Information Technology Report

Prepared by:

Jimmy Welch, Deputy Executive Director/Technology
Anne Fischer, Director of Information Technology

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Information Technology Report -- 2011

This year we continued preparing for the future with the moving of Southern Oaks to a temporary site so that their library could undergo a major renovation. IT's part in this project included having the data circuits moved, moving and re-installing all network equipment, and having data wiring installed at the temporary location as well as moving all computer related devices. We spent more time working on needs for the Northwest Library as well as participating in Southern Oaks planning, and budgeting dollars for IT costs to support those plans. We have also continued to make software changes that take the library forward for both customers and staff: switch to Windows 7 operating system, providing a tool for Materials Selection to assist in processing the hundreds of customer suggestions that are received each week, and developing a prototype web-based application that will allow staff to provide more services outside of the library.

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

Temporary location for Southern Oaks
After much searching and a complete overhaul, Southern Oaks moved into a temporary location in the Almonte Shopping Center at SW 59th & May. We had to have Cox install a data circuit while keeping the other one going and we also had AT&T move a T-1 circuit that connects Wright to the network through Southern Oaks. Once the S Walker location was closed, IT staff moved all computers, printers, and phones to the temporary location. On the first day the library was closed, we had to remove and re-install all routers and switches and make sure all lines were up as Wright was closed that day but would be open the following day. This meant that there could be no issues with the circuits or the network equipment or Wright would be without computers. We also took the opportunity to go ahead and replace several of their computers while they were closed as they were on the schedule and this allowed us to do it with little disruption to staff or the public.

Northwest Library Preparation
Construction is in full swing at the Northwest Library and we have continued our planning for all of the technology related purchases that will need to be made for the Northwest Library. In addition to acquiring computers for staff and public use, we will be purchasing all of the networking equipment, having the data circuit installed, purchasing all related printers, barcode scanners, RFID equipment, and coin boxes for the Express Checkout computers and the

surveillance cameras and equipment for surveillance at the new building. We will be purchasing a 7-bin sorter for this library that will clear materials as customers return them and sort them into general shelf location bins. We will also be contracting for the installation of the data cabling and overseeing this part of the project.

We completed our testing with the iPad and plan to begin using these as touchdown stations at Northwest and then implement them at other locations as well. This will allow staff to carry the device to the shelf when assisting customers without needing to go back to the service desk to look something up or place a reserve. The staff catalog has been redesigned to allow staff to look up a customer card directly from the catalog and select the customer so that a reserve can be placed even if the customer does not have their library card with them.

Southern Oaks Library Remodel Preparation

Due to the long delay in finding a temporary location for Southern Oaks, we will be continuing to work on plans for the move back to their remodeled building. This will involve purchase of additional computers (computers for public access are going to be doubled), re-installation of the data circuit and network equipment, installation of the data wiring, purchase and installation of new surveillance equipment, and the purchase and installation of a 7-bin sorter.

Bethany Carpet

Bethany Library closed the last week of May to have new carpet. While they were closed, we took advantage of the time by having trenching done in the children's area and back by a public table to add power and data boxes so that more children's computers could be added and we could provide power to an additional table for laptop users. We also moved computers out of the way for the carpet installers and took advantage of them being closed to replace computers so that we would minimize the disruption to customers and staff.

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 2010 (FY11), we received a funding commitment of $229,275.64. 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 FY12 is 79% which is up 2% from last year. No funding commitments have been issued yet. We have submitted a funding commitment request of $252,471 for Funding Year 2011 (FY12). This amount is up from last year as we will be adding the Northwest Library during this FY.

