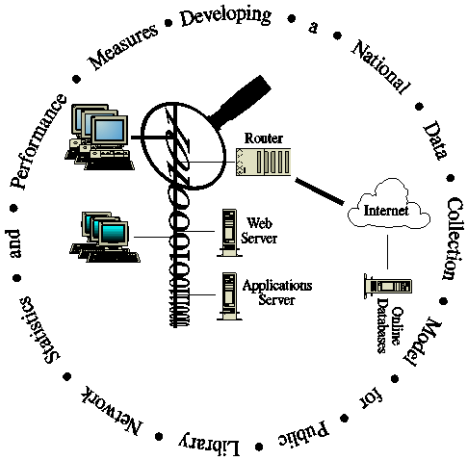

DEVELOPING A NATIONAL DATA COLLECTION MODEL FOR PUBLIC LIBRARY NETWORK STATISTICS AND PERFORMANCE MEASURES:

Final Report

November 2002

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Project Partners: U.S. National Commission on Libraries and Information Science
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Grant: NR-00009

INTRODUCTION

This report summarizes the project findings, issues, and conclusions. The report does not include all the appendices, methodological detail, or project developments – those are included in the project interim reports (one through three) submitted to the Institute of Museum and Library Services (IMLS) throughout the project. In particular, this report:

- Summarizes the project findings;
- Identifies issues for consideration for future collection, reporting, and maintenance of public library network statistics;
- Makes recommendations for future areas of development, research, and consideration; and
- Evaluates the extent to which the project met its goals and objectives.

Included in the report is the 2002 Public Library Internet Study, also funded by IMLS (see Appendix A).

In short, the study demonstrated the ability of public libraries, state library agencies, and consortia to collect and report network statistics data. The study also succeeded in influencing the adoption and use of many of the network statistics in the various standards development bodies – National Information Standards Organization (NISO), International Standards Organization (ISO) – as well as other data collection entities such as the Public Library Data Service (PLDS), Association of Research Libraries (ARL), and the State Library Agency annual survey. Thus, the outcomes of this project are significant.

THE FIELD TEST AND RESULTS

The following briefly outlines what participating libraries were expected to do during the field test. The study team requested that libraries, state library agencies, and consortia collect statistics on a number of network measures during November 2001 and report in detail on their experience using a project web site by January 2002. The overall interest of the field test was in the following areas:

- **The collection process for libraries, state library agencies, and consortia**. Here, we were interested in the ability of participants to collect the network statistics;
- **The reporting process for libraries, state library agencies, and consortia**. A primary goal for this project is to develop a national reporting system for public library network statistics. Thus, we were interested in participant comments regarding the reporting process; and
- **The network statistics**. Many of the statistics were developed and field tested as part of an Institute of Museum and Library Services grant during 1998-2000 and resulted in the publication *Statistics and Performance Measures for Public Library Networked Services*. Chicago, IL: American Library Association, 2001 by John Carlo Bertot, Charles R. McClure, and Joe Ryan. In this rapidly moving technology environment, technology changes, what we can measure changes, and what we wanted to measure changes as well. As such, the study team was interested in participant comments regarding the statistics

themselves as well as necessary changes to ensure their continued relevance and usefulness.

The above served as the primary goals of the field test process.

In all, nine (9) states participated in the field test of the network statistics (see Table 1). Overall, five state library agencies/consortia participated in the field test. In addition, 29 public library systems with a total of 115 branches, participated in the field test. The field test, therefore, was comprehensive in scope and involvement.[1]

Field Test Results

Overall, the field test succeeded in its primary goals of:

- **Field-testing the network statistics**. The network statistics developed during the 1998-2000 study had undergone one field test with selected libraries. Since that time, modifications and additions were made to the statistics, reflecting the fluid environment in which networked services reside.
- **Collecting the network statistics**. It was unclear to the study team as to the ability of public library branches and systems, consortia, and state library agencies to establish data collection procedures for the network statistics within their respective areas. Field test participants had to establish collection and management procedures for the various statistics within their systems as well as through outside sources (e.g., commercial database services).
- **Reporting the network statistics**. To facilitate an instant reporting and report generating system, the study team developed a web-based reporting system into which field test participants could enter their data. With minor exceptions, the participants were able to report their network statistic data through the web data entry forms without problems. In general, reported problems with the data entry system reflected system/server problems experienced at the time of entry rather than difficulties with the web data entry process itself.

As such, the field test was successful in meeting its primary objectives.

[1] For additional information on the methodology of and specific data results from field test, please refer to *Interim Report 3* submitted to IMLS in June 2002.

Table 1. Public Library Network Statistics.	
Network Statistic	**Definition**
Public Access Workstations	
# Public access workstations	Annual count of the total number of library owned public access graphical workstations that connect to the Internet for a dedicated purpose (to access an OPAC or specific database) or multiple-purposes.
# Public access workstation users	Annual count of the number of users of all of the library's graphical public access workstations connected to the Internet computed from a one-week sample.
Maximum speed of public access Internet workstations	Indication of the maximum bandwidth of public Internet access, e.g., less than 56kbps, 56kbps, 128kbps, 1.5mbps, etc.
Databases	
# Full text titles available by subscription Report: Serial titles, Other titles, Total titles	Count of the number of non-e-book full text titles that the library subscribes and offers to the public computed one time annually.
# E-book titles available by subscription	Count of the number of e-book titles that the library subscribes and offers to the public computed one time annually.
# Database sessions	Total count of the number of sessions (logins) initiated to the online databases. Definition adapted from proposed ICOLC standard http://www.library.yale.edu/ consortia/webstats.html.
# Database queries/searches	Total count of the number of searches conducted in the library's online databases. Subsequent activities by users (e.g., browsing, printing) are not considered part of the search process. Definition adapted from proposed ICOLC standard http://www.library.yale.edu/ consortia/webstats.html.
# Items examined using subscription services	Count the number views to each entire host to which the library subscribes. A view is defined as the number of full text articles/pages, abstracts, citations, and text only, text/graphics viewed. Definition adapted from proposed ICOLC standard http://www.library.yale.edu/ consortia/webstats.html.
Electronic Services	
# Virtual reference transactions	Annual count of the number of reference transaction using the Internet. A transaction must include a question received electronically (e.g., via e-mail, WWW form, etc.) and responded to electronically (e.g., e-mail).
Public service time spent servicing information technology Report: Information technology staff, Paid public service staff (Professional Librarian, Paraprofessional), Volunteer, & Total	Annual count of the staff hours spent in servicing information technology resource and service activity in public service areas computed based on a one-week sample. Count in 5-15 minute increments as determined appropriate for the library.
Virtual Visits	
# Virtual visits to networked library resources Report: # Internal virtual visits, # External virtual visits, # Total virtual visits	Count of visits to the library via the Internet. A *visit* occurs when an external user connects to a networked library resource for any length of time or purpose (regardless of the number of pages or elements viewed). Examples of a networked library resource include a library OPAC or a library web page. In the case of a user visit to a library web site a user who looks at 16 pages and 54 graphic images registers one visit on the Web server.
Instruction	
Formal user information technology instruction Report: # Users instructed, # Hours of instruction	A count of the number of users instructed and the hours of instruction offered in the use of information technology or resources obtainable using information technology in structured sessions – either delivered in the library using a computer lab or other instructional setting or delivered electronically through online-based instruction.
Point-of-Use information technology instruction Report: # Users instructed, # Hours of instruction	A count of the number of users instructed and the hours of instruction offered in the use of information technology or resources obtainable using information technology in unstructured sessions at the impromptu request of users. Count in 5-15 minute increments as determined appropriate for the library.

