INSTITUTIONAL REPOSITORIES: PRESERVING AND ORGANIZING WHAT YOU CREATE TODAY FOR TOMORROW'S RESEARCHERS

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Abstract — What are you creating, sticking on a shelf, dumping in a storage room, filing in a black hole, and losing? Where are your slides, digital images, poster session products, field notebooks, and data from the last year, the last five years? What about senior theses, student research projects, specimen collection inventories, or finding guides? The DSpace institutional repository system developed by the Massachusetts Institute of Technology (MIT) Libraries and the Hewlett Packard Corporation is one of several open source software packages being used by research institutions around the world to organize, preserve, and provide access to knowledge created at their institutions in a digital form. While the number of institutional repositories is increasing, content addition is slow, particularly geoscience content. The Ohio State University Libraries, in partnership with the Office of the Chief Information Officer, has developed the OSU Knowledge Bank. The Department of Geological Sciences and the Byrd Polar Research Center are two of approximately 31 communities established so far in the Knowledge Bank. This paper describes the philosophy of institutional repositories and the role of the subject librarian in identifying repository content.

INTRODUCTION

The term institutional repository (IR) has been defined by SPARC (Scholarly Publishing and Academic Resources Coalition) as "digital collections that capture and preserve the intellectual output of university communities" (Crow, 2002). Clifford Lynch expanded on this concept. He said that in his view, "a university-based institutional repository is 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" (Lynch, 2003). The 2005 Progress Report for The Ohio State Knowledge Bank Project states, "The Knowledge Bank is a digital repository that collects, stores, shares, and preserves important academic assets such as publications, reports, theses, working papers, photographs, and learning objects" (Branin, Rogers, and Cetwinski, 2005).

These are three related but different descriptions of an institutional repository. What then is an institutional repository? When I discuss the Knowledge Bank with faculty or students, I get blank looks. It was the same when discussion first started at Ohio State University and Library Director Joseph Branin stated that "...librarians must extend their expertise beyond collection management to knowledge management" (Branin, 2003). Institutional Repositories not only are

digital warehouses but also provide open access to their content. The Ohio State University Knowledge Bank, for example, has its own web site (https://kb.osu.edu/dspace/index.jsp), is linked from the OSU Libraries homepage and is open to Google and other web crawlers. Some content in the Knowledge Bank is also cataloged in the OSU Library online catalog. The DSpace Wiki lists DSpace installations worldwide (http://wiki.dspace.org/index.php/DspaceInstances).

CONTENT FOR IR's

Libraries traditionally collect and preserve publications. Is the institutional repository just another name for a digital library? If so, should we just be identifying collections to digitize? While digitized collections are part of the content – as are theses and dissertations – what else is there? Faculty need to be encouraged to retain rights to their publications and to put them in the institution repository. These are traditional library collection activities. Is there additional intellectual output of the university? What about slide/image collections, videos of dance, plays, fieldtrips, lectures, or sound recordings, databases, data files, field notebooks? What are faculty members collecting in their office file cabinets, on hard drives, and in boxes, assuming that their next computer can read the file (Villano, 2005)? Should not these all be considered intellectual output? Getting all this output into an

institutional repository requires that a set of services be in place. It also requires credibility, acceptability, pressure, perseverance, and support from the top down on a campus.

The challenges of collecting content points to the critical role that subject librarians should play in the process. The Ohio State University Libraries director has stated that "our subject specialists are building the inventory of digital resources and services on campus, and they are creating the relationships that allow the librarians and faculty to work more closely with each other in creating, managing, sharing, and preserving a wider range of digital assets" (Branin, 2003). Susan Gibbons, Assistant Dean, Public Services & Collection Development, University of Rochester, gave a presentation at the Ohio State University Libraries in February 2006 on this challenge. In her lecture she talked about the different techniques used at the University of Rochester to understand researchers and how they do their research. She presented examples of changes the University of Rochester Libraries made in the way they approached faculty about the IR and some suggestions and guidelines for others to consider when attempting to build content for an IR (Gibbons, S., 2006). Some of this content was also published in a paper she co-authored with Nancy Foster, the anthropologist who assisted with the analysis of faculty research (Foster, N.F., and Gibbons, S., 2005).

