REQUEST FOR PROPOSAL

The Minnesota Library Information Network (MnLINK)

Components Relating to an Integrated Library Management System

August 4, 1997
# MnLINK RFP - 8/4/97

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1. INTRODUCTION

1.1 Purpose

The purpose of this Request for Proposal (RFP) is to evaluate and select a vendor to provide the software and services for the furnishing, delivery, installation, and maintenance of statewide automation system consisting of an integrated library management system (System X) for specified libraries; a Gateway server that will provide access to local library catalogs, other statewide databases, and commercial databases and resources; and a union catalog.

Together these components make up the MnLINK network and are described in later sections:

- Section 5 describes the general requirements and expectations for the MnLINK systems.
- Section 6 describes the requirements and capabilities of System X.
- Section 8 provides both a narrative and a graphic description of the Gateway server concept.
- Section 1.3 provides an overview of the union catalog architecture.
- Appendix A lists the System X and Gateway participants.

1.2 MnLINK: The Minnesota Library Information Network

The Minnesota Library Information Network, or MnLINK, will be a new statewide information system that will link academic libraries, public libraries, government libraries, and school libraries throughout the state of Minnesota so that they will appear to the user as a single resource. MnLINK is proposed in response to a 1996 legislative mandate and is based on the vision statement of the state's Library Planning Task Force:

"All people in Minnesota will have access to a wide array of high quality library services and global information resources in a range of formats whenever, wherever, and however the information services are needed."

The Minnesota Library Information Network will create a virtual library for the benefit of Minnesota residents and the well being of the state. It will use appropriate software and technologies, human expertise, and a full array of information resources to provide Minnesota residents with seamless access to high quality library services in an environment that is highly collaborative and responsibly cost-effective. The foundation for this environment will be three components: System X, the Gateway, and the Union Catalog. (See the MnLINK brochure in Appendix B)
The range of educational attainment, technological competency and information literacy among the residents of Minnesota means that the Minnesota Library Information Network must be exceptionally capable. It must allow for sophisticated access from home or office to highly specialized resources without requiring the intervention of a librarian or other intermediary, while at the same time providing access to commonly used resources from public sites which can offer intensive user support.

One hundred and forty three academic, public, governmental, and special libraries have indicated an interest in participating in MnLINK through either System X or the Gateway. Appendix A (Tables 1 and 2) lists the libraries interested, indicating their preferred biennium for implementation, and provides some background on their current holdings, patron data base, and current operating system. Appendix A also provides peak load data for the highest hour of the year for the MnSCU/PALS system as a whole, the University of Minnesota-Twin Cities Libraries, and other libraries moving to System X that are able to provide the data. Table 3 in appendix A provides a list of K-12 and hospital libraries which have expressed an interest in the MnLINK System.

1.2.1 System X

System X will be an integrated library automation system, replacing the automated systems of the University of Minnesota's four campuses and the MnSCU/PALS libraries, and including participation by a number of state government libraries, special libraries, private college libraries, public libraries, and K-12 school library/media centers.

Participants include individual libraries (with or without branches), formal consortia and other groups of libraries. For the most part, the vendor may assume that each library operates autonomously with respect to the acquisition, cataloging and circulation of library materials. Furthermore, some of the participants have multiple libraries. Different libraries within the same system or consortium also may operate autonomously.

The System X libraries require a reliable, online, flexible, easy-to-use integrated automated library system that will accommodate the requirements of individual libraries, formal library consortia, and both formal and informal partnerships which exist to facilitate resource sharing and other common library activities.

In general, the system is expected to operate efficiently in an environment in which any participant can:

1. establish its own operating policies and procedures through independent profiles,
2. control use of the integrated library system through independent password and authorization functionality,
3. control access to certain files and functions through independent password and authorization functionality, and
(4) display its own edited version of the bibliographic record, handle and display different call numbers for the same bibliographic item, both for a single location and for different locations.

It is expected that there will initially be two server locations for the shared library automation system known as System X. One will be operated by the University of Minnesota (UM); the other by MnSCU/PALS. Although these servers could be co-located, it is expected that one will be housed on the Twin Cities campus of the University of Minnesota and the other will be located at Mankato State University. It is expected that the UM server will provide services only to UM libraries. Other libraries will load their records and receive their services on the MnSCU/PALS server.

In the future, the MnLINK governing board may authorize additional servers and service providers within Minnesota.

### 1.2.2 Gateway

The Gateway will offer access to the MnLINK union catalog, other statewide databases, non-MnLINK resources, and commercial resources. Gateway connections will use HTTP and Z39.50 protocols. An interlibrary loan system will provide an unmediated mechanism for patron requests. This system might be an integral part of the Gateway or might be operated as a separate server; in either case it will use the ISO ILL protocols. The Gateway server will provide an authentication component for library patrons.

The MnLINK vision assumes a collaborative environment in which a wide variety of local systems, including System X, and resources function to create a network which is transparent to its users and adds significant value. The full functionality will require local systems to have Z39.50 servers as well, but many functions will be available to libraries and users who meet the minimum standards for connectivity.

The number and location(s) of Gateway server(s) will be determined in conjunction with the Gateway vendor. It is expected that MnSCU/PALS will be the support and service agency for the interlibrary loan and union catalog server(s) and will either operate or coordinate the operations of the Gateway server(s).

### 1.2.3 Union Catalog

The proposed system architecture includes the concept of a union catalog in several forms (see also section 6 and section 8.3).

- Each System X server will have an integrated catalog of the libraries residing on that server.
- A separate server will contain physical union catalog of the holdings of all MnLINK libraries. This catalog will use System X software, and it will be accessible to MnLINK
participants via the Gateway.

- The Gateway will use Z39.50 broadcast search capabilities to create virtual union catalogs.

### 1.3 Description of Roles and Responsibilities.

The 1997 Minnesota Legislature appropriated funding to the Minnesota Higher Education Services Office (MHESO) to implement a Minnesota Library Information Network to be developed in cooperation with the Minnesota Library Planning Task Force.

The MHESO is the fiscal agent for the project and is the agent for the State of Minnesota in the procurement processes.

The Library Planning Task Force and its subcommittees working directly on this project are composed of representatives from the University of Minnesota, the Minnesota State Colleges and Universities (MnSCU), the Cooperating Libraries in Consortium (CLIC), the Minnesota Education Telecommunications Council, MINITEX, the Office of Library Development and Services in the Department of Children, Families, and Learning, the Minnesota Departments of Administration and Finance, the Minnesota Office of Technology, Minnesota's public schools, public libraries, and Minnesota residents. A list of Library Planning Task Force members can be found in Appendix C.

The task force is staffed by the MHESO. A Vendor Evaluation Team composed of members nominated by the Library Planning Task Force will make recommendations about the most favored vendor(s) for the project to the Library Planning Task Force.

The Library Planning Task Force will serve as the governing board of the MnLINK system during the implementation phase of the project and will advise MHESO as its fiscal agent. By law, the ongoing staff support for operational and training needs of the MnLINK system will be provided by the University of Minnesota, the MnSCU, and others with experience and expertise in operating large library automation systems.

### 1.4 Definitions

The following terms are to be understood as defined here:

Administrative unit: a library unit with separate administration but part of a larger library

Architecture: An architecture is an inventory of reusable assets, including designs, software components, and standards for interfaces, hardware and software. An architectural component, almost by definition, is a standard.

Authorized staff (person): a library staff member who has been assigned an appropriate level of security and has been authenticated. An individual staff person may have different levels of authorization for different subsystems.
Borrower: a person to whom books or other items have been loaned by a library.

Branch library: a library unit whose collection, functions, and administration are operationally part of a larger library.

Circulation unit: a unit that circulates materials for one or several physical locations.

Consortium: a group of libraries which share one or more activities under a formal agreement.

Contractor: A responder to the RFP being contracted with.

Document delivery: resources requested through a commercial vendor or document fulfillment service.

Fully integrated system: an automated library environment in which links between functions are seamless and transparent to the user, all transactions occur in real time, data is entered once and can be operated on for multiple applications, and actions complete in one function must inform or create actions in another function. All mandatory requirements listed in this RFP are supported in this integrated environment.

Interlibrary loan: resource sharing between libraries

Interlibrary Loan Center (ILL Center): an agency such as MINITEX that facilitates resource sharing and document delivery between libraries.

Interoperability: the ability to respond to a search request from the client software for an item or items known to be in the target database by returning information about the result set and to respond to a "present records" request from the client software by returning records.

Local library: any participating library or any member library within a participating consortium or library system.

Local loan: a loan between branches or administrative units of a single library or system.

Location: an administrative unit, a building, a group of collections (e.g., all reference units), or a collection within a building.

Open systems: computer systems composed of products which adhere to international and industry standards for interfaces with other products.

Processing unit: a technical services unit that processes materials for one or several service points.

Responder: Vendor who has submitted a response to the RFP.

Staff (person): member of a library's staff, who is able to execute functions and transactions in the
system to which access is restricted by means of a password or other authorization mechanism. [See also authorized staff person]

The State: any occurrence of the term "the State" in this document refers to MHESO.

User: any person who may access some or all of the systems described as part of System X, the Gateway, or the Online Union Catalog. This includes members of the public, library patrons, staff members and authorized staff members for any participating local library.

Vendor: Potential responder to the RFP.

1.5 State of Minnesota Goals for Library Technology Projects

The Library Planning Task Force reviews all library technology projects to assure that these projects meet Legislative Goals and has set guidelines for state funded library technology project.

The six factors considered by the Task Force are:

Standards-based: Libraries should only invest in systems that are standards-based, to prevent problems in the future with transmitting or exchanging data and also to enable easier integration with future developments.

Open: The architecture and underlying protocols and software should be open.

Functional: Technology systems should support an integrated approach to library processes (input once, use many).

Network-based: Technology systems, including downloading and printing capabilities, should integrate easily into the networks in place locally, regionally and nationally and work across network architectures.

Virtual: The information systems should be capable of interacting with other resources in such a way that a "virtual electronic library" is created for the user no matter where the data are located.

Future-looking: Vendors should be willing to experiment and partner with the users, have appropriate methods for receiving user input about needed functionality, and use this information to help shape future enhancements.

To meet these guidelines, the vendor proposal must include a vision of the future which is open; i.e. standards-based, when available, or based on commonly accepted practices, when no standard is available, and which provides for true multi-tier client-server architecture. Respondents to this Request for Proposal must document, both for the proposed system and for the software and hardware environment within which it operates, a commitment to open systems standards and practices.
1.6 Proposed Schedule for Implementation

Minnesota is assuming a staged implementation and has identified target dates. The final project schedule will be a product of contract negotiation. The proposed target dates are as follows:

- Contractor's Management Begins: July 1, 1998
- Contractor's Staff Begins: July 15, 1998
- Statewide implementation: June 30, 200X

****Implementation should occur in a timely manner with statewide implementation scheduled for 7/1/0X. The date will be determined during contract negotiations. The contractor will be asked to propose a more detailed schedule, in the context of these target dates, to be established within the following priorities, constraints, and timing.

1.7 Use of State Personnel

The MnLINK governing board plans to employ technical staff to maintain the MnLINK system after implementation. The vendor should describe how these MnLINK technical staff will be trained and involved in implementation.
2. INSTRUCTION TO VENDORS

This section of the RFP contains information and instructions about the logistics of participating in this procurement. Sections two (2), three (3), and four (4) of this RFP follow State of Minnesota guidelines for procurement, and designate all state requirements with the use of the term "must". In addition, informational boxes heading sections 5, 6, 8, and 8.5 are also instructions to the vendors designated by the term "must". These sections are different from the system requirements in these sections of the RFP.

Mandatory system requirements in sections five (5) through twelve (12) are designated by use of the phrase “IT IS OF PRIMARY IMPORTANCE.” All other (i.e. desirable) system capabilities are designated by the term “it is expected that” or similar language. Any proposed system which does not satisfactorily meet mandatory requirements may be eliminated from further consideration. However, the State may accept proposals which do not meet all “mandatory” requirements.

The intent of this section is to include those items vendors might desire in a "quick reference" section. A few items may be duplicated elsewhere in the document; vendors must notify the project immediately if they find any discrepancies.

2.1 Procurement Schedule

RFP Release Date August 4, 1997
Vendor's Conference 8:30 - 11:30 a.m. September 12, 1997
Last Date for Receipt of Vendor Questions for the Conference September 3, 1997
Date for Written Response to Vendor Questions September 25, 1997
Received at the Vendor Conference or Received Prior to September 3, 1997
Proposal Submission Deadline 2:00 p.m. November 5, 1997
Notification State of Desire for Demonstrations To Be Announced
Demonstrations by Vendors To Be Announced
Potential Selection of Apparent Successful Vendor (ASV) February 27, 1998
ASV Vendor Negotiations March 1 - May 31, 1998
Contract Executed and Project implementation Begins July 1, 1998
2.2 Evaluation of Proposals

Proposals will be reviewed by the Vendor Evaluation Team described in 1.3, which will make recommendations to the Library Planning Task Force. A demonstration of systems and services and/or interviews with vendors, may be part of the proposal evaluation process.

It is the goal to contract with an automated system vendor who demonstrates a forward looking approach to development and implementation and is working in areas such as artificial intelligence, relevance ranking, fuzzy matching, and electronic commerce, as they become feasible in library systems.

Multiple criteria will be used to evaluate vendor proposals. The following criteria will be used in the initial round of proposal evaluation: approach and functionality, understanding and the capacity to meet the scope and objectives of the project, vendor qualifications, and cost. The evaluation of each general criteria will include, but not be limited to, considering the following questions:

**APPROACH AND FUNCTIONALITY -- 45%**
- Does the proposal adequately describe the vendor's capability with respect to each specification in the RFP?
- Does the proposal satisfy the essential system requirements?
- Does the proposal deliver sufficient available functionality along with commitment to provide desired functionality within a reasonable time?
- Does the proposed system offer fully integrated functions?

**For Gateway:**
- Does the proposal employ both proven and emerging technologies appropriately?
- Does the proposed system appear to be appropriately scaled and configured to function efficiently when the initial participating libraries "come up"?
- Is the system scalable to accommodate additional servers, service providers, and participating libraries?

**For System X:**
- Is the proposed system easy to use?
- Does the proposed system employ the preferred bibliographic record structure?
- Does the proposed system appear to be appropriately scaled and configured to function efficiently when the initial participating libraries "come up"?
- Is the system scalable to accommodate additional servers, service providers, and participating libraries?

**SCOPE AND OBJECTIVES -- 20%**
- Does the proposal demonstrate commitment to standards?
- Does the proposal demonstrate commitment to open architecture, protocols, and software?
- Does the proposal achieve a "seamless interface" between System X and the Gateway?
- Does the proposal capture the vision for MnLINK?
- Does the proposal support a "virtual electronic library" for MnLINK participants?
Does the proposed system integrate easily into existing local, regional, and national networks?
Does the proposed system support participating libraries' needs for autonomy (local control and customization)?

**VENDOR QUALIFICATIONS -- 20%**

Is the vendor financially sound?
Are the vendor's financial resources commensurate with the scope of this project?
Has the vendor successfully implemented large systems, especially for multi-library consortia?
Has the vendor converted comparably large datafiles to the system?
Has the vendor demonstrated willingness to listen and work with users in shaping system enhancements?
Has the vendor demonstrated a commitment to research and development to meet continually changing needs and standards?
Are the vendor's present clients satisfied with the vendor's level of service, support, and training?
Is the vendor's staff knowledgeable and stable?

**COST -- 15%**

Does the proposal clearly delineate the costs of implementation, operation and maintenance?
Does the proposal adequately address the telecommunications costs of the system and its operation?
Is the proposed system/service priced competitively?
Are the projected future costs reasonable?

The second and subsequent stages, if any, of the evaluation, which may include vendor demonstrations, vendor interviews and requests for additional information, will focus on the specifics of the vendor's approach and detailed analysis of the vendor's response to specific functional requirements.

### 2.3 RFP Communications

#### 2.3.1 Written Communications

Written questions or communications with the State regarding this RFP or its addenda (if any) **MUST BE SUBMITTED** in sealed envelopes or via FAX, clearly stating the appropriate RFP reference (including page and section number), with an indication of the contents (for example, "RFP QUESTIONS", "RFP COMMENTS", etc.) on the outside of the envelope or on the FAX cover sheet. Any envelope or FAX received that does not contain this designation will be assumed to be general mail, and will not receive priority attention.

**MUST BE ADDRESSED OR FAXED** to the following:

Mary Lou Dresbach
Any questions received prior to September 3, 1997 will be responded to and discussed at the September 12, 1997, Vendors' Conference. The responses to these questions as well as responses to questions received at the Conference will also be distributed in written form to all vendors by September 25, 1997. Any questions received after September 3, 1997 will normally be responded to in written form within two weeks after receipt of the questions.

### 2.3.2 Vendors' Conference
The Vendors' Conference will be held on September 12, 1997, from 8:30 a.m. to 11:30 a.m. at:

Mnnesota State Office Building  
Room 10  
100 Constitution Avenue  
St. Paul, Minnesota 55155

**Attendance at this conference is optional.** Vendors are not required to declare their status as potential contractors at this time. Attendance at this conference does not require submission of a proposal.

Written replies to all questions submitted during the Vendors' Conferences will be issued to all vendors that have been sent the Request For Proposal and any others requesting related mailings (See Section 2.5) by September 25, 1997.

### 2.3.3 Communications Restrictions
From the date of release of this RFP until a contractor is selected and a contract executed, contractors MUST NOT COMMUNICATE with any State or MnLINK participating libraries' staff concerning the RFP except by using the methods described in sections 2.3.1 through 2.3.4. **IF THE CONTRACTOR ATTEMPTS ANY UNAUTHORIZED COMMUNICATION, THE STATE MAY REJECT THAT CONTRACTOR'S PROPOSAL.**

### 2.4 Proposal Submissions

#### 2.4.1 Response Date and Time
In order to be considered for selection, proposals MUST BE RECEIVED at the address identified in section 2.4.2, and time stamped by the State, NO LATER THAN 2:00 p.m. the proposal submission due-date, November 5, 1997.
Any vendor’s response which is received after the deadline will not be accepted. Receipt by the State of a proposal received after the closing date and time as stated herein must not be construed as acceptance of the proposal. Such late proposals will be logged as to date/time received and then subsequently returned to the late vendor. If delivery of the proposal is not made by courier or in person, the use of certified or registered mail is suggested. **NOTE:** Use of certified or registered mail does not relieve the vendor of the responsibility for having the proposal time stamped as specified above.

### 2.4.2 Address for Submissions

All proposals **MUST BE SUBMITTED** to:

Mary Lou Dresbach  
MnLINK Project  
Minnesota Higher Education Services Office  
400 Capitol Square Building  
550 Cedar Street  
St. Paul, MN 55101

### 2.4.3 Labeling Packages

The package(s) **MUST BE LABELED** with several pieces of information to ensure appropriate time stamping and to facilitate the evaluation process. Packages **MUST BE LABELED** with:

- a proposal number, if the vendor is submitting more than one proposal,
- an indication that this package is x of y packages, i.e., 3 of 4, 1 of 1, etc.

### 2.4.4 Quantities

SUBMIT one signed original copy of the entire submission including all attachments. In addition, submit:

- 20 copies each of each Proposal,
- 6 copies of support materials, such as user manuals, brochures, etc., and
- 1 complete copy of systems and user documentation (See Section 4.1.6).

### 2.4.5 Binding

Proposals, except the original, **MUST BE SUBMITTED** in loose-leaf or three-ring binders. All pages, except pre-printed technical inserts, **MUST BE SEQUENTIALLY NUMBERED** within each section (1.1, 2.1, etc.). An identifiable tab sheet **MUST PRECEDE** each proposal section.

The proposal responses, and supporting material, dealing specifically with the detailed requirements **MUST BE BOUND SEPARATELY** to facilitate review by the Vendor Evaluation Team.

The original of the Transmittal Letter **MUST BE SUBMITTED** in a separate sealed envelope inside the package containing the original Proposal.
2.4.6 Duration of Offer
Proposals submitted in response to this solicitation are irrevocable for 180 days following the closing date. This period may be extended by written mutual agreement between the responder and the State.

2.5 Addenda

Any addenda to this RFP will be sent to vendors via certified mail. Vendors will be held responsible for the contents of any such addenda. To ensure receipt of such mailings, vendors wishing to receive addenda and other information pertaining to this request for proposals must DESIGNATE a single mailing address.

2.6 Multiple Submissions

Multiple proposal submissions ARE ALLOWED. Multiple submissions may occur because the proposer is submitting two different technical architectural strategies or different combinations of software packages and/or subcontractors. Instructions for constructing multiple proposals are included in the text boxes at the beginning sections 5, 6, and 8.1.

Similarly, one vendor MAY BE PARTY to multiple proposals. This may occur if a vendor is submitting as a prime contractor, but is also included as a subcontractor in another proposal. One vendor may also be included as a subcontractor on multiple proposals. A vendor's participation and role in other proposals MUST BE CLEARLY IDENTIFIED in each transmittal letter.

2.7 Preference for a Single Vendor

Vendors MAY SUBMIT proposals for the entire project, for System X portion, for the Gateway portion, or for the union catalog portion of the project. The State would prefer to contract with a single vendor for the project, but reserves the right to split the elements of the project as needed. In such a case, vendors will be expected to work together and will be held responsible for making the different aspects of the system work. Joint proposals by several vendors will be accepted.

2.8 Public Information and Trade Secrets

All materials submitted in response to this RFP become the property of the State and may be returned only at the State's option. MATERIALS RECEIVED WILL BE CONSIDERED PUBLIC INFORMATION AND WILL BE OPEN TO PUBLIC INSPECTION IN ACCORDANCE WITH THE MINNESOTA DATA PRACTICES ACT, Minnesota Statutes Chapter 13.

The proposal submitted in response to this RFP may contain trade secrets which the vendor or its subcontractor(s) does not want used or disclosed for any purpose other than evaluation of the proposal. The use and disclosure of any such trade secrets may be so restricted, consistent with the Minnesota Data Practices Act. IF THE VENDOR BELIEVES IT IS SUBMITTING INFORMATION THAT CONSTITUTES A TRADE SECRET UNDER MINNESOTA
STATUTE 13.37, THE VENDOR SHOULD CLEARLY MARK EACH PAGE CONTAINING SUCH INFORMATION AS “TRADE SECRET”. ONLY LEGITIMATE TRADE SECRETS MAY BE PROTECTED FROM DISCLOSURE. TRADE SECRETS MUST BE IDENTIFIED SPECIFICALLY, AND VENDORS MUST EXPLAIN CLEARLY THE JUSTIFICATION FOR EACH ITEM IDENTIFIED AS SUCH.

Refer to sections 4.1.21 and 4.1.22 for instructions on trade secrets.
3. PROPOSAL REQUIREMENTS

Each respondent must describe in its responses to each specific requirement how the proposed system meets these requirements. Specify which items pertain to a system-wide basis and which can be applied at a local level.

Sections two (2), three (3), and four (4) of this RFP follow State of Minnesota guidelines for procurement, and designate all state requirements with the use of the term "must". In addition, informational boxes heading sections 5, 6, 8, and 8.5 are also instructions to the vendors designated by the term "must". These sections are different from the system requirements in these sections of the RFP.

Mandatory system requirements are designated by use of the phrase “it is of primary importance” All other (i.e. desirable) system capabilities are designated by the term “it is expected that” or similar language. Any proposed system which does not satisfactorily meet mandatory requirements may be eliminated from further consideration. However, the State may accept proposals which do not meet all “mandatory” requirements.

3.1 General Proposal Instructions

Each proposal submitted in response to this RFP MUST CONTAIN certain minimal information. This information is essential to understanding and evaluating proposals. The intent is not to limit the content of proposals, and vendors may include any additional information they feel is pertinent; however, unnecessarily lengthy proposals will not enhance the evaluation conducted by the State. The emphasis should be on the vendor’s ability to satisfy the requirements of this RFP.

Information submitted in the proposals MUST BE CURRENT, COMPLETE, AND ACCURATE. Misrepresentation of proposal data will be grounds for rejection of the proposal or cancellation of the contract (if one has been awarded), and legal remedies may be sought.

3.1.1 Expenses

The State assumes no liability for payment of expenses incurred by vendors in preparing and submitting proposals in response to this solicitation.

3.1.2 State Use of Proposal Ideas

The State has the right to use any or all system ideas presented in any proposal received in response to this RFP unless the vendor presents a positive statement of objection in the proposal. In no event will such objection be considered as valid with respect to the use of such ideas which are not the proprietary information of the vendor and so designated in the proposal, or which:

a. were known to the State before submission of such proposal, or

b. properly became known to the State thereafter through other sources or through acceptance of the Vendor's proposal.
3.1.3 Revision at State’s Request
The State reserves the right to amend any segment of the RFP prior to announcement of the successful contractor. When a change occurs in the State’s requirements resulting in a decision to relax, increase, or otherwise significantly modify the RFP scope of work or statement of requirements, such change will be made in writing as an amendment to the RFP and will be provided to all prospective responders or the RFP may be modified and reissued. In such an event, all responding Vendors will be afforded opportunity to revise their proposal to accommodate the RFP amendment.

3.1.4 Rights Reserved
The State reserves the right to:

a. Reject any and all proposals received in response to this RFP, or negotiate a contract as permitted by law if a particular solution or portion thereof appears to the State as the only appropriate solution;
b. Select for contract or for negotiations, a proposal other than that with the lowest cost;
c. Waive or modify any information, irregularities, or inconsistencies in proposals received;
d. Consider and/or accept a late written modification (requested by the State) of a proposal if the proposal itself was submitted on time, and the modified proposal is more favorable to the State;
e. Accept any portion of the proposal, and/or require the vendor to become a subcontractor to another vendor;
f. Approve any subcontractor used by a contractor;
g. Negotiate any aspect of the proposal with any vendor and negotiate with more than one (1) vendor at the same time;
h. If negotiations fail to result in an agreement, terminate negotiations and select the next most responsive vendor, prepare and release a new RFP, or take such other action as the State deems appropriate; and
i. Select more than one vendor.
j. The State’s evaluation process may include interviews with vendors and the use of Best and Final Offer, when appropriate. The purpose of the Best and Final Offer is to allow the State to better define its needs, adjust specifications or other aspects of the RFP, address concerns and problems raised during the evaluation process, and for any other purpose deemed appropriate by the State. The State may consider a Best and Final Offer from the vendors at any time prior to the award of the contract.

3.1.5 Disclosure of Affiliations
a) At the time a proposal is submitted, vendors MUST INCLUDE a statement as to whether there is a reasonable expectation that they are or would be associated with any parent, affiliate, or subsidiary organization, either under formal or informal arrangement, in supplying any service or furnishing any supplies or equipment to the Vendor which would relate to performance under the resulting contract of the RFP.

b) If, at any time after a proposal is submitted, such an association arises as described in the paragraph above, the Vendor (or Contractor, if the contract has been awarded) WILL BE
REQUIRED to obtain a similar certification and authorization from the parent, affiliate, or subsidiary organization. Failure to submit such certification and authorization will constitute grounds for termination of the contract (provided one has been awarded) at the option of the State.

3.1.6 Conflict of Interest
Disclosure of any contractual relationship with any State personnel or sitting member of the Library Planning Task Force or the institutions they represent in the twelve (12) months immediately prior to the release of the RFP, or any similar real or potential conflicts of interest, may, at the sole discretion of the State, be grounds for rejection of the vendor’s proposal or termination of any contract awarded;

3.1.7 Disclosure of Data
If a contract is awarded to the Vendor, the State will have the right to use or disclose the technical data to the extent otherwise provided in the contract or by law. The State does not assume liability for the use or disclosure of unmarked technical data, or marked data not specifically identified as part of the Transmittal Letter.

3.1.8 Acceptance and Testing
The system must be tested at appropriate stages until final completion and acceptance by the State, as negotiated and detailed in the contract. The State requires the contractor to prepare, maintain, and provide appropriate records to support benchmark and system acceptance tests in demonstrating compliance with established performance standards. Section 12 describes the performance and response time standards for the MnLINK systems.

3.1.9 ADA Information
Vendors must outline strategies to address ADA (Americans with Disabilities Act) requirements as it relates to their product offerings. Strategies may include the use of third party software.

3.1.10 Data Privacy
To the extent that the contractor takes possession of or has access to the private, non-public, protected non-public, or confidential data of the user, the contractor will agree to comply with the requirements of the Minnesota Government Data Practices Act (Minnesota Statutes, Ch. 13) in providing services under the Agreement. The contractor agrees to indemnify, save, and hold the State of Minnesota, its agent and employees, harmless from all claims arising out of, resulting from, or in any manner attributable to a violation of any provision of the Minnesota Government Data Practices Act, including legal fees and disbursements paid or incurred to enforce this provision of this Agreement. In the event that the contractor subcontracts any or all of the work to be performed under this Agreement, the contractor must retain responsibility under the terms of this paragraph for such work.

