

“Whither Thou Turbid Wave?” Digital Library Collections and Consortia
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Thank you for the opportunity to join in a program that looks really good. You have sessions coming up on collections analysis, undergraduate services, the future of online cataloging, and the effects of digital collections on technical services.¹ All are important topics in the era in which libraries currently find themselves—an era in which we are riding a wave of technological developments too high to see over to any clear shore. I have come to give you less a guess about where libraries are going than a view of where we are on the wave right now. So get ready for a rollicking story.

1

For you, the story begins back in 1933, when a couple of your libraries decided to enter into some cooperative undertakings. In time you extended your collaboration to four universities in the area. And as you entered the digital era, your collaborative activities came to include not only putting your individual catalogs online but linking them in a network.² This reflected one of your TRLN Principles of Cooperation, a principle that I think all of us in today’s library world should keep pasted somewhere in front of our eyes, if only mentally. It not only makes general sense but is the key to digital development. Let me quote the principle:

*Through consortial effort, results can be achieved greater than those any single library might accomplish on its own and both individual and common agendas can be advanced.*³

In consequence of your long collaboration, the students and teachers on your individual campuses no longer are limited to the use of what they can find in their own campus libraries. Anyone in the four universities, I gather from your Web site, has access to your combined holdings—some fourteen million volumes.⁴ You consider the collections and services of your individual libraries a resource for the clients of all four of your universities. You regard every student and faculty member in these universities as a client of each of your libraries. And you are working to provide what your principles of cooperation call “comprehensive and seamless access” to “information resources and services available at and through each of [your] member institutions.”⁵

But you have not stopped with that. In addition to putting your card catalogs online, you are providing access to electronic copies of parts of your collections themselves. For example, Duke University has digitized exhibits from its Rare Book, Manuscript, and Special Collections Library. The exhibits currently contain photographs taken between 1935 and 1958 for the U.S. Farm Administration and *Life* magazine by the noted photographer Carl Mydans.⁶ North Carolina State University provides electronic texts and databases on several subjects including architecture, art, and design. N.C. State also is placing conference papers, technical reports, and other materials in an online, indexed “Faculty Publications Repository.”⁷ The University of North Carolina, Chapel Hill, has declared in its current, five-year, library plan that “making portions of the library’s collections available electronically is a key part of the responsibility to provide

access to scholarly information and promote scholarly communication.”⁸ I think that declaration now speaks for all of us. And so, I think, does the following reminder of our values that I found on the library Web site of North Carolina Central University:

*Although changes have occurred in the library environment with the appearance of new formats and emerging technologies, traditional values of helpful, supportive, individualized service remain firmly entrenched in the culture of the libraries at NCCU.*⁹

In short, like many other librarians around the world, you have been riding the digital wave by providing online access to catalogs and documents, using technology to extend services, incorporating such services into your missions, and finding ways to merge new technologies with traditional values.

But just as your digital developments have not stopped with online card catalogs, your collaborative work has not stopped with your own ten libraries and four universities. You have also developed collaborations with other institutions, one of which, I happen to know, is the Library of Congress. In fact, all four universities represented here are working with us in significant ways.

The Congress of the United States mandated a program called “An Adventure of the American Mind.” It is designed to train classroom teachers and college teacher-education faculty to access, use, and produce curriculum materials using the Internet and digitized, primary-source materials from the collections of the Library of Congress. North Carolina is one of the states actively engaged with us in this program.¹⁰

The National Union Catalog of Manuscript Collections is a program of the Special Materials Cataloging Division of the Library of Congress. As you know it

produces archival cataloging for manuscript repositories. Among NUCMC's special undertakings is the Cooperative Historically Black Colleges and Universities Archival Survey Project. North Carolina Central University is among the North Carolina institutions involved with us in this project.¹¹

North Carolina State University is collaborating with us in another Congressionally mandated program: NDIIPP. As most of you know, that ungainly acronym stands for National Digital Information Infrastructure and Preservation Program. Within the program, NC State is carrying out the North Carolina Geospatial Data Archiving Project. This project involves collecting and preserving local, county, and state geospatial data. Members of the staff of the Library of Congress meet at least twice a year with Steve Morris who heads up the project at NC State. We think this project will serve as a model for other states for capturing and archiving digital geospatial data for long-term access and use.¹²

