LIBRARY ELECTRONIC RESOURCE SHARING AMONG LIBERAL ARTS COLLEGES: ACS PALLADIAN ALLIANCE PROJECT

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Abstract

Effective electronic resource sharing is critical to library information services of the 1990s. Explosion of data and increased cost of information force libraries to work together, and technological advancements present the library service profession a platform for resource sharing. The Palladian Alliance Project of the Associated Colleges of the South is designed to provides ACS member institutions an effective means to enhance information access for their faculty and students, and achieve significant cost containment in the years to come.

Keywords:

Electronic journals; Cooperation—college and university libraries

First there is a resource, then the sharing. Resource sharing, according to Allen Kent, denotes "a mode of operation whereby library functions are shared in common by a number of libraries. The goals are to provide a positive net effect: a. on the library user in terms of access to more materials or services, and/or b. on the library budget in terms of cost, or much more services at less cost than if undertaken individually.[1]

As an important means to improve the services to information users, electronic resource sharing has increasingly become the focus

of library information professionals in the 1990s.   On one hand, the explosion of data and the ever increasing cost of information present libraries of all kinds real challenges to collect enough library materials to meet the growing information demands of their users ; on the other hand, the advancement of computer and telecommunication technologies also provides library information service professionals genuine opportunities to bring virtual libraries into reality.   Currently many local, regional and state-level efforts are moving in this direction.   The Palladian Alliance Project of the Associated Colleges of the South (ACS) is one such effort.   Funded by the Andrew W. Mellon Foundation, the project is not only a cooperative experiment among thirteen liberal arts colleges in the South of the United States, but also a joint endeavor in electronic information sharing.

This article describes the background of the ACS Palladian Alliance Project, its goals and rationales.   Actual procedures and possible outcomes will also be explored.

Needs of Electronic Resource Sharing

The need for resource sharing stems from three underlying trends of a modern society : the growth of all forms of literature ; increasing reliance on information to enable society to function effectively ; inflation in the cost of materials coupled with increasing availability of technology.   These trends have made it economically imperative to consider sharing resources.[2]

According to Martha Williams of the University of Illinois, over 8,000 databases now exist in the information marketplace, representing some 5.6 billion records.   From 1985 through 1993, bibliographic databases grew by a factor of 58 percent, while full-text sources grew by 490 percent.[3]   As D. J. Graves describes, increasing costs of information, increasing demands for accessing information, and stagnating budgets of institutions of higher education have made it obvious that no library can provide all the resources required by its

users.[4]

Economics and technology are the main driving forces of library electronic resource sharing. As M. Gorman states, "Resources sharing has two bases : the effectiveness of technology and the need to cooperate." "We are, like it or not, entering a Golden Age of Cooperation because : 1. the technology to link libraries and to make the users of one library aware of the collections of others is available and getting better all the time, and 2. economics are forcing us to cooperate."[5] Information is not free. Somewhere somebody has to pay for the information. It all relies on the basic principles of economics. Gay Dannelly describes the primary paradox faced by library information services profession : "Access is analogous to paying rent on a short-term lease rather than paying a mortgage, while ownership is the mortgage and includes a condominium fee for the upkeep and continued housing of an item."[6]

Nevertheless the key to successful library information services has changed from ownership to shared access, especially the sharing of electronic resources. No single library can be self-sufficiency any longer ; and no longer can libraries afford to build up huge collections in anticipation of users' demands. New technology has provided the profession the new playing-field of resource sharing. As computer applications continue to increase in importance in library information services, capabilities for information access will continue to improve, issues of ownership and specific document location will eventually fade into irrelevancy. Shared access to electronic information resources will allow large libraries to focus their acquisitions budgets on specialized resources, while smaller institutions will gain enhanced information access that could not otherwise be afforded. The notion of "strength in numbers group approach" has been tested and proved. A good example is the group educational discounts for acquiring popular electronic data-bases such as *Encyclopedia Britannica*.

Electronic resource sharing is not interlibrary loan (ILL).

