

Patron: it shows that that journal is in the [Library catalog]
 05:28:19 2008/10/24 (GMT-5)
[Librarian 1 full name] Do you see where it says via ScienceDirect ?
([Librarian 1 ID number] At
[Library location]):
 05:28:44 2008/10/24 (GMT-5)

Patron: yes
 05:29:08 2008/10/24 (GMT-5)
[Librarian 1 full name] Click on that ...
([Librarian 1 ID number] At
[Library location]):
 05:29:19 2008/10/24 (GMT-5)

Patron: yes... got it now
 05:31:57 2008/10/24 (GMT-5)

Patron: thanks so much
 05:32:01 2008/10/24 (GMT-5)

Patron: so even if im overseas, i can download PDFs?
 05:32:12 2008/10/24 (GMT-5)
[Librarian 1 full name] From there you can download pdfs, but I can't see the
([Librarian 1 ID number] At one you are looking for ...
[Library location]):
 05:32:14 2008/10/24 (GMT-5)

[Librarian 1 full name] Do you see it?
 ([Librarian 1 ID number] At
 [Library location]):
 05:32:20 2008/10/24 (GMT-5)

[Librarian 1 full name] Yes. Just click on the pdf symbol.
 ([Librarian 1 ID number] At
 [Library location]):
 05:32:39 2008/10/24 (GMT-5)

Patron: ive seen it... i actually downloaded it already
 05:33:12 2008/10/24 (GMT-5)

Patron: its in he 'online section'
 05:33:29 2008/10/24 (GMT-5)

[Librarian 1 full name] Great! Use that process whenever you want to locate
 ([Librarian 1 ID number] At and download something.
 [Library location]):
 05:33:56 2008/10/24 (GMT-5)

Patron: thanks so much for your assistance
 05:34:25 2008/10/24 (GMT-5)

[Librarian 1 full name] You're welcome.
 ([Librarian 1 ID number] At
 [Library location]):
 05:34:38 2008/10/24 (GMT-5)

Patron: ok... bye for now... thanks again
 05:34:51 2008/10/24 (GMT-5)

[Librarian 1 full name] Cheers
 ([Librarian 1 ID number] At
 [Library location]):
 05:35:44 2008/10/24 (GMT-5)

[Librarian 1 full name] Librarian ended chat session.
 ([Librarian 1 ID number] At
 [Library location]):
 05:39:06 2008/10/24 (GMT-5)

[Librarian 1 full name] Note: Set Resolution: Answered
 ([Librarian 1 ID number] At
 [Library location]):
 05:39:08 2008/10/24 (GMT-5)

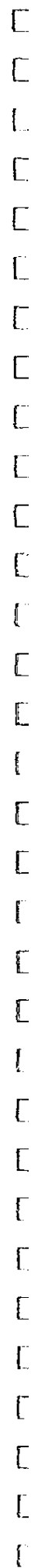
[Librarian 1 full name] Note: Set Description: Electronic Resources
 ([Librarian 1 ID number] At
 [Library location]):
 05:39:14 2008/10/24 (GMT-5)

[Librarian 1 full name]
([Librarian 1 ID number] At
[Library location]):
05:39:20 2008/10/24 (GMT-5)

Note: Set Description: Reference

Librarian:
21:54:37 2008/10/26 (GMT-5)

Closed by Librarian # [Librarian 5 ID number].



