The Ohio State Knowledge Bank Project

Progress Report, July 2005

Background

The OSU Knowledge Bank project proposes to create a knowledge management system for the University that supports the creation, organization, storage, and dissemination of the institution's academic digital information assets. The Knowledge Bank intends to develop as both a "repository," capable of archiving the increasing volume of digital content created at OSU for long term use and preservation, and as a "referatory," providing links to digital objects managed by others. This definition has guided the development of the Knowledge Bank since it's inception in 2002. A $400,000 grant from the Board of Regents' Research Challenge Fund received in August, 2003, made it possible to move the Knowledge Bank from an idea to an established practice. At approximately the same time, the University Libraries and the Office of the CIO had the opportunity to join a federation of like institutions to implement and further develop "D-Space," an open source repository software. The D-Space initiative was spearheaded by MIT and Hewlett-Packard with funding from the Mellon Foundation.

Building Communities of Users and Knowledge Assets

Currently, the Knowledge Bank repository has twelve communities of users, with a total of 247 digital assets. The communities represent diverse interests as the international partnerships fostered by the Olentangy River Wetland Research Park, research on the use and impact of learning objects, and undergraduate research sponsored by the Honors & Scholars Center. A growing number of communities are in development, including the Center for Folklore Studies, which is attempting to capture rare material in danger of being lost; University Relations, which

desires to archive press releases on faculty research that document the interesting history of OSU research progression; and the College of the Arts, which wants to preserve and share moving images of music and dance experiences from notable performers once part of the OSU community. Knowledge Bank collections that are about to be made available include transcripts from the OSU Oral History Project, the Polar Oral Histories sponsored by the Byrd Polar Research Center, and historic back files of the *Ohio Journal of Science* (1900-1972). The Knowledge Bank is also interested in collaborating with the OSU Press to encourage and foster new methods of scholarly publishing.

The current status of Knowledge Bank communities is summarized in the chart below, and a dynamic inventory of all communities and their digital assets can be found at https://kb.osu.edu/dspace.

Current Status of Knowledge Bank Communities

KB Communities	**KB Communities In-Development (within 6 months)**	**KB Communities In-Development (more than 6 months)**
Hilandar Research Library of Medieval Slavic Resources	Byrd Polar Research Center	ACCAD (Advanced Computing Center for Arts and Design)
Honors Theses	Center for Folklore Studies	MAPS (College of Mathematic and Physical Science)
John Glenn Institute	Institute Of Chinese Studies	Center for Medieval & Renaissance Studies
Knowledge Bank	Dance Projects	Wyandotte Indian Research
Learning Objects Research	University Relations	OSU Alumni Office

OARDC (Ohio Agricultural Research)	Latino/a Studies	Native American Studies
Olentangy River Wetlands Research Park	Math Papers	Veterinary Biosciences
OSU Libraries	Molecular Spectroscopy Abstracts	
OSU Press	Ohio Journal of Science	
OSU Special Collections	OSU Oral History	
TELR (Technology Enhanced Learning and Research)	Polar Oral History	
WOSU (Public Radio and TV)	College of Arts & Sciences	
	University Senate	

Not all digital assets at the University will be deposited in the Knowledge Bank's repository. Some individuals and communities will want to manage their own assets on local servers, and some will want their assets to be part of national or international disciplinary repositories. The Knowledge Bank does hope to act as a "referatory" in these cases, by at least listing and linking to all important academic digital assets produced at the University. Towards this end, the Knowledge Bank has created and is maintaining an inventory of digital projects at the University. *Digital Initiatives at The Ohio State University* (http://library.osu.edu/sites/dlib/kb/projects.html) attempts to display in a single source the academic digital assets associated wit the University with links to assets where ever possible. Colleges, centers and institutes will be surveyed on a regular basis by subject specialist librarians to keep the source up-to-date and as comprehensive as possible.

Developing a Statewide Knowledge Management System

For more than a decade, OSU has been an active member of OhioLINK and our faculty, students, and staff have benefited from the many services provided through this consortium of Ohio libraries. With grant support from the Ohio Board of Regents, OhioLINK has undertaken development of a statewide content repository system called the Digital Resource Commons (DRC). The intent is to realize economies of scale by building a statewide service so that all OhioLINK members can create, use, and manage content stored and preserved on OhioLINK servers rather than investing locally in redundant and costly infrastructure. We are continuing to build the Knowledge Bank at OSU while participating in the development of the DRC as well. We envision that many of OSU's knowledge assets will be contributed to the DRC when it is ready; and our goal is to use technology to enable easy access to all of these assets, regardless of the repository in which they are stored and preserved.