What is the current geoscience content in institutional repositories?

When I did a quick survey of about 60 North American D-Space repositories, I found only twelve with some geoscience content. I found a variety of content including slide collections, maps, theses and dissertations, publication backfiles, pre-publication papers, reports, and posters. While there was diversity of format, there was not much quantity. Institutional repositories are new, just getting started, and filling with content is slow. While not all the repositories are associated with libraries, most are. Subject librarians are often the contact for faculty concerning materials they have to organize. As we visit and talk with faculty we should be on the lookout for materials that are potential content for the institutional repository.

THE OHIO STATE UNIVERSITY EXPERIENCE

Knowledge Bank

The University's Distance Learning/Continuing Education Committee defined the concept of a "Research Bank" or "Knowledge Bank" in 2001 as a

storehouse to collect, to index, and to preserve digital content produced by faculty and to support the creation of new research content and learning packages (Rogers, 2003). A planning committee was formed to investigate the concept. An action plan was developed in 2002 (Branin, 2002). By July 2005 the Knowledge Bank (Fig. 1) had twelve communities of users with a total of 247 digital items (Branin, Rogers, and Cetwinski, 2005). As of August 2006 there were 31 communities of users and 22,327 items (Cetwinski, 2006).

The School of Earth Sciences is one of the communities. Currently there are two collections in its community, Posters and Senior Theses (Fig. 2). A third collection, the Radio Talks given by the staff of the department in the 1940s and 1950s, is under consideration. We have found the long playing records in the WOSU archives and some printed transcripts in the Geology Library. Two other Ohio State University Knowledge Bank collections of interest to geoscience librarians are the Byrd Polar Research Center (Fig. 3) and the Ohio Journal of Science (Fig. 4), v. 1-103 (1900–2003).

Media Manager

The slide/image collections are a challenge and work has begun with two faculty members to organize their collections using the Media Manager, a tool developed by the Colleges of the Arts and Sciences to help faculty organize, share and present digital media files (Web Manager FAQ, 2006). The images are uploaded into a collection and tools are available for describing and organizing the images (Fig. 5).

The technical staffs of the Knowledge Bank and the Media Manager are working to create a program that would allow an image collection, once it is organized and described in the Media Manager, to be moved into the Knowledge Bank for permanent archiving. The images could then be downloaded from the Knowledge Bank for other uses.

Web Pages

An example of a service using items stored in the Knowledge Bank is departmental and college web pages. Department and college web sites may contain pages that highlight faculty or student research projects and link to items stored in the Knowledge Bank. Some of the undergraduate posters in the School of Earth Sciences community, for example, are highlighted as part of the Geology Library web page with links to the Knowledge Bank files (Fig. 6).

Additional Applications

Recalling Lynch's concept that an institutional repository is a set of services, then in the Ohio State University experience, Knowledge Bank is the storehouse and the Media Manager is one of several associated services. The Ohio State University course management system, Carmen, is a local adaptation of the Desire2Learn ™ product. It includes a "learning object repository" where faculty can place learning objects they have developed for classroom use. In the future these learning objects may find a permanent archive in the Knowledge Bank. Through Carmen, faculty can also link to image collections in the Media Manager or link to material in the Knowledge Bank that they want their students to have access to. The Knowledge Bank with the OSU Health Sciences' Center for Knowledge Management is developing a web-based directory of expertise on campus. This will be a database of biographical information about the research interests and scholarly activities of faculty and staff. The database will link to publications in the Knowledge Bank as well as those in electronic journals when the license permits. This tool will make it easier for the faculty and university administrators to track accomplishments (Goerler, R.E. and Lay, L., 2007). There are probably other services not yet conceived or developed that in the future will become part of the institutional repository set of services.

CONCLUSION

For institutional repositories to be successful they need content, and they must be more than a storehouse of digital items. In developing the Knowledge Bank, OSU librarians were challenged to work with our faculty to identify their needs and to be the bridge between them and the Knowledge Bank. This is a new role for subject librarians and one that I want to challenge you to consider if your institution has an institutional repository. Open access to information is a benefit for all of us. I believe that the only reason more geoscience items are not in institutional repositories around the world is that we, the librarians, have not aggressively collected the materials. Now is a good time to start!

