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The Digital Library of Georgia (DLG) serves as a model of inter-organizational and cross-departmental collaboration. This paper will highlight resources involved, problems faced with collaborating, and different types of projects created with respect to collaboration. Holding no actual physical assets or artifacts of their own, the DLG is able to use assets belonging to the University of System of Georgia, the Public Library System of Georgia, and smaller historical societies, in order to provide information to middle and high school students, researchers, and life-long learners, as well as to help and assist smaller institutions (and larger departments of the University of Georgia) digitize and provide sustainable resources.

Headings:

      Collaboration--Academic-industrial

      Communities of Practice

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      Digital libraries--Georgia

A CASE STUDY OF THE DIGITAL LIBRARY OF GEORGIA AND INTER-
ORGANIZATIONAL COLLABORATION

by
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 Introduction

The Digital Library of Georgia, http://dlg.galileo.usg.edu/?Welcome&Welcome, located on the fourth floor of the University of Georgia's Main Library, creates, maintains, and manages digital projects related to Georgia and the research needs of the University. The DLG collaborates regularly with other institutions in the state of Georgia and shares metadata on a national scale. The targeted audiences of the DLG's projects vary, ranging from K-12 students to Post Doctorate and individual researchers. Some of the major collaborative projects of the DLG now include he Civil Rights Digital Library project (CRDL), the Cherokee Phoenix project, and the Vanishing Georgia Project. The media of different projects digitized includes film, newspapers, historical papers and photographs. Currently collections from institutions, including the Auburn Avenue Research Library on African American History and Culture as well as the City of Savannah Municipal Research Library are linked via the DLG's homepage.

Academic libraries have a strong foundation for collaboration already implemented. Since many digital library projects are affiliated with academic institutions, this foundation for collaboration will help digital libraries create more efficient and encompassing projects. The Digital Library of Georgia serves as a model for collaboration of digital collections. This case study looks at the process and future of collaboration in academic and public library systems.

Literature Review

       With the onset of digital repositories and preservation becoming more and more

prevalent and widespread in academic and government libraries, the potential for

collaboration and cooperation among these different institutions ensures more complete

collections cost effectively.   Inter-library collaboration is not a new phenomenon. Inter-

library loans and academic consortia have been around for ages.   Consortia for digital

libraries (DL) and preservation started to appear in the mid 1990s and are still popular

today. The Digital Library Federation, chartered in 1995, "operates through a

professional director with a small staff and a Board of Trustees on which each member

institution is represented" (*About the Digital Library Federation*).   The Library of

Congress also started the National Digital Information Infrastructure and Preservation

Program (NDIIPP) whose main purpose is "dedicated to ensuring that the digital

information that conveys our history and heritage is available and accessible for

generations to come" (Importance of Digital Preservation – Digital Preservation (Library

of Congress*)*.   The NDIIPP "charges the Library of Congress to lead a nationwide

planning effort for the long-term preservation of digital content, as well as to capture

current digital content that might be disappearing" (Kwon et al. 277). The NDIIPP is a

partnership among "state libraries, archives, and other state agencies" as well as the

Library of Congress (Kwon et al. 277)

       These collaborations and partnerships are even easier since these collections are

not necessarily physical, and many partners with the Library of Congress can link to their

website from their own library's websites.   From a user's perspective, this also provides access and visibility to many different digital projects hosted over the internet. A DL makes "it possible for users to access the library anytime, anywhere and to search and view documents in proper ways for an individual user (Iwamoto et al. 370). DL would not be able to exist without cooperation and collaboration (Hedman 147). Academic libraries already have partnerships among "archivists, librarians, and information technologists," and for future sustainability, these partnerships will need to concentrate on the "long term preservation of information" (Kwon 280). Libraries naturally center around "communal resources" and this communality is easily implemented in digital libraries and repositories (Hedman 147).

Partners Involved in Collaboration

In 1999, Anders Hedman published a paper in *Communications of the ACM*, entitled "Creating Digital Libraries Together—Collaboration, multimodality, and plurality." Hedman's study centered mostly on students and teachers developing and collaborating with each other using the Universal Simulator, "a substrate technology, and an authoring tool allowing its patrons to generate their own information structures, and to create or add existing content to those structures" (148). The possibilities for collaboration are endless because potential partners can be inside and outside of a department, institution, and even country.

Traditionally, collaboration has been necessary for state institutions to avoid multiple libraries with the same focus. This statement holds true for digital libraries as well, since most digital libraries are connected to larger physical libraries and archives. In this sense it is helpful to consider the digital library a part of the whole the library

system rather than a separate entity. Jose Luis Borbinha cited this as one of the most pressing issues of the National Library of Portugal's Digital Library (BND). Borbinha creates a goal for "long-term sustainable strategies for development and convergence with the traditional library because in the end we do not want to have two different libraries, but rather one coherently functioning library" (19). Collaboration here seems to be the key, especially in determining who the "actors" will be in the building, managing, and use of the digital library (Borbinha 19). Many national libraries depend on the collaboration of multiple public, private, and non profit organizations, which also transcends into digital libraries as well, especially since the digital library provides a supplement for the physical library not a replacement.   In a later, 2005, study of actors and roles in Digital Libraries, Borbinha (et al.) defines the relationships in Digital Libraries, as "users," "agents," and "professionals." This relationship is vital to the success and upkeep of a digital library, including the collaboration between professionals at different organizations or institutions.

