Digital Libraries and the Challenges They Face:
An Annotated Bibliography

Chris Veneziale
INFO 522: Information Access & Resources
December 4, 2011
Introduction

The following annotated bibliography covers information dealing with digital archives and digital libraries. Specifically, it examines the problems and difficulties that are associated with digital libraries and digital content in general, and explains why the future of these archives and repositories is currently uncertain. Because this is such a rapidly and constantly changing field, all of the articles presented here are recent, spanning from 2005-2011.

Description

There is no mistaking the fact the world is moving at a very swift pace toward a digital future. Newspapers, magazines, and bookstores are folding at an incredible rate as we seek to become a paperless society, relying almost entirely on iPads, computers, smart phones, and mp3 players for information, news, and entertainment. This is a problem that affects many industries, libraries being one of them. If they want to keep up with (or even try to stay ahead of) the times, libraries should be looking toward a shift to the digital world for their archives and reference materials, freeing up space and time needed to research, acquire, catalog, and search through their often massive physical, paper-based collections. It would seem the simple solution, then, is for libraries to go digital. This, unfortunately, is easier said then done.

Digital collections are usually comprised of digital objects, metadata, and a user interface (Tzoc, 2011). It is the integration of these three components that can produce a successful digital library that can respond to users’ search requests to help them find what they are looking for. The better these attributes are assimilated and indexed, the better users will be able to discover and disseminate content. However, even as easy to use, accessible, and accurate as digital libraries may be, they are not without their problems. In fact, many libraries are opting not to make the switch from physical collections to digital in lieu of the many obstacles the virtual world presents. But given the paradigm shift that they are facing, will libraries that refuse to accept the changeover to digital materials ultimately become obsolete? The answer today is that they will probably not face extinction entirely, given the number of issues that digital information presents.
Summary of Findings

The internet and other digital technologies undoubtedly allow us a different perspective than its physical, paper-based counterpart. Digital resources need not, and in some cases cannot, be held locally. Digital content is amorphous, inclusive in its formats and usage, and as near as the closet digital device, which is to say often within one’s reach (Hazen, 2011). The library's mediating role in all of this is not limited to its previously clear mandates concerning collections and content. Tools like thesauri, classification systems, and catalogs can in theory be applied regardless of an object's format, and thus should work as well for digital information as for printed resources. However, search engines have eclipsed bibliographies, catalogs, and other scholarly aids as the primary means for research and learning. As such, the library's potential role in modern day, web-based knowledge is often neither visible nor appreciated (Hazen, 2011).

Through the 1980s and 1990s the advent of personal computers and new technologies such as the internet and e-mail transformed communication and recordkeeping practice. Greater access to computers by more diverse users created an explosion in the amount and variety of digital content. In 1994, there was a realization that archivists and librarians had a responsibility to learn how to keep digital materials accessible, and as a result the Commission on Preservation and Access and the Research Libraries Group created the Task Force on Digital Archiving. The task force issued its final report in 1996, entitled “Preserving Digital Information,” which has proven influential, and has helped to define a research agenda for digital preservation for more than a decade. It identified the need for deep infrastructure to support digital archiving, and mapped specific strategic research goals for building it (McGovern, McKay, 2008).

Although digital archives have since emerged and digital libraries have been assembled, we still face a fundamental paradox in digital preservation: On the one hand, we want to maintain digital information intact as it was created, but on the other we want it to be accessible in a dynamic context for use (Chen, 2007). As a result, information in digital form faces the threat of diminished accessibility in the near future, primarily for two reasons. First, digital information has exploded and expanded exponentially, and second, hardware and software products are being upgraded and replaced roughly every 18 months (Chen, 2007). As such, to be cost-effective, we have to change hardware and software products very frequently in order to keep up with these changes. Although IT companies thrive because of the rapid progress in their
products and services, the remaining businesses, including libraries and archives, pay an expensive price to stay on top of the current technologies.