REFERENCES

Branin, J.J. 2002. *Knowledge Bank Implementation Plan and Support Request*, Report submitted by Joseph J. Branin, Director of Libraries and Chair, Knowledge Bank Planning Committee to Ed Ray, Executive Vice-President and Provost, available at: http://hdl.handle.net/1811/184

Branin, J.J. 2003. *Knowledge Management in Academic Libraries: Building the Knowledge Bank at the Ohio State University*, 17 p., available at: http://hdl.handle.net/1811/187

Branin, J.J., Rogers, S.A., and Cetwinski, T. 2005. *The Ohio State Knowledge Bank Project Progress Report, July 2005*, available at: http://hdl.handle.net/1811/565

Cetwinski, T. 2006. personal communication, 14 September 2006.

Crow, R. 2002. *The Case for Institutional Repositories: A SPARC Position Paper*, Scholarly Publishing & Academic Resources Coalition (SPARC), Washington, DC, available at: http://www.arl.org/sparc/IR/ir.html

Foster, N.F., and Gibbons, S. 2005. Understanding faculty to improve content recruitment for institutional repositories. *D-Lib Magazine* 11, no.1 available at: http://www.dlib.org/dlib/january05/foster/01foster.html

Gibbons, S. 2006. *Institutional Repositories: What's It Going to Take to Fill Them?* Available at: http://hdl.handle.net/1811/6022

Goerler, R.E. and L. Lay. 2007. Polar librarians and archivists using a digital repository: The Ohio State University experience. In: *Proceedings of the 21st Polar Libraries Colloquy, Rome, Italy*, p. 167-178, available at: http://arcticcentre.ulapland.fi/polarweb/plc/pdf/PLC06_full.pdf

Lynch, C.A. 2003. Institutional repositories: essential infrastructure for scholarship in the digital age. ARL Bimonthly Report 226, available at: http://www.arl.org/newsltr/226/ir.html

Media Manager FAQs. 2006. Available at: https://mediamanager.osu.edu/index.cfm?fuseaction=do.faq

Rogers, S.A. 2003. Developing an Institutional Knowledge Bank at Ohio State University: From Concept to Action Plan. *portal: Libraries and the Academy* 3, no.1: 125-136, available at: http://hdl.handle.net/1811/188

