



## Even in Tough Economic Times

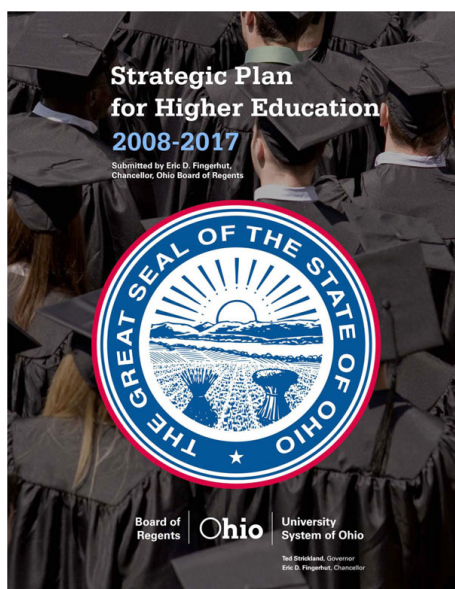
## Reinventing OhioLINK - progress report

**We first reported on the need to reinvent OhioLINK in the Fall 2006 Update.**

<http://www.ohiolink.edu/about/update/fall2006/fall06.pdf>. Much thought has gone into this need since then. This *Update* reports on our progress.

### A NECESSARY STRATEGIC INFORMATION UTILITY FOR OHIO

The current state, national, and international financial crisis highlights the need for Ohio to successfully develop the University System of Ohio (USO) <http://www.uso.edu/>. Ohio must have a globally competitive educational system to fuel its economic development. In turn, for the USO to succeed it requires access to the world's scholarship, research, and information. OhioLINK's goals are to provide that access.



We can do this by;

- 1) providing Ohio researchers comprehensive electronic access to the historical and latest global scientific research at economically affordable and sustainable rates,
- 2) providing the necessary array of electronic library services and resources to support the full range of core curricular needs from vocational programs to preparation for a four-year degree,
- 3) creating new models for electronic textbooks that improve the learning outcomes

and economics for students,

- 4) minimizing at a statewide level the long-term capital and operating costs of storing, preserving and providing improved access to current and future library materials,
- 5) implementing centrally new software tools for information management and access that can be utilized at all campuses,
- 6) coordinating library operations across Ohio to expand cost efficiencies and savings, and
- 7) collaborating with other Ohio information dependent groups (e.g. public libraries, K-12, and business incubators) to enhance the quality of education, research, and economic development beyond OhioLINK's core constituencies.

### ORGANIZING FOR SUCCESS

The Strategic Plan for Higher Education <http://www.uso.edu/strategicplan/> calls for an integrated Educational Technology Division (ETD) built around a shared technology infrastructure. The Ohio Board of Regents, OhioLINK, OARnet, and Ohio Learning Network, all serving higher education, have common or overlapping missions and technology needs. Likewise organizations such as eTech Ohio serving the K-12 community have similar agendas and needs. These organizations are pooling and re-organizing their information technology staff into new groups sharing common skill sets to better serve all constituencies. This will result in more efficiency by combining the separate systems administration staff into one group and doing the same for the software development staff.

Simultaneously, the now separate computer server and storage systems are being migrated to a single large scale Shared Infrastructure (SI). The SI is significantly larger in capacity than the multiple platforms currently in place. Its initial capacities include 500 terabytes of storage, 2 petabytes of backup tape capacity, and 16 high performance HP Proliant blades. The SI will dramatically expand our collective ability to serve the needs of Ohio's educational communities and at the same time be more efficient to support through the use of common technology and single organization.

Another positive consequence of an ETD is our ability to pool financial resources. This will facilitate the alignment of our staff and technology infrastructure to shared priorities.

Notwithstanding reduced state appropriations to the programs within the ETD, a coordinated effort will maximize the effectiveness of the resources we do have.

### ELECTRONIC CONTENT LICENSING - REFINANCING AND REPRIORITIZING

The OhioLINK state appropriation for fiscal 2010 (began July 2009) is reduced 13% from the original fiscal 2009 appropriation. With electronic content licenses (ECLs) representing the majority of OhioLINK operating expenses, OhioLINK's \$8.1 million share of \$35.0 Million in statewide ECLs must be reduced by \$1.6M. That reduction also provides for a reserve fund and support of the strategic initiatives to carry us successfully into the future as noted in this Update.

