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If Rumors Were Horses

Katina Strauch
Against the Grain, kstrauch@comcast.net

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Taking Charge: Preserving Our Digital Heritage Part II

by Amy Kohrman (Marketing Director, CLOCKSS and LOCKSS, 1450 Page Mill Road, Palo Alto, CA 94304) <akohrman@stanford.edu> http://www.clockss.org and http://www.lockss.org

In the wake of a global economic crisis, few institutions are in the position to make new investments. Yet never has the need been greater for the research community to take action to ensure the long-term survival of our digital heritage. Each day brings with it the potential for irrevocable loss to our communal knowledge. Newspapers, publishers, banks, and other long-lived producers of information are disappearing at an alarming rate.

The challenges the economy poses to digital preservation for academia is only amplified by the outdated mode of stewardship employed by most university libraries. Historically, universities have operated without explicit collaborative agreements for saving the records of mankind. Clearly, this old way of preserving materials is ill-suited to the digital age. Indispensable lessons about the fragility of monolithic structures, coupled with the positive outcomes of collective digital preservation efforts, are presented in this volume.

The Library of Congress’ National Digital Information Infrastructure and Preservation Program (NDIIPP) has been working to build a network of digital preservation partners whose efforts will benefit the greater research community. Five of the seven extraordinary projects featured in this issue received funding from NDIIPP, including:

- Preserving Digital Public Television (PDPT)
- CLOCKSS
- National Geospatial Digital Archive (NGDA)
- PeDALS
- Data Preservation Alliance for the Social Sciences (Data-PASS)

Nearly all of the entities profiled in these pages — non-profit corporations, archives, publishers, and libraries — have been undeterred by the economic downturn and identified sustainable, low-cost methods to meet their needs. The entities highlighted here are moving ahead full throttle with innovative, collaboration-based digital preservation projects. Central to many of these projects is the importance of redundancy, as well as the mutual dependence of like-minded institutions working together to preserve the digital record.

One hopes these rich examples serve as models for institutions around the world, ensuring that academic treasures will be available for generations to come.

If Rumors Were Horses

Springer Science + Business Media is not for sale, according to CEO Derk Haank who spoke at the U.K. Serials Group (UKSG) conference several weeks ago in Torquay, U.K. The sale was recently reported in LLiblicense, Peter Suber’s blog, the Guardian and the ATG NewsChannel. According to NewsBreaks (“Springer is not for sale,” by Katherine Allen, April 2, 2009), Haank was quoted as saying: “My conclusion is that we are in for a boring decade.”

And, looking ahead to 2014, Haank foresees a world where technology will continue to improve but won’t dominate developments in the sector. “I couldn’t care less about Web 3.0 or whatever. The changes will be marginal compared to what we have already had.” Like pretty much everybody, I was surprised that venture capitalists would want to sell Springer at this time in the economic downturn, but time will definitely tell.

www.springer.com
www.earlham.edu/~peters/fos/2009/03/springer-on-block.html
www.guardian.co.uk/media/2009/mar/26/springer-on-block.html
www.cinven.com
www.candoverinvestments.com
www.library.yale.edu/~llicense/index.shtml
www.against-the-grain.com/rumors

It’s official. The redeveloped New Bodleian library building will be renamed the Weston Library in honor of the £25 million donation...
March 19 was a red-letter day for me since my daughter Ileana learned that she got her internship here in Charleston at the Medical University of South Carolina. This is what she wanted and so did her dad Bruce and I so we are happy. Graduation day is May 15 and she will be an actual physician! Hard to believe. My little girl. And, as we get older (and older), we have our own human medical encyclopedia at our actual fingertips – even better than virtual!

This issue of ATG, guest edited by the incredible Amy Kohrman continues on the theme of digital preservation. There are articles by Nan Rubin, Vicky Reich, James Jacobs, Bernie Reilly, Richard Pearce-Moses, Micah Altman, Bryan Beecher, and Jonathan Crabtree. Many of these articles are about preservation topics that we (at least I) have never thought about. Very eye-opening. We have an Op Ed by Michael Pelikan about content devices, a Back Talk by Tony Ferguson about silence (what’s that these days?), an interview with Kent D. Lee, a new approach to an interview by Dennis Brunning who talks with Sue Polanka the super-blogger of No Shelf Required, a Biz of Acq by Xan Arch (RSS feeds), Sandy Thatcher’s From the University Presses is about the hidden digital revolution, Bob Holley is writing about peas and publication, Donna Jacobs cons us with books, Eleanor Cook says we can have fun with Facebook, Tinker Massey wants to know if technology has changed us, while Bob Nardini asks if we can share the data train from Mark Herring in Little Red Herrings, and on and on and on. The people who write for ATG are truly energetic, smart, and motivated. Thanks to every single one of them.

Must go. Time to consult my daughter about her graduation party. Come on down! Happy Spring!

Love, Yr. Ed.