CONCLUSION

The results of the field test enable the study team to draw the following conclusions:

- **Public libraries, consortia, and state library agencies can collect and report network statistics**. The field test suggests that public libraries and others can indeed establish procedures for the collection and reporting of network statistics.
    - **All relevant statistics collected and reported**. The study team anticipated that field test participants would collect only the statistics relevant to their systems – both from a feasibility and anticipated use perspective – thus forming a "core" set of statistics. In the end, however, participants collected and reported data on all the statistics in Table 1, indicating an interest in these statistics for a number of reasons.
- **Some statistics not easily collected or accessible**. While improving, access to, reporting of, and consistency of commercial vendor data (e.g., online databases, e-books) remains problematic for a number of reasons that include vendor adherence to definitions of key data elements (e.g., sessions, titles, searches, items accessed), library/consortia/state library agency technology configurations, and default settings (e.g., session time outs).
- **Changing environment**. The field test – initially to only address the data collection and reporting system based on the 1998-2000 network statistics – expanded to include revised definitions of existing statistics and newly added statistics. The need to do this demonstrates clearly the dynamic environment in which library network statistics reside.
- **Libraries and others better positioned to collect, report, and understand network statistics**. Awareness within the public library community of network statistics is much improved since 1998, though there is still a great need for enhancing the knowledge of public librarians and others as to the definitions, methodologies, and meaning of network statistics.
- **Need to continue development, testing, and training**. Technology does not stand still and, as a result, neither will the network statistics that reflect the services and resources that libraries provide via networks. As such, it is important to engage in a continual research and development process for the networked environment and, subsequently, the training needs to support the collection, reporting, and interpretation of library network statistics to an ever-expanding group of parties – public libraries, consortia, state library agencies, policy makers, and commercial services providers.
- **Need a data collection and reporting agency to work with state library agencies to coordinate the collection of network statistics**. Given that, for the most part, public libraries, consortia, and state library agencies are able to collect and report network statistics, there is a need for an agency to which these data are reported. This agency needs to work with the state library agencies to ensure that state-based consortia, public libraries, and the state libraries themselves collect and report these usage statistics. This agency, however, needs to be able to change data elements and collect statistics on a short timeline given the nature of the networked environment.

Based on the above, it is clear to the study team that a number of public libraries, consortia, and state library agencies are able to collect and report network statistics.

The issue of creating a national data collection system is less, therefore, about the ability of these entities to engage in network statistics collection and reporting, but rather more about the desire to include these statistics in their ongoing annual statistics collection and reporting activities. There is a need, therefore, to build upon the success of this field test and overall study and expand the collection of network statistics within the public library community beyond those entities that participated in the field test.

ISSUES AND RECOMMENDATIONS

The study identified a number of issues that require continued attention. These include:

- **Research and development efforts into network statistics should continue**. While it is tempting to consider the field tested network statistics as "final," technology, and thus what can be captured through technology, changes rapidly. So to do library, decision maker, and policy maker data needs. Thus, there is a need to continue research and development activities regarding network statistics.
- **Development of a national data collection system is essential**. At this point in time, there is no systematic data collection system for public library network statistics. More importantly, even within existing data collection systems such as the Federal State Cooperative System (FSCS), no one collection system collects data that cuts across public libraries, consortia, and state library agencies. And this is precisely the type of data collection system that is necessary in order to reflect accurately the use and uses of public library network-based services. Thus, there needs to be a national data collection system that is
    - **Flexible**. It should be able to adopt, collect, and report network statistic data within a one year cycle – not several years;
    - **Comprehensive and multitype**. Public library network use data come from public libraries, consortia, and state library agencies. Through regional and statewide licensing agreements, public libraries and their patrons benefit from access to and use of resources (e.g., databases, e-books) that are not part of the local library collection. It is necessary to extract and report use that originates from the public library community to reflect accurately the use of public library networked services and resources;
    - **Integrated with other data collection structures**. While there may be a need for a separate national network statistics collection system overall, it needs to take advantage of the existing state-based data collection system managed by the state library agencies, state data coordinators, and other existing infrastructure. Ideally, state library agencies would append selected network statistics to their annual public library surveys and at the same time collect and report relevant data from consortia and state library agencies; and
    - **Built on interest, majority desire, and persistence**. A national data collection system would require the participation of all 50 states (and territories). It is unlikely that such a system could be created initially. Rather, it is more likely the case that selected states would participate in such a data collection and reporting system with others joining over time.

Failure to create such a system will result in the continued underreporting – or worse, no reporting at all – of now integral and growing library services.

- **Foster an understanding of the networked environment, network statistics, and collection and reporting methodologies**. While it is true that a number of librarians appreciate the complexities of the networked environment, the issues regarding technology-based measures, and a host of other network statistics issues, it is clear that a many librarians simply do not understand the relationship between technology infrastructure and the network statistics data generated, how to manipulate vendor-provided data, how to interpret the results of network statistics collection efforts, and a number of other issues. There is a need for a substantial training and education effort regarding network statistics.

Together, these recommended solutions to the issues could result in a national data collection and reporting system for public library network statistics that is comprehensive, efficient, and flexible. Thus, it would meet the needs of public libraries, decision makers, and policy makers along a number of critical fronts.

ASSESSING THE STUDY'S OUTCOMES

This study had a number of objectives that included:

- Assessing the extent to which it is feasible to create a national data collection and reporting system for public library network statistics;
- Conducting a large-scale field test to determine whether, or to what degree, public libraries, consortia, and state library agencies could collect network statistics in a realistic and non-burdensome way that provided *usable* results for decision making purposes;
- Updating, as necessary, network statistics to reflect current practice and needs; and
- Standardizing network statistics data elements, definitions, and collection methodologies.

To determine the extent to which the study's objectives were met, the study team engaged in a number of project assessment activities grounded in the above objectives.

Assessment of Collecting and Reporting Network Statistics

To ascertain the extent to which libraries were able to collect and report the network statistics presented in Table 1, the study team conducted a large scale field test described above and in Interim Report 3 submitted to IMLS in June 2002.

As indicated above, libraries, consortia, and state library agencies were able to collect these data. To determine this, the study team:

- Conducted e-mail and electronic surveys with study participants that asked questions regarding the ability of libraries and others to collect and report these data;
- Conducted interviews with selected field test participants regarding challenges, problems, and other issues regarding the collection and reporting of these data; and

- Reviewed the data submission from participants for errors and other problems in reporting the requested data.

While some issues arose, overall the field test participants indicated that they were able to collect the data without too much difficulty – once participants understood the process and data collection and reporting requirements. Thus, the study demonstrated that it is feasible to collect network statistics at a national level; however, states, and the libraries and consortia within the states, need to *want* to collect and report these data.

The Network Statistics

It is difficult to assess the degree to which the network statistics themselves are successful. To a large extent, they remain unproven on any large scale basis (it is important to note that there are approximately 8,900 U.S. public library systems). What collection is occurring at this point in time is largely on an individual library, consortia, of state library basis. The true measure of the success of these statistics will evolve in the future as more libraries, vendors, consortia, state library agencies, working groups, and others adopt and incorporate these statistics into their various domains.

In the meantime, however, there is one measure of success to which the study team can point regarding the statistics. As of this date, nearly all of the statistics developed, field tested, and refined through this study (and previous work) are now incorporated into key library statistics standards, including the:

- National Information Standards Organization (NISO) Z39.7 *Library Statistics* revision currently out for review. Members of the study team served on the planning/steering committees for that revision and thus participated in the process to incorporate network statistics into the standard (see Table 2). Those interested can review the standard online at http://www.niso.org/emetrics.
- International Standards Organization (ISO) 2789 *Information and Documentation – International Library Statistics* standard adopted in 2002. This approved standard contains many of the network statistics field tested throughout the study team's various network statistics development projects.
- ISO Technical Report 20983 *Information and documentation - Performance indicators for electronic library services* work in progress. This technical report is in the process of combining many of the network statistics with other traditional statistics to develop performance indicators of library quality and outcomes. John Bertot will serve as chair of the working group beginning in 2003.

The above mark significant progress and success of the study team's efforts as part of this project. Having international agreement on a number of these statistics, their definitions, and collection methodologies will lead to continued progress, adoption, and use in the future.

Finally, it should be noted that the study team and the Information Use Management and Policy Institute (Institute) at Florida State University's School of Information Studies is involved heavily with vendors, database aggregators, publishers, and others regarding the ongoing

development of online database statistics through the Institute's Library Network Statistics Clearinghouse effort (see http://www.ii.fsu.edu for more details on this). The Institute will continue these activities through its Clearinghouse initiatives.

