

The Strategic Plan for Technology & Telecommunications for Illinois Libraries

Expanding the Illinois Information Landscape

December 2003

Updated January 2009

Foreword

This strategic plan sets a clear path for the future and identifies how to make best use of limited local, state and federal funds. The plan identifies steps to improve and enhance information access and delivery for the people of Illinois. Specific action steps for FY08 are included.

The framework of the plan is developed around Illinois' exemplary traditions of cooperation and sharing of library resources. As information and content formats proliferate and users' needs and expectations grow, collaboration is more crucial now than ever.

A common thread throughout this plan is how technology is viewed as a means to enhance information access by the state's libraries and their users, not the end. A clear, shared vision for effective use of technology is essential in order to make best use of our collective resources.

Technology planning is extremely important, and I appreciate the efforts of the Technology & Telecommunications Working Group in developing this plan and the work of the ILLINET Network Advisory Council with updating the plan and identifying action steps.

*Anne Craig, Director
Illinois State Library
June 2006*

Preface

This plan establishes the strategic goals the Illinois library community must address to meet the information needs of the people of Illinois. Funding priorities and minimum standards are also specified in the plan.

The broad Illinois library community (consisting of library staffs, governing board officials, Regional Library System staffs and board members, other library consortia and the Illinois State Library staff) is most directly involved in the implementation of this technology plan. Other stakeholders include:

- ▶ Users and potential users of all types of libraries in Illinois
- ▶ Library vendors and service providers including Internet service providers, consultants, telecommunications providers and electronic resource providers and aggregators
- ▶ Legislators
- ▶ Library funding sources
- ▶ Library associations

It was a privilege to work with my colleagues on the development of this plan. They were thoughtful, industrious, open to new ideas, and committed to the development of a plan to expand information access for the people of Illinois.

*Pamela Brown, Chairman
Technology & Telecommunications Working
Group
December 2003*

I. Purpose

This strategic plan is intended as a guide and planning tool to address the information needs of the people of Illinois. It addresses cooperative implementation of technology to facilitate access to information. Funding responsibilities are identified as well as minimum technology standards.

II. Vision

Effective, planned use of technology will promote a statewide library environment that favors cost-effective interdependence, innovation, and unhindered access to resources regardless of time and place. Emerging technologies and standards will bridge tangible and virtual collections across Illinois libraries and other institutions.

III. Assumptions

Through the development of this plan, the Technology and Telecommunications Working Group drew from the following assumptions:

1. The people of Illinois, regardless of their location, need access to a broad array of information.
2. These broad information needs will be addressed most efficiently and effectively through ongoing cooperative efforts within the state's library community.

3. Collectively, libraries provide better library service to the people of Illinois because of the environment that fosters statewide interdependence.
4. Libraries have the responsibility to meet the primary information needs of their users.
5. While continuing education/training needs for staff and users are ongoing, individual learning styles vary.
6. Privacy, security, and confidentiality issues are critical and must be addressed.
7. Library technology initiatives should build on established standards and protocols for interoperability.
8. Shared funding will continue to be an important ingredient in improving and expanding resource sharing.
9. Adequate, affordable, telecommunications capacity is an ongoing need.
10. Quantity and formats of information resources will continue to evolve.
11. Despite increased use of technology and telecommunications in Illinois libraries, demands continue to spiral while available funding is frozen, at best.
12. Both physical and electronic delivery of resources must be supported
13. Promoting the key role of libraries in providing access to information is essential.
14. Libraries' roles in providing access to content off-site are taking center stage.
15. Expectations for just-in-time information are high along with expectations for simple-to-use search interfaces.

16. Libraries are caught between conflicting demands of the traditional roles of libraries and escalating demands for immediate access to information while facing less buying power for their dollars.

IV. Issues and Challenges

The following key issues were identified:

1. Access:

- A. The use of the Statewide Illinois Library Catalog (SILC) and other library catalogs continues to grow, showing the importance of access to library materials. To fully realize the potential of SILC, linkages to local systems can be improved.
- B. Integrated search platforms, such as a federated search engine, for library databases and Web servers are needed and should be implemented locally. People expect to search one place for everything when accessing a library's portal. A number of libraries and consortia have implemented federated searching and link resolvers, but broader implementation is needed.
- C. Accessing library databases outside the state's boundaries is an increasingly important need. Our overall outlook is increasingly global in nature.
- D. Users expect self-service access to library resources at all hours of the day. Consequently, related issues include:
- ▶ The lack of a statewide patron authentication scheme. Although many libraries have implemented proxy servers, statewide authentication for FirstSearch

databases, etc., would be a big benefit.