Villano, M. 2005. Digital libraries>>'Opening' a digital library. *Campus Technology*, Sept. 2005, available at: http://www.campus-technology.com/article.asp?id=11727
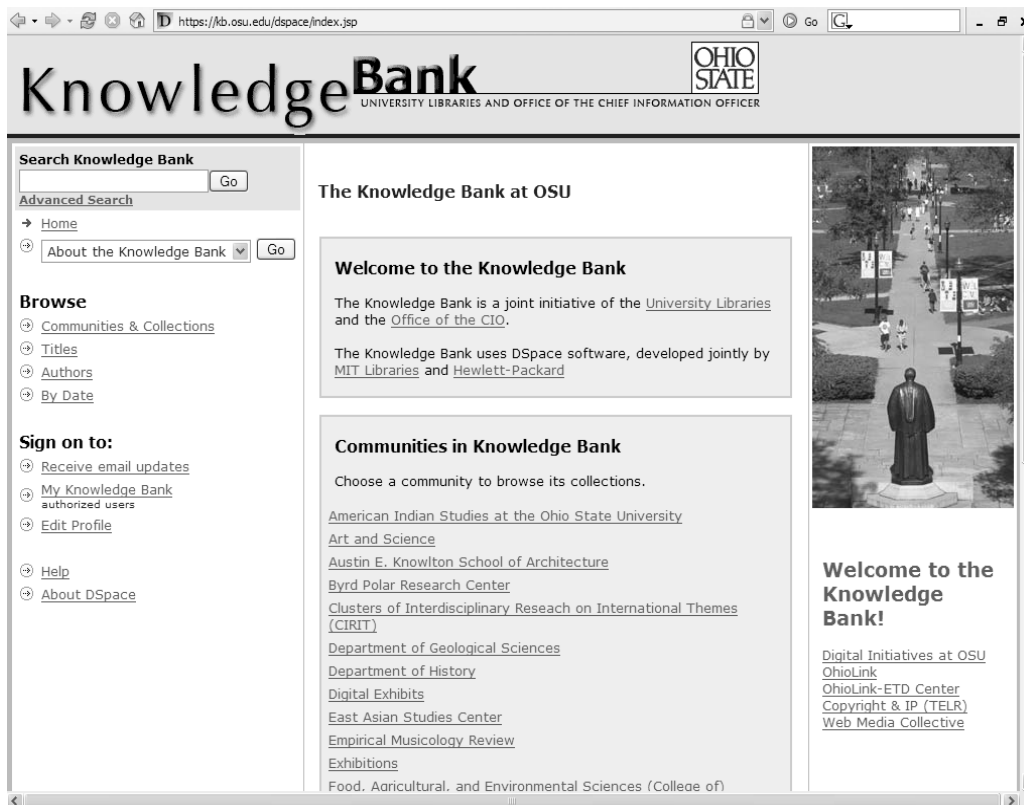
Figure 1. The Knowledge Bank at OSU home page
https://kb.osu.edu/dspace/index.jsp
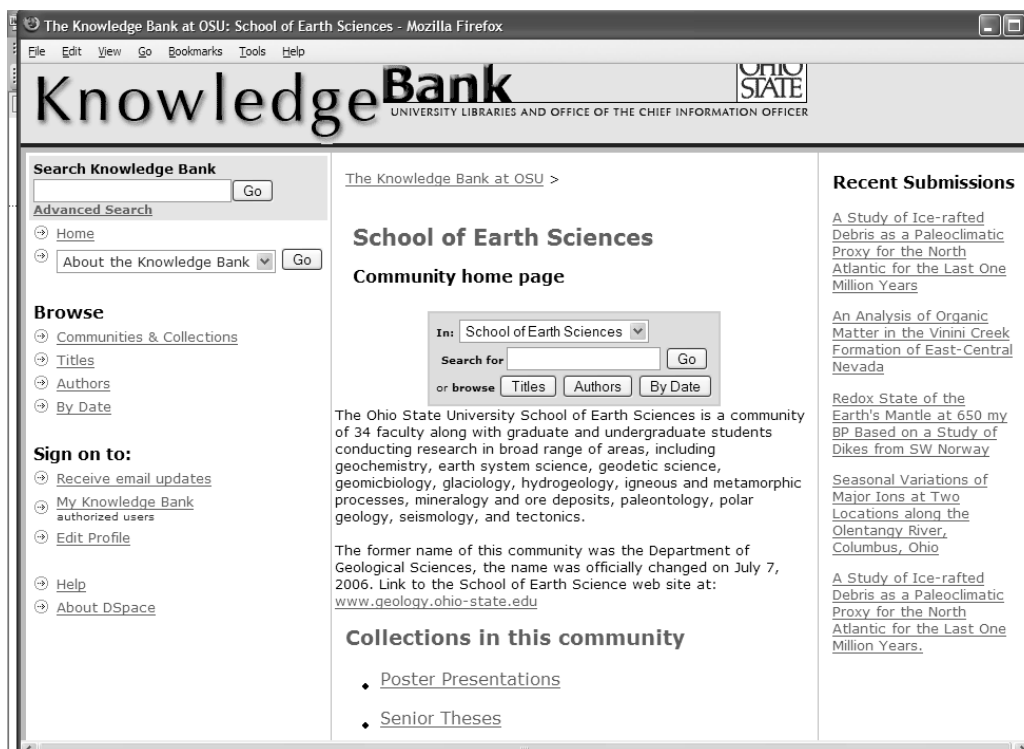
Figure 2. School of Earth Sciences community home page
https://kb.osu.edu/dspace/handle/1811/5839