Duke University and the University of North Carolina, Chapel Hill, both collaborate with the Library of Congress and others in the Program for Cooperative Cataloguing. This is an international consortium of libraries that produce authority and bibliographic records to mutually agreed-upon standards, enabling all libraries to share the cataloging data that each member produces. Duke has been a particularly high contributor to NACO, which is the name authority component of the Cooperative Cataloguing Program.¹³

The Library of Congress has another ongoing, cooperative relationship with the University of North Carolina, Chapel Hill. Every year we look forward to a visit from members of the Student Association of the School of Library and Information Science at

UNC. The students usually tour our Congressional Research Service, our reading rooms, and the work areas of our Acquisitions and Bibliographic Access Directorate. We are very proud of UNC alumni of this program, who include Bruce Knarr, now leader of our Computer Files and Microforms Team, and Kathryn Mendenhall, now interim director for our Partnerships and Outreach Programs and for Technology Policy.¹⁴

I am grateful to all of you who have been participating in the cooperative relationships I have described, and in others. And my gratitude extends to Jane Greenberg, associate professor in the School of Library and Information Science at UNC, Chapel Hill, who has recently finished something of use to us all. In the Automatic Metadata Generation Applications Project at the Library of Congress, Dr. Greenberg has explored ways to address what is called the “metadata bottleneck,” caused by the explosive growth of digital research repositories and the resulting challenge to the effectiveness of search engines. She surveyed and evaluated ways to generate metadata automatically. We have presented the project’s findings to managers of other libraries’ bibliographic access operations at conferences of IFLA and the American Library Association. And her final report is available on the Library of Congress Web site.¹⁵

In addition to cooperating with us in these ways, you are collaborating with others through regional, national, and even international consortia. Duke, for example, is a member of the Research Libraries Group, which recently decided that collaboration is such a good thing that it is merging with OCLC!¹⁶ Those two groups, of course, have been leaders in developing collaborative online catalogs with associated, technology-supported services.

But now we come to another rise in the digital development wave, produced by still another dimension of technology-infused collaboration. In this dimension, libraries, themselves, are beginning, in effect, to merge.

2

In 1995, several large, research libraries in the United States entered into what they called the Digital Library Federation. The federation's original members described its purpose as follows:

*The Federation's mission is to bring together—from across the nation and beyond—digitized materials that will be made accessible to students, scholars, and citizens everywhere, and that document the building and dynamics of America's heritage and cultures.*¹⁷

In the words of a current DLF administrator, “Charter members of the DLF imagined that a federation could accomplish much more than any single library could.”¹⁸ That’s the same realization—in almost the same words—as the statement I quoted earlier from your TRLN Principles of Cooperation. The DLF administrator went on to say about the original group, “These visionary librarians predicted that by leveraging their own resources through collaboration, their organizations would be able to offer scholars a wider range of services and collections than had been possible to date.”¹⁹

The original group spelled out its intentions in a set of goals, the first and foremost of which was the following:

The implementation of a distributed, open digital library conforming to the overall theme and accessible across the global Internet. This library shall consist of collections—expanding over time in number and scope—to be created from the conversion to digital form of documents contained in our and other libraries and archives, and from the incorporation of holdings already in electronic form.²⁰

To carry this out, the federation recognized that much preliminary work would be necessary, described in a subordinate goal as follows:

The adoption of common standards and best practices to ensure full informational capture; to guarantee universal accessibility and interchangeability; to simplify retrieval and navigation; and to facilitate archivability and enduring access.²¹

Such items have received the federation's primary attention in the intervening years, and its collaborating members have made much progress on digital library infrastructure. I know about that because one of those members is the Library of Congress. You know about that because another of the federation's members is North Carolina State University. Over the years the federation has added members—including four from outside the United States. The federation now has thirty-five "strategic members," as it calls full partners, which include three from abroad: the British Library, the Oxford University Library, and the Biolotheca Alexandrina. It also has five "allied members," which include the Joint Information Systems Committee of the United Kingdom.