In accordance with the issues of software and hardware that Chen mentions, a 2010 study conducted by Colin Meddings of Oxford University Press found some interesting results. His study focused largely on North American and European libraries and investigated what libraries are doing or planning to do in the face of this digital evolution. Despite the overwhelming presence of digital technologies in modern society, Meddings found that just under half of respondents (46.1 percent) stated that they were currently taking steps to ensure the long-term preservation of digital content. A similar percentage (46.9 percent) said they were not planning currently on going digital, while a small number (6.9 percent) said they did not know what their plans were (Meddings, 2011).

Meddings also went further to investigate why many libraries were not planning on making the transition to digital mediums. Of those surveyed, 43 percent stated that they feel it is the publisher’s responsibility to undertake digital preservation, and a similar proportion of 41 percent cited cost concerns as a reason why they are not taking action. Another 12 percent of libraries stated that preservation was not a core issue for them, or that they are happy that external programs or companies would deliver adequate benefits (15 percent). Surprisingly, 57.5 percent stated that they have no plans to participate in any digital preservation program in the future (Meddings, 2011). These results indeed show that not every institution considers digital preservation to be an important part of their mission, nor do they expect printed material to die out any time soon.

Another major concern for establishing digital libraries is cost and funding. A study by Koehn and Hawamdeh investigated whether or not patron use can justify the cost of digitalization. They used pay-per-search data they collected to conduct their investigation, but in the end found their results to be inconclusive, citing that the data they used may not be the best indicator of patrons’ digital use (Koehn, Hawamdeh, 2010). Lavoie reached a similar conclusion in a 2008 study, but stated that just because we can’t come to a definitive answer regarding the cost of creating digital libraries does not mean that we should be ignoring the problem (Lavoie, 2008). Given the difficulties involved in assessing whether or not use justifies cost, it is really up to individual libraries how they decide to allocate their funding (Owen, 2011).
Other issues that arise with digital libraries are copyright management, content quality, file formatting, permanence of digital formats, and submission guidelines (Li, Banach, 2011). Copyright management is a major concern. Unlike printed material, the republication of digital content by libraries may require permission from rights holders, and there can be a conflict of interest between them and publishers who may wish to create online versions of their acquired content for commercial purposes. There is also often a dilution of responsibility that occurs as a result of the pervasive nature of digital material. Information can be spread so easily via e-mail, the internet, over flash drives or cell phones, that it can become seemingly impossible to control the distribution and dissemination of copyrighted material. Many libraries do not want the responsibility of figuring out how to curb that problem, which is far more easily handled in the physical world.

There is also the question of who should maintain a digital library. Should it be a digital librarian? A lawyer? A database manager (Cloonan, Sanett, 2005)? Who will be responsible and have the time and resources for setting up a digital library? And what about the physical structure of libraries themselves? Will they continue to exist if the switchover to digital really takes hold? Perhaps it is just a matter of redesigning a library’s space to make patrons feel more welcome, while at the same time decreasing the volume of their physical collections to make room for digital ones (Niegaard, 2011).

Without question, the face of information and how we use it is changing. While on the surface it may seem that it is easier than ever to access information, it may in fact be becoming harder to decide how to preserve and archive it. Many problems have arisen with digital content that are not issues in a paper-based archiving system, and no consensus of a single digital preservation strategy has been agreed upon by libraries (Cloonan, Sanett, 2005). Whatever the solution ultimately is, all of these authors seem to agree that it has to be a universal one. A library in Prague should not be unable to share information with a library in Canada because they use different file formats, and a library patron in the United States should be able to access digital research from a library in China if necessary.

Although we may be coming to the end of the age of preservation as we know it, the future of information conservation remains the same: to make information readily available, and to increase its lifespan (Conway, 2010). By becoming sites of creation and dissemination through
digital means, libraries and archives can reposition themselves within the archival cycle. By linking creation or distribution with preservation, they can make important advances in preserving the archive (Paulus, 2011). This must be pursued universally as well as locally if it is to succeed. If libraries and archives do not assume greater presence and relevance in the digital age by expanding their activities throughout the archival cycle, then we may one day find ourselves lost in a sea of near inaccessible digital information, with limited means to search for, retrieve, distribute, and utilize it (Paulus, 2011).