Figure 3. Byrd Polar Research Center community home page
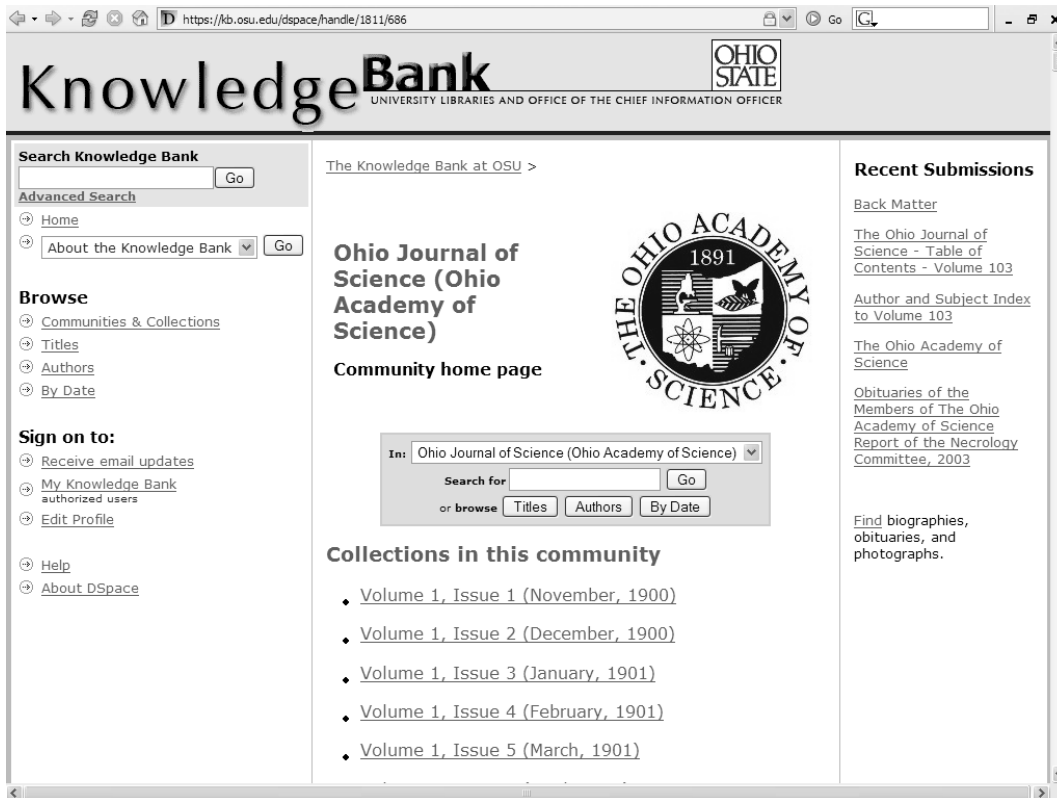https://kb.osu.edu/dspace/handle/1811/5962

Figure 4. Ohio Journal of Science community home page
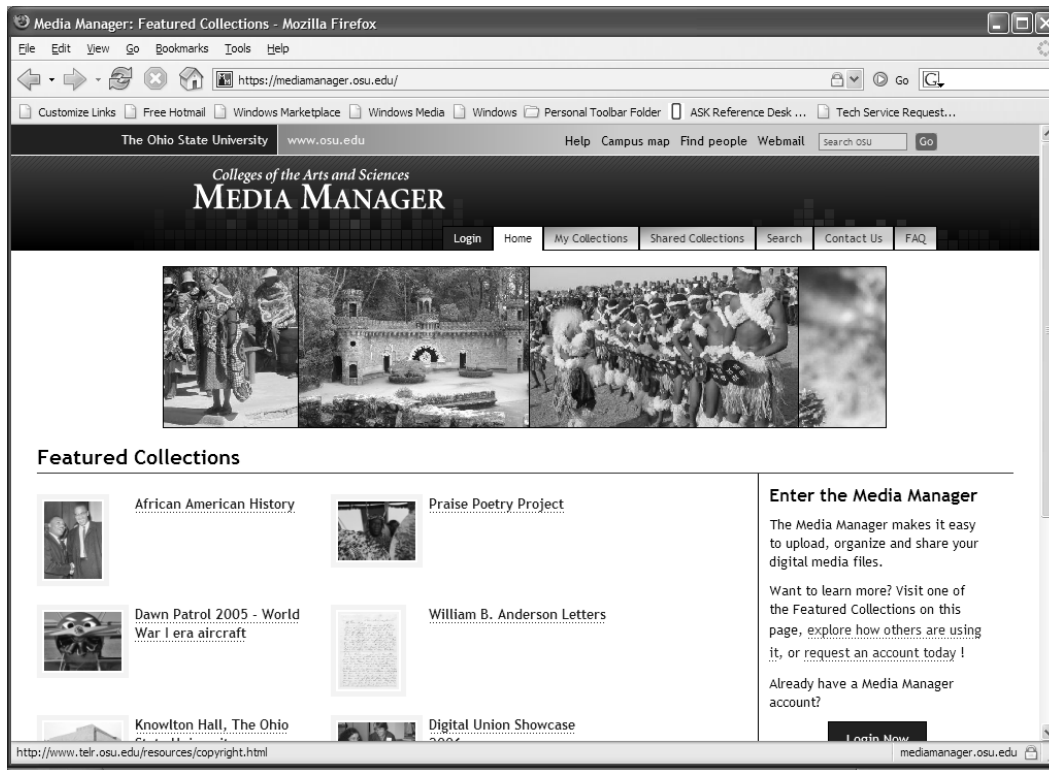https://kb.osu.edu/dspace/handle/1811/686