Interlibrary loan itself is not collection development, but only a supplement to library collection development. Though still a very important library function, interlibrary loan by itself can no longer meet the information needs of today's library users. Traditional interlibrary loan is increasingly becoming a labor intensive activity which involves constant checking, verification and shifting of library collections. With users' growing demands for materials not locally available, libraries across the country are forced to either charge high fees for ILL, or further allocate limited budget and personnel resources to support such services. However, users simply can no longer live with the delays inherent in traditional ILL, especially for timely academic information. It is time to develop new means of information access and resource sharing, and the fast growing computer and telecommunication technologies have provided such a platform. For example the Ariel, system introduced by the Research Libraries Group, is designed to improve the traditional delivery methods through digitized transmission of information over Internet.

Since the start of computer revolution the impact of electronic networking on education in general and library services in particular has been profound. High-speed transmission of information thro' electronic networks "are reducing the physical boundaries to information and are changing the role of the publisher and the library intermediaries in the chain of scholarly communication."[7] The development of Z39.50 standard, World Wide Web (WWW) browsers, and client/server technology has revolutionized the way information is being transferred. With the rise of the Internet and the National Information Infrastructure (NII), geographic barriers are finally broken and equal access to electronic information is increasingly affordable. For library users the information super highway is becoming a primary way of accessing information.

To achieve the goal of electronic resource sharing many initiatives are currently under way. Major players in the field
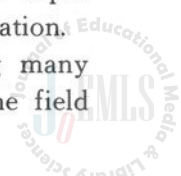
include library consortia, professional associations and research universities. Some of the well-known projects include GALILEO (Georgia), TaxShare (Texas) and VIVA(Virginia). Statewide efforts also exist in Alabama, Florida, Illinois, Louisiana, and Ohio, etc. Major research universities such as the California State University system and Committee on Institutional Cooperation (CIC) in the Midwest also play an active role in this area. The Palladian Alliance Project of the ACS is one such exploration in electronic resource sharing.

ACS Palladian Alliance Project : Objective and Rationales

Consisting of thirteen liberal arts colleges, the Associated Colleges of the South was incorporated in 1991 to strengthen academic programs through cooperation among its member institutions. The current members of the ACS include : Birmingham-Southern College (Birmingham, AL), Centenary College of Louisiana (Shreveport, LA), Centre College (Danville, KY), Furman University (Greenville, SC), Hendrix College (Conway, AR), Millsaps College (Jackson, MS), Morehouse College (Atlanta, GA), Rhodes College (Memphis, TN), Rollins College (Winter Park, FL), Southwestern University (Georgetown, TX), Trinity University (San Antonio, TX), University of Richmond (Richmond, VA), and University of the South (Sewanee, TN).

On January 11, 1996 the ACS announced a grant of $ 1.2 million from the Andrew W. Mellon Foundation for a three-year cooperative electronic library project in shared access to indexes and periodicals. The project is led by a library steering committee, consisting of Richard Meyer, director of the library at Trinity University, Douglas Anderson, automated systems librarian, Furman University, Thomas Watson, university librarian, University of the South, Lynne Brody, director of the library, Southwestern University, and James Parks, director of the library, Millsaps College.

The objectives of the ACS Palladian Alliance Project are

threefold : first, to expand access for students and faculty to electronic materials ; second, to develop a model to analyze journal pricing ; and third, to effect a substantial degree of cost containment through collaboration (see Appendix I).

Successful resource sharing requires the willingness to cooperate by all institutions involved.　Since the ACS members are all independent, modest-sized and principally liberal arts undergraduate institutions dedicated to high-quality education, consortium members see each other as partners rather than as competitors.　The Palladian Alliance Project has resulted from such understanding and efforts in electronic resource sharing among member institutions. With this collaborative spirit the project is designed to take full advantage of electronic networking.　In the past resource sharing efforts such as interlibrary loan among member institutions were limited since the ACS libraries are scattered across eleven states from Virginia to Texas.　Now by supporting affordable, equal access to electronic information resources for all users through networking, physical and geographic barriers among member institutions will be finally broken down.