		Year One (2011-2012)												Year Two (2012-2013)												Year Three (2013-2014)												Year Four (2014-2015)												Year Five (2015-2016)												Year Six (2016-2017)												Year Seven (2017-2018)												Year Eight (2018-2019)												Year Nine (2019-2020)												Year Ten (2020-2021)												Year Eleven (2021-2022)												Year Twelve (2022-2023)												Year Thirteen (2023-2024)												Year Fourteen (2024-2025)												Year Fifteen (2025-2026)												Year Sixteen (2026-2027)												Year Seventeen (2027-2028)												Year Eighteen (2028-2029)												Year Nineteen (2029-2030)												Year Twenty (2030-2031)												Year Twenty-One (2031-2032)												Year Twenty-Two (2032-2033)												Year Twenty-Three (2033-2034)												Year Twenty-Four (2034-2035)												Year Twenty-Five (2035-2036)												Year Twenty-Six (2036-2037)												Year Twenty-Seven (2037-2038)												Year Twenty-Eight (2038-2039)												Year Twenty-Nine (2039-2040)												Year Thirty (2040-2041)												Year Thirty-One (2041-2042)												Year Thirty-Two (2042-2043)												Year Thirty-Three (2043-2044)												Year Thirty-Four (2044-2045)												Year Thirty-Five (2045-2046)												Year Thirty-Six (2046-2047)												Year Thirty-Seven (2047-2048)												Year Thirty-Eight (2048-2049)												Year Thirty-Nine (2049-2050)												Year Forty (2050-2051)												Year Forty-One (2051-2052)												Year Forty-Two (2052-2053)												Year Forty-Three (2053-2054)												Year Forty-Four (2054-2055)												Year Forty-Five (2055-2056)												Year Forty-Six (2056-2057)												Year Forty-Seven (2057-2058)												Year Forty-Eight (2058-2059)												Year Forty-Nine (2059-2060)												Year Fifty (2060-2061)												Year Fifty-One (2061-2062)												Year Fifty-Two (2062-2063)												Year Fifty-Three (2063-2064)												Year Fifty-Four (2064-2065)												Year Fifty-Five (2065-2066)												Year Fifty-Six (2066-2067)												Year Fifty-Seven (2067-2068)												Year Fifty-Eight (2068-2069)												Year Fifty-Nine (2069-2070)												Year Sixty (2070-2071)												Year Sixty-One (2071-2072)												Year Sixty-Two (2072-2073)												Year Sixty-Three (2073-2074)												Year Sixty-Four (2074-2075)												Year Sixty-Five (2075-2076)												Year Sixty-Six (2076-2077)												Year Sixty-Seven (2077-2078)												Year Sixty-Eight (2078-2079)												Year Sixty-Nine (2079-2080)												Year Seventy (2080-2081)												Year Seventy-One (2081-2082)												Year Seventy-Two (2082-2083)												Year Seventy-Three (2083-2084)												Year Seventy-Four (2084-2085)												Year Seventy-Five (2085-2086)												Year Seventy-Six (2086-2087)												Year Seventy-Seven (2087-2088)												Year Seventy-Eight (2088-2089)												Year Seventy-Nine (2089-2090)												Year Eighty (2090-2091)												Year Eighty-One (2091-2092)												Year Eighty-Two (2092-2093)												Year Eighty-Three (2093-2094)												Year Eighty-Four (2094-2095)												Year Eighty-Five (2095-2096)												Year Eighty-Six (2096-2097)												Year Eighty-Seven (2097-2098)												Year Eighty-Eight (2098-2099)												Year Eighty-Nine (2099-2100)												Year Ninety (2100-2101)												Year Ninety-One (2101-2102)												Year Ninety-Two (2102-2103)												Year Ninety-Three (2103-2104)												Year Ninety-Four (2104-2105)												Year Ninety-Five (2105-2106)												Year Ninety-Six (2106-2107)												Year Ninety-Seven (2107-2108)												Year Ninety-Eight (2108-2109)												Year Ninety-Nine (2109-2110)												Year One Hundred (2110-2111)												Year One Hundred and One (2111-2112)												Year One Hundred and Two (2112-2113)												Year One Hundred and Three (2113-2114)												Year One Hundred and Four (2114-2115)												Year One Hundred and Five (2115-2116)												Year One Hundred and Six (2116-2117)												Year One Hundred and Seven (2117-2118)												Year One Hundred and Eight (2118-2119)												Year One Hundred and Nine (2119-2120)												Year One Hundred and Ten (2120-2121)												Year One Hundred and Eleven (2121-2122)												Year One Hundred and Twelve (2122-2123)												Year One Hundred and Thirteen (2123-2124)												Year One Hundred and Fourteen (2124-2125)												Year One Hundred and Fifteen (2125-2126)												Year One Hundred and Sixteen (2126-2127)												Year One Hundred and Seventeen (2127-2128)												Year One Hundred and Eighteen (2128-2129)												Year One Hundred and Nineteen (2129-2130)												Year One Hundred and Twenty (2130-2131)												Year One Hundred and Twenty-One (2131-2132)												Year One Hundred and Twenty-Two (2132-2133)												Year One Hundred and Twenty-Three (2133-2134)												Year One Hundred and Twenty-Four (2134-2135)												Year One Hundred and Twenty-Five (2135-2136)												Year One Hundred and Twenty-Six (2136-2137)												Year One Hundred and Twenty-Seven (2137-2138)												Year One Hundred and Twenty-Eight (2138-2139)												Year One Hundred and Twenty-Nine (2139-2140)												Year One Hundred and Thirty (2140-2141)												Year One Hundred and Thirty-One (2141-2142)												Year One Hundred and Thirty-Two (2142-2143)												Year One Hundred and Thirty-Three (2143-2144)												Year One Hundred and Thirty-Four (2144-2145)												Year One Hundred and Thirty-Five (2145-2146)												Year One Hundred and Thirty-Six (2146-2147)												Year One Hundred and Thirty-Seven (2147-2148)												Year One Hundred and Thirty-Eight (2148-2149)												Year One Hundred and Thirty-Nine (2149-2150)												Year One Hundred and Forty (2150-2151)												Year One Hundred and Forty-One (2151-2152)												Year One Hundred and Forty-Two (2152-2153)												Year One Hundred and Forty-Three (2153-2154)												Year One Hundred and Forty-Four (2154-2155)												Year One Hundred and Forty-Five (2155-2156)												Year One Hundred and Forty-Six (2156-2157)												Year One Hundred and Forty-Seven (2157-2158)												Year One Hundred and Forty-Eight (2158-2159)												Year One Hundred and Forty-Nine (2159-2160)												Year One Hundred and Fifty (2160-2161)												Year One Hundred and Fifty-One (2161-2162)												Year One Hundred and Fifty-Two (2162-2163)												Year One Hundred and Fifty-Three (2163-2164)												Year One Hundred and Fifty-Four (2164-2165)												Year One Hundred and Fifty-Five (2165-2166)												Year One Hundred and Fifty-Six (2166-2167)												Year One Hundred and Fifty-Seven (2167-2168)												Year One Hundred and Fifty-Eight (2168-2169)												Year One Hundred and Fifty-Nine (2169-2170)												Year One Hundred and Sixty (2170-2171)												Year One Hundred and Sixty-One (2171-2172)												Year One Hundred and Sixty-Two (2172-2173)												Year One Hundred and Sixty-Three (2173-2174)												Year One Hundred and Sixty-Four (2174-2175)											
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PARTNERSHIP STATEMENT