**Bibliography**

**ENTRY #1**


**Abstract:** “The archives of e-culture, e-government, e-learning, and e-business have grown by leaps and bounds worldwide during the last several years. Although the IT industry has invested significant time and effort to create and maintain those archives, IT professionals do not have the ability to make all digital records generated by the processes available across generations of information technology, making them accessible with future technology and enabling people to determine whether they are authentic and reliable. This is a very serious problem--called digital preservation--for which no solutions have yet been devised. This article discusses practical technologies needed for digital preservation to succeed, and describes a general framework of the life cycle of information to address this important problem so that IT professionals may find reasonable ways to preserve digital records that can be analyzed and evaluated in quantitative measures and incremental manners.”

**Annotation:** Chen seeks to answer the question of why the rapid progress being made in information technology today to create information in digital form threatens accessibility in the near future. He believes the problem of maintaining digital records is four-fold: provenance (who owns the material), context (how the information relates to other information), reference (how the content can be uniquely identified), and fixity (how the information can be exist in its original, unchanged format). He believes that a solution must involve an interplay of organizational process, archival stability, and technology continuity in digital archives are to be successful, and that research must be focused in this direction.

**Search Strategy:** I selected Dialog because of its OneSearch function which allowed me to search several information-related databases at one time. This was an initial search using Dialog so I chose a keyword approach and then browsed the results.

**Database:** Social SciSearch in Dialog

**Method of Searching:** Browsing
Search String:  s (digital()preservation OR preservation OR restoration) AND (archive? OR archival()collection? OR historical()collection?)

Scholarly/Refereed Status:  The summary in Dialog noted that this is a peer-reviewed journal. The article is a study that contains references and footnotes as well.

ENTRY #2


Abstract: “The authors are conducting a three-part study to evaluate current trends in the preservation of digital content, with an emphasis on electronic records. The study emanated from the authors' work on the Preservation Task Force of the International Research on Permanent Authentic Records in Electronic Systems (InterPARES) project. This article incorporates the findings of both the survey and individual key-informant interviews that we conducted from August 2001 through February 2003, as round 2 of the study. Round 2 builds on the 2000-2001 round 1 survey that sought to identify and describe strategies for preserving electronic records. In this second round the authors found that progress has been made in some areas while it is still lags in others. The full study consists of three phases: round 1 identified and surveyed 13 institutions, projects, and programs in North America, Australia, and Europe. Round 2 surveyed eight of the 13 institutions again to follow up on their progress. Additionally, we interviewed 18 key informants, including archivists and librarians. In round 3 the authors will each conduct one case study drawn from the survey participants in rounds 1 and 2. By the end of the three rounds, the authors will have studied a continuum of activities (over a six-year period) that constitutes a range of digital preservation strategies. The study will have charted the change in technological developments over this period-- developments that have occurred in our survey institutions to meet the requirements of their mandates to preserve digital content for as long as needed.”

Annotation: The authors of this article endeavor to discover what exactly a “record” is, how to appraise it, and how to preserve it. They conducted a three-tiered study to this end. Their results showed that there are many digital preservation challenges, including technical, social, political, legal, and educational issues. Rights management was a significant concern, as was the issue of who would be maintain these digital collections (computer scientists? Information professionals? Lawyers? Archivists? Etc.). They also note there is no consensus on a single preservation strategy.

Search Strategy: I selected Web of Science because of the many articles it contains related to information science. I had found an article about libraries by Cloonan in a previous keyword search, but it was one I decided not to use. I figured there might be others by him so I conducted an author search and came up with this article.

Database: Web of Science
Method of Searching: Author searching
Search String: AU = Cloonan; then narrowed it down to articles about information science.