3.1.12 Intellectual Property Indemnification
The contractor must warrant that any materials or products provided or produced by the prime contractor or subcontractors, utilized in the performance of this contract will not infringe or violate any patent, copyright, trade secret, or any other proprietary right of any third party. In the event of
any such claim by any third party against the State, the State must promptly notify the contractor
and the contractor, at the contractor’s expense, must indemnify and defend the State against any
loss, cost, expense, or liability (including attorney’s fees) arising out of such claim, whether or not
such claim is successful against the State.

If such claim has occurred, or in the contractor’s opinion is likely to occur, the contractor must
either procure for the State the right to continue using the material or product or replace or modify
the materials or products. If an option satisfactory to the State is not reasonably available, the State
must return the materials or products to the contractor, upon written request of the contractor and at
the contractor’s expense. The contractor must be liable for liquidated damages equal to the sum of
the depreciated value of the product returned plus 10% of the purchase price. This remedy must be
in addition to, and not be exclusive of, other remedies provided by law.

3.1.12 Source Code Access
The contractor must agree to deposit one machine-readable copy of the source code of any pre-
existing software licensed to the State with an escrow agent and must provide the State with the
name, address, and phone number of the escrow agent. The contractor must agree to keep this copy
of the source code current with the latest release of the software. If the contractor, whether directly
or through a successor or affiliate, ceases to maintain and service the current version of the
software, the State must have the right to obtain, for the sole use of MnLINK libraries and for use
only in maintaining the software, a single machine-readable copy of the then current version of the
source code of the object code provided by the vendor, and a single copy of the associated
documentation.

3.1.13 Year 2000 Compliance Warranty
Contractors must warrant that hardware and software developed or modified by them and used
before, during, and after the turn of the century must not experience abnormal ending and/or
product invalid or incorrect results in the operation of the business of the State. In the event of any
recognition, calculation, or indication of all code adjustments necessary at no cost to the State in
order to ensure that the code and databases modified or developed by the vendor are “Year 2000
Compliant”. The warranty must be in effect until December 31, 2000 or one year after system
production, whichever is later.

Year 2000 compliant: “Year 2000 compliance” means that information resources meet the following
criteria and/or perform as described:

- Data structures (databases, data files, etc) provide 4-digit date century recognition. Example: ‘1996’ provides “date century recognition”, ‘96 does not.

- Stored data contains date century recognition, including (but not limited to) data stored in databases and hardware / device internal system dates.

- Calculations and program logic accommodate both same century and multi-century formulas and data values. Calculations and logic include (but are not limited) sort algorithms, calendar generations, event recognition, and all processing actions that
use or produce data values.

- Interfaces (to and from other systems or organizations) prevent non-compliant dates and data from entering or exiting any state system.

- User interfaces - (i.e. screens, reports, etc.) Accurately show 4-digit years (if critical to business functions).

- Year 2000 compliance is correctly treated as a leap year within all calculation and calendar logic.

To the extent that a vendor uses pre-existing software which does not meet all the Year 2000 compliance criteria, the vendor must state specifically which of the above criteria cannot be met and how the vendor will assure that the Year 2000 problems will be avoided.

3.2 Specific Proposal Requirements

Vendors must respond to the requirements and expectations for the required configurations of either System X or the Gateway portion, or both, and may provide one or more alternative proposals in addition to the required configuration.

Each vendor responding with regard to System X MUST PREPARE bids for two configurations: one without a physical Union Catalog and one with a physical Union Catalog for all MnLINK libraries.

The Gateway component also includes an interlibrary loan/document delivery system; responses from vendors for this portion of MnLINK MUST INCLUDE both the Gateway and the interlibrary loan/document delivery system.

All proposals should address requirements and expectations for related data conversion, delivery, and installation; hardware/software; training and support; documentation; and performance and response time.

For each capability the system vendor must INDICATE whether the system:

- is fully compliant
- is compliant except for specific elements (to be named/described)
- is NOT compliant
  - has plans to become compliant by a specified date
  - has NO plans to become compliant

To the extent possible, responders to this RFP should describe HOW they ACHIEVE both mandatory and desired capabilities.
3.3 Data Model

Vendors MUST provide a data model as part of their response to the system being proposed. If a data model is not available at this time the vendor MUST address how a model will be developed as part of this project. If the vendor believes that this is proprietary information, the model may be identified as trade secrets.

3.4 Budget and Cost Proposal Requirements

For each proposal (including each required and alternative configurations) vendors MUST PROVIDE cost data using the Cost Summary Form in Appendix D. The State reserves the right to purchase any hardware through the vendor or directly on its own.

State law requires that an agency have authority to expend all the funds required to complete a contract BEFORE an agency enters into a contract. The cost for the contract(s) issued from this RFP must have fixed price. Vendors MUST, therefore structure their responses (including each required and alternative) configuration as fixed price. It is understood however, that if the State changes to requirements or time frame of any eventual contract may need to be adjusted. This adjustment will be subject to negotiation between the eventual vendor(s) and the State.

Minnesota operates on a biennial budgeting system. The 98/99 biennium runs from July 1, 1997 to June 30, 1999 (the State fiscal year runs from July 1 to June 30 and the year is “named” for the year when it ends - FY 98 runs from July 1, 1997 to June 30, 1998). There is required language in State contracts that reserves the right to terminate any contract that crosses a biennium for lack of continued funding, since only a new appropriation or continued spending authority can continue an obligation beyond a given biennium. For the same reason (lack of continued appropriation) this same kind of language applies to any contracts using federal funds. There are certain specific State funds which have “continuing” authority to spend funds, but the language will generally be included in contracts from those funds because that authority is subject to change by the law at any time.

3.5 Cost Scheduling

Vendors MUST provide a description of their plans to establish, maintain and use a cost and schedule management control system that provides for planning and controlling costs, measuring performance and generating timely, accurate and reliable cost scheduling performance reports.

3.6 Risk Assessment/Avoidance

The State will be conducting and ongoing, independent risk management of the project. In addition vendors MUST describe their strategies for risk assessment/avoidance and mitigation.

3.7 Change Management

Vendors MUST describe their procedures for addressing change management and methods of detecting problems and defects.
4. TRANSMITTAL LETTER

The Transmittal Letter MUST BE SUBMITTED on the vendor's official business letterhead. The letter is to transmit the proposal and must identify all materials and enclosures being forwarded collectively as a response to this RFP. The Transmittal Letter must be signed by an individual authorized to commit the vendor to the scope of work proposed.

4.1 The Transmittal Letter Must Include:

4.1.1 A statement identifying the proposal as a single proposal, or if the vendor is submitting multiple proposals, the statement must identify whether the proposal is the primary or a secondary proposal; a proposal number (1 for primary, 2, 3, etc.) must be indicated if the vendor is submitting multiple proposals.

4.1.2 A statement identifying a participating vendor's participation and role in other proposals;

4.1.3 Identification of the vendor's corporation or other legal entity and all subcontractors, including the percentage of work (as measured by percentage of total price by phase) to be performed by the Prime Contractor and each subcontractor;

4.1.4 Comprehensive written implementation plans and schedules which will indicate all product and service deliverables. The plan will include:

a) The designation of a specific Vendor’s employee to serve as the Vendor’s Implementation Manager for systems being installed, the provision of charge-free telephone calls by the State to this manager and the provision by the Vendor of as many on-site visits to the State and days of service on-site by this manager and other Vendor’s personnel as necessary for successful implementation;

b) A list of other project staff, their roles, qualifications and their training experience;

c) Migration planning, conversion and loading of MnLINK participating libraries’ Vendor’s systems; and

d) Implementation planning and assistance with the cut-over from existing systems including assistance to Customer Libraries where necessary.

4.1.5 Vendor Background Information

In addition to evaluating proposed systems, library automation vendors will be evaluated as corporations. For each of the points in this Section, PROVIDE numbered, written answers on attached sheets.

4.1.5.1 Vendor Organizational Profile

PROVIDE a concise description of your company and its affiliation (if applicable) to other corporate entities. Include information on your company’s general organization and staffing, scale
of operations, and relevant market for library systems.

**Provide** a breakdown of your company's total staffing by function:
- Sales and marketing.
- Research and development.
- Technical support.
- Administration and financial.
- Provide details on the number and composition of key staff in the firm to be assigned to this project.
- Provide resumes of vita of all staff members to be assigned to this project.

4.1.5.2 Vendor Statement of Qualifications

*Provide* written responses to each of the following questions. If the answer to any of the following questions is affirmative, vendors must describe fully the circumstances, reasons therefore, the current status, and ultimate disposition of each matter that is the subject of this inquiry:

a) Has the vendor been declared in default of any contract?

b) Has the vendor forfeited any payment of performance bond issued by a surety company on any contract?

c) Has an uncompleted contract been assigned by the vendor's surety company on any payment or performance bond issued to the vendor arising from its failure to fully discharge all contractual obligations thereunder?

d) Within the past three (3) years, has the vendor filed for reorganization, protection from creditors, or dissolution under the bankruptcy statutes?

e) Is the firm now the subject of any litigation in which an adverse decision might result in a material change in the firm’s financial position or future viability?

4.1.5.3 Vendor Installed System List: References

*Provide* information on a minimum of three currently installed library systems. In particular, vendors should provide the information requested for any statewide consortia comprised of multiple academic institutions and/or multitype library members. **For each installation, the vendor must provide the following customer reference information:**

- Consortia or library name.
- Contact person.
- Address.
- Telephone number.
- Operational applications (type and scope of services/functional capabilities supported).
- Activity/transaction levels (number of terminals and transaction volume).
• Size of bibliographic database.

4.1.5.4 System Installation in Progress
Vendors are requested to provide the following information on systems installations in progress. In particular, vendors should provide the information requested for any statewide consortia comprised of multiple academic institutions and/or multitype library members. Vendor-installed systems that include specific components being sought by this RFP should be clearly identified and described.

• Consortia or library name.
• Contact person.
• Address.
• Telephone number.
• System type and functions supported.
• Installation start date.
• Estimated final completion date.
• Current percent complete.
• Number of vendor staff assigned.

4.1.5.5 Vendor Viability
DESCRIBE your company’s long-term development strategy and plans to ensure that your system(s) and firm remain viable in the market.

DESCRIBE the process by which client requests for system enhancements are considered and prioritized by the firm in formulating its future research and development strategy.

4.1.5.6 Vendor Financial History
PROVIDE annual reports with audited financial statements (income and expenses, changes in fund balances, and balance sheets) including the auditor’s certifying opinion on the financial statements, for the most recent year of business operations and the preceding year. If your firm conducts operations in multiple lines of business, a separate statement on the financial condition for library and technology divisions of the company should be submitted. All financial information provided will be used for evaluation purposes only and will be held confidential.

4.1.5.7 Information Concerning History of Product and Future Development Plans
PROVIDE a history of your company and the proposed product(s). Elaborate on your vision for the future development of the proposed system, including, if appropriate, reference to such subjects as non-text computerized information databases, client/server architecture, the Internet, the National Information Infrastructure, and NISO and OSI standards.

4.1.6 System and User Documentation
PROVIDE one complete set of systems and user documentation which explain the configuration, functionality, and operation of the proposed system. The sets of documentation will be returned to unsuccessful respondents.

4.1.7 A statement that the proposed system will meet the specifications set forth in this RFP or
clearly specify any deviations from the RFP;

**4.1.8** A restatement of the scope and objectives to demonstrate the vendor’s view of the nature of the RFP.

**4.1.9** A statement identifying those individuals who were involved with the preparation of the proposal;

**4.1.10** A statement that no attempt has been made or will be made by the vendor to induce any other person or firm to not submit a proposal;

**4.1.11** A statement of compliance with affirmative action and equal employment regulations that the vendor does not discriminate in its employment practices with regard to race, color, religion, age, sex, marital status, political affiliation, national origin, or handicap;

**4.1.12** In accordance with the provisions of Minnesota Statutes, §363.073, for all contracts estimated to be in excess of $100,000, all responders having more than 40 full-time employees at any time during the previous twelve months must have an affirmative action plan submitted to the Commissioner of Human Rights before a proposal may be accepted. Your proposal will not be accepted unless it includes one of the following:

a. A copy of your current certificate of compliance;

b. A letter of affidavit certifying that your firm has submitted an affirmative action plan to the Commissioner of Human Rights; or

c. A letter of affidavit certifying that your firm has not had more than 40 full-time employees at any time during the previous twelve months.

For information on how to obtain a Certificate of Compliance call the Minnesota Human Rights Department, Contract Compliance at (612)296-5663.

**4.1.13** A reference to all RFP amendments received by the vendor to ensure that the vendor is aware of all such amendments; if no amendments have been received, a statement to that effect must be included;

**4.1.14** The terms and conditions contained in the sample contract, incorporated herein as Appendix D, will be substantially similar to those included in any contract which may result from this solicitation. Although some minor changes in these terms and conditions may be negotiated, all vendors’ transmittal letters must expressly accept all such terms and conditions or specifically note any exceptions. **PLEASE NOTE THAT STATE LAW REQUIRES THAT CERTAIN PROVISIONS MUST BE INCLUDED IN THE FINAL CONTRACT. ANY SUGGESTIONS FOR ALTERNATE LANGUAGE MUST BE INDICATED ON AN ‘EXCEPTIONS TO TERMS AND CONDITIONS’ ATTACHMENT TO THE PROPOSER’S RESPONSE.** The State is under no obligation to accept wording changes submitted by the vendor;
4.1.15 A statement certifying that no personnel currently employed by the State or under contract to the State, participated, either directly or indirectly, in any activities related to the preparation of the vendor’s proposal;

4.1.16 A statement certifying that the vendor has not had any contractual relationships or other contacts with any State personnel involved in the development of the RFP, or, if such contacts have occurred, a statement identifying in detail the nature and extent of such contacts and the personnel involved;

4.1.17 A statement that the vendor has sole and complete responsibility for the completion of all services provided under the contract, except for those items specifically defined as State responsibilities;

4.1.18 A statement that the vendor certifies that, in connection with this procurement, the prices proposed have been arrived at independently, without consultation, communication, or agreement, for the purpose of restriction of competition, as to any other vendor or with any competitor; and that unless otherwise required by law, the prices quoted have not been knowingly disclosed by the vendor prior to award, either directly or indirectly, to any other vendor or competitor;

4.1.19 Certification that no contingency fees have been paid for purposes of securing this contract;

4.1.20 Certification that the vendor’s offer will be firm and binding, without any reference to the price submitted, for one hundred eighty (180) days from the due date for receipt of proposals;

4.1.21 A statement that the proposal does or does not include trade secret information;

4.1.22 An attachment listing each individual item declared as a Trade Secret, identifying, item, volume/page number reference for location within the document and reason for declaration as trade secret; and

4.1.23 Certification by an appropriate corporate official other than the signer of the proposal that the official signing this proposal has the authority to obligate and bind the corporation to the terms, conditions, and provisions of the proposal.

4.1.24 The vendor should describe how these MnLINK technical staff will be trained and involved in implementation.

4.2 Proposals Including Subcontractors

A statement from each subcontractor, if any, must be appended to the Transmittal Letter signed by an individual authorized to legally bind the subcontractor and stating:

- The general scope of work to be performed by the subcontractor
- The subcontractor's willingness to perform the work indicated
- That the subcontractor does not discriminate in its employment practices with regard to race,
color, religion, age, sex, marital status, political affiliation, national origin, or handicap

4.3 State Requirement

In compliance with Minnesota Statutes 16.B.167, the availability of this contracting opportunity is being offered to state employees. We will evaluate the responses of any state employee along with other responses to the Request for Proposal.
5. MnLINK FRAMEWORK

The intent of section 1.2 is to describe a vision of the MnLINK system. The basic configuration is envisioned to be:

- two initial System X servers, one at University of Minnesota serving all of its campuses, and one at Mankato State University, serving other all other libraries using System X;
- one Union Catalog server, containing all of the records of the MnLINK participating libraries, located at Mankato State University;
- one Gateway server, providing authentication and Interlibrary Loan/Document Delivery services, located at Mankato State University. (The ILL/DD functions may be on a separate server.).

The RFP authors believe that this is the most likely configuration for the MnLINK system. VENDORS MUST FRAME AT LEAST ONE OF THEIR RESPONSES WITHIN THIS CONFIGURATION and MUST size their servers given the data in Appendix A. Vendors are encouraged, however, to also submit additional, alternate configuration(s) which, in the vendor’s estimate, have advantages to MnLINK over the required configuration.

5.1 Technical Directions

MnLINK is committed to the use of national and international standards and, through the MINITEX/LDS Joint Standards Review Task Force, actively participates in the monitoring of standards relating to libraries and information. MnLINK prefers to avoid use of proprietary standards which do not have strong marketplace and professional support. Vendors recommending use of proprietary products should be able to demonstrate a wide range of application in suitable environments.

A further list of standards considered either critical or highly related to the implementation of MnLINK is set forth in this section and/or in Appendix F. If the vendor is not fully compliant with any of these at the time of response, the vendor should provide a "plan for compliance" which specifies the date by which the vendor will be fully compliant with each element of the standard not currently supported.

5.1.1. Open Systems/Standards

5.1.1.1. The system is expected to use common user interface standards. Screen scraping technology is not acceptable.

5.1.1.2. **IT IS OF PRIMARY IMPORTANCE** that the system have a fully-functional integrated extension to HTTP or its successor technology in order to use a commonly-used Web or successor technology browser as a "universal client" when necessary, as in remote access via the Internet to the database(s) outside of the physical libraries.

5.1.1.3. The system is expected to be object-oriented or object-based.

5.1.1.4. The system is expected to interface with common applications development
platforms/tools.

5.1.1.5. The system is expected to be DCE (Distributed Computing Environment) compliant.

5.1.1.6. **SPECIFY platforms supported for your products and indicate which platforms would be most likely to support the loads and functionality desired by the participating libraries with an appropriate response time.**

5.1.1.7. If the mainframe is a host server for the system, the interface is expected to be based upon standards or, where standards are lacking, commonly accepted protocols, for access to that server for all purposes.

### 5.1.2 Client Server Architecture

5.1.2.1. The system is expected to support an open client/server architecture, which is portable and interoperable and which depends upon standards or, where standards are lacking, commonly accepted practices. Although the architecture is to be defined by the system vendor, we anticipate that the proposed system will put highly shared activities and resource-intensive activities on application servers and data access activities on database servers (using multi-tier architecture) while placing presentation activities and highly customizable activities on the client. The system is expected to redistribute data or logic from client to server, between clients, and among servers. It is expected to redistribute client upgrades from a central server or to run them from a network server.

5.1.2.2. Staff in-library clients are expected to be compatible with the latest version of Windows plus the immediately preceding release of Windows, or be Web- (or successor technology) based.

5.1.2.3. If a special client is provided for in-library public use, it is expected to be compatible with the latest version of Windows plus the immediately preceding release of Windows, or be Web- (or successor technology) based.

5.1.2.4. **IT IS OF PRIMARY IMPORTANCE** that for public uses originating outside of a library there be a fully functional Web interface accessible with a standard Web or successor technology browser. In practice, either this client or the one described in 5.1.2.3 may be used within or external to the participating libraries depending upon local choice.

5.1.2.5. **SPECIFY what Macintosh clients the system supports.**

5.1.2.6. The system is expected to support at least one client which can be used in dial-access situations.

5.1.2.7. **IT IS OF PRIMARY IMPORTANCE** that the system support at least one client that is compatible with standard adaptation products used by individuals covered by the Americans with Disabilities Act.

5.1.2.8. The system is expected to allow a user the choice of skill level for interaction.
5.1.2.9. The system is expected to support clients which accommodate users who do not read English, but who read languages other than English.

5.1.2.10. The user workstation is expected to be either a graphically oriented microcomputer workstation or a network computer with graphical Web browsing capability.

5.1.2.11. **DESCRIBE** minimum hardware requirements and software requirements for the desktop computers to be used as devices for the system.

### 5.1.3. Database

5.1.3.1. A highly-supported relational, or object-oriented, or highly supported database management system is expected to be part of the system.

5.1.3.2. The system is expected to have the capability to load the bibliographic, authority, circulation item, patron, acquisition, and serial records of the libraries which will be using the integrated library system.

5.1.3.3. The system is expected to have the capability of loading the records both individual library by library or as groups of libraries.

5.1.3.4. The system is expected to have the capability of removing records from the integrated library system both individual library by library or as groups of libraries at no additional cost or programming support to MnLINK. This will enable libraries, if they decide to move from the integrated library system to another system, to remove their records from all system databases.

### 5.1.4 Network Connections

5.1.4.1. The system is expected to operate within a full TCP/IP environment, including Telnet, FTP, and SMTP. Connections are required to backbone networks and to local area network infrastructures for the system's online data communications with data input and output devices, including computers, printers, and those devices that are capable of displaying and inputting the full ALA character set or the UNICODE set.

5.1.4.2. It is expected to be possible to use desktop computers, communicating with the central site(s) hardware via the network infrastructure, as devices for input and display for the system.

### 5.1.5 Security and Backup

5.1.5.1. The data security plans for MnLINK are to provide access to secured data, databases, and services through implementation of authentication technology that will ensure secure computing environments for customers and institutional data. The system is expected to support this option. **DESCRIBE** how the system provides security and authentication other than through the use of the patron file.

5.1.5.2. The system is expected to provide authentication and account profile systems to limit access to certain records, fields, and functions to authorized personnel or workstations. The system is expected to accommodate multiple levels of security and allow for different levels of authorization
to be associated with the same staff person for different subsystems.

5.1.5.3. **SPECIFY how the system accomplishes each of the following tasks:**

a. Protects the central files and databases from erasure or damage due to accident, error, or through deliberate action

b. Provides continuous backup

c. Provides for restoration of all transactions following accidental or deliberate file damage

d. Provides for forward recovery of all transactions from a specified point following correction of damage

e. Provides rollback (also known as transaction backout) for failed or interrupted transactions

5.1.5.4. **DESCRIBE how the system will protect system users who have entered secure information in order to protect that information when moving from one function to another or closing a work session.**

5.1.5.5. The client software is expected to be able to prevent user access to secured files and records. **If the system does not provide for this protection, SPECIFY how this protection might be assured.**

5.1.6. Imaging Directions

The system is expected to support integration with local imaging systems and to retrieve and display images from these links. Links may be in the bibliographic record (856 field) and in circulation item records (URL field).

5.1.7. Interactive Voice Response Directions

The system, if it provides interactive voice response capabilities, is expected to interact with local voice response systems.

5.1.8. System Software

5.1.8.1. **DESCRIBE how user participation is handled as part of the system's development process.** In addition to describing the development model, SPECIFY the methods used to receive, assess, and respond to input from participating libraries. What options do libraries have if the vendor chooses not to implement requested enhancements?

5.1.8.2. Does the vendor have experience in partnering with user libraries in development and maintenance processes? **If so, SPECIFY the nature and outcomes of such partnerships and provide references from the partner organization(s), so that MnLINK governing body may contact them.**
5.1.9. Other Information Directions
The vendor is expected to work with local institutions and libraries to help them integrate the vendor’s product (data and business objects) with full functionality into interfaces and products either locally developed or provided by other parties. Examples of such ventures are: self-charge equipment provided by third party vendors; the State of Minnesota North Star project to provide government information and services to the residents of the state; and the University of Minnesota “Web glue” project to provide enterprise system information to the users in a single Web interface.

5.2 Functional Directions
The conceptual model for this system is expected to include the following features:

a. All transactions occur in real time;
b. Actions completed in one function inform or create actions in another function;
c. Data is entered once and can be operated on for multiple applications.

5.2.1 Information Interchange
5.2.1.1. **IT IS OF PRIMARY IMPORTANCE** that the system comply with ANSI/NISO Z39.2-1994 Information Interchange Format or the current version.

5.2.1.2. **IT IS OF PRIMARY IMPORTANCE** that the system be able to accept as input from any source bibliographic, authority and holdings records that are in the record structure format defined by the latest version of Z39.2 without loss of content or content designation.

5.2.1.3. **IT IS OF PRIMARY IMPORTANCE** that the system be able to export bibliographic, authority and holdings records in a structure compliant with the latest version of Z39.2 without loss of content or content designation.

5.2.1.4. **IT IS OF PRIMARY IMPORTANCE** that the system comply with the USMARC formats for authority, bibliographic, holdings, classification, and community information data.

5.2.1.5. **IT IS OF PRIMARY IMPORTANCE** that the system be able to accept as input, to output, to display, and to support online editing of all tags, indicators, subfield codes, fixed field data elements and coded data elements defined in the latest release of the USMARC Format for Bibliographic Data in all formats.

5.2.1.6. **IT IS OF PRIMARY IMPORTANCE** that the system be able to accept as input, to output, to display, and to support online editing of all tags, indicators, subfield codes, fixed field data elements and coded data elements defined in the latest release of the USMARC Format for Authority Data for names and subject headings.

5.2.1.7. **IT IS OF PRIMARY IMPORTANCE** that the system be able to accept as input, to output, to display, and to support online editing of all tags, indicators, subfield codes, fixed field data elements and coded data elements defined in the latest release of the USMARC Format for Holdings Data.

5.2.1.8. **IT IS OF PRIMARY IMPORTANCE** that the system be able to accept as input, to
output, to display, and to support online editing of all tags, indicators, subfield codes, fixed field data elements and coded data elements defined in the latest release of the USMARC Format for Community Information.

5.2.1.9. The system is expected to be able to accept as input, to output, to display, and to support online editing of all tags, indicators, subfield codes, fixed field data elements and coded data elements defined in the latest release of the USMARC Format for Classification Data.

5.2.1.10. It is expected that the curriculum-enhanced MARC format will also be supported.

5.2.1.11. **IT IS OF PRIMARY IMPORTANCE** that the system support either the ANSI X12 EDI transaction subsets developed for business transactions with the serials industry and other library implementations or support, as appropriate and approved by the library community, the equivalent EDIFACT functions.

5.2.1.12. The system is expected to support the NISO standard Z39.76-1996 for data elements for binding of library materials to enable the system to communicate with bindery automated systems that support this standard.

5.2.1.13. The system is expected to support the UNICODE Worldwide Character Standard, Version 1.0, and new versions as approved.

5.2.1.14. The system is expected to be able to import and export records via FTP or other electronic transport.

### 5.2.2. Information Retrieval and Display

5.2.2.1. **IT IS OF PRIMARY IMPORTANCE** that the system comply with ANSI/NISO Z39.50-1995 Information Retrieval (Z39.50): Application Service Definition and Protocol Specification and **IT IS OF PRIMARY IMPORTANCE** that the system demonstrate such compliance by interoperating over a TCP/IP communications link with client software that is Z39.50-1995 compliant and that was not produced by the vendor of the system. "Interoperating" is defined as responding to a search request from the client software for an item or items known to be in the target database by returning information about the result set and responding to a "present records" request from the client software by returning records. (See also Appendix F.)

5.2.2.2. **IT IS OF PRIMARY IMPORTANCE** that the system support searching and information retrieval of bibliographic data, as currently defined in Z39.50-1995 including Extended Services. It is expected that the system will support full-text documents, images and multimedia as definitions develop in these areas. (See also Appendix F.)

5.2.2.3. The system is expected to allow local (i.e., consortia and individual library) customization of the arrangement of data elements and order of display elements for all record displays.

5.2.2.4. The system is expected to support multiple display formats. An authorized staff person should be able to set the fields to be included and to configure their order of display for a local
5.2.5. The system is expected to display in the OPAC a bibliographic record, its holdings data, and any associated status information, including order, processing, circulation, reserve, lost and missing, etc.

5.2.6. Given appropriate terminal hardware and software, IT IS OF PRIMARY IMPORTANCE that it is possible to import, export, store, display (in proper relationship to other displayed characters), and edit all diacritical marks and other characters that comprise the ALA character set. SPECIFY whether any special terminal hardware or software is required for this capability, bearing in mind the mandatory requirement for TCP/IP network. If a system has this capability, it is assumed that the bid price includes the cost of any special software that might be required.

5.2.7. Given appropriate terminal hardware and software, the system is expected to be able to import, export, store, display (in proper relationship to other displayed characters), and edit all diacritical marks and other characters that comprise the UNICODE Worldwide Character Standard, Version 1 and new versions as approved. SPECIFY whether any special terminal hardware or software is required for this capability, bearing in mind the mandatory requirement for TCP/IP network. If a system has this capability, it is assumed that the bid price includes the cost of any special software that might be required.

5.2.3. Record Creation and Maintenance
5.2.3.1. All record creation and maintenance transactions are expected to occur in real time.

5.2.3.2. The system is expected to support the creation of a bibliographic record, whether it is created online or as a result of data transfer from an external source, to which an order record can be associated.