WiFi Upgrade

IEEE 802.11 is a set of standards carrying out wireless local area network computer communication in the 2.4, 3.6 and 5 GHz frequency bands. They are implemented by the IEEE LAN/MAN Standards Committee. The library currently has wireless access points that allow users to connect through 802.11a/b/g. 802.11a operates in the 5Ghz frequency band whereas the 802.11b/g operate in the 2.4Ghz frequency band. While 802.11a can operate at higher speeds, it is not widely used as it does not reach as far and is easily absorbed by solid objects such as walls. Because so many Internet applications are very bandwidth hungry, a task group has been working on a new standard and technologies that have become the 802.11n standard. This new standard will allow for much faster wireless operating speeds (144Mbits compared to 54Mbits for 802.11g) with less interference from outside objects such as microwaves, bluetooth devices and cordless telephones. As more users begin having wireless cards that operate with 802.11n, we will be looking to replace or upgrade our equipment to allow customers to connect at the higher speed. The first phase of this upgrade was to purchase a Wireless Lan Controller that controls access points across the system. It also allows for much quicker configuration should a unit go bad and prevents "rogue" devices from accessing the network. The next phase of upgrading to allow 802.11n is to begin replacing the Access Points in each agency. The new Wireless Lan Controller will fully support that plus make any upgrade much simpler to accomplish in less time.

Changes to Materials Selection Software for Customer Suggestions

The library system allows customers to suggest titles for the library to purchase if we do not currently own the material. This is done from the Catalog Search screen in CyberMARS. These requests had been forwarded to Materials Selection as an e-mail and they processed the requests by checking to see if it is in system, checked to see that it met the library's collection policy, looked for reviews available recommending the material, and if it was in print or not yet published. If the material was purchased, the customer was then placed on reserve for the title so they would be notified once it is received. Due to the high volume of requests from customers, this had become a very time consuming process.

The enhancements to the software have automated the processing of these requests and put them directly into a database accessible through their mlsMaterials software. They are able to combine requests and place orders and once orders are placed, reserves will automatically be placed for all customers that have requested that the library purchase the title.

MLS Application Conversion for Windows 7

This year's computers were purchased with the Windows 7 operating system. This required converting all MLS application software, file formats, and messaging that would allow it to work with the Remote Server Call (RSC) that works with Windows 7 and communicate with the NonStop System which is the library's main database server.

This has been a fairly lengthy and involved process and we have had to perform a lot of testing on each application as it was converted to make sure it not only worked on the Windows 7 computers but also continued to work on current Windows XP installations.

NonStop System Operating System Upgraded

Another project that was accomplished during the past year was the upgrade of the Operating System on the NonStop. This required working with a NonStop specialist to make sure everything would work right and then taking the system down on an "off" time to perform the upgrade and re-load the system. This was done on overnight hours the last weekend in August. It went very smoothly with minimal disruption to library services.

Cataloging Software changes

A conversion of the bibliographic file was completed this year that doubles the maximum allowable size of each MARC record. This allows Cataloging staff to provide more information in a record which was needed for many items. There is much more information in records transferred from the OCLC Cataloging system that can now be included in the MLS catalog.

Resource Description and Access or **RDA** is a set of instructions for the cataloging of books and other materials held in libraries and other cultural organizations such as museums and galleries. RDA is the successor to the second edition of the Anglo-American Cataloging Rules (AACR2), the current standard set of cataloging guidelines for English language libraries. MLS software was enhanced to allow the use of RDA while keeping the system compatible with the records done using AACR2 as there is no plan to go back and re-do all prior records.

Big Bin Enhancements

Big Bin is the storage machine that was purchased for the Service Center that allows more materials to be stored in less square footage of space than would be required if we used all shelving. Two enhancements were made to the software that communicates with the Big Bin device. The history of what has been put in and taken out as well as data on how long it was in storage is now retained and productivity reports are available for how the machine is used.

Also, we found that the machine storage gets fragmented over time due to materials being taken out of the totes at different intervals. Software was written that gives staff the ability to know which totes can be combined to defrag the storage and allow for many more items to be added.

Oklahoma Employment Security Commission(OESC) Filing Requirements Changed

Effective January 1, 2011, the Oklahoma Employment Security Commission began requiring employers to file Form OES-3 (Quarterly Compensation Report) electronically. The two ways of doing this were to upload a file in their specified format or enter all of the data manually. Manual entry would have been extremely time consuming so software was developed that creates the file and allows the Business Office staff to upload the data rather than entering it by hand.

