

An Institutional Repository for the UMB Campus:

A White Paper

Prepared by:

The Repository Information Project Task Group

Beverly Gresehover, Chair; Richard Behles; Steven Douglas; María Fernández;

Patricia Hinegardner, Thom Pinho

December 1, 2008

Executive Summary

Institutional repositories offer a new model for the dissemination of scholarly publications and increase access to resources. The development of an institutional repository will help promote the mission of the University of Maryland, Baltimore (UMB) to educate and conduct research by applying state-of-the-art technology to organize and present the intellectual work of its scholarly community. The Executive Director of the Health Sciences and Human Services Library (HS/HSL) established the Repository Information Project Task Group (RIPTG) in May 2008 to explore the feasibility of such a project. The group envisions a repository that while institutional in scope, allows the University's constituent schools and individual community members to define their own identities and highlight their accomplishments underneath the UMB umbrella. Equally important, the repository should be scalable, designed from the outset to allow for future growth in participation and content. The RIPTG concludes that the HS/HSL, a technological innovator on campus and an expert in selecting, organizing, storing, and providing the information the campus community needs, is uniquely positioned to develop and implement an institutional repository for UMB. While there will be some cost for computer hardware and software to host the repository, current HS/HSL personnel have the expertise to develop a world-class repository.

What is an institutional repository?

Institutional repositories, Raym Crow states, are “digital collections capturing and preserving the intellectual output of a single or multi-university community.”¹

Clifford A. Lynch extends that definition by asserting that institutional repositories are “a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members.”² Taking advantage of continuing developments in digital technology, institutional repositories offer a new model for the dissemination of scholarly publications and increase access to materials published electronically or subsequently digitized. For example, an institutional repository may contain preprints, datasets, scholarly papers and presentations not previously published as well as links to and metadata describing materials published elsewhere. The flexibility of the digital environment means that this material can be organized, displayed, and searched in a variety of ways, such as by author, by school or department, and by subject. By offering this service to its community members, a university provides an opportunity for them to increase their scholarly visibility. This, in turn, enhances the visibility and reputation of the university.

Why should the University of Maryland, Baltimore consider an institutional repository?

The University of Maryland, Baltimore (UMB) is not only Maryland’s sole “public academic health, human services, and law center,” it is also a major research institution. Enrolling over 5,300 students and employing 6,600 faculty members and staff, the University conducted over \$380 million in sponsored research in Fiscal Year 2006. In fact, the University considers the benefits of the research it

¹ Crow, Raym. “The Case for Institutional Repositories: A SPARC Position Paper.” The Scholarly Publishing & Academic Resources Coalition: Washington (2002).

http://www.arl.org/sparc/bm~doc/ir_final_release_102.pdf. Accessed 11/11/08.

² Lynch, Clifford A. “Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age.” ARL, no. 226 (February 2003): 1-7.

<http://www.arl.org/resources/pubs/br/br226/br226ir.shtml>. Accessed 11/11/08.

conducts so important that its mission statement emphasizes “UMB is committed to ensuring that the knowledge it generates provides maximum benefit to society, directly enhancing the community.”³

The development of an institutional repository will promote the mission of UMB to educate and conduct research by applying state-of-the-art technology to organize and present the intellectual work of its community. An institutional repository would:

- Provide wider access to scholarly information that is either difficult or impossible to provide in other formats. For example, intellectual material that may be of considerable value to the research community but not formally published would be made accessible. Digitized items from the historical collection could become available. Additionally, posters and papers that are presented at conferences and other venues could be presented to a wider audience.
- Provide another entry point to scholarly information in digital formats. An individual’s publications could be linked to a bibliography, for example, providing easy access to all of the UMB academic community’s published work in one place.
- Provide a venue to showcase the scholarly work of UMB in an institutional context. An institutional repository would provide a place to gather together all of the University’s intellectual output, demonstrating clearly the importance of the institution and its constituent schools to the Baltimore community, Maryland, and the world.
- Provide a tool to promote faculty and student recruitment and retention. Other institutions have established repositories that highlight the accomplishments of their faculty and students. It is only a matter of time before this service becomes expected.

³ University of Maryland, Baltimore. About the University. <http://www.umaryland.edu/about/>. Accessed 11/5/08.

Institutional repositories are growing in number and in scope. Within the University of Maryland system, the University of Maryland, College Park has established and is populating a repository. On the UMB campus, the School of Law's repository is proving popular among faculty. More significantly, many academic health centers have established institutional repositories. Duke University, the University of Washington, Washington University in St. Louis, the University of Massachusetts, and Thomas Jefferson University are examples of this trend.