Scholarly/Refereed Status: This article is a professional study that contains references, citations and footnotes, which speaks to its authoritative nature. I also confirmed in the Ulrich database that this publication is scholarly/academic.

ENTRY #3

Abstract: “The cultural heritage preservation community now functions largely within the environment of digital technologies. This article begins by juxtaposing definitions of the terms "digitization for preservation" and "digital preservation" within a socio-technical environment for which Google serves as a relevant metaphor. It then reviews two reports published twelve years apart under the auspices of the Council on Library and Information Resources. Preserving Digital Information presented an insightful and visionary framework for digital preservation in 1996. Preservation in the Age of Large-Scale Digitization explores the implications for preservation practice of the digitization of books and, by implication, our cultural heritage in general. These juxtapositions frame four dilemmas for preservation relating to the impact of environmental storage, new challenges to preservation quality, threats to audiovisual heritage, and an emerging expertise gap. The article concludes with recommendations and observations on making difficult choices.”

Annotation: Conway attempts to outline the dilemmas involved in preserving information in the digital age by focusing on several topics: proper environmental storage conditions as the first and most cost-effective preservation strategy; how the principle of quality applies to digital preservation and digitization for preservation; the physical medium of digital preservation; and the technical complexities involved in the process. He concludes that with a paradigm shift moving away from printed materials (in some cases altogether) that we are coming to the end of preservation as we know it. However, Conway believes the future of preservation in the age of Google is still about transforming artifacts into useful new forms and extending their lifespan.

Search Strategy: I selected LISA because of the many articles it contains related to information science. Since I wanted to narrow my results further than just using keywords which produced numerous hits, I decided to perform a title search instead and sift through the results.

Database: LISA

Method of Searching: Browsing; Title searching
Search String: TI = digital and libraries or preservation

Scholarly/Refereed Status: Library Quarterly is a well-known peer-reviewed magazine among information specialists, but to sure I confirmed in the Ulrich database
that this publication is scholarly/academic. I also only searched peer-reviewed articles in LISA.

ENTRY #4


**Abstract:** “Digital technologies, renewed attention to the purposes of higher education, and changing models for scholarship and learning challenge our historic understandings of research libraries and their collections. Common assumptions and goals. are giving way to diverse local agendas, many of which also reflect increasingly limited budgets. Cooperative ventures are taking new forms as well, with straitened resources again the rule. Our adaptation to this uncertain environment requires research libraries to reconsider the elements that are now necessary for success.”

**Annotation:** This article discusses how digital technologies are transforming the landscape of the nature of information, and how libraries need to embrace the shift away from physical collections. Hazen argues that far too often, librarians seek to find an immediate and temporary solution when dealing with this paradigm shift, one that is often only focused locally on individual libraries when the solution really needs to be one that is more permanent and global. He believes the internet plays a vital role in helping libraries store and share their digital collections.

**Search Strategy:** I selected Web of Science because of the large number of articles it contains related to information and social sciences. This was an initial search using this database so I chose a title search approach and browsed through the results to find relevant matches for my topic.

**Database:** Web of Science

**Method of Searching:** Browsing

**Search String:** digital and library* or preserv*/ti; then searched the results to find articles that matched my topic.

**Scholarly/Refereed Status:** I confirmed in the Ulrich database that this publication is academic. The article also contains citations and references, suggesting it is professional and scholarly.

ENTRY #5


**Abstract:** “As library collections increasingly become digital, libraries are faced with many challenges regarding the acquisition and management of electronic resources. Some of these challenges include copyright and fair use, the first-sale doctrine, licensing versus ownership, digital preservation, long-term archiving, and, most important, the issue of rising cost. How can
public libraries continue to justify the rising cost of acquiring and maintaining digital resources? Can use justify cost? In this article, we report on a case study that describes a public library approach to the acquisition and management of digital resources. The Tulsa City-County Library has established a special committee to evaluate electronic resources and make decisions regarding existing and potential resources. Several of the databases to which the Tulsa City-County Library subscribes are discussed, as well as the methods used for evaluating those resources.”

