Information Technology Report

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"Tagged," "Tagged," "Check Screen," Tagged." These are words staff throughout the system and IT staff in particular have heard over a million times this year. RFID has been a "front and center" project and implementing RFID has been a time consuming, but worthwhile project for the library system this year. The audible signals allowed staff to scan items at a faster pace without having to keep their eyes glued to the screen.

In this report, we will give you an overview of the major projects that have been accomplished during the past year as well as the status of projects still in progress and some that are ongoing from year to year. Again, all of the projects highlighted took a lot of effort on the part of many staff and could not have been completed without the cooperation of other departments throughout the system.

Projects Completed

Radio Frequency Identification (RFID) Purchase & Implementation

RFID had been on our radar as a technology that we felt could pay great benefits for the library system. We had been monitoring the technology and the prices of the hardware and tags as well as standardizations in the industry.

This past year, we contacted TagSys, a major RFID vendor, to purchase equipment for additional development testing. We were very pleased with the results. With the planning for the new service center and sorting equipment that uses RFID technology a possibility for the new building, we decided to go ahead and seek pricing to see if it would be reasonable to consider as part of the plan. As we looked at pricing, we found that it had come down to a level that was reasonable for implementation within the library system. Our proposal for this first year was to retroactively tag all library materials and install the antennas and readers at all libraries.

Based on information provided by the vendor regarding how many items could be processed in a week with three stations, we estimated that it would take approximately 15 months to complete the tagging of all materials currently in the system. With our software and the separation of placing the tag in the book from the computer part of the process, we have been able to complete the tagging in just under seven months.

Staff are now able to check out/in multiple books in one pass. There are several other functions that are regularly performed that can also be used on multiple items at a time. We also believe this will reduce repetitive motion injuries as well as free up staff time spent on repetitive task so that they have more time to assist customers.

Implementation of System Reserve Labels

Each year the library fills over 900,000 customer requests for material through the system reserve process. Last year, we reported that a new process for system reserves had been

developed that would reduce staff time for processing reserves. An added benefit of the new reserve system would also be a reduction in books held/pulled unnecessarily and a reduction in cross-shipping between agencies.

This new system was implemented in September 2007. The system uses labels and assigns the item to a specific customer rather than creating a list to be searched by staff. When the item is located, the label can be applied immediately. The staff member then confirms through the computer that the item has been found and puts it with the outgoing mail to be sent to the library requested by the customer. The process has greatly reduced time required to process reserves and has worked very well. (Yeah! No more rubber bands!)

Public Printing Management System

Once we began offering computers for public use, we also had to deal with customers wanting to print items from the Internet or other software provided by the library. Print management has always been desirable but not easily attainable as there is no built in mechanism within the Windows operating system that provides an easy tool to manage printing. Up until this year, we have been using the honor system. We have allowed customers to print 10 free pages per day and then asked that they pay 15 cents per page for each additional page thereafter.

We have experienced many problems with customers printing a lot more than 10 pages and then not paying or printing and leaving things on the printer because they do not want to pay. We have also had requests to have color printing and for customers using wireless to be able to print from their computers.

In January, we implemented a commercial system that interfaces with our computers and handles most of the problems and requests that we have regarding public printing. We no longer offer any free printing but we have reduced the cost of black and white copies to 10 cents per page. We also added color printing at a cost of 50 cents per page.

The original version installed did not allow the wireless printing to work properly. The vendor has since provided an update that does allow the wireless printing to work. However, since every library was installed before the update became available, we will now need to go out to each library and perform upgrades and test before we can offer the wireless printing to customers. This is something we plan to complete within the next few months

We have had a few customers that were not happy with having to pay for printouts. For the most part, customers have been very pleased with the system and happy with the reduction in per page costs. We have even received customer thank yous from those that saw paper being wasted by printouts made and left on the printer or thrown in the trash.