In November 2003, the North Carolina State Archives and State Library collaborated with state governments in a digitization project of state government information. The resulting white paper defined and differentiated between the "traditional" definitions of librarians and archivists as related to the State Library and government information. According to Kristen Martin and Jan Reagan, librarians generally are in charge of disseminating information readily available to the public, while "archivists and record managers handle 'unpublished' government records" (5). This definition holds true for most working archivists and librarians, just in definition of their names and titles. Archivists make the records and artifacts safe and secure for scholars to

come and conduct research. By digitizing these artifacts and records, the scholar has less

contact with the actual artifact, preserving the integrity and quality of the asset. The

white paper looks at how roles and definitions change with digital preservation.

If we look at libraries as communities, and take into account Etienne Wenger's

"Communities of Practice" idea to "cultivate" and "promote cross boundary action

learning" we can address the problem of separatism in institutions (Snyder 18).

Communities of practice will build a support network that is able to address all the issues

that pop up with inter-organizational collaboration. In 1991, Jean Lave and Etienne

Wenger first used the term "communities of practice." Wenger has since broadened and

elaborated on that phrase to include "groups of people who share a concern, set of

problems, or a passion about a topic, and who deepen their knowledge and expertise in

this area by interacting on an ongoing basis" (4). Communities of practices cannot be

cultivated "in the same way you develop traditional organizational structures. Design

and development are more about eliciting and fostering participation than planning,

directing, and organizing their activities" (Wenger 13). Communities of practice have

been adopted by the business world, and have been spreading quickly in the realm of

Academia.

Communities of Practice are "boundary-crossing entities," making them a

"particularly appropriate structural model for cross-agency and cross-sector

collaborations" (Snyder 17). An academic library serves the local population

immediately but also has ties to other library communities through association

membership and interaction. Therefore, by showing how librarians can create

"communities of practice," we establish certain relationships in Wenger's model that fit

his "knowledge structure." I will further take this structure to look at collaborations between academic libraries and other institutions and the digital projects that they create.

Collaborative Digital Projects

The nature of a collection can determine the feasibility of collaboration. In Portugal, all printing houses are required by Portuguese law to "deposit materials of any kind in [the National Library of Portugal (BN)]," and the library encourages a "voluntary deposit model based on agreements with publishers and authors" (Borbinha, 20). These cooperative efforts, as well as those with the Networked Digital Library of Theses and Dissertations (NDLTD) will contribute much of the media in the National Library of Portugal's Digital Library (BND) (Borbinha 20). Eventually, the BN will start depositing newspapers in the BND (Borbinha 20).

Targeted Audiences of Collections

Digital libraries tend to appeal to broader audiences, appealing to more demographics than traditional university libraries, as the information can be accessed any time anywhere. These audiences range from grade school students, college students, and life-long learners, as well as genealogical research.

In 2002, "tens of millions of Americans visited history museums," and twenty million Americans tuned into Ken Burns' *Civil War* series (Crane and Wulfman 75). With this amount of attention being paid to historical presence in the spare time of Americans' it makes sense that digital projects focusing on similar subjects would spike an interest as well. Digital libraries provide "an environment in which the barriers between academia and broader historical discourse about the past may be broken down" (Crane and Wulfman 75).

Collection Funding

IMLS (Institute of Museum and Library Services) issues grants to support library projects, such as the National Leadership Grants for Libraries and Information Technology Service Act. In 2002, the California Digital Library (partnered with the UC Berkley Library) received $374,736 from the National Leadership Grants for Libraries to "create a model preservation repository for multi-institutional digital materials following the Open Archival Information System (OAIS) reference model" (Grant Search). IMLS also supports the Library Services and Technology Act (LSTA), which gives smaller amounts of money to help public libraries with digitization. The focus of the Library Services and Technology Act according to the IMLS website is:

- To promote improvements in library services in all types of libraries in order to better serve the people of the United States.

- To facilitate access to resources and in all types of libraries for the purpose of cultivating an educated and informed citizenry; and

- To encourage resource sharing among all types of libraries for the purpose of achieving economical and efficient delivery of library services to the public

This last bullet emphasizes collaboration on a broad scale not only for efficiency but for the good of the patrons and users of these libraries. These grants supplement money from other institutions and help to get projects started.

Problems That Arise from Collaboration

The Center for Technology in Government (CTG), " a digital government research center at the University of Albany, has been working with the LC since

September 2004" (Kwon et al. 277). The workshops held on April 27th, May 11th and May 25th, had representatives from all 50 states, Washington DC, and three territories, consisting of "67 librarians, 53 archivists, 13 records managers, and 20 IT professionals" (Kwon et al. 278).   Each workshop addressed "what kinds of digital content are at-risk and what are the priorities for preservation, how can states extend or build partnership networks, and what preservation related roles do states and the Library need to fill?" (Kwon et al. 278). The results of the workshops found the following barriers to partnerships: "competing priorities, lack of funding, lack of knowledge, and different perspective of IT people" (Kwon et al. 278). The workshop found that "creating a new community of practice for digital preservation" was among the top solutions for handling these problems (Kwon et al. 278).

In "Working Together: New Collaborations Among Information Professionals," Gerry Bernbom, Joan Lippincott, and Fynnette Eaton cite the following items as "factors impeding collaboration":

- Lack of financial resources

- Difficulties with inter-unit communication and organizational issues such as territoriality.

- Lack of support from upper management.

- Fear of change.

- Short term thinking, with no recognition of the need for information management.

- Insufficient workforce to continue present operations and address new needs.

- Fluidity of technology, which makes it difficult to know when to take action.