5.2.3.3. The system is expected to store and maintain for each library its bibliographic data, including all institution specific data in USMARC format, and to display that information to each library’s users on demand in real time.

Most System X libraries wish to preserve existing local notes and headings as well as holdings and to have the ability to continue to handle such information on an individual library basis. They also wish to have the ability to display to their patrons only the notes, headings, and call numbers that are particular to their library.

DESCRIBE how this will be accomplished, including but not limited to answers to the following questions. What are the capabilities of the system for maintaining local notes, headings, and holdings? INCLUDE number and size limits. How does the system handle indexing library-specific information? How does the system handle displaying library-specific information?

5.2.3.4. The acquisitions subsystem of the system is expected to utilize the system’s bibliographic database and not require the creation or maintenance of a separate file of bibliographic records.
5.2.3.5. The system is expected to be able to receive and process electronic transmission of acquisitions data, including approval plan information.

5.2.3.6. The system is expected to store, perform correct calculations, and display dates in the 20th and 21st centuries.

5.2.3.7. It is expected to be possible to copy a single bibliographic USMARC record from one library to another.

5.2.3.8. The system is expected to dynamically delete or undelete bibliographic records from an institution.

5.2.3.9. The system is expected to maintain a history of edits for each library's data.

5.2.3.10. The system is expected to edit and produce spine and pocket labels, both single and multiples, in formats compatible with local practice.

5.2.4. Interlibrary Loan and Document Delivery

5.2.4.1. IT IS OF PRIMARY IMPORTANCE that the system support all established interlibrary loan standards, including ANSI/NISO Z39.63-1989 Interlibrary Loan Data Elements and ISO Interlibrary Loan Standard Protocols 10160/10161, and IT IS OF PRIMARY IMPORTANCE that the system comply with developing standards as approved, including Z39.63-199x Interlibrary Loan Data Elements (revision of ANSI/NISO Z39.63-1989).

5.2.4.2. The user request interface is expected to display an institution-specified copyright compliance notice before allowing the request for a copy to be made.

5.2.5. Item ID Numbers and Patron ID Numbers

5.2.5.1. IT IS OF PRIMARY IMPORTANCE that the system be able to utilize any library's existing item identification numbers, including the check-digit algorithm inherent in those numbers. Compliance requires agreement to develop the capability to calculate the check digit for both CODABAR and Code 39. (See Appendix G for specifications of item identification numbers and the check-digit algorithm for modulus 36 for Code 39.)

5.2.5.2. The system is expected to be able to distinguish and use multiple bar code numbers (i.e. CODABAR and Code 39) at the same terminal in the same session.

5.2.5.3. The system is expected to prevent duplicate item identification numbers from being entered into the database.

5.2.5.4. IT IS OF PRIMARY IMPORTANCE that the system be able to utilize existing patron identification numbers. Compliance requires agreement to develop the capability to use the existing patron identification numbers. (See Appendix G for specifications of participating libraries' patron identification numbers and special card specifications.)
5.2.5.5. The system is expected to prevent duplicate patron identification numbers from being entered into the patron database.

5.2.6. Call Numbers
5.2.6.1. The system is expected to be able to store, display and sort correctly LC call numbers, NLM call numbers, Dewey Decimal call numbers, UN document numbers, SuDocs numbers, and local call numbers. **DESCRIBE how this will be done to allow online shelflisting and efficient searching.**

5.2.6.2. The system is expected to have the ability to store and display different call numbers for the same bibliographic item, both for a single location and for different locations. It is not expected to be necessary to store multiple bibliographic records for the same bibliographic item in order to satisfy this requirement.

5.2.7. Subject Headings
5.2.7.1. **IT IS OF PRIMARY IMPORTANCE** that the system accept, support and maintain storage, retrieval, display and editing distinctions and capabilities for Library of Congress Subject Headings (LCSH), Medical Subject Headings (MeSH), SEAR’s, Children's Subject Headings, and multiple local subject headings constructed according to accepted patterns.

5.2.8. Database Integrity
5.2.8.1. The system is expected to prevent more than one staff person from being able to modify the same record simultaneously.

5.2.8.2. It is expected to be possible to block staff functions for unauthorized persons from a dedicated public access terminal or from a remote public access session.

5.2.9 Draft Standards
The vendor is expected to demonstrate a commitment to comply with the following standards when each is approved by the library community. **DESCRIBE any activity that you have performed in this regard.**

5.2.9.1. Z39.71-199X (Holding Statements for Bibliographic Items) defines data elements, requirements and rules for the recording of holdings statements for serial and non-serial material in all formats except electronic resources that do not exist as physical items.

5.2.9.2. **IT IS OF PRIMARY IMPORTANCE** that Z39.69-199x (Patron Record Data Elements) defines the data elements that be included in a library's circulation system to create a library patron record.

5.2.9.3. Z39.70-199x (Format for Circulation Transactions) defines the format for data elements to be used when transferring transaction file data between core data files (bibliographic information, holdings descriptions, and patron) and transactions files (circulation information, patron accounts, patron requests for unavailable items, and scheduled reservations or bookings).
6. SYSTEM X REQUIREMENTS AND CAPABILITIES

The following sections describe in detail the requirements for the System X component of the MnLINK system. In addition to providing complete automated library services to System X participants, the System X software may be used to maintain a physical union catalog of all MnLINK system participants.

It is anticipated that the System X software will initially be loaded on two servers, one serving the University of Minnesota and the other serving the remaining System X participants. VENDORS MUST RESPOND TO THIS CONFIGURATION. Vendors may also submit additional, alternate configuration(s) which, in the vendor’s estimate, have advantages to the MnLINK system over the required configuration. Any such additional proposals MUST indicate whether the proposed configuration is available now or at what point in the future it will be available.

The MnLINK configuration includes an ILL/DD system on the Gateway that will be available to all MnLINK libraries, including those that utilize the System X software. The System X vendor is expected to provide an interface to the Gateway ILL/DD system in order to facilitate certain circulation and ILL/DD functions (described in sections 6.3.2, 6.3.9, 6.3.10, 6.3.11, and 8.5). It is anticipated that the successful vendors for both System X and the Gateway components of the MnLINK system will commit to working together to develop the necessary interfaces between the two systems.

In addition to access to the Gateway ILL/DD system, System X participants may choose to utilize ILL/DD functions available through their System X software. For this reason, the RFP includes ILL/DD functionality in both the System X and Gateway sections.

The System X libraries operate autonomously with respect to the acquisition, circulation, and cataloging of library materials. In general, it is desirable that each autonomous unit be able to:

- Establish its own operating policies and procedures through independent profiles;
- Control use of the integrated library system through independent password and authorization functionality;
- Control access to certain files through independent password and authorization functionality;
- Display its own edited version of the bibliographic record;
- Handle and display different call numbers for the same bibliographic item, both for a single location and for different locations.
At the same time, it is mandatory that the catalog database (bibliographic and holdings and authority records) for each System X server function as an integrated catalog for all libraries on that server. In other words, it is important that the system function in such a way that each library can establish its own operating policies and can control access to those files involving internal library functions. Yet it is essential that the information concerning the holdings and the circulation status of those holdings (of the libraries sharing a server) be easily accessible and visible from any workstation that is accessing the proposed system, regardless of its location.

**It is of primary importance that** the system be a complete system, which is defined as the applications software, software installation, database loaders, training, documentation, maintenance, and ongoing software enhancements necessary to provide easy-to-use online real-time integrated automated support. The following functions should be part of the integrated system:

- online public access catalogs
- MnLINK union catalog
- authority control
- circulation control, including both electronic and traditional reserve services, and circulation between System X libraries
- database maintenance and cataloging
- acquisitions
- serials management
- integration with MULS (the Minnesota Union List of Serials)
- binding control
- fiscal management
- interlibrary loan system
- inventory control
- management information
- integration with other automated systems at the local library level
- linkages with other bibliographic databases and full-text, numerical, image, and multimedia databases
- booking system
- interfaces with other vendors’ systems

A system that uses PC-based software for a function, such as acquisitions, and updates the catalog database by means of periodic uploads of the PC files will not comply with this requirement.

### 6.1 General Capabilities

In this section, *specify* which items are applied on a system-wide basis only and which can be applied at the local library level.

#### 6.1.1 Security

6.1.1.1. The system is expected to include a flexible multilevel staff person authorization control capability that:

a. Makes it possible for an appropriately authorized staff person to examine and alter the authorization levels for other staff persons in a group of libraries or a single library without
needing the assistance or involvement of the vendor or central system management personnel

b. Allows each library to establish and maintain a separate set of passwords and authorized functions

c. Makes it impossible for a staff person in one library in a group or consortium to examine or alter authorization levels for staff persons in different libraries, excluding staff members with authorized administrative or functional responsibility

d. Makes it optional to enable or prevent a staff person in one processing unit from being able to alter or delete a bibliographic record, holdings record, acquisitions record, serials control record, and circulation record for an item that is located in a different library

e. Makes it possible to restrict a staff person to the ability to alter or delete records from a single file, e.g., holdings records;

f. Makes it possible to limit authority for work on authority records, bibliographic records, holdings records, acquisitions record maintenance, serials control records, circulation records and ILL records by library or by group of libraries.

6.1.1.2. In addition to password control for the library application software, the system's operating system is expected to prevent unauthorized access (either external or internal access) to system management functions and files. **DESCRIBE how this is handled in the system.**

6.1.1.3. In the event of a hardware or software failure that damages one or more system files, the system is expected to provide a method of restoring the system database to its state of existence immediately prior to the event that caused the file damage.

6.1.1.4. The system is expected to include capabilities to control and manage large-scale printing operations so that data communication problems will not result in the loss of output and that output will not have to be regenerated, even when the printer is remote from the central site computer.

6.1.2. Profiling
6.1.2.1. System parameters and options are expected to be available interactively for addition, deletion, and change by an authorized local system administrator or designated assistant(s). These include but are not limited to:
- Operator security authorizations
- OPAC menu and screen text
- OPAC record display formats
- Search command parameters
- Record export formats
- Location names and parameters
- Acquisitions and cataloging parameters
- Circulation policies and calendars
SPECIFY any additional parameters or options available in the system.

6.1.2.2. It is expected that online tables will be designed to expedite efficient and consistent data entry. The table structure is expected to:
   a. Support queries on individual table values or a combination of values
   b. Allow for a global replacement of a specific value in individual profiles
   c. Allow the system administrator to copy or point to an existing profile
   d. Provide tools or reports that assist the system administrator to maintain consistency in a set of profiles.

6.1.3. Flexibility
6.1.3.1. The system is expected to exhibit consistent and uniform screen design and methodology of using the various modules and functions in the system along with flexibility and ease of use.

6.1.3.2. Consistent with security considerations, the system is expected to allow library staff members to move easily from function to function and not lose work in progress.

6.1.3.3. The system is expected to allow staff members to toggle easily from staff mode to public mode and from public mode to staff mode and between modules while displaying the same record.

6.1.3.4. Consistent with security considerations, the system is expected to make it possible to search any indexed record field while performing any function in any place within the system.

6.1.3.5. The system is expected to be available 24 hours per day 7 days per week with at least 99+ % reliability, and it is not expected to be necessary to make the system unavailable to public and staff persons nor should response be degraded when performing such routine system management activities as file backups, file loading, and notice and report production and printing.

6.1.3.6. When the processing required for an online transaction exceeds five seconds the system is expected to display some kind of information or indication that transaction processing is underway.

6.1.3.7. The system is expected to interrupt a long search with options to revise, see partial results, continue, abandon the search, etc.

6.1.3.8. In displays involving long lists of records, such as a serials title with a large number of item records, the system is expected to navigate within the list easily and randomly, to reach the beginning or end of the list with a single transaction, and to display any specific records in the list with a single transaction.

6.1.3.9. The system is expected to make it possible, without having to reload the entire catalog database, to add bibliographic records and/or holdings records for a library that was not represented in the database when it was originally created.

6.1.3.10. When adding bibliographic records and/or holdings for a new library, the system is expected to exist to integrate those bibliographic records and/or holdings with those of other
libraries or to load them as a separately searchable database.

6.1.3.11. The system is expected to create a new index in a file without having to reload the file.

6.1.3.12. The system is expected to support dynamic indexing of all records including unlinked records.

6.1.3.13. The system is expected to add indexes, add data elements to existing indexes, and delete data elements from existing indexes, without completely regenerating indexes.

6.1.3.14. All search methodologies are expected to be available in both public and staff mode subject to security requirements.

6.1.3.15. The system is expected to allow individual libraries to decide which system modules to implement and when to implement them.

6.1.4. Reporting (See also Section 6.7--Management Information and Reporting)

6.1.4.1. The system is expected to include a report generator that features:
   a. Selection of any field from any system file for reporting
   b. Use of Boolean logic in selection criteria
   c. Reporting of data from both fixed and variable fields
   d. Sorting for all fields
   e. Provision for totals in detail or in summary
   f. Combining in one report information from more than one file
   g. Relating of current activity to activity from previous period
   h. Retention of generated statistical information and ability to use such generated information in subsequent reports
   i. Retention of report formats for later recall by user interactive editing facility
   j. Reports in electronic and print output formats, any of which can be customized and/or formatted for further analysis including ASCII, commonly accepted spreadsheets and database formats
   k. Reports from different time periods with capability to then have the information compared and related.

6.1.4.2. The report generator is expected to feature an easy-to-use interface for designing and formatting reports and be designed in such a way that it can be used by library staff with a minimum of training.

6.1.4.3. The system is expected to be capable of having certain reports produced automatically on a library specified schedule.

6.1.4.4. The system is expected to have the capability to print transaction-related output, such as due date slips or save shelf slips, and management reports on a printer located in the library where the transaction is performed or from which the report is requested or generated.
6.1.4.5. The system is expected to maintain a transaction log, which can be analyzed, that records the date and time of each transaction on the system, the workstation for which the transaction was processed, the type of transaction processed, and the text of the transaction if consistent with a time period specified by a library. These reports may be generated by authorized staff at the local library.

6.1.4.6. The system is expected to make it possible to produce an annual report of library-defined statistics.

6.1.5. Customizing
6.1.5.1. The system is expected to make it possible to customize system-supplied error messages.

6.1.5.2. The system is expected to make it possible for consortia and local libraries to customize the information displayed by the help system.

6.1.5.3. The system is expected to allow easy local modification of all user prompts, error messages, help screens, instructional screens, and tutorials in the OPAC.

6.1.5.4. The system is expected to allow staff members to customize the attributes of their sessions including default search file and institution, file access authorizations, record display format, print station, type of interface, and terminal settings such as timeout periods.

6.1.5.5. The system is expected to allow individual users to customize a session-based personal profile including default search file and institution, record display format, print/delivery station, type of interface, and terminal settings.

6.1.6. Patron Accounts Receivable
6.1.6.1. The system is expected to provide the means of accounting for amounts due from patrons for various charges, such as fines, interlibrary loans, and service fees.

6.1.6.2. The system is expected to provide for the review of open accounts receivable balances and to maintain an accurate and detailed record of open invoices by patron.

6.1.6.3. The system is expected to allow authorized staff to add, adjust, or cancel charges to patron accounts.

6.1.6.4. The system is expected to provide for retention and archiving of user account records for ten years; non-current records may be archived to tape.

6.1.6.5. The system is expected to provide a means of billing the patron for services using a price list.

6.1.6.6. The system is expected to make it possible to generate and produce user-specific reports of credits and debits by library and by type of debit and credit with appropriate aggregation of amounts.
6.1.6.7. The system is expected to provide data fields that can be used to maintain an audit trail for receipting cash.

6.1.6.8. The system is expected to interface financial transactions with other financial transaction and accounting systems at participating libraries.

6.1.6.9. The system is expected to maintain a patron file for credit, billings, payment history, terms, and account status.

6.2 Online Public Access Catalog
This section describes system capabilities having to do with searching for and displaying records.

**Describe** the capabilities of the system to meet the following searching components:

a. A spell checking feature to identify incorrectly spelled words and give suggestions to other possible spellings. This feature should be subject to be enabled/disabled at the user's option.

b. Users' ability to enter searches in question format through the system's natural language ability. This feature should be subject to be enabled/disabled at the user's option.

c. Thesaurus feature incorporated in the subject/subject keyword headings searches. This feature should be subject to be enabled/disabled at the user's option.

d. Users' ability to search at multi-level knowledge levels. Users should have the ability to choose options (beginner, intermediate, advanced) at any time during the search with screens and commands to adjust accordingly.

e. An online public access catalog workstation which is designed for use by children.

6.2.1 Searching
6.2.1.1. Regardless of the file structure used by the system, the online catalog is expected to allow records for all libraries in any group or consortium to be retrieved in a single search.

6.2.1.2. The system is expected to maintain a search history, with numbered sets that may be used in later searches.

6.2.1.3. Each set in a search history is expected to indicate the number of hits associated with it.

6.2.1.4. The system is expected to make it possible to limit a search in various ways (e.g., by date or range of dates, language, country of publication, and type of material). This is expected to include the capability to limit by more than one parameter (e.g., language and date) as well as the capability to specify more than one value for a parameter (e.g., French or English).

6.2.1.5. The system is expected to provide clear user prompts at each stage in a search.

6.2.1.6. System-supplied error messages are expected to be clear and suggest appropriate action or alternatives instead of simply identifying the problem.

6.2.1.7. The system is expected to provide a context-sensitive help system for all functional modules of the system.
6.2.1.8. The system is expected to provide an online tutorial on how to use the online public access catalog. It is expected to also allow for seamless integration of locally developed tutorials.

6.2.1.9. The system is expected to provide an optimal interface that permits the user to choose from among multiple language interfaces. **Specify languages supported or the process by which multiple language interfaces are supported.**

6.2.1.10. The system is expected to allow the user to use search commands to bypass a series of prompts or menus.

6.2.1.11. The fields and subfields to be indexed for all types of searching are expected to be locally configurable.

6.2.1.12. A keyword search is expected to cover all the fields determined in the local configuration, but it is expected that the option to qualify the search to a specific field in a simple manner will be available.

6.2.1.13. The system is expected to support right-hand and internal truncation of keywords.

6.2.1.14. The stop word list for keyword searching is expected to be configurable and changeable by consortia or local libraries.

6.2.1.15. When a stop word is used in a search, the system is expected to alert the user with an appropriate message.

6.2.1.16. Keyword searches are expected to be able to use Boolean operators (AND, OR, NOT).

6.2.1.17. Keyword searches are expected to be able to use positional operators (e.g., ADJ, NEAR, WITH).

6.2.1.18. The default operator for keyword searching is expected to be locally configurable.

6.2.1.19. Searching is expected to incorporate the Soundex algorithm and alternatives in order to overcome spelling variations in names.

6.2.1.20. All indexes are expected to be browsable in either direction, with a display that shows the number of hits associated with each term/phrase.

6.2.1.21. The system is expected to perform a (optionally truncated) phrase search for names, subjects, series, and titles.

6.2.1.22. The system is expected to edit previous search arguments, and submit them without having to rekey them.

6.2.1.23. The system is expected to perform dictionary searches that combine all the available
phrase searches (i.e., title, author, etc.).

6.2.1.24. When a search retrieves no records, the system is expected to display a browse screen with the user's search argument in its proper alphabetical location in the index, is expected to alert the user to possible causes of this "no" result, and suggest possible courses of action.

6.2.1.25. The system is expected to make it easy to define by consortia or local library groups of specific locations that can be efficiently searched.

6.2.1.26. The system is expected to allow local libraries to define a specific library or group of libraries as the default to be searched or excluded at a given terminal, but the system is expected to allow the user to easily change this default.

6.2.1.27. When a search finds no holdings in the location or libraries being searched, the system is expected to inform the user of this, and offer suggestions of additional locations or libraries that may be searched.

6.2.1.28. When a search finds no holdings in the location(s) being searched, the system is expected to make it possible to repeat the search in additional location(s) without rekeying it and without "cut & paste".

6.2.1.29. When displaying a list of headings, the system is expected to retrieve bibliographic records for more than one heading with a single transaction.

6.2.1.30. When searching or browsing, if a user uses an unauthorized form of entry, as defined by the authority file, the system is expected to inform the user and offer the option to search using the authorized term without rekeying and without "cut & paste".

6.2.1.31. The system is expected to make it possible for a user to display related headings when searching.

6.2.1.32. The system is expected to allow use of the same search argument in multiple databases without having to rekey the search argument and without "cut & paste".

6.2.1.33. When a search finds no holdings in one database, the system is expected to make it possible to use the same search argument in another database(s) without rekeying it and without "cut & paste".

6.2.1.34. The system is expected to establish no limit on the number of records that may be retrieved for any given search, but a limit can be set locally on the number that will be displayed, sorted, or printed. The system is expected to allow authorized staff to override this display limit for staff or users.

6.2.1.35. When a locally-determined display limit is exceeded, the system is expected to ensure that the user receive an appropriate and meaningful message giving suggestions as to how to narrow
the search.

6.2.1.36. Searches are expected to be possible using various standard numbers (including ISSN, ISBN, LCCN), call number, SuDoc number, record number, OCLC number, RLIN number, and music publisher number.

6.2.1.37. The system is expected to easily permit use of part of a displayed record (e.g., subject, author, etc.) as the search argument of the next search.

6.2.1.38. When an Internet URL is part of the displayed record the system is expected to directly retrieve the item referred to by that URL.

6.2.1.39. When a record has long, complex holdings, the system is expected to make it possible to move through this holdings information in a flexible, efficient manner.

6.2.1.40. Users are expected to be able to use the system to send to library staff electronic requests for service, e.g., a reference question, an interlibrary loan request, or a document delivery request.

6.2.1.41. The user interface is expected to provide a reminder to the user to sign out once all patron-initiated functions, transactions, requests, etc. are placed.

6.2.1.42. The system is expected to provide the user with a list of options for limiting the search when excessive numbers of records are retrieved in a search.

6.2.1.43. The system is expected to allow nested search sets.

6.2.2. Displaying and Manipulating Output

**Describe** the capability of the system to:

a. Implement a relevancy ranking feature as a “sort” option when displaying search results.

b. Provide a graphical call number locator which would offer the option to view a map of the library’s location of the particular item.

6.2.2.1. The user is expected to be able to select an alternate display format or set a new default display for a searching session.

6.2.2.2. Displays are expected to be clearly labeled, with the text of the labels determined locally. The MARC protocols for tags and indicators are expected to determine what is encompassed by each label.

6.2.2.3. Any displayed list of headings is expected to indicate the number of bibliographic records associated with each heading.

6.2.2.4. The system is expected to display, add and configure text for printing; and print, download, or E-mail any specific record, group of records or full text. This is expected to include the capability to mark specific records for action and the ability to specify any of several formats,
e.g., EndNotes, Procite, MARC, etc.

6.2.2.5. The system is expected to make it easy for users to name individual print jobs and route them to a specific networked printer.

6.2.2.6. The system is expected to be able to sort search results by any of a number of fields.

6.2.2.7. The system is expected to allow local options to sort items for display.

6.2.2.8. The system is expected to display multiple items (for example, copies in different locations of the same library) on a single screen.

6.2.2.9. The system is expected to provide receipt information for individual current issues of serials in OPAC displays.

6.2.2.10. The system is expected to display status information whenever item level information is displayed; such statuses include "On Order," "In Process," "On Reserve," "Missing," "Charged Out," "At Bindery" or similar language.

6.2.2.11. When a given item is associated with more than one related bibliographic record (e.g., a serials record and an analytic record), changes in status and location for that item is expected to be displayed on each record.

6.2.2.12. The system is expected to give status information without requiring the user to move through multiple screens.

6.2.2.13. Displays for the status of "Charged Out" or "At Bindery" are expected to indicate the date the item is due back. For short-term loans (like "Reserves"), the system should also display the time an item is due.

6.2.2.14. A display of items with a status of "Missing" or "Lost" is expected to indicate the date that status was assigned.

6.2.2.15. In displays for items charged out, the system is expected to provide an option for the library to supply a note instead of a due date.

6.2.2.16. In displays for items charged out, the system is expected to show the number of recalls or holds for the item.

6.2.2.17. The system is expected to support the display of full-text documents in a variety of formats. **Specify formats supported.**

6.2.2.18. The system is expected to be able to search for and deliver non-print media, such as audio and video.
6.2.2.19. When full text is available for a citation, that information is expected to be clearly evident on the display screen.

6.2.2.20. The system is expected to have the capability to save the output of search sessions through e-mail or downloading.

6.2.2.21. The system is expected to have the capability to save the output of search sessions.

6.2.3. **OPAC as Navigator**

In addition to traditional OPAC functions, the system is expected to offer capabilities to access:

- multiple databases of citations to articles in periodicals;
- locally created bibliographic data;
- full-text documents;
- table of contents databases;
- images and multimedia;
- numeric and statistical data;
- and link them to local bibliographic records and holdings.

It is expected to also provide convenient gateways to servers outside the library.

a. **Describe** the capabilities of the system to meet these needs directly.

b. **Describe** the capabilities of the system to interface with appropriate products (e.g., Ovid, SilverPlatter, ERL, CD-ROM LANs, OCLC's FirstSearch) from other vendors.

c. **Describe** the capabilities of the system to link from: one function to another, e.g., from URL in a bibliographic record to an Internet site; from an article citation to local or consortia call numbers, holdings and circulation status holdings; and from a bibliographic citation to an image or multimedia.

d. **Describe** the capabilities of the system to search and display results from more than one database outside this system simultaneously.

e. **Describe** how users can search the local catalog, usenet groups, the Web, and/or journal databases from the same search statement at the same time.

6.2.4. **Locally-Mounted External Databases**

In addition to providing access to databases via gateways, the system is expected to support the loading, searching, displaying, and maintenance of locally-mounted external databases.

6.2.4.1. The system is expected to load records in MARC or BRS format from external sources.

6.2.4.2. The system is expected to provide the same search, display, and maintenance features for these databases as it provides for the online catalog.

6.2.4.3. The system is expected to build and maintain bridges from the external databases to the participating libraries local holdings.

6.2.4.4. The system is expected to load, store, and link full-text resources to external database citations.

6.2.5 **MnLINK Union Catalog**

In the future MnLINK participants may create a union catalog using System X software. The MnLINK union catalog is envisioned to contain all of the bibliographic records for all library holdings in the state of Minnesota, including both System X and Gateway participants of the
MnLINK system. It will be updated on a regular basis. It will be accessible to MnLINK participants via the Gateway using Z39.50 protocols. Current status and holdings information will be obtained through a Z39.50 search of the appropriate catalog(s) once the record of a desired item is identified by the user.

6.2.5.1. **DESCRIBE** the system’s capability to maintain such a physical union catalog, providing the same storage, search and display features as described for the server-based online public access catalog.

6.2.5.2. **DESCRIBE** the system’s capability to handle large numbers of records and large numbers of individual libraries.

6.3 Circulation
This section describes system capabilities that have to do with the circulation of library materials to library users, including the management of items placed on reserve; interlibrary loan and document delivery functions; and the management of items in remote storage.

6.3.1 Circulation Functions (Charge, Discharge, Holds, Saves, Recalls)
6.3.1.1. Within administrative unit constraints, it is expected to be possible for a user to charge or renew items from any library within a consortium. It is expected that a user will not need more than one patron I.D. to be able to charge items from other libraries within a consortium.

6.3.1.2. The system is expected to alert the staff person whenever an item that has a status of lost or missing appears in any online transaction.

6.3.1.3. The system is expected to make it possible for a patron, upon appropriate authentication to use a current ID card to charge out materials at OPAC computers or special purpose circulation terminals. If this option is supported, the system is expected to impose the same restrictions as other components of the circulation module. (The self-charge computer is expected to also demagnetize the present security devices imbedded in the items to be charged.) The system is expected to include a user interface that protects secure information input by the user once all charges are made. [Appendix G contains information related to patron ID schema and security devices for participating libraries.]

6.3.1.4. The system is expected to check the length of the identification number and its check digit when scanning identification numbers from the item during charge and discharge and from the patron during charge. If there is an error in the number, the reason for the error should be displayed to the person performing the charge or discharge. For example “The system has detected an error in the barcode, please swipe again.” or, after several tries, “The system has detected a fatal error in the barcode.” If users are permitted to charge out their materials, the message should include user options to remedy the error.

6.3.1.5. The system is expected to allow an unlimited number of items to be charged to any borrower I.D. Local libraries should be allowed to set specific limits if desired.
6.3.1.6. When the user ID is entered into the system, if the borrower has exceeded certain limits, such as number of items charged out, the amount of money owed, or the number of items overdue, the system is expected to alert the staff person or block the self-charge process during the course of the transaction.

6.3.1.7. The system is expected to allow authorized staff to manually restrict individual patron activities.

6.3.1.8. The system is expected to allow administrative units or local libraries to create and implement restrictions on patron records to alert the staff person to such restrictions during the course of the transaction.