- ▶ Conflicting licensing agreements
- ▶ Overlapping patron groups

- E. Intellectual property issues need to be resolved, managed and monitored.
- F. Differences exist between national security initiatives, Illinois law and established library professional responsibilities and credos. Conflicts include:
- ▶ The Illinois Library Records Confidentiality Act vs. the USA PATRIOT Act
 - ▶ Access to information vs. the trend towards expanded Internet filtering
 - ▶ Digital copyright issues vs. intellectual freedom
- G. Equity of access to information is critical to the future of Illinois. Special needs of the diverse population with distinct language, literacy and accessibility needs must be considered. Support issues related to home access need careful attention.
- H. The commonly held perception of the Internet as *the* primary information source threatens the value of libraries. Reestablishing the vital role of reliable resources available through libraries takes time, diligence and a consistently effective marketing effort.

2. Technology:

- A. Telecommunications pricing varies widely throughout the state due in part to the Local Access and Transport Areas (LATAs). This has been cited as a critical issue in small and rural libraries.
- B. Increased multimedia applications and expanded demand necessitate more bandwidth and an ongoing review of options such as wireless and emerging technologies. Library users are

demanding new technologies, and libraries must respond quickly.

- C. Incompatibility among computer platforms and the slow rate of product integration are ongoing concerns. Implementation of technology standards is in various stages among the integrated library systems. Clear-cut standards need to be articulated and tied to grant funding. Keeping abreast of ever quickening changes in hardware and software places increased pressure on financially strapped library budgets.
- D. Expanded technologies create a steep learning curve for library staff and users. Training needs proliferate quickly, and individual learning styles produce daily challenges.
- E. Network, hardware and software security issues necessitate up-to-date training and sufficient funding. Protection against identification theft needs constant attention.

3. Content:

- A. The valuable resources of libraries must be shared more widely through carefully planned and executed digitization projects. Digital projects should follow guidelines for best practices with open protocols and standards for interoperability.
- B. Preservation of electronic-only information is a growing role for libraries. Electronic access to resources provides a means of facilitating expanded cooperative collection management. Particular attention should be paid to issues and trends related to the long-term retention of electronic only (“born digital”) publications, including but not limited to government publications.
- C. Standards for archival copies should be clearly stated and followed.

- D. The role of library professionals in identifying authoritative content needs to be emphasized and reinforced.
- E. Standards for metadata should be emphasized and enforced. Librarians should make metadata available for electronic resources as well as cataloging.

4. Collaboration:

- A. The benefits of library cooperation and economies of scale must be demonstrated as benefits that accrue without losing the autonomy of individual libraries and their communities.
- B. More partnerships are needed with groups in and beyond the library community.
- C. Communications with vendors regarding functional expectations for library automation need to be expanded and made assertive. Library consortia need to work together in communicating with library vendors about their needs.

5. Funding:

- A. The current economic climate is seriously impacting libraries at a time when there are more and more demands for technology.
- B. With limited revenue due to declining resources, new funding opportunities must be explored.
- C. More cost-effective models for funding shared services need to be developed.

6. Services and Staffing:

- A. Recurring training needs impact library staff time significantly. New

models for providing more efficient learner-centered training are needed.

- B. Twenty-four hour services bring new challenges for training, technical support and staffing. Means of support must be identified and maintained.
- C. Library users with varying technology skills and needs pose special challenges. Patron needs — ranging from those stemming from the “digital divide” to emerging technologies to Website accessibility issues — must be addressed.
- D. User-friendliness must be an ongoing focus.
- E. Generational and economic differences in learning styles and access to information must be addressed.

V. Strategic Goals and Objectives

Specific action steps and target dates for achieving the following goals and objectives will be addressed in future operational plans and targeted in grant Requests for Proposals.

Strategic Goal # 1: Continue to Improve Services to Patrons through Expanded Information Discovery, Access and Delivery:

Fulfill patrons’ information needs effectively and efficiently by maximizing the use of technology.

OBJECTIVES:

- ▶ Implement use of an off-the-shelf standards-based unified search engine that provides single search access to all types of resources such as library catalogs, licensed electronic databases, digital images and the Internet.

- ▶ Increase statewide access to full-text and full-image electronic databases.
- ▶ Use newer technologies used by patrons to enhance communications with them.
- ▶ Develop a plan for a workable patron authentication scheme for statewide borrowing and access to electronic resources statewide while adhering to state and federal privacy and confidentiality law.
- ▶ Evaluate technology and bandwidth needs for effective network utilization and scalability.
- ▶ Maintain ongoing evaluation of security for hardware, software and networks.
- ▶ Develop intellectual property and confidentiality guidelines for statewide projects and provide training on the implementation of the guidelines.
- ▶ Increase Illinois library materials availability in OCLC and SILC, the LLSAPs and other consortial databases.
- ▶ Continue to promote *AskAway*, the statewide virtual collaborative reference services, utilizing up-to-date technology.
- ▶ Continue to promote *Illinois CLICKS*, a website with quality internet resources, chosen by Illinois librarians, for all Illinois citizens.

