
Recent Trends in Statewide Academic Library Consortia

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ABSTRACT

HISTORICALLY, ACADEMIC LIBRARIES FORMED consortia for the primary purpose of sharing printed materials. Recently, academic libraries are forming consortia to provide common access to electronic resources across the Internet, and they are forming these consortia on a statewide basis. This article describes five of these newer statewide efforts: GALILEO in Georgia, the Louisiana Library Network, OhioLink, TexShare in Texas, and VIVA in Virginia. In describing these consortia, particular attention will be paid to participating libraries, core programs, the reason for formation, funding, the involvement of the larger academic libraries in the state, and governance. Similarities and differences are discussed and emerging patterns in statewide academic library consortia delineated.

INTRODUCTION

Academic libraries have long formed consortia for the purpose of sharing existing physical resources—principally books and journals held by member libraries. This is done in recognition of the fact that a group of libraries has a combined set of resources that is greater than the resources of any single member. Indeed, studies have indicated that, contrary to what might be assumed, there is great diversity among collections, and even the smallest library contributes something unique (Potter, 1986). Recent figures from academic libraries in Ohio found that, of 5.7 million different titles held by thirty-one libraries, 58 percent were held just once. On average, 23 percent of each library's collection was

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unique to that library (Byerly, 1996). Alliances to share resources, then, make considerable sense because all the participating libraries benefit from access to titles they do not hold in their own collections.

To expedite the sharing of resources, academic library consortia have promoted the formation of union catalogs and expedited interlibrary loan. The OCLC Online Union Catalog lends itself to supporting interlibrary loan and provides the means for a consortium to facilitate requests among its members. Consortia that link circulation systems, such as LCS in Illinois and OhioLINK, permit users to determine the circulation status of a book at another library and initiate an online request. Courier services have been established to move materials from one library to another and high speed telefacsimile has become common to move copies of documents either across phone lines or across the Internet.

While the chief reason for academic libraries to form consortia has been to share existing physical resources, a new trend is becoming evident or at least more pronounced. Libraries are forming alliances for the purpose of identifying and addressing common needs arising from developments in information technology, especially the growing importance of the Internet and the World Wide Web. Specifically, it is becoming increasingly possible to offer a variety of electronic resources across the Internet. These resources include abstracting and indexing databases, the full-text of journals, the full-text of reference works, large collections of literary text, and extensive sets of digitized images. The best possible access to these resources requires high-speed workstations with access to a capacious network. Libraries are forming consortia to provide these resources on a suitable network with capable workstations. Moreover, the prevalent pattern appears to be that academic libraries are forming these consortia on a statewide basis.

CONCENTRIC CONSORTIA

Academic libraries have many overlapping consortial arrangements. The University of Georgia, for example, has alliances through the University Center in Georgia, a consortium of academic institutions in the Atlanta metropolitan area. It also has alliances through the University System of Georgia, the Georgia Online Database (GOLD), and Georgia Library Learning Online (GALILEO). Beyond the state, the University of Georgia holds membership in several regional alliances, including the Association of Southeastern Research Libraries (ASERL), the Southeastern Library Network (SOLINET), and the Southern University Research Alliance (SURA). On a national level, it is active in OCLC, the Association of Research Libraries (ARL), the Center for Research Libraries (CRL), the U.S. Agricultural Information Network (USAIN), and numerous other amalgamations of libraries. At first glance, this is a seeming hodgepodge, but each group serves a different purpose and each is

important. Most large academic libraries can plot a similar set of consortial arrangements. These arrangements are like concentric rings—city, metropolitan area, state, region, national, and international. For each library, any one level may be more important than the others depending upon the mission and nature of the institutions.

VALUE OF STATEWIDE CONSORTIA

For most academic libraries, statewide cooperation offers distinct advantages and incentives. The state provides a predetermined political and geographical grouping of libraries. There are often common governing agencies for publicly supported institutions of higher education, perhaps a board of regents or a coordinating board for higher education. State government also exercises control over the publicly supported colleges and universities and, of course, provides much of the funding. The extent of direct interest that the governor or legislature takes in the operations of the libraries varies by state, but this interest is always a factor. The fact that a group of libraries shares a common funding source, be it directly through elected officials or through a board of regents or oversight agency, is an important reason to build statewide cooperative systems. There is great appeal in efforts to pool resources and in cooperating to control costs.