The focus of the ACS project is on the core collections of library periodicals and indexes.　With enrollment varying from 800 to 3,500, the number of periodicals subscribed by the ACS libraries ranges from 600 to 3,000 (see Appendix II).　Since all colleges have similar programs and common objectives, collaboration in this area makes particularly good sense.　Having a shared core collection of full-text electronic periodicals will not only improve and expand faculty and students' access to information, but also contain the cost of information, since both periodical subscription and interlibrary loan costs will more than likely be reduced.　The financial savings from the ACS project will be used for expanding individual library collections, adding staff assistance, and purchasing new equipment and software.

The development of Internet technology and the general avail-

ability of electronic databases have presented a unique opportunity for small institutions like the ACS members to level the playing-field in the information age.   To enhance access for information and offset the duplication costs of common collection among member institutions, the key component of the ACS Palladian Alliance Project is to build a core collection of essential periodical titles in full text format over the network.   It is the firm belief of the ACS faculty, staff and administrators that this creative, collaborative strategy for acquiring equitable access to electronic information resources will significantly improve the quality of services to information users.

Planning Process

With a planning grant from the Mellon Foundation, the ACS started the planning process for the Palladian Alliance Project in the spring of 1995.   Major goals in this stage included : identifying the indexes most appropriate for electronic access ; determining some sense of the possible economies that could be achieved by switching from print to electronic indexes and journals ; and evaluating possible products.

The directors of the planning project included Richard Meyer, director of the Elizabeth Coates Maddux Library at Trinity University, Thomas Watson, director of the Jessie Ball duPont Library at the University of the South, and Douglas Anderson, automated systems librarian of Furman University.   During the planning stage the ACS administrators worked together with library faculty and staff from all thirteen institutions to identify problems to be resolved and develop joint strategies for strengthening their library services.   The consortium also enlisted the assistance of planning consultants including Charlene Hurt of George Mason University library, Sarah Prichard of the Smith College library and Kate Nevins of the SOLINET.

During the planning stage the specific needs of member

institutions for Internet access were identified. In order to communicate with each other in a network configuration, the issue of how to convert bibliographic files to the Online College Library Catalogue (OCLC) was also studied. Another task was to analyze the role and costs of installing Ariel work stations across the ACS for interlibrary loan and document delivery over networks. Internet access would provide the first element in the infrastructure, coversion of holdings would allow the ACS libraries to share information through network communication, and Ariel work stations would provide a necessary means of high quality text delivery.

Analysis of periodicals and indexes involved two steps : analysis of library holdings and analysis of commercial databases. The first step was to identify the overlap of periodical holdings and to decide the appropriate index coverage, while the second one was to determine the availability of a core collection of full-text periodicals and to identify hardware and software requirements for the electronic library project. The analysis study confirmed the project assumption that there was considerable overlapping of library periodical and index collections among member institutions. Building up a core collection of essential periodical titles in full text format over the network would not only enhance the level of information access that each member library could not achieve effectively on its own, but also would likely result in some significant cost savings for the institutions of the consortium.

The commercial production of electronic databases is a fast growing market. During the planning process the ACS project team librarians attempted to identify as many index and full-text databases as possible. Various potential sources of online indexes and full-text files that the ACS project team examined include : CD-Plus (OVID Technologies), EBSCOHost (EBSCO Information Services), InfoShare (Ameritech), InfoTrac 2000 (Information Access Company), NLightN (Library Corporation), Open DRANet, ProQuest (UMI), Silver Platter, and SiteSearch (OCLC).

Each of these sources was analyzed for availability, appropriateness to the collections, cost, and requirements for hardware, software and maintenance, etc. Three factors were considered : first it was important that the full-text periodical content match the titles that the libraries currently carry in print subscriptions ; then those products offering both content and a delivery system were given higher priority ; added priority was also given to those products which provided easy accessibility without the need for complex hardware configuration (see Appendix III for product survey form). A list of core titles for all members was matched against the potential full-text electronic databases, and strongest consideration was given to those products with the highest number of matching titles. After careful examinations, the project team concluded that EBSCOHost, IAC, and UMI products appeared to be reasonably comparable candidates for the ACS electronic library database.