Additional Changes made to Public Computer Scheduling

Additional changes were made to the public computer scheduling software to improve the fair scheduling of computers. We want the computers to be used, but we also want customers coming into the library to be able to get on without having to wait an extremely long time. If a

customer has had at least an hour of time and the first customer on the list has been waiting more than 10 minutes, the customer that has been told their time is up will not be allowed to sign up for additional time until the longest wait is less than 10 minutes. This has provided a small increase in the number of "unique" customers served. We will continue to look at this issue to see if there are ways to improve it even further.

We also added a "Park" function to the public computers. If a customer is on a computer and needs to step away for five minutes or less, they can "park" their session, take care of their business, then get back on the computer. This keeps them from having to logoff and sign back up and it also helps staff to know that a computer has not been abandoned as they can see that it has been parked and the customer will return.

Acceptance of Credit Cards

We have had customer requests to provide a way for them to make payments for fines or lost materials online or to allow credit card payments in the library. We began exploring what options we had to provide this service earlier this year and went live with online payment service through CyberMARS. There has been no advertisement that we now take credit cards except for the information that is printed on the overdue notices. In the first month of service, we have collected almost $3400.

Our plans for the coming year will discuss how we plan to implement taking credit/debit cards at our circulation desks and Express Check units. Once we begin taking credit cards at the circulation desk and Express Checkout units, we believe collections will increase as many customers prefer to use a credit or debit card rather than carry cash.

Enhancements added to CyberMars/Library Catalog

Two major enhancements have been added to CyberMars/Library Catalog this year. The first enhancement was to add data from a service called Syndetics. There are several types of data that can be added from this service. We chose to add:

> ➢ Cover images (shows a small picture of the book cover)
> ➢ Tables of contents (allows a customer to see chapters in the book)
> ➢ Fiction & Biography profiles (each profile gives list of characters, genre, and series information)
> ➢ Video & Music (cover images and annotations for almost one million video and music titles)
> ➢ Summaries & Annotations (gives a short summary of what the book is about)

The second enhancement added to CyberMars is a feature called a "Cart."   A customer can add up to 500 items to their cart. Items in the cart can be selected and printed in four formats: brief (short bibliographic record), full (complete bibliographic record), MLA, and APA format. The customer can also have a list of selected records e-mailed to them in any of these formats. Items in the cart can also be selected and placed on reserve directly from the cart. Customers use the "Cart" feature to keep track of titles they've read, titles they want to read, items used for

reports and other purposes that meet their needs. This feature has been available since the first of 2008 and we've had over 12,000 carts saved to date.

Pressure Seal Forms for Overdues and Reserve Notifications

Late last year we found out that the printer we use to print all of the overdue and reserve notifications would no longer be able to be supported on a maintenance contract. Since this printer is critical to producing these notifications, we felt that it was imperative that we look at making a switch to a new type of notification. We had looked at pressure seal notifications in the past but some of the early technologies in this area were cost prohibitive for our application.

When we began exploring this option again, we found equipment and forms that were within our budget. The software that produces the two notices was re-developed and we began using pressure seal forms for the overdues in November. We continued with our old system reserve notifications until our supply of forms were depleted and began using the pressure seal forms for reserves at the beginning of May. Both forms have worked very well. We also have more flexibility to make changes to the form as needed since they are controlled entirely by the software rather than a custom printed form. This served us well when we began accepting credit card payments (discussed earlier in this report) as we were able to put that information on the overdue notices immediately rather than waiting until the next time the forms were printed.

E-Rate

Each year we include e-rate as a part of this report. E-rate is a federally mandated program. Every phone customer is charged a fee on their phone bill called the Universal Service Fund. That money is managed by the Schools & Libraries Corporation, a division of the FCC, and given back to K-12 schools and public libraries in the form of a grant to pay for data and telecommunication costs. To continue receiving e-rate funds, an application has to be filed every year. For Funding Year 2007 (FY08), we received a funding commitment of $236,238.51. Our discount eligibility is based on the percentage of students eligible for free and reduced lunches in the school districts where our libraries are located. This percentage changes from year to year and our discount percentage for FY08 is 75%. We have received a commitment for Funding Year 2008 (FY09) in the amount of $216,938.34. (Last year's larger amount included installation costs for the additional Internet connection as well as higher monthly costs on the PRI lines that are used for our VoIP system.)