Table 2. Network Statistics as of June 2002.*

Statistic	Definition
4.5.3 Current Subscriptions--Electronic 4.5.4 Current Serial Titles--Electronic	A document in print or in non-print form, issued in successive parts, usually having numerical or chronological designations, and intended to be continued indefinitely, whatever its periodicity. Note 1: Serials published in electronic form only or in both electronic and other format. Note 2: Comprises serials held locally and remote resources for which access rights have been acquired, at least for a certain period of time.
4.10 Other Materials--Electronic	An electronic document or item. Includes eBooks, databases, Internet resources and other digital documents.
4.10.1 Abstract and Indexing Databases	Collection of bibliographic references analyzing and presenting on a continuous basis periodical and/or other titles that usually relate to a common discipline or geographic area. This includes electronic reference and indexing tools which in print form would be counted as periodicals. Databases primarily containing full text are excluded.
4.10.2 Compact Disc Read-Only Memory (CD-ROM)	Computer based information storage and retrieval medium based on laser technology that contains data in text and/or multimedia formats. CD-ROMs are counted according to their contents as database, digital document, electronic serial.
4.10.3 Computer Files	The number of pieces of computer-readable disks, tapes, CD-ROMs, and similar machine-readable files comprising data or programs that are locally held as part of the library's collections available to library clients. Examples are U.S. Census data tapes, sample research software, locally mounted databases, and reference tools on CD-ROM, tape or disk. Note: Does not include bibliographic records used to manage the collection (i.e., the library's own catalog in machine-readable form), library system software, and microcomputer software used only by the library staff.
4.10.4 Databases	Collection of electronically stored data or unit records (facts, bibliographic data, texts) with a common user interface and software for the retrieval and manipulation of the data. Notes: The data or records are usually collected with a particular intent and are related to a defined topic. A database may be issued on CD-ROM, diskette, or other direct access method, or as a computer file accessed via dial-up methods or via the Internet. Licensed databases are counted separately even if access to several licensed database products is affected through the same interface.
4.10.5 Digital Documents	Information unit with a defined content that has been digitized by the library or acquired in digital form as part of the library collection. This includes eBooks, electronic patents, networked audiovisual documents and other digital documents, e.g. reports, cartographic and music documents, pre-prints etc. Databases and electronic serials are excluded.
4.10.6 eBooks	Digital documents, licensed or not, where searchable text is prevalent, and which can be seen in analogy to a print book (monograph). The use of eBooks is in many cases dependent on a dedicated device and/or a special reader or viewing software. Note 1. eBooks can be lent to users either on portable devices (eBook readers) or by transmitting the contents to the user's PC for a limited time period. Note 2. Doctoral dissertations in electronic format are included.
4.10.7 Electronic Serials	Serials published in electronic form only or in both electronic and other format. Note: Comprises serials held locally and remote resources for which access rights have been acquired, at least for a certain period of time.

Table 2. Network Statistics as of June 2002.*	
Statistic	Definition
4.5.3 Current Subscriptions--Electronic 4.5.4 Current Serial Titles--Electronic	A document in print or in non-print form, issued in successive parts, usually having numerical or chronological designations, and intended to be continued indefinitely, whatever its periodicity. Note 1: Serials published in electronic form only or in both electronic and other format. Note 2: Comprises serials held locally and remote resources for which access rights have been acquired, at least for a certain period of time.
4.10 Other Materials--Electronic	An electronic document or item. Includes eBooks, databases, Internet resources and other digital documents.
4.10.1 Abstract and Indexing Databases	Collection of bibliographic references analyzing and presenting on a continuous basis periodical and/or other titles that usually relate to a common discipline or geographic area. This includes electronic reference and indexing tools which in print form would be counted as periodicals. Databases primarily containing full text are excluded.
4.10.2 Compact Disc Read-Only Memory (CD-ROM)	Computer based information storage and retrieval medium based on laser technology that contains data in text and/or multimedia formats. CD-ROMs are counted according to their contents as database, digital document, electronic serial.
4.10.3 Computer Files	The number of pieces of computer-readable disks, tapes, CD-ROMs, and similar machine-readable files comprising data or programs that are locally held as part of the library's collections available to library clients. Examples are U.S. Census data tapes, sample research software, locally mounted databases, and reference tools on CD-ROM, tape or disk. Note: Does not include bibliographic records used to manage the collection (i.e., the library's own catalog in machine-readable form), library system software, and microcomputer software used only by the library staff.
4.10.4 Databases	Collection of electronically stored data or unit records (facts, bibliographic data, texts) with a common user interface and software for the retrieval and manipulation of the data. Notes: The data or records are usually collected with a particular intent and are related to a defined topic. A database may be issued on CD-ROM, diskette, or other direct access method, or as a computer file accessed via dial-up methods or via the Internet. Licensed databases are counted separately even if access to several licensed database products is effected through the same interface.
4.10.5 Digital Documents	Information unit with a defined content that has been digitized by the library or acquired in digital form as part of the library collection. This includes eBooks, electronic patents, networked audiovisual documents and other digital documents, e.g. reports, cartographic and music documents, pre-prints etc. Databases and electronic serials are excluded.
4.10.6 eBooks	Digital documents, licensed or not, where searchable text is prevalent, and which can be seen in analogy to a print book (monograph). The use of eBooks is in many cases dependent on a dedicated device and/or a special reader or viewing software. Note 1. eBooks can be lent to users either on portable devices (eBook readers) or by transmitting the contents to the user's PC for a limited time period. Note 2. Doctoral dissertations in electronic format are included.
4.10.7 Electronic Serials	Serials published in electronic form only or in both electronic and other format. Note: Comprises serials held locally and remote resources for which access rights have been acquired, at least for a certain period of time.

Table 1. Network Statistics as of June 2002.*	
Statistic	Definition
4.10.8 Free Internet Resources	The number of links to unique free Internet resources (digital documents, databases, electronic journals, etc.) which have been catalogued by the library in its OPAC or a database.
4.10.9 Other Digital Documents	Digital documents other than an eBook, networked audio-visual document or electronic patent, e.g. report, pre-print, cartographic or music document etc. in electronic format.
6.2.8 Electronic Access Expenditures	All operating expenditures from the library budget associated with access to electronic materials and services. Include computer hardware and software used to support library operations, whether purchased or leased, mainframe and microcomputer. Includes expenditures for maintenance. Includes expenditures for equipment used to run information service products when that expenditure cannot be separated from the price of the product. Includes expenditures for services provided by national, regional, and local bibliographic utilities, networks, consortia and commercial services. Includes all fees and usage costs associated with such services as OCLC FirstSearch or electronic document delivery. Note: Excludes capital expenditures.
6.2.9 Electronic Materials Expenditures	Expenditures for electronic documents or items. Includes eBooks, databases, Internet resources and other digital documents.
6.2.10 Electronic Network Expenditures	Expenditures for services provided by national, regional, and local bibliographic utilities, networks, and consortia.
7.3.1 Virtual Reference Transactions	Virtual reference transactions conducted via e-mail, website, or other network-based medium designed to support virtual reference. (ARL E-metrics; Bertot, McClure, Ryan). Note: Includes questions either received or responded to.
7.4.1 Electronic Document Delivery	Electronic transmission of a document or part of a document from the library collection to a user, mediated by library staff, not necessarily via another library. Note 1. Electronic transmission of documents to members of the population to be served is included. FAX transmission is excluded. Note 2: May be split up as to transmission with or without charge to the user.
7.4.2 External Document Supply	Document or part of it in print or electronic form delivered from outside the library collection by non-library suppliers (not through interlibrary lending) with the library being involved in the transaction and/or the payment. Note: It is irrelevant whether a number of individual transactions is paid per view or a certain number of transactions have been prepaid.
7.8 Public Access Workstations	Library owned public access graphical workstations that connect to the Internet for a dedicated purpose (to access an OPAC or specific database) or multiple-purposes.
7.8.1 Number of Public Access Workstations	Annual count of the total number of library owned public access graphical workstations that connect to the Internet for a dedicated purpose (to access an OPAC or specific database) or multiple-purposes. This statistic is counted and collected for each participating branch, if applicable. **(Branch Level Statistic)** Note: Computers in computer labs used for public instruction if graphical and connected to the Internet should be counted. Public access graphical workstations that connect to the Internet that are used by both staff and the public should be counted if the workstation is used by the public for at least half of the hours during an average week that the library is open to the public. Reference desk computers used by staff to assist the public should not be counted.