Strategic Goal #2: Enhance Collaboration and Cooperation: Improve information access to the people of Illinois by increasing collaboration and cooperation among libraries and other organizations

OBJECTIVES:

- ▶ Increase collaboration among libraries (and other institutions) in other states and nations.

- ▶ Increase collaboration with information providers outside the library community as well as vendors of technology.
- ▶ Promote expanded consortial efforts for cooperative licensing of electronic resources.
- ▶ Work with other organizations to address patron access and authentication.
- ▶ Identify and plan to increase the number of collections that are accessible through SILC.
- ▶ Maintain principles of interlibrary lending as described in the *ILLINET Interlibrary Loan Code* and other proven systems for cost-effective sharing of information resources.

Strategic Goal #3: Promote Library Services to “users.” Proactively, through current and forthcoming technologies, market library resources (catalogs, digital resources, web pages) to end users.

OBJECTIVES:

- ▶ Publicize the benefits and services of Illinois library networks (such as ILLINET, library systems, CARLI and others) to library users and potential users.
- ▶ Promote the role of libraries as helpful, definitive sources of information.
- ▶ Promote library resources in the outside world, on non-library web sites, etc.

Strategic Goal # 4: Augment Training Opportunities and Outcomes: Continue to develop and support ongoing, effective training for library staff and users on the use of technology and telecommunications including access to Illinois library resources.

OBJECTIVES:

- ▶ Establish professional criterion for training programs that address use of new technologies.

- ▶ Identify exceptional learning resources that address new technologies and their use.
- ▶ Require a training component for technology grants, as appropriate.
- ▶ Develop, enforce and maintain statewide cataloging and metadata standards to ensure consistency and accuracy in discovering and accessing information.
- ▶ Address cataloging certification needs, as appropriate.
- ▶ Expand the LibraryU Web-based training initiative to include increased technology topics for library users and library staff.

Strategic Goal 5: Ensure Adequate

Funding: Strive for sustained and predictable financial support for technology and telecommunications priorities.

OBJECTIVES:

- ▶ Identify new funding sources and models, including non-traditional sources, while maintaining existing support.
- ▶ Promote the value of libraries to funders and potential funders.
- ▶ Target funding to defined areas that address specified standards.
- ▶ Foster and maintain opportunities to seek funding for training and hardware/software replacement.
- ▶ Provide funding for replication of worthy technology projects.
- ▶ Seek demonstration projects with other organizations.
- ▶ Work with the Illinois Century Network and other agencies in addressing telecommunications cost issues.
- ▶ Identify and publicize successes and challenges of State Library-funded technology grants through posting of final reports on the Illinois State Library Web site,

- press announcements and sharing with legislators.
- ▶ Identify and investigate new models for paying for shared services.

Strategic Goal #6 : Stimulate Research and Development: Promote demonstration technology grants and additional research and development efforts in use of new technologies.

OBJECTIVES:

- ▶ Specify a minimum percentage of grant funds be allocated to technologically innovative ideas.
- ▶ Continue to earmark funding to encourage demonstration and experimental projects.
- ▶ Evaluate new learning models for technology and information literacy areas.
- ▶ Research and identify best practices regarding the affordability, reliability and ease of use of technology in libraries.
- ▶ Investigate alternative technologies to deliver services.
- ▶ Publicize innovative demonstration projects to show capabilities of Illinois libraries.

Strategic Goal #7: Employ Strategic Use of Operational Standards: Use standards to promote interoperability in cooperative technology projects.

OBJECTIVES:

- ▶ Require adherence to selected standards in Appendix A as a condition of State Library grant funding.
- ▶ Develop and implement standards and best practices for digital content projects.
- ▶ Investigate statewide minimum technology requirements for developmental and full library system membership.

- ▶ Implement an annual evaluation and revision of standards in Appendix A.

VI: Strategic Plan for Technology and Telecommunications: Action Plan for FY10

Grant funds set aside for the use of technology to improve information access via the Illinois library network must be sufficient to make a measurable impact. The ILLINET Network Advisory Council recommends a minimum of 40% of the funding available for competitive Library Services & Technology Act grants be allocated for projects that address this action plan and lead to models that can be replicated in other locales.

Recommended priority areas for FY10 grants are listed below. These suggested areas, which are tied to goals in the *Strategic Plan for Technology and Technology in Illinois Libraries*, are not in prioritized order.

GOAL: Continue to Improve Services to Patrons Through Expanded Information Discovery, Access and Delivery:
[LSTA Goal 2 – Position Illinois libraries to provide access to abundant resources and information, both virtual and tangible, to collaborate for resource sharing, develop ideas that embrace technology and extend library services for all Illinois citizens]

Priority Areas in FY10:

- ▶ Implement emerging web-based initiatives geared towards more

participation by library patrons in library services. Examples include, but are not limited to, blogs for patron book discussions, enabling tagging the library online catalog to make it more attractive to library users, and utilizing instant messaging to connect reference service with younger people.