6.3.1.9. The system is expected to make it possible for authorized staff to display and print out on a printer located at the workstation information such as lists: of items charged to a borrower with the option to display/print by location; borrower’s account summary; or holds and recalls placed by a borrower.

6.3.1.10. The system is expected to make it possible to display or print only selected information such as the items charged to a borrower that are overdue.

6.3.1.11. The system is expected to make it possible for a borrower, upon appropriate authentication, to display/print the status of all current activity associated with his/her patron ID.

6.3.1.12. The system is expected to make it possible to review online the list of uncataloged charged items and browse backwards and forwards in that list by title or other index points.

6.3.1.13. The system is expected to make it possible to use circulation functions to temporarily relocate an item to a different circulation unit or location, to circulate that item to borrowers from its temporary location, and to have the displayed location of the item reflect its temporary location. This function is expected to be available for use on individual items or for a range of call numbers.

6.3.1.14. The system is expected to make it possible to create temporary locations either at the item or title level.

6.3.1.15. When a given item is associated with more than one related bibliographic record (e.g., a serials record and an analytic record), changes in status and location for that item are expected to be made in all associated bibliographic records.

6.3.1.16. The system is expected to allow an authorized staff person to key in a borrower record at a circulation point.

6.3.1.17. The system is expected to perform a charge transaction, for example by choosing the borrower record from an index display or by checking the item out without exiting the borrower record, with a minimum of keying even when the borrower does not have an ID card. It should be an option at the local library or consortium level to require an appropriate ID.
6.3.1.18. The system is expected to complete a charge transaction easily and with a minimum of keying even when the item being charged is not in the catalog database.

6.3.1.19. The system is expected to maintain information concerning scheduled open hours for each participating library and consider this information when setting due dates, times for charged items, and in calculating overdue fines. It should be easy to override dates, times, and fines calculated via this function.

6.3.1.20. The system, when charging an item out, is expected to determine the due date/time for the item by considering the borrower category, the type of material, and the location of the item being charged as well as the time of the charge and the building schedule for the location from which the loan was made.

6.3.1.21. The system is expected to support a wide variety of loan periods, ranging from hourly through loan periods defined by a fixed date, such as the end of an academic semester or quarter, through indefinite.

6.3.1.22. The system is expected to allow different loan periods for different copies (i.e., overnight loan for one copy, 2-week loan for second copy) of the same work.

6.3.1.23. The system is expected to alert staff person, before completing a charge-out, to check for the presence of all pieces, if the number of pieces is more than one. Optimally the system is expected to display a description of the pieces (e.g., score and seven parts). This information is expected to also be provided during the check in function. The staff person is expected to be able to complete or cancel the check-out at his or her option. In addition the staff person is expected to be able to report the absence of a missing item as they complete the check-out.

6.3.1.24. During the course of a charge transaction, the system is expected to allow an authorized staff person to easily search for and display information from other system files, e.g. the list of items charged to the borrower or the borrower's fine record, without having to reenter the borrower's ID number or the item's ID number.

6.3.1.25. The system is expected to allow an authorized staff person to override any automatic system decisions, such as selection of due date, or to override blocking conditions that otherwise would prevent the charging of an item. This override is expected to not interfere with the automatic production of notices related to the transaction. The ability to override decisions and restrictions on patron activities should be protected through the level of staff authorization.

6.3.1.26. The system is expected to use a single transaction to renew all items, or a selected sub-set of such items, charged to an individual borrower or a specified ID associated with an individual borrower, from libraries within a single administrative unit or associated with a single processing unit.

6.3.1.27. The system is expected to allow borrowers, upon appropriate authentication, to renew materials themselves either at computers in the library or via remote access. The user interface is
expected to provide a reminder to the user to sign out once all renewals are made. In addition it should be possible for a borrower to renew items by telephone using interactive voice response via a touch-tone telephone.

6.3.1.28. When renewing items, the system is expected to report which items have been renewed and which may not be renewed because of restricting conditions or holds or recalls by other borrowers.

6.3.1.29. The system is expected to allow an authorized staff person to determine to whom an item is charged and, if the item is charged, the date, time and location of the charge and each renewal.

6.3.1.30. The system is expected to allow display of a list of items charged by any borrower or a specified proxy borrower ID.

6.3.1.31. The system is expected to calculate fines immediately and automatically upon the discharge or renewal of an item.

6.3.1.32. The system is expected to alert the staff person, before completing the discharge of an item, to check for the presence of all pieces if there is more than one. Optimally the system is expected to display a description of the pieces (e.g. score and seven parts). The staff person is expected to be able to cancel the discharge if an item is missing.

6.3.1.33. The system is expected to be able to flag an item, which lacks a part, with the appropriate status: missing, lost, or claims returned, and is expected to alert the staff to take appropriate action.

6.3.1.34. When a charged item is discharged in a location or circulation unit that is not its home location, the system is expected to be able, at the option of the administrative unit, to discharge the item and break the link between the borrower and the item borrowed.

6.3.1.35. When an item is discharged in a location or circulation unit that is not its home location, the system is expected to alert the staff person of the proper routing of the item and give the item in-transit status until it reaches its home location and is discharged there.

6.3.1.36. The system is expected to make it possible to place a hold or recall on an item that has a status of in-transit.

6.3.1.37. The system is expected to allow authorized staff to change the status of any item.

6.3.1.38. The system is expected to allow authorized staff to create a list of items that have been in transit for a given number of days.

6.3.1.39. The system is expected to alert the staff person based upon a library specific parameter when an uncataloged item is discharged.
6.3.1.40. The system is expected to provide the option to discharge an item automatically if a staff person attempts to charge the item to one borrower while it is still charged to a different borrower.

6.3.1.41. The system is expected to allow an authorized staff person to change the effective date of a discharge and to override the levying of fines for an overdue item at the time of the discharge transaction.

6.3.1.42. During a discharge transaction the system is expected to detect the existence of a hold or recall on an item and alert the staff person. The system is expected to allow optionally a hold shelf slip to be printed at the workstation and the borrower who placed the hold automatically notified that the item is available to be picked up.

6.3.1.43. The system is expected to track and be able to report to authorized staff regularly the use of overrides, identifying location, date, and time of the transaction.

6.3.1.44. The system is expected to allow an authorized staff person to force the hold or recall of a charged item at any time.

6.3.1.45. The system is expected to automatically notify a borrower when an item charged to that borrower has been recalled.

6.3.1.46. The system is expected to generate recall and hold notices automatically.

6.3.1.47. The system is expected to have the capability of automatically recalculating the due date for a charged item when it is recalled. The parameters governing the recalculation of the due date is expected to consider both the location of the material, type of material, and the borrower category.

6.3.1.48. The system is expected to allow authorized staff to determine which locations materials may be routed to for borrower pick up.

6.3.1.49. The system is expected to make it possible, at the option of the local library, to place a hold or recall on an item that is on the shelf, charged out, on-order, or in process and for the system to automatically set the pickup location based upon the user profile, to set the expiration date of the hold or recall, and to manage the hold or recall queue.

6.3.1.50. The system is expected to make it possible to provide a report that lists all items presently being held for pickup at a given location for the purposes of verifying that items have been routed properly to that location.

6.3.1.51. The system is expected to allow an authorized staff person to change the expiration date, the pickup location, or the hold or recall queue at the time the hold or recall is placed or at any time thereafter.

6.3.1.52. The system is expected to allow a hold or recall on either a specific copy or on the first copy returned.
6.3.1.53. When an item that is not charged out is declared to be missing, the system is expected to identify the item as missing and initiate the automatic production of search notices. The system is expected to allow authorized staff to request lists arranged in shelf-order of lost and missing items by location.

6.3.1.54. When an item has been identified as missing, the system is expected to allow a hold on the item.

6.3.1.55. The system is expected to alert the staff person or borrower if a borrower attempts to place a duplicate hold or recall or to recall an item from himself or herself.

6.3.1.56. The system is expected to have the capability to recall automatically a charged item based on library defined criteria, borrower type or other defined conditions. The number of holds or recalls that triggers a recall is expected to be consortium or library-specific.

6.3.1.57. The system is expected to allow an authorized staff person to cancel a single hold or recall or to cancel all holds or recalls on an item and notify the patron.

6.3.1.58. The system is expected to automatically cancel all holds and recalls on an item that is recalled for reserve or that is declared lost.

6.3.1.59. The system is expected to automatically notify a user who has placed a hold or recall when a hold or recall is canceled; the notification is expected to include the reason(s) for the cancellation.

6.3.1.60. The system is expected to offer the option for library patrons to place holds and recalls within established guidelines on charged items without library staff assistance and to designate a choice of pick-up locations.

6.3.1.61. The system is expected to allow special flags associated with a given item to be created and to set these flags to disappear upon discharge or after a specified lapse of time.

6.3.1.62. The system is expected to provide backup circulation capability that can be used to charge, renew, and discharge items and to create and edit patron and item records when the online system is unavailable. The system is expected to allow stored transactions to be automatically uploaded when the online system is available.

6.3.1.63. The system is expected to provide a printed report of backup transactions for error correction purposes.

6.3.1.64. The system is expected to allow recording of use of an item using the system’s circulation functions, distinguishing between in-library use and circulation use of an item, in order to gather information for statistical reports of various uses of materials.

6.3.1.65. The system is expected to allow library staff to discharge labeled browsed materials at
multiple locations and for multiple parts of the library at the same time with portable barcode scanners.

6.3.1.66. The system is expected to provide reports that will assist in returning materials to their proper locations.

6.3.1.67. The system is expected to allow gathering of information on charges, renewals, discharges, and in-house use, by location, by circulation unit, and, where possible, by borrower status for statistical reports of various uses of materials.

6.3.1.68. When an item is removed from the database, the option to retain its transaction history and statistics is expected to be available.

6.3.1.69. The system is expected to provide the option for libraries to maintain circulation statistics for all issues of serial titles.

6.3.1.70. The system is expected to provide the capability of listing holds placed for on-shelf items by library.

6.3.2 Circulation Between System X Libraries

Loans of returnable items between System X member libraries and between branches of System X libraries are expected to be integrated into the circulation functions of the local library systems.

6.3.2.1. The successful vendor is expected to have the ability to interact with the circulation systems of other MnLINK library system vendors who are willing to engage in the development so that service can be expanded to handle circulation requests between System X and non-System X MnLINK libraries. The successful vendor is expected to certify their ability and willingness to work together with the other vendors to develop the necessary interfaces.

6.3.2.2. The system is expected to have the ability to interact with the Inter-Library Loan system of the MnLINK gateway to provide for comprehensive patron and material tracking mechanisms, comprehensive statistical reports on materials sharing, and the transfer of circulation requests from System X to the gateway ILL.

6.3.2.3. The system is expected to allow circulation requests to be initiated from both public and remote access workstations including via the Web (or successor technologies).

6.3.2.4. The circulation request function is expected to be integrated with the online catalog interface so that the patron does not have to leave the online catalog and go into a separate circulation request system.

6.3.2.5. The system is expected to provide libraries with the option of creating profiles of potential lending libraries, or groups of lending libraries, in priority order to which circulation requests are routed automatically. When groups of lending libraries are defined as equivalent in priority, the system is expected to rotate requests among the group in order to simulate load-leveling or to
accommodate existing policies regarding filling requests, such as requesting first from the smallest library.

**Describe how the system will handle a request from a user so that circulation requests are presented to preferred libraries rather than only to the ones identified in the user’s request.**

6.3.2.6. Alternatively, the system is expected to be able to automatically create a hierarchical list of suppliers for automatic request routing according to other criteria selected by the local library, such as past performance.

6.3.2.7. Decisions about how to implement request routing are expected to be at the local library, library system, or consortium option.

6.3.2.8. The system is expected to permit the library to allow or restrict circulation requests by both patron and item types.

6.3.2.9. The system is expected to provide libraries with the option to define conditions under which a patron’s circulation request will be automatically rejected. These conditions include, but are not limited to, when a requested item is available at the patron’s library, and when a request duplicates another request by the same patron.

6.3.2.10. The system is expected to provide libraries with the option to define conditions under which items in their collection will not be available for interlibrary circulation, such as when the maximum number of holds on an item has been exceeded.

6.3.2.11. The system is expected to allow libraries to develop a profile of delivery locations available to their patrons.

6.3.2.12. The system is expected to allow patrons to designate their default delivery location (from the profile of library-defined location options).

6.3.2.13. The system is expected to provide the option to allow the patron to enter an alternate delivery location if the default delivery location is not the desired location.

6.3.2.14. The system is expected to provide a free-text notes field for patron-specified notes when the circulation request is entered.

6.3.2.15. The system is expected to allow the patron to designate a need-by-date when a circulation request is entered.

6.3.2.16. When a circulation request is entered, the system is expected to signal any patron or item exception warnings or blocks that apply.

6.3.2.17. The system is expected to provide messages to the patron when blocks occur telling the patron what action might be taken (e.g., call the library circulation desk for help).
6.3.2.18. When a circulation request is entered, the system is expected to verify the item availability using the locally-defined lender lists and the criteria set at the potential lending libraries. Depending on the outcome, the request should be added to a pickup list, queued for staff review, or rejected.

6.3.2.19. The system is expected to provide libraries with the option to define conditions under which rejected requests should be routed to library staff for handling.

6.3.2.20. The system is expected to allow library staff to override a patron block (i.e., to send a circulation request that would normally be blocked due to patron or library-defined condition).

6.3.2.21. The system is expected to allow library staff to override the lender priority list for a specific item and/or change the lender priority list for all subsequent items requested.

6.3.2.22. The system is expected to notify the patron when a successful circulation request transaction has been completed. The verification is expected to contain the unique transaction number, the item’s bibliographic information, date/time the request was placed, the target library(ies), and the delivery site. The system is expected to allow the user to print a verification/reminder of the request.

6.3.2.23. The system is expected to assign a unique and searchable number to identify each successful circulation request transaction. This transaction number is expected to stay with the request from start to finish.

6.3.2.24. The system is expected to provide a materials tracking system with easy-to-use mechanisms for recording the status of items being sent between libraries (and between branches) during the complete request cycle. The system is expected to record the status information in both the lending and borrowing libraries’ local systems.

6.3.2.25. Once a circulation request has been entered, the system is expected to allow subsequent action on the request to be tracked via the transaction number, call number, or other unique identifiers.

6.3.2.26. **Describe how staff would update circulation requests when they are sent, not supplied, received, etc. Does your system have batch workforms for updating the status?**

6.3.2.27. The system is expected to have the capacity to record several status codes, including but not limited to: requested (item is on hold for requesting patron), not supplied, canceled (by the patron), sent, received (at the delivery site), mailed, on wait list, returned.

6.3.2.28. The system is expected to have the ability to record status information in the request record and in the corresponding patron and item records.

6.3.2.29. The system is expected to have the ability to include the date by which a request should exit the current status.
6.3.2.30. The system is expected to record the date/time associated with each status change during the circulation request process.

6.3.2.31. The system is expected to integrate local and non-local circulation activity into the patron records so that circulation request information is available to patrons via their patron information display.

6.3.2.32. The system is expected to have the ability to retain and link all data relevant to the request transaction to the item until all accounts are settled.

6.3.2.33. The system is expected to have the ability to automatically forward a circulation request to another potential lender after a default or library-specified number of days.

6.3.2.34. The system is expected to have the ability to provide a free-text notes field for lender-specified notes (such as reasons that items are not supplied).

6.3.2.35. The system is expected to have the ability to send a “not supplied” notice to the patron when a request cannot be filled.

6.3.2.36. The system is expected to allow users to cancel pending requests at any time before a lending library fills the request.

6.3.2.37. The system is expected to generate pull slips at the lending library. Each lending library is expected to have the ability to profile the location where pull slips are to be printed.

6.3.2.38. The system is expected to provide the option to sort and print pull slips on demand.

6.3.2.39. It is expected that pull slips will include: date/time, item and patron barcode ID (library option), bibliographic information, local call number, transaction number, need-by date, delivery site, and other locally-specified information.

6.3.2.40. The system is expected to provide the option to print delivery instructions including the method of shipment and mailing labels.

6.3.2.41. The system is expected to provide the option to allow items borrowed via the circulation request function to be renewed by staff or patrons of the borrowing library if no exceptions or blocks are encountered.

6.3.2.42. The system is expected to accommodate participation of ILL centers such as MINITEX. For example, it should be possible to set an ILL center as a default supplier of last resort so requests will be sent to the center when other possible suppliers are exhausted.

6.3.3. Name/Address
6.3.3.1. Participating libraries along with their parent institutions are moving towards a data model
where data about a person will be stored in one place within the institution, probably in a relational database with SQL access or an X.500/X.509 directory. These databases will probably only contain information about people officially associated with the library or parent institution, so it will continue to be necessary to also be able to store information about other borrowers and users of the libraries within the circulation system. **DESCRIBE the capabilities of your system to work in this environment.**

Since the above environment may not be fully in place before the new system is chosen, the remaining items address a desired stand-alone user file in a circulation system.

6.3.3.2. At a minimum, the system is expected to make it possible to retrieve borrower records for online display by ID number and name. It is desirable to be able to search on all fields in the borrower record and to be able to combine searches on different fields.

6.3.3.3. It is expected to be possible for one administrative unit, local library or consortium to empower or restrict another administrative unit or local library to view and manipulate its patron records.

6.3.3.4. The system is expected to have the capability of creating name/address records for borrowers from machine readable information obtained from student and human resource systems and/or X.500/X.509 directory databases. Whether the information is obtained from another source or input manually into the system, the system is expected to indicate the source of the data and its expiration date. Name/address records should include a field for e-mail addresses.

6.3.3.5. **DESCRIBE the available methods to create, display and edit name/address records both within the system and off-line.**

6.3.3.6. The system is expected to employ some method, such as date of last address update, to control whether incoming machine-readable borrower information alters address information in the borrower file in order to minimize the possibility of overlaying old information over newer information in the file.

6.3.3.7. The system is expected to prevent the deletion of a user record if there are any outstanding obligations or pending transactions linked to that user, including but not limited to items charged out and unpaid charges.

6.3.3.8. If a user record is deleted, then the system is expected to also delete any requested holds or recalls that user has placed and to notify the user of the cancellation of the holds and recalls.

6.3.3.9. The system is expected to have the capability of allowing a minimum of ten borrower ID numbers, including proxy borrower IDs, to be associated with a single borrower and to charge items using proxy borrower ID numbers.

6.3.3.10. The system is expected to have the capability of assigning the same individual to different borrower categories for the same or different units of participating libraries or consortia without
having to maintain multiple borrower records for the same person.

6.3.3.11. The system is expected to allow for up to ten addresses, e-mail addresses and phone numbers in the borrower record for a given individual and be able to indicate which is the borrower’s preferred method and address for receiving notices.

6.3.3.12. The system is expected to have at least two fields which can be customized and are available for local data or flags.

6.3.3.13. The system is expected to make it possible to store a lengthy free text message in a borrower record. The system is expected to make it possible for the staff person to choose whether or not this free text will be internal or whether it will display during any circulation transaction involving that borrower and whether it will be automatically removed from the patron’s record at the next transaction or at a time determined by the staff person.

6.3.4. User Accounts for Circulation, Reserves, and Interlibrary Loan/Document Delivery

6.3.4.1. The system is expected to process and record a variety of forms of payment (i.e., cash, check, credit card, debit from the participating libraries and their parent institutions ID card debit strip) and print a receipt.

6.3.4.2. The system is expected to make it possible to transmit borrower account information in electronic form to and from other financial systems. [See Section 6.5.6.]

6.3.4.3. The system is expected to alert a staff person if the item being discharged is one for which the borrower has been billed and the amount due.

6.3.4.4. The system is expected to display account information for a user at any time while performing circulation and circulation-related functions, such as interlibrary loan and document delivery.

6.3.4.5. The system is expected to allow authorized staff to edit borrower account records including creating charges, consistent with audit trail requirements.

6.3.4.6. The system is expected to allow payments to be posted immediately after fees are added to a borrower's account and to clear restrictions on the patron's activities.

6.3.4.7. The system is expected to allow fees to be posted to particular income accounts.

6.3.4.8. The system is expected to maintain an audit trail that conforms to generally accepted accounting principles for all financial charges levied against a borrower including a complete history of debits and credits or payments.

6.3.4.9. The system is expected to have the capability to display debits, credits, and payments at any circulation unit by an authorized staff person.
6.3.4.10. The system is expected to make it possible to display and print only the unpaid charges for a borrower. It should be possible for either a staff person or the user, with appropriate authorization, to request this information.

6.3.4.11. The system is expected to display and print on demand a statement of account, including credits, for a user. It should be possible for either a staff person or the user, with appropriate authorization, to request this information. The user interface is expected to provide a reminder to the user to sign out once all requests are fulfilled.

6.3.4.12. The system is expected to print a borrower's CURRENT AND OUTSTANDING account balances for account notices.

6.3.4.13. The system is expected to allow an individual library to process full or partial payment of any account at any time and is expected to adjust the borrower's account balance appropriately. The system is expected to allow the circulation unit at its discretion to post partial payments to appropriate charges in the account.

6.3.4.14. The system is expected to alert staff to follow up on adjusted accounts at a later time.

6.3.4.15. The system is expected to make it possible to age accounts and to produce a report of outstanding fees based on amount owed and date fees were charged.

6.3.4.16. The system is expected to produce a report identifying items that are significantly overdue to alert staff for possible billing of replacement costs.

6.3.4.17. The system is expected to allow participating libraries to establish different billing periods and charges and services fees for different types of materials, for different circulation units, and for different user categories.

6.3.5. Reserves
6.3.5.1. The system is expected to provide functions with which a staff person can easily indicate that an item has been relocated to a reserve room or location.

6.3.5.2. The system is expected to place items on reserve that are not represented in the catalog database.

6.3.5.3. The system is expected to assign a unique shelving number to uncataloged items that are placed on reserve.

6.3.5.4. The system is expected to make it possible to circulate items on reserve with a wide range of different loan periods while retaining the original loan periods used when the item is not on reserve.

6.3.5.5. The system is expected to retain reserve information for an item and to "turn on" and "turn off" reserve status for an item or group of items with a simple command or procedure.
6.3.5.6. All displays that include location information for an item are expected to dynamically indicate that the item is in a reserve location as a result of it being placed on reserve. It should not be necessary to edit the holdings record for the item.

6.3.5.7. The system is expected to allow faculty to request via the system that an item be placed on reserve. If these requests are placed within the libraries, the user interface is expected to provide a reminder to the user to sign out once all of the requests are placed.

6.3.5.8. The system is expected to place on reserve an unlimited number of items per course and professor; however, local libraries should have the option to impose a limit.

6.3.5.9. The system is expected to make it possible to change or delete the reserve status of all items on a reserve list with a single transaction.

6.3.5.10. The system is expected to process with a single transaction a change to fields related to the reserve function for all items on a reserve list.

6.3.5.11. The system is expected to make it easy to produce a list of items on reserve for a specific course or faculty member and to print this list in the library.

6.3.5.12. The system is expected to retrieve lists of items on reserve by course name or course number and/or faculty name in addition to the normal bibliographic access points.

6.3.5.13. The system is expected to allow an item to be placed on reserve for more than one academic course and/or for more than one faculty member.

6.3.5.14. The system is expected to allow different loan periods for different copies (i.e., overnight loan for one copy, 2-hour loan for second copy) of the same work which are placed on reserve.

6.3.5.15. The system is expected to allow a hold on an item that is on reserve, at the option of the circulation unit so it can be provided to the requester when it comes off reserve. It should be possible to build a queue of such requests and manage this queue like any other hold queue.

6.3.5.16. The system is expected to notify a staff person that an item is due to be removed from reserve.

6.3.5.17. The system is expected to make it possible to edit all fields related to the reserve function.

6.3.5.18. The system is expected to gather information and report within the reserve function on charges, renewals, discharges, and in-house use, by location, by circulation unit, and, where possible, by borrower type for statistical reports of various uses of materials.

6.3.5.19. The system is expected to calculate overdue fines on an hourly basis and to produce overdue notices for reserve items. The system should provide the option to calculate fines.
immediately upon discharge, with no grace period.

6.3.5.20. The system is expected to retain bills and accounting information associated with reserve items even after the item is removed from reserve.

6.3.5.21. The system is expected to provide links from the traditional reserve system to items available in electronic form, either locally-scanned or available from vendors, and either on the Web (or successor technology), via ASCII or image databases on this system, or available via gateways to other systems.

6.3.6. Notices
6.3.6.1. The system is expected to generate and produce various batch processes including overdue notices, recall and hold fulfillment notices, hold cancellation notices, recall notices, recall cancellation notices, fine notices and bills, and statements of account. Notices, bills and statements of account should be automatically sent via mail, e-mail or voice-mail to the borrower’s preferred address/phone number. Circulation units should be able to customize the message for each of these notices and to print it at the circulation desk if desired.

6.3.6.2. For all notices produced in a batch mode, the system is expected to allow an authorized staff person to generate an individual notice or set of notices on demand and for the system to automatically modify the batch process in recognition of the notices sent on demand.

6.3.6.3. The system is expected to produce a printed or electronic purchase alert based on a consortia or local library-specified number of holds and recalls having been placed on a charged item.

6.3.6.4. Circulation units associated with one administrative unit are expected to be able to control the sequence and scheduling of circulation notice and report production.

6.3.6.5. The system is expected to allow use of electronic mail or the telephone for the purpose of automatically sending circulation-related notices to borrowers, patrons, and staff persons, depending upon the individual’s preferred method of receiving notices.

6.3.6.6. The system is expected to associate a borrower record with a variety of statistical categories for statistical reporting purposes. These categories should be definable at either the system or local library level.

6.3.7. Profiling
6.3.7.1. Circulation functions are expected to be controlled by a library circulation unit-specific set of tables that can be maintained by an authorized staff person without the assistance of the vendor or system management personnel.

6.3.7.2. The system is expected to allow a library administrative unit to establish different sets of parameters governing the privileges and fines charged for different categories of borrowers.
6.3.7.3. The system is expected to allow a local library or circulation unit to set an automatic restriction if a predefined limit for items charged out, amount of money owed, or number of items overdue is reached.

6.3.7.4. The system is expected to support a large number of borrower categories. **Describe how the system would handle borrower categories for a large number of libraries and circulation units.**

6.3.7.5. The system is expected to define a default loan period for each location and to override or change the loan period either at the item or title level.

**6.3.8. Inventory**

6.3.8.1. The system is expected to inventory the collection and/or selected portions of it. The system is expected to establish a beginning and end date to an inventory period during which any item charged or scanned through a portable device is marked. At the end of the period a list should be produced of all items not charged nor scanned during the given period. The system is expected to either automatically flag the items as missing or to allow manual flagging.

6.3.8.2. The system is expected to provide reports of shelving errors and circulation record/bibliographic record information mismatches.

6.3.8.3. The system is expected to provide a report of missing items by holding library and/or location.

6.3.8.4. The system is expected to make it possible to produce a shelf inventory list in call number order by location.

**6.3.9. Interlibrary Loan (ILL) and Document Delivery**

Sections 6.3.9, 6.3.10, and 6.3.11 discuss the requirements for an Interlibrary Loan and Document Delivery system integrated into System X. This includes provisions for an interface to the MnLINK Gateway ILL/DD system (described in Section 8.5). **It is of primary importance** that successful vendors for both System X and the Gateway certify their ability and willingness to work together to develop the necessary interfaces between the two systems.

In these sections, “local loan” refers to loans between circulation units, “interlibrary loan” refers to loans between institutions, and “document delivery” refers to loans through a vendor document fulfillment service. The term “ILL” refers to the ILL/DD system in general.

Note: Section 5.2.4 includes mandatory requirements for an ILL/DD system.

6.3.9.1. The system is expected to have the ability to interact with the ILL/DD system of the MnLINK Gateway to provide for comprehensive patron and material tracking mechanisms, comprehensive statistical reports on materials sharing, and the transfer of interlibrary loan requests
from System X to the Gateway ILL.

6.3.9.2. The system is expected to support user-initiated resource-sharing transactions, including local loans, interlibrary loans, and document delivery for all formats of materials including returnable materials, non-returnable materials such as photocopies, and digital formats. Any particular document may be delivered:
   a. Immediately in electronic form;
   b. As a loan requiring physical transport to and from the requestor;
   c. As a physical copy produced from the original document (photocopy, microform, photographic print, analog cassette, etc.);
   d. As a digital copy produced from an original document (paper, microfiche, digital object, etc.).

6.3.9.3. The user interface is expected to provide a reminder to the user to sign out once all requests are placed.

6.3.9.4. The system is expected to support interlibrary loan and resource sharing activities with other systems that comply with the ISO Interlibrary Loan standard protocols 10160/10161.

