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Keeping the Window of Opportunity
Open for the Private Sector

ABSTRACT

If libraries are to grow in the coming years, they must redefine the
services offered, the clientele served, and the mechanisms for financing
operations. Through existing regional telecommunication networks and
the proposed National Research and Education Network (NREN),
libraries can de-emphasize physical collections and become virtual
libraries, providing global access to information—not only to their
traditional clientele but to business and industry as well. By serving
the private sector, libraries can contribute to the economic growth of
society; however, by charging for these information services, they may
do so on a profitable basis. PALINET is developing a program that
will enable its members to deliver fee-based services to business and
industry; this program could serve as a model for services that would
be available on a national network.

INTRODUCTION

Much has been said and written about the advantages that will
accrue to libraries as telecommunication networks become ever more
pervasive and as access to these communication facilities becomes easier.
However, the assumption that underlies such talk and writing seems
to be that the clientele of individual libraries will remain largely

unchanged. This assumption has been invalid for a long time and cannot be allowed to remain unchallenged in the networking environment of today and tomorrow.

The importance of timely and accurate information to economic development and growth cannot be overstated (Koenig, 1990; McAdams, Vietorisz, Dougan, & Lombardi, 1988). Access to information cannot, therefore, be restricted to our traditional clientele. Nor can we simply continue to provide access to traditional sources of information.

Although some public libraries have built support for business and industry, few academic libraries have done so. Dougherty (1991) has written recently that research libraries need to be more "user-responsive." Size, as he points out, is not the central concern of library users; access to information is. But Dougherty clearly views the clientele of research libraries as students and faculty. Libraries in general and research libraries in particular have a responsibility to society that is larger than this traditional definition of client implies. It is essential that libraries forge partnerships with business and industry that will provide greater benefits to our society as a whole than is possible under our present mode of operation.

Networks, data in machine-readable form, and emphasis on access make a redefinition of our role economically feasible. Libraries of all types must have as their primary objective the delivery of information to people in all walks of life. In the words of Frederick Kilgour (1979), "when and where they need it" (p. 202).

Therefore, libraries face a critical choice, one that we must make before it is made for us. We must either redefine the services we offer, the clientele we purport to serve, and the mechanisms for financing operations if we are to grow and prosper in the coming years; or we can choose to live out our declining years doing business as usual.

For several years, telecommunication networks and computer-based processing have enabled libraries, especially large libraries, to choose between these two alternatives. Unfortunately, most have so far chosen the second alternative. The implications of this choice are obvious.

Libraries must either seize the opportunity to which existing and planned telecommunication networks give rise, and therefore play a significant and major role in this country's economic development and global competitiveness, or live out their declining years in a caretaker capacity. Libraries of all types, and academic libraries in particular, both large and small, have an immensely important role to play in economic development and improvement of the general quality of life in this country, but that role remains to be pursued with vigor.

Every segment of society needs information and will have it whether or not libraries are willing to provide it when and where needed. Let us seize the opportunity to redefine our organizations and our profession before that window of opportunity is forever closed to us.

After the presentation of some background information and a look at the options available to business and industry for accessing information, a program we are planning at PALINET (Pennsylvania Area Library Network) to help forge alliances between our member libraries and business and industry in our region is outlined.

BACKGROUND

The idea of the virtual library, part of the title of this clinic, is not new. What the term implies is that libraries need not—indeed, should not—be architectural monuments or warehouses of artifacts, but sources of information. Data communication networks make the virtual library possible, as many have observed (Molholt, 1988; Battin, 1985). Few libraries have, however, worked hard to become virtual libraries, although there are some that are clearly moving in that direction, e.g., Pikes Peak Library District, CARL (Colorado Alliance of Research Libraries), Carnegie-Mellon University, Lehigh University, and Dartmouth College. At the same time, few automated library systems are adequately designed to support the virtual library, although the CARL, PALS (Project for Automated Library System [Unisys Corp.]), and Data Research Associates Inc. (DRA) ATLAS systems are at least partial exceptions.

One item of concern about the condition of libraries is that it has taken so long for the idea of the virtual library to be spoken of openly, much less acted upon. The lack of vision this indicates does not bode well for the future of libraries.

In a speech before a meeting of the Library Association of the City University of New York early in 1975, the author said,

> Libraries today are isolated, independent entities, paid for by many but used by few. Libraries are, in the minds of many people, equated with the buildings that house them. In contrast, what I envision is a single universal library, the union catalog of which may be found in every home. The technology to put a universal catalog in every home is available now. (Rush, 1976)

To be sure, my vision was less than adequate, for it is not the catalog that is important, but the data to which the catalog points, and it is not only homes, but offices as well, from which access to the universal library may be gained.