- ▶ Provide support for implementation of unified access through federated searching, etc., to library catalogs and electronic resources, leveraging library content and patron-contributed content for both on-site and remote access.
- ▶ Provide funding for collaboration utilizing open source software for library system-wide projects. Examples include consulting assistance and staff training.
- ▶ Enhance cooperation and collaboration within and beyond the library community by providing grants to encourage libraries to become library system automation program members.
- ▶ Increase information about serial holdings in Illinois libraries through a concerted effort to update and expand local holding records (LHRs) in OCLC WorldCat for print and non-print serials. Re-evaluate the impact of the initiative before committing to this effort in FY11.
- ▶ Digitize valuable unique collections in Illinois that address local and Illinois history and resources. Digitized collections should be available through the Illinois Digital Archives or, at a minimum, through Digital Illinois. An example is digitization of key historic state government publications.

GOAL: Augmenting Training Opportunities and Outcomes:

[LSTA Goal 1: Position Illinois libraries as the educational anchor of the community by providing opportunities that support information fluency and lifelong learning to address the diverse needs of Illinois residents.]

Priority Area in FY10:

- ▶ Expand access to and train library staff statewide on effective utilization of new web-based technologies and virtual meeting/web conferencing collaboration software to improve services to library users.
- ▶ Expand training for library patrons on the use of library resources including remote access, critical use of Internet information, user-generated content and newer web-based functionality.

**GOALS: Stimulate Research and Development
Employ Strategic Use of Operational Standards
[LSTA Goal 4: Provide tools for the future to facilitate the ability of libraries to lead their communities through planning, research, innovation, partnerships, best practices, and discovery to improve library service for Illinoisans.]**

Priority Area in FY10:

- ▶ Define and address minimally acceptable connectivity standards for Internet services in libraries implementing web-based initiatives that are bandwidth-intensive. Collaborating with other relevant agencies and associations and addressing bandwidth management should be part of the grant projects.
- ▶ Formally assess the impact of newer web-based initiatives including the impact of user-generated content and the financial requirements for virtual library services.
- ▶ Develop a white paper or consulting study on the future of technology for Illinois library service.

The evaluation plans of the grants funded in these areas should address effective techniques in providing training, demonstrations and access to more

information, depending on the nature of the grant project. Grant results and what did not work should also be shared broadly at conferences and via a WebJunction Illinois library wiki on best practices for LSTA technology grants.

VII. Funding Priorities

The Technology & Telecommunications Working Group urges the Illinois State Library to set aside sufficient state and federal grant funding to supplement local funding in addressing the strategic goals outlined in this plan. Shared funding from the state, library systems and local libraries is optimal because of the benefits that occur at the local level and beyond.

An aggressive effort toward exploring new funding opportunities is both appropriate and necessary. Working with other organizations and agencies is essential in addressing shared needs.

VIII. Responsibilities

The earlier automation plan, *Plan for Funding Automated Resource Sharing in Illinois Libraries* (May 1988) delineated expectations for local libraries, library systems and the state. Fifteen years later, these expectations continue to be valid. Responsibilities are as follows:

LOCAL: The local library has the primary responsibility to meet the needs of its users. Resources beyond the library's immediate collection are still needed, however. Library staff should provide global access to additional resources to their users. Libraries should participate in consortia and provide access to their holdings via OCLC records. Standards outlined in Appendix A of this plan should be addressed.

REGIONAL LIBRARY SYSTEMS: Local Library System Automation Programs (LLSAPs) continue as key components of the Illinois Library & Information Network. The Regional Library Systems are the logical units to lead and coordinate LLSAP development, as delineated in the 1988 automation plan and in subsequent Regional Library Systems standards. Regional Library Systems should work with member libraries to increase the number and diversity of LLSAP participants as well as LLSAP affordability. The leadership role of systems regarding technology development is of tremendous importance in providing access to Illinois library resources and in supporting the overall statewide goals.

LIBRARY CONSORTIA/COOPERATIVE LIBRARY ORGANIZATIONS: In addition to the library systems, other library consortia also play key roles in technology networking in the state. Library consortia should work with their members, other consortia and the Illinois State Library in addressing the goals and objectives stated in this strategic plan.

STATE LIBRARY: As stated in the 1988 plan, "...the State Library has a major responsibility, not only to libraries, but to the citizens of Illinois." Judicious use of grant funding in addressing key statewide goals is the best way to provide expanded access to information. Likewise, the implementation of technology-related standards plays an important role.