6.3.9.5. The system is expected to provide for user-initiated interlibrary loan for items found in other Z39.50 compatible catalogs, but not in the participating library's database, by providing an interface to designated external interlibrary loan systems, e.g., OCLC, RLG, MINITEX, DOCLINE, CIC institutions, etc.
   a. Specify the automated interlibrary loan systems to which your system currently interfaces and the manner in which it does so, including any standards employed and authentication processes.
   b. Specify your system's capabilities for facilitating ILL transactions with libraries not on an automated system or with systems that do not comply with the ISO Interlibrary Loan protocols.
   c. Specify your system's capabilities for handling requests from unaffiliated users, who have previously set up accounts with the participating libraries, for fee-based document delivery.
   d. Specify your system's capabilities for interacting with a participating library's purchased accounting system for its income operations. [See Section 6.5.6.]

6.3.9.6. The system is expected to have the capability to accept user-initiated loan requests from both public and remote-access workstations including via the Web (or successor technologies).

6.3.9.7. The system is expected to have the capability to interact with the circulation system in blocking requests from patrons who have exceeded certain limits, such as number of items charged out, amount of money owed, or number of items overdue, or have other restrictions on their record.

6.3.9.8. The system is expected to have the capability to accept multiple staff-initiated interlibrary loan requests on behalf of a user.

6.3.9.9. The system is expected to assign a record number and date and time to each ILL request when entered.
6.3.9.10. The system is expected to integrate the status of the patron’s current interlibrary loan activity into their patron information display. Further, the system is expected to provide an easy-to-use mechanism so that patrons can link to their current gateway ILL activity.

6.3.9.11. The system is expected to permit patrons to view their interlibrary loan requests at public and/or remote-access workstations, under user security restraints, at the option of the library.

6.3.9.12. The system is expected to inform the user when he or she has requested an item which is not available because of copyright restrictions.

6.3.9.13. The system is expected to be able to provide an institution-specific note and provide a variety of local options for handling cases where a request exceeds copyright limits: block the request; refer the requestor to a specific library office; accept the request and refer the request to a staff person for handling; accept the request and automatically route it to an approved document supplier, as examples.

6.3.9.14. The system is expected to provide a default copyright compliance notice with a local option to create an institution-specific note.

6.3.9.15. The system is expected to provide query access by authorized staff to interlibrary loan requests by:
   a. Bibliographic field
   b. OCLC numbers
   c. NLM numbers
   d. RLIN numbers
   e. MINITEX request numbers, as assigned by the library
   f. User ID
   g. User name
   h. Unique numbers (such as tracking numbers assigned by the library)
   i. System-assigned number

6.3.9.16. The system is expected to maintain an online archive of completed ILL requests. Once the request has been filled and, in the case of returnable items, returned, the borrower information should only be indicated by status, affiliation, and interlibrary loan office handling the request. After a consortium or library-specified period, this information is expected to be archived off-line but remain accessible for query and reporting.

6.3.9.17. The system is expected to allow the local library to specify the period of online archiving required. **Specify the period of ILL online archiving the system will support.**

6.3.9.18. The system is expected to permit the archive to be queried by:
   a. Department/major of use
   b. User type
   c. Periodical/item title
   d. Unique number
e. Item author
f. Lending institution
g. Borrowing institution
h. MINITEX request number

**SPECIFY how the system protects the privacy and security of this function.**

6.3.9.19. The system is expected to have the capability to integrate, when appropriate, interlibrary loan or other fees into the patron’s fine account.

6.3.9.20. Billings that are issued to the user are expected to include interlibrary loan fees, which contribute to calculation of a fiscal-based restriction on a user.

6.3.9.21. The system is expected to interface the ILL system with the circulation system activity to create interlibrary loan reports.

6.3.9.22. The system is expected to allow online or printed reports by category of ILL: complete, received, returned, will supply, shipped, unfilled, etc.

6.3.9.23. The system is expected to provide a report listing titles that have exceeded copyright limits. The report should include the number of requests per title and the number of patrons who submitted the requests for each title.

6.3.9.24. The system is expected to accommodate participation by ILL centers such as MINITEX (see definition of “ILL center” in Section 1.3). In particular, the system is expected to have the ability to profile the routing of messages, requests, and other batch products in such a way that each product may have a different profile, if needed. For example, requests to a lending library for returnable materials may be routed differently than requests for non-returnable materials.

6.3.9.25. The system is expected to provide an unmediated environment for handling user-initiated requests.

6.3.9.26. The system is expected to provide libraries with the option to have the system automatically reject requests under conditions specified by local libraries, such as when a request is for an item in a non-circulating portion of the collection; the number of holds allowed is exceeded; the number of interlibrary loan or document delivery requests exceeds a certain threshold; the item is not on the shelf; no possible lending libraries are located.

6.3.9.27. Rejected requests are expected to generate a message to the patron about the reason for the rejection and possible solutions.

6.3.9.28. At the library’s option, certain rejected requests, based upon a profile of the reasons for rejection, are expected to be routed to library staff to be handled.

6.3.9.29. The unmediated feature is expected to provide libraries with the option of creating
profiles of potential lending libraries and document suppliers, or groups of lending libraries, in priority order, to which request records are routed automatically. When groups of lending libraries are defined as equivalent in priority, the system is expected to rotate requests among the group in order to simulate load leveling or accommodate existing policies regarding filling requests, such as requesting first from the smallest library.

**Describe how your system will handle a request from a user so that requests are presented to preferred libraries rather than only to the one(s) identified in the user’s request.**

6.3.9.30. Alternatively the system is expected to be able to automatically create a hierarchical list of suppliers for automatic request routing according to other criteria selected by the local library such as past performance. It is expected to be possible to set MINITEX as a default “supplier of last resort” so requests are sent to MINITEX when other possible suppliers are exhausted.

6.3.9.31. Decisions about how to implement request routing are expected to be at the local library option.

6.3.10. Borrowing (ILL) and Lending Requirements

6.3.10.1. The system is expected to support requests for physical items, requests for document photocopies, and requests for materials in electronic format.

a. Additional information (volume, number, page, article author, title, etc.) as well as user notes are expected to be allowed in the request.

b. Items requested may be local (local loan between circulation units), remote to other borrowing institutions (interlibrary loan), or external through a vendor document fulfillment service (document delivery).

c. The system is expected to allow for multiple delivery options of the requested material, including but not limited to e-mail (with or without MIME), Ariel, fax, FTP, UPS, standard mail. Each library administrative unit is expected to have the option of specifying which delivery options will be supported, based on local availability and policy.

d. The system is expected to handle requests in ISO 10160/10161 standard message format.

e. The system is expected to handle requests in EDIX12 or EDIFACT format as well as Z39.50 BER.

6.3.10.2. The system is expected to be able to collect the bibliographic information for the request from a variety of sources:

a. The results of a search of a local catalog (for local loan requests);

b. The results of a search of a local index and abstract or full text database (for local loan, document delivery, or interlibrary loan);

c. The results of a search of one or more external catalogs or databases (for local loan, interlibrary loan, or document delivery).

6.3.10.3. The request interface is expected to provide the option for blank request templates that can be used to request items/documents that have not been located in one of the local or remote catalogs or databases.
6.3.10.4. Document requests are expected to seamlessly interface with the online catalog searching system and are expected to support the ability to search multiple remote Z39.50 catalogs and databases simultaneously.

The document request function is expected to be fully integrated with the search functions; i.e., users should not be required to enter a document request module to search for items to be requested.

a. The document request command is expected to be readily apparent to users, i.e., not hidden on a different screen.

b. If the item specified by a multiple institution search is requested, all of the institutions that satisfy the request should be recorded in the request transaction.

c. Locally held items should be dynamically identified for the user by the system. If the item is locally held, locally-specified rules, based on circulation status should determine whether an external request will be allowed.

6.3.10.5. The system is expected to capture and/or import the following data from a remote or local catalog or database using NISO standard Z39.63 or from user input, as appropriate:

a. Bibliographic/citation information

b. Location, call number, shelf status (for catalog items)

c. Date item no longer needed

6.3.10.6. The system is expected to allow staff to add verification information to a request record.

6.3.10.7. Document requests are expected to inter-operate with OCLC, and should operate with RLIN, and DOCLINE.

a. The administrative unit is expected to have the option of allowing users to search the OCLC, RLIN Z39.50, and DOCLINE servers.

b. The ILL staff person is expected to be able to place an ILL request via OCLC, RLIN ILL or DOCLINE ILL systems.

c. The ILL staff person is expected to be able to receive requests from OCLC, RLIN or DOCLINE ILL systems.

DESCRIBE how this inter-operability is achieved.

6.3.10.8. The user request interface is expected to collect user information and authenticate the user.

a. The interface is expected to provide the option of requiring users to validate against the local authentication source. The source may be internal, such as a system user file, or external such as an institutional X.500/X.509 directory.

b. Once the user is authenticated, the system is expected to verify the user's authorization to place a request (e.g., the user is not blocked by fines; user has the proper status category, etc.); criteria for authorization are expected to be flexible based on the administrative unit's policies.

c. The user interface is expected to provide an option specifying how many requests can be placed and how much time is allowed in the same session before a user is required to re-authenticate. The user is expected to be able to issue multiple requests without having to re-
authenticate each request.

d. Authentication requests to the local authentication server are expected to use published
standards and/or interfaces. The system is expected to be able to cache the user information to
eliminate the need for re-authentication during the current session.

6.3.10.9. The system is expected to capture and/or import the following data from a local
circulation or user ID system, or from user input, as appropriate:
a. User data (name, ID number, etc.)
b. Delivery information (delivery address, fax number, e-mail address, etc.)
c. Billing information (account number, credit card information, as appropriate).

6.3.10.10. The user is expected to have the option to cancel a request prior to sending it.

6.3.10.11. Each administrative unit is expected to have the option of allowing users to search their
local catalog or databases and place a local loan delivery request; that is, a request that an item be
delivered from a local location such as remote storage or be supplied through a photocopy. This
request is expected to be identifiable by the system as needing to be processed by local staff.

6.3.10.12. The request interface is expected to provide the option of allowing the user to specify
the delivery mode. That might be: to his or her desktop; to an appropriate local ILL office; or to
another user-specified pickup location.
   a. The interface is expected to accommodate delivery of local loan requests.
   b. The administrative unit is expected to have the option of specifying what delivery options are
to be supported and offered for each user type.

6.3.10.13. The request interface is expected to provide the user with the option to request a copy
from a fee-based document supplier, either commercial document suppliers or on-campus/library
document suppliers that charge a fee.

6.3.10.14. The system is expected to support electronic commerce in a networked environment for
this service.
   a. The request interface is expected to allow the administrative unit the option of paying for all
or part of any request, including photocopy charges; delivery charges; fee-based document
suppliers.
   b. The request interface is expected to allow the institution to charge the user for any or all of the
charges enumerated above.
   c. The request interface is expected to allow additional user fees to be added by the institution.
   d. If the user is charged, a variety of payment options is expected to be supported, depending
upon the document supplier and the policies of the administrative unit.

**Describe how payment information is secured in your system.**

6.3.10.15. The interface is expected to provide an online verification that the request has been
successfully placed. This verification is expected to contain the request’s system-assigned unique
identifier, the item’s bibliographic information, date/time the request was placed, the target
institution/supplier, the estimated cost, and the selected delivery site. When applicable, the system is expected to display the appropriate copyright warning. The system is expected to allow the user to print off a verification/reminder of the request.

6.3.10.16. The system is expected to allow the user, upon appropriate authentication, to cancel a pending request at any time before a lending library fills the request.

6.3.10.17. The system is expected to provide the capability for the user to search for his/her own outstanding requests; **IT IS OF PRIMARY IMPORTANCE** that the request to search be validated by authenticating the user. The system is expected to supply to the user the status of the request based upon the status codes in Z39.63.

6.3.10.18. **IT IS OF PRIMARY IMPORTANCE** that requests from the user request interface be formatted to contain the appropriate Z39.63/Z39.70 elements and be able to be sent to remote servers using the Z39.50 Extended Services Document request/ILL protocol as proposed by the National Library of Canada when the proposal is adopted.

6.3.10.19. The system is expected to allow multiple potential lenders on a request record and is expected to automatically forward the request from one lender to the next. It is expected that the automatic forwarding occur after a library or ILL center specified number of days.

6.3.10.20. The system is expected to be fully integrated with both the lending and borrowing libraries' circulation systems - the user and item files. Charging, renewing and recalling ILL items are expected to update the circulation records as well. ILL availability notices, overdue notices, fines, etc. are expected to be able to be generated using user data from the circulation records.

6.3.10.21. The system is expected to support the ability to re-initiate requests that were not supplied.

6.3.10.22. The system is expected to include a messaging feature to allow borrowing and lending library staff to communicate via messages on the ILL request record. **IT IS OF PRIMARY IMPORTANCE** that this allow for an ongoing dialogue back and forth with notification of pending messages via the status tracking file.

6.3.10.23. The system is expected to block requests to libraries that are not currently active ILL participants.

6.3.11. **ILL Staff Management Requirements**

6.3.11.1. The system is expected to assign a unique and searchable number to identify that transaction (see 6.3.9.9.). This transaction number is expected to stay with the transaction from start to finish. If a transaction from a remote ILL system is forwarded to the system for fulfillment, the system is expected to carry the remote ILL server transaction number as well as the locally assigned number in order to link the two transactions.

6.3.11.2. Within the system the status values that manage and track the request are expected to be
supported as part of the request transaction, showing when the item was requested, from whom, if/when filled, when returned to the owning site, etc. The system is expected to include status values which conform to those specified in NISO Z39.63 and the ISO ILL protocols.

6.3.11.3. The system is expected to dynamically detect and reject duplicate requests from the same user providing that user with a message for the reason for the rejection.

6.3.11.4. On receipt of a request, the system is expected to choose a request destination:

a. If the request is destined for the host or local site, either a local loan request or a request from another ILL system sent to this site, the system is expected to verify the item availability using locally defined rules. The local rules are expected to result in the item being added to a pickup list, the request being queued for staff review, or the request being canceled.

b. If the request is canceled, the system is expected to notify the local requester or the requesting system about the cancellation and the reason for the cancellation.

c. The system is expected to send requests directly to the holding library system if the holding libraries have been identified and will accept non-mediated requests. The request is expected to be sent to the holding library system via Z39.63 over TCP or using Z39.50 Extended Services.

d. Otherwise the system is expected to allow staff to identify a holding library via Z39.50 or other searching functions, if needed, at which point the request is forwarded to the destination or the request is rejected per local policy.

6.3.11.5. The system is expected to provide the ILL staff person with the ability to download in batch pending requests; to sort the requests and print pull slips or lists that include bibliographic information, local call number, all lending library locations, unique system identification numbers, ship to address, and other locally specified information. The system is expected to give priority to rush requests in addition to specially flagged requests.

6.3.11.6. The system is expected to have the ability to include barcodes, in either Codabar or Code 39 specifications, on interlibrary loan requests as they are printed. These barcodes are expected to reflect the system-assigned transaction identifier for each request.

6.3.11.7. The system is expected to have the ability to use the printed barcodes for subsequent updating of request status.

6.3.11.8. The system is expected to maintain status values on transactions. The status is expected to change as identified in Z39.63 and the ISO ILL protocol status values.

6.3.11.9. The system is expected to set status values automatically during item processing, on individual items during staff review, or in a batch update based on institution specific criteria, such as status, date in queue, institution, etc.
6.3.11.10. When the requester's item arrives, the system is expected to generate a status change in the system and a notice that is sent to the requester noting that the item has been received and where it can be picked up. The system is expected to support paper, telephone and e-mail request notification options.

6.3.11.11. The staff management interface is expected to allow retrieval of transactions by a variety of criteria, including but not limited to user ID, originating institution, transaction status, system assigned transaction identifier, local call number.

6.3.11.12. The staff management interface is expected to allow purging of completed transactions by a variety of criteria, including date and item type. Automatic purging based on specified criteria is expected to be a locally specified option.

6.3.11.13. The ILL system is expected to maintain statistics on the time taken for interlibrary loan work forms to move from any specified status to another, based on local library or consortium selection, e.g., from "pending" to "shipped," from "pending" to "received." These statistics are expected to be available for a library-specified period of time, and the system is expected to interface them to the report generator.

6.3.11.14. The system is expected to provide a method for tracking ILL fill rate and turnaround time for each lending institution.

6.3.11.15. The system is expected to maintain statistics on loans requested and loans filled, sorted by institution and cross-tabulated.

6.3.11.16. The system is expected to maintain statistics on the number of inter-campus and interlibrary requests as well as the number of document delivery requests.

6.3.11.17. The system is expected to be able to generate loan reports in such a way as they can be used to charge for net borrowing and reimburse for net lending across any group of libraries as defined by the governing body of MnLINK or groups of libraries within MnLINK.

6.3.11.18. The system is expected to be able to produce reports concerning returnable loans sorted by user status and affiliation.

6.3.11.19. The system is expected to be able to produce reports concerning returnable loans sorted by classification number, subject if available, and year of publication.

6.3.11.20. The system is expected to be able to produce reports concerning non-returnable loans (photocopies, faxes, disposable fiche, materials sent in digital form) sorted by journal title, volume and year, subject if available, and user status.

6.3.11.21. The system is expected to be able to produce reports concerning requests not filled, whether or not owned, in order for libraries to make decisions about purchase of materials not currently available.
6.3.11.22. The system is expected to be able to compile statistics in any arbitrary date range.

6.3.11.23. The system is expected to supply a copyright compliance report listing the journal title and article citation of all non-returnable items requested from suppliers.

6.3.11.24. **DESCRIBE how the system:**
   a. Monitors copyright compliance
   b. Handles requests which would violate copyright compliance

6.3.11.25. The system is expected to provide the option to automatically block a request when it would violate copyright compliance.

6.3.11.26. The system is expected to allow the ILL staff person to override blocks for copyright limit violations.

6.3.11.27. The system is expected to provide online access to copyright compliance information. It is expected that ILL staff are able to browse the file for their library. The information is expected to be secure so that other libraries' copyright information is not available.

6.3.11.28. The system is expected to allow staff to make changes to the ILL request record at any time before completion.

6.3.11.29. The system is expected to flag duplicate requests for the same item even if they are new or in process at the lending library.

6.3.11.30. The system is expected to capture the correct call number from each successive potential lender and provide this information in successive requests.

6.3.11.31. The system is expected to provide the option to print delivery instructions including the method of shipment and mailing labels.

6.3.12. **Compact Storage**
The state of Minnesota has funded a new regional storage facility, available for use by all libraries within the state, which will store items in bins rather than on shelves. As we move items to this facility, the system is expected to support the transfer of the item to a new location as well as manage the storage of the items in bins, facilitate the paging of these items, manage their circulation, and display the status of the item to the user of the online catalog.

Many libraries throughout the state will have access to this facility, but not all of these libraries will be System X participants. We will need brief records in the System X database for the holdings of the non-System X libraries.

**DESCRIBE how the system would support such a process.**
6.4 Database Maintenance and Cataloging

This section describes system capabilities that have to do with the creation and maintenance of bibliographic, authority and holdings records, the records that comprise the catalog database. **IT IS OF PRIMARY IMPORTANCE** that the system maintain each library's individualized bibliographic data. **IT IS OF PRIMARY IMPORTANCE** that local libraries and consortia be allowed to describe how they wish their records to be handled and displayed.

6.4.1. Record Creation

6.4.1.1. The system is expected to allow libraries to transfer batches of bibliographic or authority records or individual records from national bibliographic utilities or vendors to a server using file transfer protocol (FTP). The system is also expected to provide a tapeload transfer capability for records which need to be input in this way. It is expected to be possible to convert, index, and load these records into the OPAC in a single command.

6.4.1.2. The system is expected to make it possible to (1) search for individual records or small files of records on any Z39.50-compliant server, (2) mark records(s) in the result set for import, and (3) capture, convert, index, and load marked records into the OPAC in a single transaction.

6.4.1.3. The system is expected to make it possible to create a new record by deriving from (copying) records in the local file(s) (e.g., OPAC, locally mounted resource file of Library of Congress records).

6.4.1.4. The system is expected to make it possible to key brief or complete records online with a minimum number of keystrokes and "point and click" operations.

6.4.1.5. When a new bibliographic record is added to the system through import or derived, the system is expected to create a default holdings record as well as a bibliographic record. The system is expected to include the following data in the holdings record:
   a. Location: The default location is expected to be table-driven and linked to operator ID, but the system is expected to provide the option to set another default location during work session.
   b. Call number: Call number data is expected to be copied from fields specified in priority order in a table. The system is expected to make it possible to specify priority orders and link one order to an operator ID. The system is expected to provide the option to set another default order during a work session.

6.4.1.6. The maximum number of characters allowed for a single record (bibliographic, authority, or holding) is expected to exceed 20,000.

6.4.1.7. The maximum number of indexed fields allowed for a single record (bibliographic, authority, or holding) is expected to exceed 500 fields.

6.4.1.8. The system is expected to associate an unlimited number of individual item records (or issues or volumes) with a bibliographic or holdings record.

6.4.1.9. When a Library imports bibliographic records from databases outside the system, the
system is expected to automatically overlay an existing record in that Library's database which is in the same format with a matching standard number. Each library is expected to be able to define which standards numbers are to be used as the basis of overlay and it should be possible for an authorized staff person to change the definitions without programmer intervention.

6.4.1.10. The system is expected to accept, support, and maintain storage, retrieval, display, and editing distinctions and capabilities for genre subject headings and local subject headings.

6.4.1.11. Within an individual library’s catalog, the system is expected to transfer and overlay online a single bibliographic record with another record --either with a record from the same file as the existing record or a record from another file such as a resource file of Library of Congress records--and have it automatically replace a designated bibliographic record in the catalog database.

6.4.1.12. The system is expected to prevent overlay from affecting circulation or order record links.

6.4.1.13. The system is expected to allow local libraries to define which linked records will be affected by overlay, e.g., bibliographic records only or bibliographic and holdings records.

6.4.1.14. The system is expected to allow local libraries and consortia to determine fields where no overlay is possible.

6.4.1.15. The system is expected to mark errors in records imported into the system and provide a mechanism for retrieval of error records for correction. **EXPLAIN how this is handled.**

6.4.2. **Record Editing and Maintenance**

6.4.2.1. The system is expected to allow a staff person to search for and display records from any system file at any time during the process of creating or modifying a bibliographic, authority, or holdings record online without having to terminate the record creation/modification activity.

6.4.2.2. The system is expected to support editing features similar to those in commonly used word processing programs (e.g., copy and "cut and paste" between records and insert data at any point in the record).

6.4.2.3. The system is expected to incorporate data from any existing bibliographic or authority record into a new record that is being created online or into an existing record that is being modified online.

6.4.2.4. Each staff person at a participating library who performs online creation of bibliographic, authority, and holdings records is expected to be able to define and have the system display easily defined default values for certain tags, indicators, and subfield codes.

6.4.2.5. The staff person is expected to be able to control the order of display of subject fields, added entries and notes fields by arranging the order of the fields in the bibliographic record; the system is expected to preserve the order when the record is stored.
6.4.2.6. The system is expected to validate the following data against a master table whenever a record is created or updated:
   a. All values in 006, 007, and 008 fields
   b. All field tags
   c. All subfield codes within each field
   d. Repeatability of fields and all subfields with fields.

   It is expected that updates to the master table will occur in a timely manner following changes to any relevant standards.

6.4.2.7. The system is expected to return appropriate error messages to aid in correction.

6.4.2.8. The system is expected to do record purges by parameters (date, etc.) specified by an authorized staff person.

6.4.2.9. It is expected that it be possible to immediately delete or undelete bibliographic records from an individual library.

6.4.2.10. The system is expected to prevent the inadvertent deletion of a bibliographic record that has any records associated with it. A message, prompt, and override option should be provided when a staff member attempts to delete a bibliographic record with other associated records.

6.4.2.11. The system is expected to prevent the deletion of a holdings record if any item reflected in the holdings record is circulating or associated with a circulation transaction (bill, hold, recall).

6.4.2.12. The system is expected to store bibliographic, authority, and holdings records that are created online by one staff person in a working file, so that another staff person can review the records before they are entered into the catalog database.

6.4.2.13. It is expected to be possible to copy a single bibliographic MARC record from one library to another.

6.4.2.14. The system is expected to maintain a history of edits for each library's database.

6.4.2.15. It is expected that it be possible to edit and produce labels, both single and multiples.

6.4.2.16. The system is expected to have the ability to generate statistical reports of cataloging activities coded into a locally-defined tag in the bib record.

6.4.3. Authority Control

6.4.3.1. The system is expected to maintain standard authority files (e.g., LC, MESH, Children's Subject Headings, and others) in a searchable format, with the ability to update and pass records.

6.4.3.2. The system is expected to handle interactions between bibliographic and authority record
data, including identification of unestablished headings, identification of bibliographic heading/reference conflicts, identification of duplicate headings and authority heading/reference conflicts whenever new authorities are added. Interactions between hierarchically related headings (e.g., recognizing an authority record for a subordinate body as being in conflict if it uses an obsolete form of the higher body’s name in the established heading) also should be monitored and reported. The system is expected to identify blind references and notify the user.

6.4.3.3. The system is expected to index and display to staff and the public references and other authority record data that appear on records not matched in the bibliographic file—for example, "reference" records or records needed to complete a hierarchy or sequence of related headings.

6.4.3.4. The system is expected to make global changes to bibliographic, holdings and authority records so:
   a. An authorized staff person can, by means of an online transaction, cause the system to change all occurrences of one text string to another text string or add a text string to records based on the presence of other specified data in the records or delete a specified text string from records.
   b. To cause a selected group of holdings records that are logically associated with one bibliographic record to be logically associated with a different bibliographic record (and no longer associated with the original bibliographic record) without having to enter a separate transaction for each individual holdings record.
   c. An authorized staff person can control the global change process so that heading elements may be rearranged based on subfield code alone, in conjunction with a partial heading text, i.e., use the global change process to reorder specified topical subdivisions in relation to variable geographic subdivisions when the former change from "Not Subd Geog" to "May Subd Geog."

6.4.3.5. The system is expected to make it possible to review the consequences of a global change to the database before it is implemented.

6.4.3.6. The system is expected to alert the staff person when a heading in a bibliographic record (1xx, 4xx, 6xx, 7xx, 8xx fields) that has been created online or a heading that has been added to a bibliographic record that is being modified online does not match an existing record in the authority file.

6.4.3.7. The system is expected to be able to replace existing authority records with newer versions loaded through either batch or online process, and is expected to provide the option of automatic replacement of headings in affected bibliographic records.

6.4.3.8. System generated authority records for unmatched bibliographic headings are expected to include 670s when identifying data from the 245 and 260 fields of the source record. The system also is expected to supply rule-based 4xxs (e.g., rotation of multiple surname headings within the heading and 1xx/245-based references for records generated from 1xx /240 headings). System-generated authority records should be created both during batch record loading and during online cataloging and record maintenance.
6.4.3.9. The system is expected to report the entry of new controlled headings into the indexes, regardless of the source of the heading, and report duplicate headings and authority heading/reference conflicts resulting from the addition of authority records to the file.

6.4.4. Holdings

6.4.4.1. **DESCRIBE how the system structures holdings data.**

6.4.4.2. The system is expected to place no limit on the holdings data that can be associated with a single bibliographic record.

6.4.4.3. The system is expected to allow an authorized staff person to perform operations on a selected group of holdings records, as follows:
   a. To change specific data elements, such as location information, in a selected group of holdings records without having to edit each individual holdings record.
   b. To cause a selected group of holdings records that are logically associated with bibliographic record (and no longer associated with the original bibliographic record) without having to enter a separate transaction for each individual holdings record.
   c. To delete a selected group of holdings records.
   d. To control the order of holdings display by location.
   e. To customize messages associated with status of items.

6.4.4.4. The system is expected to be able to link multiple bibliographic records with a single holdings record in order to accommodate bound-together items and analyzed monographic series.

6.4.4.5. The system is expected to specify in a holdings record the location of an item within a library, e.g., that a given item is located on the "Indexes" shelf in the reference collection of a particular library.

6.4.4.6. The system is expected to allow authorized staff to suppress the holdings information for a specific copy and thereby prevent the display of that holdings record in the OPAC.

6.5 Acquisitions

This section describes system capabilities that have to do with the ordering and receipt of library materials and the fund accounting activities that accompany such activities. **DESCRIBE how the system protects secure data (for example, fund number or name of requestor).**

6.5.1. Integration

6.5.1.1. The system is expected to allow an authorized staff person to suppress a record from display in the OPAC.

6.5.1.2. The system is expected to be fully integrated with the serials function for tracking, ordering, renewing and paying for periodical and standing order serials.

6.5.1.3. It is expected to be possible to search and display records from any system file while performing acquisitions functions.
6.5.1.4. The system is expected to allow an authorized staff person to suppress specific fields in a record from display in the OPAC.

6.5.1.5. The system is expected to provide a hot link to a URL from the OPAC if the record has information in the 856 field.