Beyond government, institutions in a state often share common social and cultural bodies, including foundations or economic development boards that have an interest in seeing the libraries of a state cooperate and prosper. Pride of place is also a factor in statewide cooperation. People want to promote their state and look favorably upon efforts that will demonstrably improve library services.

Other types of consortia, such as national groups of similar libraries, do not offer all of these factors. They may offer others, such as a way for research libraries to cooperate, that are also very important but, in the United States, state-based cooperation makes sense for public institutions. Further, while not all of these factors apply to private institutions, they are still part of the state and can also realize benefits.

CURRENT STATUS OF STATEWIDE CONSORTIA

Statewide cooperation among academic libraries is not new. Virtually every state has some level of formal resource sharing among its academic libraries with Illinois, Minnesota, Wisconsin, Ohio, California, and Missouri being among the most advanced in their efforts over the past two decades. Of course, it should be pointed out that OCLC grew out of a statewide library consortium.

As pointed out above, however, most of these efforts focused on the physical sharing of printed materials through union catalogs, expedited

interlibrary loan, and shared or linked circulation systems. Recently, new statewide efforts have been undertaken, often with the expressed purpose of providing an electronic or virtual library, a core of electronic resources, as the focus. Many of the more established systems are also working to offer electronic resources, grafting them onto existing programs. The newer consortia also address the need for sharing physical resources. However, these newer consortia are focused more on electronic resources. They recognize that electronic resources will be increasingly important and that there are benefits in banding together to offer them, using the leverage of a group and the advantages of a common funding source. This is not to say that the more established systems are not interested in offering electronic resources, only that they were not founded for this purpose.

PURPOSE OF THIS ARTICLE

This article will describe five of these newer statewide efforts. In alphabetical order, these are GALILEO in Georgia, the Louisiana Library Network, OhioLINK, TexShare in Texas, and VIVA in Virginia. In describing them, particular attention will be paid to:

- participating libraries;
- core programs;
- reason for formation;
- funding;
- involvement of the larger academic libraries in the state; and
- governance.

The similarities and differences of these five consortia will then be discussed and emerging patterns in statewide academic library consortia will be delineated.

GALILEO

Background

GALILEO is an acronym for Georgia Library Learning Online. The program originated and is operated by the University System of Georgia, which encompasses the thirty-four publicly supported colleges and universities in the state (Potter et al., 1996). The services offered by GALILEO include the expansion of the systemwide data network called PeachNet, the completion of retrospective conversion and automation, a courier service for delivery of books, high speed telefacsimile equipment, and an attempt to facilitate walk-in borrowing at all libraries. The core of GALILEO, however, was built around the idea of an electronic library starting with an abstracting and indexing database linked to the full text of the journals most needed by undergraduate students.

Participating Libraries

GALILEO originated with the thirty-four institutions in the University System of Georgia. These include four doctoral institutions, two regional universities, thirteen comprehensive colleges or universities, and fifteen two-year colleges. Funding was provided early in 1996 to add the headquarters libraries of the fifty-six regional public libraries. A grant was secured to add ten private academic libraries in the Atlanta area beginning in July 1996 and twenty-one other private academic libraries in the state also elected to join. In addition, funding was provided by the state to add the libraries of the thirty-two vocational-technical institutes in the state. Funding is being sought to add more public libraries and to add school libraries in the future.

Core Programs

The central activity of GALILEO is to offer a set of databases, including full text of core undergraduate journals, and to provide these databases from a common site on the World Wide Web. Using SiteSearch software from OCLC, several databases are maintained on platforms at the University of Georgia and Georgia State University, including many databases from UMI and Current Contents. In addition, access is provided to other services, including databases on OCLC FirstSearch, the online version of the Encyclopedia Britannica, reference databases maintained by Gale Research, databases maintained by Cambridge Scientific Abstracts, and the full text of journals published by Academic Press. An important service of GALILEO is to ensure that participating libraries have access to the Internet and the World Wide Web through PeachNet.

While GALILEO does provide some assistance in the sharing of collections through the facilitation of interlibrary lending, its signature function is the provision of an electronic library of databases and full-text resources.

