



**13<sup>th</sup> Judicial Circuit Court**

# **Technology Services 2012 Annual Report**

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## STAFF AND RESPONSIBILITIES

The Technology Services unit of the 13<sup>th</sup> Circuit is staffed by 3 people:

### **Steve Smith, Supervisor**

- Staff Supervision
- Technical Project Management
- Hardware, Software and Network Management
- Applications Development
- Technology Bid & Contract Preparation and Review
- Training & User Manuals

### **Chris Fishman-Weaver / David Mankin / Paul Christus**

- Hardware, Software and Network Management
- Help Desk & End-User Support

### **Nicholas Stultz**

- Applications Development

### **Staff Changes in 2012**

- Chris Fishman-Weaver left in February and was replaced by David Mankin in April.
- David Mankin left in October and was replaced by Paul Christus in December.

## TECHNOLOGY AREAS SUPPORTED

The following summarizes the various technology-related components managed and activities routinely performed by the unit:

### NETWORK COMPONENTS

#### Network Management

- User & computer network account management
- Work w/ patch panels / patch cables / switches / hubs
- Work with OSCA staff to resolve network-related issues

#### Workstations

- Install/configure operating system (*Windows XP & Windows 7*)
- Install/configure numerous software products
- Locate and eradicate viruses and other mal-ware
- Remotely manage workstations and work with user issues over the phone

#### Servers & Storage Devices

- Install/configure operating system (*Windows 2008 & Linux*)
- Manage RAID devices (servers and Network Attached Storage)

#### Printers & Multi-Function Devices

- Setup/configure network printers & multi-function devices
- Program printers for scanning / email
- Perform minor printer repairs / routine maintenance

#### Video Conferencing Technologies

- Program Polycom and Tandberg devices
- Work with multi-media bridge to schedule/manage video conferences

## AUDIO/VISUAL

#### Courtroom Sound Systems

- Work with microphones, speakers, amplifiers & XLR cabling
- Manage vendors troubleshooting and resolving issues

#### Video

- Work with projectors & document cameras
- Convert media files

## TELEPHONE

### Telephones

- Setup/retrieval of portable conference phones
- Work with phone company regarding programming changes
- Work with patch panels to re-route internal phone lines

## GENERAL SUPPORT

### Support

- Manage Help Desk requests
- Work closely with other government technical entities

### Training

- Train users in office products i.e. email/word processing/spreadsheets
- Train users in use of video conferencing components
- Develop & manage training materials

### Security

- Use software to create video recordings of courthouse incidents
- Configure software managing door locks

### Other

- Develop & update technical documentation
- Process technical inventory and surplus property

## APPLICATIONS MANAGEMENT

### Development

- Create new local applications as needs are identified
- Work with local users to enhance locally-developed applications when needed

### Reporting

- Create and manage ad-hoc reports using COGNOS (judiciary's reporting tool)
- Extract court case data to spreadsheets as needs are identified

## CONFIGURATION OVERVIEW

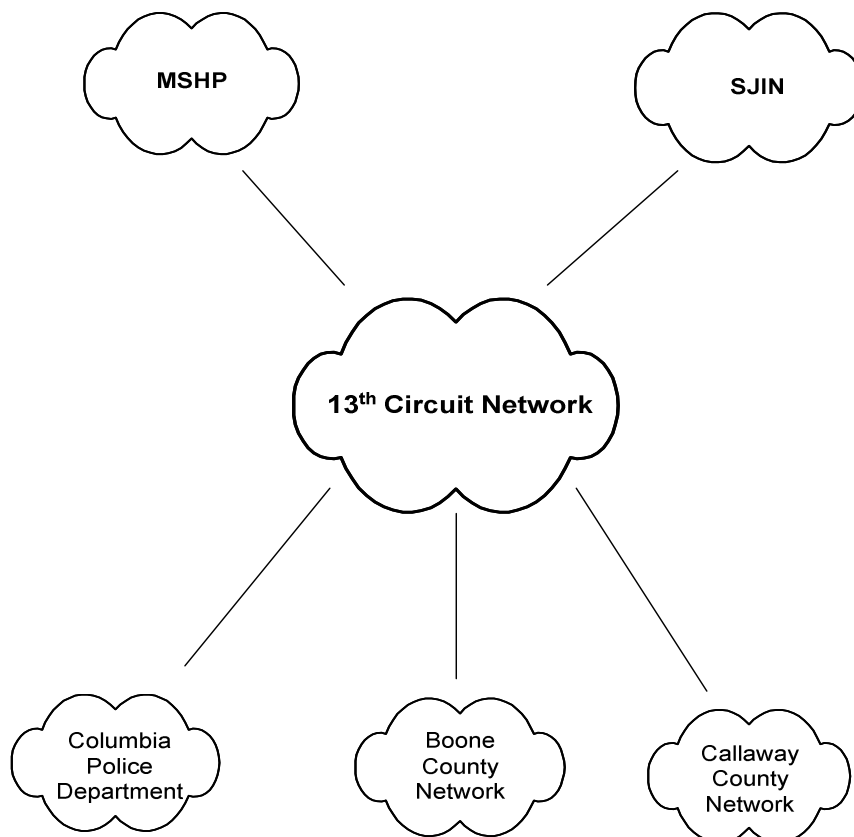
The computer network utilized by the 13<sup>th</sup> Circuit is part of the larger Statewide Judicial Information Network (SJIN) managed by the Office of State Courts Administrator (OSCA). The SJIN is the backbone that interconnects all trial and appellate courts in Missouri.