Table 2. Network Statistics as of June 2002.*	
Statistic	Definition
7.8.2 Number of Public Access Workstation Users	Annual count of the number of users of all of the library's graphical public access workstations connected to the Internet computed from a one-week sample. **(Branch Level Statistic)**
7.9.1 Electronic Collection	
7.9.1.1 Units/Records Examined	Content in the electronic collection that is delivered to a user. The sub-categories that follow provide for a detailed breakdown by type of content delivered (full-content unit or descriptive record) and system delivering the content (Library Collection, Commercial Service or OPAC).
7.9.1.2 Searches/Menu Selections (Queries)	A search is defined as intending to represent a unique intellectual inquiry whether conducted through a search form submitted to the server or through the use of menu selections (e.g. browsing a list of subjects.). [Note: It is possible to capture searches for online commercial services, OPACs, and library-based online resources – e.g., digital collections).
7.9.1.3 Sessions	A session is defined as a successful request of an online service or library's online catalog. It is one cycle of user activities that typically starts when a user connects to the service or database and ends by terminating activity that is either explicit (by leaving the service through exit or log-out) or implicit (timeout due to user inactivity). [Note: It is possible to capture sessions for online commercial services and OPACs].
7.9.1.5 Virtual Visits	A user's request of the library web site from outside the library premises regardless of the number of pages or elements viewed. (ISO 2789, 3.3.25) Excludes web site visits from within the library. [Note: This statistic is the equivalent of a session for a library's website. As such, there is a need to exclude various actions (e.g., hits, downloads) by users during any given visit.
7.9.3 Internet Access	Internet access by a user from a workstation provided on the library premises or remotely.
7.10.2 Formal User Information Technology Training	A count of the number of users instructed and the hours of instruction offered in the use of information technology or resources obtainable using information technology in structured sessions – either delivered in the library using a computer lab or other instructional setting or delivered electronically through online-based instruction. (Bertot, McClure, Davis).
7.10.4 Point-of-Use Information Technology Training	A count of the number of users instructed and the hours of instruction offered in the use of information technology or resources obtainable using information technology in unstructured sessions at the impromptu request of users.
*Source of statistics: National Information Standards Organization Draft Library Statistics Revision (Z39.7). Available for review at <http://www.niso.org/emetrics>.	

APPENDIX A – 2002 PUBLIC LIBRARY INTERNET STUDY

Information Use Management and Policy Institute

Public Libraries and the Internet 2002: Internet Connectivity and Networked Services

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ACKNOWLEDGMENTS

This study was made possible by a National Leadership Grant provided by the U.S. Institute of Museum and Library Services (IMLS). The authors express their thanks and gratitude to IMLS for their support.

The success of this study is also due to a number of other individuals. The authors would like to thank:

- Ms. Denise Davis, whom at the time of the study was the Director of the Statistics Program at the National Commission on Libraries and Information Science. Ms. Davis' assistance throughout the survey process served to make the survey instrument more effective.
- The 50+ state data coordinators (SDCs) who provided invaluable suggestions, comments, and support throughout the entire survey process. While we cannot list all the SDCs by name, we are in their debt for all of their hard work and assistance throughout the study.
- Ms. Lesley Langa, Mr. Paul T. Jaeger, and Ms. Kim M. Thompson for their efforts in calling sampled libraries to boost the survey response rate.
- Paragon New Media of Tallahassee, FL, which produced, maintained, and facilitated the web-based survey form used in the study.

To all these individuals and groups, we say thank you. The help with which you provided us made this the 6th *Public Library Internet* study to achieve a better than 70% response rate!

TABLE OF CONTENTS

INTRODUCTION

In 2002, the Institute of Museum and Library Services (IMLS) commissioned a study to determine the current state of U.S. public library Internet connectivity. The study, conducted through a national survey, was part of a larger study funded by IMLS that focused on public library roles in the digital divide (McClure, Ryan & Bertot, 2002). Since 1994, the authors have conducted a number of studies that track longitudinally a number of key aspects concerning public library Internet involvement, including connectivity, bandwidth, public access services, and other Internet-based library services and resources. Over the years, these studies have enjoyed multiple sponsors such as the National Commission on Libraries and Information Science (NCLIS) and the American Library Association (ALA).

METHODOLOGY

The 2002 study updated statistics about public library outlet and system Internet connectivity and network services using the 1997 public library dataset produced by the National Center for Education Statistics (NCES)[2] through the Federal-State Cooperative System (FSCS).[3] Using geographic information system-based techniques, a research team at the Florida State University geocoded 16,004 public library outlets in terms of their poverty (defined as less than 20%, 20%-40%, and greater than 40%) and metropolitan status (urban, suburban, and rural) using the same techniques as for the *Public Library Internet* 1998 and 2000 studies.[4] From the 16,004 geocoded outlets,[5] the consultants drew a sample of 1,500 outlets in proportion to their percentage in poverty and metropolitan status categories. This sample was the same as that of 1998 *Public Library Internet* study.

The study team developed and pre-tested a number of survey questions for inclusion on the 2002 survey form. These pre-test methods included:

- Distributing and discussing the draft survey with state data coordinators using the state data coordinator listserv maintained by NCLIS;
- Distributing copies of the draft survey questions to selected individuals involved with public library data collection efforts (e.g., Public Library Data Service); and
- Distributing draft copies of the survey to library school faculty and public librarians.

Based on the comments provided by the various survey reviewers, the consultants developed a final version of the survey form.

[2] National Center for Education Statistics. Available at: http://nces.ed.gov/
[3] Background of the Federal-State Cooperative System (FSCS) for Public Library Data. Available at: http://www.state.me.us/msl/fscsdef.pdf
[4] For a detailed discussion of the geocoding process, see Appendix C of U.S. National Commission on Libraries and Information Science. (1998). *Moving toward more effective public Internet access: The 1998 national survey of public library outlet Internet connectivity.* Washington, D.C.: National Commission on Libraries and Information Science.
[5] According to the National Center for Education Statistics, there were 16,925 public libraries in 1997. Of those, many have P.O. boxes for mailing addresses and several are bookmobiles. It is not possible to geocode bookmobiles nor some service outlets with P.O. boxes as these are not fixed locations. With the techniques available in April 2000, it was possible to geocode 16,004 of the 16,925 outlets.

In a departure from previous Public Library Internet studies, the study team did not produce a mail-based survey form. Rather, all data collection for the 2002 study occurred via a web-based survey form. Each library was assigned a unique ID number (the FSCS library ID number from the FSCS/NCES dataset) for access to the appropriate survey form or set of forms for the library to complete. Those completing the form, if applicable, first completed the questions regarding the surveyed branches (outlets) and then completed the questions regarding the entire library system (see Appendix A for a screen copy version of the survey form).

The study team mailed a letter in June 2002 that identified the intent of the study, the branches (outlets) surveyed (if applicable), and survey completion instructions to the library director of the library systems selected to participate in the study. At the same time, the study team distributed the sample list to the state data coordinators to apprise them of the library outlets sampled in their states. The study team attempted to correct letters returned due to incorrect addresses. When it was not possible to correct the address, or the library outlet closed, the study team selected a replacement outlet in the same poverty and metropolitan status category. Survey collection occurred through August 2002, with a final response rate of 73.3%.

The state data coordinators provided tremendous support to the data collection effort, often calling and e-mailing non-responding libraries within their states to urge participation. To also boost the survey response rate, members of the study team called non-responding libraries and conducted phone interviews to elicit the survey information for the libraries.

READING THE TABLES

National estimates of public library connectivity were weighted based on metropolitan status and poverty classification. Thus, the analysis uses the actual responses from the 1,100 completed surveys from library outlets to estimate to all geocoded outlets.

For example, Winter Harbor Public Library in Winter Harbor, Maine, is coded as a rural library outlet with less than 20% poverty. Winter Harbor Public Library's responses (and all others designated rural with less than 20% poverty) are weighted by 14.023 to generate an estimate for all rural library outlets with less than 20% poverty.[6]

Tables 3 through 16 present these weighted study findings. Readers should note that this weighting necessitates some amount of rounding of the numbers generated in which case the total may not add up to 100%.

[6] By multiplying the weight of 14.023 by the total number of respondents in the rural with less than 20% poverty outlets (14.023 x 485 – see Table 2), one should get the total number of outlets for that cell in Table 1 (6,801).

Table 1. Public Library Outlets by Metropolitan Status and Poverty.				
	Poverty			
	Less than 20%	20%-40%	More than 40%	Overall
Metropolitan Status				
Urban	10.1% (n=1,614)	5.7% (n=905)	1.4% (n=223)	17.1% (n=2,742)
Suburban	27.7% (n=4,432)	2.0% (n=316)	0.1% (n=16)	29.8% (n=4,764)
Rural	42.5% (n=6,801)	10.1% (n=1,611)	0.5% (n=86)	53.1% (n=8,498)
Overall	80.3% (n=12,847)	17.7% (n=2,832)	2.0% (n=325)	100.0%* (n=16,004)
Based on geocoding of 16,004 outlets.				

Table 2. Response Rate of 2000 Outlet Study by Metropolitan Status and Poverty.				
	Poverty			
	Less than 20%	20%-40%	More than 40%	Overall
Metropolitan Status				
Urban	10.6% (n=117)	5.2% (n=57)	2.1% (n=23)	17.9% (n=197)
Suburban	25.4% (n=279)	1.9% (n=21)	0.4% (n=4)	27.6% (n=304)
Rural	44.1% (n=485)	9.9% (n=109)	0.5% (n=5)	54.5% (n=599)
Overall	80.1% (n=881)	17.0% (n=187)	2.9% (n=32)	100.0%* (n=1,100)
Based on 1,100 responses out of 1,500 for a total response rate of 73.3%.				