Letters to the Editor

Send letters to <kstrauch@comcast.net>, phone or fax 843-723-3536, or snail mail: Against the Grain, MSC 98, The Citadel, Charleston, SC 29409. You can also send a letter to the editor from the ATG Homepage at http://www.against-the-grain.com.

Dear Editor:

In case I’ve never dropped you a note, I have to say your publication has to be one of the highest quality ones I’ve come across, regardless of topic. Very well done! And a wealth of information. Thanks and, once again, awesome publication.

Sincerely,

John Bond (Vice President, Health Care Books and Journals, SLACK Incorporated)
<jbond@slackinc.com>

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given in March 2008 by the Garfield Weston Foundation toward transformation of the New Bodleian into an advanced special collections library and cultural center. The indefatigable Dr. Sarah Thomas, Bodley’s Librarian, made the announcement on 14 March during the Founder’s Luncheon held by the Bodleian Library, an annual event commemorating the birth of its founder, Sir Thomas Bodley in March 1545, and his legacy of philanthropy. The formal renaming will occur in 2014 following a major refurbishment of the New Bodleian building. The gift, the largest ever made by the Foundation, was announced at the launch of Oxford Thinking: The Campaign for the University of Oxford last May. It is also the largest donation received to date in the Library’s history, and is one of the leading gifts to the University’s campaign which aims to raise a minimum of £1.25bn. Coupled with matching funds from Oxford University Press, the Garfield Weston Foundation grant will transform the accommodation for the Bodleian’s priceless collections and will open up its treasures to the public. Founded in 1602, the Bodleian Library has been the largest organization to which it belongs, Oxford University Library Services, are home to over 11 million volumes and a large number of manuscripts and rare printed books. It is the largest university library in Britain and the second largest library in the UK. For the 21st time, the lunch was generously sponsored by Blackwell UK Ltd., as part of its support for the University of Oxford.

www.bodley.ox.ac.uk

Speaking of which, you will remember our article in June 2008 ATG (v.20#3, p.82) (“From Fortress to Fairway” by Rita Ricketts, Bruce Strauch and yours truly) which discussed the donation of a large sum of money to the Bodleian Library by Julian Blackwell, owner of Blackwell Book Services and the Blackwell Book Shops.

www.against-the-grain.com

Egyptian Universities Libraries (EUL) has selected the Healthcare and Science business of Thomson Reuters to provide research solutions to their consortium of university libraries. EUL signed a multi-year contract with Thomson Reuters to provide Egypt’s researcher’s access to ISI Web of Knowledge(SM). Egyptian Universities Libraries is the first library consortium of academic and research libraries in Egypt. Currently it includes 15 public academic universities in Egypt, which means it serves about 75% of researchers and scientists in Egypt. It is funded by Egyptian Universities (under the Supreme Council of Universities) and the Information and Communication Projects in Higher Education.

www.eul.edu.eg/thomsonreuters.com/

Which reminds me. We mentioned Matthew Ismail <mdismail@aucegypt.edu> continued on page 8
If you are interested in leading a discussion, acting as a moderator, coordinating a lively lunch, or would like to make sure we discuss a particular topic, please let us know. The Charleston Conference prides itself on creativity, innovation, flexibility, and informality. If there is something you are interested in doing, please try it out on us. We’ll probably love it...

The Conference Directors for the 2009 Charleston Conference include — Beth Bernhardt, Principal Director (UNC-Greensboro) <beth_bernhardt@uncg.edu>, Glenda Alvin <galvin@tnstate.edu>, Adam Chesler <adamchesler@cox.net>, Cris Ferguson (Furman University) <cris.ferguson@furman.edu>, David Goodman <dgoodman@princeton.edu>, Chuck Hamaker <chahamake@email.uncc.edu>, Heidi Hoerman <hoerman@sc.edu>, Tony Horava (University of Ottawa) <thorava@uottawa.ca>, Ramune Kubilius (Northwestern Health Sciences Library) <r-kubilius@northwestern.edu>, Corrie Marsh <cmmarsh12@hotmail.com>, Heather Miller (SUNY-Albany) <hmiller@uamail.albany.edu>, Jack Montgomery (Western Kentucky University) <jack.montgomery@wku.edu>, Audrey Powers (USF Tampa Library) <apowers@lib.usf.edu>, John Perry Smith (Total Information Inc.) <jsp@totalinformation.com>, Anthony Watkinson (Consultant) <anthony.watkinson@btoopenworld.com>, Katina Strauch (College of Charleston) <kstrauch@comcast.net> or www.katina.info/conference.

Send ideas by July 31, 2009, to any of the Conference Directors listed above.

Or to: Katina Strauch, MSC 98, The Citadel, Charleston, SC 29409
843-723-5336 (voice) 843-805-7918 (fax) 843-509-2848 (cell)
<kstrauch@comcast.net> http://www.katina.info/conference

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to you last year in connection with materials budgets funding formulas. And, guess what, Matthew has sent us some very useful and enlightening information about the American University in Cairo which was founded by Americans overseas to offer an American style of English language education. See this issue, p.81.