- Absence of standards or agreed-upon practices for long-term management of digital information.

Of the major problems that Bernbom, Lippincott, and Eaton mention, they focus primarily on that of communication problems experienced by different information professionals, due to the nature of their professions. Computer programmers tend to speak a different language than an American historian, but each brings a necessary function and expertise to a digital library on American Memory. Similarly, within the world of information professionals, there are curators, archivists, librarians, information technology professionals who all can contribute to digital projects. They bring with them specialized knowledge of their fields, as well as specialized languages. To an information technologist, the term "record" is "a subset of data about an entity; it is a discrete unit of computer-readable information stored in a file," but to an archivist, a record is "a document created or received by an agency, organization, or individual in carrying out a legal obligation or in the transaction of business" (Bernbom et al). Even the term "archive," has different meanings. For archivists, an archive is a place, but "for information technologists, archive is a verb meaning to transfer information to a storage location containing infrequently used files, for example from a disk to tape" (Bernbom).

The question then arises as to why this relationship is being ignored, especially since "the problem generally is not a lack of good intentions or a shared purpose…it is mainly an 'organizational problem'" (Snyder 17).

Summary

There is already a strong infrastructure to help support digital library collaborations. The NDIPP and the DLF have helped create models and standards for

digital libraries to follow, and grants from the IMLS have helped encourage inter-organizational and disciplinary participation. Additionally, workshops and conference proceedings help to give collaborators standards and scenarios of possible problems that they might encounter. Furthermore, adopting Wenger's model of a community of practice will help create a practical model for digital collaboration and participation across inter-organizational structures. The knowledge that is shared in these communities comes both in the form of digital and historical assets as well as information regarding the best practices and standards for developing digital repositories and digital collections.

Research Study

Research Methodology

The subject population consists of approximately 20 employees (faculty, staff, or student positions) of the Digital Library of Georgia (DLG) and three participants outside of the DLG who are connected to the University System of Georgia and collaborate directly with the DLG. Two of the latter are employed with the University of Georgia directly and work in the Russell Memorial Library. The third is an employee of the Georgia Board of Regents/GALILEO and works with the Georgia HomePLACE.

This is a case study of one state-wide digital library.   I interviewed five people in person who are directly involved with collaborative projects centered on the Digital Library of Georgia (DLG).   I interviewed the Director, Toby Graham, and Assistant Director, Sheila McAlister, of the Digital Library of Georgia, as well as Ruta Abolins, the Director of the Walter J Brown Media Archives and Peabody Awards, Tim Peacock, Information Technologist with GALILEO, and Ed Johnson, the Director of the Georgia HomePLACE.   All interviewees are connected to the University System of Georgia and the Board of Regents. Before the interview, I individually gave and explained the consent form (Appendix III), and the interviewees read over it before they officially decided to volunteer for the study. If they chose to participate, I asked thirteen questions about inter-organizational collaboration, upcoming projects, and problems and issues related to collaboration and project organization (See Appendix I for a list of the

interview questions).   There were no control groups in this study, nor were there any

differential assignment of participants to different study "arms."

I asked employees of the Digital Library of Georgia as well as the five

interviewees mentioned above if they would like to participate in a brief questionnaire

that I had created for the study (See Appendix II for the questionnaire). The participants

who chose to participate returned the questionnaire and consent form (Appendix D) in a

stamped envelope that I provided.

This research study consists of mostly qualitative data (the interviews), with a

smaller amount of quantitative data (the short-answer questionnaires) that I statistically

analyzed by hand, due to the small size of the survey pool. My analysis of the qualitative

data is prepared similarly to the study in 2003, *North Carolina State Government*

Information: Realities and Possibilities, prepared by Kristin Martin, Digital State

Documents Librarian, Jan Reagan, Head, Documents branch, and the State Library of

North Carolina Department of Cultural Resources.

Results

The Questionnaire

Questionnaires were given to ten participants in the Digital Library of Georgia,

and six were completed and returned (Appendix II). Of those questioned, 3 of the six

described themselves as staff, one described as faculty, one percent as a graduate student

and faculty, and one as an undergraduate. Three of those questioned have been involved

with fewer than five projects, while the other three have been involved with more than

ten (See Figure One). Of the three involved with less than four projects, one of those was

only involved in one project. Three of the six were affiliated with the DLG, and three

were affiliated with other institutions. One of the six questioned had been at the DLG

less than six months, two had been at the DLG for 2-5 years, and one had been at the

DLG for more than five years. Three of the six questioned said that in regard to the

projects they have worked on, the possibility for collaboration is extremely likely, one

responded "likely," one responded "unlikely," and one responded "not applicable." Four

of those questioned responded that collaboration needs of the University of Georgia met

were very efficiently, and two responded that the needs were met some-what efficiently

(Figure Two). Two of the six surveyed responded that collaboration with institutions

outside of the university occurred daily, one said collaboration outside of Georgia and the

University System of Georgia occurred weekly, and two said it occurred monthly. One

answered unsure. Similarly, Two respondents had contact with other institutions Daily,

one survey respondent answered weekly, and two responded that they had occasional

contact with other institutions (See Figure Three).

