DALNET'S VISION FOR THE NEXT GENERATION INFORMATION SERVICES AND SYSTEM

The closing years of the 1990's will be a time of transition as Detroit Area Library Network (DALNET) prepares for and begins migration to the next generation information system--one that will deliver the information services needed by our member libraries and their users in the 21st Century. DALNET librarians expect that there will be a noticeable and significant shift from print to digital resources and from in-house to remote access use for all our member libraries. They see the online catalog as just one of many resources, as users expect access to the information itself, not just the bibliographic citations. The new system will be more than an integrated library system; it will likely integrate multiple systems to deliver these expanded information services.

DALNET's Vision

By the Year 2000, the Detroit Area Library Network (DALNET) will:

1. Be widely recognized as a model cooperative information service provider, one that anticipates and supports the information needs of a diverse community of users in the Metropolitan Detroit area;

2. Through creative partnering, provide excellent, flexible, responsive and cost effective services to the DALNET libraries and the communities they serve;

3. Become a regional information provider of the unique resources of the members and their communities; and

4. Become an established gateway to information resources worldwide.

DALNET's Users

DALNET's primary users are the citizens of the tri-county Detroit Metropolitan area, which now number over 3.9 million. Of DALNET's 500,000 registered borrowers, over 106,000 are children under the age of 18. These students learn about the DALNET Online System at their local branch libraries. About 135,000 library cards have been issued to adult residents of the area who use the Detroit Public Library (DPL) system. DPL also issues about 20,000 library cards to citizens of Michigan outside of Detroit, in its role as a state-wide resource library.

As these students graduate from high schools and go on to the area's colleges, they are very likely to attend a college or university that is part of DALNET. Recent enrollment figures show there are over 90,000 students in DALNET institutions. Most students live and work in metropolitan Detroit and many attend school part-time. Some take classes at

more than one institution at the same time, and many transfer from community colleges to four-year institutions to obtain undergraduate, graduate, or professional degrees.

DALNET's hospital libraries have affiliations with the Wayne State University School of Medicine, as well as with the nursing, dental, and allied health programs at other DALNET academic institutions. Students, residents, and medical faculty move among the academic institutions and the hospitals for their instructional, research, and clinical work.

As students graduate and become professionals, some work in DALNET hospitals, the Oakland County Court system, and the Detroit Institute of Arts where they use the DALNET Online System in those special libraries. Many are employed by the area's largest employers, including General Motors, Ford, Chrysler, Detroit Edison, Ameritech, NBD Bancorp, and various accounting and law firms. Most graduates find employment in the metro area and continue to use the DALNET Online System by dialing in from their offices, corporate libraries, and homes.

The DALNET patron database reveals that over 120,000 users have library cards from more than one DALNET institution. This represents a considerable overlap among users, who benefit from learning a common interface to information that they can use at any DALNET library throughout their lives.

DALNET Users' Information Needs

DALNET's diverse users value highly information services and systems that save them time and effort. They need:

1. *ONE-STOP SHOPPING* for information, with the integration of a comprehensive online catalog of all DALNET libraries' resources, citation and index/abstract databases mounted locally or remotely, catalogs of other libraries in the area and State, full-text/image databases (including journals, encyclopedias, dictionaries, and other reference books), and local administrative information systems in a single workstation;

2. *DESKTOP DELIVERY* of information, not only in DALNET libraries, but also on their campus or institution networks and to their homes and offices;

3. *CUSTOMIZABLE and SPECIALIZED USER INTERFACES* for DALNET's diverse user groups, with features such as a simplified interface for children, a basic interface for adults, and research-level interfaces for specialized disciplines such as medicine and law that can be selected by the user; a "kiosk" option for unattended public access stations; and menus or icons that display the databases accessible to different groups of users both in the various DALNET libraries and from remote dial up workstations;

4. *INTERNET ACCESS* using a Web interface with hypertext links to locate not just bibliographic and indexing records but also the CONTENT--whether full-text, image, sound, or video, and regardless of its location in the world;

5. *WORKSTATION INTEGRATION* of information--both citations and content-- importing into users' information management software for learning, instructional, research, publishing, clinical practice and recreational uses;

6. *UNIQUE LOCAL INFORMATION* accessible via the DALNET Online System--
information that is either not yet available on computer or is on a standalone system,
for example, DPL's Information and Referral Service and the Burton Historical and
Automotive History collections;

7. *CONTINUOUS AVAILABILITY* of the DALNET Online System 24 hours a day and 7
days a week;