Add Additional Internet Connection

With the increased usage of public computers and the addition of wireless Internet access, our Internet connection had shown to be using near the maximum bandwidth available which caused slower response time for both staff and customers. In December, we added a 2nd Internet connection. We now have two 100Mb lines that are shared by all libraries for accessing the Internet. As part of this upgrade, we installed a new firewall that would allow maximum throughput so that we could take full advantage of the installed bandwidth.

Evaluating Vista Operating System

This past year we began evaluating the Vista desktop operating system to determine what would need to be done for the library software to work if and when we made a desktop operating system upgrade. We found that Vista does not have much added functionality, just a totally different look. We also discovered that we will have to upgrade the software that connects to our NonStop system for any computer that runs the Vista Operating system. And, all library software will have to be modified for communicating with the NonStop system for it to be able to run on a Vista computer.

Reading the industry news, we have found that many businesses are choosing to not switch to Vista as it requires more processing power and memory with very little if any payoff in performance. A recent article in *Information Week* says that Dell plans to make the XP operating system available to business customers until 2010 when the next Microsoft operating system is scheduled to be released. Information is also already being published about Windows 7, the operating system that is set to replace Vista. We will have to see if that holds true across the industry and try to make a decision based on what is best as well as cost effective for the library system.

Other Software Changes completed during the year

Each year there are many small changes to various parts of the library software that take place but are never mentioned. Some of these include: typesetting of a new subject guide, new software for handling materials sent for rebinding, Oklahoma Moments added to a streaming media server and put on the library's web page for viewing by customers, a safety library catalog with checkin/out functions added for Human Resources, age/gender demographic information now being collected for future needs and use, and public computer compliance monitoring software that allows us to monitor a customer's internet usage if we believe they are trying to circumvent library policies. While many of these items may seem small, each takes time to develop and provides an added benefit to those needing the features.

Additional Services provided by MLS Information Technology Department

Our help desk has logged and our technicians have handled 1,233 service calls over the past year. This does not include calls that can be resolved immediately over the phone. We have chosen to only log calls that require support and/or a visit by a technician to resolve the issue. We are almost completed with upgrading/installing 150 computers as part of our technology replacement cycle.

Many other software changes have been implemented. These items include changes recommended by the Tech Support group, adding in-library and remote access to new subscription databases, upgrading web browser plug-ins as they are released, and various other minor changes.

While we have mentioned it under the RFID item, we would once again like to recognize all of the work put in by the IT staff to complete the RFID tagging project of items already owned by the library system. Every one of the staff put in many hours on this project not only participating in the tagging but also installing the hardware and software on computers at each library. If it had not been for their dedication and teamwork the past seven months, we would not be completed with this project today.

Plans for the Coming Year

The IT department will be involved with moving the computers, network, and phone equipment from the Ralph Ellison Library to a temporary location for its remodel. We will also continue to be involved in working on the new Service Center as well as plan development of the new Northwest Library. In addition to the wiring for computers and phones, there are several other items that are being considered or planned for that involves the IT department. The list below includes projects that we plan to complete during the coming fiscal year as well as others that will be worked on as time allows.

Further Enhancements with use of RFID

While the majority of the tagging project has been completed, there are several other RFID related items that will be added/worked on during the upcoming year:

⇒ Tagging of materials that have already been purchased for the new Northwest Library (these items are currently in boxes at the Capitol Hill Library and will need to be unboxed, tagged, re-boxed and labeled that they have had RFID tags applied)

⇒ Re-developing the Express Checkout software and units to use the RFID technology

⇒ Develop a Standard Interchange Protocol Version 2 (SIP2) module that will allow us to incorporate third party vendors' equipment with our RFID system.

⇒ Implement the portable RFID reader. These portable readers will allow staff to capture data by scanning materials at the shelf and checking (real time) for exception items such as materials belonging to other libraries, lost and paid items, missing items, tracer items, and items that have been shelved incorrectly or been coded incorrectly in the computer. Because it is being done in "real" time, corrections can also be made at the shelf without having to transport the material to a backroom or circulation desk for correction.