Implementation and Outcome

Intensive work by the ACS planning team led to the submission of a grant proposal to the Mellon Foundation in the summer of 1995. With the award of a $ 1.2 million grant from the Mellon Foundation, the three-year ACS Palladian Alliance Project was started in January 1996. The first year agenda consists of meetings of the steering committee and library directors for strategic planning, recruitment of project director, selection of vendors and staff workshop training. Steps for project implementation include establishing a communication system through Internet, installing necessary servers, local Area network and client/server software, choosing indexes and full-text periodicals appropriate for coverage and loading them to the server, and installing Ariel work stations, etc. It is anticipated by the fall of 1996 the system will be in operation.

The preliminary selection of vendors was conducted in late 1995
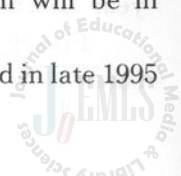
and early 1996.   Trial access to EBSCOHost, IAC InfoTrac 2000 and UMI ProQuest Direct was tested over the Internet.   During this stage technical problems were identified and issues of interface and printing were discussed.   The ACS librarians compared and ranked the products by repeating the same searches in each system.   After all factors were considered, it was concluded that UMI database provided a very good range of titles and was fairly priced.   IAC was eliminated because of its relative high price and short run of back files.   The quality of title selections was a concern with the EBSCO system.   The UMI periodical database with ABI/Inform selected by the project team has a total of 2.3 million citations, covering from 1987 to current.   It includes 1,000 titles in ASCII full text format.

In the spring of 1996, the ACS steering committee for the Palladian Alliance Project announced the selections of UMI as the content vendor and OCLC as delivery vendor.   Since both EBSCO and UMI databases are accessible through OCLC, choosing OCLC as delivery vendor makes particularly good sense.   Not only does OCLC have a flexible delivery mechanism which includes online viewing / printing, downloading and emailing, it also provides a reliable backup network system.   By way of World Wide Web, Telnet, or OCLC multi-drop line, users can easily access the selected databases.   In addition, ACS librarians gain unlimited access to WorldCat, ArticleFirst, ERIC, MEDLINE, GPO and four other OCLC databases.

The final price quote for the UMI database for the first year ACS project is $ 184,295, which is funded through the Mellon grant. Database pricing is based on the number of simultaneous log-ons, including 15 logons to UMI Periodical Abstracts, 5 logons to ABI/Inform, and 20 logons to the OCLC base package.   ACS members agree to share the prorated costs in the second and third year based upon enrollment each year.

Presence of a network infrastructure is prerequisite to the success of the ACS Palladian Alliance Project.   Each member

library has the responsibility of maintaining its Internet connection. During this stage special attention was given to the internal design of the individual campus networks, their connections to the Internet and the transmission capacity of the Internet providers. Through the Mellon grant a total of 51 computers is financed and distributed to member institutions, with each library receiving 3 to 5 work-stations depending on its enrollment. After distribution all but three institutions achieved a recommended ratio of one work-station per 200 FTE students. The minimal specifications for those microcomputers include 75 Mhz pentium, 8 MB RAM, 500 MB hard disk, Network interface card and cable, Windows 3.11 or Windows95, Winsock 1.1 compatible TCP/IP software and 15 inch monitor ; for Mackintosh machines the basic requirements are 60 Mhz PowerPC 601 or better, 8 MB or more RAM, 500 MB or more hard disk, network interface card and cable, MacOS 7.5 with TCP/IP and 15 inch monitor. In individual libraries these work stations providing access to the automated catalogs are connected to Internet ; Ariel software programs are also installed so that digital document delivery could be executed among member institutions.

The success of the project also depends on the skills of librarians and college staff who implement the electronic project. Heavy emphasis is placed by the ACS project team leaders on the training of library staff. During late May of 1996 two well attended workshops took place at the SOLINET headquarters in Atlanta, Georgia. One was for the project systems administrators of member institutions to assure a standard level of technical expertise to support the project in each library. Another was for the Ariel system and document delivery operations. In order to build enthusiasm and commitment to the project among staff at thirteen libraries, a video tele-conference was held on September 19, 1996 as official project "kick off".