Reason for Formation

GALILEO was formed because the leadership of the University System of Georgia was interested in cooperative projects that benefited all students and faculty and in projects that might be extended to the rest of the state. The library directors and one of the vice chancellors had been considering ways to improve cooperation using advanced technology and were able to respond to the University System with a proposal that emphasized the need to offer a common set of resources to all students in the system. This proposal was well received and recommended for funding.

Funding

Initial funding for GALILEO was provided by the state with about \$10 million in start-up funds coming from the state lottery and ongoing funds of about \$2 million per year being appropriated from both the

lottery and general revenues. The private academic libraries are supported to a large extent by a grant from a private foundation. The public libraries and the vocational-technical institutions are covered by direct funding from the state.

Involvement of Large Libraries

The University of Georgia, Georgia Tech, and Georgia State University, the largest libraries in the University System, were actively involved in the formation and operation of GALILEO. If participation of the largest libraries is critical to the success of a statewide cooperative project, GALILEO enjoyed this participation.

Governance

Initial governance of GALILEO was provided by a steering committee consisting of four presidents, four library directors, and a vice chancellor. Working groups were also formed—made up of librarians and technical staff from many campuses—to address particular issues. Governance later passed to a new steering committee consisting of library directors from the University System, representatives from a users council, and a liaison from the Vice Chancellor for Information and Instructional Technology. An advisory committee, consisting of presidents or chief academic officers, library directors, vice chancellors, and outside consultants, functions as a GALILEO oversight board and provides strategic direction. The University System operates GALILEO on a contract basis to the other libraries in the state. All participating libraries are represented on a users council.

LOUISIANA LIBRARY NETWORK

Background

The Louisiana Library Network builds upon the success of LOUIS (Louisiana Online University Information System) (Boe, 1996). LOUIS is a centralized library system operating out of Louisiana State University (LSU) that supports the online catalog and processing functions for eighteen academic libraries in the state using NOTIS. Federal funds were sought and secured to use the LOUIS computer platform to provide electronic resources, including the full text of journals, to academic, public, and school libraries throughout the state. The resulting project was termed the Louisiana Library Network.

Participating Libraries

Libraries involved in the Louisiana Library Network include the seventeen academic libraries in LOUIS plus a public library in each of the state's sixty-four parishes and eighteen school libraries throughout the state. The public libraries were connected in the fall of 1994 and the school libraries were connected in the spring and summer of 1995.

Core Programs

Federal funds covered the cost of workstations and Internet connections in the public and school libraries as well as subscriptions for the databases, including full-text articles. The academic institutions also provide the public libraries with e-mail services. The basic programs, then, are Internet access, World Wide Web browser software, e-mail, access to the online catalogs of the academic libraries in LOUIS, and access to databases, including the full-text of journal articles. Available databases include several from UMI (Periodical Abstracts, ABI/Inform, and Newspaper Abstracts), some indexes from H.W. Wilson, and several from Pierian Press (*A Matter of Fact* and *Directory of National Help Hotlines*). Additional services are planned.

Reason for Formation

The motivating factor in the formation of the Louisiana Library Network was to provide enhanced library services to the citizens of the state. Sharing of existing collections was not the primary factor. Instead, the emphasis was on access to new electronic resources, including databases mounted on the LOUIS platform, and services offered through the Internet and the World Wide Web.

Funding

Initial funding for the Louisiana Library Network came from a federal grant. In 1994, a tariff was enacted to support network connections in educational institutions. This tariff reduced the costs of continuing the project after the term of the federal grant. Many of the ongoing costs of the network have been funded by the state legislature with some support by the Board of Regents. The costs of the network connections are borne by each library.

Involvement of Large Libraries

Louisiana State University, the largest library and the flagship university in the state, took the lead in establishing the Louisiana Library Network. As the host of LOUIS, LSU initiated the federal grant proposal that created the network. Leadership was provided by the Provost at LSU as well as staff of the library and the computer center. Technical support and direction was provided by LSU. Again, involvement of the largest library in the state appears to have played a crucial role.

Governance

LOUIS and the Louisiana Library Network are administered by a director and staff at LSU. This office operates the server, manages the database, maintains the communications network, and provides staff training. Oversight is provided by the Louisiana Library Network Commission, which also makes budget requests and other recommendations to the Board of Regents. The commission includes several academic library directors, the state librarian, and staff from the Board of Regents.