We have also budgeted for a sorter unit that uses RFID to be used at the new Service Center facility by both Technical Processing for new books and Maintenance for sorting materials that are being transported between buildings. We will also be considering smaller sorter units for the new Northwest Library and possibly retrofitting these units at other libraries over the next few years. Software will need to be developed that will interface to sorter to MLS' Integrated Library System software.

Express Checkout Upgrades

In addition to adding RFID to the Express Checkout units, software will be re-developed so that customers can pay for fines and lost or damaged materials at the Express Checkout units. We will be replacing monitors with monitors that have a card swipe for taking credit cards and also adding a coin box to allow customers to pay with cash for these items. The exterior portion of the coin boxes are already being custom manufactured and we will be purchasing the coin and bill acceptor mechanisms right after the beginning of the fiscal year.

Credit Card Usage at Circulation Desks

Library software has also been re-developed to allow customers to use credit cards at the Circulation Desk when they checkout or return materials. We have budgeted for 1-2 monitors for each library that will have the "card swipe" and will phase in monitors with card swipes at all circulation computers over the next three years.

Ralph Ellison, Service Center & other facilities projects

There are several projects that will require IT's assistance that will come up during this next year. These include:

- ➢ Ralph Ellison remodel – IT will need to have wiring pulled in the temporary location, move all computers to this location, and set up VoIP telephones for staff use. We will also be responsible for setting up the new data closet in the remodeled building and having data wiring installed for all computer & phone locations.
- ➢ Service Center – Depending on construction timing, IT will be responsible for setting up data and telecommunications hardware, having wiring pulled to all computer and phone locations in the building, and moving and setting up staff computers and phones.
- ➢ Village & Edmond carpeting – New carpeting is planned for the Village and Edmond libraries this year. IT will need to move out all public computers and some staff computers as well as re-install all equipment after the carpet has been replaced.

Technical Processing & new Service Center Equipment & Software

In addition to the RFID sorter that has been planned and budgeted for at the new Service Center, there are also plans for new binning equipment and related software for use by the Technical Processing department. Currently, new materials received are stored on conventional shelving until Cataloging has put the title in the system. This new equipment and software will streamline the process by incorporating the use of a computerized storage of the materials in binning equipment during the receiving and cataloging process. Once the single copy is returned from Cataloging, the additional copies will be retrieved from the storage equipment for processing. This equipment will take up much less floor space than conventional shelving and should reduce the possibilities for injuries due to so much lifting that is done with the current setup.

NonStop Upgrade

Our last upgrade of the NonStop system was in the fall of 2003, approximately six months before we moved to the Downtown Library. To take advantage of progress in technologies, we need to upgrade this system at least every five years. Maintenance costs on a newer system are also much lower. The savings in maintenance will pay for the upgrade in under three years.

Other Projects

In addition to the projects listed above, we will be upgrading/replacing approximately 150 computers. We have an inventory of over 700 devices including computers and printers and needing to replace too many in one year could have a very detrimental effect on the budget and IT staff.

We will also continue maintaining the computers we own, take care of software upgrades including updates to our anti-virus software, web browser plugins, etc. and other service calls as requested.

Future Plans

We continue to have many ongoing future plans. Some of these plans may not be completed in this fiscal year, but we need to maintain awareness of the needs so that we do not come up with surprises in the future and find ourselves unprepared. These plans include:

> - Supporting Technology as part of the Library's Strategic Plan
> - Keeping abreast of emerging technologies
> - Re-evaluating our software for use by both customers and staff
> - Updating a portion of the hardware each year
> - Evaluating the desktop operating system
> - Evaluating the server operating system
> - Evaluating and updating the communications systems as needed

In closing, it seems that we say this every year, but this has once again been a busy, but productive year for Information Technology at MLS. In the coming year, we are continuing to look forward in providing customers and staff with the new and exciting items and supporting their information technology needs.