For those sports nuts who followed the NCAA basketball final four, I have to tell you that as that old-timer Tarheel, I am excited that UNC-CH won the tournament. I remember the Dean Smith days fondly (when we used to wrap all the trees in toilet paper and I even have a Dean Smith autograph somewhere). But I was also happy to see that Michigan State did so well! Noticed this article in the Chronicle of Higher Education. “The University of Michigan Press is being restructured as an academic unit under the aegis of Paul N. Courant, the university’s dean of libraries.” Philip Pochoda, the press’s director, is encouraged by the news because it “relieves the press of pressure to be financially self-sustaining.” See “University of Michigan Press Reorganizes as a unit of the library,” kevincreamer.net/panda/2009/03/23/u-of-michigan-press-reorganizes-as-a-unit-of-the-library/ www.libraryjournal.com/article/CA6647076.html

And more about the University of Michigan Press which will take its print book operation and shift it largely to digital. In two years, the press is expected to produce 50 of its nearly 60 book titles in digital format. “Digital publishing helps the U-M Press to adopt a business model more consistent with the university research goal to disseminate information as widely and freely as possible,” says Provost Teresa Sullivan. “In addition, the change aligns with the university’s ongoing effort to digitize its library collection, enhances U-M Press’s print on demand capacity, and increases the range and means of expression of published ideas and authors.” A new U-M press board will be created by July 1. See — “U-M redefining scholarly publications in the digital age,” by Frank Provenzano, March 16, 2009, www.mich.edu/0809/ Mar16_09/35.php. Also — “Farewell to the printed monograph,” Chronicle of Higher Education, March 23, 2009. www.chronicle.com/

I am sure that we have all seen the International Coalition of Library Consortia (ICOLC) Statement on the Global Economic Crisis and its Impact on Consortial Licenses (January 19, 2009). This statement is adopted in principle by member representatives of consortia of ICOLC. Updated to adopters of the statement are poster periodically at: www.library.yale.edu/consortia www.library.yale.edu/consortia/icolc-econcrisis-0109.htm

Speaking of the Chronicle of Higher Education and the budget crisis, I was interested to see that at the recent ACRL conference, libraries urged publishers to keep their prices relatively stable given the current economy. See — “Publishers face pressure from libraries to freeze prices and cut deals,” by Jennifer Howard, Chronicle of Higher Education, March 27, 2009. chronicle.com/weekly/v55/i29/29a01301.htm

The H.W. Wilson Company has appointed the supremely capable John Regazzi to the newly created position of Chief Strategy Officer, reporting to H.W. Wilson President and CEO Harold Regan. Mr. Regazzi will focus on a broad range of initiatives, including new products, product enhancements, business development, and marketing. From 1981 to 1988, Mr. Regazzi was H.W. Wilson’s Vice-President of Computer Services, overseeing the company’s conversion from print to electronic publishing. He currently serves (and will continue on) as a full professor in the College of Information and Computer Science at the C.W. Post Campus of Long Island University. In 1988, Mr. Regazzi was continued on page 10

<http://www.against-the-grain.com>
appointed President & CEO of Engineering Information, Inc., and in 1999, when Elsevier, Inc., he was appointed to the position of President & CEO of Elsevier, Inc., with responsibilities for electronic publishing. In 2004, he assumed the additional role of Managing Director, Market Development, where he was responsible for research and development, advanced technology and new strategic market initiatives. Mr. Regazzi holds a doctorate in Information Science from Rutgers University, an M.S. degree in Library and Information Science from Columbia University, an M.A. in Religious Studies from the University of Iowa, and a B.A. degree in Psychology from St. John’s University. He can be reached at <jregazzi@hwwilson.com>.

www.hwwilson.com

And, speaking of John Regazzi, remember when Judy Luther did an interview with him when he was president and CEO of Engineering Information Village (remember that name?)? It was in the June 1997 issue of Against the Grain (v.9#3).

Did y’all know that the gorgeous Linda F. Crismond <crismond@aol.com>, once Executive Director of ALA from 1989 to 1992 got married on Valentine’s Day to her boyfriend of four years, Peter Lecoq. The ceremony and celebration after took place outside Linda’s home which is right on the Gulf of Mexico. There was a lovely sunset that evening. Afterwards, Linda and Peter honeymooned in Costa Rica. After leaving the library world, Linda has been working hard on establishing a new business. Check out www.frugaldougalsgolf.com. The hottest product is a solar roof panel kit for golf carts which turns the cart into a solar electric hybrid vehicle. Boy, what these librarians don’t get up to in their spare time!