6.5.1.6. The system is expected to be fully integrated with document delivery functions to allow for acquiring, tracking and paying for journal articles and other individual pieces.

6.5.2. Ordering
6.5.2.1. The parameters that control how the system carries out various acquisitions operations are expected to be easily modified by an authorized staff person without the intervention of the vendor or system management personnel.

6.5.2.2. The system is expected to place no limits on the number of order records that can be associated with a single bibliographic record. The system is expected to allow the library to specify the data elements that appear on purchase orders, whether printed or electronically transmitted, within the parameters of EDI and other approved standards. **DESCRIBE how the system produces purchase orders.**

6.5.2.3. The system is expected to make it possible to correct or cancel a purchase order before printing or transmitting electronically.

6.5.2.4. The system is expected to make it possible to print purchase orders locally, possibly at the desktop.

6.5.2.5. The system is expected to use standard codes for countries and currencies.

6.5.2.6. The system is expected to make it possible to locally select which fields of the order record will be indexed.

6.5.2.7. The system is expected to make it possible to search and retrieve sequential record ID numbers.

6.5.2.8. The system is expected to make it possible to retrieve payment or check-in information for a specific issue within a series or subseries.

6.5.2.9. Order, vendor, and check-in records are expected to include library-defined fields.

6.5.2.10. The system is expected to provide flexibility in the number and length of fields and include the capability to enter free text notes in variable length fields for various pre-defined functions, i.e. ordering, receiving, cataloging etc.

6.5.2.11. The system is expected to prevent payment for items not received unless they are prepaid, renewals, or depository items.
6.5.2.12. The system is expected to support patron-initiated monographic or serial acquisitions requests to be used at the local library's discretion.

6.5.2.13. The system is expected to have the capability to link requestor names to a patron ID and to notify patrons when a requested item has been cataloged.

6.5.2.14. The system is expected to accommodate the following types of orders in any format:
   a. Firm orders
   b. Approval plans
   c. Standing orders
   d. Blanket orders
   e. Continuations
   f. Serial orders
   g. Collective orders
   h. Gifts
   i. Gratis orders
   j. Exchange receipts
   k. Prepaid orders
   l. Deposit account orders
   m. Memberships
   And have the flexibility to handle other types.

6.5.2.15. The system is expected to make it possible for a staff person to establish default values according to vendor type, terminal ID, or location for data elements in the order record to be used by the system whenever an order record is being created online.

6.5.2.16. The system is expected to make it possible for an authorized staff person who is creating order records online to override system-supplied default values for data elements in the order record on a record-by-record basis or by setting new default values that are valid only during the terminal session.

6.5.2.17. The system is expected to be able to detect and report in real time input errors for coded or numeric data elements (as defined by the library) in an order record when the order record is being created.

6.5.2.18. The system is expected to make it possible to make global changes to selected fields in a selected group of order records.

6.5.2.19. The system is expected to automatically check for fund availability at the time an order record is created.

6.5.2.20. The system is expected to make it possible to view online on request the complete payment history for an order record.

6.5.2.21. The system is expected to make it possible to use information in a bibliographic record,
MARC format compatible electronic record, or order record from the entering library or any other library system as source data for subsequent order without rekeying.

6.5.2.22. The system is expected to have the capability, at a library's option, to order multiple items on a single purchase order or limit purchase orders to single items.

6.5.2.23. The system is expected to make it possible to suppress an inactive or pending order record so that it does not display to the public.

6.5.2.24. The system is expected to make it possible to have different copies of the same title charged against different funds.

6.5.2.25. The system is expected to make it be possible to split a single-copy order among multiple funds.

6.5.2.26. A staff person is expected to be able to easily create an order record without producing a purchase order.

6.5.2.23. The system is expected to make it possible to receive and process bibliographic information in machine-readable form, via tape or FTP, and create linked payment records.

6.5.2.24. The system is expected to provide a method for tracking order fill rate for particular types of orders.

6.5.3. Claims and Cancellations

6.5.3.1. The system is expected to allow a local library to implement automatic claiming.

6.5.3.2. Each library is expected to be able to easily control the length and actual text for individual claim and cancellation notices, within the parameters of EDI and other approved standards.

6.5.3.3. The system is expected to have an editable preview of claims, whether printed or electronic.

6.5.3.4. The system is expected to make it possible to correct or cancel a claim before printing or transmitting electronically.

6.5.3.5. The system is expected to make it possible to print claims locally, possibly at the desktop.

6.5.3.6. For claiming and cancellations, the system is expected to make it possible to produce a report only or notices only or both.

6.5.3.7. The system is expected to make it possible for a processing unit to produce a library-specific list of outstanding claims for a selected vendor.
6.5.3.8. The system is expected to make it possible to display the entire claim and cancellation history down to the copy level.

6.5.3.9. The system is expected to make it possible to control the claim interval and to disable automatic claiming.

6.5.3.10. The system is expected to make it possible to review and modify or override automatically generated claims before they are sent or transmitted.

6.5.3.11. The system is expected to make it possible to produce a claim manually.

6.5.3.12. The system is expected to make it possible to issue a claim when only part of an order has been received.

6.5.3.13. The system is expected to make it possible for an authorized staff person to cancel all orders for a selected vendor with a single transaction.

6.5.3.14. The system is expected to make it possible for an authorized staff person to reassign a selected group of orders to a new vendor.

6.5.4. Receiving and Paying

6.5.4.1. The system is expected to allow for multiple ship to/bill to addresses for institutions with multiple library locations.

6.5.4.2. The system is expected to make it possible to edit the vendor and the fund at the time of receipt.

6.5.4.3. The system is expected to place no limits on the size of invoice records.

6.5.4.4. The system is expected to make it possible to search invoice records by vendor name, vendor code, and invoice number.

6.5.4.5. The system is expected to produce a report from electronic invoice processing to reflect all transactions and errors.

6.5.4.6. The system is expected to make it possible to receive and process invoice information in machine-readable form.

6.5.4.7. The system is expected to make it possible to track copies returned and the reason why.

6.5.4.8. The system is expected to make it possible to edit library-selected fields in an order record that has a received status.

6.5.4.9. The system is expected to make it possible to receive items that have a canceled status.
6.5.4.10. The system is expected to make it possible to record the receipt of part of an order.

6.5.4.11. The system is expected to make it be possible to record the receipt of items with or without an accompanying invoice.

6.5.4.12. The system is expected to make it possible to pay an invoice without linking it to an order record.

6.5.4.13. The order record is expected to be easily accessed and displayed during the processing of an invoice.

6.5.4.14. The system is expected to make it possible to apply multiple credit memos to an invoice or a single credit memo to multiple invoices.

6.5.4.15. It is expected to be possible for an item record or piece record for the item to automatically be created when an item is received.

6.5.4.16. It is expected to be an option for the local library to produce a customized processing slip automatically when an item is received.

6.5.4.17. The system is expected to make it possible to identify separately such extra charges as postage, bank charges, surcharges, and rush charges and to allocate these extra charges among the items in a flexible way.

6.5.4.18. The system is expected to make it possible to edit a paid invoice consistent with the maintenance of an audit trail.

6.5.4.19. The system is expected to make it possible to select which fields of an invoice record will be indexed.

6.5.4.20. Invoice records are expected to include library-defined fields.

6.5.4.21. The system is expected to be able to calculate the average price of monographs, using various criteria.

6.5.4.22. The system is expected to make it possible to produce a report of unfilled prepaid orders.

**6.5.5. Fund Accounting**

6.5.5.1. The system is expected to provide the capability to budget and monitor book and serial purchases either in a different manner or at a more detailed level than that provided by the institution’s financial management system.

6.5.5.2. The system is expected to be fully integrated with the acquisitions and serials management control functions.
6.5.5.3. The system is expected to record budgets and purchases in a manner that supports management overview.

6.5.5.4. The system is expected to make it possible to transmit invoice and fund information to and from participating library and parent institution accounting systems. [See Section 6.5.6.] **DESCRIBE how the system would manage this process.**

6.5.5.5. The system is expected to maintain a copy-specific audit trail.

6.5.5.6. The system is expected to make it possible to print the audit trail for a fund on a printer located in a library or output in electronic format.

6.5.5.7. The encumbering and disencumbering of funds and the adjustment of fund balances is expected to be performed automatically and dynamically in response to creation of orders, cancellation of orders, and payment of invoices.

6.5.5.8. The system is expected to make it possible to track adjustments to fund allocations.

6.5.5.9. It is expected to be possible to add free text notes to fund records.

6.5.5.10. The system is expected to make it possible to adjust fiscal year beginning and ending dates for commitments and expenditures.

6.5.5.11. The system is expected to make it possible to select which fields in a fund record will be indexed.

6.5.5.12. The system is expected to make it possible for an authorized staff person to establish encumbrance and expenditure limits by fund either in terms of a dollar amount or a percentage of the allocation that can exceed 100 percent.

6.5.5.13. Totals for a fund are expected to be calculated for display.

6.5.5.14. There is expected to be no limit on the number of funds or the size of fund records.

6.5.5.15. The system is expected to make it possible to associate funds to each other in a hierarchical relationship with multiple levels such that a fund can have multiple levels of subfunds.

6.5.5.16. The system is expected to make it possible for a library easily to customize and generate financial reports.

6.5.5.17. The system is expected to make it possible to designate a fund as active or inactive.

6.5.5.18. The system is expected to convert encumbrances and expenditures automatically from foreign currencies into dollars and from dollars into foreign currencies based on a currency conversion table that can be easily maintained by an authorized staff person without the intervention
of the vendor or system management personnel.

6.5.5.19. The system is expected to provide a rules-based method for fiscal year rollover, to allow libraries to choose whether or not to carry over funds and commitments into a new fiscal year automatically.

6.5.5.20. The system is expected to make it possible to define fiscal years differently for different funds.

6.5.5.21. The system is expected to make it possible to specify by fund different carryover or rollover types.

6.5.5.22. The system is expected to make it possible to produce on demand a report, specific to the local library's fiscal year, of funds showing budget, amount encumbered, amount expended and free balance.

6.5.6 Acquisitions interface to financial systems

6.5.6.1. System X participants need the ability to assemble and post accounting and purchase transactions to their parent organization’s financial systems. These organizations may also follow encumbrance accounting, in which commitments to purchase are recorded as a reduction of available fund balances. Because of the variety of financial systems and accounting policies, it is expected that the system will have the capability to maintain detail information and will have options on how this information may be summarized and posted to the financial system.

6.5.6.2. It is expected that the system will maintain a single means of accumulating data for posting accounting records.

6.5.6.3. It is expected that the system will provide means of maintaining additional accounting data not provided elsewhere.

6.5.6.4. It is expected that the system will have the capability to record the detail needed to support encumbrance accounting.

6.5.6.5. It is expected that the system will maintain information needed to record accounting entries related to library transactions.

6.5.6.6. It is expected that the system will allow for a separate adjustment transaction for price and quantity changes versus changing the original recorded amount.

6.5.6.7. It is expected that the system will have the capability to group similar transactions with a common description.

6.5.6.8. It is expected that the system will support either detailed or summarized posting to the financial system.
6.5.6.9. It is expected that the system will provide the option to accumulate and post only certain transactions.

6.5.6.10. It is expected that the system will provide the capability to post vendor invoices to a clearing account, with separate receipt transactions posted as subsidiary invoice transactions.

6.5.7. **Vendor File**

6.5.7.1. It is expected to be possible to create a union vendor file, with library or consortia-defined fields, to which all libraries using the system would have access.

6.5.7.2. It is expected to be possible for each library to add local information to the union vendor record.

6.5.7.3. It is expected to be possible for the library specific data, including locally entered notes in a vendor record, to display for the entering library only.

6.5.7.4. It is expected to be able to produce system-wide or individual library vendor performance reports including average fill time, discount percent, number of orders, number of claims, number of cancels, dollars ordered, dollars paid.

6.5.7.5. It is expected to be able to produce system-wide or individual library vendor performance ON-LINE OR PRINTED reports including average fill time, discount percent, number of orders, number of claims, numbers of cancels, dollars ordered, dollars paid.

6.5.7.6. There is expected to be no limit on the number of vendor records.

6.5.7.7. The system is expected to make it possible to connect the vendor record fields with local accounting systems. **DESCRIBE how the system would make this connection.**

6.5.7.8. The system is expected to make it possible to store vendor-specific information that will be automatically included on purchase orders, claims, cancellation notices.

6.5.7.9. The system is expected to accommodate easily both international addresses and a 9-digit zip code.

6.5.7.10. The system is expected to make it possible to select which fields in a vendor record will be indexed.

6.5.7.11. Country and currency information is expected to be identified in separate, searchable fields in the vendor record.

6.5.7.12. The system is expected to make it possible to manually or automatically purge vendor records for vendors based on library-specified criteria.

6.5.7.13. The system is expected to make it possible to control by vendor automatic claiming of
orders.

6.5.7.14. The system is expected to make it possible to control by vendor automatic cancellation of orders.

6.5.7.15. A library is expected to be able to store standard discount information by vendor, and the system is expected to use this information in determining the amount to be encumbered for an order.

6.5.7.16. The system is expected to make it possible to store information about language and specialization in the vendor record.

6.5.7.17. The vendor record is expected to accommodate multiple addresses for the vendor, including electronic mail and web addresses.

6.5.7.18. The system is expected to make it possible for an authorized staff person at the local library to use the system to block orders to a specific vendor.

6.6 Serials Management
This section describes system capabilities that have to do with the maintenance of serial orders and the binding of materials. **IT IS OF PRIMARY IMPORTANCE** that each library and consortium have the capability to control its own serial records.

6.6.1. Integration
6.6.1.1. The system's serials management functions are expected to be fully integrated with the acquisitions functions.

6.6.1.2. The system is expected to provide for a serial/acquisitions interface for automatic renewal and payments of serials. Libraries should have the option to override this feature.

6.6.1.3. The system is expected to make it possible to specify renewal instructions at the copy level.

6.6.1.4. The system is expected to make it possible to project next year's serials expenditures based on current year's serial (or continuation) orders, cancellation or renewal instructions, and country-specific inflation factors.

6.6.1.5. The system is expected to provide information on serials and standing orders by various categories, e.g., country of origin, language, vendor.

6.6.2. Check-In
6.6.2.1. The system is expected to accommodate all types of serials in all types of media, including but not limited to periodicals, loose leafs, government publications, monographic series, conference proceedings, legal materials, technical reports, and electronic files.

6.6.2.2. The parameters that control how the system carries out various serials management
operations are expected to be easily viewed and modified by an authorized staff person without the intervention of the vendor or system management personnel.

6.6.2.3. The system is expected to make it possible to authorize a staff person to check in materials only for specified locations.

6.6.2.4. The system is expected to make it possible to search for and display records from any system file while performing serials management operations.

6.6.2.5. The system is expected to make it possible to create serials records either by copying the fields necessary from existing records in the system and by manual entry.

6.6.2.6. The system is expected to make it possible to search and display serials/bibliographic records along with summary of holdings display as part of the online catalog.

6.6.2.7. The system is expected to allow identification of serials for checking by title, ISSN, vendor ID, fund number, Bibliographic ID, and other fields.

6.6.2.8. The system is expected to allow free text notes to be attached to checking records.

6.6.2.9. The system is expected to prompt for barcode entry if a copy is to be barcoded for circulation, and refuse a barcode if an item or copy is not to be barcoded for circulation.

6.6.2.10. The system is expected to interface with circulation so that at checking time an item record is created and stored in the item file within circulation.

6.6.2.11. The system is expected to indicate the destination for materials (e.g., routing, current periodicals, reference, discard etc).

6.6.2.12. The system is expected to maintain an historical payment file that details every payment for a specific serial title.

6.6.2.13. The system is expected to maintain cumulative circulation statistics for all issues of the title.

6.6.2.14. The system is expected to accommodate multi-year subscriptions.

6.6.2.15. The system is expected to accommodate various enumeration and chronology patterns and designations, for easy check-in of all frequencies of publication, regular and irregular.

6.6.2.16. The system is expected to generate a reminder report at a library specified time prior to renewal for all titles that are ordered direct.

6.6.2.17. The system is expected to accommodate multiple copy serial orders, whether from one or multiple sources and whether from one or multiple funds.
6.6.2.18. There is expected to be no limit on the number of check-in records that can be associated with a single bibliographic record.

6.6.2.19. The system is expected to employ a predictive algorithm to predict the next issue of a serial, and this algorithm is expected to consider not only the defined pattern for the serial but past experience in the receipt of issues for the serial.

6.6.2.20. The system is expected to accommodate all types of supplementary materials, such as:
   a. Special issues
   b. Supplements
   c. Inserts
   d. Pocket parts
   e. Replacement pages
   f. Maps
   g. Computer diskettes
   h. CD-ROMs
   i. Multiple-part issues
   j. Replacement volumes, etc.

And have the flexibility to handle other types.

6.6.2.21. The system is expected to make it be possible to establish a system of priorities for the handling of the individual copies in a multiple-copy serial order, in terms of holdings, updates, routing, etc., or to change the sequence of copies displayed.

6.6.2.22. The system is expected to make it easy to check in an issue at any time, regardless of its predicted arrival date, and to adjust enumeration and chronology at the point of check-in.

6.6.2.23. The system is expected to support various automatic routing functions, including:
   a. Production of routing lists at a user-defined point in the serials processing procedure
   b. Maintenance of different routing lists for different copies of a multiple-copy serial order
   c. Deletion of a routing list with a single command
   d. Deletion of a specific name from all routing lists
   e. Printing of all lists
   f. Printing of routing lists at the location of the workstation used to check in issues.

6.6.2.24. Check-in of an issue is expected to trigger a number of locally optional operations, such as:
   a. Generation of call number labels and routing slips
   b. Clearing of the claims queue
   c. Updating of holdings information and OPAC display
   d. Recording of statistical information about vendor or publisher performance
   e. Creation of a claim for skipped issue

6.6.2.25. The system is expected to have flexible capabilities for managing standing orders, such
as:

a. Multiple orders under a standing order
b. Multiple levels of hierarchy

6.6.2.26. The system is expected to have the ability to associate records of individual titles to membership records or other global records.

6.6.2.27. Issue specific holdings information is expected to automatically be collapsed into item-level holdings, subject to override, when bound volumes are received.

6.6.3. Claiming
6.6.3.1. The system is expected to generate claims at a library-determined point in serials issue processing.

6.6.3.2. The system is expected to support claiming on a specific serial order record.

6.6.3.3. The system is expected to produce claims of variable length, even quite long ones.

6.6.3.4. The system is expected to make it possible to control the claim interval and to disable automatic claiming for serial orders.

6.6.3.5. The system is expected to make it possible to review and modify or override automatically generated claims before they are sent or transmitted.

6.6.3.6. The system is expected to make it possible to produce a claim manually.

6.6.3.7. The system is expected to support electronic transmission of claims.

6.6.4. Binding
6.6.4.1. The binding system is expected to be fully integrated with the complete automated system, including circulation and serials management.

6.6.4.2. The system is expected to make it easy to create and maintain binding information (such as spine label, color, location, etc.) for a title and to review and modify this information prior to the preparation of bindery forms.

6.6.4.3. The system is expected to interface with the binder to support electronic transfer of binding information.

6.6.4.4. The system is expected to be capable of determining binding readiness at the copy level on the basis of whether the item is bound, the completeness of the volumes, the receipt of a specified issue, or user-defined time intervals.

6.6.4.5. The system is expected to be capable of automatically producing internal binding pickup lists or slips for items that are ready for binding. The system is expected to make it possible to
review these lists online and modify them as needed.

6.6.4.6. It is expected to be possible to charge all individual items in a binding shipment to a circulation status of "at the bindery" with a single transaction.

6.6.4.7. The system is expected to maintain serial copy-specific binding patterns or profiles.

6.6.4.8. The system is expected to provide spine label support for serial and non-serial items.

**6.7 Management Information and Reporting**

6.7.1. General Features

6.7.1.1. The system is expected to provide a wide range of standard reports.

6.7.1.2. The system is expected to use an internal customized report generator that allows query by example, using Boolean operators and truncation, SQL queries, and GUI (graphical user interface) capabilities for easy query construction.

6.7.1.3. The system is expected to provide a method for converting existing management data, including an annual snapshot of the entire database. **DESCRIBE how the system would do this.**

6.7.1.4. The system is expected to export all data in standard formats for use in external report generation systems.

6.7.1.5. The system is expected to provide scheduled and on-demand report generation without negative impact on system operation.

6.7.1.6. The system is expected to allow a library staff person (not a programmer) to create customized reports on demand.

6.7.1.7. The system is expected to have the capability to create "what if" scenarios, projecting future trends from current data.

6.7.1.8. It is expected to be possible to generate reports with information from multiple files.

6.7.1.9. The system is expected to make it possible to gather data at the whole system level as well as by administrative unit and circulation unit and other levels.

6.7.1.10. The system is expected to be able to provide statistical reports with library specific data, especially by user, language and type of material.

**6.8 Media Booking**

6.8.1. The media booking system is expected to be fully integrated with the complete automated system, including circulation and reserves.
6.8.2. The system is expected to have the capability to select, book and track media, equipment, and rooms. The system is expected to have the capability to track all items at all times.

6.8.3. The system is expected to maintain a tracking history of media, equipment, and rooms, e.g., where a specific piece of equipment has been the last several times it was booked.

6.8.4. The system is expected to support a wide variety of loan periods, ranging from hourly through loan periods defined by a fixed date, such as the end of an academic term, through indefinite.

6.8.5. The system is expected to allow an authorized staff person to override check-out periods as needed.

6.8.6. The system is expected to have the capability to flag requests for review by a staff person if conflicts arise or duplicate requests are received.

6.8.7. The system is expected to calculate overdue fines on an hourly basis and to produce overdue notices for reserve items. The system should provide the option to calculate fines immediately upon discharge, with no grace period.

6.8.8. The system is expected to have the capability to accept specific coded information for each type/category of room, equipment or media title to be booked.

6.8.9. The system is expected to be able to handle data needed for proper identification and inventory of equipment. This data includes make, model number, serial number, year purchased, vendor, purchase price, bulb type, general notes field (256 character minimum), repair notes field (256 character minimum), preventative maintenance notes field (256 character minimum).

6.8.10. The system is expected to make it possible to locally select which fields of the booking records will be indexed.

6.8.11. The system is expected to allow an item to have repeat booking, e.g., if a piece of equipment is used on a regularly scheduled basis by an instructor.

6.8.12. The system is expected to have the capability to accept date, time frame, and delivery location needed for items. The calendar the system maintains is expected to extend for a minimum of 18 months ahead.

6.8.13. The system is expected to have the capability to proceed through a list of requested rooms/equipment/media until it finds an available item or exhausts the supply.

6.8.14. The system is expected to supply all user data into the booking module simply by supplying the patron barcode.

6.8.15. When an item is booked in advance, the system is expected to charge the item out to the
requestor automatically on the requested date.

6.8.16. The system is expected to be able to supply online a list of items booked for any given date.

6.8.17. The system is expected to have the capability to generate at any point a printed schedule of booked items and requestor names. If delivery is necessary, the system is expected to supply a daily delivery schedule with locations.

6.8.18. The system is expected to have the capability to generate a mailing label for delivery of a booked item.
7. DATA CONVERSION, DELIVERY, AND INSTALLATION

Vendor will be expected to convert data from local systems now used by participating institutions. See Appendix A for further information.

7.1 Data Conversion

7.1.1. The vendor is expected to convert the following types of records:

a. Authority
b. Bibliographic
c. Holdings (including local copy holdings and MARC holdings data)
d. Item
e. Order/Pay/Receipt
f. Fund
g. Invoice
h. Patron
i. Patron Accounting
j. Serials check-in
k. Vendor

7.1.2. The vendor is expected to maintain the following types of links between and among records:

a. Patron to charged item
b. Patron to patron accounting
c. Patron to charged item to patron accounting
d. Fund or invoice to order
e. Invoice to vendor
f. Order to vendor
g. Order to bibliographic record
h. Holdings to bibliographic record
i. Item to bibliographic record
j. Serials check-in to bibliographic record
k. Item status to circulation or bibliographic record

7.1.3. In order to estimate the process and effort required to convert data currently in the systems of participating libraries to the new system:

a. **SPECIFY** the information required from the participating libraries in order to carry out conversion tasks.

b. **SUPPLY** copies of forms typically used to record information needed for conversion.

c. **OUTLINE** typical steps in the conversion process, focusing particularly on procedures for library review of test files.

d. **SPECIFY** the costs associated with the data conversions in 7.1.1 and 7.1.2 if:

   (1) All data is supplied in the local system format, as specified in Appendix A.
   (2) Bibliographic, holdings, authority, and community information data is supplied in USMARC format, and all other data is supplied in the local system format, as specified in Appendix A.

e. **SPECIFY** how long it will take to convert initial backfiles of data on a dedicated machine;
list the specifications for that machine.

f. SPECIFY the process that will be used to update the initial database file with a subsequent load of all transactions occurring after the initial data extract and before cut over to the new system.

7.1.4. SUPPLY a list of libraries whose data have been converted for use in the system and the names of the local systems from which they migrated.

7.1.5. SUPPLY a list of libraries that are converting from the same systems as our System X libraries.
8. OVERVIEW OF MnLINK GATEWAY SYSTEM

The MnLINK Gateway will allow users to access both traditional library materials, primarily those held in Minnesota libraries or in other libraries with which Minnesota libraries have cooperative arrangements, and digital information resources available in electronic form hosted on commercial systems and services, on servers located throughout Minnesota, and globally on the Internet and World Wide Web (or successor technologies).

The MnLINK Gateway System is defined as the set of components required to provide a single, easy to use, integrated and coherent network and computer-based user interface. It provides the end-user with easily searchable access to and direct online access to or delivery of:

- Traditional library resources
- Digital resources including
  1. online index, abstract, statistical, and directory databases
  2. text, image, video, and multi-media resources available via the Minnesota statewide network infrastructure
  3. Internet-based resources within and beyond the local institution and the state of Minnesota.
- Integrated access to both forms of material is required.

The MnLINK Gateway environment represents an information strategy which will unfold over time and which:

- Puts in place a major capability for cooperative library resource sharing.
- Preserves and enhances investments in existing library automation systems which do not participate in System X by retrofitting such systems, where feasible and cost effective, with standard NISO Z39.50 search and retrieval server capabilities.
- Capitalizes on the universal adoption of TCP/IP, the Internet, and World Wide Web protocols.
- Lays the framework for multimedia content delivery via graphically oriented microcomputer workstations.
- Establishes an open system and standards environment which does not constrain the MnLINK system or individual libraries in their choice of vendors, systems, and services, now or in the future.
- Provides the capability to serve Minnesota users of the MnLINK system at home, in the office, in the library, on campus, in a distance learning environment, or while traveling.
- Allows a MnLINK system administrative organization to integrate and manage user access to and use of a diverse and changing set of databases, systems, and services through a gateway architecture which will provide the technology to support the development,
implementation, and refinement of coherent sets of policies on a statewide basis.

8.1 General System Description

The intent of the rest of section 8 is to describe what a suitable MnLINK Gateway System is expected to do and be. The requirements listed, and the diagram enclosed, are intended to show what the RFP authors believe is the most likely configuration for the MnLINK Gateway System. If the vendor wishes to respond to the Gateway portion, the VENDOR MUST RESPOND TO THIS CONFIGURATION. Vendors may also, however, submit additional, alternate configuration(s) which, in the vendor’s estimate, have advantages for the MnLINK system over the required configuration. Any such additional proposals MUST indicate whether the proposed configuration is available now or at what point in the future it will be available.

Under the MnLINK Gateway System, a user employing a personal computer with a Web browser (or successor technology) either in the library or at any other location with an Internet connection, will be able to search for wanted information in the collections of Minnesota libraries, resources provided by the MnLINK system or locally accessible digital resources, databases licensed by a library or the State of Minnesota, and digital resources available through the Internet and World Wide Web.

The MnLINK Gateway System includes:

- **MnLINK Gateway Server** complex which stands between end users at workstations and variety of target databases, systems, and services. The MnLINK Gateway server has responsibility for identifying, authenticating, and authorizing users; for maintaining information about the state of a user’s interaction with one or more databases, systems, or services; for supporting a World Wide Web user environment at the workstation; and for supporting a variety of open standard protocols for the search, retrieval, and processing of information obtained from target sources.

- **Union Catalog: Virtual and/or Physical.** The vendor is expected to be able to create a very large, physical union catalog on System X for all MnLINK participants. The Gateway System will provide the capability to conduct Z39.50 protocol searches among library automation systems, including System X servers, in Minnesota and elsewhere, in order to create a virtual union catalog or subsets of a union catalog, as appropriate in the development of the MnLINK system.