Information Technology System Description

Summary Description of Information Technology System

The Metropolitan Library Integrated System (MetropoLIS) provides vital automation 24 hours/7 days a week. It supports over 700 networked devices, including computers and printers, throughout the library system. The computers include 21 servers, 208 public computers, 10 Express Checkout computers, 38 Children's computers, 60 CyberMARS catalogs, and 248 staff computers as well as computers that manage the public computer signup and public printing. Hardware for MetropoLIS includes a Hewlett-Packard (HP) NonStop database server with four gigabytes of memory and 144 gigabytes of mirrored disk storage. The HP NonStop system contains the databases and software that are accessed by CyberMARS through the Internet, the Z39.50 gateway, as well as all of the library support functions including circulation, in-library catalog searching, materials acquisition, cataloging of materials, accounts payable, payroll and personnel functions, etc.

The Library has 18 Windows 2000/2003 servers that provide services for the system's network. Two of the servers are the primary and backup domain controllers that manage security services for the library's network and provide internal Domain Name Services. Services also provided through the servers include: Web Page services for the library, CyberMARS, a Z39.50 gateway through the Library of Congress, an internal meeting calendar, access to the staff catalog, backup files for disaster recovery, support of the Raisers' Edge software used by Development and the Friends, management of the anti-virus/anti-spyware software, the Oklahoma Images and Oklahoma Folklore databases, Oklahoma Moments videos, the meeting room booking database, and Internet filtering for wireless customers. Two additional servers run the Linux operating system and provide the Bess filtering service for the libraries' computers. Five additional servers are specialty servers for operating the VoIP phone system and managing the wireless network.

The network devices located at the various library agencies are connected to the servers through the use of data communication circuits. All full-service libraries and the Maintenance/Outreach center are connected to the network through 100Mb data communication lines. Downtown, where the servers are located, has devices directly connected without use of data circuits. The Jones Library connects to the library network via a T-1 line through the Choctaw Library; Luther connects through Edmond Library via a T-1 line, Harrah and Nicoma Park have T-1 lines connected through Midwest City, and Wright has a T-1 line connected through Southern Oaks. The library system's connection to the Internet consists of two 100Mb circuit from the computer center at Downtown to our Internet Provider, OneNet.

Software Description

Software for MetropoLIS includes more than 700 different programs that have been developed in-house to perform the following functions:

Circulation

⇒ Materials Circulation; checkout, renewal, checkin
⇒ Flat Panel Touch Screens used with Virtual Circ Desk software that allows navigation by touching the screen
⇒ Receipt printers that will allow staff to provide customers with a detailed receipt of their transactions
⇒ Laser barcode scanners using CODABAR and Code39 bar code number systems
⇒ RFID equipment and software that allows staff to perform functions on multiple items at the same time including checkin/checkout, receiving of reserves, inventory functions, etc.
⇒ Text-to-Speech Software that gives verbal message to staff
⇒ Automatic detection of delinquent patrons, cards with PPO restrictions, and Under 17 customers that need parental permission to check out R-rated videos at checkout time
⇒ Patron Inquiry for Transactions and Patron Information entry and update
⇒ Access to on-line materials catalog
⇒ Production of self-mailer overdue notices qualifying for lowest USPS rates or e-mail notifications
⇒ Production of follow-up billing statements
⇒ Production of Annual Fee Card expiration letters

Cash Handling

⇒ Fines and other payment collections
⇒ Prepaid Accounts
⇒ Cash/credit card reconciliation interface with Business Office system

System Reserves

⇒ Placing patron reserve requests for materials system-wide
⇒ Automatic "Trapping" of reserved materials at checkin time
⇒ Daily label production for staff to pull materials from shelf that customers have reserved
⇒ Reserves Confirmation and Receiving functions
⇒ Production of self-mailer reserve notifications or e-mail notifications that alert customers when reserved materials are available for pickup
⇒ Detailed status information including position on list, number waiting, and number of copies available
⇒ Reserve Pull List

MLS Web-based Software

⇒ CyberMARS
  ➢ Public Access Catalog -- providing author, title, subject, call number, and keyword access