Figure 5. Media Manager web page
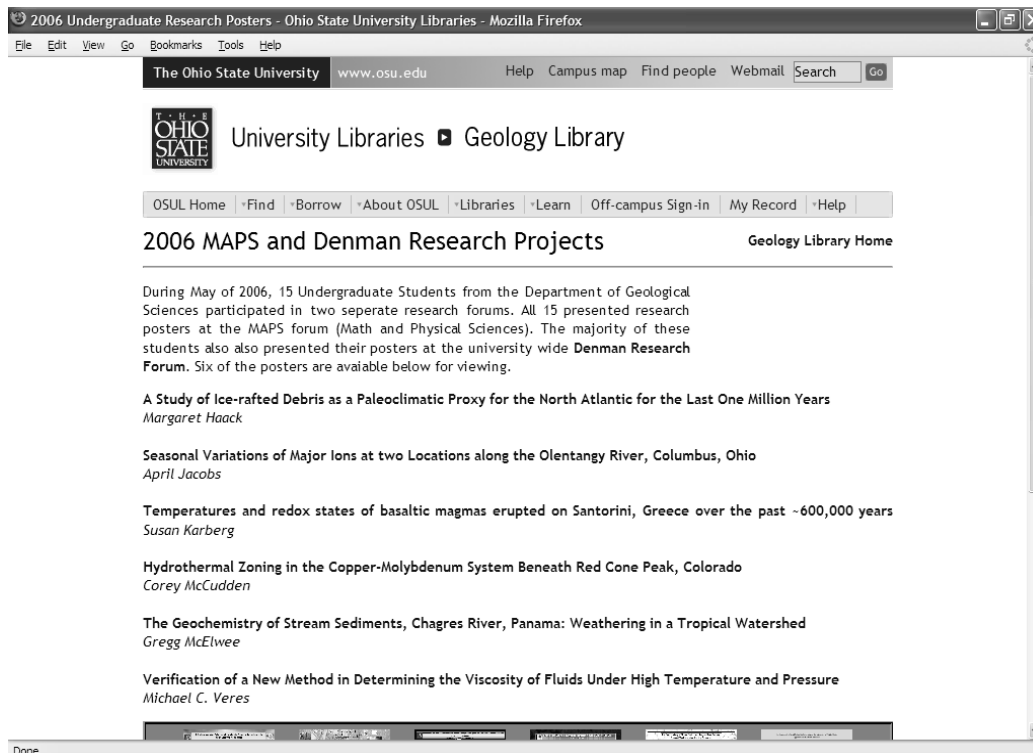https://mediamanager.osu.edu/

Figure 6. 2006 MAPS and Denman Research Posters
http://library.osu.edu/sites/geology/research/UndergraduatePosters_2006/main.php