OHIOLINK

Background

OhioLINK consisted originally of all state-supported universities plus two private universities and the Ohio State Library. Using a common vendor, each library operates its own integrated library system that in turn connects to a centralized system where an online union catalog is maintained. This arrangement permits users to identify and request materials held in the other libraries using current circulation information. A courier service is used to deliver materials from one library to another. In addition, OhioLINK maintains an assortment of databases. As with GALILEO, some are maintained on a central server while others are accessed through Internet gateway connections.

The school libraries and the public libraries have also formed networks in Ohio. INFOhio connects the school libraries and consists of over twenty sites where an integrated library system is installed. The Ohio Public Library Information Network (OPLIN) connects public libraries to the Internet.

Participating Libraries

OhioLINK began as a network for publicly supported universities and colleges but is expanding to include private academic libraries on a cost recovery basis. The state library was also included from the beginning. Altogether, OhioLINK includes fifteen state-assisted universities, seventeen separate two-year colleges, two standalone medical schools, and the State Library of Ohio. Two private institutions, Ohio Northern and Oberlin, have joined OhioLINK and nine others are planning to join. The school libraries and public libraries developing their own networks and connection to OhioLINK is viewed as a critical component. These are three separate projects, and the extent that databases and other resources will be shared has yet to be determined. While this may present a set of difficult issues, library networking in Ohio is extremely advanced.

Core Programs

Initially, the core program of OhioLINK was the sharing of print-based materials. It does this by linking the individual local automated library systems at the member libraries to a shared central system where a master union catalog is maintained. Users can determine whether a library holds a given book and if the book is checked out and can then issue an online request for the book if desired. A courier service is used to move materials among the member libraries.

OhioLINK has evolved to also provide electronic resources, including the full text of many journals and reference works, and today is a leader in the number and variety of databases available. These include databases from UMI, Wilson, Pierian Press, and OCLC. Many of these databases are mounted on a shared central computer, using software from

Innovative Interfaces and Ovid, while others are available through Internet gateway connections.

Reason for Formation

OhioLINK has its roots in an effort to control building costs by providing regional storage facilities and then expediting interlibrary borrowing using ready access to each library's catalog. From that standpoint, it began as an effort to promote the sharing of existing resources. However, its function has evolved to provide electronic resources, and it could be argued that its larger purpose now is to leverage the weight of its consortium for the purpose of providing as many electronic resources as possible at the lowest negotiable price.

Funding

OhioLINK funding has been allocated by the state legislature to the Ohio Board of Regents. In addition to ongoing costs, over \$20 million in capital appropriations have been made since 1989 to support the installation of equipment and databases.

Involvement of Large Libraries

Ohio is fortunate to have five members of the Association of Research Libraries: Ohio State University, Kent State University, University of Cincinnati, Case Western Reserve University, and Ohio University. These libraries have historically demonstrated a remarkable spirit of cooperation, dating back to before the formation of OCLC. This spirit of cooperation continued with OhioLINK.

Governance

OhioLINK is administered by an executive director and staff in Columbus. Oversight is provided by a Governing Board consisting of twelve chief academic officers for the participating institutions. A Library Advisory Council comprised of the eighteen library directors of the original institutions plus three representatives from the community colleges and a law library representative also provides direction. In addition, there are four working groups and a technical advisory council.

TEXSHARE

Background

TexShare is a joint effort of the publicly supported universities in Texas to provide a common set of electronic resources and to expedite the physical sharing of resources. The Texas Council of State University Librarians had been seeking funding for improved cooperation for a number of years. In 1993, they were successful in obtaining funds to support the planning and implementation of TexShare through the Texas Higher Education Coordinating Board. The first elements of TexShare became operational in 1994.

Participating Libraries

All fifty-two academic libraries at the publicly supported universities and health science centers in Texas participate in TexShare. These libraries are all represented on the Texas Council of State University Librarians, a long-standing body that worked for many years to secure funding for increased library cooperation using advanced technology. While TexShare is currently limited to state university libraries, it is hoped that many of its services can be expanded to all types of libraries in the state in the future. Also, there are similar projects underway for public and school libraries, and areas of overlap and possible cooperation are being explored (Martin, 1996). A committee of the state House of Representatives has been investigating how best to coordinate networking and resource sharing for all libraries in Texas (Martin, 1996).