The implementation of the ACS Palladian Alliance Project will present the academic community an economic model for analyzing
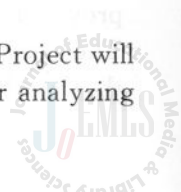
institutional costs of acquiring scholarly electronic information for their faculty and students.   The potential areas of cost recovery and containment identified by the project team include canceled subscriptions to print indexes and journals, negotiated group purchase discounts, savings from interlibrary loan via Ariel, joint consulting and coordinated training, preservation of materials and space availability, etc.   At the conclusion of the project the substantial data gathered will be used to demonstrate the impact of electronic information on scholarship communication and library services.

With the Palladian Alliance Project all ACS faculty and students will gain access to a complete collection of the periodical indexes most important to liberal arts education, and a substantial collection of full-text periodicals.   In addition, special local collections in each library will be strengthened with the savings from canceled print subscriptions, and access will be improved through the Ariel digital delivery over the network.

Conclusion

The Palladian Alliance Project of the Associated Colleges of the South is not only a cooperative experiment in library services among the thirteen small liberal arts colleges, but a joint adventure in electronic information sharing.   Successful implementation of the project will provide the less technologically advanced ACS member institutions an effective means to enhance information access for their faculty and students, and achieve significant cost savings in the years to come.

To level the playing-field is crucial in the information age. With the Palladian Alliance Project the ACS leaders believe that for the first time small colleges will be able to compete with the largest and most prestigious universities in the quality and type of resources provided to their faculty and students.   There is no turning back. The administrators, librarians and staff of the Associated Colleges of the South are determined to take a proactive stance in devising

creative, collaborative strategies for acquiring equitable access to electronic information resources.

Acknowledgement

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Notes

1. Allen Kent, *Encyclopedia of Library and Information Science*, v. 25 (New York : Dekker, 1978), p.295.

2. American Library Association, *World Encyclopedia of Library and Information Services* (Chicago, Illinois : American Library Association, 1993), p.715.

3. Ilene F. Rockman, "Affording Electronic Resources : Collaboration is the key," *RSV*, 23 : 2(1995) : 5.

4. D.J. Graves, & Y.L. Wulff, "The Economics behind Resource Sharing : Implications for collection development and the future of libraries," *Advances in Resource Sharing*, 1(1990) : 53.

5. M. Gorman, "The Academic Library in the Year 2001 : Dream or nightmare or something in between" *Journal of Academic Librarianship*, 17 : 1(1991).

6. Gay N. Dannelly, "Resource Sharing in the Electronic Era : Potentials and Paradoxes," *Library Trends*, 43 : 4(Spring 1995) : 665.

7. P.E. Sabosik, "Electronic Subscriptions," *Serials Librarian*, 19 : 3/4(1991) : 60.

Appendix I

January 11, 1996

Press Release—Mellon Library Grant

The Associated Colleges of the South has received a grant of $ 1,200,000 from The Andrew W. Mellon Foundation for a cooperative electronic library project.　The grant will underwrite a three year effort featuring joint electronic access to indexes and periodicals.　The program also will involve cooperative efforts to train library personnel in the use of various kinds of technology.

The plan leading to the grant was made possible by a planning grant given by the Mellon Foundation in April, 1995.　Mellon Foundation funds enabled library directors from all thirteen ACS institutions to identify problems to be resolved, and develop joint strategies for strengthening their libraries.　The ACS librarians were also able to draw on consulting assistance from experienced library directors, attorneys conversant with copyright law, experts on the lastest technology, and economists, who assisted in developing an econometric model for the project.

The objective throughout this project is threefold : first, to expand access that students and
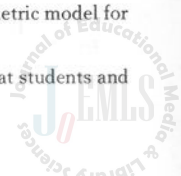
faculty will have to electronic materials ; second, to develop a model to analyze journal pricing ; and third, to effect a substantial degree of cost containment through collaboration.   The project will be led by a library steering group, consisting of Richard Meyer, director of the library at Trinity University, Douglas Anderson, automated systems librarian, Furman University, Thomas Watson, university librarian, University of the South, Lynne Brody, director of the library, Southwestern University, and James Parks, director of the library, Millsaps College.