OSCA provides to the courts certain hardware components and software products utilized by all sites including file, print and database servers, communications devices and other myriad technical devices that allow components to work seamlessly. Over the years many of these services have been consolidated into two judicial data centers located in different geographical locations within Missouri.

OSCA provides and manages enterprise-wide software products such as the court case management software (JIS), juror software (JMS), email, office automation products, Case.Net and “Your Missouri Courts” (the judicial website) among others.

Technical components unique to the 13<sup>th</sup> Circuit are located within the Boone and Callaway county locations and managed by Technology Services staff. The unit develops and manages software applications used solely by the 13<sup>th</sup> Circuit. It also installs and manages purchased “off-the-shelf” software not provided by OSCA such as accounting, statistical analysis, and various office automation products.

Additionally, the 13<sup>th</sup> Circuit network interacts with the networks of Boone County, Callaway County, the Columbia Police Department, and the Missouri State Highway Patrol. The result is a blended responsibility and cooperation among circuit, state and local government entities.



## INVENTORY - HARDWARE

### Servers

There are multiple servers located in the Boone County Courthouse server room. There are no servers located in the Callaway County facilities.

#### BNEWCMNEMO – Data Repository

BNEWCMNEMO is a workstation located in the Boone courthouse server room running the Windows XP operating system and used for data storage. It provides a backup location for the court reporters' Case Catalyst, and for sound recordings made in the Boone courthouse.

This device was purchased with funds provided by Boone County.

#### BNEIN1301 – Public Web Server

In 2011 the 13<sup>th</sup> Circuit deployed its first public internet application - the Attorney Conflict Calendar. The application resides on a Linux server and is connected to the internet via a DSL modem. As other internet-based applications are developed they are anticipated to reside on this server as well.

BNEIN1301 was purchased with funds provided by the Administration of Justice Fund.

#### BNEAS1301 – Applications Server

In the Fall of 2010 the 13<sup>th</sup> Circuit acquired a surplus server from the Office of State Courts Administrator (OSCA). This server has 6 GB of RAM and approximately 240 GB of disk space in a RAID configuration for a total of 120 GB usable space.

The intent of this server is to host applications that, for technical reasons, should not reside offsite in the judiciary's data centers. Currently CCTS, Fines & Costs, and Court Services are hosted on this server. As other applications are written/re-written they will likely reside on this server.

BNEAS1301 was originally purchased by OSCA, later surplused to the 13<sup>th</sup> Circuit, and is now the property of the 13<sup>th</sup> Circuit.

### Workstations

The 13<sup>th</sup> Circuit utilizes approximately 213 workstations (99 provided by the state) and approximately 30 notebook computers. The operating system for most devices is Windows XP.

### Printers

The 13<sup>th</sup> Circuit utilizes approximately 84 network and local printers, 8 of which are provided by the state.

### Video-Conferencing

The circuit utilizes video-conferencing equipment to help reduce overall costs for staff travel for meetings and prisoner transport. There are five mobile units and units built into the ground level and 3 West courtrooms of the Boone County Courthouse.

### Conference Telephones

The Boone County Circuit Court routinely sees case participants who either do not speak English fluently, or do not speak English at all. The court sometimes accommodates non-English speakers by using phone interpreter services through Language Select or Language Line whereby interpreters are available on short notice to provide language interpreting services over the telephone.

### Other Courtroom Technology

Each of the Boone County courtrooms has a sound system. Additionally, the 3 West courtroom in the Boone County Courthouse has several technology components for evidence presentation, teleconferencing and video conferencing.