Why should the Health Sciences and Human Services Library take the lead in developing an institutional repository for the University of Maryland, Baltimore?

Established in 1813, the Health Sciences and Human Services Library (HS/HSL) has a long history of providing innovative services to meet the University's, the State's, and the wider Southeastern Atlantic Region's health and human services information needs. In fact, the HS/HSL's current strategic plan emphasizes accessibility, innovation, collaboration, and adaptability to meet its goal of becoming "the leading provider of quality health information" for its diverse constituents. The HS/HSL is also responsible for preserving the historical record of UMB.⁴

Thus, the HS/HSL is uniquely positioned to develop and implement an institutional repository for the University of Maryland, Baltimore. Along with its expertise in selecting, organizing, storing, and providing the information the campus community needs, the HS/HSL has long been a technological innovator on campus. Beginning with computer automation of circulation and cataloging functions in the 1970's, the Library has continued to leverage technology to make its collection more accessible and more relevant. More recently, the Library has led the campus in exploring the possibilities of Web 2.0 technology for research and learning by conducting a well-attended Social Networking Symposium. And the HS/HSL functions as a unifying academic center on campus, serving five of the six schools that comprise UMB.

⁴ University of Maryland, Health Sciences & Human Services Library. Strategic Plan. <http://www.hshsl.umaryland.edu/general/about/strategic.html>. Accessed 11/5/08.

The faculty and staff of the HS/HSL have the skills and knowledge to develop and maintain an innovative, accessible, and adaptive institutional repository. Its Computing and Technology Services department (CATS) has the system engineers, programmers, and web developers necessary to create an outstanding platform. The Liaison and Outreach Services department has a well established history of collaborating with UMB's faculty and will be fundamental in both promoting an institutional repository and encouraging participation. The Cataloging and Collection Management departments have the experience needed to organize information to make it readily accessible, while the Resource Sharing staff is expert in digitizing print materials and obtaining copyright clearance. The Historical Librarian, as the custodian of UMB's historical collections, will be instrumental in developing that portion of the repository. In short, the HS/HSL is the obvious choice to manage UMB's institutional repository.

The Repository Information Project Task Group's Vision for an Institutional Repository at the University of Maryland, Baltimore

The Repository Information Project Task Group (RIPTG) was established in May, 2008 to explore the feasibility of the HS/HSL developing and maintaining an institutional repository for UMB. Its membership was drawn from all of the Library's divisions, and it explored the literature, evaluated other universities' repositories, and analyzed the resources and personnel necessary for the development of a repository. This is the Task Group's vision of how the HS/HSL would develop a world-class institutional repository for UMB.

The institutional repository will be a showcase for the intellectual production of UMB. The overall design and appearance will represent the whole University while simultaneously allowing each individual school and unit to establish its own presence. The pages devoted to each school will incorporate specific branding, reflecting that school's own particular identity and personality. Search engines will provide a variety of access into the repository's content by such means as author, title, subject, or keyword. Also, individual contributors to the repository will each

have a personal homepage, to include a photo, other professional information, and titles of selected works with links to their full content if available. Participation from each school is essential in the early planning and implementation stages of the repository.

Further, the technical infrastructure behind the repository must support the full variety of publication formats and media currently in use, and remain scalable enough to accommodate future technologies.

Finally, metadata provided by the librarians involved in the implementation and maintenance of the repository will ensure direct access to its contents via the standard search engines on the Web, thereby fostering a heightened worldwide exposure of both the individual authors and UMB.

Test Stage

The project will begin with a test stage. During this phase, Library personnel will test the repository's functionality by beginning to populate it with selections from the Historical Collections (see Appendix A), and with HS/HSL faculty librarian scholarly works such as publications, presentations and posters. Even in this pilot stage, a framework for both institutional and school-specific branding will be present, ready to receive contributions from each school and campus administrative unit. The RIPTG recommends that the Library refrain from launching the site to the public until after the content and participation have grown beyond just the Library's own contributions.

Implementation stage

Subsequent sections of this white paper describe the specifics necessary for full implementation of the repository. Appendix B delineates types of activities designed for fostering and nurturing partner relationships vital to the successful population of the repository. A repository service requires widespread campus representation in order to be successful. Appendix C details the various staffing requirements needed for the total management of the repository, from an Advisory

Committee which establishes policy guidelines for the scope of content, to the hands-on staff necessary in the day-to-day routines of entering and maintaining that content.