Figure One: Involvement in Digital Library Projects

Answer	Subject Responses	Percentage of Total
One	1	17%
Two to Four	2	33%
Five to Ten	0	0%
More than Ten	3	50%
N/A	0	0%

Figure Two: Efficiency in Collaboration

Answer	Subject Responses	Percentage of Total
Not Efficient	0	0%
Somewhat Efficient	2	33%
Very Efficient	4	66%
N/A	0	0%

Figure Two: Frequency of Contact with Other Institutions

Answer	Subject Responses	Percentage of Total
Daily	2	33%
Weekly	1	17%
Monthly	1	17%
Occasionally	2	33%
Never	0	0%

These survey results show that collaboration occurs often as more than half of those questioned have contact with other institutions at least monthly. Additionally, it seems that collaboration is efficient, as the majority of those questioned responded "very efficiently." The question specifically asked about the needs of the University of Georgia, and not those outside the system.

The Interviews

The results of the interviews were summarized below according to the main points of the Library Manager Interview Questions (Appendix I) specifically: partners involved in collaboration, collaborative digital projects, collection audience, collection

funding, problems with collaboration, ownership and hosting, software and hardware used in collaborative projects, and future and long term goals for collaboration.

Partners Involved in Collaboration

The Digital Library of Georgia (DLG) is supported by the Board of Regents (BOR) of the University System of Georgia, which supports GeorgiA LIbrary LEarning Online (GALILEO), as well as the Georgia Public Library System. Because of this structure/base, the DLG works closely with other academic institutions as well as public library systems, and the projects produced by the DLG reflect this relationship. Generally most of the institutions that the DLG collaborates with are Georgia institutions. Through the Board of Regents and GALILEO, the DLG works closely with the Georgia Public Library System and college and university libraries across the state. However, the DLG does collaborate on a national scale as well. For example, the "Southeastern Native American Documents include institutions in Tennessee and North Carolina" (Graham). Currently, the DLG is collaborating with 75 national institutions on the Civil Rights Digital Library (CRDL). These national institutions are content partners, which "are people who are hosting their own content, that have their own digital collection, but [the DLG is] providing another route of access to that content through the DLG metadata catalog and…site" (Graham). The project partners, those whom "[the DLG works] with to digitize their collections…and build digital sites on a project," for the CRDL are all Georgia Institutions (Graham).

Sheila McAlister, Assistant Director of the Digital Library of Georgia, explains how the process of collaborations varies from project to project. She lists examples of the Troup County Archives and the Georgia Historical Society, "they contacted us for

advice on how to do it, and we contacted them with some option on how we could help

out if [they] would like to partner with [us]" (McAlister). The Georgia HomePLACE

project, a collection of collaborative projects through the BOR and public libraries across

the state, mostly elicits collaboration from the smaller libraries with help an extensive

survey created by Ed Johnson based on the needs of the library patrons and users

(McAlister). Once the survey is completed, the DLG will "go back to these digital

partners and talk to them about the collections that they have and propose a project, but

quite often it happens the other way around" (Graham).

Collaborative Digital Projects

The largest project in the making at the DLG right now is the Civil Rights Digital

Library project (CRDL). The CRDL began as an idea from English professor Dr.

Barbara McCaskill who "came to visit [the DLG] one day and said she wanted to have

students analyze historical news film and create a website that would be of instructional

value" (Graham). This function is still the key concept behind the CRDL, but it has

grown into something much larger (Graham). In October 2005, McCaskill told the UGA

office of Public Affairs, "we are eager to begin creating interactive teaching tools that

will offer historical and cultural contexts, facilitate critical discussions, and appeal to

different methods of learning" (UGA Library News and Events Blog).   Now the CRDL

is "the most ambitious effort to date to provide educational content on the civil rights

movement to make that available via the web" (Graham). The CRDL "includes moving

images from the WSB television news archive, which is held here at the University of

Georgia, and WALB [in Albany]." The CRDL will include the "streaming [of] about 30

hours of historical news film," and "will also be providing educational resources to help

support the use of this content in class rooms (K12 and also college)" (Graham). The

DLG has also created a "national portal on the civil rights movement that connects

together by process of metadata aggregation the digital collections that have been created

by institutions across the country" (Graham). This metadata aggregate links the above

mentioned 75 content partners to the DLG. This portal, however, is part of the DLG as a

whole. According to the Digital Library of Georgia Homepage:

> The DLG Portal Service links historical and cultural collections digitized by the
> DLG and held locally in GALILEO with digital collections, materials, sites, items
> or similar resources held by cultural and/or other non-profit organizations
> throughout the state and elsewhere by means of a selective portal service. The
> core of the portal service is a metadata catalog containing descriptive information
> about each resource. (Collection Development Policy)

This portal makes the "DLG itself…a giant collaboration…for the [DLG's] basic website

we get other institutions to donate their metadata" (McAlister).

Georgia HomePLACE is collection of collaborative project of the DLG and the

BOR/ University System of Georgia "to digitize valuable collections on Georgia local

and family history and to support partnerships between public libraries and the Digital

Library of Georgia" (Digital Library of Georgia and Partners and Sponsors). The first

Georgia HomePLACE project was created in 2002, the Vanishing Georgia Project, and

since 2004, there have been fourteen new digital projects from the Georgia HomePLACE

(Graham). Ed Johnson, Director of the Georgia HomePLACE, created a survey

technique "to understand what type of collections [public libraries] have and what their

needs are" (Graham). Ed presents this information to the Georgia History Committee

(Johnson).