Core Programs

The first program was the TexShare Gopher, introduced in June 1994, followed shortly thereafter by the TexShare Web. These two services are the primary information sources for TexShare, and many TexShare libraries use them as their principal means of access to Internet resources. The University of Texas at Austin serves as the host site for TexShare Web. TexShare also provides access to a variety of electronic resources, featuring both citations and full text of articles, using databases from UMI that are mounted at the University of Texas in Austin using the Ovid search engine. Other electronic resources are also available (Rooks, 1996). Further, TexShare supports the sharing of physical materials among the fifty-two participating libraries.

Reason for Formation

The Texas Council of State University Librarians lobbied for many years to acquire funding for a project like TexShare. The council promoted the need to provide a level playing field, to ensure that students and faculty at all the universities had access to the same types of materials available at the largest libraries. Initial funding was provided in 1993. Emphasis has shifted from sharing physical resources to sharing electronic resources. Increasingly, people have come to see "that its greatest potential lies in making electronic resources available collectively to all the institutions" (Rooks, 1996, p. 295). This is a large cooperative, and together these libraries have considerable purchasing power and the potential to achieve significant economies of scale by working together.

Funding

The funding agency for TexShare is the Texas Higher Education Coordinating Board. Funding was first provided by the state legislature in 1993, and the first programs were introduced in the fall of 1994. This funding supported the establishment of the TexShare Gopher and Web

hosts, access to the online catalog of each library, access to selected electronic index databases, access to commercial electronic document delivery services, and access to information available on the Internet. For the 1996/97 biennium, funding was requested to continue these services and to expand TexShare to include a greater variety of electronic resources.

Involvement of Large Libraries

As stated above, TexShare was initiated by the Texas Council of State University Librarians, a council representing all the public university libraries in Texas. With legislative funding through the Texas Higher Education Coordinating Board, the first two years of the project were managed jointly by the University of Houston and Texas A&M University libraries. The University of Texas at Austin, in cooperation with the University of Texas System Office of Telecommunications Services, managed the electronic information resources for TexShare libraries. These three provided leadership while recognizing that they are partners with the other libraries. To quote from the final report of the planning project: "At the level of an overall vision for service, it is the fulfillment of a dream that the student in Beaumont or Brownsville has access to the same level of information as the student in Austin or College Station. TexShare will turn this dream into reality" (*Developing TexShare*, 1995). This statement demonstrates a broad based dedication to promoting the education of students at all institutions.

Governance

A TexShare management team coordinates the project with the assistance of an advisory board that meets quarterly. Working groups have been formed to address specific issues, such as the selection of commercial databases, electronic document delivery, a standard library card, and an interlibrary loan protocol. The Texas Higher Education Coordinating Board oversees TexShare and is the recognized funding agency. As stated above, during the first two years of the project, management was provided by the University of Houston Libraries and Texas A&M University Libraries while the University of Texas at Austin managed the electronic resources. These services were provided by these three institutions under contract to the Texas Higher Education Coordinating Board. In the future, different organizations may receive the contract to offer TexShare services.

VIVA

Background

VIVA, the Virtual Library of Virginia, provides a set of electronic resources and expedited interlibrary loan to the thirty-nine state-assisted

colleges and universities in the Commonwealth of Virginia. The libraries of these institutions have a history of cooperation. Recognizing that the State Council of Higher Education in Virginia (SCHEV) would be receptive to proposals for enhanced cooperation, the library directors, in 1993, initiated a budget request for funds to use advanced technology to begin to build a "virtual library." Funding was approved by the General Assembly for the 1994-96 biennium (Hurt, 1994).

To the user, VIVA is a site on the Internet that provides access to a variety of databases, including full text, as well as expediting the physical sharing of resources. Some resources are mounted on servers in the state, such as literary texts offered through servers at the University of Virginia. Most electronic resources, however, are available through gateways to commercial servers.

Participating Libraries

The initial VIVA project included the libraries at the thirty-nine publicly assisted colleges and universities on fifty-one campuses. These libraries include the six doctoral institutions, nine four-year comprehensive colleges and universities, and twenty-four community and two-year branch colleges. To the extent possible, the twenty-seven private institutions in Virginia also participate in VIVA by obtaining discounts on electronic resources and other group purchases, by participating in the expedited interlibrary lending, and helping to plan and shape the project. The Virginia State Library has been included in the planning of VIVA from the beginning, and the hope is eventually to extend VIVA services to all citizens.