Complete one of these forms for each formal partner.

Legal name of applicant organization (5a from Face Sheet): Rutgers, The State University of New Jersey

1. Legal name of partner organization: OCLC, Inc.

2. Partner DUNS number: 06-358-7745

3. Mailing address:

Street1: 6565 Kilgour Place Street2:

City: Dublin State: Ohio Zip+4: 43017-3395

4. Partner Web address: <http://www.oclc.org/>

5. Partner project contact name: Lynn Silipigni Connaway

Title: Consulting Research Scientist III

Telephone number: (303)246-3623

E-mail: connawal@oclc.org

6. Governing control of partner (choose one):

- | | |
|---|--|
| <input type="checkbox"/> State Government | <input checked="" type="checkbox"/> Nonprofit with 501(c)(3) IRS Status (Other than Institution of Higher Education) |
| <input type="checkbox"/> County Government | <input type="checkbox"/> Nonprofit without 501(c)(3) IRS Status (Other than Institution of Higher Education) |
| <input type="checkbox"/> City or Township Government | <input type="checkbox"/> Private Institution of Higher Education |
| <input type="checkbox"/> Special District Government | <input type="checkbox"/> Individual |
| <input type="checkbox"/> Regional Organization | <input type="checkbox"/> For-Profit Organization (Other than Small Business) |
| <input type="checkbox"/> U.S. Territory or Possession | <input type="checkbox"/> Small Business |
| <input type="checkbox"/> Independent School District | <input type="checkbox"/> Hispanic-serving Institution |
| <input type="checkbox"/> Public/State Controlled Institution of Higher Learning | <input type="checkbox"/> Historically Black Colleges and Universities (HBCU's) |
| <input type="checkbox"/> Indian/Native American Tribal Government (Federally Recognized) | <input type="checkbox"/> Tribally Controlled Colleges and Universities (TCCUs) |
| <input type="checkbox"/> Indian/Native American Tribal Government (Other than Federally Recognized) | <input type="checkbox"/> Alaska Native and Native Hawaiian Serving Institutions |
| <input type="checkbox"/> Indian/Native American Tribally Designated Organization | <input type="checkbox"/> Nondomestic (non-U.S.) Entity |
| <input type="checkbox"/> Public/Indian Housing Authority | <input type="checkbox"/> Other (specify) |