8. *ONLINE END-USER ACCESS* to DALNET libraries' services, including online
requests for materials in DALNET and other libraries, user-initiated holds, user-
accessible circulation records, and an online user-alerting service;

9. *EASY ACCESS* to and *PROMPT DELIVERY* of traditional information resources
stored in DALNET libraries to all users, including on-site access to those collections
open to the public, expedited inter-library lending for those collections that cannot be
open, and remote access to collections elsewhere in the State;

10. *HELP* facilities for those users who need technical support to use the DALNET
Online System, even to their desktops;

11. *TRAINING* capabilities to teach staff and users how to use the system and how to
locate and use electronic information.

DALNET Information System Components

To achieve our vision and provide these 21st Century information services to users,
DALNET offers a bold new fision of the future information system. This system will
build on the foundation already in place. This list of components does *not* include all the
standard features of current integrated library systems, such as authority control with
global change capabilities and circulation charge, discharge and hold features, but instead
focuses on innovative new features.

1. ONLINE CATALOG (Bibliographic access)

   Provide users with a union catalog display as well as individual library catalog
   displays by collection, building, library, and groups of libraries;

   Provide a choice of interfaces to meet the diverse needs of DALNET's users, which
   range from children to college students, from faculty and professionals to the general
   public;

   Provide "user friendly" interfaces that have well-developed, context-sensitive online
   help that will guide users through the information retrieval processes;

   Include bibliographic records for electronic library resources included in the
   DALNET Gateway (see 6) with hyperlinks from those records to the full-text, images,
   sound, or videos.

2. SHARED INTEGRATED LIBRARY SYSTEM

Enable DALNET libraries to use a single, shared bibliographic record for a title held by more than one member library, with the ability to store unique information about local copies;

Enable the output of individual DALNET libraries' bibliographic, holdings, and authority records, as needed, in standard MARC formats;

Enable library staff to manage their own holdings yet be able to participate in centralized processing, including both ordering and cataloging services, within DALNET;

Enable electronic data transfer, including MARC bibliographic, authority, and holdings records, vendor invoices, and citation records with abstracts, between the local system and a variety of information providers/vendors;

Enable electronic fund transfers to pay vendor invoices from multiple DALNET institutions;

Provide the capability to order, receive, pay for, inventory, and circulate titles with very large numbers of copies and locations, e.g., 600 to 800 copies distributed among 30 buildings;

Enable DALNET libraries to create and manage records (for non-bibliographic data) for unique collections or information resources, such as the Information and Referral Service at DPL;

Provide a serials control module that predicts receipt of pieces, automates the update of bound volume holdings, includes bindery management, and interfaces with OCLC's local data record system;

Use shared files and records to minimize duplication of work among DALNET libraries, for example, prediction pattern records for serials, authority and patron records;

Enable DALNET libraries to further improve operational efficiency by automating areas not currently supported by the DALNET Online System, including electronic course reserves and media booking services;

Provide a security system for staff in DALNET libraries to be authorized to do their work as individuals or as members of groups;

Provide statistical and management data from all appropriate files with an online querying capability for staff to both display data online or export it in a standard format to create customized reports for individual DALNET libraries as well as groups of DALNET libraries.

3. COLLECTION MANAGEMENT

Enable individual library as well as DALNET-wide collection management to minimize duplication among libraries, including collection usage and overlap reports at the title level, e.g., for serial titles;

Enable a DALNET library to be designated the archival repository for a title on behalf of all DALNET libraries and not withdraw the last copy held without review;

Provide collection analysis capabilities within and among DALNET libraries, for example, by classification number ranges;

Enable a DALNET-wide Digital Resources Team to evaluate and select resources to add to the DALNET Online System.

4. CENTRALIZED PROCESSING

Enable DALNET libraries to participate in, as desired, centralized processing services, including purchasing, receipt, cataloging, and database management for traditional as well as electronic resources;

Provide a staff security and record management system that allows one person to do centralized processing for several DALNET Libraries;

Include a statistics capability to track services provided, e.g., number of titles cataloged and withdrawn;

Provide a way to create customized reports or electronic interfaces with local institutions' accounting departments.