IX. Review of Plan: Evaluation

Following the recommendation of the Technology & Telecommunications Working Group, comments on the draft plan were sought from the library community in late October and November 2003. Following review and discussion of the comments, the working group

presented a final draft plan to the director of the Illinois State Library and the Illinois State Library Advisory Committee in early December. The Illinois State Library Advisory Committee unanimously approved the plan following discussion at its December 12, 2003 meeting.

Annual review of the strategic plan and development of an annual operational plan to implement the strategic goals are essential. As approved by the advisory committee, the review and development of the operational plan/action steps is the responsibility of the ILLINET Network Advisory Council with assistance from the Illinois State Library staff. At the end of each year, the ILLINET Network Advisory Council should also undertake the review of the annual operational plan. The operational plan will be shared with the Illinois State Library Advisory Committee each year.

NOTE: The Illinois State Library Advisory Committee at the August 26, 2008 meeting accepted the revised plan.

APPENDICES

APPENDIX A: Technology & Telecommunications Standards for the Illinois Library Community

I. Introduction

The goal of these standards is to support resource sharing, facilitate access to information, and enhance interoperability. ***It is recommended that there will be periodic grant opportunities targeted to help libraries meet these standards.***

Resource sharing is highly valued among Illinois libraries of all types and their users. It is critical for libraries to adhere to technology and telecommunications standards, so that the people of Illinois can benefit from plentiful resource sharing.

To assure staff and users have maximum access to library resources, when applying for automation or technology grant funds offered by the Illinois State Library, libraries are required to certify that they comply with the applicable standards, as directed in the grant application. Depending upon the grant opportunity, this information may be used to establish funding priorities. There are grants that are built on the standards and those that are designed to help libraries achieve compliance with the standards. **Not all standards may be applicable for every grant offering.**

Each Standard is a goal. If a library has been unable to comply with a particular standard, as part of the grant application, it must provide evidence of striving to meet it, including a strategy and target date.

Libraries are strongly encouraged both to consult with staff at their Regional Library System for assistance in planning to meet the required standards and to pursue grant opportunities to help meet them.

The Illinois Regional Library Systems and other consortia are also eligible to apply for automation or technology grants funded through the Illinois State Library. As such, they similarly certify compliance with these standards as is appropriate for the grant opportunity.

The Illinois State Library staff will coordinate ongoing review of these standards in order to keep them up-to-date and relevant.

II. Standards for Automation/Technology Grant Offerings (as applicable)

To qualify for automation or technology grants, a **library** must show progress in meeting these standards, as applicable to the grant offering:

1. Ideally participates in a **consortial** online catalog – either a Regional Library System’s LLSAP (Local Library System Automation Program) or CARLI/I-Share so that its resources are readily available for discovery and sharing.
2. Is an OCLC Governing Member, i.e. contributes current cataloging, and regularly checks and responds to its OCLC interlibrary loan message file (these activities can be performed by a central agent such as the Regional Library System or the Illinois State Library).
3. Displays shelf status for individual items as part of the interlibrary loan process.
4. Keeps up-to-date holdings in the OCLC union list for Illinois serials (SILO: Serials in Illinois Libraries Online).

Utilizes a unique barcoding system for resource sharing, recorded at one of the following sites.

- a. Cooperative Computer Services
 - i. in Alpha Order: <http://www.ccs.nsls.lib.il.us/prefixes/zebrasorted.html>
 - ii. in Numeric Order: <http://www.ccs.nsls.lib.il.us/prefixes/zebransorted.html>

- b. CARLI: (for I-SHARE libraries):
http://office.ilcso.illinois.edu/fm/directory/search_barcode.htm
- 6. Adheres to the *Illinois Interlibrary Loan Code* and makes its materials available by having their circulation status online, with up-to-date holdings information.
- 7. Provides staff members who are accessible via email for communication about resource sharing. It is recommended that staff addresses use a domain name that identifies the library.
- 8. Maintains up-to-date directory information in the Every Library in Illinois (ELI) Web database.
- 9. Provides patron access to the Internet.
- 10. Supports and promotes in-library access to the electronic resources provided by the Illinois State Library. <http://www.finditillinois.org/articles.html>
- 11. If the library has a Web site and it is active, it:
 - a. Is universally accessible through adherence to Americans with Disabilities Act standards, including:
 - i. The Web Accessibility Initiative (WAI) of the W3C (World Wide Web Consortium). Level 1 is required.
 - ii. Section 508 of the Rehabilitation Act, which was revised in 1998 to require all federal government agencies to make their electronic and information technology accessible to people with disabilities. Section 508 is based on the Web Accessibility Initiative standards.
 - b. Uses a domain name that identifies the library.
 - c. Uses ISL-identified metadata standards.
 - d. Facilitates remote access to the electronic resources provided by the Illinois State Library. <http://www.finditillinois.org/articles.html>.
 - e. Is kept up-to-date.
- 13. If the Library engages in digital imaging projects, it complies with best practices defined by the Illinois State Library,
http://www.cyberdriveillinois.com/departments/library/who_we_are/bestpractices.html.
- 14. Provides a level of minimum Internet connectivity for patron workstations as identified by the Illinois State Library in collaboration with other agencies and organizations. (NOTE: There are pockets in Illinois that may have some problems with access to the needed technologies).
- 15. Either individually, through its consortium, LLSAP, or I-Share, implements the Illinois State Library's *Standards for Cataloging*.
- 16. Adheres to privacy policies as promulgated by the American Library Association:
 - a. *Privacy: An Interpretation of the Library Bill of Rights*
 - b. *Policy Concerning Confidentiality of Personally Identifiable Information about Library Users*
- 17. Adheres to syntax conventions as established in the Open URL Framework for Context-Sensitive Services. (http://www.niso.org/committees/committee_ax.html)