- ➢ Viewing of Personal records including transactions, status of reserves, and prepaid account
- ➢ Renewal of materials
- ➢ Acceptance of credit cards for payments of fines and/or lost materials
- ➢ Placing of reserves
- ➢ Notification of reserves ready for pickup
- ➢ Placing of Parental Preferences Option
- ➢ Customer authentication for OverDrive E-media access
- ➢ Library developed software to provide seamless access to subscription databases. This software makes access to these databases seamless by authenticating the customer through their library card information when accessing remotely or by IP address when in the library rather than requiring them to enter special user names and passwords for each database. Without the seamless integration, customers would have to be given a username and password for each database. Subscription databases available to customers include: FirstSearch, Biography & Genealogy Index, Biography Reference Bank, Books In Print, EbscoHost, Grolier Online, Heritage Quest Online, Learning Express Library, Literature Resource Center, LitFinder, African American History & Culture, Ancestry.com, AP Multimedia Archive, Associations Unlimited, Facts.Com, Dun & Bradstreet Million Dollar database, Mergent Online, Newsbank, Proquest, Reference USA, Sanborn Maps, Science Online, Sirs, Sirs Discoverer, Novelist Reader's Advisory, Oklahoman Electronic Archives, and Mitchell's Repair manuals. All are available for access in the library and many are available for customers to access from home.

- ⇒ Staff Catalog
- ⇒ Oklahoma Images
- ⇒ Oklahoma Folklore Collection
- ⇒ Oklahoma Moments
- ⇒ MLS Events Calendar
- ⇒ MLS Meeting Calendar
- ⇒ MLS Staff Leave Calendar
- ⇒ MetroLibrary.org search function
- ⇒ Subscription Database redirection for transparent connection and statistics
- ⇒ Artist Index
- ⇒ Oklahoma County Building Index
- ⇒ Software for allowing e-mail suggestions of materials for purchase
- ⇒ Who's Who Pictorial Staff Directory
- ⇒ MLS Intranet Keyword Searching
- ⇒ Z39.50 Gateway

Note: Z39.50 is a national and international (ISO 23950) standard defining a protocol for computer-to-computer information retrieval. Z39.50 makes it possible for a user in one system to search and retrieve information from other computer systems (that have also implemented Z39.50) without knowing the search syntax that is used by those other systems. Many libraries across the world access the MLS Z39.50 gateway server application to obtain catalog and holdings information using a Z39.50 client. Many others access our database via the Z39.50 Gateway available through the Internet on the Library of Congress bibliographic web site.

Public Computer Access

⇒ Sign-Up system for use of public computers
⇒ Reservation slips with personal/private code
⇒ Overhead monitors to notify customers when their computer time is available using reservation code assigned when customer signs up to use computer
⇒ Internet client -- used to log customers on, verifies that customer is Internet certified, and automatically logs off inactive user
⇒ Browser access to the World Wide Web
⇒ Microsoft Office (includes Word, Excel, Powerpoint, & Access) and Encarta
⇒ Licensed reference resources
⇒ Internet monitoring

Materials Inventory Control

⇒ Assist agencies in collection management through various reports
⇒ Provide agencies with item inquiry
⇒ Provide agencies with internal agency collection control for:

- Materials Location (within agency)
- Coding Materials for rebind, mending, withdrawal, etc.
- Temporary loans of materials to other agencies
- Bindery control system

Materials Selection/Acquisition

⇒ Agency level fund accounting (detailed by type within fund)
⇒ Order entry and tracking
⇒ System level collection management information
⇒ GASB Compliant Materials Depreciation Reporting
⇒ MLS Catalog linkage with Baker & Taylor

Cataloging

⇒ Windows-based Client application for editing MARC records and transferring records from OCLC to the NonStop system
⇒ Subject cross references (both LC and local)
⇒ Automatic inventory entry
⇒ Processing "kit" production (including barcode)

Technical Processing

⇒ Automated receiving records of on order materials
⇒ Acknowledgment of receipt triggers automatic payment by the Business Office without further data entry
⇒ Access to Accounts Payable and warrant information online