7. What is the partner organization's mission? [500 characters] OCLC Online Computer Library Center is a nonprofit, membership, computer library service and research organization dedicated to the public purposes of furthering access to the world's information and reducing information costs

8. Describe the partner organization's service area (audience served, including size, demographic characteristics and geographic area) [500 characters] More than 57,000 libraries in 112 countries and territories around the world have used OCLC services including cataloging, reference, resource sharing, eContent and preservation services

9. List the partner's key roles and responsibilities in the project: [1000 characters]

The project time of Lynn Silipigni Connaway, Co-Principal Investigator, will be supported by OCLC for the duration of the project. She will provide expertise in focus group and individual interview data collection and analysis, disseminate the results of the research, and assist with the evaluation of websites. OCLC will support the time of the OCLC staff who are members of the Internal Advisory Board. They will provide expertise in 3-D virtual library environments, the integration of social software into library systems and services, transcripts from the QuestionPoint service, and the evaluation of websites. The OCLC Usability Lab will be available for both in-person and remote website evaluation sessions. A sample of 600 QuestionPoint transcripts from October 2007 through September 2010 and access to available

QuestionPoint Second Life data will be provided by OCLC. OCLC Research will provide technical expertise for the project and will host the project website.

Please note:

A. Submission of this application by the Authorized Representative of the applicant organization reflects the partner organization's agreement with the following statements:

- We will carry out the activities described above and in the application narrative.
- We will use any federal funds we receive from the applicant organization in accordance with applicable federal laws and regulations as set forth in the program guidelines and the terms and conditions of the grant award.
- We assure that our facilities and programs comply with the applicable federal requirements and laws as set forth in the program guidelines.

B. Prior to submission of the application, the applicant will ensure that the partner organization has provided to the applicant a signed original of this Partnership Statement for the applicant's records. Such original will be made available to IMLS, if requested by IMLS.



Office of Research and Sponsored Programs
Rutgers, The State University of New Jersey
3 Rutgers Plaza - ASB III • New Brunswick • New Jersey 08901
Email: sponsored@orsp.rutgers.edu • Web: <http://info.rutgers.edu/orsp>
Tel: 732-932-0150 • Fax: 732-932-0162

STATEMENT OF INTENT TO ESTABLISH A CONSORTIUM AGREEMENT

Subject: Subcontract Proposal Entitled: "Cyber Synergy: Seeking Sustainability through Collaboration Between Virtual Reference and Social Q&A Sites", Rutgers PIs Marie L. Radford, PhD and Chirag Shah, PhD, Collaborator PI Lynn Silipigni Connaway, PhD.

Dear Mr. Charles Thomas:

Rutgers is pleased to team with OCLC Online Computer Library Center, Inc. on the research proposal being sent to the Institute of Museum and Library Services. Rutgers University anticipates a three year period of performance beginning October 1, 2011, ending September 30, 2014, funded at the level of \$1,830,275.92 as detailed in our proposed budget that has been forwarded to your office.

Rutgers is an educational institution, which is an instrumentality of the State of New Jersey and conducts fundamental research in basic and applied science and engineering that is widely and openly published and made available to the scientific and academic community.

Rutgers shall enter into agreements for the support of research or instruction that do not require it, as a university, to participate in (1) handling or transmitting classified information, documents, material, or equipment, or (2) processing the security clearance of any person or facility, or (3) controlling access to any information in accordance with any security regulation, whether public or private.