In 2003, twelve of the federation's members rode the wave still higher by declaring it time to achieve the original vision of a collaborative digital library, now called "DLF Aquifer." They proposed to start with material about American culture and life, provided from collections digitized by several member institutions. They proposed to make these materials accessible by Internet as if from a single collection. Also they proposed that DLF Aquifer would help researchers use this aggregation of digital resources by developing what the federation calls "a test-bed suite of tools and services for the scholar," so that people doing research may not only see material in the collection but also may search it in sophisticated ways and recombine parts of it for their own needs. And again, echoing your own TRLN statement, the federation restated an essential principle for digital library development as follows: "The additional value libraries can offer by collaborating to aggregate existing digital collections and create services to support scholarship will allow a far more rapid rate of development than any single library could sustain."²²

As the DLF and its Aquifer project developed, so did similar collaborations elsewhere in the world. In the mid-1950s, libraries across Canada began experimenting with digitization of special collections, and a group of presidents of the major research universities in Canada asked their libraries to consider possibilities for mass digitization of books. Thirty libraries in the Canadian Association of Research Libraries put together an ambitious proposal for substantial government funding to subsidize the digitizing of Canadian collections. But the proposal failed to receive wide-spread support, and adequate infrastructure remained unavailable.²³

Nonetheless, some experiments went forward. The University of Toronto began digitizing as early as 1993, but found the costs as high as \$100 per volume. Looking for a better, less-expensive method, Toronto became “intrigued” by achievements of the Internet Archive, an independent, nonprofit organization that captures Web sites of potential long-term value for research. And in 2004, Toronto and the Internet Archive started a pilot project to try to produce high-quality digital copies of books at a more affordable cost. By the end of an experimental year, costs had been cut by two-thirds, and improved technologies produced digital images of high quality without damage to scanned books. The University of Toronto digitized materials from its own collections and begun scanning books for other libraries in Canada.²⁴

In Europe, digital library development came from national libraries. After the formation in 1987 of the Conference of European National Librarians, it became a platform for collaborations among a growing number of members. In 1994, the conference established a Web service called Gabriel to provide information on library collections, services, and developments in European national libraries. Plans then arose to create an integrated, online search facility for holdings of member libraries. This became the foundation for a virtual library called TEL, which stands for The European Library. With funding from the European Commission, libraries in eight countries began work on TEL in 2001, and, by January of 2004, they had the new service up and running.²⁵

Thus as the year 2004 unfolded, though money for digitizing and technology for integration remained challenges, digital library development showed encouraging progress. And the progress came from collaborative work by librarians across institutional walls and even across national borders. Then, on December 14, 2004, a

proverbial 600-pound gorilla jumped into the middle of all this. Or I should say, to avoid mixing my original metaphor, a whale suddenly appeared, giving the digital wave a gigantic push beyond all previous heights. That whale's name was Google.

3

As you all know, Google, Inc., founded in 1998, provides an Internet search engine that indexes and ranks Internet sites for retrieval through electronic key-word searches. Used daily by millions of people, who include college students and faculty members, Google can search more than nine billion Web pages.²⁶ In December of 2004, it announced its intention to make millions of books searchable as well by digitizing parts or all of five of the world's largest libraries.

The libraries in what is now designated the Google Book Search program are the New York Public Library, the libraries of Harvard, Stanford, and the University of Michigan, and the Bodleian Library of the University of Oxford. To begin, at least, the Bodleian has agreed to Google's digitizing more than one million of its books over a period of three years. Google will digitize at least another million under its agreement with Harvard.²⁷ And Google will digitize some "subset" of books in The New York Public Library that the library considers of "great public interest."²⁸

These three libraries are selecting materials to be digitized by Google from holdings that are in the public domain. Stanford, according to its university librarian, Michael Keller, has "expressed a desire to allow Google to digitize all of its books, but is currently sending only works in the public domain," mostly government documents and pre-1923 works. However, Stanford says it will soon "send books published between

1923 and 1964 that have been determined not to have been re-registered in the United States for copyright protection.”²⁹ And the remaining institution in the group of five, the University of Michigan, is “allowing Google to digitize every book in its collections.”³⁰

All of these libraries have been digitizing materials on their own. But all have been slowed by the same financial and technological limitations. Even using improved technology in the form of a “book digitizing robot,” according to Stanford’s University Librarian Michael Keller, “it would be many centuries before all our books were digitized for the sort of preservation program and enhanced access we had in mind.”³¹ Mary Sue Coleman, president of the University of Michigan, has said, “Digitizing the entire Michigan library was a project our librarians predicted would take more than one thousand years. Larry [Page, co-founder of Google] told us Google could make it happen in six.”³²

Google already is expanding its digitization program beyond the five libraries. Last February, Google announced an agreement with the National Archives of the United States to provide digital access to the archives’ collection of historic films.³³ By agreement with the Library of Congress, it is digitizing books from our law library.³⁴ It also is accepting partners in several countries of Europe. And this may be only the beginning, for the Google company describes its “mission” as nothing less than “to organize the world’s information and make it universally accessible and useful.”³⁵

If you will forgive again a possible over-extension of my wave metaphor, the Google program has seemed like a tsunami to others involved in digital library development. Some feared they would soon be swamped.