The OhioLINK library community is working cooperatively to minimize the loss of access to key resources by absorbing the reductions in OhioLINK ECLs shares. Given the overall weakness in current library budgets there will be limitations. Fortunately, 2010 fees will average flat versus 2009. This will help libraries decide to what extent they can increase their \$27.9M 2009 share of the statewide licenses.

Beyond these necessary short-term actions, the OhioLINK community must determine the most important content additions to support the goals of the USO. Group action will continue to be the most cost efficient means to do so. We are looking across the breadth of academic disciplines for the most valuable resources we can make available to faculty and students. As part of this effort we are evaluating the key information resources that are needed to support the 2008 Ohio Research Scholars programs. We will produce a blueprint of resources that will most effectively support the USO's Strategic Plan.

### DIGITAL RESOURCE COMMONS (DRC) - TO A STATE REPOSITORY

The DRC is already the largest DSpace repository in the US and the second largest in the world. Offering institutionally branded repository web sites joined together through federated searching, it enables all Ohio higher education institutions to create, store, and make accessible digital information without

duplicative local repository platforms.

We want to do even more with the DRC. In keeping with the strategy to leverage the use of common technologies, the ETD is beginning the development of a Statewide repository that will extend the DRC and integrate with eTech's Ohio iTunes project. This new repository will provide a shared platform that serves both organizations and their clientele. Multiple services can be offered to a variety of constituencies but the underlying technical platform will be shared and supported more efficiently.

### REINVENTING OhioLINK AFTER 20 YEARS – OhioLINK 2.0

When OhioLINK was created twenty years ago it was a fundamental change in how libraries provided services and how their behind-the-scenes operations were conducted. After years of isolated print-based operations, libraries were transformed into computerized institutions electronically connected to create opportunities for cooperation.

Twenty years ago OhioLINK took the new concept of a local integrated library system (ILS) and exploded it into a successful statewide resource sharing system. The ILS, which made the change to computerization possible twenty years ago, has now developed its own set of internal limitations and constraints, hampering the ability of libraries to operate efficiently and to quickly adapt to technological and societal changes. Additionally, with fiscal resources constrained and expected to remain so in the future, the need for Ohio academic libraries to reduce costs and to operate more efficiently is even more pronounced. It is time to change again.

But already having made the transfer into a computerized environment and having created a cooperative community, this change must consider more fundamentally what tasks can be done differently or not at all to make the system more efficient and effective.

Our existing system cannot be cost-effectively expanded, enhanced or modified. It limits our participation in statewide resource sharing efforts, and lacks capabilities which are essential to the effective operation of today's academic libraries. It may be no longer necessary or advisable for OhioLINK to be dependent on a single ILS vendor. In addition, even with the ILS, the basic backroom operations of libraries have not changed to the extent necessary to efficiently and effectively provide services in the 21st Century for a mostly electronic collection.

To ensure that OhioLINK continues to provide the highest quality service at the lowest possible cost through institutional cooperation a redesigned OhioLINK system will:

- (1) Interface with or be interoperable with the systems of Ohio's public and school libraries in order to participate in statewide resource sharing. The State Library, with the participation of OhioLINK, is developing a statewide resource sharing system (SWRS) using an open source software vendor;
- (2) Increase the efficiency and effectiveness of technical services and processes in managing both print and digital materials. The overall objective of any redesign is to cut costs which can be redirected to other essential operations. Shared or coordinated technical service operations offers the potential to consolidate operations, reduce the number of local systems, and use newer, cheaper technologies;
- (3) Improve the flexibility of the system by placing as few limits on scalability as practically possible. OhioLINK's current system has reached limits, both technological and fiscal, which have effectively stalemated OhioLINK's efforts to add new libraries, especially Ohio public libraries;
- (4) Increase the adaptability of the system to meet future changes. This will be a developmental project, as opposed to a procurement of a replacement ILS system. Open source development or collaboration

along with modularity may expand flexibility and options. We will need to consider a wide range of options and design our own approach through this complex set of needs and options;

- 5) Any redesign of OhioLINK must meet the diverse needs of our different libraries and their institutions. The differences between the very small and the very large libraries and the differences between libraries at two-year, undergraduate, and graduate institutions must be acknowledged and taken into consideration.

The bottom line is that any new system must be able to demonstrate productivity improvements and spending efficiencies. The goal is also to foster increased collaboration and mutual growth within higher education and with other Ohio educational and information-using communities.