Core Programs

From the beginning, VIVA had two major components: to develop and share electronic resources and to expedite the physical sharing of traditional resources. The electronic resources that were made available include OCLC FirstSearch, citations and full text for journals provided by Information Access Corporation, online reference works like the *Encyclopedia Britannica*, and literary texts. Through central funding and central negotiations, VIVA recognized considerable savings from what would have been spent individually. All of these electronic resources are unified under a common site on the Internet supporting a variety of Web browsers. The physical sharing of resources has been improved through the universal use of ARIEL software and redesigned interlibrary loan protocols (Perry, 1995).

Beyond these two core components, VIVA is considering how it might influence teaching-learning models and also expand into cooperative digitization projects for the scanning, storage, and display of materials from the libraries' rare book and archival collections.

Reason for Formation

The library directors of the publicly assisted colleges and universities constitute the Library Advisory Committee of the State Council of Higher Education, Virginia. When the SCHEV signaled an openness to cooperative projects that would exploit available technology, the Library Advisory Committee was quickly able to develop and propose VIVA based upon several demonstration projects. Interested in how higher education might be restructured, SCHEV was looking for projects that tried new approaches. VIVA proposed to demonstrate how a consortium might better share existing resources and jointly acquire new resources at great savings. With the aid of SCHEV, the VIVA proposal was presented to, and approved by, the legislature.

Funding

Funding for the 1994-96 biennium totaled about \$5.2 million. The SCHEV recommended a significant increase in funding for library materials with the understanding that a portion of this increase would be invested in VIVA. This funding was used to acquire databases, to equip resource centers to support the databases, to provide staff at the six doctoral institutions to expedite interlibrary loan requests, and to support other operations. For the 1996-98 biennium, the state moved to direct funding of VIVA and provided \$4.9 million for its operations.

Involvement of Large Libraries

The publicly assisted colleges and universities in Virginia have a history of cooperation that serves as a foundation for VIVA. The six doctoral institutions have always supported cooperative efforts and VIVA was no exception. Many of the resources available on VIVA, such as literary texts, were developed by the University of Virginia. George Mason University provides administrative support and houses the VIVA project coordinator. All six doctoral institutions are committed to rapid response for interlibrary lending. Again, the involvement of the largest libraries is evident in a successful project and, again, the involvement is one of a partnering nature.

Governance

VIVA has attempted to avoid a large central staff to manage the project, employing only a half-time project coordinator. Instead, VIVA relies upon a number of committees, headed by a steering committee made up of library directors. There are also several working committees: the collections committee, the interlibrary loan enhancements committee, the special collections committee, the technical issues committee, and the user services committee. In addition, two staff members from the State Council on Higher Education serve as liaisons to VIVA. It should be stressed that higher education in Virginia is highly decentralized. The State Coun-

cil on Higher Education is charged to recommend policy to the General Assembly. It does not function as a Board of Regents with budget and policy control.

SUMMARY

Beyond these five states, many others could be mentioned as taking new and innovative approaches to statewide cooperation. In the interest of space, however, these five are illustrative of the present situation with statewide academic library cooperation.

Basic Functions of the Consortia

There are three basic functions provided by these consortia. The first is the sharing of physical resources. To this end, union catalogs have been assembled, local systems linked together, interlibrary loan protocols established, courier services provided, and so on. The second function is to provide connections to the Internet and the World Wide Web, including the provision of workstations in some cases. The third function, and the one that is becoming increasingly important, is to provide access to electronic resources, either by mounting them on a local server or providing access to resources on other platforms. Even those consortia that started out with the initial objective of sharing physical resources, such as OhioLINK, are finding that the collective licensing of electronic resources is becoming increasingly important.

Formation and Evolution

All five of the projects discussed above began as consortia of the publicly supported academic libraries in the state. This can be attributed to the fact that these libraries share a common central authority—a central administrative office, such as the Chancellor in Georgia, a central board of regents as in Ohio, or a coordinating agency as in Virginia. This central authority encourages and promotes cooperation as a way to maximize the investment in existing resources and collections and to leverage future investment. Perhaps more important, this central authority provides a single funding authority. Further, the directors of these libraries in each state have a long history of association and cooperation, usually meeting regularly. In Georgia and in Texas, for example, the library directors had been discussing how to use information technology to better advantage for a number of years before funding became available.