Among those were some of the Europeans involved with TEL, The European Library I described earlier. To give you the flavor of how Google's book-digitizing program struck Europe, let me quote my friend Elisabeth Niggeman, director of the German National Library, who recently described the situation as follows:

Immediately after Google's announcement of its intended digitization initiative, Jean-Noel Jeanneney, president of the Bibliothèque nationale de France, fought in many interviews, presentations, and a book called Quand Google Défie l'Europe, published in early 2005, for the need of a European counter-initiative, in order to prevent the linguistic and informational dominance of the English language he raised hell with his texts and speeches. The media storm that started in Paris soon reached the other European countries. The media, and in the end also the politicians in Europe, liked the controversy, liked the chance it offered to claim the importance of European culture, language, independence. At the end of April 2005, the French President Chirac wrote a letter [to the presidents of the European Council and the European Commission, signed] also by . . . the heads of state of Germany, Hungary Italy, Spain, and Poland. In this letter they advocated the creation of a virtual European library, aiming to make Europe's cultural and scientific record accessible for all.³⁶

The European Commission reacted with a new initiative to digitize all kinds of information rather than just cultural documents and to draw on all kinds of media in archives, museums, and libraries rather than just in national libraries. The intention was

to build upon the infrastructure already developed by TEL to make at least two million books and other materials accessible online by 2008, and six million by 2010.³⁷ Thus in Europe as well as here, the goals have been substantially raised, and the collaborations expanded.

However, this was far from the only reaction to the Google digitizing project. If you remember my previous description of digital library development in Canada, the University of Toronto, by the time of the Google announcement, was collaborating with the Internet Archives and other Canadian libraries to develop digital resources. Google's announcement, according to Carole Moore, director of libraries at the University of Toronto, "certainly had an effect on our plans. It caused us to consider whether we were duplicating effort, but at the same time, encouraged others to invest in digitization on a large scale."³⁸

Indeed, it led to the expansion in 2005 of the collaboration between Toronto University and the Archives Internet. They and others formed a new organization called the Open Content Alliance, which within little more than a year expanded to include more than sixty libraries, archives, foundations, associations, publishers, and technology companies from around the world. Some of you know this because the participants include the libraries of the University of North Carolina, Chapel Hill, and the UNC School of Information and Library Science.³⁹ Other members range from the National Library of Australia and the National Archives of the United Kingdom to the Xerox Corporation, Adobe Systems, and such competitors of Google's as MSN and Yahoo!⁴⁰

Brewster Kahle, founder of the Internet Archives, is the guiding spirit of the Open Content Alliance, which his Internet Archives administers. He describes his mission in

terms every bit as ambitious as Google's: to provide "universal access to all human knowledge."⁴¹ The Alliance's goal is to build a permanent archive of digitized texts and multimedia content, in all languages, for use "by anyone in the world for any purpose."⁴² Material under copyright will not be included in the Alliance's digital aggregation, except when the Alliance receives permission from rights holders.

Toronto's Carole Moore has argued that "all of these activities will contribute to the development of the World Digital Library." And she believes that every library "can and must" participate. Every library can do that, she says, by (1) supporting open standards to promote interoperability among participating institutions, (2) taking responsibility for contributing material from one's own holdings, and (3) "fostering international digital collections."⁴³ Oh, how far we have come from the time when a few of us worked together to create online versions of our card catalogs!

4

So, will this powerful and fast moving wave of digital library development soon wash us up safely on the shore of nirvana, where all the contents of all the world's repositories will be electronically available to all users in all places through a single portal, which will be equipped with software programs to help searchers identify, locate, and make multiple uses of materials they need? Unfortunately, the wave is still far from reaching that shore. We first have to get by several barrier reefs. Let me briefly identify the larger ones.

