To: M. Auer, W. Kane

Date: 9/6/95

From: M. Sheble

Re: DALNET Planning Process Committee

Attached are notes from the DALNET Planning Process Committee meeting of 9/5/95. I've also attached a copy of a talk that Louise Bugg gave at Michigan NUGUM this year. We're beginning to think beyond her ideas, but I believe the copy of her talk provides a good, basic look at future ideas for DALNET.

DALNET Planning Process Committee
September 5, 1995

Notes

Present: L. Bugg, I. David, M. Sheble, F. White

The Committee reviewed the notes from their previous meeting and decided to work on details of the plan for educating ourselves. Louise will draft a report to the Board (for their September 14 meeting) that recommends six major planning tasks in the order decided. The draft report will be ready for review by the Committee at the September 11 Project Managers' meeting. The outline of the education plan will also be ready then for discussion with the Project Managers.

Committee members were willing to continue working as a team to arrange the "education sessions" being recommended. Frank will arrange a demo by SIRSI at MCC the third or fourth week of October. Indra volunteered to arrange a visit from OCLC. Mary Ann and Frank had articles they will share with the Committee. The Committee will decide if the articles should be recommended to all Project Managers as part of the "education" process.

Louise will recommend to the Board that the Committee continue to work on developing recommendations for the other major planning tasks. She will report back to the Committee after the Board meeting to schedule the next meeting.

Notes by,

Louise Bugg
September 5, 1995

LB95-136

I'm going to broaden the focus of the panel from the needs of a single academic library to those of a multi-type library consortium. As you know, DALNET--the Detroit Area Library Network--is a multi-type consortium of 13 libraries in Wayne, Oakland, and Macomb counties that collectively own about 8.5 million volumes. Founded in 1986, DALNET has grown over these past 9 years to a very large shared computerized library system--probably still one of the largest shared "classic" NOTIS LMS sites in the country.

I'll give you a few numbers just to help you understand the scope of our operations. We have over 1200 terminals accessing the mainframe housed at WSU over a traditional IBM SNA network from 62 different library buildings in three counties. These terminals (or low-end pc's emulating 3270 terminals), together with our remote access users, generate about 6 million CICS transactions per month. The Online catalog now has over 4 million bib records and over 11 million citation records in our MDAS files. Users performed over 5.5 million searches in those public databases last year. We serve collectively over 500,000 registered borrowers. To handle this load, we have an IBM 9121 Model 411 cpu with 100 gigabytes of storage.

What are the benefits of a consortium like DALNET?

DALNET's goals have been---
--to share the costs of a comprehensive, up-to-date computerized library system that goes beyond what any single member institution could afford on its own; and

--to provide their users with computerized access to the wealth of information resources available today, initially via a shared OPAC.

Initially--back in 1983/84--DALNET had a joint planning process for automating built on these components:
1.   a shared broad vision that went beyond any single library's system;

2.   a history of cooperation that had built trust among the libraries;

3.   a willing host site to operate the shared system;

4.   the commitment of all levels of staff to the project, including the administrators with the checkbooks; plus

5.   REAL benefits for each library, especially cost sharing.

Those REAL benefits I'll group into four areas:

1. Streamlined library operations from shared systems and data.

    For example, member libraries share MARC bib and authority records from a variety of sources; they can access one another's acquisitions and serials check-in information and vendor records; we use a shared patron database and billing files for patrons who move among our sites.

2. Access to sophisticated automated library systems.

    The parameter-driven system is very flexible and can accommodate most libraries' policies, especially for circulation; multiple subject thesauruses are provided; centralized record transmission to and from vendors like Blackwell and OCLC can be done via FTP; citation databases can be mounted locally and shared (which some members could not do on their own); specialized ad-hoc reports can be created.

3. Expanded access to the library resources of the Detroit area and beyond.

    The shared online catalog (now called DCAT) displays the collective holdings of DALNET libraries not only at their 1200 terminals but also to users accessing remotely via dial up. Those users save time and effort by learning to use a single interface to all these collctions and by identifying resources in the area with a single search. Use of all DALNET libraries is up, and resource sharing via ILL and direct borrowing is also up.

4. Shared costs.

    For central site hardware, software, networking--both start up and expansion;

    For databases, especially index-abstract files;

    For staff expertise, especially at the central site, where staff are responsible for installation, testing, training, system operation and enhancements, problem resolution, security.   But also, shared expertise among member institutions, where staff help each other with workflows, techniques for automating, etc. Staff of larger members can do contract work for smaller memebers, e.g., contract cataloging.

    And there are opportunities for shared grant funding for joint automation project.

Given these benefits, what are the needs/challenges facing a consortium like DALNET as we prepare for the next generation system?

I've grouped my thoughts at this stage into four areas, namely, (1) functional requirements; (2) technology needs; (3) financial considerations; and (4) political issues. DALNET is only in the beginning stages of planning for the next generation system. WE have created a team to develop a process that we can agree on. The last time we searched for a system, it took us two years.

But, it seems clear that our 9-year-old "classic" NOTIS LMS system is getting out-dated, even with enhancements like PACLink and, we hope, PACLoan. The **first area** is functional requirements. By this, I mean requirements that go beyond what "classic" LMS already provides. That LMS functionality is a GIVEN, upon which we need to build. We don't want to lose its good features.

We would like such additional features as:
1. a front end/user interface with maximum flexibility for our large, multi-type site. It should be able to vary menus (or icons) by library. It should handle complex authorizations or logons that vary by library--not only for local databases and servers but also for remote systems users may be accessing. It should send ASCII text and images to printers, FAX machines, or email boxes in several buildings or at several campuses.