The Technology Services unit can also provide portable document cameras, LCD projectors and projection screens as needed.

## INVENTORY – SOFTWARE

NOTE: This lists the major products in use, but is not an exhaustive list of software items.

### Enterprise Software

| Product                 | Primary Use                                                             |
|-------------------------|-------------------------------------------------------------------------|
| Windows XP & Windows 7  | Operating system                                                        |
| Office XP & Office 2010 | Office automation                                                       |
| JIS                     | Court case management                                                   |
| OSCA Reports            | Court case reporting                                                    |
| COGNOS                  | Ad-hoc reporting                                                        |
| JMS/JUROR               | Jury management                                                         |
| Lotus Notes             | Email, calendaring, instant messaging, & applications                   |
| Case.net                | Court case viewing online                                               |
| MACSS                   | Mo Automated Child Support System                                       |
| eFiling                 | Allows attorneys to file case documents electronically (Callaway only)  |
| eBench                  | Allows judges to electronically manage the court docket (Callaway only) |

### Software Developed by Technology Services

| Product                    | Primary Use                                                       |
|----------------------------|-------------------------------------------------------------------|
| Court Services             | Client management (bonds, detention, etc.)                        |
| Fines & Costs              | Client management (fines, costs)                                  |
| CCTS                       | Modules for Focus on Kids, JJC Case Management, Case Scheduler    |
| Technology Assets          | Manage technology inventory                                       |
| Contracts Repository       | Manage local procurement / management contracts                   |
| Attorney Conflict Calendar | Reporting calendar conflicts for attorneys                        |
| Budget                     | In-house budgets for Court Administration, Circuit Clerk, and JJC |
| Case Scheduler             | <i>In progress</i> – Schedules cases going to trial               |

### Other Third-Party Software

|                        |                                                                          |
|------------------------|--------------------------------------------------------------------------|
| Case Catalyst          | Court reporter transcription                                             |
| Quickbooks             | Juvenile office accounting & Boone Circuit Clerk's office accounting     |
| Nutrikids              | Track nutritional information at JJC                                     |
| Records Management     | Track arrests, booking information                                       |
| Dreamweaver            | Web site management                                                      |
| Cookin' with Pillsbury | Recipe management for JJC                                                |
| Proxiguard             | Detention checks at JJC                                                  |
| Jail View              | Allows select court staff access to Boone county jail records            |
| Justice Web View       | Allows select court staff to access City of Columbia municipal case data |
| wlntegrate             | Allows select Juvenile staff access to City of Columbia records          |
| FTR                    | Courtroom sound recording                                                |



## 2012 ACCOMPLISHMENTS

### Alternative Sentencing Building Renovation

In 2012 the lower level of the Alternative Sentencing building underwent renovation in order to improve the drug testing facility and to provide additional conference room and office space. The lower level was largely gutted then refurbished. Three technology-related enhancements were included.

The first technology-related improvement was reconfiguring the building's telephone wiring so that internal telephone lines were placed on a patch panel. This allows Technology Services staff to move telephone extensions within the building instead of contacting local telephone service technicians who would charge a fee.

The second improvement was the addition of a wireless access point on the upper level of the building which provides wireless network capability throughout the building. The wireless service is the same service provided within the courthouse that allows properly configured court notebooks access to court network resources and other visitors access to the internet. Wireless internet access is provided to other building inhabitants including Probation & Parole staff and the company contracted for drug testing.

The last enhancement was the addition of a 'smart board' in the lower-level conference room. A smart board is a device which, when connected to a properly equipped notebook, will allow one to interact with the notebook from the wall-mounted board. Using a special stylus the user can draw and initiate computer commands. The smart board is used primarily by Juvenile Office staff for various programs.

### Boone A/P Electronic Interface

Boone County receives and records accounts payable transactions largely in a manual manner. Most county offices send to the Auditor's office paper payment requisitions and other necessary documentation. Auditor's office staff then manually key data into the county's electronic system.

The Boone County Circuit Court has its own internal budget programs that electronically records payment requisition information, then manually prints the same documents which are later re-keyed by Auditor's staff.

Key staff from the Auditor's office, the Circuit Court, and Boone Information Technology met to discuss the potential for electronically transmitting such data from the Court systems to the County's system. By implementing an electronic interface, Auditor's staff would not need to re-key payment requisition information previously entered by Court staff in their own budget programs. An agreement was reached to proceed with developing the technology infrastructure and re-programming both Boone IT and Court IT systems to accommodate.