The Survey for the Georgia HomePLACE focused on "local history and family

history resources in Georgia public libraries for the purpose of gathering information to

assist planning future collaborative digitization" (HomePLACE Survey Abstract 1). The survey sought what assets different Public Libraries housed and had access needs for, as well as input from patrons of what they would like to see digitized and made available as well. The survey results showed that "newspapers are clearly the most widely held and most actively collected materials" (HomePLACE Survey Abstract 1). The survey further looked at how/which assets were widely held and collected (HomePLACE Survey Abstract 1). Patrons of these institutions mostly wanted cemetery information, marriage records, family history and genealogy information, as well as thematic types of items (HomePLACE Survey Abstract 1). Newspapers, which the institutions actively hold and collect have many of the needs of "genealogical" information (HomePLACE Survey Abstract 2).

Collection Audiences

The intended audience of the Digital library of Georgia includes "five segments: Casual User, Student/K12/Lifelong Learner, Information Seeker/Hobbyist, Scholar/Researcher, Government/Business Community" (Collection Development Policy). During the design phase of the site, the DLG had a middle or high school teacher as the benchmark user because the DLG would be able to "reach people on either side of that user" (Graham). Furthermore, Georgia History is taught in every eighth grade class in middle and junior high schools in the state. The DLG is also directed towards "anybody who is interested about the state of Georgia," including life-long learners, genealogists, and scholars (McAlister). This span of audiences creates a challenge, since it "requires the ability to take something as vast as a digital library and distill it in something that is packaged for educators and give effectively with [the

DLG's] resources" (Graham). Similarly, projects from GALILEO are targeted towards "K-12 education, [the] state library system, and USG member institutions along with several private colleges/universities (Peacock). Additionally, the Georgia HomePLACE caters itself to public library patrons and users, librarians, K-12, university students, "local history buffs, genealogists, curious citizens, and life-long learners," which include "everybody in the state with curiosity" (Johnson).

Collection Funding

When asked about whether funding helps or hinders collaboration, all who were interviewed generally agreed that it does help but also adds complications. As Sheila McAlister notes, "all of [the DLG's] projects are collaborative, so it certainly doesn't hurt [to have grant funds]." Grant money can help make decisions about which projects that the DLG is going to do, "but the decision to collaborate, that's just what we do" (McAlister). As Toby Graham notes, "the lure of grant dollars can bring people together in a room and give them the sense that there is a possibility to move forward with something." Georgia HomePLACE uses IMLS (Institute of Museum and Library Services) Library Services Technology Act (LSTA) funds. LSTA funds "have been tremendously important because…it has given something better than dollars" (Graham). If the DLG had just been offering "sub grants" from the University of Georgia, "then they'd have to go out and figure out how to start their own digitization program and figure out how to sustain that over time and sustain the digital resources they create." (Graham). With the LSTA funds, the DLG is able to offer "a sustained service, to take the best practices and preserve their master data and perpetuity online" (Graham). These funds give public libraries and archives a possible avenue in order to digitize local

collections with the help of the DLG. The CRDL (Civil Rights Digital Library Project) was written into a grant as an afterthought (Abolins).   Having sources outside the University of Georgia help "make it more attractive" and (Graham). Furthermore, "funding sources tend to generate revenues for personnel and equipment" (Peacock).

Problems That Arise from Collaboration

Both Sheila McAlister and Toby Graham cite communication as the key concern for problems encountered with digital collaboration. As Sheila McAlister points out, "[communication] is so important in creating a shared vision and workable work flows and getting other people to be happy with the progress that we are making" (McAlister). If stakeholders and institutions "feel like decisions…are made without their input, that sours them on collaboration and that's something we have to guard against and be diligent in communicating with our partners" (Graham). Graham further explains that sometimes no matter how diligent you try to be, facilitating successful collaboration is very difficult because you need to "make sure it is a win for everyone…collaboration should be based on enlightened self interest" (Graham).

Miscommunication can create problems with collaboration because "projects involving a new partner, one who has not engaged in such work before, sometimes run into delays and misconceptions around the amount of time and effort that is needed for metadata generations, finding aids, etc…" (Peacock). Ruta Abolins, Walter J. Brown Media Archives and Peabody Awards, also cites communication problems, especially with really large projects. She further explains that it is something that one needs to stay open to and flexible with (Abolins).

Ed Johnson, Georgia HomePLACE, doesn't want to put too much emphasis on the problems, as the possibilities are so strong, but he mentions the same communication problems around the amount of time it takes to digitize collections, and the time it takes to get to future collections in the Georgia Public Library System (Johnson). Sheila McAlister, of the DLG, says, "I think the biggest and hardest thing about any project is communication. If institutions who are stake holders in digital projects "feel like decisions are made without their input, [it] can sour them on collaboration, and that's something we have to guard against and be diligent in communicating with our partners" (Graham).

Different metadata standards can create problems with the collection of metadata from other institutions. These variations in practice are not necessarily a problem for the DLG, since

> we have less of an issue with that than programs that are decentralized because we're doing so much of that work according to our internal standards, and our external standards, internal guidelines that we use to implement things like Dublin Core and our imaging standards (Graham).

This issue leads to the final problem listed by Graham, that of "digital preservation and sustainability" (Graham). The DLG is in a better position than models similar to it around the country because of the support that the DLG gets from the University of Georgia and GALILEO (Graham).

Ownership and Hosting

Most of the projects that the DLG and smaller libraries are hosted on GALILEO. As Sheila McAlister points out, "[smaller institutions] don't' have the same kind of infrastructure" (McAlister). Since the admin side of GALILEO is in the basement of the main library, this brings back the convenience of the location of the DLG and the ease of

convenience (McAlister). The DLG has a "permanent non exclusive right to provide online access" (Graham).