Speaking of Costa Rica. A blast from the past, the amazing Steve Johnson retired March 25. Boo hoo! Remember Steve and Maria’s great work with the early Charleston Conferences (the beers were fantastic). Anyway, Steve and Maria are moving to Costa Rica as soon as they sell their house in Clemson. They bought a one-acre lot high on the side of a volcano (the realtor told them it hadn’t erupted for about 250,000 years, and they believed him). The guesthouse is now complete and they should break ground on the main house sometime next month. Maria will be near her 19 brothers and sisters and brothers-and-sisters-in-law and 38 nephews and nieces. Steve’s passion is gardening, and he says he will be in a gardener’s nirvana. The plan is for the guesthouse (should be open by 2011) to become a bed and breakfast surrounded by tropical vegetation. Well, Steve, have fun in paradise!

More on Steve and Maria — their first grandson was born to Steve Jr. & his wife Emily in Jan. 2007 — Reed Campbell Johnson — red hair and blue eyes. Sorry we missed the announcement!

And, speaking of grandchildren, I just saw mine over the weekend! My son Raymond, his wife Lindsay, and grandbaby Trifon came to Charleston for the famous Cooper River Bridge Run. Over 31,000 runners joined them. Raymond ran the race with his sister, Ileana, while the rest of us watched. Much run was had by all!

More. The other day my colleague Gene Waddell who has written many articles for ATG about good books, brought me a book. It was called How to Teach Your Baby to Read by Glenn Doman (Doubleday & Co, 1975). He said I should study this book immediately and use it with my grandson. You know, until I looked on the Internet and in WorldCat, I had no idea that there’s an industry in baby reading kits, books, videos, etc. Amazing. What they won’t dream up next!

And, speaking of good books and reading, it’s great to see two people talking about reading and printed books. Tom Leonhardt and Donna Jacobs may not agree on the best books in the world, but they are doing their best to tell us their reactions to them. See this issue’s “Booklover” p.65 and “Lost in Austin” p.73.

Was just poking around and ran into this article in the New York Times about a new digital reading device called Vook. Started by Bradley Inman, Vook turns the book into a multimedia device. “We think there’s a real urgency in publishing to innovate with new kinds of content,” Inman says. See “Is This the Future of the Digital Book?” by Brad Stone, New York Times. April 5, 2009.

www.nytimes.com/2009/04/05/business/05stream.html
Vook.tv/

Speaking of which there is a new start up in Charleston called Bibliolabs, preserving knowledge. The founders of Bibliolabs were previously senior principals in BookSurge, the print-on-demand technology company that was acquired by Amazon.com in 2005.

www.bibliolabs.biblioLife.com/

The recently-signed 2009 Consolidated Appropriations Act includes a provision making the National Institutes’ of Health (NIH) Public Access Policy permanent. The NIH Revised Policy on Enhancing Public Access requires eligible NIH-funded researchers to deposit electronic copies of their peer-reviewed manuscripts into the National Library of Medicine’s online archive, PubMed Central (PMC). Full texts of the articles are made publicly available and searchable online in PMC no later than 12 months after publication in a journal.

www.taxpayeraccess.org

Like many other colleges, the College of Charleston has published its last yearbook, the Comet. I have to agree with the article in the Economist. “Although today’s students find yearbooks old-fashioned, they may one day miss their vanished youth. Long after Facebook and MySpace have become obsolete and the electrons dispersed to the ether, future alumni might just wish for the permanence of ink on paper.” See – “The death of yearbooks, continued on page 18
data should accompany the video files, and the project was one of the first to adopt a set of metadata schema appropriate for long-term video preservation. Both of these outcomes were unexpected.

Collecting and Analyzing Metadata
The NYU Digital Library team based their repository design on DSpace, which they had used to build other moving image archives. Technical issues rested primarily on how best to organize files and metadata to create Submission Information Packages (SIPs) and Archival Information Packages (AIPs) using test digital program files.

The team used a sample of 35 hours of program files, all standard definition, drawn from Nature, Frontline and Religion and Ethics Newsweekly, plus a local selection from New York Voices. The test files originated from three sources — uncompressed program masters from WNET and from WGBH, and compressed distribution versions of the same programs from PBS. This provided a mix of both high and low resolution program file formats, with different flavor files from each source.

A fundamental requirement was to configure AIPs for long term storage by aggregating content plus metadata for each program without adding anything new. The SIPs therefore, had to contain comprehensive program-related and technical metadata along with the program files themselves.

Operating from the assumption that the repository should conform to the OAIS" reference model for creating a trusted repository, the project examined a broad range of metadata schema used by libraries and archives. It also looked at standards emerging in commercial television, and assessed PBCore, a metadata dictionary based on Dublin Core, designed specifically for public radio and television program files.

In practice, determining the appropriate sets of metadata fields was an intensive task. Individual program files were accompanied by a wide range of metadata, but because program information is not collected systematically even within PBS, it had to be gathered from multiple sources on a program-by-program basis. Also, because there are no uniform criteria, the quality of metadata associated with each program was idiosyncratic and inconsistent. To determine the components required for the AIP, the collected metadata had to be analyzed, particularly the extensive descriptive and rights metadata created by PBS for broadcast scheduling.