How much will an Institutional Repository cost?

The development of the world-class repository envisioned above will necessarily demand some investment of resources. However, since the project is scalable, designed to start small and grow as its constituency realizes its utility, the RIPTG feels that initial costs will be modest. In fact, the Task Group thinks that initially the existing personnel of the HS/HSL will be able to perform the development and the roll-out of the repository; the only initial costs will be for additional computer hardware or services.

Technology

The cost of the technology involved in establishing an institutional repository depends upon whether the decision is made to out-source hosting, or to host the repository in-house. A hosted solution, contracting with a commercial service to provide the infrastructure and software necessary to run an institutional repository, has certain advantages. First, commercial products such as Digital Commons (<http://digitalcommons.bepress.com>) offer turn-key solutions. These services provide the software, hardware, and storage space necessary for a rapid implementation of an institutional repository. They also make a much smaller demand on technology personnel than an in-house solution. However, since these are subscription services, there will be an ongoing cost. Also, it is not clear how easily data can be transferred from these proprietary platforms to other services or a self-hosted solution if the provider were to fail or if the university were to negotiate a better deal. While Digital Commons and other services allow for some institutional branding, they maintain the branding of the service provider. Institutions that have adopted this solution include the UMB School of Law (<http://digitalcommons.law.umaryland.edu/>) and Thomas Jefferson University (<http://jdc.jefferson.edu/>).

Hosted, turn-key solutions are ideal for institutions with limited technology staff. However, the HS/HSL CATS department is more than capable of supporting an in-house hosting solution. While Digital Commons and other services provide a one-size-fits-all product, a self-hosted system using open source software such as DSpace allows an infinitely scalable repository; it can start small and grow as large as demand requires. DSpace (<http://www.dspace.org/>) is a stable, well established open-source software product with a large community of users and developers worldwide. Although it can be used as it is, it is also customizable and would allow for greater branding of UMB and its constituent schools. The software itself is free, but it would demand the purchase of additional hardware (see Appendix D) and some programming and web development time before a repository could be implemented. Institutions that have adopted this solution include Duke University School of Medicine (<http://dspace.mclibrary.duke.edu/>) and the North Carolina State University (<http://www.lib.ncsu.edu/repository/>).

Personnel

A project of this magnitude necessarily will include representatives from throughout the campus. While the faculty and staff of the HS/HSL will conduct the majority of the day-to-day operation, the wider campus community will contribute content and provide oversight for the conception and ongoing development of the repository. For example, an advisory committee composed of the Library's Executive Director, the Project Manager—who serves as chair, school deans or their designees, selected library faculty members, and the Library Advisory Committee chair will play an important role in setting policy. The advisory committee will formulate repository guidelines and priorities, establish content standards, and consider requests to withdraw content. The oversight structure and policies of the North Carolina State University Scholarly Publications Repository provides an excellent model (<http://www.lib.ncsu.edu/repository/spr/about.html>).

At the administrative level, the Library's Executive Director will guide the direction of the repository and assess progress. The Project Manager and Library division

heads will oversee daily operations and the technical processing of materials. Oversight of copyright and permissions is the responsibility of the Project Manager.

The timetable for repository development and funds available will drive initial staffing costs. A full or part-time repository project manager is crucial at the outset. This position could be new or might originate from within an existing position. Support from the Resources division is essential and it also might be feasible for existing staff to provide this service.

Technical support is crucial; it may be provided by the current staff of CATS. Depending on the platform chosen, CATS may also be called on to implement the repository. This would entail the same effort as similar major projects they have implemented in the past, such as the roll-out of Sharepoint, the redevelopment of the library's web pages, and the development of a storage area network (SAN) for the HS/HSL. (See Appendix C for further details.)

If we were to decide to implement an institutional repository, what would be our next steps?

1. Library's Executive Director reviews White Paper and commits to the project
2. Library's Executive Director names or hires a Project Manager
3. Create implementation team and advisory committee

Conclusions

The RIPTG concludes the development of an institutional repository for UMB by the HS/HSL is desirable and feasible. An institutional repository is a service that a university provides to its community, a service that an increasing number of campuses are developing. The Task Group envisions a repository for UMB that recognizes the identity of the University's individual schools within the larger institution and that is capable of growth over time. While the HS/HSL will develop and maintain the repository, oversight of the project will be a shared responsibility including partners from throughout the campus. There will be some cost in

instituting a world-class repository for UMB, but the RIPTG feels that it will be modest compared to the increased visibility of the campus through the further dissemination of its scholarly product.