The Vanishing Georgia project is the only current example where the same digital object would be hosted multiple places (Graham). The DLG does "share metadata [through the metadata aggregator] and point to those digital objects where they reside" (Graham).

Software and Hardware used in Collaborative Projects

The DLG has created "a metadata union catalog that is a web based form," called META, and they encourage its use with "people from other smaller institutions" (McAlister). Sometimes though, "larger institutions will have their own software solutions," such as ContentDM (McAlister). If an institution is working "mostly independently from [the DLG], they would be using their own software and equipment to digitize a collection." These institutions would either digitize the material themselves or outsource it to other vendors (McAlister). GALILEO has software "that was written by and maintained by UGA personnel" (Peacock). The Walter J. Brown Media Archives and Peabody Awards use the same software that the DLG uses for the CRDL, but for hardware, they use Mac computers (Abolins). Since the DLG in the same building as the Walter J. Brown Media Archives and Peabody Awards, their digitization staff can use the PCs in the DLG and they can "jockey between the two systems" when needed (Abolins).

Future and Long Term Goals for Collaboration

The CRDL which "brings together librarians, archivists, and information technology people, public broadcasters and publishers, humanity scholars, undergraduate and graduate researchers, K12 teachers" is the model for the future of digitization

projects. This collaboration helped shape "the degree to which our collaborations need to be cross institutional but also interdisciplinary and cross areas of expertise in ways that they most often aren't" (Graham).

When asked about future projects in the DLG, Sheila McAlister mentioned the effort to digitize all of Georgia's Newspapers. Taking into account the HomePLACE survey results previously mentioned this direction makes sense. There had been a Newspaper project in the past, which turned out not to be sustainable (McAlister). Now the DLG is using Optical Character Recognition software, versus hand transcriptions and SGML tagging. Sheila McAlister elaborates, "we're in the process of evaluating different methods of newspaper digitization, so they are going to do a focus groups with different stakeholders to see which user interface [will both make them happy and be good for the DLG" (McAlister).

Summary

The DLG already resembles a community of practice. It has core members who contribute and meet with other stakeholders as well as active members, peripheral members, and outside members. The DLG also has an open dialogue with perspective partners and project coordinators. Many of these open dialogues include outside perspectives, as generally, anyone could be considered a future collaborator. At the moment, the DLG's focus is more on institutions in Georgia, but the scope of the DLG is national as well. In that case by opening up dialogue to outside perspectives, the DLG is also opening up dialogue to future participants in collaboration. This open dialog will help thwart communication issues from the beginning, since communication is unanimously the most challenging issue felt by the survey respondents as well as representative of the challenges faced in the literature.

Funding was a major issue in the literature for collaboration. All of the projects for the DLG are funded (either by outside grants or the University of Georgia). Having the IMLS grants available has helped some collections come to fruition, since otherwise there might not have been money in UGA's budget to create that project.

The roles are well defined within the DLG. The physical location of the DLG also helps to facilitate and elicit collaboration among different departments of the University of Georgia Library Systems as well as with the Technical Staff of Galileo. Having the Walter J. Brown Media Archives and Peabody Awards on the seventh floor, helps not only with collaboration of content, but also with that of resources. This is

location is also convenient for the DLG and the Information Technology staff of

GALILEO. The Board of Regents is also based in Athens, creating an even more

convenient method for collaboration with other academic and public libraries.

Bibliography

Abolins, Ruta. Personal interview. 12 February 2008.

About the Digital Library Federation. 29 May 2008. Digital Library Federation,
Washington DC. 4 July 2008 <http://www.diglib.org/about.htm>.

Bernbom, Gary, Joan Lippincott, and Fynnette Eaton. "Working Together: New
Collaborations Among Information Professionals." *Cause/Effect: a
Practitioner's Journal about managing and using Information resources on
college and university campus.* 22.2 (1999): 6-9

Borbinha, Jose Luis. "An Approach to Creating a National Digital Library."
International Journal of Digital Libraries. 4 (2004): 19-22.

Borbinha, Jose et al. "Reference Models for Digital Libraries: Actors and Roles."
International Journal on Digital Libraries (2005): 325-331.

Collection Development Policy. Sept. 2004. Digital Library of Georgia, Athens, GA. 21
04. 2008 <http://dlg.galileo.usg.edu/AboutDLG/CollectionDevelopment.html>

Crane, Gregory and Clifford Wulfman. "Towards a Cultural Heritage Digital Library."
Proceedings / Joint Conference on Digital Libraries. (2003): 75-86.

Digital Library of Georgia Partners and Sponsors. Digital Library of Georgia, Athens,
GA. 04 03. 2008 <http://dlg.galileo.usg.edu/AboutDLG/Partners.html?Welcome>

Graham, Toby. Personal interview. 18 February 2008.

Grant Search. Institute of Museum and Library Services, 08 July 2008.
<http://www.imls.gov/results.asp?State=0&city=&description=on&inst=&keyword
=&program=gt_1006&sort=year&year=7>

Importance of Digital Preservation - Digital Preservation (Library of Congress). 05 May
2008. Library of Congress, Washington, DC. 04 07. 2008
<http://://www.digitalpreservation.gov/importance/index.html>.

Iwamoto, Hajime et al. "A Digital Library System with Mechanisms of Collaboration
Support." *IEEE* (2000): 370-375.