Annotation: The authors attempt to figure out if patron use of digital collections outweigh the costs of acquiring them by examining the results of a study of the Tulsa City-County Library. They looked at the cost and use of current event publications, magazines/journals, books/literature, and business and industry publications. Results of the study were uncertain in that they were not sure that cost-per-search data that was accumulated was the best indicator of the use of electronic resources. While electronic media will undoubtedly continue to grow, the authors believe it is ultimately up to individual libraries to determine how best to serve their patrons and allocate their resources.

Search Strategy: I selected LISA because of the many articles it contains related to information science. Since I wanted to narrow my results further than just using keywords which produced numerous hits, I decided to perform a title search instead and browsed the results.

Database: LISA

Method of Searching: Browsing; title searching

Search String: TI = digital and libraries or preservation

Scholarly/Refereed Status: Library Quarterly is a well-known peer-reviewed magazine among information specialists, but to sure I confirmed in the Ulrich database that this publication is scholarly/academic. I also only searched for peer-reviewed articles.

ENTRY #6


Abstract: “A few years ago my colleague Lorcan Dempsey and I wrote an article entitled "Thirteen Ways of Looking at . . . Digital Preservation" (the title being a shameless re-working of "Thirteen Ways of Looking at a Blackbird", a well-known poem by Wallace Stevens). Our purpose was to present a more nuanced view of digital preservation than one typically found in the literature, conferences, and community discussion springing up around the topic. At that time, digital preservation was often characterized as a discrete activity that could be segregated from, or tacked onto the end of, the digital life cycle; the primary obstacle to be overcome was the development of technical strategies, like emulation and migration, to stave off the twin evils of bit rot and technological obsolescence. The present article focuses on the fifth "blackbird" in our original list of thirteen: digital preservation as an economically sustainable activity. In
reviewing the list of blackbirds in the earlier article, the one pertaining to economic sustainability stands out as an area where it seems we can point to little progress. Much of the discussion in the digital preservation community focuses on the problem of ensuring that digital materials survive for future generations. In comparison, however, there has been relatively little discussion of how we can ensure that digital preservation activities survive beyond the current availability of soft-money funding; or the transition from a project's first-generation management to the second; or even how they might be supplied with sufficient resources to get underway at all.”

**Annotation:** This article examines whether or not digital preservation is an economically sustainable activity. Lavoie reaches similar conclusions as Li and Banach, concluding that it is not yet understood how digital preservation can be sustained as an economic activity across a range of contexts. However, he argues, that should not allow us to ignore the problem, or to assume that it will somehow work itself out over time.

**Search Strategy:** I had found another article in *D-Lib Magazine* during a search in LISA, but I decided not to use it. Since this magazine has a wealth of articles about digital libraries, I decided to browse recent issues and articles and ended up deciding to use this one.

**Database:** LISA

**Method of Searching:** Browsing

**Search String:** I was searching though the archives on *D-Lib Magazine* for articles that were applicable to my topic. I simply read through back issues until I found something relevant.

**Scholarly/Refereed Status:** This article contains many references and footnotes, and in addition I confirmed in the Ulrich database that this publication is scholarly/academic.

**ENTRY #7**


**Abstract:** “In spring 2010, authors from the University of Massachusetts Amherst conducted a national survey on digital preservation of Institutional Repository (IR) materials among Association of Research Libraries (ARL) member institutions. Examining the current practices of digital preservation of IR materials, the survey of 72 research libraries reveals the challenges and opportunities of implementing digital preservation for IRs in a complex environment with rapidly evolving technology, practices, and standards. Findings from this survey will inform libraries about the current state of digital preservation for IRs.”