III. Regional Library Systems and I-SHARE

Each Illinois Regional Library System and I-SHARE, in addition to adhering the above standards as appropriate, also:

- 1. Supports a library automation system that adheres to:
 - a. The Z39.50 protocol for linking disparate integrated library systems.
 - b. The Bath Profile.
 - c. The ISO 10160/10161 Interlibrary Loan (ILL) Application Service Definition/Protocol Specification.
- 2. Keeps up-to-date holdings in the OCLC union list for Illinois serials (SILO: Serials in Illinois Online).
- 3. Implements XML or SQL compliant resource sharing databases when new databases are acquired or existing databases are moved to new platforms.

IV. Emerging Standards

In addition, Illinois libraries and Regional Library Systems alike are encouraged to monitor the development of these standards and schemas as well as other relevant standards that emerge:

1. Open Archives Initiative.
2. Electronic Data Exchange (EDI) as it pertains to libraries.
3. SISAC, the Serials Industry Systems Advisory Committee.
4. BISAC standards (from the Book Industry Study Group, Standards and Communications).
5. Functional Requirements for Bibliographic Records.
6. Z39.83 Part 1/Part 2 - Circulation Interchange Part 1: Protocol (NCIP)/ Protocol Implementation Profile 1.
7. Radio Frequency Identification (RFID).
8. Open architecture initiatives such as Shibboleth.

APPENDIX B: The Resource-Sharing Environment: Chronology of Key Developments in Illinois Library Network

1965	Illinois Library System Act enacted.	1999	VIC (Virtual Illinois Catalog) and Find-It! Illinois announced to library community.
1975	Illinois library network officially named ILLINET.	1999	ISL establishes Cataloging Maintenance Centers at three library systems to promote standardized practices.
1975	Regional Library Systems begin development of shared online circulation systems.	2000	LibraryU, an effort of four regional library system debuts.
1977	Illinois State Library begins OCLC services to Illinois libraries.	2000	New services join Find-It! Illinois: Illinois Digital Archives and Illinois Authors and the Talking Book and Braille Service.
1977	University of Illinois implements the Library Circulation System (LCS) database.	2001	First annual Try-It! Illinois online electronic database trials in October and November.
1980	Statewide delivery service begins.	2001	Gates Foundation awards grants totaling more than \$3.8 million to Illinois public libraries for connectivity and networking upgrades.
1983	Library System Act amended to include non-public libraries as full system members.	2001	zILLANE final report issued.
1984	University of Illinois at Urbana-Champaign and River Bend Library System jointly developed the Full Bibliographic Record (FBR) online catalog.	2002	OCLC Group Catalog and QuestionPoint pilot projects begin.
1988	Plan for Funding Automated Resource Sharing in Illinois Libraries developed by Illinois State Library Automation Committee.	2002	Preserving Electronic Publications project (PEP) begins harvesting State of Illinois Web sites.
1990	ILLINET Online implements statewide dial-access for ILLINET libraries.	2002	ILLINET/OCLC Services institutes group services flat rate pricing for Illinois libraries.
1990	<i>Standards for Illinois Multitype Library Systems</i> approved by the Illinois State Library Advisory Committee.	2004	Statewide Illinois Library Catalog (SILC) debuts.
1994	State Library begins providing OCLC FirstSearch databases to all libraries and their users.	2005	CARLI consortium formed.
1997	Educate & Automate Automation/Technology grants begin.	2006	“AskAway” virtual reference project begins.
1999	Illinois Century Network formed.		

APPENDIX C: Bibliography of Background Documents

American Library Association. *Privacy: An Interpretation of the Library Bill of Rights*. (available from the American Library Association web site, <http://www.ala.org/>).

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APPENDIX D: Glossary

AskAway: A virtual reference consortia of Illinois and Wisconsin libraries, using OCLC QuestionPoint software.

Bath Profile: An international Z39.50 specification supporting library applications and resource discovery. The profile describes and specifies a subset of ANSI/NISO Z39.50-1995, Information Retrieval (Z39.50): Application Service Definition and Protocol Specification (ISO 23950).
<http://www.nlc-bnc.ca/bath/bp-current.htm>.