If funding is secured, Rutgers University will provide any relevant current notices of approval for any and all animal and/or human subjects' protocols which may apply to this proposal, and documentation of human subjects education certification for individuals working on the related human subjects protocols. Funds will not be released until the documentation is provided.

Rutgers University will assure full compliance with award terms and conditions, as well as the regulatory and administrative requirements of the sponsor and any government entity with authority and jurisdiction in said matters.

Should this proposal be selected for funding, Rutgers agrees to enter into an agreement whose terms and conditions do not restrict our right to publish results of the research and do not restrict the participation of any individual based upon nationality, race, or religion. The appropriate programmatic and administrative personnel of each institution involved in this grant application are aware of the prime sponsor's consortium grant policy and are prepared to establish the necessary inter-institutional agreement(s) consistent with that policy. Questions regarding the technical aspects

of this proposal should be directed to Prof. Marie L. Radford at (732) 932-7500, ext. 8233. Administrative and/or fiscal questions should be directed to Nicole Nicholas, Research Contract and Grant Specialist, (732) 932-0150, ext. 2127 at the contacts listed above.

RUTGERS, THE STATE UNIVERSITY
OF NEW JERSEY

Marie L. Radford 1/26/11
(name) (date)
Principal Investigator

Chirag Shah 1/26/11
(name) (date)
Principal Investigator

(name) (date)
Institutional Authorized Signature

Consortium Institution
OCLC Online Computer Library Center, Inc.

Lynn Silipigni Connaway
Lynn Silipigni Connaway 1/26/11
Principal Investigator
(signature optional) (date)

Jay Jordan 1/26/11
(name) (date)
Official Authorized to sign for
Institution



January 27, 2011

Chuck Thomas, Senior Program Officer
Institute of Museum and Library Services
1800 M Street NW, 9th Floor
Washington, DC 20036

6565 Kilgour Place
Dublin, OH 43017-3395 USA

T +1-614-764-6000
1-800-848-5878
F +1-614-764-6096
E oclc@oclc.org

WWW.OCLC.ORG

Dear Mr. Thomas,

We are pleased to collaborate on the grant proposal being submitted to the Institute of Museum and Library Services by Rutgers, The State University of New Jersey, on behalf of co-investigators Marie Radford, Associate Professor in the School of Communication and Information at Rutgers, and Lynn Silipigni Connaway. Dr. Connaway is a Senior Research Scientist at OCLC.

The proposed research project, "Cyber Synergy: Seeking Sustainability through Collaboration between Virtual Reference and Social Q&A Sites," is greatly needed in the library community because virtual reference services (VRS), including live chat and Instant Messaging (IM) formats, have become well-established offerings now found on the great majority of library websites. Difficult economic times have negatively impacted library funding and many collaborative VRS, although they effectively leverage consortia resources, and many have folded or are in imminent danger.

This project builds on the findings of the researchers' previous IMLS-funded study, "Seeking Synchronicity: Evaluating Virtual Reference Services from User, Non-User, and Librarian Perspectives." The new project seeks to discover innovative ways to ensure that collaborative VRS remain sustainable amid today's budget woes and increased competition for libraries. In addressing these areas, the project will look to social Q&A sites (such as Yahoo! Answers, Answerbag, WikiAnswers, etc.) to see if there are lessons to be learned from their success, as well as to explore virtual collaboration opportunities (including potential revenue-generating options) and VRS system enhancements.

This proposed research project is an excellent opportunity for Rutgers University and OCLC Research to explore how VRS could not only better utilize existing subject expertise of librarians, but also connect with potential users and information seekers from social Q&A services (who may be interested in value-added, fee-based options that librarians might offer) and social media sites in general to create a more open, innovative, and sustainable pathway for the future of these services. This, in turn, will contribute to the continued advancement of the library and information science profession, creating opportunities for future investigations by other researchers. Because of this, we agree to the following in-kind contributions.



SQA Example 1 from Yahoo! Answers

Q. Why is American football called "football"?

Anyone know why we call it football when the feet are only used on the ball in punts, kick offs and field goals?

A. Best Answer - Chosen by Asker

Well, anyone can copy and paste. But that guy didn't answer your question. Here's why it's called football.