Although PBCore is in the early stages of adoption, the repository chose to build its descriptive metadata requirements around it, which has encouraged others to use it as well. As a result, the most important source of metadata for national programming, PBS’s Program Offer Data Service (PODS), can now be exported directly into PBCore, making national program information much easier to access.

Incorporating technical metadata from the video files also proved to be a challenge. Because the program files were submitted to the repository in many formats (including such diverse wrappers and encoding formats as MXF, Quicktime, and various flavors of MPEG and DVCPro), multiple tools were required to play the videos and extract information such as bitrate, file size, and frame size. Transforming this disorganized metadata into a standardized AIP was clearly a necessity.
Maintaining Momentum

Since Preserving Digital Public Television began, broadcasting has shed its analog systems and moved completely into a digital universe. This project has been able to impress on the public television system the message that digital preservation is not an optional “add-on” cost, but a requirement for any future use of the materials. In this, the project has been instrumental in transforming an attitude of indifference to one that acknowledges the value of properly managing our collective archival holdings.

In a further indication of support, for the very first time CPB allocated preservation funding to pilot The American Archive. The American Archive will develop a repository for public radio and television, and PDPTV anticipates making a significant contribution to this initiative.

Viewers keep reminding us that public television programming is precious and has made an indelible imprint. What remains is to continue building commitment across the entire system, so the critical responsibility for saving this American media legacy will be shared, sustained and nurtured over time.

Endnotes

3. “From Wikipedia: An Open Archival Information System (or OAIS) is an archive, consisting of an organization of people and systems, that has accepted the responsibility to preserve information and make it available for a Designated Community. The information being maintained has been deemed to need ‘long term preservation,’ even if the OAIS itself is not permanent.”  
5. From Wikipedia: “The Dublin Core metadata element set is a standard for cross-domain information resource description. It provides a simple and standardized set of conventions for describing things online in ways that make them easier to find. Dublin Core is widely used to describe digital materials such as video, sound, image, text, and composite media like Web pages.
Few government agencies have information access as a primary mission and even those that do face multiple barriers to assuring permanent, free access to usable digital information. The National Archives is a prime example. While NARA has an explicit mission of making records available “in perpetuity,” it is constrained by technology, budgets, and recalibrant agencies. Put simply, it has too much to do and not enough funding to do it. In an honest attempt to deal with these realities, NARA is turning to the private sector to make information more readily available, effectively privatizing the public record. The GPO likes to claim that there has been a “paradigm shift in preservation of depository materials” but you will look in vain in the GPO Access Act of 1993 (107 Stat.112), on which it bases these claims, for the words “preservation” or “permanent.” There are good intentions, but no mandate; there are inadequate budgets and no guarantees. Even GPO recognized this in its early policies to implement this “paradigm shift” when it said it would maintain information online only “as long as usage warrants.”

Agencies that have information access as a secondary mission or provide information as a by-product of some other function will not have the inclination, ability, or budget to provide long-term access to their information. And, as the missions of agencies change or are split among new agencies, and as agencies are dissolved or subsumed by other agencies, information will be lost.

But even if one assumes that the government will eventually overcome these problems, there are still other problems. Chief among these is that no one can keep everything forever. Whether it is superseded information, out-of-date information, embarrassing information, expensive-to-keep information, or low-use information that no longer “warrants” keeping, everyone will weed something sometime. The question we should be asking is, “Who will be in charge of weeding?”

Society needs different libraries with different collections that respond to the needs of their user-communities (no longer necessarily geographically-based) when making decisions on the value of information. A society without digital libraries will be relying only on federal budget priorities and the market to decide what is worth keeping. Having different collections meeting the needs of different user-communities will better ensure preservation of the information that society as a whole needs. A law library will make different decisions than a medical library and both will make different choices than a library that caters to historians of science. This is a good thing. It builds robustness into preservation and access.

Finally, the e-government movement is re-shaping government information policies to be more flexible and interactive. In practice, this means that government will value information transactions more than it values instantiating information in a preservable, re-usable form. Such changes will value current information, but will devalue “out-of-date” information. In such an environment, agencies will find it difficult, if not impossible, to justify preserving last year’s annual report, much less something from ten years or a hundred years ago.

Conclusion

For those who believe that information should just remain in the possession and control of producers and for those who view the Web as a virtual “library,” the idea of digital library collections naturally seems unnecessary and even anachronistic. For those who value long-term, free, public access to information, leaving control of information in the hands of those who will control use, limit access, and charge fees is anathema. If libraries choose to have no digital collections, it will almost certainly result in licensing constraints, DRM constraints, loss of information, loss of free access, loss of usability of information, and more.

Society needs institutions that select that information that deserves preserving from the plethora of information that surrounds us; it needs institutions that then acquire, organize, and preserve that information and that provide trusted, free, privacy-respecting, secure access to and service for that information. Society needs institutions that have the complete mix of all of these roles as their primary mission (not a secondary mission or a by-product of publishing, or dissemination, or making money). In the case of government information in a participatory democracy it is particularly important, even essential, that society has such institutions. We call them libraries.
distinguishing requirements of an archival repository.