5. RESOURCE SHARING

Enable DALNET library patrons to move freely among member libraries that participate in reciprocal borrowing, for example, with a single library card issued by the home library;

Enable DALNET patrons to make online requests for information or for materials, whether in DALNET's collections or in the collections of other libraries or information providers listed in the user interface;

Enable DALNET staff to mediate online requests for materials, as desired, with both automatic and "manual" routing of requests to national-level Inter-Library Loan systems, including both OCLC and DOCLINE;

Enable transmission to users desktops of articles whether found in print or electronic format;

Provide self check-out, user-initiated holds, user accessible circulation records, and a user-alerting service;

Provide statistical and management data in a standard export format to create customized reports on DALNET's users, including reports on overlap of users among member libraries.

6. GATEWAY TO ELECTRONIC RESOURCES

Enable the creation and maintenance of a DALNET Gateway as a "front-end" to more than 1,000 full-text, bibliographic, numeric, and other digital resources accessible via the Internet;

Provide the latest Z39.50 and Web connectivity to electronic resources that follows open system industry standards;

Enable the Gateway to be developed and managed by a team of experts in various disciplines from all DALNET libraries;

Enable centralized automated updating of Internet addresses for these resources;

Provide secure, controlled access to these resources as required by the terms of agreements with the information providers, including authentication, metering, accounting and electronic billing services;

Include these resources in the specialized OPAC interfaces as appropriate to the user.

7. DIGITAL RESOURCES (Access and Creation)

Enable DALNET libraries to digitize unique materials, e.g., slide collections, archival materials, sound and video collections, and rare books, and make them accessible not only to their library users but also to citizens of the State of Michigan and beyond;

Integrate into the user interface access to index/abstract and full-text or image databases purchased collectively from other vendors with options for access via Z39.50 or via specialized vendor search software, as desired;

Integrate into the user interface Z39.50 links to other online catalogs, and enable the listing of these OPACS to vary by DALNET library;

Enable interfaces that can be customized for the type of user and by library, depending on the resources to which they subscribe;

Provide security features that enable subsets of DALNET libraries to subscribe to electronic resources and provide access to their users desktops;

Find ways to provide electronic access to local campus, institution, and community information resources to users of DALNET's Online System.

8. INFRASTRUCTURE

Maximize the investment made in the current shared system hardware, software, and networks;

Ensure system reliability and performance for automated library operations 24 hours a day and 7 days a week with at least the current percentage of up-time, backup, recovery, and response time in a network that connects over 70 buildings in a 30 mile radius of one another and serves over one-half million patrons;

Enable centralized technical support services for DALNET system management, server administration, distributed printing, system backups, and trouble-shooting;

Provide systems that will run on microcomputer workstations with standard operating system software, with access to printers, high quality color monitors, and headphones for sound, as needed;

Provide systems that will work with workstations that also have the latest word processors, spreadsheets, database managers, statistical packages, bibliography makers, presentation and desktop publishing software for users' information management.

Integrate fully with the emerging technical services workstations that include cataloging tools, efficient record editing features, and online record transfer to and from OCLC and other vendor sources;

Operate with TCP/IP connectivity.

9. MIGRATION STRATEGIES

Provide flexibility for DALNET libraries to migrate to the new system within a specified time period and to choose those capabilities of the system they need;

Support a phased approach to migrate from the private IBM-based SNA network to the TCP/IP network required for full use of the new system;

Support efficient file conversions for the large shared files as well as the individual databases from DALNET's current system to the new system;

Assist with installation of the needed telecommunications systems;

Minimize disruption to the production online system for the actual migration for each DALNET library.

10. USER EDUCATION PROGRAM

Provide ways for DALNET to deliver a user education program that promotes the effective use of DALNET libraries' rich resources with an array of user-friendly interfaces;

Provide online tutorials and context-sensitive help for staff mode;

Enable a visible means to make DALNET a well-known information provider in the Metropolitan Detroit area;

Provide a way for users to give feedback and suggestions to DALNET libraries about their online services.

VISION AND IMPLEMENTATION STRATEGIES

Vision

The Detroit Area Library Network (DALNET) and Ameritech Library Services propose to create, through their partneı ship and shared effort, a model urban information hub in the Detroit area. The hub will be a single source of information and library-based services providing access to the shared resources of the partners and DALNET member institutions. It will serve as a gateway to information resources worldwide that supports the life-long learning needs of the people of the Detroit metropolitan area. It will improve access to unique local information, special collections, and services available through DALNET member institutions. Finally, it will enable DALNET libraries to play a leadership role within their institutions and communities in the delivery of information to meet the library-based learning, research, professional, cultural, and recreational needs of their users.