Six years later, the author was also the keynote speaker at an ASIS regional conference on "The National Library Network: Perspectives for the 1980's" (Rush, 1981). That speech argued that a national network would develop from the grass roots upward, rather than be developed from on "high." A seven-level national network of networks was proposed, a concept that grew out of work the author was doing for

INCOLSA (Indiana Cooperative Library Services Authority) in 1980 and 1981. This conceptualization embodied distributed processing and distributed databases. The OCLC system, which the author helped to design and implement, reflected this concept, albeit within narrow geographical confines—the system is all in one building.

This idea of a network of networks was further refined and expanded upon in a paper prepared for the Library of Congress Network Advisory Committee at its April 23, 1983, meeting (Rush, 1983). The network envisioned there grew to eight levels, numbered 0-7, wherein level 0 was an international (global) network, and level 1 was a national network. The lowest level, level 7, consisted of individual workstations, terminals, and small local area networks. In all of this, the emphasis was on the processing capabilities of nodes in the network rather than on the communication facilities linking processing nodes.

Of course, that vision was not novel and was short of the mark in several ways, but it clearly represented a model that gradually is being implemented. It is gratifying that some ten to fifteen years later, the idea of the virtual or universal library is being taken seriously. However, this idea is far from being universally accepted within the profession.

Today, there are many networks that fit at various levels within the model first presented in 1981. What is now being considered is a new network at level 1, the National Research and Education Network (NREN), ultimately to supplant, or at least impose some order on, the plethora of networks now operating at this level (Catlett, 1989).

SCOPE OF THE NREN

A network designed to link other networks on a nationwide basis and to provide the gateways to other nation's networks is now being pursued (Getz, 1989). This network, NREN, is a very important facility for nationwide, if not global, information access and delivery, but this technological marvel must not become the tail that wags the dog. It is not the telecommunication facility per se that is important, but the data that flow over it.

Inasmuch as the NREN will cost a great deal of money to implement, it is appropriate, as Likins (1991) pointed out in a speech before the EDUCOM National NET'91 Conference, to ask, "Who benefits?" Every one, that is, society at large, should benefit. Research and education are not limited to the formalized rituals practiced in our academic institutions; neither are they restricted to one's years of formal education nor just to science and technology. Therefore, the scope of the NREN,

which is already being expanded through the influence of the Coalition for Networked Information, needs to be broadened further to be as all-encompassing as possible. Likins (1991) has observed that

> in the federal budget, NREN is viewed as the academic precursor to the future development of a broader, privately operated national information infrastructure, an infrastructure which is essential to the evolution of a competitive US capability in the global economy. Unless consumers, businesses, hospitals, schools, libraries and governments are all linked together in a way that permits convenient and cost-effective exchange of all kinds of information, we will be unable to compete in a global economy that values knowledge and its application above all else. (p. 4)

If the window of opportunity is opening for research libraries to create the universal library, then we must keep the window open for the private sector—"companies large and small that drive our economy" (Likins, 1991, p. 5).

ACCESS TO DATA BY BUSINESS AND INDUSTRY

Many large corporations are able to afford their own in-house information centers. Even so, much of the information used by clients of these centers comes from outside sources, including other libraries.

However, most private enterprise is carried out by small- to medium-sized corporations, and these organizations rarely can afford to operate an in-house information service. It is the small corporation that is often the most innovative and thus most in need of timely and accurate information. But it is the small corporation that can least afford to invest staff time and other resources to obtain the needed information on its own.

It is for this reason that libraries must develop capabilities for providing information to business and industry. However, such capabilities should not be provided free of charge. Libraries must develop sound policies and practices for charging for information services, particularly when they support business and industry—the private sector.

PALINET MODEL FOR REGIONAL NETWORKING

In order to assist the members of PALINET in delivering meaningful services to business and industry within our service area, PALINET is planning a three-phase development program intended to provide a broad spectrum of information services to our members that they can deliver to their clientele, with emphasis on business and industry. The three phases and the nature of the services each is expected to

provide are outlined in the following pages. The reader should bear in mind that we are just at the conceptual stage of planning, and that PALINET's Board of Trustees has only authorized work at this stage. Whether or not PALINET actually implements some or all of the plan is a decision that will be made by the board when the time is right.

It should be emphasized that the services we are planning are intended to be delivered wholesale to our members who will, in turn, retail them to their clientele. PALINET has no intention of competing with our own members for delivery of information services within our service area. Rather, we want to facilitate delivery of services to business and industry through our members and through other libraries that may become members of PALINET. The implications of this approach will become more evident later in this paper, but it should be obvious that larger libraries could implement a similar program unilaterally.