### OhioLINK 2.0 – A MULTIPLE STEP PROCESS

The effort to examine these issues has been organized for the past year as the Catalog, Cataloging, and Integrated Library System Architecture (CatArch) Steering Committee. As we move to implement the recommendations of the CatArch group to fundamentally reinvent our core OhioLINK and library ILS systems, the effort is now being called OhioLINK 2.0.

Any recommended OhioLINK redesign project will be very complex with multiple, inter-

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dependent steps or phases over multiple years. To avoid failure each of the proposed steps must be parsed to no more than six or eight months and avoid as much as possible any massive one-time switch or migration. An evolutionary approach will allow for changes and additions along the way as technology rapidly evolves. Many decisions can be delayed until earlier steps are under development or implemented without compromising the end result.

Subject to this evolutionary approach, the CatArch group has proposed a potential step-wise path. Steps foreseen that will be investigated include 1) migration to a new central catalog that will allow resource sharing across the K-12, public, and academic libraries; 2) modification of our flow of catalog records to reduce duplicates and minimize cataloging costs; 3) migration of the circulation function to the central system; 4) migration of cataloging, acquisitions and serials to some form of functional or regional hubs.

To get started we are forming various committees to create specific functional requirements, define the technical environment, and more. It is important that participation be from a broad spectrum of representatives including members from our current standing committees, library directors and the ETD technology community. The major committees being formed this fall are:

- (1) OPAC/Cataloging Functional Requirements
- (2) PCIRC/Circulation Functional Requirements
- (3) Acq/Serials Functional Requirements
- (4) Systems Design and Architecture (SDAC)
- (5) OhioLINK 2.0 Implementation Steering Committee

The SDAC is charged with defining the infrastructure on which OhioLINK 2.0 will be built. Creating specifications for the technical components of the system includes hardware, software, operating system, and networking based on the work of the three functional requirements committees.

The Steering Committee serves as the oversight group to which the three functional requirements committees and the SDAC report. This committee will 1) provide oversight to the work of the standing or any specially formed committees by maintaining the overall view of the project, and 2) maintain the timeline in order to keep the work moving forward.

### **BUILDING A FOUNDATION IN PRACTICE FOR OhioLINK 2.0**

The Group Technical Services Task Force #2 (GTS2) was formed in August 2008 in response to a call to the OhioLINK library directors to form a "Coalition of the Willing" to experiment with cooperative technical services operations. This experimentation was done within the context of the work of the CatArch Steering Committee and provides a working laboratory to inform our work to create OhioLINK 2.0.

The GTS2 has made recommendations to take pilot work and concepts of shared expertise, training, coordinated collection development and cooperative use of vendor services to new levels that can become more broadly used now and evolved on a day-to-day basis. The Database Management and Standards and the Cooperative Information Resource Management committees have been charged with addressing these major recommendations.

### **CREATING A 21ST CENTURY DISCOVERY LAYER**

Librarians are well aware that many users begin their academic work with Web search engines rather than at the library or library Web site. We also know that many users have trouble identifying relevant library resources, and consider library Web sites and electronic resources difficult to use. Our clientele of Web users now expect:

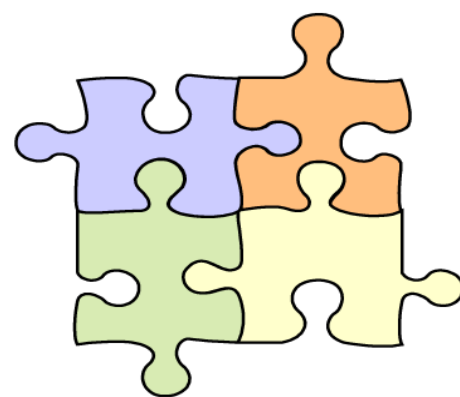
- \*Simple access: single search box, with option for advanced search
- \*Comprehensive access: single search provides access to "everything" in a display ordered by relevance to the user's query
- \*Social computing: users help each other by adding personal terminology and comments
- \*Attractiveness and design: Web pages which are appealing in appearance and intuitive to use

In response, the Discovery Layer Task Force created a definition of our needs, an analysis of alternatives, and a recommendation based on an RFP process. As a result of their work the ETD will work with Index Data to create a suite of tools and services that all educational institutions can use.

The best course of action is to build a pre-computed index of as much metadata as possible while using a federated search tool to query remaining databases for which metadata is not available for pre-indexing. Results from the pre-computed index and the federated search will be available through the new interface.

This will involve harvesting, transforming, and computing relevancy rankings for disparate metadata sets, and returning results to search queries in such a way that other applications can make use of the data. Most data may be universally available to all institutions but some metadata sets will be limited to particular member institutions.