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

KEY SURVEY FINDINGS

The tables and narratives below describe public library outlet Internet connectivity as of September 2002 and, where possible, identify significant changes from the *Public Libraries and the Internet 2000* study findings.

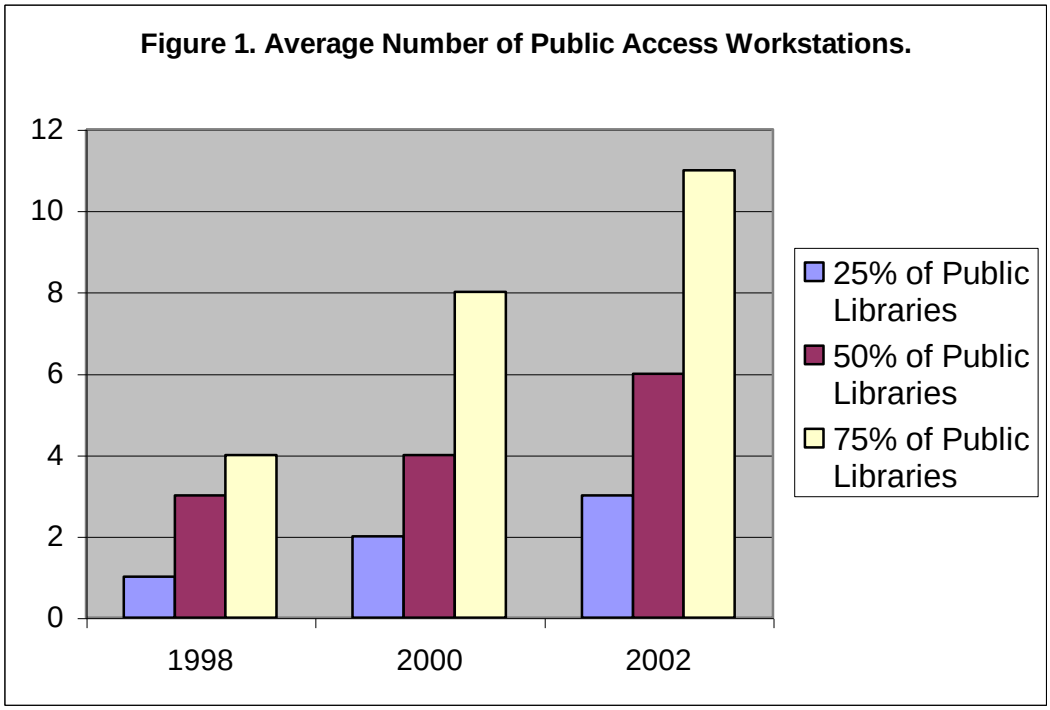
Connectivity and Public Access

Almost all public library outlets (98.7%) have an Internet connection, an increase from 95.7% in 2000 (see Table 3). Notably, urban libraries have increased from 98.3% in 2000 to 100% in 2002, and rural libraries have increased from 93.3% in 2000 to 97.8% in 2002. Public library outlets with more than 40% poverty have also reached 100% connectivity in 2002.

Most library outlets (95.3%) also provide public access to the Internet (see Table 4). Of particular interest is that 100% of urban library outlets surveyed provide public access to the Internet, up from 97.7% in 2000, and 100% of outlets with more than 40% poverty do as well, an increase from 93.5% in 2000.

Outlets with public access Internet services have an average of 10.8 workstations per outlet, an increase from 8.3 in 2000 (see Table 5 and Figure 1). Indeed, public library outlets have doubled or almost tripled the number of public access workstations for patron use in the past four years (see Table 6). In 2002, one quarter of public library outlets have three (3) or fewer workstations as compared to two (2) in 2000 and one (1) in 1998. Half of library outlets have six (6) or fewer workstations, as compared to four (4) in 2000 and three (3) in 1998, and three-quarters of public library outlets now have eleven (11) or fewer workstations as compared to eight (8) or fewer in 2000 and four (4) or fewer in 1998.

Figure 1. Average Number of Public Access Workstations.



Connection speeds for public access Internet services also increased (see Table 7). Indeed, 49.1% of outlets have T1 (1.5mbps) or faster speed of connectivity for public access services, as compared to 36.2% in 2000. With regard to rural outlets, 49.7% have greater than 56kbps (direct connect) service as their maximum speed of connectivity for public access services as compared to 35.4% in 2000 and 22.2% in 1998. Also, 33.2% of rural library outlets and 47.2% of libraries with more than 40% poverty are able to provide T1 (1.5mbps) service or greater.

Table 3. Public Library Outlets Connected to the Internet by Metropolitan Status and Poverty.

	Poverty			
	Less than 20%	**20%-40%**	**More than 40%**	**Overall**
Metropolitan Status				
Urban	100.0% +/- 0.0% (n=1,614)	100.0% +/- 0.0% (n=905)	100.0% +/- 0.0% (n=223)	100.0% +/- 0.0% (n=2,742)
Suburban	99.6% +/- 0.6% (n=4,416)	100.0% +/- 0.0% (n=316)	100.0% +/- 0.0% (n=16)	99.7% +/- 0.5% (n=4,748)
Rural	98.4% +/- 1.3% (n=6,689)	95.4% +/- 2.1% (n=1,537)	100.0% +/- 0.0% (n=86)	97.8% +/- 1.5% (n=8,312)
Overall	99.0% +/- 1.0% (n=12,719)	97.4% +/- 1.6% (n=2,758)	100.0% +/- 0.0% (n=325)	98.7% +/- 1.1% (n=15,802)

Table 4. Connected Public Library Outlets that Provide Public Access to the Internet by Metropolitan Status and Poverty.

	Poverty			
	Less than 20%	**20%-40%**	**More than 40%**	**Overall**
Metropolitan Status				
Urban	100.0% +/- 0.0% (n=1,614)	100.0% +/- 0.0% (n=905)	100.0% +/- 0.0% (n=223)	100.0% +/- 0.0% (n=2,742)
Suburban	95.0% +/- 2.2% (n=4,194)	100.0% +/- 0.0% (n=316)	100.0% +/- 0.0% (n=16)	95.3% +/- 2.1% (n=4,526)
Rural	92.7% +/- 2.6% (n=6,198)	98.1% +/- 1.4% (n=1,508)	100.0% +/- 0.0% (n=86)	93.7% +/- 2.4% (n=7,792)
Overall	94.4% +/- 2.3% (n=12,006)	98.9% +/- 1.0% (n=2,729)	100.0% +/- 0.0% (n=325)	95.3% +/- 2.1% (n=15,059)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

Table 5. Average Number of Public Library Outlet Graphical Public Access Internet Terminals by Metropolitan Status and Poverty.

	Poverty			
	Less than 20%	**20%-40%**	**More than 40%**	**Overall**
Metropolitan Status				
Urban	16.6 range: 1-171	29.1 range: 1-680	12.9 range: 2-36	20.6 range: 1-680
Suburban	11.9 range: 1-139	9.3 range: 1-40	3.5 range: 2-5	11.7 range: 1-139
Rural	6.5 range: 1-81	7.5 range: 1-45	4.0 range: 1-5	6.7 range: 1-81
Overall	9.8 range: 1-171	15.1 range: 1-680	10.6 range 1-36	**10.8** range: 1-680

Table 6. Frequency Analysis of Public Library Outlet Number of Graphical Public Access Workstations.

Quartile	**Number of Graphical Workstations Per Outlet**
1 (25%)	3
2 (50%)	6
3 (75%)	11

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

Table 7. Public Library Outlet Maximum Speed of Public Access Internet Services by Metropolitan Status and Poverty.