The central authority in each case has been in place for years, and the library directors have long sought funds for programs to advance the cooperative use of advanced technology. These two factors did not come together to provide funding until recently, however. What is the factor that precipitated the financial support? In the case of Ohio, initial funding came from a determination to curtail requests for new library buildings. With the other four, funding came about more recently and, it can

be argued, that the main factor was momentum generated by the publicity and reputation of the Internet and the emerging World Wide Web. At a time when newspapers and popular magazines are filled with stories about the "information superhighway," it is not difficult to promote the idea that all schools and all libraries should be connected. Coupling this need for connectivity with the content that an electronic library can provide makes a powerful argument for funding a cooperative project.

The other argument that supports each consortium is the need for a "level playing field." This is an important factor in all of these consortia, the need to ensure a certain level of access to all users. Some may disparagingly call this the lowest common denominator. A more enlightened view recognizes that users at all libraries have a common set of needs. Some may be more sophisticated than others, but there is a core set of resources that all users need—e.g., core undergraduate journals, ready reference works, a corpus of standard literary works, etc. Moreover, it is chauvinistic to assume that only the larger libraries have sophisticated users. A student at a community college may have potential that could be unlocked by using a set of databases and texts that might otherwise only be available at a research library. Similarly, faculty at four-year schools may prosper if offered resources otherwise available only to faculty at comprehensive universities.

Each of the five consortia is at some stage of extending its services beyond the publicly supported academic libraries in the state. GALILEO now includes private academic libraries, vocational-technical institutes, and public libraries. The Louisiana Library Network includes public and school libraries. OhioLINK has added private academic libraries and is considering linkages to statewide networks for public and school libraries. VIVA includes private academic libraries and has a goal of expanding to other libraries in the state. TexShare is currently limited to the state supported university libraries but is included as a component in a comprehensive plan to network all libraries in Texas (Martin, 1996).

Again, it should be remembered that each of these consortia provide both content and connectivity. They provide a set of electronic resources that are valuable and needed, usually by assembling these resources on a common Web site. Equally important, they also provide connections and workstations that can access the Internet, the World Wide Web, and all the services that are available there. In the past, terminals were installed for library projects that were dedicated to that project. Now, these workstations might be set up to go first to the project's Web site, but users are free, even encouraged, to go beyond and search out other services and sources on the Internet. In Georgia, the workstations installed in the public libraries are more likely to be used for retrieving resources on the Internet than in using the specific services included in GALILEO.

It is also interesting to note that the services offered by these consortia are increasingly placeless and virtual. In the case of VIVA, the presence is primarily a Web site that unites a set of electronic resources on a variety of servers that are jointly licensed by the consortia. A few of these services are mounted on platforms in the state, but most of them are maintained on servers owned and operated by a publisher or other agency such as OCLC.

Vision of an Electronic Library

In all five states discussed above, there is an emerging vision of an electronic library for all citizens of the state. This is a powerful vision that has broad appeal to state government and local communities. It is also a vision that offers increasing economies of scale. If a consortium of state-supported academic libraries can leverage favorable prices from vendors, consider the leverage possible with a consortium that includes every citizen in the state.

The idea of all citizens having access to a common set of resources in an electronic library is appealing to many. It is a natural extension of the history of openness and freely available information that has characterized library development in this country for the past century. However, it is also dangerously easy to oversell this vision. The truth is that at present there are not enough electronic resources available to provide a truly satisfactory electronic library. Also, what is available can be expensive. While consortia can leverage better prices than libraries working individually, it will always be cheaper to do nothing.

The services offered by these consortia have, to date, been largely additions to existing and continuing services. They have rarely replaced print resources and thus have not resulted in cost savings. They have, however, provided resources to an audience that did not have them before, especially in smaller libraries and in distance education settings. They have also provided an increased level of service and convenience to audiences that already have large library collections available to them. In the consortia discussed above, the emphasis has appropriately been placed on the extension of services, on leverage in acquiring new services, and on the possibility of future cost containment. It would be unwise to promote these consortia as a way to reduce overall expenditures.