Several technical challenges were encountered. First, there are three separate Court-related budget programs – one each for Court Administrator, the Boone Circuit Clerk's office, and the Juvenile Justice Center. A new program had to be developed to allow all three Court budget systems to funnel transactions through a central point in Court IT to Boone IT and back again.

Next, certain technical reconfigurations were necessary to allow such transactions to be communicated in near-real time.

Lastly, court staff needed additional training to ensure data elements were being collected and entered in a manner consistent with the Auditor's needs.

After many months of programming and close collaboration between Boone IT, court staff, court IT and Auditor's office staff, the new interface was implemented in July of 2012.

### Boone Courthouse Wireless Access Points

As a courtesy to attorneys and other select courthouse visitors, wireless access points (WAPs) were strategically placed throughout the Boone courthouse in prior years with the intent they be used in common areas such as hallways and attorney conference rooms. It was presumed use in courtrooms could be

distracting so placement of WAPs focused on accessibility in common areas. Wireless access within courtrooms, while not intentional, was available in some locations.

However, as smart phones, iPads and other personal digital devices become more prevalent attorneys need wireless access wherever they happen to be – and that includes courtrooms. Additionally, it was determined court employees (primarily Juvenile Office staff) work more effectively within the courtroom using notebooks with wireless capability that can access judicial network resources.

In 2012 two additional WAPs were installed which helped extend the courthouse wireless signal into areas where such signal was lacking. These two WAPs now improve wireless reception in the area of the Ceremonial Courtroom and the west side of the second floor.

## Case Scheduler

For cases that go to trial, the process for determining a date for trial takes into consideration several factors including the court schedule, judge and attorney availability, identifying the specific cases that need to go to trial, and numerous other factors. Setting cases for trial is a largely manual process that is very tedious and time-consuming.

In 2011 the Attorney Conflict Calendar was deployed as the first phase of a two-phase project designed to alleviate the arduous process of determining appropriate dates for setting trials. The Attorney Conflict Calendar records upcoming dates of unavailability of attorneys.

The second phase is the development of the **Case Scheduler**. The Case Scheduler examines data from a variety of sources including:

- the court case management system,
- the Attorney Conflict Calendar, and
- judge and docket schedules.

The Case Scheduler pulls data from several sources, applies rules, compares schedules, and ultimately proposes trial dates. This

program significantly reduces the amount of work performed by clerical staff.

The goal was to deploy the Case Scheduler in 2012. However, the time allotted to work on the Case Scheduler was interrupted due to the request to develop and deploy the A/P Interface mentioned earlier. As a result much, but not all, of the work required to deploy the new application was completed in 2012. It is anticipated the Case Scheduler will be in full production in the Spring of 2013.

## Callaway Jury Media Cart

Sometimes in court cases attorneys will introduce certain video and/or audio evidence. A notebook computer connected to a projector allows the jury to view such evidence.

In 2009 a notebook computer was purchased using Callaway Law Library funds with the intent of being used for both jury media viewing and for judge research. Due to circumstances this arrangement was impractical as it became more of a judge research tool and not used for jury media viewing.

As a remedy to this conflict, in 2012 a second notebook was purchased strictly for the purpose of jury media viewing. This notebook is configured with typical software for viewing common electronic media formats. It is housed in a portable media cart that can be used in the courtroom, the jury assembly room, or other locations as needed.

## Callaway Juvenile Office Relocation

In late 2011 the Callaway County Commission acquired a commercial building in which it planned to house both the Public Defender's office and the Juvenile Office. This decision was made as an overall cost-saving measure for the County. The lease on the former space occupied by the Juvenile Office was due to expire at the end of March 2012 – meaning the Juvenile Office staff would need to relocate on or before that date. In late 2011, and early 2012, much effort was expended very quickly to develop building schematics, including wiring for voice and data drops, and perform construction.

One of the more technically challenging aspects of the relocation concerned network communications to allow the Juvenile Office to connect to the judiciary's network.

In the former building network communications to the Juvenile Office consisted of a line-of-sight radio dish connected from the judiciary's network in the courthouse transmitting to the Juvenile Office approximately 100 yards away. In the new location this technology would not work as the new office was several miles away and the terrain made that configuration impossible. In order for network connectivity with adequate speeds, the Juvenile Office needed a fiber connection.