- **MnLINK Participating Library Z39.50 Servers.** MnLINK participating libraries, which have automated library systems and for whatever reason do not participate in System X, will acquire Z39.50 server capability sufficient to make information about their collections and holdings available to users of the MnLINK system.

The MnLINK Gateway is designed to be flexible. Designated MnLINK system administrators will have the ability to profile the target servers to be searched as a group, to create one or more HTML search forms as the front end of the MnLINK system, and to modify authorization groups and classes as needed to extend or restrict privileges to various groups of users. Designated
MnLINK system administrators will be able to define and maintain multiple user interfaces as well as have the ability to invoke a default user interface.

The Gateway supports a Web-(HTTP and other Web based protocols) based environment at the end user workstation; provides methods for access control; and session management, and provides interfaces to target databases, systems, and services, including NISO Z39.50 compliant catalogs and databases.

The graphic (MnLINK Gateway) on the following page is a representation of a suggested architecture for the MnLINK Gateway system from the point of view of the patron.

8.1.1. Operation of the MnLINK Gateway from the Patron’s Perspective

In order to use the MnLINK system services, the library patron will access the MnLINK network with a Web browser client, such as Netscape, Microsoft’s Explorer, or Mosaic. The browser requests services from a local library system, System X (integrated library system specified in previous sections of this Request for Proposals), the MnLINK Gateway server, or commercial or other database servers. These connections will be made in HTTP protocol and are shown in the diagram as blue connecting lines. Normally the library patron will connect to MnLINK system through a home page at his/her library and search the local system for library resources. If the local library cannot fulfill the patron’s resource needs, a hot link off the local home page directs the patron to MnLINK Gateway resources.

The Gateway offers access to MnLINK’s Union Catalog, either physical or virtual depending upon what is implemented; other statewide databases; non-MnLINK system resources; and commercial resources. The Gateway uses the Z39.50 protocol to search these resource databases. The Gateway can access services from Z39.50 compliant servers or from Web servers. The Z39.50 connections are shown as red connecting lines in the diagram.

Resources found on searches through the Gateway may be requested via inter-library loan or document delivery. The inter-library loan and document delivery (ILL/DD) system will be an integral part of the Gateway. The ILL system may be used as an unmediated mechanism for requesting resources within the state as well as outside the state. The ILL system will use the ISO ILL protocol 10160/10161 standards. When a library patron requests an inter-library loan, authentication will be needed to insure that the patron is a valid user of the local library and does not have blocks on his/her record. The Gateway will be responsible for requesting authentication back to the local system. This authentication path is shown as green curved lines on the diagram. (More information on authentication is presented later in this section.)

The MnLINK system will also provide access to commercial and non-commercial databases and information resources. The local home page will also direct the library patron to these services. These services may be available directly from the provider, through the Gateway, or through an 800 number dial-in modem pool or secure proxy server. Since authentication will be necessary for all commercial services and perhaps for some non-commercial services, the authentication
mechanism used by the resource provider will dictate what type of connection method will be needed to access the service. If the resource provider supports reverse authentication, the resource server will connect to the Gateway and the Gateway will do the local system authentication. This is shown also by the **curved green lines** in the diagram.

Where the resource provider only supports IP address authentication, only those end-user devices that access the resource from within the domain address will be allowed to use the resource. For people outside the domain of a MnLINK participating library, an 800 number dial-in modem pool or a secure proxy server will be available to provide access to these resources. The services that the dial-in modem pool or secure proxy server provides access to will be restricted to a defined list so that the MnLINK system does not become an Internet provider for everyone in the state.

### 8.1.2. Patron Identification and Authentication in the MnLINK Gateway

Patron authentication is a critical component of the MnLINK Gateway. The Gateway will be able to authenticate users from their home location as well as when they are at remote locations in the state or even out of the state. It is expected that there will be no central union patron database for the MnLINK system. The Gateway will need to authenticate the patron at his/her home server. A patron’s home server may be any of the different vendor library systems participating in the MnLINK system.

The MnLINK system could use the patron’s bar code and password/pin number for identification. The bar code prefix may be used to identify the home server of the patron. The Gateway could then inquire of the home server for patron authentication. This inquiry may be a native command to the home server, some type of CGI script run on the home server, or some more universal mechanism to retrieve this patron authentication information.

**IT IS OF PRIMARY IMPORTANCE** that the vendor of the Gateway software work with the other vendors participating in the MnLINK system to develop a status inquiry using the Z39.50 Access Control Facility.

Many any of the services offered through the MnLINK system will be initiated at or by the Gateway. Where the service is initiated by the Gateway, the authentication described above may be employed. It is also possible that the library patron will go directly to some resource providers for some MnLINK system services. Where the resource provider offers a remote authentication process, it is expected that the Gateway will support this process. An example of this type of authentication is the Remote Patron Authentication Service (RPAS) offered by IAC SearchBank. The resource provider may wish to inquire of the Gateway for patron authentication and status. The Gateway may need to authenticate a patron from the home server and respond to the resource provider.

It is recommended that scripting be used to control the authentication connections to the patron’s home server and the resource provider’s remote authentication process. **IT IS OF PRIMARY IMPORTANCE** that the MnLINK system administrators be able to change these scripts as needed and not have to continually request software changes as the various resource providers...
change systems or libraries acquire systems from different vendors.

8.2 MnLINK Gateway Client

Please refer to section 5.2.1 for specifications for the client for the Gateway portion of the MnLINK system and respond directly to these specifications.

8.3 The MnLINK Union Catalog

The vendor is expected to be able to create a very large, physical union catalog using System X software for all MnLINK participants. Also, IT IS OF PRIMARY IMPORTANCE that the Gateway System provide the capabilities to conduct Z39.50 protocol searches among library automation systems, including System X servers, in Minnesota and elsewhere in order to create a virtual union catalog as appropriate in the development of the MnLINK system. Unless otherwise specified, the term “Union Catalog” refers to both the possible physical and virtual manifestations.

8.3.1. If the MnLINK system creates a physical union catalog, it will be within the System X server complex. The Gateway is expected to be able to search the physical Union Catalog using Z39.50 protocols and to obtain circulation status information from the corresponding local server for items found on Union Catalog searches.

8.3.2. IT IS OF PRIMARY IMPORTANCE that “Broadcast” searching using Z39.50 protocols across multiple servers or databases be available in the MnLINK Gateway.

8.4 The MnLINK Gateway

It is envisioned that an HTTP/Z39.50 Gateway (hereafter referred to as the Gateway) will serve as a single point of management for search traffic, both chargeable or free. In this capacity the Gateway is expected to perform both entry management such as authentication and session control as well as track user activity information. The Gateway will perform the translation function to allow searching from a Web browser to multiple Z39.50 databases through a Z39.50 client included within the Gateway package. The principal purpose of the Gateway will be to allow users a transparent mechanism for a uniform search capability across a diverse range of data sources.

8.4.1. Session Control

8.4.1.1. IT IS OF PRIMARY IMPORTANCE that the Gateway provide a version 3 implementation of the Z39.50 client within the proposed Gateway package including all the features of the NISO standard specified in Appendix B.

8.4.1.2. IT IS OF PRIMARY IMPORTANCE that the Gateway establish session control and history so that the Gateway may maintain the state of a user’s search, allowing a user to incorporate earlier steps in the search process or other type of transaction in a later step of such a
process or transaction.

8.4.1.3. The Gateway is expected to generate a system log file for all system activity that may be used by a report writer for reporting regarding Gateway activities. This log is expected to contain information about Gateway connections, disconnects, date and time of the activity, resource connected to, IP address connection came from, etc.

8.4.1.4. The Gateway is expected to generate a system error log file. This file may be imbedded in the system log file or more preferably be a separate log file.

8.4.1.5. The Gateway is expected to maintain a database of statistical performance records to be used for analysis by system administrators. This database is expected to be used by a system supplied report writer capable of customized report output. See, in addition, section 8.6 of the RFP for additional management information reports required or desired.

8.4.1.6. If Z39.50 Extended Services EXPLAIN is not implemented, default session parameters controlled by the Gateway administrator are expected to be available for each target database and server.

8.4.1.7. The Gateway is expected to manage searches against individual targets, or control “broadcasting” of searches against multiple targets, so that the user perceives the search as being executed simultaneously against a single resource.

8.4.1.8. **IT IS OF PRIMARY IMPORTANCE** that the Gateway demonstrate interoperability at a detailed feature by feature level with the Z39.50 servers of the MnLINK participating libraries. A list of these libraries and each library automation vendor are described in appendix A.

8.4.1.9. The Gateway is expected to provide a time-out mechanism for no response from targets for connections and searches.

8.4.1.10. The Gateway is expected to have the capability to submit a user search to either a Z39.50 server, a Web server, or both in parallel.

8.4.1.11. The Gateway is expected to allow the user to search a specific MnLINK library location, a subset of MnLINK library locations, or the entire Union Catalog, whether virtual or physical.

**8.4.2. Authentication**

8.4.2.1. **IT IS OF PRIMARY IMPORTANCE** that authentication NOT be needed to search any of the MnLINK library catalogs or the MnLINK Union Catalog.

8.4.2.2. The Gateway is expected be able to maintain a table of IP addresses, that may be changed by the Gateway administrator, which will identify a library location and override the
need for patron identification and authentication at those locations.

8.4.2.3. The Gateway is expected to request authentication from users only as necessary.

8.4.2.4. The Gateway is expected to be capable of authenticating system users at their home location/server. The home location could be a System X server or one of many different vendor’s library system servers. This authentication is expected to include patron validation and status check.

8.4.2.5. The Gateway authentication is expected to support the use of a patron bar code and password/pin number for access. The bar code prefix will be the primary mechanism to identify the local server to use for authentication. See Appendix G for a description of the bar code layouts.

**EXPLAIN how your system will support patron authentication in the distributed MnLINK system environment.**

8.4.2.6. The Gateway authentication is expected to, through the use of the bar code prefix, identify patrons associated with non-MnLINK participating libraries and present to them a special message when they request services which require authentication.

8.4.2.7. The Gateway is expected to support X.500 and X.509 mail directory authentication.

8.4.2.8. The Gateway is expected to support library profiles so that Gateway services may be authorized on an library-by-library basis. This library profile is expected to allow libraries to control whether blocked patrons have access to each of the Gateway services.

8.4.2.9. Gateway authentication is expected to be handled by a scripting mechanism which can be easily changed by the Gateway administrator.

8.4.2.10. The Gateway is expected to be able to retrieve demographic data about the patron from the home server for delivery to the ILL or System X server. (see 8.5.2.12 for further details)

8.4.2.11. The Gateway is expected to be able to accept patron authentication requests from external resource providers. In addition, it is expected that the vendor keep pace with developments in electronic security and authentication, such as certificate and token servers and smart-chip technology. **EXPLAIN how the system being proposed will be able to handle multiple varieties of patron authentication currently in use or in development.**

8.4.2.12. **IT IS OF PRIMARY IMPORTANCE** that the Gateway vendor work with the various library automation vendors for the library systems participating in MnLINK to develop a mechanism for patron authentication. **IT IS OF PRIMARY IMPORTANCE** that the vendor certify their ability and willingness to work with the MnLINK organization to devise a consistent, workable, and interoperable approach to user authentication.
8.4.2.13. The dial-in or secure proxy server is expected to authenticate users through the Gateway.

8.4.2.14. **IT IS OF PRIMARY IMPORTANCE** that the dial-in or secure proxy server have the capability to restrict access to a selected list of Internet addresses as determined by MnLINK.

8.4.3. Interface (See also section 5.1.2 above)

8.4.3.1. **IT IS OF PRIMARY IMPORTANCE** that the Gateway support a fully functional Web interface accessible with a standard Web or successor technology browser.

8.4.3.2. **IT IS OF PRIMARY IMPORTANCE** that the Gateway support a client which is compatible with standard adaptation products used by individuals covered by the Americans with Disabilities Act.

8.4.3.3. The Gateway is expected to project a flexible patron interface.

8.4.3.4. The Gateway administrator is expected to be able to easily change the content of messages and the initial menu screens on the patron interface.

8.4.3.5. The Gateway is expected to allow a customized initial menu screen for different sets of patrons based on the IP address of the user client connecting to the Gateway.

8.4.3.6. The initial menu is not expected to require patron authentication.

8.4.3.7. The Gateway is expected to allow a user the choice of skill level for interaction.

8.4.3.8. The Gateway is expected to provide clear and concise user help screens including context sensitive help. Alternatively the Gateway is expected to provide methods of creating help and other screens locally which are easy to use. The help text is expected to be customizable by the Gateway Administrator.

8.4.3.9. The Gateway is expected to provide a set of uniform help options on all screens.

8.4.3.10. The Gateway is expected to present a simple default search logic when searching MARC record databases.

8.4.3.11. The Gateway is expected to present the user with options of searching the MnLINK Union Catalog by a single location, user selected locations, predefined location subsets, or the entire Union Catalog, whether virtual or physical. (see also 8.4.1.11)

8.4.3.12. The Gateway is expected to allow “broadcast” Z39.50 searching options so users may select search locations or use predefined search location sets.

8.4.3.13. When search results are returned from multiple databases, the display is expected to be
either in a default order or a user specified order, at the user’s option.

8.4.3.14. The Gateway is expected to provide pay options for pay-per-view or other transactions utilizing a user’s credit card, a debit card, a debit account, or by withdrawing funds from a library deposit account.

8.4.3.15. The Gateway is expected to provide security over credit card data or other data which needs to be secured for payment for services. **EXPLAIN how this is accomplished in your system.**

8.4.3.16. The Gateway is expected to provide account record keeping for pay-per-view charges, if implemented, and other charges incurred by the user.

8.4.3.17. The Gateway is expected to report the progress of a search to a user (e.g., how many sites are done, percentage, long search in progress).

8.4.3.18. The Gateway is expected to allow the user to stop a search in progress and accept the results yielded so far.

8.4.3.19. The Gateway is expected to allow users to alter session parameters within restrictions specified by the MnLINK system (e.g., maximum number of hits).

8.4.3.20. The Gateway is expected to display an interlibrary loan/document delivery (ILL/DD) request button on all single record display screens.

8.4.3.21. The Gateway is expected to prompt the user for his/her user bar code number and password or other identification when an ILL/DD request is initiated.

8.4.3.22. The Gateway is expected to allow ILL or document delivery requests to be placed on individual record displays and to send them to the ILL/DD server without any rekeying by the patron.

8.4.3.23. The Gateway is expected to allow the patron to check on the status of all active ILL requests with the ILL/DD server.

8.4.3.24. The Gateway is expected to provide a messaging capability between the patron and the ILL/DD server on open ILL requests.

8.4.3.25. The Gateway interface is expected to support languages other than English.

**8.4.4. Search Capabilities**

8.4.4.1. The Gateway is expected to have the ability to implement advanced searching strategies such as Boolean searches, adjacency searches and limiting by format, language, or publication year.
8.4.4.2. The Gateway is expected to allow the user to limit searches by MnLINK system specified fields either before or after the search is executed for the first time.

8.4.4.3. The Z39.50 client of the Gateway is expected to allow the searcher to exploit as fully as possible the searching capabilities of the MnLINK Union Catalog.

8.4.4.4. The Gateway is expected to allow for searches to be saved and the results to be combined with subsequent search results.

8.4.4.5. The Gateway is expected to allow search criteria to be saved and resubmitted against a different target database during the same search session.

8.4.4.6. The Gateway is expected to have the ability to merge search results for broadcast searches.

8.4.4.7. The Gateway is expected to be able to display search results in several types of order. (e.g., alphabetical by search field(s), chronological, reverse chronological, degree of term adjacency, relevance, etc.)

8.4.4.8. The Gateway is expected to be capable of organizing search results by a readily understood ranking or relevance scheme.

8.4.4.9. The Gateway is expected to be able to retrieve holding location, status, and availability information for materials cataloged, on-order or in-process if the appropriate local library system provides this information.

8.4.4.10. The Gateway is expected to retrieve and display item status and availability for items found in either a single server, a centralized Union Catalog, selected MnLINK OPACs, or OPAC servers functioning as a virtual Union Catalog. **DESCRIPT**E how you will meet this requirement.

8.4.4.11. The Gateway is expected to support links to the 856 field in the MARC record allowing for the direct retrieval and display of networked resources.

8.5 Interlibrary Loan and Document Delivery (ILL/DD)

The following three sections discuss the requirements for an interlibrary loan and document delivery system integrated into the Gateway function of the MnLINK system. It is expected that System X will provide an interface to the Gateway ILL/DD system in such a way as to facilitate the use of the circulation system function within System X for certain functions described here and in sections 6.3.9, 6.3.10, and 6.3.11 of the System X portion of the RFP. Vendors who propose either System X or the Gateway MUST certify their ability and willingness to create a workable and effective interface between their own system and that of the provider(s) of other MnLINK system components.

Document delivery in the context of this RFP means a direct patron request to a document
delivery supplier, which could be internal to the library or a commercial supplier. Interlibrary
loan, on the other hand, is understood to take place within library-to-library agreements and
policies.

**IT IS OF PRIMARY IMPORTANCE that** the chosen vendor for the MnLINK Interlibrary
Loan/Document Delivery system work with document delivery services and national and
intentional standards bodies to define and implement a service definition and standard protocols
for document delivery covering the process from request to fulfillment, including the receipt and
processing of status information regarding the transaction.

### 8.5.1. General Interlibrary Loan Requirements

8.5.1.1. Some local automation systems will have an integrated ILL system which the local
library may prefer to use. Given that the local system ILL system will be able to export/import
requests using the ISO 10160/10161 protocols. **EXPLAIN what functions your system will be
able to perform with these requests from the requirements below.**

Given that some libraries may not decide whether to user their own local system ILL system until
they learn what the Gateway system can perform with respect to this function,

**EXPLAIN what functions your Gateway system will be able to perform for libraries with local
systems and without local system ILL systems.**

8.5.1.2. The system is expected to support user initiated resource sharing transactions, including
local loans, interlibrary loan, and document delivery for all formats of materials including
returnable materials, non-returnable materials such as photocopies, and digital formats. Any
particular document may be delivered:

a. Immediately in electronic form from a server operated within the MnLINK systems and or
   by another library or supplier;

b. As a loan requiring physical transport to and from the requester;

c. As a physical copy produced from the original document (photocopy, microform,
   photographic print, analogue cassette, etc.);

d. As a digital copy produced on demand from an original document (paper, microfiche,
   digital object, etc.) delivered electronically.

8.5.1.3. The user interface is expected to provide a reminder to the user to sign out once all
requests are placed.

8.5.1.4. **IT IS OF PRIMARY IMPORTANCE** that the system support interlibrary loan and
resource sharing activities with other systems that comply with the ISO Interlibrary Loan
standard protocols 10160/10161.

8.5.1.5. The system is expected to provide for user-initiated interlibrary loan or document
delivery for items found in other Z39.50 compatible catalogs, but not in the participating
library’s database, by providing an interface to any external interlibrary loan or document
delivery system, e.g., OCLC, RLG, MINITEX, DOCLINE, CIC institutions, CARL, etc. 

SPECIFY the automated interlibrary loan systems to which your system currently interfaces and the manner in which it does so, including any standards employed and authentication processes.

SPECIFY your system’s capabilities for facilitating ILL transactions with libraries not on an automated system or with systems that do not comply with the ISO Interlibrary Loan protocols.

SPECIFY your system’s capabilities for handling requests from unaffiliated users, who have previously set up accounts with a local library, for fee-based document delivery.

SPECIFY your system’s capabilities for interacting with participating libraries purchased accounting system for its income operations. [See Section 6.5.6.]

8.5.1.6. The system is expected to have the capability to accept user-initiated loan requests from both public and remote access workstations including via the Web (or successor technologies).

8.5.1.7. The system is expected to have the capability to interact with the circulation system of System X and other MnLINK system local library system vendors who are willing to engage in the development, to block requests from patrons who have exceeded certain limits, such as number of items charged out, amount of money owed, or number of items overdue, or have other restrictions on their record.

8.5.1.8. The system is expected to have the capability to accept multiple staff-initiated interlibrary loan or document delivery requests on behalf of a user.

8.5.1.9. Once the Interlibrary Loan/Document Delivery system has initiated a document delivery request, the tracking and processing of the request is expected to be the responsibility of the document delivery service.

8.5.1.10. The system is expected to assign a record number and date and time to each ILL and document delivery request when entered.

8.5.1.11. The system is expected to permit patrons to view their interlibrary activity requests at public and/or remote-access workstations, under user security restraints, at the option of the library. The user interface is expected to provide a reminder to the user to sign out once all requests are placed.

8.5.1.12. The system is expected to provide query access by authorized staff to interlibrary loan and document delivery requests. Such requests are expected to be searchable by any or all of the below:

a. Bibliographic field
b. OCLC numbers
c. NLM numbers
d. RLIN numbers
e. MINITEX request numbers, as assigned by the library
8.5.1.13. The system is expected to maintain an online archive of completed ILL requests. Once the request has been filled and, in the case of returnable items, returned, it is expected that the borrower information only be indicated by status, affiliation, and interlibrary loan office handling the request.

8.5.1.14. After a consortium or library-specified period, the information regarding completed ILL requests is expected to be archived off-line but remain accessible for query and reporting. The system is expected to allow the local library to specify the period of online archiving required.

**SPECIFY the period of ILL online archiving your system will support.**

8.5.1.15. The system is expected to permit the archive to be queried. The system is expected to allow the following queries:

a. Department/major of use
b. User type
c. Periodical/item title
d. Unique number
e. Item author
f. Lending institution
g. Borrowing institution
h. MINITEX request number

**SPECIFY how the system protects the privacy and security of this function.**

8.5.1.16. The system is expected to have the capability to integrate, when appropriate, interlibrary loan, document delivery, or other fees into the patron’s fine account of System X or other MnLINK participating local library system, if the local system vendors are willing to engage in such a development.

8.5.1.17. Billings issued to the user are expected to include interlibrary loan and document delivery fees, which contribute to calculation of a fiscal-based restriction on a user.

8.5.1.18. The system is expected to interface the ILL/DD subsystem with the circulation system activity of System X or other MnLINK participating local library system, if the vendors are willing to engage in such development, to create interlibrary loan reports.

8.5.1.19. The system is expected to allow online or printed reports by category of ILL: complete, received, returned, will supply, shipped, unfilled, etc.
8.5.1.20. The system is expected to inform the user when he or she has requested an item which is not available because of copyright restrictions.

8.5.1.21. The system is expected to be able to provide an institution specific note and provide a variety of local options for handling cases where the requests exceed copyright limits: block the request; refer the requestor to a specific library office; accept the request and refer the request to a staff person for handling; accept the request and automatically route it to an approved document supplier, as examples.

8.5.1.22. The system is expected to provide a default copyright compliance notice with a local option to create an institution-specific notice. IT IS OF PRIMARY IMPORTANCE that the user request interface display the appropriate copyright compliance notice before allowing the request for a copy to be made.

8.5.1.23. At the initiation of the system administrator, the system is expected to block requests to and from libraries which
a. Are not currently active MnLINK participants
b. Are not currently able to fill requests

8.5.1.24. The system is expected to accommodate ILL participation with centers such as MINITEX. In particular, the system is expected to have the ability to profile the routing of messages, requests, and other batch products in such a way that each product may have a different profile, if needed. For example, requests to a lending library for returnable materials may be routed differently than requests for non-returnable materials.

8.5.1.25. The system is expected to provide an unmediated environment for handling user-initiated requests.

8.5.1.26. The system is expected to provide libraries with the option to have the system automatically reject requests under conditions specified by local libraries, such as when a request is for an item in a non-circulating portion of the collection; the number of interlibrary loan or document delivery requests exceeds a certain threshold; no possible lending libraries are located; the item is held locally.

8.5.1.27. Rejected requests are expected to generate a message to the patron about the reason for the rejection and possible solutions.

8.5.1.28. At the library’s option, certain rejected requests, based upon a profile of the reasons for rejection, are expected to be routed to library staff to be handled.

8.5.1.29. The unmediated feature is expected to provide libraries with the option of creating profiles of potential lending libraries and document suppliers, or groups of lending libraries, in priority order, to which request records are routed automatically. When groups of lending libraries are defined as equivalent in priority, the system is expected to rotate requests among the group in order to simulate load leveling or accommodate existing policies regarding filling
requests, such as requesting first from the smallest library.

**DESCRIBE how your system will handle a request from a user so that requests are presented to preferred libraries rather than only to the one(s) identified in the user’s request.**

8.5.1.30. Alternatively the system is expected to be able to automatically create a hierarchical list of suppliers for automatic request routing according to other criteria selected by the local library such as past performance. It is expected to be possible to set MINITEX as a default “supplier of last resort” so requests are sent to MINITEX when other possible suppliers are exhausted.

8.5.1.31. Decisions about how to implement request routing are expected to be at the local library option.

**8.5.2. Borrowing (ILL) and Lending Requirements**

8.5.2.1. The system is expected to support requests for physical items, requests for document photocopies, and requests for materials in electronic format as described in 8.5.1.2.:

a. Additional information (volume, number, page, article author, title, etc.) as well as user notes is expected to be allowed in the request.

b. Items requested may be local (local loan between circulation units), remote to other borrowing institutions (interlibrary loan), or external through vendor document fulfillment services (document delivery).

c. The system is expected to allow for multiple delivery options of the requested material, including but not limited to e-mail (with or without MIME), Ariel, fax, FTP, UPS or similar delivery services, standard mail. Each local library is expected to have the option of specifying which delivery options will be supported, based on local availability and policy.

**d. IT IS OF PRIMARY IMPORTANCE** that the system be able to handle requests in ISO 10160/10161 standard message format.

e. The system is expected to be able to handle requests in EDIX12 or EDIFACT as well as Z39.50 BER.

**EXPLAIN how your system will support each of the above.**

8.5.2.2. The system is expected to be able to collect the bibliographic information for the request from a variety of sources:

a. The results of a search of a local catalog (for local loan requests);

b. The results of a search of a local index and abstract or full text database (for local loan, document delivery, or interlibrary loan);

c. The results of a search of one or more external catalogs or databases (for local loan, interlibrary loan or document delivery).

8.5.2.3. The request interface is expected to provide the option for blank request templates that
can be used to request items/documents/information resources that have not been located in one of the local or remote catalogs or databases.

8.5.2.4. Document requesting is expected to seamlessly interface with the online catalog searching system and support the ability to search multiple remote Z39.50 catalogs and databases simultaneously.
   a. The document request function is expected to be fully integrated with the search functions; i.e., users are not expected to enter a document request module to search for items to be requested.
   b. The document request command is expected to be readily apparent to users, i.e., not hidden on a different screen.
   c. If the item specified by a multiple institution search is requested, all of the institutions that satisfy the request are expected to be recorded in the request transaction.
   d. Locally held items are expected to be dynamically identified for the user by the system. If the item is locally held, locally specified rules, based on circulation status are expected to determine whether an external request to another institution is expected to be allowed.

8.5.2.5. The system is expected to capture and/or import the following data from a remote or local catalog or database using NISO standard Z39.63 or from user or local system input, as appropriate:
   a. Bibliographic/citation information;
   b. Location, call number, shelf status (for cataloged items);
   c. Date item no longer needed.

8.5.2.6. In addition, the system is expected to capture and/or import information from the remote or local catalog about the availability of the item to fill ILL requests.

8.5.2.7. The system is expected to be able to be profiled to recognize locations or collections which are non-circulating for returnable items.

8.5.2.8. The system is expected to allow staff to add verification information to a request record.

8.5.2.9. The document request system is expected to inter-operate with OCLC, RLIN, and DOCLINE.
   a. The local library is expected to have the option of allowing users to search the OCLC, RLIN Z39.50, and DOCLINE servers.
   b. The ILL staff person is expected to be able to place an ILL request via OCLC, RLIN ILL or DOCLINE ILL systems.
   c. The ILL staff person is expected to be able to receive requests from OCLC, RLIN or DOCLINE ILL systems.

**DESCRIPT** how this inter-operability is achieved.

8.5.2.10. The user request interface is expected to collect user information and authenticate the
a. The interface is expected to provide the option of requiring users to validate against the local authentication source. The source may be internal, such as an integrated library automation system user file, or external such as an institutional X.500 or X.509 directory.

b. Once the user is authenticated, the system is expected to verify the user’s authorization to place a request (e.g., the user is not blocked by fines; user has the proper status category, etc.); criteria for authorization are expected to be flexible based on the local library’s policies.

c. The user interface is expected to provide an option for the local library to specify how many requests can be placed and how much time is allowed in the same session before a user is required to re-authenticate. The user is expected to be able to issue multiple requests without having to re-authenticate for each request.

d. Authentication requests to the local authentication server are expected to use published standards and/or interfaces. The system is expected to be able to cache the user information to eliminate re-authentication during the current session.

**DESCRIPT** how the patron authentication process will be handled and the expectations of your system regarding where the files for this function will be and the formats expected.