The funding of these consortia varies in amount and nature. OhioLINK is funded as a continuing item, the Louisiana Library Network started out with federal funding, GALILEO was funded initially from the Georgia lottery, TexShare received an ad hoc state appropriation, and VIVA was funded from an increase in the budget for library materials for the member libraries. Comparison of funding is difficult because different consortia pay for different things. For example, much of the start-up costs for GALILEO covered increasing the capacity of PeachNet,

the statewide telecommunications network. In other states, adequate network capacity was already in place. However, the common element in all five situations was that a case for the benefits of increased cooperation was made to a central authority, and this case was presented by a united group of libraries. Speaking with one voice appears to be a key in securing funding.

Role of Larger Libraries

A critical factor in speaking with one voice is the involvement of large libraries in the consortia, especially those that are members of the Association of Research Libraries. The presence of these libraries was important in each of these five consortia. Unfortunately, whether the purpose is to share resources or meet common needs, larger libraries sometimes do not see the benefits of cooperation. They have the largest collections and thus believe that they offer the most and have the least to gain from sharing resources. Further, they sometimes do not see that they have common needs with a two-year college or public library. Thus, in some cases, the larger libraries may stand off or limit involvement. In these five cases, the larger libraries were true partners in the development and continuation of the consortia.

CONCLUSIONS

Statewide consortia such as MINITEX in Minnesota, WILS in Wisconsin, and the LCS network in Illinois were established to share physical resources, to provide library materials to members. Over time, these established consortia have added services and begun to offer electronic resources as well. Newer consortia, such as GALILEO and VIVA, were established primarily to support electronic libraries—i.e., to offer new services that every consortium member needed but that not everyone could afford. The emphasis in these consortia is on sharing a set of electronic services more than on sharing of collections. In practice, no consortium is all one way or the other, but there is a shift of emphasis in the fundamental reason for the creation of the consortia.

In the creation of electronic libraries, a principal value of statewide consortia comes in license negotiations. The consortia bring considerable leverage because of the number of libraries involved, the number of users represented, and the fact that funding is available. Experience appears to indicate that there are benefits in inclusive licensing that brings together libraries of all sizes and types. While some may think that the inclusion of smaller libraries would reduce the set of databases to a lowest common denominator, limiting availability to very basic resources, it appears that the alliance of large and small libraries tends to raise the level of the databases offered. This may be because the inclusion of large libraries tends to increase the demand for research-oriented files, and

the smaller academic libraries benefit by gaining access to resources they would not otherwise have.

Database publishers of research-oriented files may not be responsive to adjusting their pricing to accommodate smaller libraries. However, the need for a level playing field, for offering a common set of databases to all members, should motivate those concerned to negotiate inclusive licenses. Further, it can be argued that smaller libraries will account for less use of research-oriented files because their enrollments are smaller and they do not have many graduate students or research faculty. Indeed, the success of these consortia to date suggests that publishers are open to licenses and pricing that are inclusive.

Beyond academe, considerable value may be realized by offering university level resources through public libraries and even school libraries. Of course, the use will not be as great as at a university, but this is an argument for reduced pricing, not for the exclusion of some class of users.

Perhaps the most interesting point that can be made about these five projects is that they are very diverse. For example, while they attempt to provide a similar set of services, they all go about it differently in terms of hardware and software used. This reflects a hidden value of statewide cooperation, an advantage that this country has over many others. Given funding, each state chose to achieve similar goals in somewhat different ways. The ability for different states to try different approaches is healthy. This situation also allows other states to benefit from their experience. In other countries, the approach to consortia would be much more centralized on a national basis.

As a federation of states, this country is blessed, or perhaps cursed, with at least fifty different entities looking for the best way to do something. This can be a disadvantage when a single national purpose is needed. However, it can be a real advantage in situations where experimentation is beneficial. In the case of offering electronic libraries, experimentation is valuable, even vital. Diverse attempts by different statewide library consortia to provide electronic libraries should be viewed as a healthy development, even as a situation that promotes the evolution of library services through a form of natural selection. The approach that is the most successful is likely to be the one that will be emulated or that will be extended to other states. Statewide cooperation has traditionally been and continues to be a valuable asset for libraries in the United States.

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