Phase 1: Network Interfaces/Electronic Mail

The first phase of our planned development is quite simple and straightforward. This phase involves establishment of an interface between the PREPnet (Pennsylvania Research and Economic Partnership network) and PALINET's electronic mail system, CALL (Computer Access Linking Libraries). This will provide all PREPnet users easy, quick access to a capable electronic mail service, and obviate the need for PREPnet to implement such a service itself. The interface will also permit PALINET members to communicate not only with other organizations in Pennsylvania but also with libraries and other organizations throughout the world through PREPnet's gateway into the Internet (Quarterman, 1990). We expect to support the free flow of electronic mail between other services and CALL, so that CALL users may send mail to people on the Internet and vice versa. This service will emphasize a problem in internetwork access that needs to be resolved soon: addressing (Ohio State, 1990). Just as ordinary voice telephony employs a standardized addressing scheme worldwide, so must our data communication networks. We cannot continue with the chaotic addressing situation that presently exists.

Phase 1 establishes the communication links that will be needed by Phases 2 and 3. It is a relatively low-cost first step toward delivery of information to business and industry.

Phase 2: Economic Development Information Service

The second phase of our planned development is more ambitious. In this phase, a larger computer system would be installed, and the

CALL system would be migrated to this new platform, also interfaced to PREPnet. In addition to electronic mail, Phase 2 would bring into operation an information service offering a variety of databases that are beneficial to economic development but that are typically difficult to gain access to, at least while the data are current. Such databases include

- census data;
- industry production data;
- real estate data (including such things as listings of commercial and residential real estate, title information, sales data, and the like);
- directories;
- budgets of public agencies;
- tax information;
- legislation pending and enacted;
- compensation of all public employees;
- standards and regulations;
- capital investment sources;
- grant sources for innovation;
- organizations that assist start-up companies;
- community information;
- databases created and maintained by the library;

and much more. In addition, gateways to existing reference services, such as EasyNet, OCLC's EPIC Service, and DIALOG, would be provided.

The most difficult aspect of this development phase will be establishment of a reliable supply of data from a wide variety of sources and establishment of working arrangements with existing reference services.

In addition to database supply, Phase 2 would provide PALINET member libraries the opportunity to retail specialized data to business and industry. Access would be provided through workstations in the library, offices, and homes. Authorization to access the data would be managed by the library so that the service would appear as a library service rather than as a PALINET service. Moreover, the library would be relieved of the need to collect money, perform billing and accounting functions, and do other administrative chores.

Although the library might choose to subsidize the service (a practice the author discourages), payment by the user would be made via deposit account, bank card, or credit card, all managed by PALINET. On all sales, the difference between the wholesale and retail prices would be

credited to the PALINET member account, and such revenue would then be available to the library for any purpose of the library.

Phase 2 would establish expanded processing capacity, increased communication capacity, an economic development information service, and a mechanism for handling payment for services.

Phase 3: Library Support Services

Once Phase 2 is completed, it becomes a relatively simple matter to add support for basic library operations such as acquisitions, serials control, circulation control, and public catalog access. Any novelty in Phase 3 lies in the fact that such support would be delivered to the library by PALINET and charged for on a transaction basis. This is a concept the author proposed at OCLC in 1977 but that was never implemented. Nevertheless, variations on the concept have been implemented in several places, including Connecticut, Indiana, and Illinois. It is just the service bureau model with transaction charging rather than time and materials charging.

The importance of this approach to providing automation support for library operations is that it enables even very small libraries to take advantage of quite robust systems at a cost commensurate with their needs and ability to pay. Moreover, it obviates the need for capital investment, system management, software and hardware upgrades, system replacement, and other work that is associated with owning and operating a computer system. In addition, it insures that all participants are networked.

CONCLUSION

If libraries are to grow and prosper in the coming years, they must change. One of these changes must be in the definition of the clientele the library purports to serve, with particular emphasis on business and industry.

Libraries must cease to build physical collections and become virtual libraries by supporting and providing, via regional and national networks, access to information in electronic form. Libraries must also provide access to information to any and all who want or need the information and have the means (either direct or indirect) to pay.

Libraries have the opportunity to serve business and industry on a profitable basis and should pursue this opportunity before it is seized by other organizations.

Regional networks such as PALINET have a role to play in enabling libraries to achieve these objectives. The PALINET program outlined here could also be undertaken by larger libraries on an individual basis, but the services they provide must be available throughout the national network.

ACKNOWLEDGMENT

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