First, copyright. If digital copying of copyrighted works is illegal, developers of massive digital libraries face a laborious process of securing permissions from individual

rights holders and tracking down possible owners of “orphan works,” as we call them. Otherwise digital libraries will contain little that is new—indeed, little produced in the last sixty years or so.

Of all the digital library developers I have described, only Google and the University of Michigan are planning to make digital copies of copyrighted works. Even so, Google is permitting publishers to “opt out” by providing bibliographic descriptions of works they do not want to be digitized. And Google will allow users of its search engine to see only “snippets,” not full texts, of copyrighted works that Google digitizes and indexes. But Google argues that it has the right to digitize copyrighted works for indexing and to reveal snippets under the “fair use” provisions of current copyright law.⁴⁴

In disagreement, associations of publishers and authors are suing Google and the University of Michigan. They argue that Google has no right to copy a work electronically without permission, that publishers do not have to go to the trouble of “opting out,” and that Google has no right to reveal even “snippets” in a commercial program designed to attract Internet searchers for the purpose of generating advertising revenue.⁴⁵

Who will win, I don’t know. But I know that I am not the only librarian watching. Previously I referred to the Digital Library section of the current five-year plan of the University of North Carolina, Chapel Hill. Item 6 in that section commits UNC’s libraries to, quote, “seek options which would permit copyrighted publications to be included in the digital library.”⁴⁶

Some options may in fact be coming. In April of 2005, we at the Library of Congress convened what we call the Section 108 Study Group, named for the section of

the United States Copyright Act that provides limited exceptions to copyright restrictions for libraries and archives. The purpose of the group is “to conduct a re-examination of the exceptions and limitations applicable to libraries and archives under the Copyright Act, specifically in light of the changes wrought by digital media.”⁴⁷ We expect recommendations from the group before the end of the current year.

Also, in January of this year, the U.S. Copyright Office, which is part of the Library of Congress, submitted to Congress a report on the difficulties that users face in seeking permission to copy “orphan works,” whose owners cannot readily be identified or located. The Copyright Office recommended solutions that we hope will be incorporated into legislation.⁴⁸

Legislation already has been introduced in the Congress to reduce copyright protection for works produced with government funds. Republican Senator John Cornyn and Democratic Senator Joseph Lieberman have introduced the Federal Research Public Access Act of 2006. This would require federal agencies with research budgets above \$100 million to ensure that articles they fund are made available online for free within six months of publication and preserved “in a stable repository.”⁴⁹

Another major barrier to digital library development is the uncertainty of our ability to preserve digital materials indefinitely. Many of you are familiar with the challenges of media fragility, systems obsolescence, and format proliferation in the digital world. We have all learned to use such preservation measures as digital data migration, but how often and how long can we migrate without at least some loss in content? I find it curious that the preservation challenge seems to get relatively little attention by the developers of our new, massive digital library aggregations.

Stanford says that preservation is one of the major reasons for its collaboration with Google. Michael Keller explains as follows:

*First and foremost, we will take the digital copies of books from our collections scanned by Google as our agent and place them in our virtual bookshelves in the Stanford Digital Repository for long-term preservation. Preserving the books . . . digitally is a hedge against the likelihood of loss and increasing brittleness of paper.*⁵⁰

However, in the same paragraph, he acknowledges (quote), “that digital preservation techniques are not yet proven”⁵¹

He is not alone in whistling in the dark. Most of us are gambling on solutions to come from the program I described earlier as NDIIPP—the National Digital Information Infrastructure and Preservation Program. The NC State preservation research project I described is one of several that NDIIPP is funding to explore multiple ways of preserving the digital resources that we are so rapidly creating. Before long we should see results from some of the NDIIPP-funded research-and-development projects.⁵²

Others are working on the preservation challenge as well. To take one particularly encouraging example, earlier this year the Harvard University Library received a grant from the Andrew W. Mellon Foundation to develop a registry of authoritative information about digital formats. The product will be a Global Digital Format Registry containing information of use to libraries, archives, and others with responsibilities for, in the words of the grant announcement, “keeping digital resources visible over time.”⁵³

Besides copyright restrictions and preservation challenges, we face another potential barrier is digital library development in the form of the sheer volume of digital

material that is coming available through the Web. To help users find their way through all this, we will need navigation aids and new kinds of bibliographic control. You remember my earlier mention of Jane Greenberg of the School of Library and Information Science at UNC, Chapel Hill and the report she recently finished on the Automatic Metadata Generation Applications Project at the Library of Congress. In her executive summary, she rightly declares:

*Never has there been such a wealth of valuable information accessible to the global public as there is with the World Wide Web. It can also be argued, however, that never has there been such an abundance of easily accessible information that is factually incorrect, misleading, and lacking authentication.*⁵⁴

Many libraries including yours are now teaching digital literacy in hope of helping clients learn to find grain among the chaff. But how will we assert bibliographic control over the growing multitude of digital resources, which people increasingly want to access through Internet key-word searches rather than through even online library catalogs?