8.5.2.11. The user interface is expected to provide a reminder to the user to sign out once all requests are placed.

8.5.2.12. The system is expected to capture and/or import the following data from a local circulation or user ID system or from user input, as appropriate:
   a. User data (name, ID number, etc.)
   b. Delivery information (delivery address, fax number, e-mail address, etc.)
   c. Billing information (account number, credit card information, as appropriate).

8.5.2.13. The user is expected to have the option to cancel a request prior to sending it.

8.5.2.14. Each local library is expected to have the option of allowing users to search their local catalog or databases and place a local loan delivery request; that is, a request that an item be delivered from a local location such as remote storage or be supplied through a photocopy.

8.5.2.15. The local loan delivery request is expected to be identifiable by the system as needing to be processed by local staff.

8.5.2.16. The request interface is expected to provide the option of allowing the user to specify the desired delivery mode which might be: to his or her desktop; to an appropriate local ILL office; or to other user-specified pickup location.
   a. The interface is expected to accommodate delivery of local loan requests.
   b. The local library is expected to have the option of specifying what delivery options are to be supported and offered for each user type.

8.5.2.17. The request interface is expected to provide the user with the option to request a copy from a fee-based document supplier, either commercial document suppliers or on-campus/library
document suppliers that charge a fee.

8.5.2.18. The system is expected to support electronic commerce in a networked environment for this service.
   a. The request interface is expected to allow the local library the option of paying for all or part of any request, including photocopy charges; delivery charges; charges by fee-based document suppliers.
   b. The request interface is expected to allow the institution to charge the user for any or all of the charges enumerated above.
   c. The request interface is expected to support the local library setting a threshold, by user or by other unit, below which the transactions are at no cost and after which the user will pay certain or all charges.
   d. The request interface is expected to allow additional user fees to be added by the institution.
   e. If the user is charged, a variety of payment options, including credit accounts with document suppliers set up for individuals or groups of users, are expected to be supported.
   f. The system is expected to accommodate practices of the various document suppliers and the policies of the local library.

**DESCRIBE how payment information is secured in your system.**

8.5.2.19. The interface is expected to provide an online verification that the request has been successfully placed. This verification is expected to contain the request’s system-assigned unique identifier, the item’s bibliographic information, date/time the request was placed, the target institution/supplier, the estimated cost, and the selected delivery site.

8.5.2.20. When applicable, the system is expected to display the appropriate copyright warning.

8.5.2.21. The system is expected to allow the user to print off a verification/reminder of the request.

8.5.2.22. The system is expected to provide the capability for the user to search for his/her own outstanding request; **IT IS OF PRIMARY IMPORTANCE** that the request to search be validated by authenticating the user. The system is expected to supply to the user the status of the request based upon the status codes in Z39.63.

8.5.2.23. The system is expected to allow the user, upon appropriate authentication, to cancel a pending request at any time before a lending library fills the request.

8.5.2.24. The user interface is expected to provide a reminder to the user to sign out once he or she has finished searching.

8.5.2.25. The system is expected to include a messaging feature, including use of Z39.63 status codes, to allow borrowing and lending library staff to communicate via messages on the ILL request record. This feature is expected to allow for an ongoing dialogue back and forth with notification of pending messages via the status tracking file.
8.5.2.26. Requests from the user request interface are expected to be formatted to contain the appropriate Z39.63/Z39.70 elements and to be in correct format to be sent to remote servers using the Z39.50 Extended Services Document Request/ILL protocol as proposed by the National Library of Canada when the proposal is adopted.

8.5.2.27. The system is expected to provide for multiple potential lenders on a request record and is expected to automatically forward the request from one lender to the next. The automatic forwarding is expected to occur after a local library or Minitex specified number of days. (See also 8.5.1.29 above and 8.5.3.5. below.)

8.5.2.28. The system is expected to capture the correct call number from each successive potential lender and correlate this information to the appropriate lender in successive requests.

8.5.2.29. The system is expected to support the ability to re-initiate requests that were not supplied.

8.5.3. ILL Staff Management Requirements

8.5.3.1. The system is expected to assign a unique and searchable number to identify that transaction (see 8.5.1.10). This transaction number is expected to stay with the transaction from start to finish.

8.5.3.2. If a transaction from a remote ILL system is forwarded to the system for fulfillment, the system is expected to carry the remote ILL server transaction number as well as the locally assigned number in order to link the two transactions.

8.5.3.3. Within the system the status values that manage and track the request are expected to be supported as part of the request transaction, showing when the item was requested, from whom, if/when filled, when returned to the owning site, etc. The system is expected to include status values which conform to those specified in NISO Z39.63 and the ISO ILL protocols. (See also 8.5.2.25 and 8.5.2.26 above.)

8.5.3.4. The system is expected to dynamically detect and reject duplicate requests from the same user providing that user with a message for the reason for the rejection.

8.5.3.5. On receipt of a request, the system is expected to choose a request destination:
   a. If the request is destined for the host or local site, either a local loan request or a request from another ILL system sent to this site, the system is expected to verify the item availability using locally defined rules. The local rules are expected to result in the item being added to a pickup list, the request being queued for staff review, or the request being canceled.
   b. If the request is canceled, the system is expected to notify the local requester or the requesting system about the cancellation and the reason for the cancellation.
   c. The system is expected to send requests directly to the holding library system or document supplier if they can be identified and will accept non-mediated requests. The request is
expected to be sent to the holding library system or document supplier via Z39.63 over TCP/IP or using Z39.50 Extended Services Item Order.

d. Otherwise the system is expected to allow staff to identify a holding library via Z39.50 or other searching functions, if needed, at which point the request is forwarded to the destination or the request is rejected per local policy.

8.5.3.6. The system is expected to have the ability to profile the routing of messages, requests, and other batch products in such a way that each product may have a different profile, if needed.

8.5.3.7. The system is expected to flag multiple requests for the same item intended for the same borrowing library even if the requests are new or in process at the lending library.

8.5.3.8. The system is expected to allow staff to make changes to the ILL request record at any time before completion.

8.5.3.9. It is expected to be possible to work on the ILL/DD system from multiple staff workstations in multiple locations within an institution and/or across the state at the option of the local library.

8.5.3.10. The system is expected to provide the ILL staff person with the ability to download in batch pending requests and to sort the requests and print pull slips or lists that include bibliographic information, local call number, all lending library locations, unique system identification numbers, ship to address, and other locally specified information.

8.5.3.11. The system is expected to have the ability to include barcodes, in either Codabar or Code 39 specifications, on interlibrary loan requests as they are printed. **IT IS OF PRIMARY IMPORTANCE** that these barcodes reflect the system assigned transaction identifier for each request.

8.5.3.12. The system is expected to have the ability to use the printed barcodes for subsequent updating of request status.

8.5.3.13. The ILL/DD system is expected to allow online or printed reports by status of ILL: complete, received, returned, will supply, shipped, unfilled, etc.

8.5.3.14. The system is expected to give priority to rush requests in addition to especially flagged requests.

8.5.3.15. The system is expected to maintain status values on transactions and change these values according to the Z39.63 and the ISO ILL protocol status values. The system is expected to set status values automatically during item processing, on individual items during staff review, or in a batch update based on institution specific criteria, such as status, date in queue, institution, etc. (See also 8.5.2.25, 8.5.2.26, 8.5.3.3.)

8.5.3.16. When the requester’s item arrives, the system is expected to generate a status change
in the system and also generate a notice that is sent to the requester noting that the item has been received and where it can be picked up.

8.5.3.17. The system is expected to support paper, telephone and e-mail request notification options.

8.5.3.18. The staff management interface is expected to allow retrieval of transactions by a variety of criteria, including but not limited to user ID, originating institution, transaction status, system assigned transaction identifier. (See also 8.5.1.12 above.)

8.5.3.19. The staff management interface is expected to allow purging of completed transactions by a variety of criteria, including date and item type.

8.5.3.20. Automatic purging based on specified criteria is expected to be available as a locally specified option. It is expected that purged records may be archived for the library specified length of time.

8.5.3.21. The system is expected to record the date/time associated with each status change during the interlibrary loan/document delivery process.

8.5.3.22. The ILL/DD system is expected to maintain statistics on the time taken for interlibrary loan work forms to move from any specified status to another, based on local library or consortium selection, e.g., from "pending" to "shipped," from "pending" to "received." These statistics are expected to be available for a library-specified period of time.

8.5.3.23. The system is expected to provide a method for tracking ILL fill rate and turnaround time for each lending institution.

8.5.3.24. The ILL/DD system is expected to maintain statistics on loans requested and loans filled, sorted by institution and cross-tabulated.

8.5.3.25. The ILL/DD system is expected to maintain statistics on the number of inter-campus and inter-library requests as well as the number of document delivery requests.

8.5.3.26. The system is expected to be able to generate loan reports in such a way as they can be used to charge for net borrowing and reimburse for net lending across any group of libraries as defined by the MnLINK organization or groups of libraries within the MnLINK organization.

8.5.3.27. The system is expected to be able to produce reports concerning returnable loans sorted by user status and affiliation.

8.5.3.28. The system is expected to be able to produce reports concerning returnable loans sorted by classification number, subject if available, and year of publication.

8.5.3.29. The system is expected to be able to produce reports concerning non-returnable loans (photocopies, faxes, disposable fiche, materials sent in digital form) sorted by journal title,
volume and year, subject if available, and user status.

8.5.3.30. The system is expected to be able to produce reports concerning requests not filled, whether or not owned, in order for libraries to make decisions about purchase of materials not currently available within the MnLINK participating libraries.

8.5.3.31. The ILL/DD system is expected to interface the maintained statistics to a report generator. (See also sections 8.6 and 8.6.3)

8.5.3.32. The system is expected to be able to compile statistics in any arbitrary date range.

8.5.3.33. The ILL/DD system is expected to interface with the integrated library automation system defined earlier in this RFP and with other local systems, if the local system vendors are willing to undertake the development, in order to create interlibrary loan reports.

8.5.3.34. The system is expected to automatically block a request when it would violate copyright compliance.

8.5.3.35. The system is expected to allow the ILL staff to override blocks for copyright limit violations.

8.5.3.36. **Describe how the system:**
   a. Monitors and maintains copyright compliance
   b. Handles requests which would violate copyright compliance.

8.5.3.37. The system is expected to supply a copyright compliance report listing the journal title and article citation of all non-returnable items requested from non-commercial suppliers on a library by library basis.

8.5.3.38. The system is expected to provide online access to copyright compliance information. **It is of primary importance** that the ILL staff be able to browse the file for their library.

8.5.3.39. Copyright compliance information is expected to be secure so a library may only view their own copyright information.

8.6 Gateway Management Information System

8.6.1. General

8.6.1.1. The Gateway is expected to provide a management information system that produces summaries of data on the operations, use, activity and performance of the Gateway overall and on each component in particular.
8.6.1.2. The Gateway is expected to maintain a database of statistical information about the operations performed by the gateway.

8.6.1.3. The Gateway is expected to have the ability to provide reports on the following statistical categories. These reports is expected to be available by hours of the day and cumulated by user defined time periods.
   a. Connections
   b. Concurrent session maximums
   c. Connections to each Z39.50 resource
   d. Response time
   e. ILL requests
   f. ILL items sent to the ILL/DD server or ILL component
   g. IP domain range connection summaries
   h. Availability requests
   i. Authentications

8.6.2. Account Reporting

A critical component of the Gateway will be the tracking of any charges associated with this feature. The Gateway will need a detailed reporting capability for institutions and individuals. The Gateway is expected to provide reporting on account balances and account activity, including:
   a. Accounts receivable
   b. Accounts payable
   c. Deposit accounts
   d. Debit card usage

8.6.3. Report Writer Capability

8.6.3.1. The Gateway is expected to provide a report writer capability to customize reports from the system log file and error log file.

8.6.3.2. The Gateway is expected to provide a report writer capability to generate customized reports from the Gateway’s statistical database and from the interlibrary loan and document delivery systems.
9. HARDWARE/SOFTWARE

9.1 Implementation

9.1.1. **IT IS OF PRIMARY IMPORTANCE** that the vendor designate a specific employee to serve as the vendor’s Implementation Manager for the systems being installed.

9.1.2. **IT IS OF PRIMARY IMPORTANCE** that no charge be made for telephone calls by the MnLINK Organization’s representative(s) to the Implementation Manager.

9.1.3. **IT IS OF PRIMARY IMPORTANCE** that the vendor not charge for on-site visits to the MnLINK installation sites and for days of service on-site by the Implementation Manager and other vendor’s personnel as necessary for successful implementation.

9.1.4. **IT IS OF PRIMARY IMPORTANCE** that the vendor review the automated systems and service plans for the MnLINK System.

9.1.5. **IT IS OF PRIMARY IMPORTANCE** that the vendor assist in preparing all sites, including installation of equipment, cabling, and connection to communications equipment.

9.1.6. **IT IS OF PRIMARY IMPORTANCE** that the vendor install all equipment to be acquired from the vendor at the agreed upon site(s).

9.1.7. **IT IS OF PRIMARY IMPORTANCE** that the vendor provide migration planning, conversion and loading of all participating MnLINK libraries’ data into the vendor’s systems.

9.1.8. **IT IS OF PRIMARY IMPORTANCE** that the vendor provide comprehensive written implementation plans and schedules which will indicate all product and service deliverables.

9.1.9. **IT IS OF PRIMARY IMPORTANCE** that the vendor give full physical and environmental information about all equipment and software to be installed.

9.1.10. **IT IS OF PRIMARY IMPORTANCE** that the vendor provide details of the numbers and qualifications of staff required to operate the proposed installation. The MnLINK Organization will apply its own current staff costs to the cost model used to assess the response and will project those costs over a five year period.

9.2 Hardware and System Software Services

9.2.1. Hardware and system software services are required for all equipment, operating software and systems management software offered in any part of the vendor’s response.

9.2.2. **IT IS OF PRIMARY IMPORTANCE** that the vendor provide all installation services and testing of the systems environment which are sufficient to satisfy the correctness and
completeness of the installation of all products selected from the vendor.

9.2.3. **IT IS OF PRIMARY IMPORTANCE** that the vendor propose computer equipment maintenance, systems software support services and applications software support services for each server installed. **IT IS OF PRIMARY IMPORTANCE** that the location and staff capabilities of the service organization be stated for all equipment and software offered in response to this RFP.

9.2.4. **IT IS OF PRIMARY IMPORTANCE** that the vendor provide computer equipment maintenance costs covering all labor and materials for all equipment proposed and should provide options for both:

- Eight hours from 8:00 AM to 5:00 PM five days per week (8/5 maintenance)
- Twelve hours from 7:00 AM to 7:00 PM seven days per week (12/7 maintenance)
- Twenty-four hours per day seven days per week (24/7 maintenance).

9.2.5. The vendor is expected to provide online diagnosis of system problems and is expected to be able to dial the CPU of the system directly.

9.2.6. The vendor is expected to provide diagnostic maintenance within two hours during hours for which service has been contracted for the system.

9.2.7. The vendor is expected to be capable of providing on-site maintenance within two hours during which service has been contracted for the system.

9.2.8. **IT IS OF PRIMARY IMPORTANCE** that the cost of system software support service be stated and should indicate the cost for both support during normal working hours and support on a 24-hour day basis in order to cover periods when systems maintenance is likely to occur.

9.2.9. **IT IS OF PRIMARY IMPORTANCE** that the vendor state system software pricing and define responsibilities for system software support.

9.2.10. **IT IS OF PRIMARY IMPORTANCE** that the system be capable of unattended operation with remote operations for startup, shut down, performance monitoring, etc.

9.3 Application Software

9.3.1. **IT IS OF PRIMARY IMPORTANCE** that the vendor license the application software for continued use for a fixed fee without additional royalties or service fees, except for fees for ongoing software maintenance. Software enhancements or upgrades for those sub-systems purchased by the MnLINK Organization should be provided at no extra charge beyond the annual application software maintenance fee for as long as the MnLINK Organization wishes to use the software covered by a contract with the vendor.
9.3.2. **IT IS OF PRIMARY IMPORTANCE** that the vendor state the terms and conditions for the performance of specialized customization and enhancement of the vendor’s products. This may be required to interface other systems, such as a library’s financial management system, with the vendor’s product. Where the vendor has included product customization in order to satisfy the requirements of this RFP, **IT IS OF PRIMARY IMPORTANCE** that full details of every proposed change to standard products be included in the response and clearly annotated as customization.

9.3.3. The MnLINK Organization may require the successful vendor to take full responsibility for software maintenance including upgrading, improvements, additions, enhancements, and changes. **IT IS OF PRIMARY IMPORTANCE** that the vendor provide pricing for this option.

9.3.4. The system is expected to be written in standard languages such as C or C++. **DESCRIBE** the software tools and products used in the application.

9.3.5. The system is expected to support a standard client/server architecture. **DESCRIBE how the client/server architecture is implemented in the application.**

9.3.6. The system is expected to be object-oriented or object based. **EXPLAIN how objects are used in the system.**

9.3.7. A highly supported relational, or object oriented database management system is expected to be used. **DESCRIBE the database management system.**

9.3.8. The system is expected to support the UNICODE Worldwide Character Standard.

9.3.9. **IT IS OF PRIMARY IMPORTANCE** that the system not require daily outages to perform backups, rebuild indexes, load records, etc.

9.3.10. **IT IS OF PRIMARY IMPORTANCE** that the system be capable of operating 24 hours per day for extended periods to provide maximum system availability.

9.3.11. **EXPLAIN** what software changes would be required to double the database size and transaction volume in System X and what software changes would be required to double the transaction volume in the Gateway.

9.4 System Hardware

9.4.1 Server Hardware

9.4.1.1. **IT IS OF PRIMARY IMPORTANCE** that the vendor state all hardware warranties for delivered equipment.

9.4.1.2. The system is expected to operate on industry standard hardware and operating system software such as UNIX or Windows NT. **DESCRIBE the operating system.**
9.4.1.3. The system hardware is expected to be new and state of the art. The major system components are expected to be within the first 2 years of their life cycle.

9.4.1.4. The server system is expected to be DCE (Distributed Computing Environment) compliant and is expected to be capable of using multi-tier architecture where activities may be spread across multiple servers.

9.4.1.5. The system is expected to be quoted with non-proprietary hardware peripherals which are readily available from multiple sources.

9.4.1.6. The vendor is expected to provide all necessary controllers, cabinets, clocks, cables and other interfaces for the system.

9.4.1.7. **IT IS OF PRIMARY IMPORTANCE** that the vendor describe how the initial hardware configuration can be increased to accommodate increased database size or transaction load. **EXPLAIN what hardware changes would be required to double the database size and transaction volume in System X and what hardware changes would be required to double the transaction volume in the Gateway.**

9.4.2. **Workstation Hardware**

9.4.2.1. Staff in-library clients are expected to be compatible with the latest 2 releases of Microsoft Windows.

9.4.2.2. It is expected that the staff in-library clients will also be compatible with the latest 2 releases of Microsoft Windows NT.
10. TRAINING AND SUPPORT

Training and support for the shared automated library system (System X) will be server site-based. Initially, it is anticipated that the University of Minnesota will maintain and operate a server for its libraries and provide training and user and technical support for UM libraries. It is anticipated that MnSCU will operate a server and provide training and user and technical support for all other libraries. It is anticipated that MnSCU/PALS will support the Union Catalog server(s) and either operate or coordinate the operations of the MnLINK Gateway server(s). Additional servers and service providers may be authorized by the MnLINK organization in the future.

Only the MnLINK project manager and designated persons from MnSCU/PALS and the University of Minnesota (and possibly other agencies in the future) will be allowed to contact the vendor. These persons are referred to here as "designated MnLINK support staff." No participating MnLINK library will communicate with the vendor directly. The designated MnLINK support staff will have substantial previous experience with library automation and/or telecommunications support.

There will be two types of designated MnLINK support staff: 1) functional support staff will provide training and support in the operation of the system for participating libraries, and 2) technical support staff will operate and maintain the system hardware and software.

10.1 Training

The vendor will initially provide complete and thorough training in all aspects of its software and hardware operations for designated MnLINK support staff. Functional support staff will be trained in sufficient detail in the software functions so that they will then be able to train staff from MnLINK libraries in the proper use of the system. Technical support staff will be trained in sufficient detail to operate and maintain the system hardware and software.

The chart below illustrates the number of people the MnLINK organization expects the vendor to train in the areas of functional and technical support for the system components. In this section, DESCRIBE your plan for a training program in the area(s) in which you are bidding - System X and/or the Gateway. INCLUDE separate cost figures for training additional MnLINK support staff if they are designated in the future.

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10.1.1. The vendor is expected to provide designated MnLINK support staff with complete and thorough training in advance of the profiling and data conversion process.

10.1.2. The vendor is expected to provide training in the use of all system functions for each of the functional modules.

10.1.3. The vendor is expected to provide training in system hardware and software principles, system operation, maintenance, file backup and recovery, system security, software and database maintenance and management, and report and user notice production.

10.1.4. Submit a detailed plan for training designated MnLINK support staff including the following:
   a. **SPECIFY** the level of training proposed for various areas (public services, technical services, circulation, ILL, library administration, system administration, etc.).
   b. **SPECIFY** what training is included with the system purchase and what training would be available at additional cost.
   c. **SPECIFY** what training is available on site and what training is available off site.
   d. **SPECIFY** the type of training (demonstration, hands-on, etc.) that would be used.
   e. **SPECIFY** the training/experience of the staff providing the training.
   f. **PROVIDE** a general training calendar relative to system implementation and specify the number of contact hours of training that will be provided for each system component or training category.

10.1.5. The vendor is expected to provide ongoing training for designated MnLINK support staff for any major system revision.

10.1.6. **DESCRIBE** the training that would be provided when additional servers are added (such as for CLIC or public library systems) after the initial conversion. **SPECIFY** whether the vendor or the MnLINK organization would be responsible for performing this training and the estimated costs.

10.2 **Support**

On-going support and local Help Desk services for MnLINK participants will be provided by designated MnLINK support staff for their respective constituents. Questions and problems which cannot be resolved by these persons will be forward by them to the vendors support staff.

10.2.1. The vendor is expected to provide a telephone Help Desk to provide designated MnLINK support staff with assistance.

10.2.2. **DESCRIBE** your Help Desk(s). **SPECIFY** the hours of availability, number of
staff assigned to these positions, number of staff assigned specifically to the MnLINK system, experience/training of the staff providing service, and whether staff are assigned to user support full-time or split their time between support and other activities (e.g., programming, marketing, etc.).

10.2.3. **SPECIFY** the average response time for problem resolution. **SPECIFY** your timelines for responding to the following three categories of reports:

1) Urgent problems (such as when data is being corrupted or when work cannot be performed)
2) Problems that cause annoying, inconvenient, or inefficient operation
3) Enhancement requests.

**DESCRIBE** your organization’s criteria for designating when a request will receive an urgent problem status, a regular problem status, or an enhancement request status.

10.2.4. **INCLUDE** the results of Help Desk user satisfaction surveys that have been conducted.

10.2.5. **SPECIFY** who is authorized to contact your Help Desk(s). **SPECIFY** any fees for using these services.

10.2.6. **DESCRIBE** your user question/problem reporting and tracking procedures. **INCLUDE** a description of the procedures a user would follow to escalate an unresolved problem in your organization.

10.2.7. The vendor is expected to accept and respond to questions submitted by designated contact persons via e-mail.

10.2.8. **LIST** the titles and provide sample copies of any newsletters produced by your organization for system users. **SPECIFY** the frequency of these publications. **DESCRIBE** your subscription policies and costs, if any.

10.2.9. **LIST** any online communication forums (listservs, new groups, Web pages, etc.) that relate specifically to your system.

10.3 **User Groups and Representation**

10.3.1. **LIST** any user groups associated with the proposed system. **PROVIDE** copies of agendas and/or minutes of recent meetings, if available.

10.3.2. **DESCRIBE** the organizational structure of any user groups and **SPECIFY** the type of representation granted to library consortia such as the MnLINK system. That is, would a consortia of 100 libraries have 100 votes, 1 vote, etc.

10.3.3. **DESCRIBE** the process of bringing a typical system enhancement request from suggestion to implementation. **SPECIFY** the groups involved in the design process,
describe the processes used to assign priorities, and specify the typical testing procedures used.

10.3.4. **Describe** how the MnLINK system's development priorities will be handled when they differ from the priorities of other clients.
11. DOCUMENTATION

11.1 Staff Documentation User Manuals

11.1.1. **Describe** in the proposal the type of user documentation maintained for the system and the unit cost of this documentation. The successful vendor will be expected to supply a minimum of one complete printed user reference manual for each participating library. **Describe** access to electronic documentation and the means by which libraries are notified when such documentation has been updated. The vendor also is expected to provide online documentation and context sensitive help messages. It is expected to be possible to customize online documentation, help screens, and pull-down menus to meet local needs. The cost of printing these manuals and online documentation is expected to be itemized and included in the cost of the proposed system.

11.1.2. The vendor will be expected to provide 5 print copies per server site of the hardware and operating system documentation. Include print and non-print materials (e.g., instructional videos, interactive training programs, etc.). Indicate the cost for initial and additional copies, and any quantity discounts that might apply.

11.1.3. The vendor is expected to permit all documentation to be copied in whole or in part for distributing to library staff or patrons.

11.1.4. **Describe** the means of distribution used to disseminate system documentation releases and revisions (e.g., FTP, mail paper copies or disks, etc.). **Describe** options for distribution in a consortial setting (i.e., whether documentation is sent to each member or to a central site).

11.1.5. The annual software maintenance fee paid by MnLINK is expected to cover the cost of regular updates and revisions to the user documentation manuals.

11.2 Technical Documentation Manuals

The vendor will be expected to provide 5 print copies of the technical documentation for the proposed system. This material is expected to describe in detail the operation of the system, including such activities as file backup, system initialization and restart, file restoration and recovery, file maintenance and record loading from tape, report and user notice production, etc.
12. PERFORMANCE AND RESPONSE TIME

Peak hour information is presented in Appendix A for the University of Minnesota systems on the Twin Cities, Morris, and Duluth campuses; for the MnSCU/PALS system as a whole; and for the Traverse De Sioux Regional system. Because of the differing nature of these systems, some are able to report transactions for the peak hour usage in the past quarter and some are able to report maximum sessions in use during that time.

12.1. The system is expected to perform the following categories of online transactions with the indicated response times when an average of one session per terminal is active. Response time is defined as the total amount of time between a “send” command (pressing of a key to initiate the input to the computer) and the completed display of the response on the screen.

12.1.1. Charge, renewal, and discharge commands performed during peak hours are expected to have an average response time of 1 second or less and have a response time during peak hours of less than 5 seconds 99% of the time.

12.1.2. Serials check-ins during peak hours are expected to have an average response time of 3 seconds or less and have a response time of less than 6 seconds 99% of the time.

12.1.3. Non-Boolean public access catalog searches during peak hour are expected to have an average response time of 2 seconds or less and be less than 10 seconds 98% of the time.

12.1.4. Boolean searches during peak hour are expected to have an average response time of no more than 6 seconds, except that one additional second may be allowed for each 2,000 matching records.

12.1.5. Input and update functions during peak hour are expected to have an average response time of 2 seconds or less and be less than 8 seconds at least 99% of the time.

12.2. The system is expected to provide a “transaction in progress” visual indication for transactions which exceed 3 seconds response time at 2 second intervals until the response is provided.

12.3. The vendor is expected to provide adequate sizing and scalability information in this and other responses and/or other ways to validate the proposed sizing and scalability of their system. The MnLINK participating libraries will prefer solutions with demonstrated evidence regarding sizing information, such as existing production sites, available benchmarks, and the like. Actual sizing examples are preferred over extrapolation in arriving at estimated capacity.

DESCRIBE and PROVIDE schematic diagrams of your current and future computer
system architecture to demonstrate how the proposed system will be able to handle a
greater capacity for processing online transactions over the initial configuration.

**DESCRIBE** and **provide** supporting documentation and **test results** for any
benchmarking of any configuration of hardware and vendor software that indicates
that the proposed system configuration is appropriately scaled and configured.

12.4 MnLINK reserves the right to develop tests at the time of initial installation or at
any time during the contract to determine that the vendor is able to comply with the
following requirements in this RFP and the vendor’s response to the RFP, as well as any
future enhancements the vendor provides:

a) **Transaction throughput capacity and response time**--to determine that the
provided system is performing at vendor designated levels
b) **Hardware functionality**--to determine that the hardware provided by the
vendor works
c) **Module functionality**--to determine that the software provided by the vendor
performs all functions attested to by the vendor
d) **Conversion testing**--to determine that all appropriate databases and records
from former systems have been converted correctly
e) **Database loading and index building**--to determine both the accuracy of the
database loading and subsequent built indexes and the length of time to reload
the database and index it.