2. a smart OPAC client that helps the users much more with searching, e.g., handles fuzzy matches, ignores stopwords, forgives capitalization or punctuation, accommodates word order for names, makes it clear what file you are searching at any time, clears its memory at appropriate times.

3. location-based catalogs that aren't prohibitively resource intensive for a very large site without losing the union catalog view.

4. the ability to mount local databases, such as DPL's TIP file, that capture our unique resources in the Detroit area.

5. LMS functionality that is currently missing, including media booking system, computerized storage and delivery of course reserve materials, interfaces with email for direct communication with users, and end user access to their own circulation information and service requests.

6. and, lastly, unique improvements for a large, multi-type
    system such as true implementation of multiple subject systems
    for health science libraries; accommodating the needs of a
    large public library for purchasing, processing, and managing
    hundreds of copies of a single title; support beyond the
    current LMS system limits of service units, security groups,
    PACLink to non-OPAC, non-NOTIS databases, etc.

Since there are clear benefits to sharing an automated library
system in a region, regardless of type of library, we hope vendros
will not focus their systems too narrowly on a single library type,
but will consider the needs of the variety of libraries in a
consortium for the next generation systems.

The **second area** is the technology issues we face. It seems obvious
today that the next generation systems will be client/server. Yet,
client/server systems for libraries are in the fairly early stages
of development. None have really proven themselves with sites as
large as DALNET yet, but we are still educating ourselves about
what is coming.

DALNET envisions a system that can handle our large number of very
large files, large numbers of terminals, and very heavy transaction
load with maximum flexibility. This may require many servers
running separate pieces of the system. Some DALNET libraries may
be able to run their own servers with the best software to meet
their needs. Other DALNET libraries may need to share a central
server. It seems logical that central servers handle shared
citation, full-text, and image databases for all DALNET libraries.
Whatever combination of servers and systems--centralized pieces and
decentralized pieces--we use, they need to operate seamlessly
together over a high-speed network.

DALNET needs to upgrade its traditional SNA network, with 9600 baud
lines, to TCP/IP Ethernet connections at T1 speeds as a minimum.
We need to upgrade our 1200 dumb terminals (or low-end PCs) to 468
or Pentium machines connected to Ethernet networks. It is likely
many of these machines will run on LANs that are not in place yet.

To handle all of this, DALNET needs a **very** robust client/server
system. It needs to be a seamless link between the various servers
used by DALNET. It also needs to provide Z39.50 linkages that
DALNET libraries have in common, as well as linkages to unique
resources that vary by DALNET library. This will require varied
menus at each DALNET library, but with a common user interface for
users to learn. It needs to provide a union catalog view across
all the DALNET libraries' OPACs, so that users see the Detroit
area's library resources in the aggregate. The system needs to be
accessible 24 hours per day, with fast throughput, fault tolerance,
data integrity among the servers, disaster recovery, storage
management, and software distribution capabilities.

The **third area** is financial considerations--MONEY. DALNET has made a large investment in its mainframe and disk drives over the years. We recently upgraded to IBM's new ES9000 technology and would like very much to leverage that investment for th next generation system. Isn't there some way for the mainframe to be a gbig server in the client/server world? It still offers powerful computing, high throughput, and data storage for very large files. Developments in the mainframe world enable it to function as a communication hub and to handle file backups centrally for several smaller servers. Such a development would give Ameritech an edge over other systems that require complete replacement of their central site equipment!

Secondly, it will be very costly to migrate 1200 terminals to smart PCs (perhaps in the neighborhood of $3.5 to 4 million). We need a way to phase out the terminals--a way for them to run limited client functionality in the new system--until they can be replaced. We also need affordable site licensing for client software for so many machines!

A major cost of client/server technology is said to be the distributed administration and maintenance of LANs and servers. They will require more technical support in DALNET member libraries than the current SNA network. There is potential for greatly increased costs of staff training, support, and management if options aren't provided for more centralized operations. Depending on central site staff for system operation is a key benefit of participating in a consortium.

My **fourth and last area** is the political issues. Thankfully, there is no pressure from the Computing Center at Wayne State University, DALNET's host site, to unplug our mainframe. This gives us time for the joint planning process we need to migrate to the next generation system. This gives us time to educate ourselves about client/server technology and capabilities. This gives client/server systems time to mature to handle sites our size.

I think client/server technology will provide opportunities to pull a consortium apart. It offers libraries with the capability the opportunity to run separate systems. Those systems could then be linked togehter rather than be part of a shared system. It will be very important for DALNET libraries to develop a new shared vision for their next generation system as part of the planning process. We need to identify and agree on those components best delivered together, e.g., index/abstract databasea and full-text files, common interfaces, the union catalog view.

During this time, while we are in the planning stages and while client/server systems are developing, DALNET can continue to implement the "bridge" products that move us closer to using UNIX systems and Ethernet communications with client software. During this time, DALNET needs to continue to upgrade its "classic" NOTIS LMS with new functionality and to keep its member libraries' needs met the best we can with the mainframe system. We don't want to invest too heavilty in expanding it, however, if it will not fit into the next generation!

Questions that come to my mind as I look toward the next generation system are similar to those we had 10 years ago:

1.   for our new vision, will there really be a system that will have the potential we need?

2.   what compromises will this new system require of a consortium? or will the member libraries have even more local control without having to give up the benefits of a shared system?

3.   will vendors be willing to work together with us in a partnership arrangement to develop the unique capabilities we need? our needs do not fit just the Ameritech Academic Division or the Special Libraries Division or the Public Libraries Division. Will there be a Consortium Division for systems that need to work across all three?

As I said, we are just beginning to develop our planning process for the next generation system. We have many challenges to face as we work through it--but the promises of the next generation look very exciting and well worth the effort.

Louise Bugg
Wayne State University/DALNET
June 1, 1995