Johnson, Edward A. *Georgia HomePLACE Survey*. Dec. 2003. Digital Library of
    Georgia, Athens, GA. 21 April 2008
    <http://dlg.galileo.usg.edu/AboutDLG/HomePLACESurvey.html?Welcome&We
    lcome>

Johnson, Edward A. Personal interview. 02 February 2008.

Kwon, Hyuckbin, Theresa A. Pardo, and G. B. Burke. "Building a State Government
    Digital Preservation Community: Lessons on Interorganizational Collaboration."
    *Proceedings of the 2006 International Conference on Digital Government
    Research* May (2006): 277-284.

Kristen Martin & Jan Reagan. *North Carolina State Government Information: Realities
    and Possibilities*. Nov. 2003. State Library of North Carolina, Raleigh, NC. 15
    Dec. 2007
    <http://statelibrary.dcr.state.nc.us/digidocs/workgroup/whitepaper.pdf>.

McAlister, Sheila. Personal interview. 12 February 2008.

McDonough, Jerome P. "METS: Standardized Encoding for Digital Library Objects."
    International Journal on Digital Libraries 6.2 (2006): 148-158.

Peacock, Tim. Personal interview. 29 January 2008.

Torres, Roberto et al. "Collaboration and Group Work: Enhancing Digital Libraries with
    TechLens." *Proceedings of the 4th ACM/IEEE-CS Joint Conference on Digital
    Libraries JCDL '04* June (2004): 228-236.

Snyder, William M. et al. "Reference Models for Digital Libraries: Actors and Roles."
    The Public Manager 32.4 (2003): 17-22.

UGA Libraries News & Events. 17 Oct. 2005. University of Georgia Libraries, Athens,
    GA. 08 07. 2008 <http://www.libs.uga.edu/blog/?p=157>.

Welcome to the Digital Library of Georgia. 2006. Digital Library of Georgia, Athens,
    GA. 21 04. 2008. <http://dlg.galileo.usg.edu/>

Wenger, Etienne. *Communities of Practice: Learning, Meaning, and Identity*.
    Cambridge: Cambridge University Press, 1998.

Wenger, Etienne, Richard McDermott, and William Snyder. *Cultivating Communities of
    Practice: a Guide to Managing Knowledge*. Boston: Harvard Business School
    Press, 1989.

Appendix I

Library Manger Interview Questions

1. Are there any digital library projects in the making at the moment, which are a collaboration among UGA and other Institutions?
2. If yes, How many institutions generally collaborate together?
3. Which institution generally enlists the other for collaboration?
4. What about in the past?
5. Who is the intended audience for different projects?
6. Are grant funded projects (outside the University of Georgia) more or less likely to encourage collaboration?
7. Do you know of any problems that come along with inter-library collaboration among projects shared and created between a few institutions?
8. Who has hosting rights? Do you ever share hosting rights?
9. Does each institution use their own software for such collaborations?
10. Does one institution generally do most of the work and contribute mostly material as opposed to work force?
11. Are most of the institutions that you collaborate with connected to the University Systems of Georgia?
12. Are most of the institutions in Georgia?
13. What do you feel is in-store for collaboration on future projects?

Appendix II

Questionnaire examining the frequency of inter-organizational collaboration among the Digital Library of Georgia and other institutions inside and outside the state of Georgia and Library Systems of Georgia

1. Please check all that apply to you:
   __Faculty
   __Staff
   __Graduate Student
   __Undergraduate Student
   __Other:_____(Please specify)

2. How many projects in the digital library have you been involved in?
   __One
   __Two to Four
   __Five to Ten
   __More than Ten
   __N/A

3. How much contact do you have with other institutions including GALILEO, State Archives, and other academic Universities?
   __Daily
   __Weekly
   __Monthly
   __Occasionally
   __Never

4. With which department are you officially affiliated?
   __the DLG
   __History
   __English
   __Anthropology
   __Sociology
   __Other (Please Specify):_____

5. How many years have you been at the Digital Library of Georgia?
   __Less than 3 Months
   __ 3-6 Months
   __6-12 Months
   __1-2 Years
   __2-5 Years
   __5-10 Years
   __More than 10 Years

6. In regards to the project(s) that you have worked on what is the likelihood of collaboration with other institutions regarding the scope and subject of the projects?
   __Unlikely
   __Likely
   __Extremely Likely
   __N/A

7. With what efficiency are the needs of the University of Georgia met in regards to collaboration with other institutions (in your opinion)?
   __N/A
   __Not Efficient
   __Some-what Efficient
   __Very Efficient

8. How often is collaboration done with institutions outside of Georgia and the University of Georgia Libraries?
   __Daily
   __Weekly
   __Monthly
   __Occasionally
   __Never

Appendix III

University of North Carolina-Chapel Hill
Consent to Participate in a Research Study
Adult Participants: Managers of the Digital Library of Georgia
Social Behavioral Form

IRB Study # 07-1978
Consent Form Version Date: October 3, 2007
Title of Study: Inter-Organizational Collaboration: A Case Study

Principal Investigator: Mary Katherine Barnes
UNC-Chapel Hill Department: School of Information and Library Science
UNC-Chapel Hill Phone number: 919-962-8366
Faculty Advisor: Dr. Deborah Barreau
Faculty Advisor phone number: 919-966-5042
Faculty Advisor email: barreau@email.unc.edu
Study Contact telephone number: 706-254-6338
Study Contact email: mkbarnes@email.unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. To join the study is voluntary.
You may refuse to join, or you may withdraw your consent to be in the study, for any
reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help
people in the future.   You may not receive any direct benefit from being in the research
study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this
information so that you can make an informed choice about being in this research study.
You will be given a copy of this consent form. You should ask the researchers named
above any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn about inter-organizational collaborations
and partnerships in Digital Libraries.