**Annotation:** Li and Banach use this article to describe their study of an IR to discover whether or not they have the capacity to support long-term digital storage. They focused on examining the areas of digital preservation policies, digital preservation strategies, rights to preserve the content, content quality, and sustainability. Their results indicated that while many libraries are working on constructing IRs, most face problems dealing with copyright, assuring content quality, file formats, submission guidelines, and lack of funding.
Search Strategy: I selected LISA because of the many articles it contains related to information science. Since I wanted to narrow my results further than just using keywords which produced numerous hits, I decided to perform a title search instead and then browse the results.

Database: LISA

Method of Searching: Browsing; Title searching

Search String: TI = digital and libraries or preservation

Scholarly/Refereed Status: This article contains many references and footnotes, and in addition I confirmed in the Ulrich database that this publication is scholarly/academic.

ENTRY #8


Abstract: “The paper aims to provide an overall methodology and case study for the innovation and extension of a digital library, especially the service system. Design/methodology/approach - Based on the three-dimensional structure theory of the information service industry, this paper combines a comprehensive analysis with the practical experiences of Peking University Library as a case study. Findings - The paper proposes three-dimensional extensions of a digital library service system. It analyses the respective functions of organizations and librarians, information resources, services and methods and the interactions between them. Originality/value - Innovatively, the theory of three-dimensional structures is applied to the discussion of the development of the digital library service system. It is significant for the integrality of a digital library theoretical system, as well as for the practical developments, innovations and sustainability of the digital library.”

Annotation: In this study, Long posits that all libraries share the same three facets: organizations/librarians, resources, and services/methods. He uses a case study of Peking University Library to demonstrate how to build up a digital collection successfully. Long believes that all digital libraries should function as an interactive mode between library and user, but that it is not possible without the convergence and cooperation among these three axes.

Search Strategy: I conducted a title search in Dialog’s social science databases after trying keyword searches in an effort to find something different than what keywords were producing. This was one of the first results.

Database: Social SciSearch in Dialog

Method of Searching: Title searching

Search String: digital and library and service/ti
**Scholarly/Refereed Status:** This article is a case study which contains many references, citations and footnotes, and in addition I confirmed in the Ulrich database that this publication is scholarly/academic.

**ENTRY #9**


**Abstract:** “Colin Meddings of Oxford University Press presented the results of research conducted into opinions within the academic library community on digital preservation. In this context the term digital preservation refers specifically to the preservation of electronic scholarly literature with the goal of ensuring materials remain accessible to future scholars, researchers, and students. Oxford University Press intends this survey to build on and complement recent research done by the Association of Learned and Professional Society Publishers (ALPSP) into publisher strategies for preservation.”

**Annotation:** This article presents the results of a study conducted to discover what libraries are doing to make the move to a digital world. The records indicated less than half surveyed (approximately 46%) were making the switch to digital files, with most who weren’t claiming they thought it was the responsibility of the publisher and not the library. Other concerns included lack of staff resources, budget, technical challenges, lack of clarity, and concerns over the permanence of digital materials.

**Search Strategy:** I selected LISA because of the many articles it contains related to information science. Since I wanted to narrow my results further than just using keywords which produced numerous hits, I decided to perform a title search instead.

**Database:** LISA

**Method of Searching:** Title searching

**Search String:** TI = digital and libraries or preservation

**Scholarly/Refereed Status:** This is a scholarly research article which was a study written and conducted by a member of Oxford University.

**ENTRY #10**


**Abstract:** “Until now, information retrieval (IR) managers have been absorbed by efforts to increase the amount and quality of scholarly deposits. Other pressing concerns have been to develop the software, standards, and other tools to insure access, exchange, and discovery of the works in the IRs. But building an IR without making plans for technological, organizational, and resourcing sustainability is like building a house on sand. At this particular juncture, there are opportunities to enhance the efforts of both institutional repository implementation and digital
preservation program development by bringing together the strengths of each. This paper first explores the developmental paths and intersections of digital preservation and institutional repositories, considers the current status of both, and looks ahead toward the opportunities and challenges inherent in their convergent future.”