When American football was being developed, it was called football, as was soccer, as was rugby. To differentiate the different sports, in the mid 1900s (1905-1906), Americans started calling soccer "Association football," football was "American football," and rugby was "Gaelic football."

Obviously, being an egocentric nation, the American was dropped and it became football.

Association football was shortened to Assoc. footbal (pronounced A-sock), which was further shortened to Socc. football. It developed into the name "soccer."

Gaelic football is still Gaelic football, but rugby grew out of that. How, I dunno.

There's your answer!

Asker's Rating:

★★★★

Asker's Comment:

Thanks for the good answer. I wasn't about to read the history of football copied from some website.

SQA Example 2 from Yahoo! Answers

Q. My laptop turns on but the screen stays black?

It's actually my parents laptop. They use it for shopping online, bank and stuff. So no virus. It's an acer laptop which originally had the windows vista software but recently been changed to xp. I used it last night for facebook, yahoo, people.com and some skateboarding sites. His morning my mom tries to turn it on but the screen stays black. The on button in green but screen: nothing. My mom is scolding me right now because she thinks it's virus that I "downloaded" please help!!!!

A. Best Answer - Chosen by Asker

Well tries this,

- 1-connect another monitor to it,
2. turn on the lap top on the safe mode, press f8 button, i think
3. you should get visual on the new monitor,
- 4i.go to control panel and check the appearance and resolution and check monitor status
5. if there is no visual on the 2ed monitor,there is probably a problem with connection.

Some say lap top Monitors last about 4-5 years, if she has been travelling with it well less any 3-4 years.

good luck,i have read mac and toshiba have the best laptop screen and

Asker's Rating:

★★★★★

Asker's Comment:

Thanx alot!! Ithaca worked in my brother's laptop!! The one I asked about was only dead because the battery was dead!! U should have seen my mom's face!! It wasn't about me at all!! Thanx!!

[illegible]

Cyber Synergy: Seeking Sustainability through Collaboration Between Virtual Reference and Social Q&A Sites

Key Personnel

Principal Investigators

Marie L. Radford, Ph.D., Associate Professor at Rutgers University, School of Communication & Information

Lynn Silipigni Connaway, Ph.D., Senior Research Scientist at OCLC's Office of Research

Chirag Shah, Ph.D., Assistant Professor, Rutgers University, School of Communication & Information

Internal Advisory Board

Susan McGlamery, QuestionPoint Senior Product Manager, OCLC, Inc.

Paula Rumbaugh, QuestionPoint Product Manager, OCLC, Inc.

Mor Naaman, Ph.D., Associate Professor at Rutgers University, School of Communication & Information

Jacek Gwizdka, Ph.D., Assistant Professor at Rutgers University, School of Communication & Information

Nicholas Belkin, Ph.D., Professor II at Rutgers University, School of Communication & Information

Michael Lesk, Ph.D., Professor at Rutgers University, School of Communication & Information

Jennifer Gibbs, Ph.D., Associate Professor at Rutgers University, School of Communication & Information

External Advisory Board

Frederick Kenneth Schmidt, Director, Academic Relations, Yahoo! Labs

Julie Strange, Statewide Coordinator, Maryland AskUsNow!

Jeffrey Pomerantz, Ph.D., Associate Professor, University of North Carolina – Chapel Hill

Rich Gazan, Ph.D., Assistant Professor, University of Hawaii

Joseph Janes, Ph.D., Associate Professor, University of Washington

R. David Lankes, Ph.D., Associate Professor, Syracuse University

[illegible]

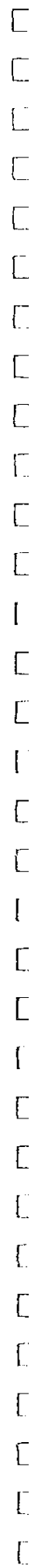
Supporting Document 1

Attachment A: Cited References

Attachment B: Additional Related Literature

Attachment C: Schedule of Completion

Attachment D: Example of live chat, Qwidget, and Social Q & A transcripts



Attachment A: Cited References



Attachment A

Cited References

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Attachment B: Additional Related Literature

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Attachment B

Additional Related Literature

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