Switch to Intelligent Mail Barcode (IMB)

The retirement of the POSTNET barcode (Zip+4 and delivery point) was set to take place at the beginning of May 2011. To be able to continue mailing overdue and reserve notifications at automation rate, the library would need to switch to the Intelligent Mail Barcode. This new barcode provides more information and functionality than its predecessors. Changes were made to the software and then in January the US Postal Service announced that they would continue to allow POSTNET barcoded mail to be mailed at automation rates beyond May 2011. A new retirement date for the older barcode has not been given. However, the IMB barcode is all ready to be implemented and since it is also accepted, we plan to implement it in the next few months which will keep us prepared for the future with our mailings.

Apple Enterprise Developer Certification

When we began looking at the iPad for use as a tool for librarians, we decided to look at what other applications might be useful on the iPad and even an iPod Touch. However, to develop for the Apple platform, you have to have Apple Enterprise Developer Certification to obtain full access to their tools. To facilitate this, Jim Welch now has his Apple Developer Certification and we are working on some things for the future that we are excited about and feel that they will be beneficial for staff in allowing them to be more mobile within their library.

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: adding the Facebook "Like" button to the library catalog that then posts on a user's Facebook page that they like a link. When this happens, their friends can then click on the link and it will take them to the bibliographic record in CyberMARS. CyberMARS was also updated with a more user-friendly graphical menu. Previously, all information was text only. Now there are boxes that each have a small graphic in the corner as well as a text description of the menu choice.

Checkout period on DVDs and videos was increased from 7 to 14 days and fines were reduced from $0.50 to $0.10, the same as books. This required changes to the ILS System, the Express Checkout software, and CyberMARS. Information also had to be maintained at the higher fee for items that had been returned late before the change took effect.

The Express Checkout software is also in the process of being updated. We have many customers that know their library card number but do not carry their card with them. The Express Checkouts currently require the customer to have their card in hand to be able to use it. Changes have been made that give the customer the option to say they forgot their card and then a keyboard comes up on the screen that allows them to enter their card and the first four letters of their last name. This will make the Express Checkouts available to all customers which will be very useful at all libraries, especially at Northwest and the remodeled Southern Oaks as each of these libraries will have four Express Checkout units.

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, and various other minor changes.

Additional Services provided by MLS Information Technology Department

Our help desk has logged and our technicians have handled 1,377 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 have also almost completed the upgrading/installing of 175 computers as part of our technology replacement cycle. Progress has been a bit slower this year due to the switch to the Windows 7 operating system. Technicians also continue to visit each computer on a quarterly basis to upgrade software, Windows security updates, web browser plugins, and check for any hardware or software problems with the computer as well as cleaning the keyboards, mice, monitors and making sure equipment is in good working order. Many other projects have also been completed.

Plans for the Coming Year

The IT department will continue to be involved in areas of construction of the new Northwest Library and remodel of the Southern Oaks Library that relate to technology. 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.

Northwest Library Preparation

The Northwest Library continues to move towards completion. It will be a bit different than the remodels have been as there will be all new computers. Also, all of the network installation will be new which will be more involved. We plan to bid out the wiring project later this summer and will be bringing that to the commission for approval.

Another first that is planned for the Northwest Library is a bank of computers that will be specifically for teens. These computers will have a separate sign-up computer and will only be allocated to cardholders that fit the age criteria.

The Northwest Library is also going to have the first agency sorter. It will work much differently than the sorter at the Service Center so additional software will be developed that can then be used as other libraries have sorters installed. This agency sorter will check-in the material when the customer returns it and sort it into various sections for the library staff.

We also will be developing software to assist with using the Service Center sorter to organize all of the materials that have been purchased and stored for the Northwest Library as it will be an extremely large undertaking to get the materials in order to put on the shelves before the library opens.