	Metropolitan Status			Poverty Level			
	Urban	**Suburban**	**Rural**	**Less than 20%**	**20%-40%**	**More than 40%**	**Overall**
Maximum Speed							
Less than 56kbps	-	-	3.3% +/- 1.7% (n=257)	1.4% +/- 1.1% (n=168)	3.3% +/- 1.8% (n=89)	-	1.7% +/- 1.3% (n=257)
56kbps dial-up	-	2.8% +/- 1.6% (n=126)	11.0% +/- 3.0% (n=858)	7.7% +/- 2.6% (n=925)	2.2% +/- 1.5% (n=59)	-	6.5% +/- 2.4% (n=984)
56kbps direct connect	6.6% +/- 2.5% (n=181)	10.6% +/- 3.0% (n=478)	20.1% +/- 3.9% (n=1,567)	14.3% +/- 3.4% (n=1,717)	15.8% +/- 3.6% (n=432)	23.7% +/- 4.3% (n=77)	14.8% +/- 3.5% (n=2,226)
64kbps – 128kbps	4.5% +/- 2.1% (n=124)	8.1% +/- 2.7% (n=365)	8.2% +/- 2.7% (n=638)	6.9% +/- 2.5% (n=832)	10.0% +/- 2.9% (n=272)	7.2% +/- 2.6% (n=23)	7.5% +/-2.6% (n=1,127)
128kbps – 1.5mbps	7.4% +/- 2.6% (n=204)	11.6% +/- 3.1% (n=523)	8.3% +/- 2.7% (n=650)	9.9% +/- 2.9% (n=1,193)	6.7% +/- 2.5% (n=183)	-	9.1% +/- 2.8% (n=1,377)
T1 (1. 5mbps)	43.1% +/- 4.9% (n=1,182)	38.3% +/- 4.8% (n=1,734)	27.9% +/- 4.4% (n=2,170)	33.2% +/- 4.6% (n=3,981)	36.3% +/- 4.8% (n=991)	35.3% +/- 4.8% (n=115)	33.8% +/- 4.7% (n=5,087)
Greater than 1.5mbps	34.1% +/- 4.7% (n=936)	21.0% 4.0% (n=951)	5.3% +/- 2.2% (n=413)	14.8% +/- 3.5% (n=1,781)	17.6% +/- 3.8% (n=481)	11.9% +/- 3.3% (n=39)	15.3% +/- 3.5% (n=2,301)
Don't Know	3.7% +/- 1.9% (n=102)	5.9% 3.0% (n=268)	15.6% +/- 4.1% (n=1,212)	10.5% +/- 3.6% (n=1,259)	9.2% +/- 3.0% (n=252)	21.8% +/- 4.1% (n=71)	10.5% +/- 3.5% (n=1,582)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

Internet Services Provision and Implementation

The survey form queried public library outlets as to their provision and implementation of public access online databases, blocking of Internet services (i.e. Chat), and filtering or blocking of Internet content (i.e. objectionable sites or images). Responses to the surveys showed that 90.6% of public library outlets offering database subscription services on some or all of their public access workstations (see Table 8). This is an increase from 81.1% in 2000. Remote database access has also increased, from 36.1% in 2000 to 44.3% in 2002.

The 2000 *Public Libraries and the Internet* survey queried public library outlets about the blocking of Internet services. The 2002 iteration of the study divided this question to address both the blocking of Internet *services* and, a related but separate issue, the blocking of Internet *content*. Responses to the 2000 survey indicated that 9.6% of public library outlets blocked Internet services on all public access workstations, 15% blocked services on some workstations, and 75.5% of public library outlets did not block Internet services at all. The 2002 survey responses show that 16.4% block Internet services on all public access workstations, 9.6% block services on some workstations, and 73.9% of public library outlets do not block Internet services on their public access workstations (see Table 9).

Table 8. Public Library Outlet Public Access Database Subscription Services by Metropolitan Status and Poverty.

	Metropolitan Status			Poverty Level			
	Urban	**Suburban**	**Rural**	**Less than 20%**	**20%-40%**	**More than 40%**	**Overall**
Subscription Database Services							
On all workstations	75.5% +/- 4.3% (n=2,071)	61.7% +/- 4.8% (n=2,792)	63.3% +/- 4.9% (n=4,962)	64.5% +/- 4.8% (n=7,741)	69.0% +/- 4.7% (n=1,881)	53.2% +/- 5.0% (n=173)	65.0% +/- 4.8% (n=9,795)
On some workstations	21.8% +/- 4.2% (n=598)	31.0% +/- 4.6% (n=1,402)	23.8% +/- 4.5% (n=1,851)	25.5% +/- 4.4% (n=3,066)	24.4% +/- 4.4% (n=667)	36.2% +/- 4.8% (n=118)	25.6% +/- 4.5% (n=3,851)
On no workstations	2.7% +/- 1.6% (n=73)	7.3% +/- 3.1% (n=332)	12.9% +/- 3.4% (n=1,008)	10.0% +/- 3.0% (n=1,199)	6.6% +/- 2.5% (n=180)	10.6% +/- 3.1% (n=34)	9.4% +/- 3.9% (n=1,413)
Subscription services offered remotely to off-site users	61.9% +/- 4.9% (n=1,698)	41.2% +/- 5.0% (n=1,866)	40.0% +/- 4.9% (n=3,114)	44.7% +/- 4.9% (n=5,364)	43.1% +/- 4.9% (n=1,176)	42.5% +/- 4.9% (n=138)	44.3% +/-4.9% (n=6,678)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

Table 9. Public Library Outlet Public Access Internet Blocking of Internet Services (i.e., Chat) by Metropolitan Status and Poverty.

	Metropolitan Status			Poverty Level			
	Urban	**Suburban**	**Rural**	**Less than 20%**	**20%-40%**	**More than 40%**	**Overall**
Blocking of Internet Services							
On all workstations	29.8% +/- 4.6% (n=817)	15.0% +/- 3.5% (n=679)	12.6% +/- 3.2% (n=981)	15.0% +/- 3.5% (n=1,802)	23.0% +/- 4.2% (n=627)	14.9% +/- 3.3% (n=48)	16.4% +/- 3.6% (n=2,477)
On some workstations	9.7% +/- 2.9% (n=266)	13.0% +/- 3.3% (n=587)	7.7% +/- 2.6% (n=600)	9.4% +/- 2.9% (n=1,131)	9.4% +/- 2.9% (n=257)	20.2% +/- 4.0% (n=66)	9.6% +/- 2.9% (n=1,453)
On no workstations	60.5% +/- 4.9% (n=1,659)	72.0% +/- 4.4% (n=3,260)	79.7% +/- 3.9% (n=6,210)	75.6% +/- 4.2% (n=9,074)	67.6% +/- 4.7% (n=1,844)	64.9% +/- 4.7% (n=211)	73.9% +/- 4.3% (n=11,129)

Table 10. Public Library Outlet Public Access Internet Blocking of Internet Content (i.e., objectionable material) by Metropolitan Status and Poverty.

	Metropolitan Status			Poverty Level			
	Urban	**Suburban**	**Rural**	**Less than 20%**	**20%-40%**	**More than 40%**	**Overall**
Blocking of Internet Content							
On all workstations	38.9% +/- 4.8% (n=1,066)	19.5% +/- 3.8% (n=884)	22.1% +/- 4.0% (n=1,724)	21.6% +/- 4.0% (n=2,592)	36.9% +/- 4.8% (n=1,007)	23.2% +/- 4.2% (n=75)	24.4% +/- 4.2% (n=3,674)
On some workstations	18.1% +/- 3.8% (n=496)	23.8% +/- 4.2% (n=1,077)	13.7% +/- 3.3% (n=1,066)	18.5% +/- 3.7% (n=2,217)	12.7% +/- 3.3% (n=346)	23.2% +/- 4.2% (n=75)	17.5% +/- 3.7% (n=2,639)
On no workstations	43.0% +/- 4.9% (n=1,180)	56.7% +/- 4.9% (n=2,565)	64.2% +/- 4.7% (n=5,002)	59.9% +/- 4.8% (n=7,197)	50.4% +/- 5.0% (n=1,375)	53.6% +/- 4.9% (n=174)	58.1% +/- 4.9% (n=8,747)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

With regard to filtering of Internet content, 24.4% of library outlets responded that they block objectionable material on all workstations, 17.5% of outlets block on some public access workstations, and 58.1% of public library outlets do not block Internet content on any of their public access workstations (see Table 10).

The remainder of the survey focused on system wide questions. To remain consistent in the overall presentation of the data, responses from the systems were projected nationally to public library outlets.

Public Library System Funding

Compared with 2000 data, the trend in funding for Internet-related technology and infrastructure appears to be moving away from local government funding (down 13.5% since 2000), shifting toward more state library funding (up 16.2%) and federal government funding (up 4.8%) (see Table 11).

E-rate discount funding in public libraries has decreased by 5.5% since 2000, while library foundation funding has increased by 10.6%. Gates library program funding has also slightly increased (up 2.6%), and gifts, contributions, donations, local fundraisers and other local income sources in sum increased by 12.3%.