The LOCKSS team understands the need to keep information resources for a very long time. As a result, they have already been thinking about archival storage system requirements, even if in a different context.

LOCKSS supports automated integrity checking and error correction. The technology required no adaptation to meet an archival repository’s need for fixity and integrity. LOCKSS was built to support a distributed preservation network by keeping copies in multiple locations. Again, the technology did not need any modification to meet a critical preservation requirement. In fact, LOCKSS is outstanding as a preservation system; some commercial systems that keep multiple copies do not offer distributed storage, but keep both copies in a single system. Finally, LOCKSS uses a sophisticated polling technique among multiple copies to protect the records from a malicious attempt to replace authentic records with forgeries; this methodology makes it particularly easy to demonstrate the authenticity of the records. Finally, LOCKSS is significantly less expensive than any other commercial solution.

Some Concerns

Agency staff had a number of concerns about LOCKSS while developing the PeDALS architecture. They had lengthy discussions with LOCKSS staff about these potential problems. Agency staff also consulted with the MetaArchive Cooperative, which had already implemented a distributed preservation network for special collections materials using LOCKSS. Through these conversations, agency staff determined that their concerns could be readily addressed.

First, archival collections contain many records, which raised the issue of the capacity of LOCKSS as a storage system. LOCKSS is built on top of UNIX, which can easily accommodate terabytes of digital data. However, the UNIX file system has practical limits on the number of files it can address. Given that many archival records are rather small in size, staff was concerned that the repository would reach the file limit long before it would reach storage capacity. The solution was to store collections of records in “super packages.” For example, all records in an acquisition would be encapsulated within a single file.

Staff is still concerned about the maximum capacity of a LOCKSS system. The time necessary to perform integrity checks on all the files in the system places a practical limit on the size of a LOCKSS system. At the moment, LOCKSS staff believes maximum capacity to be approximately ten terabytes, assuming relatively low-cost servers. Arizona State Library and Archives is investigating the use of more powerful servers to address that issue. Regardless, the cost of a LOCKSS system is low enough that it will be possible to implement additional LOCKSS systems.

Second, because PeDALS will contain records that must be kept confidential by law, the system must be a private network. This requires the system to have multiple LOCKSS servers, each with a complete set of records. This differs from the use of LOCkSS to store serials, where many different libraries would capture the same serial. Some serials may be captured by dozens of libraries and so libraries need to create redundant copies. A PeDALS system will include seven LOCKSS servers distributed across at least three states.

Finally, agency staff was concerned about risks associated with the use of open source software. Where commercial software has a vendor backing the product that can provide product support, open source software typically relies on volunteers. At first glance, open source may appear to be an unreasonable risk for an archival repository. However, some commercial software has been abandoned, and Linux has a large and committed development community. Agency staff believes that the level of risk associated with using LOCKSS to be acceptable. Although LOCKSS does not have the backing of a commercial enterprise or a large open source community, it does have a significant number of organizations willing to support the technology’s ongoing support and development.

All told, staff felt that the costs and benefits of LOCKSS far outweighed these risks. Since then, staff has considered a more limited use of LOCKSS for robust, near linear storage for digitized images. In this context, many archival requirements are largely moot because the original paper record is preserved. However, LOCKSS offers a robust mechanism to store the digitized image and ensure that the work of digitizing the images is not lost due to failing media or single copies.

The article is about famous deceased authors and the various files and artifacts that they are leaving to libraries in formats that are no longer in use. “The floppies … are outdated and damage-prone by today’s standards.’ [says] Ms. Morris, who curates modern books and manuscripts at the Harvard University’s Houghton Library].” I mean, y’all, I bought a Kindle 1 in September, 2008, and everyone is now making fun of me for not having a Kindle 2. They are calling me “retro.” See – “Archiving Writers’ Work in the Age of E-Mail,” by Steve Kolowich. http://chronicle.com/weekly/v55/i31/31a00102.htm

And, speaking of deceased authors, saw recently that the University of Massachusetts W.E. B. Du Bois library in Amherst is going to post W.E.B. Du Bois’ documents (estimated at 100,000) online. It is projected that the task will take two years and help from a $200,000 grant from the Verizon 29th Foundation, which funds scholarly programs that use technology. Du Bois died in 1963. The library got the papers from his widow, Shirley Graham Du Bois. The materials (papers, letters, diaries, photographs, speeches, essays, etc.) have been largely inaccessible except to the most dedicated researcher. Rob Cox is head of special collections at the W.E.B. Du Bois Library. See – “UMass to Post Treasure Trove of Du Bois Documents Online,” by Peter Schworm. The Boston Globe, April 4, 2009. http://www.boston.com/news/education/higher/articles/2009/04/04/umass_to_post_treasure_trove_of_du_bois_documents_online/?rss_id=Boston+---+Education+---+News