The main item that will require a large amount of IT staff time is setting up and installing the new computers. It is one thing to move computers back and forth. It is completely different when all computers will be set up from scratch, taken to the Northwest Library and installed, especially with the number that will be at Northwest. We hope to purchase these computer a couple of months ahead of time so the setup and installation can be staged so as to not cause issues for other libraries while IT is working on this project.

Southern Oaks Library Preparation

Now that Southern Oaks has officially moved to a temporary location and the building has been turned over to the contractor for the remodel, we know that our part in this project should take place during the upcoming fiscal year. We will be preparing bid specifications for the data wiring to be completed during the remodel project. We will be purchasing additional computers as the number of public computers will be doubled in the remodeled building. We will also be purchasing additional coin boxes as the remodeled library will be going to more of a "self-service" model for checking out and will have four Express Checkout computers.

Re-designed Express Checkout Coin Boxes

As part of the design of the Northwest Library and Southern Oaks Library, the architects requested that the Express Checkout Coin Boxes be made of stainless steel rather than the current black units that we now use. They also had a requirement that the boxes only be 34 inches tall to comply with current ADA standards. The IT staff have worked with the vendor that was used for the original design and been able to negotiate the changes necessary for these units. In addition, we will be ordering part of the units with the staff access door opening one direction and the rest opening from the other direction to accommodate the placement of the units at the Southern Oaks Library.

Netbook Purchase and Use

When we were testing with the iPad, we also tested the same process with a Netbook to see if that would be better than the iPad. For the touchdown stations, we chose to use the iPad. However, we have been working on another application that will be used with Netbooks. Library staff have asked many times if they could issue library cards at a remote location. This always brought up lots of issues about checking to see if the person had a card before and how to get the information in the system without a lot of extra work.

With our secure server certificate, we have the ability to set up secure websites that will allow more flexibility with what can be accessed on the computer system. A secure page was developed that will allow staff to check if the person has a prior card and enter their information remotely from the library. It works through wireless networks so anywhere there is wireless access, cards can be issued. We can also use them out in the library to issue cards on very busy days. This is just the first step in an ongoing process to make the libraries' services more accessible for the future. Library Operations has formed a committee to develop guidelines for providing library services outside the physical library building.

Mobile Apps Prototype being Developed for Staff Use

With the choice of the iPads and Netbooks to be used for providing staff with tools that are mobile, we also began looking at other ways to provide tools that would allow staff to assist customers at a different level by being able to be more mobile within their library. We found a device that fits over an iPod Touch that will allow the use of a barcode scanner and also permit swiping of a credit card for payment. This has lead to the development of several prototype applications that could be used for assisting customers. These apps include:

⇒ Payments – This would allow staff to accept credit card payments from customers for fines, lost material, and damaged items without needing to be at a computer. The customer could then be e-mailed a receipt or pick the receipt up at the service desk. During busy times, this could be especially helpful as it would give staff more flexibility in reducing lines at the service desk.

⇒ Item Inquiry – Scan or key in any item barcode to view information about a specific item

⇒ FFME – This would allow Business Office staff to scan and collect physical inventory from a library then upload it to match against the NonStop inventory to determine that all items are accounted for at each library
⇒ Confirm Reserves – This application would allow staff to use the device out in the library to go ahead and confirm that a reserve has been found rather than having to batch the process by bringing the material to the circulation desk or back room for processing
⇒ Meeting Room Booking – The Meeting Room Booking Application would allow staff members to view information about a room booking and also take or refund payments for the room via credit card.

Other Projects

In addition to the projects listed above, we will be upgrading/replacing approximately 170 computers. When the Northwest and remodeled Southern Oaks libraries are opened, we will be adding over 100 computers to the inventory. 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. This will bring our inventory of computers to over 800 units in addition to printers and other IT related equipment.

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. We also plan to upgrade/replace routers at four libraries this year. The current routers are over seven years old and they are both end-of-life and end-of-support from Cisco so if one fails, we cannot get a replacement.