Annotation: This paper explores the developmental paths and intersections of both digital preservation and institutional repositories, and then attempts to look ahead toward the opportunities and challenges inherent in their future coexistence. To assess this convergence, they focus on the five stages of acknowledgment, action, consolidation, institutionalization, and externalization. They conclude that with good management and cooperation, libraries stand a solid chance of achieving systems where information is both accessible and safely kept.

Search Strategy: The article by Li and Banach had several footnotes that looked like they could prove useful. After checking into a few of them and reading their abstracts, this article seemed appropriate so I read it and decided to include it in my bibliography. Was able to access it using LISA.

Database: N/A

Method of Searching: Footnote chasing


Scholarly/Refereed Status: I confirmed in the Ulrich database that this publication is scholarly/academic. It is also an academic paper with multiple footnotes and citations.

ENTRY #11


Abstract: The spread of the knowledge society and the growth of digitalization challenge the current configuration of the physical library space. In coming years the library environment will change radically, irrespective of which kind of library we are talking about. This article focuses on the library’s evolution, and on the spatial and design changes that lie ahead for the traditional library in both the Danish and general contexts. The article provides a brief description of certain innovative changes in two new Danish public libraries, in Aarhus and Hjørring.

Annotation: This article seeks to answer the question of how physical libraries are still relevant in the age of Google. Niegaard argues that libraries need to rethink their space need and redesign them with less focus on printed collections and more focus on making them accessible and comfortable for patrons. She believes that in order for libraries to thrive in a digital age, they must understand the need for the continual updating of media formats and sources, competencies, services, and the physical space itself.

Search Strategy: I selected Web of Science because of the large number of articles it contains related to information and social sciences. This was a later search using this database so I chose a title search approach.
Database: Web of Science
Method of Searching: Browsing; Title searching
Search String: digital and library* or preserv*/ti
Scholarly/Refereed Status: I confirmed in the Ulrich database that this publication is scholarly/academic and knew from looking into this publication before that it is peer-reviewed.

ENTRY #12

Abstract: In this article, the development of a digital repository is examined, specifically how the focus on acquiring content for the repository has transitioned from faculty-published research to include the gray literature produced by the research centers on campus, including unpublished technical reports and undergraduate research from honors programs. This material has the benefit of fewer copyright restrictions, making acquisition much less problematic. Inclusion in the repository increases the creditability of the research center and provides wider distribution of this often under-recognized research.

Annotation: The author explores the development of the Digital Repository of the University of Maryland (DRUM). Initially DRUM was strictly for archiving the works of faculty members, but expanded to include the works of students as well. The conclusion reached is that when deciding how best to increase deposits in a digital archive, each institution must identify potential resources of appropriate material, concentrating efforts on acquiring material that is not readily available. This would then provide wider distribution for research that might have never been previously discovered and increase the population of the repository.

Search Strategy: I selected Dialog because of its OneSearch function which allowed me to search several information-related databases at one time. This was an initial search using Dialog so I chose a keyword approach and then browsed the results.

Database: Social SciSearch in Dialog
Method of Searching: Browsing
Search String: s (digital()preservation OR preservation OR restoration) and (archive? or archival()collection? OR historical()collection?)
Scholarly/Refereed Status: When I pulled the article from the LISA database, I made sure to retrieve only peer-reviewed articles. I also confirmed this magazine’s scholarly credentials in the Ulrich database.
ENTRY #13


**Abstract:** “This paper considers the concept of "the archive" in the digital age and the situation of libraries and archives within the lifecycle of information. After discussing the changing nature of books, records, scholarly communication, and the concept of "the archive," this paper merges book and record lifecycle models into a new archival cycle. To avail themselves of the opportunities and to confront the challenges presented by digital materials, librarians and archivists are beginning to assume new roles and reposition themselves within this archival cycle. As professional trajectories converge, preservation can be linked with creation or distribution and it becomes easier to imagine a viable model for curating the archive in the twenty-first century.”