Appendix A

Possible Historical Collections items to be included in the recommended test phase of the Institutional Repository

John Crawford biography – authored by Rich Behles, it will appear in the forthcoming *Dictionary of Early American Philosophers*.

Local Website Archive

St. Apollonia images – the Library holds a collection of 82 graphic works on paper devoted to St. Apollonia, the patron saint associated with dentistry and dental patients. This is a rare and extensive set of St. Apollonia graphic materials, and some of the items date from as far back as the 16th Century. Included is documentation from an antiquarian dealer which describes the collection's provenance and establishes it here among our holdings as of July 1945. In addition to the paper originals, the Library also holds high-resolution digital copies of each item.

Arnaldus, de Villanova, *Brevarium Practicae Medicinae*. Venetiis : Impressum per magistrum Octinum Papiensem de la Luna, 1497 12 Kal. Novembris. This is the earliest imprint (1497) in the Library's collections.

Bicentennial materials

An Act for Founding a Medical College in the City or Precincts of Baltimore for the Instruction of Students in the Different Branches of Medicine. Baltimore : Printed by William Pechie, 1807.

Cordell, Eugene F. *University of Maryland, 1807-1907 : Its History, Influence, Equipment and Characteristics, with Biographical Sketches and Portraits of Its Founders, Benefactors, Regents, Faculty and Alumni*. New York : Lewis Pub. Co., c1907.

Cordell, Eugene F. *The Medical Annals of Maryland, 1799-1899 : Prepared for the Centennial of the Medical and Chirurgical Faculty by Eugene Fauntleroy Cordell, M.D.* Baltimore : Press of Williams & Wilkins Company, 1903.

University of Maryland School of Medicine theses up through 1887 (manuscripts)

College catalogs

File cabinet – legislative typescript documents

Florence Kendall materials – collection of unpublished correspondence, 16mm films, and other documentation originating from the career of Florence P. Kendall, leader in developing the profession of Physical Therapy in Maryland and beyond.

Hyman Rubinstein materials – collection of illustrations from “The Study of the Brain : a companion text to the stereoscopic atlas of neuroanatomy” (1953)

Appendix B

Partners

The effective buy-in from participating partners is vital to the success of an Institutional Repository. An identifiable combination of potential partner relationships exists on campus.

The HS/HSL Library's liaison system will aid in pinpointing specific faculty contacts to explore for potential interest. For example, the School of Social Work liaison already has expressed that many individuals are likely to be interested in the IR project. Specific names include Dean Richard Barth, as well as Donna Harrington, Diane DePanfilis, and Bruce DeForge. The complete School of Social Work faculty listing with biographies is available at:

http://www.ssw.umaryland.edu/faculty_and_research/faculty_bios.htm

The liaisons for each of the other schools should expect to offer similar insight, contact assistance, and the fostering of relationships that would encourage faculty participation.

Our Resource Sharing data would supply the names of high-volume users, whose demonstrated research interests and continuing relationship with the HS/HSL suggest that they might be a group to explore for potential IR participation.

Additionally, the database of faculty who have published in PubMed Central would identify a significant population group already conversant with electronic publishing. Further, there is vertical file material available in our Historical Collections that includes some biographical background documentation about the various deans and their research interests.

There are several other specific individuals with whom the HS/HSL should consider pursuing partner relationships, although no such discussions have occurred yet. Dr. Joseph Lakowicz and Dr. Robert Gallo have demonstrated professional histories that would make them highly desirable as potential partners. Further, Dr. Philip Mackowiak generates unique documentation in support of his renowned annual Historical Clinicopathological Conference. In conjunction with our recent Woodward award to Dr. Charlotte Ferencz, digitized versions of her Baltimore-Washington Infant Study content would have great merit within the repository project. Further, appropriate staff of the Maryland Institute for Emergency Medical Services Systems would be worth cultivating in terms of any available documentation originating from, or concerning, Dr. R Adams Cowley and the development of the University of Maryland Medical System's landmark Shock Trauma Center. Finally, Dr. James McNamee as the Chief Information Officer of the School of Medicine is poised to be a very worthwhile potential partner.

As the principal publication-producing agency for the campus, the Office of External Affairs presents an important prospective partner, particularly with respect to

campus administrative publications which help constitute the top-tier historical record of the institution.