The initial dataset for the unified index is expected to include records from approximately 60 sources comprising roughly 220 million records. The initial set of remote databases for federated search includes about 40 sources. Plus, each member institution will want to add resources to the system for local subscriptions.



### **MAXIMIZING THE REGIONAL LIBRARY DEPOSITORIES (RLDs) EFFICIENCY**

The 1980's original concept of Ohio academic library cooperation included as essential components both a more effective means to store and access physical resources and a new shared electronic catalog and services. Neither could succeed without the other. Under past practices, each of the five depositories have operated independently on a regional basis.

With at least four now at capacity it is financially impractical to request state support for four simultaneous new modules. Clearly a commitment to increased coordination and adoption of the principle of community shared repositories provide an opportunity to be more efficient and limit the investment needed at any point in time.

The commitment to operate at a coordinated, statewide level has been embraced by the public university library directors and is being put into action. Major first steps include the migration of the five repository catalogs to a shared library system and undertaking a coordinated de-duplication effort of bound journals.



## OhioLINK Member and Participating Institutions with Installation Dates

Antioch College, 1999	Mount Vernon Nazarene University, 1996
Ashland University, 1999	Muskingum College, 1999
The Athenaeum of Ohio, 1999	North Central State College, 1994
Baldwin-Wallace College, 1999	Northeastern Ohio Universities College of Medicine, 1993
Belmont Technical College, 1995	Northwest State Community College, 1996
Bluffton University, 1999	Notre Dame College, 1999
Bowling Green State University, 1992	Oberlin College, 1995
Capital University, 1996	Ohio Christian University, 2008
Case Western Reserve University, 1992	Ohio Dominican University, 1997
Cedarville University, 1996	Ohio Northern University, 1995
Central Ohio Technical College, 1994	The Ohio State University, 1994
Central State University, 1992	Ohio University, 1994
Cincinnati Christian University, 1999	Ohio Wesleyan University, 1996
Cincinnati State Technical and Community College, 1995	Otterbein College, 1999
Clark State Community College, 1995	Owens Community College, 1995
The Cleveland Clinic, 2002	Pontifical College Josephinum, 2007
Cleveland State University, 1994	Rhodes State College, 1994
College of Mount St. Joseph, 1996	Saint Mary Seminary & Graduate School of Theology, 2008
The College of Wooster, 1996	Shawnee State University, 1994
Columbus College of Art & Design, 2000	Sinclair Community College, 1994
Columbus State Community College, 1994	Southern State Community College, 1994
Cuyahoga Community College, 1994	Stark State College of Technology, 1994
Defiance College, 1999	State Library of Ohio, 1994
Denison University, 1996	Terra Community College, 1995
Edison Community College, 1995	Tiffin University, 1999
Franciscan University of Steubenville, 1999	Trinity Lutheran Seminary, 2007
Franklin University, 2002	University of Akron, 1993
Heidelberg College, 1999	University of Cincinnati, 1992
Hiram College, 1997	University of Dayton, 1994
Hocking College, 1995	The University of Findlay, 1999
Jefferson Community College, 1995	University of Northwestern Ohio, 2008
John Carroll University, 1998	University of Rio Grande & RGCC, 1995
Kent State University, 1994	University of Toledo, 1994
Kenyon College, 1996	Urbana University, 2000
Lakeland Community College, 1995	Ursuline College, 1997
Lorain County Community College, 1995	Walsh University, 2004
Lourdes College, 2002	Washington State Community College, 1996
Malone College, 1999	Wilberforce University, 1999
Marietta College, 1999	Wilmington College, 1999
Marion Technical College, 1994	Wittenberg University, 1997
Mercy College of Northwest Ohio, 2004	Wright State University, 1992
Methodist Theological School in Ohio, 2007	Xavier University, 1996
Miami University, 1992	Youngstown State University, 1993
Mount Carmel College of Nursing, 1999	Zane State College, 1994
Mount Union College, 1999	

## OhioLINK Update

The *OhioLINK Update*, published annually, provides information on the developments of the Ohio Library and Information Network (OhioLINK).

OhioLINK, an initiative of the Ohio Board of Regents, is a consortium of Ohio's college and university libraries and the State Library of Ohio. OhioLINK serves more than 600,000 students, faculty, staff and other researchers at 90 institutions.

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The Update is available online at [www.ohiolink.edu/about/publications](http://www.ohiolink.edu/about/publications).

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