Promoting Stewardship of Important Academic Digital Assets

The Knowledge Bank has a deliberate personal approach in promoting new methods of content management that appreciates the diversity of material and the need for individual attention to collections. In the 2004/05 academic year alone the Knowledge Bank staff and University librarians made sixty-three presentations to encourage the stewardship of academic digital assets and the value of networked access to these assets. These presentations are usually followed by small group discussions with potential contributors to assess their digital or non-digital resources and the technical issues that would need to be addressed in archiving them in the Knowledge Bank repository. The Knowledge Bank has also recently been on exhibit at meetings and conferences, such as the 2005 Patterson Land-Grant Lecture on June 2. Additional proactive

measures include articles and advertisements in University publications such as "On Campus," as well as personal contacts with faculty who have been recognized by the University for their outstanding research and teaching. Librarian subject specialists are beginning to make the Knowledge Bank part of their collection development and faculty liaison responsibility, which will mainstream digital repository development. Marketing the Knowledge Bank and gaining faculty and student understanding, appreciation, and participation for digital stewardship remain key challenges for the project.

Developing a Service Model

While the D-Space software behind the Knowledge Bank repository was designed for easy use by communities of users, the need for active librarian and information technologist support and intervention is evident. The University Libraries has devoted an equivalent of 3FTE staff (project manager, metadata specialist, and programmer) to the project in addition to contributions from many other library and CIO staff. The service model for the Knowledge Bank is in continuous development with each community of users presenting new challenges. The Knowledge Bank team appreciates the importance and uniqueness of each community's research and scholarship be it text, sound, images or some combination of the three formats. Metadata profiles (information about information, such as index terms) are developed that require content familiarity, an understanding of community's objectives, and adherence to standards that ensure successful sharing and preservation of assets. In many cases, this is time consuming and is accomplished by trial and error. The CIO's Office of Information Technology has provided required technical support and storage space for the Knowledge Bank. As much as possible, the goal is over time to mainstream Knowledge Bank services into the routine responsibilities of staff in the Libraries and the CIO operation.

Managing Information about Expertise

The Knowledge Bank has partnered with OSU Health Sciences' Center for Knowledge Management to develop a directory or repository of *OSU Expertise*. The objective is to design and implement a comprehensive, dynamic database of relevant information about scholarly activities, teaching, research, expertise, and academic achievements by all faculty and research staff at the University. *OSU Expertise* draws on existing "canonical" data sources already available at the University and makes it easy for users to add additional information. The advisory team for *OSU Expertise* is currently gathering input and evaluations from test audiences by piloting usability with several health sciences, library, College of Arts and Sciences groups. More about *OSU Expertise* can be found https://expertise.osu.edu. The project is scheduled to be more widely publicized and tested during the 2005-06 academic year.

Designing New Space: the Digital Union

As part of the Knowledge Bank project, the University Libraries has collaborated with the Office of the CIO to create the *Digital Union,* a new facility in the Science and Engineering Library. The Digital Union is a laboratory that encourages faculty and student collaboration on digital multimedia projects. The content produced in the Digital Union is intended to be contributed to the Knowledge Bank. More information about the Digital Union is available at http://digitalunion.osu.edu/

Grant Expenditures

A $400,000 grant from the Board of Regents' Research Challenge Fund was awarded to the University Libraries in August, 2003, to seed the Knowledge Bank and move it from an idea to an established practice. Expenditures from the grant are summarized below. All funds from the grant will be expended by the end of 2006, and by that point the Libraries and the CIO will have integrated the project into routine operations.

Summary of Expenditures as of 6-30-05

	Initial allocation	FY04	FY05	Total	Available
Personnel		23,076.74	89,705.95	$112,782.69	
Community of Science public view fees			18,000.00	$ 18,000.00	
Photo images for KB Web site		66.00		$ 66.00	
OIT support (12 months @ $358.00)			4,296.00	$ 4,296.00	
Participation in CIC Metadata Harvesting Project (2005-2006)			9,456.00	$ 9,456.00	
Expertise System development support		100,000.00		$100,000.00	
Total Expenditures	**$ 400,000.00**	**$123,142.74**	**$121,457.95**	**$244,600.69**	**$155,399.31**

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