BISAC (Book Industry Study Group, Book Industry Standards and Communications forum): Standards for publishing industry-supported bar code and EDI formats including numbering systems such as ISBN. <http://www.bisg.org/bisac/index.html>.

CARLI: Consortium of Academic and Research Libraries in Illinois. Established in 2005, the consortium was formed by the merger of the Illinois Library Computer Systems Office (ILCSO), the Illinois Cooperative Collection Management Project and the Illinois Digital Academic Library.
<http://www.carli.illinois.edu/>.

Crosswalk: A table that maps the relationships and equivalencies between two or more metadata formats to support the ability of search engines to search effectively across heterogeneous databases, promoting interoperability.

Dublin Core Metadata Initiative: An open forum engaged in the development of interoperable online metadata standards that support a broad range of purposes and business models.
<http://dublincore.org/>.

EDI (Electronic Data Exchange): The electronic exchange of business documents in a standardized format between diverse systems. <http://www.x12.org/>.

ELI (Every Library in Illinois): A service provided through the Illinois State Library's Find-It! Illinois portal. This Web interface supplies access to directory and statistical information concerning Illinois libraries. <http://www.eliillinois.org/>.

Federated search engine: Performs simultaneous parallel queries across multiple bibliographic, reference and digital images databases.

Find-It! Illinois: Illinois State Library initiative to establish and administer a statewide digital library. Key components are the SILC (the Statewide Illinois Catalog), access to electronic resources purchased by the State Library for Illinois library patrons, and the Illinois Government Information (IGI) search engine. <http://www.finditillinois.org>.

Functional Requirements for Bibliographic Records: An international effort resulting in development of a clearly defined, structured framework for relating the data that are recorded in bibliographic records to the needs of the users of those records. The second objective is to recommend a basic level of functionality for records created by national bibliographic agencies.
<http://www.ifla.org/VII/s13/frbr/frbr.htm>.

I-Share: A shared database of 64 Illinois libraries (mostly academic). Formerly known as ILLINET Online). I-Share is managed by CARLI.

ILLINET (Illinois Library & Information Network): The state's library network, founded in 1975 and comprised of the Illinois State Library, Regional Library Systems and the 2,200+ school, academic, special and public libraries that are Regional Library System members.
http://www.cyberdriveillinois.com/departments/library/who_we_are/illinet.html

Illinois Century Network: A telecommunications backbone providing high-speed access to data, video, and audio communication for schools and libraries, colleges and universities, museums, and local government and state agencies. <http://www.illinois.net>.

Illinois Group Catalog Project: A pilot project between Illinois libraries and OCLC in 2003. The Illinois Group Catalog, comprised of records for library materials cataloged by Illinois OCLC member libraries, is available for public access and interlibrary loan. <http://www5.oclc.org/groupcatalog/default.htm>. The pilot project was implemented as “SILC,” the Statewide Illinois Library Catalog.

Illinois Library Computer Systems Organization (ILCSO): The consortium of academic libraries and others that worked together in the development of ILLINET Online and other cooperative efforts to enhance and expand access to information resources among ILCSO members and with the Illinois library community. The ILCSO consortium merged into CARLI in 2005.

Integrated library system: A complete system for automating and administering all of a library's technical and public services functions including cataloging, patron access catalog and circulation so they interact together.

Interlibrary loan: The sharing of publications, information products, or material between libraries where one library requests loans or copies of materials from another library to fill the informational needs of its users that cannot be met through its local collection.

International Standards Organization (ISO) Interlibrary Loan (ILL) Application Service Definition/Protocol Specification. 10160/10161: Standards that address open systems interconnection for interlibrary loan. <http://www.nlcnc.ca/iso/ill/standard.htm>.

Local Access and Transport Area (LATA): The geographic region set up to differentiate local and long distance telephone calls within the U.S. Telephone calls between parties within a LATA (intraLATA) are handled by the local telephone companies and are under the jurisdiction of the state's public utility commission. Calls between LATAs are handled by interexchange carriers (IXCs) and are governed by the FCC.

LibraryU: A collection of library-centered, Web-based training courses available at no cost to Illinois librarians, library staff, trustees, and library patrons, sponsored by the Illinois State Library and the Regional Library Systems. <http://www.libraryu.org/>.

LCS: (Library Computer System): The predecessor of ILLINET Online.

LLSAP (Local Library System Automation Program): A shared bibliographic control and online catalog system for system members developed under the auspices of an Illinois Regional Library System.

OCLC: A global library cooperative serving more than 43,000 libraries worldwide. Services include an online shared cataloging system, interlibrary loan service and FirstSearch reference databases. <http://www.oclc.org/>.