As you may know, the Library of Congress is deeply engaged in a discussion about the future of cataloging with the library community. I proposed at the recent meeting of the American Library Association a summit meeting on the future of bibliographic control. I announced that the Library of Congress will form an advisory committee from the library community to help plan such a meeting, which we would hope to host in late spring or summer of 2007. The advisory committee will help us

determine topics to be addressed, the structure of the meeting itself, the participants, and the ways in which information from the summit can be communicated effectively to constituent communities.⁵⁵

I have now described three major barriers to the continued surge of the digital library wave, and those are enough challenges for one meeting. I have also tried to show you that promising efforts are underway to overcome each of the challenges. Additionally I have tried to show that development has been and will continue to be dependent on the broadening of collaborations. I encourage those of you who already participate in such collaborations to continue to do so. And I encourage all of you to keep abreast of digital library developments and make use of the fruits of such work.

In a poem called “The Wave,” Henry Wadsworth Longfellow included this question:

Whither, thou turbid wave?

Whither with so much haste . . . ?

To which, the wave in the poem replied:

From the struggle and the strife

Of the narrow stream I fly

To the Sea’s immensity

In digital library development, we have greatly transcended “the narrow stream.” Possibilities of incalculable “immensity” lie before us.

Thank you.

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- ⁴¹ Quoted in Moore, "The Open Content Alliance," p. 4-4-1.
- ⁴² Moore, "The Open Content Alliance," p. 4-4-1.
- ⁴³ Moore, "The Open Content Alliance," p. 4-4-15.
- ⁴⁴ Keller, "Google Book Search," 3-4-7, 8, 9. Also see Kevin Kelly, "Scan This Book!" *New York Times Magazine* (14 May 2006): 43-49 + 64, 71,
- ⁴⁵ Keller, "Google Book Search, 3-4-9, and Kelly, "Scan This Book!" 43-49 = 64, 72.
- ⁴⁶ UNC libraries, "Library Directions, The University of North Carolina at Chapel Hill Library, 2005-2010," p. 5, <http://www.lib.unc.edu/Plan20051118.pdf>, accessed 18 June 2006.
- ⁴⁷ Library of Congress, "Section 108 Study Group Convenes to Discuss Exceptions to Copyright Law for Libraries and Archives," press release, 13 May 2005, http://www.loc.gov/section108/release_051305.html, accessed 25 July 2006. The 108 Study Group's Web site is <http://www.loc.gov/section108/>, accessed 25 July 2006.
- ⁴⁸ Kathlin Smith, "Symposium Kicks Off Fiftieth Anniversary Celebration," *CLIR Issues* 51 (May/June 2006): p. 2 (under subhead "Orphan Works").
- ⁴⁹ Janice Anderson, "Federal Research Public Access Act of 2006," e-mail message to the Legal Information Preservation Alliance, 8 May 2006. Copy obtained from Deanna Marcum.
- ⁵⁰ Keller, "Google Book Search," p. 3-4-23.
- ⁵¹ Keller, "Google Book Search," p. 3-4-23.
- ⁵² NDIIPP Web site, <http://www.digitalpreservation.gov>, accessed 25 July 2006.
- ⁵³ "Harvard to Develop Global Digital Format Registry," *Archival Outlook* (March/April 2006): 19. For more on the project, see its Web site: <http://hul.harvard.edu/gdfr>, accessed 25 July 2006.
- ⁵⁴ Jane Greenberg et al., "Final Report for the AMeGA (Automatic Metadata Generation Applications) Project," 17 February 2006, http://www.loc.gov/catdir/bibcontrol/lc_amega_final_report.pdf, accessed 25 July 2006.
- ⁵⁵ Deanna Marcum, "Friday's News," listserv newsletter to staff of LC Library Services, 30 June 2006.