In that same vein, there are public communications agencies within each school, performing functions similar to OEA, at the school-specific level. For example, the Pharmacy School operates its Office of Marketing and Communications.

Appendix C

Staffing Requirements

I. Library Executive Director

- a. Assesses progress and guides the direction of the repository

II. Advisory Committee

- a. Advises on guidelines and priorities for the repository
- b. Establishes guidelines on what is acceptable content
- c. Considers requests to withdraw content from the repository

Composition: Library Executive Director, Project Manager, dean or designated person from each school as the school becomes involved, Library Advisory Committee chair and library faculty member(s)

III. Repository Project Manager

- a. Oversees all aspects of repository development and maintenance
- b. Works closely with division heads to facilitate division staff participation
- c. Actively solicits content
- d. Oversees content
- e. Oversees digital permissions
- f. Oversees metadata design and creation
- g. Promotes the long-term development of the repository
- h. Oversees evaluation (use analysis, surveys, reporting to constituents, etc.)
- i. Provides coordination and facilitation of the advisory committee
- j. Reports to management

IV. Liaisons

- a. Recruit campus faculty/staff to provide content
- b. Recruit participants for personal homepages
- c. Conduct public relations/promotion

V. Cataloging Staff

- a. Create metadata
- b. Assign subject headings

VI. Technical Staff

- a. Provide system administration
- b. Program software
- c. Design system
- d. Provide UMB/ school's branding

VII. Support Staff

- a. Investigate copyright and obtain permissions
- b. Find digital copies or scan print
- c. Perform final edit and upload

- Staffing is scalable depending on the repository platform selected.
- Sufficient staffing is needed up front to launch the repository with an array of content from Library faculty, Historical and Special Collections, and campus faculty.
- Branding is essential at the outset to sell to potential campus users.

Appendix D

Hosting Options

There are two possible methods to host a DSpace installation at HS/HSL. The first method uses virtual servers on hardware the Library already owns. The second more conventional method would be to purchase hardware specifically for the new installation.

The first option, using virtual servers on existing hardware, would cost approximately \$7,200.00. This includes adding 143GB of space to the SAN (the storage area network to which the virtual servers have access) at an approximate cost of \$3,900. Backup would be by tape and cost around \$3,300 for an additional tape drive, software, and redundant sets of backup tapes. Advantages for this solution include ease of initial setup and the performance boost on storage using fiber channel drives in the SAN. Disadvantages include the expense of storage space (143GB for \$3,300) and additional load on existing HS/HSL hardware.

The second method would involve the purchase of a new physical server, for example an HP ProLiant ML 115GS with 3Ghz processor, 4GB RAM, and 4 750GB hard drives in a RAID5+1 array. Repository backup would be provided by a removable drive bay for physical hard drives. The cost for this solution is approximately \$5,300, \$4,300 for the server and an additional \$1000 for 10 1TB SATA drives for backup. Advantages would include enhanced storage capacity at repository roll-out and the ability to provide future upgrades at a minimal cost or impact to other systems. Disadvantages include providing ongoing maintenance for an additional physical server.

Projected costs are approximate and do not include various software decisions which may be made by the implementation team. For example, there are several backup software solutions available with a wide range of costs. Additionally, the implementation team may choose to equip a new server with an operating system

requiring the purchase of licenses or decide to buy a packaged distribution of open-source software.

Approximate Cost of Hardware
Storage on the SAN (first method):

459282144

QUOTE #:

Customer #: 71371319

Contract #: 70137

Customer Agreement #: Dell Std Terms

Quote Date: 11/14/08

Date: 11/14/08 2:31:52 PM

Customer Name: UNIV OF MD @ BALTIMORE/FINA SR

TOTAL QUOTE AMOUNT:	\$3,837.60		
Product Subtotal:	\$3,837.60		
Tax:	\$0.00		
Shipping & Handling:	\$0.00		
Shipping Method:	Ground	Total Number of System Groups:	0

SOFTWARE & ACCESSORIES

Product	Quantity	Unit Price	Total
146GB 10K RPM Fibre Channel 2Gbps 3.5-in HotPlug Hard Drive, Cust. Kit (340-8068)	4	\$959.40	\$3,837.60

Number of S & A Items: 1

S&A Total Amount: \$3,837.60

Backup solution for SAN storage (first method):

PowerVault 114T	
Price	\$3,288.00

PowerVault 114T	Unit Price: \$3,288.00
PV114T, LTO3-060 Tape Rack Enclosure, 1 Drive	