Future Plans

We continue to have many ongoing future plans. Again, some of these plans may not be completed in this fiscal year, but we still 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
- ➢ Evaluating the library's database structure

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 26 servers, 231 public computers, 13 Express Checkout computers, 42 Children's computers, 58 CyberMARS catalogs, and 281 staff computers as well as computers that manage the public computer signup and public printing.

Servers

The library's primary database server is a Hewlett-Packard (HP) NonStop database server with four CPUs each containing four gigabytes of memory and over one terabyte 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 2003/2008 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, access to the staff catalog, backup files for disaster recovery, support of the Raisers' Edge software client 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. Four servers run the Linux operating system and provide the Bess filtering service for the libraries' computers as well as utilities and images used by the IT staff for setting up computers and maintaining images of each model's hard drive. Two additional servers are specialty servers for managing the wireless network. Three servers provide the software that operates the library's phone system and voicemail services.

Desktop Computers and Laptops

The library system has 653 desktop and laptop computers. These computers are used for staff work (281), public computers with Internet access (231), children's use (42), CyberMARS (60), Express Checkout (13) and 26 others are used for computer sign-up and print management.

All of these computers are on the technology replacement cycle and must also be maintained by keeping software up to date, installing and/or updating Internet plugins, cleaning off temporary files that affect computer performance, and checking for bad hardware components. IT technicians visit each library on a quarterly basis to update software and clean up disk space on each computer in addition to other projects including computer replacements and service calls.

Network Components and Telephony

The network devices located at the various library agencies are used to connect the library system's WAN together through the use of data communication circuits. The Downtown library is connected to the Cox WAN through a 1Gb connection. All other full-service libraries and the Service Center are connected to the network through 100Mb data communication lines. 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.

The equipment used to make these connections consists of thirty-three routers, sixty-three switches, forty-nine access points and one firewall appliance. The routers transfer both computer data and telephone traffic from building to building. The switches are used to connect individual devices within a building including computers, printers, and telephones. The access points are used for wireless computing for both staff and customers. All of these devices must be configured to maintain security on the library's network.

Security of the library's network is vital to maintaining services. We regularly deal with e-mail spamming issues, hacking attempts and attempts to use our network to share copyrighted files.

Another part of our network management is the telephony segment. We have three servers that manage calls and voice mail for the library's 219 telephones. These servers are computers with telephony and voicemail software which must be updated on a periodic basis including replacing the hardware as well as upgrading the software.

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

- ⇒ 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

Express Customer Units

- ⇒ Checkout Materials
- ⇒ Renew Materials
- ⇒ View/Print Borrowing Record
- ⇒ Pay for fines, fees, lost materials with cash or credit card

Cash Handling

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

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. Also provides suggested search terms, cover images, similar title suggestions and topic word cloud.
  - ➢ 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
  - ➢ eNotification of overdues
  - ➢ eReminders for both system reserves and materials coming due
  - ➢ 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 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
⇒ RSS Feeds

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)
⇒ Licensed reference resources

$\Rightarrow$ Internet monitoring

Materials Inventory Control

$\Rightarrow$ Assist agencies in collection management through various reports
$\Rightarrow$ Provide agencies with item inquiry
$\Rightarrow$ 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

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

Cataloging

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

Technical Processing

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

Serials Control

$\Rightarrow$ Checkin of periodicals
$\Rightarrow$ Routing capabilities
$\Rightarrow$ Linkage to MetropoLIS
  for circulation and overdue reporting
  for access to serials holdings via Public Access Catalog
$\Rightarrow$ Bibliographic control
$\Rightarrow$ Claiming report
$\Rightarrow$ Subscription Maintenance
$\Rightarrow$ Subscription Usage reports
$\Rightarrow$ 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
⇒ Oklahoma Employment Security Commission Reporting Interface

Payroll/Personnel

⇒ Employee time accounting
⇒ Employee leave and personnel records
⇒ Performance Appraisal
⇒ 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 Client Interface (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)
⇒ GeoLearning Learning Management System (hosted by GeoLearning)

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. 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.