**Annotation:** In this article, Paulus describes the differences between libraries and archives, and the life cycle of archival information. He states that the success of these institutions is based on the archivist, as well as the library or archive itself. His belief is that libraries and archives must position themselves aggressively during the archival cycle and evolve their institutions to support new forms of communication.

**Search Strategy:** I selected Dialog because of its OneSearch function which allowed me to search several information-related databases at one time. This was an initial search using Dialog so I chose a keyword approach and then browsed the results.

**Database:** Social SciSearch in Dialog

**Method of Searching:** Browsing

**Search String:** s (digital()preservation OR preservation OR restoration) and (archive? or archival()collection? OR historical()collection?)

**Scholarly/Refereed Status:** I confirmed in the Ulrich database that this publication is scholarly/academic. It is published by Johns Hopkins University Press.

ENTRY #14


**Abstract:** “According to the ‘Framework of Guidance for Building Good Digital Collections,’ a good collection is broadly available and avoids unnecessary impediments to use. Two challenges, however, are the constant change in users' expectations and the increasing volume of information in local repositories. Therefore, as academic and research institutions continue to
work on providing online access to primary source materials, they need to integrate effective interaction methods among digital objects, metadata, and user interface. This article provides an overview of the implementation of five features for customizing digital collections Web sites: AutoSuggest, TagCloud, A-Z List, Share-It, and CalView.”

**Annotation:** This article suggests that just as web developers must constantly revise, evaluate, and test new features that can enhance the overall user experience, information professionals working on digital collections also need to do the same to increase discoverability of their collections. Tzoc argues digital librarians and information professionals need to design more user-friendly interfaces regardless of which digital management system they use, and they should become familiar with open-source systems.

**Search Strategy:** I selected Dialog because of its OneSearch function which allowed me to search several information-related databases at one time. This was an initial search using Dialog so I chose a keyword approach.

**Database:** Social sciences search in Dialog

**Method of Searching:** Keyword searching

**Search String:** s (digital()preservation OR preservation OR restoration) and (archive? or archival()collection? OR historical()collection?)

**Scholarly/Refereed Status:** When I pulled up the article in the LISA database, it showed as a peer-reviewed journal. I confirmed this in the Ulrich database.

**Conclusion**

While I had initially planned on my annotated bibliography being about digital libraries in general, I found that almost all of the articles I was finding included sections or paragraphs that detailed the numerous problems that arise in relation to the technologies. Since this was contrary to my initial thoughts that there should be no question of libraries going digital given the direction we are headed globally as a society, I decided to explore the aspects involving these issues further.

There were really only two issues that did not come as a surprise to me, one of which is the problem of copyright. Since we had read about this earlier in the quarter, I was fully expecting copyright to be a challenge facing libraries who intend to go digital. The other complication I expected was cost and resources, which is a concern for most aspects of businesses in general.
The other numerous difficulties, however, took me somewhat by surprise though now it seems logical that they are all problems that digital libraries have to deal with. Specifically, I did not take into account the rapid pace with which technology advances, nor the fact that there is no universal solution as to what to do about switching to a digital paradigm, both of which are major factors in maintaining a digital library or archive. It was also surprising to find that such a large number of libraries do not consider going digital to be an important part of their mission. Again though, if many of them expect that burden to fall on someone else (the publisher, for example), then it does make sense that they would not expend the resources to attain that end.

Overall this was a very interesting and eye-opening project. I now have a much firmer grasp on digital libraries, some of their history, how they are comprised, and most importantly what challenges they face. Since this is an area I am interested in taking part in professionally, I feel that I have taken the first steps in learning what is involved in the field as well as what problems I can expect in the years to come.

---

**Personal Statement**

I certify that:

- This assignment is entirely my own work.
- I have not quoted the words of any other person from a printed source or website without indicating what has been quoted and providing an appropriate citation.
- I have not submitted this assignment to satisfy the requirements of any other course.

Signature   CHRISTOPHER VENEZIALE

Date   12/4/11