You are being asked to be in the study because you are principle managers and project
coordinators of the Digital Library of Georgia.

How many people will take part in this study?
If you decide to be in this study, you will be one of approximately two people being
interviewed in this research study.

How long will your part in this study last?
If you decide to participate, I will interview you for approximately one hour. The questionnaire will take only a few minutes to fill out.

What will happen if you take part in the study?
If you take part in this study, I will ask a series of open-ended questions regarding inter-organizational/institutional collaboration, focusing on problems that arise when collaborating or choosing not to collaborate with different libraries and academic institutions when a similar scope and project possibility exists outside the realm of your library as well as your library system.

I will also give you and the staff of the DLG a voluntary small questionnaire to fill out about collaborations in your Digital Library.

What are the possible benefits from being in this study?
Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study, but there will be educational or professional benefits, as information we obtain will be communicated to researchers and professionals. There is no cost to you or financial benefit for your participation

What are the possible risks or discomforts involved from being in this study?
There are no risks anticipated with this study.

There may be uncommon or previously unknown risks. You should report any problems to the researcher.

How will your privacy be protected?
The interviews will be held privately in a conference room or designation of your choice. I will give stamped envelopes with the questionnaires that will be addressed to me. At the end of my study all information on my laptop will be deleted and paper copies of the questionnaire will be shredded.

Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies for purposes such as quality control or safety.

I will quote and identify you in the research paper. If you choose, I will not identify you by name but by pseudonym. Upon your consent, our interviews will be recorded. During the time of my study, I will have all information including the recording of our conversation on my personal laptop, which will always be in a securely locked home or office with a password encryption on the file. The audio recording will be kept as a Windows Media File for the duration of the study. The content will be transcribed with a

word processor. Upon your request, I will provide you a copy of the transcription to meet with your approval and to prevent misquotations. All files will be kept for a year after completion of the study and then will be erased.

Audio-recordings may be requested to be turned off, if you wish.
       Check the line that best matches your choice:
         _____ OK to record me during the study
         _____ Not OK to record me during the study

Will you receive anything for being in this study?
You will not receive anything for taking part in this study.

Will it cost you anything to be in this study?
There will be no costs for being in the study

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research participant?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

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Title of Study: Inter-organizational Collaboration: A Case Study

Principal Investigator: Mary Katherine Barnes

Participant's Agreement:
I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_____   _____
Signature of Research Participant   Date

_____
Printed Name of Research Participant

_____   _____
Signature of Person Obtaining Consent   Date

Printed Name of Person Obtaining Consent

Appendix IV

University of North Carolina-Chapel Hill
Consent to Participate in a Research Study
Adult Participants: Questionnaire for the Digital Library of Georgia Staff
Social Behavioral Form

IRB Study # 07-1978
Consent Form Version Date: October 3, 2007

Title of Study: Inter-Organizational Collaboration: A Case Study

Principal Investigator: Mary Katherine Barnes
UNC-Chapel Hill Department: School of Information and Library Science
UNC-Chapel Hill Phone number: 919-962-8366
Faculty Advisor: Dr. Deborah Barreau
Faculty Advisor telephone number: 919-966-5042
Faculty Advisor email: barreau@email.unc.edu
Study Contact telephone number: 706-254-6338
Study Contact email: mkbarnes@email.unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. To join the study is voluntary.
You may refuse to join, or you may withdraw your consent to be in the study, for any
reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help
people in the future.   You may not receive any direct benefit from being in the research
study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this
information so that you can make an informed choice about being in this research study.
You will be given a copy of this consent form. You should ask the researchers named
above who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn about inter-organizational collaborations
and partnerships in Digital Libraries.

You are being asked to be in the study because you work on projects at the Digital
Library of Georgia.

How many people will take part in this study?
If you decide to be in this study, you will be one of approximately 20 people in this research study.

How long will your part in this study last?
The study consists of 8 questions short-answer items. The questions will take no more than a few minutes to complete. You may add comments as you wish to the questionnaire. All feedback is greatly appreciated.

What will happen if you take part in the study?
I will give you a list of questions that you can fill out at your earliest convenience. I will include a stamped envelope that will be addressed to me for you to mail off at your earliest convenience.

There will be no information identifying you on the questionnaire but you are free to answer or not answer at your own will.

If you decide to participate, simply include the signed portion of this consent form with the questionnaire and drop it in the mail. All information regarding your identity will be kept confidential, as I will be the only one who has access to this information.

What are the possible benefits from being in this study?
Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study. There will be educational or professional benefits from this study, as information we obtain will be available to researchers and professionals.

What are the possible risks or discomforts involved from being in this study?
There are no risks anticipated with this study.

There may be uncommon or previously unknown risks. You should report any problems to the researcher.

How will your privacy be protected?
I will give stamped envelopes with the questionnaires that will be addressed to me. Therefore, besides myself, no one will know of your involvement with this study. All files will be kept for a year after the study is completed and then will be erased.

Participants will not be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies for purposes such as quality control or safety.

Will you receive anything for being in this study?
You will not receive anything for taking part in this study.

Will it cost you anything to be in this study?
There will be no costs for being in the study

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research participant?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

- -

Title of Study: Inter-Organizational Collaboration: A Case Study

Principal Investigator: Mary Katherine Barnes

Participant's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_____   _____

Signature of Research Participant   Date

_____