And, in homage to a book, wanted to tell you all that one of the most influential chemistry resources in the world has turned 100! Since 1909 Houben–Weyl has been used by chemists working in academia and industry. In 1909, Theodor Weyl wrote and edited the Houben–Weyl Methods of Organic Chemistry series. The first edition, consisted of two volumes and covered material published from as early as 1834. In 1913, Josef Houben expanded the project. The two German chemists made a significant contribution to the field of chemical information at the commencement of the 20th century. Weyl and Houben were the first scientists to exhaustively evaluate the organic chemistry literature with regard to its practical application. In order to mark the Houben–Weyl centenary, 100 selected articles

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Endnotes for A Prototype Platform ... from page 47

1. Corresponding author, <Mickey Altmann@harvard.edu>. This project was supported by an award (PA#NDP03-1) from the Library of Congress through its National Digital Information and Preservation Program (NDIIPP).


The Data-PASS project Website is: http://www.icpsr.org/DATAPASS.

8. Both the Harvard-MIT Data Center and the Henry A. Murray Research Archive are now part of the Institute for Quantitative Social Science, in the Faculty of Arts & Sciences at Harvard University.

9. Data-PASS has been, in part, funded by an award from National Digital Information Infrastructure and Preservation Program (NDIIPP).

10. Data-PASS is striving toward becoming a virtual organization conforming with preservation standards and practices, and in particular the TRAC (Trusted Repositories Audit & Certification) checklist. As such, it is a long-term goal that the virtual organization as a whole be able to demonstrate conformance with these standards, but not essential that every participating host of the SSP platform be conformant. Demonstrating conformance with these examples of digital preservation community standards and practice entails explicitly documenting the approach of a repository is addressing the requirements (mapping actions and developments to the requirements) and being able to provide evidence that the requirements are being addressed. The TRAC requirements incorporate the essential requirements of both the Trusted Digital Repositories and the OAIS documents.

11. Our model of changing network state is based on simple primitives. The tool uses the difference report to generate a set of requests of the form: 

\[ \text{HOST_ID} [\text{start}][\text{stop}] \text{COLLECTION_ID} [\text{with plugin parameters XYZ}] \]

The early stages of this effort consist of sending the requests as email messages to the administrators of the hosts requiring changes, and providing them with a tool to update their LOCKSS configuration based on the requests. We are investigating more automated approaches, however the LOCKSS PLN architecture does not currently offer hooks for automated remote management with restricted privileges, and allowing full access to automated clients is unacceptable from a security standpoint.


13. With regard to the software used in our system, much of it is based on standard LOCKSS, or uses extensions to it, created in response to the requests from our projects and other users of PLN’s. Much of the software we developed for our prototype system, such as the extensions to the harvesting plugins we describe above, has also now been contributed back to the LOCKSS project.

Pelikan’s Antidisambiguation from page 48

the deal with Sprint. That book was delivered by Amazon’s service, to Amazon’s device, generating Amazon’s associative metadata, richly profiling the demographics of their audience: this detailed demographic data is likely a near-irresistible value-add to offer to the publishers in exchange for signing on to the Kindle distribution service.

Synchronize your page location between your Kindle and your iPhone? It’s neat, I guess. Well actually, it’s not really such a big deal to accomplish, but it does enrich Amazon’s understanding of how the material they sell is consumed, when, over how long a period, even where, given the rudimentary GPS capabilities of the devices involved.

But this way of moving e-content around is transitional, folks. The Kindle is the 8-track tape player of the eBook age. I’m not saying that’s bad — I’m just saying it’s so.

Always remember: We like to think we’re living in the Modern Age, but really we’re living in the Old Days!

We’re living back in the time when you had to download a book to read it — and not just that, but download it to a specific, licensed device, in a specified format, from a specific service, over a specific connection, provided by a specific vendor! (This attempt at lock-in kind of sounds like iTunes or the iPhone app store, doesn’t it?)

Am I suggesting, throughout this column, that Amazon or Sony or Google don’t deserve a mechanism for cost recovery? Certainly not! Thank goodness someone has finally achieved some traction in these arenas!

But imagine if CNN only let you see their Website if you used a computer you’d bought from CNN, using only the browser they sold you, and only over the Internet service they specified — and then made you pay by the item as well.

We’re not done figuring all of this out yet, but at least we know who’s paying for the R&D.

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from Houben–Weyl, Science of Synthesis, SYNLETT and SYNTHESIS covering a variety of themes have been collocated and can be downloaded for free during the course of this year on the Thieme Chemistry Website. www.thieme-chemistry.com www.science-of-synthesis.com

We have a fascinating interview in this issue with Kent D. Lee of East View Information Services. East View began in 1989 sourcing print content from the former Soviet Union and now the general thrust of East View is to bring primary source information — print or digital — to Western markets from countries of the East — Russia, Eastern Europe, the Far East, and now the Middle East. See this issue, p.50.