The study found that 29.9% of the public libraries surveyed would continue to apply for E-rate discounts if the Children's Internet Protection Act (CIPA) is upheld, and 18.9% replied that they would not (see Table 12). More than half (51.3%) were unsure of how CIPA would affect their intention to apply for E-rate discounts.

Table 11. Public Library *System* Funding for Internet-Related Technology and Infrastructure.	
Funding Source	**Percentage of Funding Source**
Operating funds from local government/tax districts	74.2% +/- 4.4% (n=11,181)
Operating funds from state library	39.8% +/- 4.9% (n=5,992)
State grants	28.9% +/- 4.5% (n=4,352)
Federal government funds (LSTA, TIAPP)	23.1% +/-4.2% (n=3,483)
Education Rate (E-rate) discount	43.4% +/- 4.9% (n=6,536)
Library foundation funds	18.9% +/- 3.9% (n=2,845)
Gates library program	34.0% +/- 4.7% (n=5,122)
Gifts, contributions, donations	30.5% +/- 4.6% (n=4,593)
Local fund raisers	13.7% +/- 3.4% (n=2,057)
Other income sources	9.9% +/- 2.9% (n=1,483)
Percentages will not total to 100.0% as respondents could select multiple funding options.	

Table 12. Public Library Intention to Apply for E-Rate Discounts if CIPA is Upheld.	
Continued Application for E-rate Discounts	**Percentage of E-rate Discount Applications**
Yes would continue to apply	29.9% +/- 4.6% (n=4,498)
No would not continue to apply	18.9% +/- 3.9% (n=2,843)
Unsure	51.3% +/- 4.5% (n=4,352)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

Table 13. Public Library Provision of Digital Reference Services.	
Provision of Digital Reference Services	**Percentage of Digital Reference Services**
Currently provide digital reference services	31.7% +/- 4.6% (n=4,771)
Do not provide digital reference services	59.9% +/- 4.9% (n=9,028)
Plan to provide digital reference services within the year	8.4% +/- 2.8% (n=1,260)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

Digital Reference Services

A new question added to this iteration of the *Public Libraries and the Internet* survey was with regard to the implementation of digital reference services. As Table 13 shows, 31.7% of public libraries currently provide digital reference services and 8.4% of libraries have plans to provide digital reference services within the year.

Training Services

With the increases of Internet provision in public library outlets, public libraries are providing formal Internet training services for patrons. These training services were the subject of a few of the new questions of the 2002 *Public Libraries and the Internet* survey. Survey responses showed that 42% of public libraries offer formal Internet training services for patrons (see Table 14). Of the libraries that provide training services, 22.9% have their own training facilities and 14% have shared facilities. Another 4.4% will have a training facility within the next year.

Table 14. Public Library Formal Patron Internet Training Services and Training Facilities.

Public Training Services	Percentage of Public Training Services
Library provides formal Internet training services to its patrons	42.0% +/- 4.9% (n=6,332)
Library does not provide formal Internet training services to its patrons	58.0% +/- 4.9% (n=8,728)
Technology Instructional Facility	**Percentage of Instructional Facility**
Library has a separate instructional facility in a library facility/branch	22.9% +/- 4.2% (n=3,446)
Library has access to a shared instructional facility (e.g., shared with a school or local agency)	14.0% +/- 3.4% (n=2,108)
Library does not have access to a separate instructional facility	63.1% +/- 4.8% (n=9,505)
Library will have access to an instructional facility within the next year	4.4% +/- 2.0% (n=667)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

Almost half (49.1%) of the public libraries surveyed target the senior adult public for training services, 31.4% target non-senior adults, and 32.6% of the libraries provide Internet training services specifically for children and youth groups (see Table 15). Another 18% of libraries target local businesses and 8% target local government audiences for training services.

Table 15. Public Library Formal Patron Internet Training Services Target Audiences.

Target Audiences for Public Training Services	Percentage of Public Target Audiences
Adult (non-senior) public	31.4% +/- 4.6% (n=4,731)
Adult (senior) public	49.1% +/- 4.9% (n=7,392)
Children/youth public	32.6% +/-4.7% (n=4,906)
Local businesses	18.0% +/- 3.8% (n=2,714)
Local government	8.0% +/- 2.7% (n=1,212)
Other targeted populations	10.2% +/- 3.0% (n=1,538)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

Finally, the data show that 43.6% of libraries offer formal technology training for staff members (see Table 16). Trainings for staff include such technology instruction topics as:

- General computer skills (28.1%);
- General computer software use (44.9%);
- General technology troubleshooting (37.2%);
- General Internet use (44.3%); and
- Online Web searching (47.5%).

Focused staff training was offered in some library systems for locating government information on the web (31.5%) and using online databases (41.6%).

Table 16. Public Library Formal Staff Technology Training Services and Training Topics.

Staff Training Services	Percentage of Staff Training Services
Library offers formal technology training services to its staff	43.6% +/- 4.9% (n=6,559)
Library does not offer formal technology training services to its staff	56.4% +/- 4.9% (n=8,501)
Technology Instruction Topics	**Percentage of Instruction Topics**
General computer skills (e.g., mouse use, printing)	28.1% +/- 4.5% (n=4,228)
General computer software use (e.g., word processing, spreadsheets, databases, presentation)	44.9% +/- 4.9% (n=6,754)
General technology troubleshooting (e.g., dealing with frozen computers, jammed printers, etc.)	37.2% +/- 4.8% (n=5,595)
General Internet use (e.g., e-mail, web browsing)	44.3% +/- 4.9% (n=6,678)
Online/web searching (e.g., using Google, AltaVista, other to locate information and sources)	47.5% +/- 5.0% (n=7,147)
Locating government information on the web	31.5% +/- 4.6% (n=4,738)
Using online databases (e.g., using commercial databases to search and find content)	41.6% +/- 4.9% (n=6,270)

Source: Bertot, J.C., and McClure, C.R. (2002). *Public Libraries and the Internet 2002: Internet Connectivity and Networked Services*. Tallahassee, FL: Information Use Management and Policy Institute, Florida State University. Available at: <http://www.ii.fsu.edu>.

SUMMARY AND RECOMMENDATIONS

The Internet has become an integral part of public libraries in the United States. Services in libraries are changing based on a foundation of connectivity. Notable data from this most recent survey of public library outlets and systems show that:

- Within the past eight years, public library Internet connectivity has increased substantially, from 20.9% of public library *systems* connected to the Internet in 1994 to 98.7% of public library *outlets* connected to the Internet in 2002.
- About 95% of outlets provide public Internet access.
- The filtering of content is substantial in public libraries, with 41.9% blocking objectionable content on all or some outlet-based workstations.
- Public library funding for technology is shifting toward more state and local non-government funds.
- Almost one third (31.7%) of public libraries offer digital reference services, and 8.4% plan on implementing such services within the next year.
- 42% of public libraries offer formal Internet training and 36.9% of these have a separate facility, whether private or shared, for this training.

The data indicate that libraries are increasing Internet technologies and services to meet the perceived demand for increased online services and resources. Increases in the provision of subscription databases both within libraries (up 9.5% since 2000) as well as by remote access to online subscription databases (up 8.2% since 2000) further demonstrate the increasing importance of online services provided by public libraries.

APPENDIX A.1 – ONLINE SURVEY FORM

(Please note that the survey form appeared differently in its online format)

Survey Screen 1 – Survey Login and Introduction

2002 Public Library Internet Survey

Since 1994, Drs. John Carlo Bertot and Charles R. McClure have conducted a bi-annual survey of public library Internet connectivity with support over the years from the American Library Association (ALA), Institute of Museum and Library Services (IMLS), and the National Commission on Libraries and Information Science (NCLIS). This survey has pioneered a number of questions that provide extremely important data regarding public library Internet connectivity, use, and involvement that enable practitioners, policy makers, and researchers understand the nature, extent, and changes of public library Internet connectivity. We encourage you to review prior studies and see the value your response provides in developing state and national information policy (http://www.nclis.gov/statsurv/statsurv.html).

Your library has been selected to participate in the study this year. The survey asks questions regarding your library's Internet connectivity and Internet-based services. In particular, the survey asks about whether your library is connected to the Internet and provides public access, the number of graphical workstations for public access, speed of connectivity, whether your library filters Internet content and services, availability of online databases, and public and staff training services.

The survey does not take more than 5 minutes to complete, however, your participation will provide important data for years to come. THANK YOU for your willingness to participate! Please enter your library's survey ID (found on your survey alert letter) to begin the survey process. If you cannot remember and/or locate your survey ID, please follow the link below to locate your library by zip code.