Serials Control

⇒ Checkin of periodicals
⇒ Routing capabilities
⇒ Linkage to MetropoLIS
  for circulation and overdue reporting
  for access to serials holdings via Public Access Catalog
⇒ Bibliographic control
⇒ Claiming report
⇒ Subscription Maintenance
⇒ Subscription Usage reports
⇒ Checkin of continuations

Financial Management

⇒ Accounts Payable Processing (A/P)
⇒ Warrant creation including MICR printing
⇒ Financial Reporting including Grant Accounting
⇒ A/P interface with MetropoLIS materials order/receiving process
⇒ Windows-based client for fixed asset accounting and physical inventory
⇒ GASB Compliant FF&E Depreciation Reporting
⇒ Program budget system

Payroll/Personnel

⇒ Employee time accounting
⇒ Employee leave and personnel records
⇒ Payroll production
⇒ Cafeteria Plan
⇒ Retirement accounting
⇒ Payroll check creation including MICR printing
⇒ Direct Deposit (ACH)
⇒ Query facility and export to MS Excel
⇒ Various reports
⇒ Safety library with checkin/checkout functionality

Reports

⇒ Collection Analysis
⇒ Library usage by time period Report
⇒ Circulation Gains/Losses Report
⇒ Patron Registration Report
⇒ Patron Registration matched to U.S. Census Geographic base file
⇒ Collection Shelf Management Reports
⇒ System Reserves Analysis Report
⇒ Billing Analysis Report
⇒ Internet Usage reports
⇒ GIS/GPS Information System

Windows Server Software/Utilities

⇒ mlsPCLibrarian -- allows staff to see who is logged on to an Internet computer
⇒ mlsPcHelper – Configurator software to allow remote updating of configuration files; allows Automation staff to deploy software updates without copying the file to each individual computer or needing to visit each computer to install the update; also allows remote re-booting of computer and other computer management functions

Other

⇒ Meeting Room Reservation System
⇒ Mailing List/Label System
⇒ Typesetting (Browsing the Shelves: Your Guide to Finding Nonfiction Materials)
⇒ CASS software interface -- U.S. Postal Service certified software interface that allows the library to mail overdue notices and system reserve notifications at automated rates.
⇒ Oklahoma Images administration software
⇒ Oklahoma Folklore administration software

Third Party Software

⇒ Raiser's Edge Software (Used for managing Endowment donors, Friends' memberships, and Volunteer records)
⇒ Electronic Mail System
⇒ Anti-virus software
⇒ AccuZip CASS software (Used for mailing system reserve and overdue notices at Automation rate)
⇒ TrackIt! (Used for IT department's work order management and computer inventory management)
⇒ ASTD (Used for Employee Training record keeping)

NOTE: All software except the Third Party software has been developed by MLS Information Technology (IT) staff and is maintained by MLS IT Staff. Software that has been developed uses a combination of Cobol, Scobol, and TAL for the NonStop system and Visual Basic, Active Server Pages (ASP), and XML for the PC based and web-based applications. PC applications that communicate with the NonStop system use Remote Server Call (RSC) to send messages between the two systems.

MLS Philosophy re: Software Development

The Metropolitan Library System develops much of its software in-house without using a turnkey software vendor. Our philosophy regarding library automation is to redevelop and update a portion of our software and replace a portion of our computer hardware each year. Using this approach, we can avoid the trauma that other libraries deal with when making an automation upgrade -- throwing out the entire system and choosing a new vendor. However, at any given point in time, MLS has the luxury of migrating to a turnkey system if it so chooses. With our

given philosophy in place, this migration could take place on a timetable that would allow implementation at a well thought out pace.

Another part of our philosophy is to implement leading-edge technology while avoiding cutting-edge technology which is also referred to as the bleeding-edge. One example of this is that although we have been keeping abreast of the advancement of RFID technology for almost ten years, we did not recommend its adoption and implementation until this year. This is because it was still evolving as a new technology and had not yet stabilized with standards across the industry and the return on investment did not justify purchase and implementation of the technology. We will continue to research and evaluate new technologies for possible use and improved processes for the library and make recommendations for purchase and implementation as warranted.