Some of us may remember Georges deLorme and Les Livres Etrangers which was a thriving business before the collapse of the Soviet Union in 1991. I understand from Kent’s interview that Mr. deLorme has a restaurant in Paris these days. My husband Bruce and I had the good fortune to meet the charming Mr. deLorme and we remember sitting in a Paris café on the left bank. I’ll bet that he has a great restaurant!

Speaking of Georges – The hard-working George Machovec tells me that library users in Colorado now have access to tens of thousands of additional open-access digitized books and serials through the Prospector Library Catalog. The digitized items originate from the University of Michigan, a partner in the Google Books digitization project and a member of a consortium of libraries called Hathi Trust. Last year the University of Michigan made available bibliographic records for many of the out-of-copyright titles that Google digitized from its collections.

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I Hear the Train A Comin’
from page 84

Download counts and other metrics tell us there is an audience for informal works and for impermanent works. Is there an audience for informal and impermanent works, and, if so, how are these materials best captured, categorized, organized, and preserved? Or are some forms of scholarly communication simply too off-the-cuff and evanescent to be of widespread and/or long-term value?

This is but one of the questions we will encounter looking forward. Institutional repositories face many interesting challenges and opportunities as they approach adolescence. Common deposit mechanisms such as those envisioned by NISO, SWORD, and other initiatives may expose scholarly objects to their creator’s choice of multiple deposit domains, such as journals, content management systems, subject matter repositories, learning object repositories and, of course, IRs. The current reality that a scholar creates something and then must follow several submission paths to give it life in all the places where it could have life certainly impedes the success of the IR.

The consolidation of effort, in which the institutional repository deposit is no harder than checking another box, seems like a promising way to clear this hurdle.

Web 2.0 considerations will also continue to impact institutional repositories. The emerging generation of scholars spends its time on the Internet sharing things — pictures, videos, theories, gripes, thoughts, and so forth. Looking ahead, it seems likely that scholars, especially students and younger professionals, will want access to more real-time information and more unfettered communication. And they will want it with lower barriers — quicker, at less expense, delivered in a format and medium of their choosing. IR infrastructures and services will need to grow more flexible and nimble to meet these expectations.

Another potential game-changer for the IR is the proliferation of funding mandates. We have seen with Harvard that institutions may decide to use the institutional repository as a tool to execute broader policies and strategies. As yet the list of schools that has followed suit is small. Stanford’s School of Education and Macquarie University are two of the notable mandates. Should other institutions begin requiring their faculty to archive copies of their funded research, the IR would no doubt increase in prominence.

Institutional repositories have had an interesting trajectory. They have not been the next course management system, a ubiquitous utility permanently enmeshed in the communication protocols of nearly every college and university. Nor have they been a white elephant along the lines of multimedia CD-ROMs, a product category heralded with great fanfare but ultimately adding little to the long-term fabric of scholarly communication. The jury is still out on the long-term impact of institutional repositories. I look forward to revisiting this fascinating issue in the years to come.

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The University then made available online files for each of the digitized works. The bibliographic records were acquired and enhanced by librarians at the Auraria Library in Denver. After the records were loaded into Skyline, the Auraria Library online catalog, they were uploaded to Prospector, the union catalog of the Colorado Alliance of Research Libraries. Now library patrons from across Colorado have access to the online books via the Prospector catalog. Except for the University of Michigan where the books originated, the Auraria Library was the first library in the nation to make these books available to its users. For more information about Skyline and these records contact: Jeffrey Beall at Auraria Library <Jeffrey.Beall@ucdenver.edu> or for more information about Prospector contact George Machovec <george@coalliance.org> www.coalliance.org

Just back from a fabulous trip to Oxford, England where I attended a conference: “Exploring Acquisitions” from April 15-17. Wonderful. Ran into all kinds of great people from all over the world. More information coming on the ATG NewsChannel and in the June 2009 issue of ATG!

Guess we’re out of space. More Rumors on the ATG NewsChannel! See you there! www.against-the-grain.com.

Back Talk
from page 86

I have an idea that Francis Bacon probably wanted his libraries deathly quiet but I fear that unless we loosen up our rules about the need for silence and stop shushing people, our libraries will be dead to the world. I probably also agree with Plotnick who in another part of his essay said:

When I am working in a library, I much prefer a general hub-bub to the sound of my own breathing or of catalog trays slapping closed or of somebody’s acid indigestion. Oh, once in a while I might enjoy a brief period of near-perfect silence during a particularly meditative study. But I will gladly sacrifice that occasional pleasure for the privilege of, say, reading a good passage aloud to a companion across the table or breaking the tedium of study with a joke and with funky laughter, and so on.

If you have time and want more about the value of silence, click to Youtube’s rendition of Silence Is Golden by the Tremeloes http://www.youtube.com/watch?v=wP3YCZvuB6A.

Endnotes


2. Sexton, David. (April 7, 2009). The sound of silence is all we want in our libraries. Evening Standard (standard.co.uk). Retrieved April 7, 2009 from http://www.thisislondon.co.uk/stardard/article-23560632-details/The+sound+of+silence+is+all+we+want+in+our+libraries/article.do.