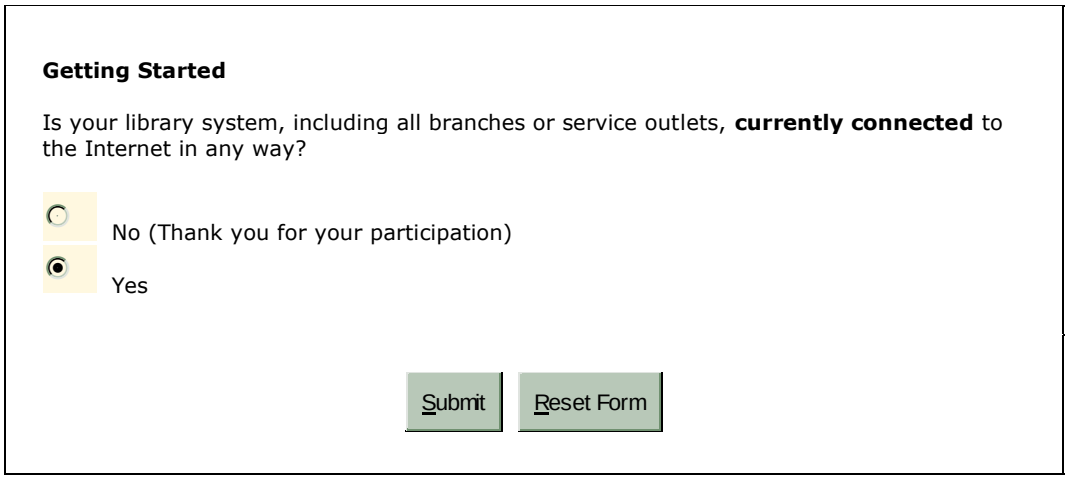
Enter your Access Code in the field below to begin the survey. You will be able to come back and change your answers at any time, or print your survey for your records.

Access Code:

Login

If you do not have your access code
follow this link.

Survey Screen 2 – Internet Connectivity Screening Question



Survey Screen 3 – Branch/Outlet Questions

Welcome to the Survey.

This portion of the survey contains questions regarding **specific branches or outlets** in your Library System. The branches that have been chosen for this survey are listed below. When you click 'Submit and Continue' at the bottom of this form, you will **automatically** be taken to the form for the next branch or outlet. Once you have completed the questions pertaining to these outlets, you will be taken to a short form containing questions relating to your entire Library System.

Branch Name	Survey Status
Alviso Library	Incomplete
Biblioteca Latino Americano	Incomplete
Rosegarden Library	Incomplete

You are answering questions regarding the following library branch or service outlet:
Alviso Library

Question 1. (required)

Is this library branch/service outlet **currently connected** to the Internet in any way?

- ○ No (If you answer 'no', please click here.)
- ○ Yes, staff access only (If you answer 'yes, staff only' please click here.)
- ○ Yes, public and staff access

Question 2.

Please indicate the **number of GRAPHICAL PUBLIC ACCESS Internet workstations** provided by this library branch/service outlet (include in the count multi-purpose workstations that allow access to the Internet. Exclude workstations that only access the library's web-based OPACs):

(Please type in number): [ ]

Question 3.

Please indicate the **maximum speed** of this **library branch's/service outlet's PUBLIC ACCESS Internet service connection**:

[select one]

Question 4.

Please complete the following questions about this library branch's/service outlet's **PUBLIC ACCESS Internet services**:

	On all workstations	On some workstations	On no workstations	Service offered remotely to off-site users
This library outlet offers public access to subscription databases (e.g., EbscoHost, InfoTrac, SIRS, etc. Answer "yes" if the library does not subscribe directly to these subscription databases, but rather receives them through consortia, state library, or other means)	○	○	○	☐
This library outlet uses technology measures (e.g., filtering software) to block users from accessing various Internet SERVICES (e.g., e-mail, chat)	○	○	○	
This library outlet uses technology measures (e.g., filtering software) to block users from accessing various Internet CONTENT (e.g., images, text)	○	○	○	

Submit and Continue | Reset Form

If you have any questions regarding the survey, please contact John Bertot via e-mail at jcbertot@lis.fsu.edu or by phone at (850) 644-8118."

Survey Screen 5 – System Level Questions

System Questions

You are now answering questions regarding your entire **LIBRARY SYSTEM**.

Question 5.

Please indicate your library's **sources of funding for Internet-related technology and infrastructure** (e.g., space, wiring, telecommunications services, workstations, servers, furniture, etc.) for the library's last fiscal year. (Select all that apply)

- ☐ Operating funds from local government/tax districts
- ☐ Operating funds from state library
- ☐ State grants
- ☐ Federal government funds (LSTA, TIAPP)
- ☐ Education Rate (E-rate) discount
- ☐ Library foundation funds
- ☐ Gates Library Program
- ☐ Gifts, contributions, donations
- ☐ Local fund raisers
- ☐ Other income sources

If your library applied for and received E-rate funding during the library's last fiscal year, please answer the following questions:

a.) Will your library **continue to apply for E-rate funding** should the Children's Internet Protection Act (CIPA) that requires the filtering of public access Internet content in exchange for continued E-rate funding survive its legal challenges?

[select one]

b.) Can you please **estimate the percentage of cost** for your library's Internet connectivity/telecommunications services that E-rate funding covered during the last fiscal year?

[ ] %

Question 6.

Does your library currently offer digital reference services (e.g., receive/answer reference questions via e-mail or web-based technologies)?

[select one]

Survey Screen 5 – System Level Questions (cont'd)

Question 7.

Does your library offer **formal Internet training services for its patrons**?

[select one]

If yes, please answer the following questions:

a.) Does your library have access to a separate instructional room (e.g., computer lab) for its training services?

[select one]

b.) Please identify the **target audiences** of these training services:

- ☐ Adult (non-senior) public
- ☐ Adult (senior) public
- ☐ Children/youth public
- ☐ Local business
- ☐ Local government
- ☐ Other targeted populations

c.) If your library uses **technology measures to filter Internet content**, does your library inform patrons of this during its training sessions?

[select one]

Survey Screen 5 – System Level Questions (cont'd)

Question 8.

Does your library offer **formal Internet training services for its staff**?

[select one]

If yes, please answer the following questions:

a.) Please identify the most common topics covered in these training session:

- ☐ General computer skills (e.g., mouse use, printing)
- ☐ General computer software use (e.g., wordprocessing, spreadsheets, databases, presentation)
- ☐ General technology troubleshooting (e.g., dealing with frozen computers, jammed printers, etc.)
- ☐ General Internet use (e.g., e-mail, web browsing)
- ☐ Online/web searching (e.g., using Google, AtlaVista, other to locate information and sources)
- ☐ Locating government information on the web
- ☐ Using online databases (e.g., using commercial databases to search and find content)
- ☐ Technology planning and management (e.g., developing and implementing technology infrastructure, managing equipment)

Submit Survey | Reset Form

If you have any questions regarding the survey, please contact John Bertot via e-mail at jcbertot@lis.fsu.edu or by phone at (850) 644-8118."

Survey Screen 6 – Hyperlinked Glossary of Terms

GLOSSARY OF SURVEY ABBREVIATIONS/KEY TERMS

Outlet/Branch
A library facility. In the case of some public libraries, there is only one facility or outlet. Other public libraries have several outlets or facilities sometimes referred to as branches.
[top]

Graphical Workstation
A workstation and/or computer that is capable of displaying graphical images, pictorial representations, or other multi-media formats.
[top]

Public Access Internet Workstations
Those library outlet graphical workstations that provide public access to the Internet, including those that provide access to a limited set of Internet-based services such as online databases.
[top]

KBPS
Kilobits per second.
[top]

MBPS
Megabits per second.
[top]

Dial-up Internet Connection
Internet connection using a modem and a phone line.
[top]

Direct Internet Connection
Internet connection using a dedicated connection such as a leased line (e.g., T1, 56kbps, ISDN, DSL), cable, or satellite.
[top]

Service Offered Remotely to Off-Site Users
Internet-based services such as online databases (e.g., EbscoHost) the library offers that users can access via the Internet from home, office, school, or other non-library locations.
[top]

Formal Internet Training Services
Instruction offered in the use of information technology or resources obtainable using information technology in structured sessions.
[top]

Technology measures to filter Internet content
Technology measures include filtering software that blocks and/or filters Internet content and/or software that prevents Internet-based activities such as chat.
[top]