In order to actualize this shared vision of an information hub, featuring DALNET services and Ameritech systems, DALNET and Ameritech commit to the following:

- Development of a computerized system to serve as the foundation for the information hub of a large multi-type library consortium that includes academic, public and special libraries, and that can be expanded to include school libraries.

- Design of an easy-to-use interface to DALNET's information hub that has a consistent "look-and-feel" yet can be customized for specific user groups as they access DALNET libraries' information resources and systems throughout their lives.

- Development of a network infrastructure, including critical help desk services, that ensures system availability and responsiveness to DALNET's staff and users in DALNET libraries, as well as in their offices, classrooms, and homes.

- Migration from the "legacy" NOTIS system to the new system in a manner that minimizes disruption to DALNET's users, takes advantage of the power of desktop computers, and maximizes operational efficiencies for DALNET libraries' staff.

- Improved access to, and sharing of, DALNET libraries' traditional collections, electronic materials, special collections, and local digitized information resources through the hub.

- Provision of a cost-effective system for a large consortium through shared expertise, cooperative services, and shared information systems and resources.

- Enhanced visibility of DALNET, particularly its member libraries' resources and services, as a means to identify new partnerships and funding sources that will help build the information hub.

Implementation Strategies

The implementation strategies to achieve these goals are as follows:

Information Hub Strategies

- Implement the Horizon system, enhanced in the areas mutually agreed on, as the foundation for DALNET's information hub.

- Include DALNET's participation in writing specifications, evaluating, and testing prototypes for the Horizon system enhancements.

- Integrate the Horizon system with DALNET libraries' desktop computers and network-based information resources, systems, and services.

Interface Design Strategies

- Design a children's catalog interface to include such features as automatic spell checking, ranked retrieval sets, concept searching and librarian-designed canned searches.

- Design Web-based (thin) client software to shared systems for DALNET libraries' users that improve patron access and ease of use while reducing client software maintenance costs.

- Integrate DALNET libraries' institutional Web home pages and Web-accessible systems with the NOTIS LMS and Horizon systems implementation.

Network Infrastructure Strategies

- Design a private TCP/IP network for participating DALNET libraries to ensure acceptable network performance and reliability.

- Provide help to DALNET libraries for needs assessment, selection, and installation of desktop workstations for both staff and users.

- Develop a shared Help Desk service to provide trouble-shooting within the private TCP/IP network for participating DALNET libraries.

System Migration Strategies

- Install bridge products in the current mainframe-based NOTIS environment that will also be fully functional in the Horizon environment, to serve both the NOTIS and new systems during the transition and to relieve demands for ongoing NOTIS support.

- Implement WebPAC to provide user access to LUIS with standard Web browser software, which will give a new look to LUIS during the transition, take advantage of desktop computers in DALNET libraries, and provide a platform for developing the children's catalog interface.

- Implement InfoShare, a UNIX-based database server system, to replace MDAS as DALNET's citation database system.

- Shift resources from centralized mainframe systems support towards the new client/server systems, TCP/IP networks, and PC and network support services by:

    - Migrating to the latest IBM operating system OS/390.

- Freezing NOTIS enhancements beyond Release 6.4.
- Contracting for NOTIS day-to-day technical support after Release 6.4 is installed until late 1999.

Resource Sharing Strategies

- Implement RSAS, the interlibrary loan and document delivery management system, after WebPAC is operational, to provide users with the ability to request both traditional and full-text documents and to provide a platform for testing in a multiple-library environment with both OCLC and DOCLINE ILL systems.
- Identify local information resources that already are or could be digitized and undertake projects to make them available through DALNET's information hub.
- Continue to seek opportunities for DALNET libraries to share the costs of electronic library information resources available from both commercial and non-commercial providers and make them accessible through the DALNET information hub.
- Identify special collections and other materials in DALNET institutions that should be made accessible and undertake projects to add them to the information hub.

Cost Sharing Strategies

- Develop an equitable cost-sharing plan among the DALNET member libraries for the new system, with baseline components supported by all members and optional components to be selected by individual members.
- Identify funding sources or donated services to help carry out these initiatives.
- Develop new or improved cooperative services, such as the Help Desk service for desktop computers and the DALNET network, DALNET database maintenance, and shared cataloging.
- Negotiate group-purchasing discounts for software, desktop workstations, electronic resources, and other supplies or equipment.

Promotion Strategies

- Issue joint press releases with Ameritech to publicize milestones reached during the partnership.
- Target the spring 1999 ACRL conference in Detroit as an opportunity to showcase the DALNET information hub.