Open Archives Initiative: The initiative develops and promotes interoperability standards that facilitate efficient dissemination of content. The initiative has its roots in an effort to enhance access to e-print archives as a means of increasing the availability of scholarly communication. <http://www.openarchives.org/>.

Open URL Framework for Context-Sensitive Services: The proposed OpenURL standard is syntax to create Web-transportable packages of metadata and/or identifiers about an information object.

By standardizing this syntax, the OpenURL will enable many other innovative user-specific services. http://www.niso.org/committees/committee_ax.html.

Patron authentication: A system whereby licensed services may be accessed on the Internet by patrons using a personal identification number. Services may be provided on a statewide, regional or individual library basis.

Radio Identification Frequency (RFID): Radio frequency identification (RFID) is a method of remotely storing and retrieving data from so-called RFID "tags" attached to objects. <http://en2.wikipedia.org/wiki/RFID>.

Resource sharing: A cooperative arrangement among libraries to make available the resources of a library for use by the patrons of another library, usually through interlibrary loan or reciprocal borrowing.

Section 508, Rehabilitation Act: Federal law, revised in 1998, to require all federal government agencies to make their electronic and information technology accessible to people with disabilities. <http://www.section508.gov/>.

Shibboleth: Shibboleth, a project of [Internet2/MACE](http://www.internet2.edu/), is investigating architectures, frameworks, and technologies to support inter-institutional authentication and authorization for access to web pages. <http://shibboleth.internet2.edu/>.

SILC (Statewide Illinois Library Catalog): Illinois' first all inclusive statewide union catalog that integrates OCLC WorldCat, the Illinois Library Systems' local consortial OPACs, and the I-Share database to provide both shelf status and interlibrary loan capabilities in a single searchable interface. SILC resides on the familiar FirstSearch platform as an additional WorldCat database that allows users to scope to regional groups within Illinois, as well as by type of library. From a single WorldCat record, users can link to a local shared catalog record to see if and where an item is available for loan. <http://www.finditillinois.org/OCLC/>.

SILO (Serials in Illinois Libraries Online): An online union list of Illinois serials, representing the cooperative efforts of more than 1,200 member libraries, that utilizes OCLC's union listing capabilities to provide bibliographic data and verification and to report the copy-specific serials holdings of the member libraries.

SISAC (Serials Industry Systems Advisory Committee): Standards for journal bar codes and other standards relating to serials publishing. See also BISAC. <http://www.bisg.org>.

SQL (Structured Query Language): A type of programming language used to construct database queries and perform updates and other maintenance of relational databases.

Standalone: In this context, an implementation of a library automation system by one library only that is not shared by other libraries.

USA PATRIOT Act (PL 107-56): U.S. legislation enacted in late 2001 to deter and punish terrorist acts in the United States and around the world and enhance law enforcement investigatory tools, etc. The law broadly expands law enforcement's surveillance and investigative powers.

Web Accessibility Initiative: The Web Accessibility Initiative (WAI) of the W3C (World Wide Web Consortium) promotes guidelines that ensure people with disability have access to Web information. Level 1 compliance is required. <http://www.w3.org/WAI/>.

Wiki: Server software that allows users to freely create and edit Web page content using any Web browser.

XML (Extensible Markup Language): A simple, very flexible text format derived from SGML (Standard Generalized Markup Language). Originally designed to meet the challenges of large-scale

electronic publishing, XML is also playing an increasingly important role in the exchange of a wide variety of data on the Web and elsewhere.

Z39.50: The International Standard, ISO 23950: "Information Retrieval (Z39.50): Application Service Definition and Protocol Specification," and U.S. standard ANSI/NISO Z39.50. The standards specify a client/server-based protocol for searching and retrieving information from remote databases. The Library of Congress is the Maintenance Agency and Registration Authority for both standards, which are technically identical though with minor editorial differences.

<http://lcweb.loc.gov/z3950/agency/>.

Z39.83 Part 1/Part2 - Circulation Interchange Part 1: Protocol (NCIP)/ Protocol

Implementation Profile 1): This new National Information Standards Organization (NISO) standard defines transactions needed to support circulation activities among independent automated library systems. Circulation activities include patron and item inquiry and update transactions, such as hold or reserve, check-out, renew and check-in.

http://www.niso.org/committees/committee_at.html.

zILLANE: The informal name of the report, "**I**llinois **L**ibrary Resources and **A**utomation in the **N**etworked **E**nvironment: An Analysis and Recommended Strategies," a 2002 consulting study of the Illinois Regional Library Systems' databases (LLSAPs) by the Texas Center for Digital Knowledge.

<http://www.unt.edu/zillane/FinalReport.htm>.

Appendix E: Members of the Illinois State Library Technology & Telecommunications Working Group (plan completed in December 2003):

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Vice-chairman

Robert McKay, Director, River Bend Library System, Coal Valley

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