The Associated Colleges of the South was incorporated in 1991 to strengthen academic programs through cooperation among its member institutions.   Cooperative programs have included faculty development opportunities, such as joint efforts in the use of technology, international programs for students, a tuition exchange program and many other activities.

Members of the ACS are as follows : Birmingham-Southern College (Birmingham, AL), Centenary College of Louisiana (Shreveport, LA), Centre College (Danville, KY), Furman University (Greenville, SC), Hendrix College (Conway, AR), Millsaps College (Jackson, MS), Morehouse College (Atlanta, GA), Rhodes College (Memphis, TN), Rollins College (Winter Park, FL), Southwestern University (Georgetown, TX), Trinity University (San Antonio, TX), University of Richmond (Richmond, VA), and University of the South (Sewanee, TN).

The consortium places a heavy emphasis on the dissemination of results throughout this three year endeavor.   Consequently, several reports will be issued and presentations will be made to various library and technology organizations.   Inquiries are welcome and should be addressed to :

> Dr. Wayne Anderson, President, Associated Colleges of the South, 1866
> Southern Lane, Decatur, Georgia 30033-4097, Phone : (404)636-9533,
> fax : (404)636-9558, e-mail : wanders@emory . edu.

Appendix II

Associated Colleges of the South :
Enrollment, Collections and Alumni Status

Institution	Student Enrollment	Number of Book Titles	Numter of Periodical Subscriptions	Percent Alumni Attending Graduate School
Birm'ham-Southern	1,551	132,420	858	49%
Centenary	773	125,000	923	n/a
Centre	950	138,106	850	37%
Furman	2,684	198,685	1,767	36%
Hendrix	950	134,700	650	38%
Millsaps	1,350	111,000	800	41%
Morehouse	3,000	308,802	1,478	52%
Rhodes	1,382	161,735	1,187	39%

Rollins	2,549	220,099	1,554	28%
Southwestern	1,220	168,685	1,387	33%
Trinity	2,408	560,000	3,002	58%
U of Richmond	3,613	289,615	2,786	n/a
U of the South	1,292	341,551	2,643	45%
Total	23,722	2,757,978		
Average	1,825	212,152	1,530	41%

Appendix III

The following questions were applied to each potential product.

System or product name :

What is the product name?

Contact name(s) :

Who is the primary contact?

Contact's phone number?

Address :

What is the address of the contact?

Description :

Describe the system or product briefly.

Hardware :

What hardware is required? Central and local?

What kind of server hardware : PC or Unix?

What are the general operating system requirements?

What communications protocols are used (e.g., TCP/IP, Novel, Z39.50)?

Software :

What central or server software is required?

Can multiple, linked servers be installed to distribute data?

Is the client proprietary?

If proprietary, are version for DOS, Windows, Macintosh, and Unix/VT100 available?

Can general purpose WWW clients be used directly to search?

Will any of the existing OPAC installations be capable of direct linking?

Are Telnet-based connections required? (Security and login may make their use problematic.)

Can locally produced files be loaded to the server? How?

Indexes :

What indexes are available with the product?

What is the basic file structure for the index records? Proprietary or third party?

Must databases be indexed at the time of loading index files or does the vendor deliver databases pre-indexed?

Can the indexes be linked to the full text components?

List of indexes with dates of coverage?

Is the list of indexes available as an ASCII flat file?

Full text components :

What full-text components are available with the product? Proprietary or third party?

List of periodicals provided with dates of coverage?

What is the basic file structure for the full-text records?

Are full text components in ASCII only or are digital images available?

Maintenance procedure required :

What procedures must be applied to maintain the system?

Are indexes pre-loaded so that file copying only is required to load?

Compatibility with existing ACS library components :

Will the system be compatible with existing networks?

Is it possible to link the system to any of the existing OPACS?

Printing :

How does the user achieve a printout?

Can printing be mediated?

Can there be a flexible pricing capability for different user groups?

Can use be made of a shared printer?

Is there a Windows client capability to control printing?

How does the print server work?

Could an Ariel workstation be used for the print server?

Cost :

What are the costs of hardware? software?

Licenses for proprietary products?

Licenses for third-party products?

What are the pay-per-print prices if applicable?

Methods of payment?