PowerVault 114T	PV114T, LTO3-060 Tape Rack Enclosure, 1 Drive
SCSI Controller and Cable for First Drive	None
SCSI Controller and Cable for Optional 2nd Drive	None
Rack Rails	RAPIDRAILS FOR DELL RACK
Tape Media	Tape Media for LTO3, 400/800GB, 10 Pack
Backup Software	None
Hardware Support Service	3Yr BASIC NBD: L1 Hardware Queue, Next Business Day Onsite M-F 8am-6pm
Installation Services	PowerVault Installation Declined
Asset Recovery Services	None
Environmental Options	None

New Physical Server (second method):



invent

Items/description	Part no	Unit price	Qty	Ext price
-Configurable- HP ProLiant ML115 G5 Non- Base Hot Plug Server		\$4,012.01	1	\$4,012.01
		\$4,012.01		
HP ProLiant ML115 G5 Server	457767-B21			
Quad-Core AMD Opteron™ Processor Model 1354 (3.0GHz, 75W, 800FSB, 2MB)	490606-L21			
HP 4GB Unbuffered Advanced ECC PC2-6400 DDR 4x1GB Memory	450259-4GB			
Storage controller				
HP Embedded 4 Port SATA Controller (does not support factory integrated RAID)				
HP 750GB 3G SATA Non-Hot Plug 7,200rpm 3.5" MDL Hard Drive (1-year warranty)	462595-B21			
HP 750GB 3G SATA Non-Hot Plug 7,200rpm 3.5" MDL Hard Drive (1-year warranty)	462595-B21			
HP 750GB 3G SATA Non-Hot Plug 7,200rpm 3.5" MDL Hard Drive (1-year warranty)	462595-B21			
HP 750GB 3G SATA Non-Hot Plug 7,200rpm 3.5" MDL Hard Drive (1-year warranty)	462595-B21			
RAID 5 drive set with online spare (requires matching 4 hard drives)	339780-B21			
HP 16X Half-Height SATA DVD-ROM Optical Drive	447326-B21			
HP RDX500 Internal Removable Disk Backup System	AJ934A			
HP Smart Array E200/128 BBWC Controller	411508-B21			
Network card				
Embedded NC320i PCI Express Gigabit Server Adapter				
HP NC360T PCI Express Dual Port Gigabit Server Adapter - Low Profile	412648-B21			
Power supply				
HP 365W power supply				
Warranty				
Protected by HP Services, including a one-year, limited warranty, parts only 1 year limited global warranty				
HP Care Pack, 3 Years, 4 Hours, 13x5, Hardware	U4434E	\$276.00	1	\$276.00
		\$276.00		

Subtotal: \$4,288.01

Backup Storage Drives (second method):
(Price from NewEgg.com)

Quantity: 10

[Western Digital Caviar Green WD10EACS 1TB SATA 3.0Gb/s Hard Drive - OEM](#)

Item #: N82E16822136151

Return Policy: [Limited 30-Day Return Policy](#)

\$999.90

(\$99.99 each)

Subtotal: \$999.90

Grand Total:* \$999.90

Select Bibliography

Bailey, Charles W. "Institutional Repositories, Tout de Suite." Digital Scholarship (2008). <http://www.digital-scholarship.org/ts/irtoutsuite.pdf>. Accessed 11/20/08.

Baudoin, Patsy and Margret Branschofsky. Implementing an Institutional Repository: The DSpace Experience at MIT. Science & Technology Libraries, Volume 24, Issue 1/2, June 2004, p.31-45. Available through the MIT DSpace repository at <http://dspace.mit.edu/handle/1721.1/26699> . Accessed 11/24/08.

Crow, Raym. "The Case for Institutional Repositories: A SPARC Position Paper." The Scholarly Publishing & Academic Resources Coalition: Washington (2002). http://www.arl.org/sparc/bm~doc/ir_final_release_102.pdf. Accessed 11/11/08.

Lynch, Clifford A. "Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age." ARL, no. 226 (February 2003): 1-7. <http://www.arl.org/resources/pubs/br/br226/br226ir.shtml>. Accessed 11/11/08.

Royster, Paul. "The Institutional Repository at the University of Nebraska–Lincoln: Its First Year of Operations." Coordinator of Scholarly Communications, U of Nebraska, Lincoln (2006). http://works.bepress.com/paul_royster/38/. Accessed 11/21/08.