The nearest fiber connection fortunately terminated approximately a quarter-mile away from the new location. Another entity – the City of Fulton – was also interested in extending fiber to a location that ran past the new Juvenile Office. With collaboration from the Commission, circuit court staff, the Office of State Courts Administrator, the City of Fulton and Sho-Me Technologies, the fiber was extended inside the facility. The Juvenile Office relocation was completed by the deadline.

## Electronic Filing (eFiling) & Electronic Bench (eBench)

The Missouri judiciary's Electronic Filing project, also known as **eFiling**, is a process that allows attorneys to file documents with the court online without having to visit the courthouse. Documents are sent to a queue, examined by court staff, accepted and attached electronically to the appropriate case in the database. Additional paper documents for a case not received through eFiling can be scanned and attached electronically.

Case documents can be retrieved through the computer by court staff from anywhere on the judicial network, and by attorneys via the internet through a secure web site. Judges access case documents electronically from the bench or in chambers; clerks manage cases without having to locate and check out a paper case file; attorneys view case documents online without having to visit the courthouse.

In fact, everyone can view the same case documents simultaneously.

Once stored electronically, paper versions of documents are no longer needed. Without paper, storage costs drop significantly and postage is reduced as copies of case documents can be transmitted electronically. As a result, courts on eFiling can provide much greater accessibility to case files and reduce storage costs.

Having seen the future, the Callaway Circuit Clerk made a decision in 2011 to begin scanning most case-related documents effective January 1, 2012, with plans to implement eFiling as time and circumstances would permit.

In mid-2012 the Office of State Courts Administrator selected Callaway to become a pilot site for eFiling. As an incentive OSCA agreed to provide certain technology equipment – primarily bench workstations for judges, and scanners and additional monitors for clerk staff – free of charge to the county. The county, local attorneys and OSCA agreed and partnered to bring this project to fruition.

Over time the three courtrooms in the Callaway courthouse were outfitted with additional equipment including:

- courtroom bench workstations,
- courtroom clerk workstations,
- court clerk & juvenile office scanners,
- courtroom scanners,
- courtroom printers, and
- additional monitors for judges, clerks and juvenile office staff.

On October 22, 2012, the Callaway Circuit Court went live on eFiling. As of that date, all court documents (with the exception of those from pro se litigants) are required to be filed through the eFiling web site.

## Case Docket Processing for eFiling Courts

The *docket* is a list of cases scheduled to be heard by a judge or commissioner during a given docket session. Prior to eFiling, paper-based case file folders for an upcoming docket were collected by court clerk staff and brought into the courtroom. The judge processed each case, one paper file at a time, until the docket was completed. For each case file the judge

would record orders by manually writing those orders on a paper docket sheet. Afterward, court clerks reviewed the judge's docket sheet and transcribed the manually-written orders into the court's electronic case management system.

However, courts using eFiling no longer use paper case files. Without paper case files a new method for handling dockets within the courtroom was needed.

The Electronic Bench, also known as **eBench**, allows court dockets to be generated and managed electronically. Once the electronic docket is prepared by clerk staff the judge, using a workstation and monitors at the bench, views and manages the docket session. The details and documents of each case are viewed and processed electronically at the bench.

An additional benefit of this process is that judges who used to manually write their orders on paper docket sheets are now typing them which virtually eliminates handwriting legibility problems occasionally experienced before eFiling/eBench.

## **FTR (Sound Recording)**

For The Record (FTR) is a software product used to create and manage sound recordings of court proceedings. Such recordings are made for many associate circuit cases in the event a transcript of a court proceeding is needed later. Each day as courtroom activities are completed clerks archive the recordings to CD. To reduce the chance of losing data due to a disk drive crash, each FTR workstation is specially configured with two mirrored disk drives. In the event of a disk drive failure the second drive should continue to function allowing time for repair.

Two significant FTR-related events occurred in 2012:

First, upgrades to many of the courtroom FTR workstations were performed. Upgrading the

software to the version 5.x release was a necessary preliminary step for the upgrade to Windows 7 slated for early 2014.

The second event was the introduction of a Network Attached Storage (NAS) device. A NAS device is essentially a mirrored pair of disk drives with a large storage capacity. Version 5.x of FTR offers the option of archiving, in real time, both to the local FTR workstation and to the NAS device. A single NAS device can accommodate up to five FTR workstations simultaneously. By archiving to two places at the same time, the need to manually archive recordings separately to CD is eliminated.

One NAS device was added to Callaway County in 2012 and supports all three of their FTR workstations. One NAS device was added to Boone County in 2012 and supports four of the eight FTR workstations. A second NAS device is planned for Boone County in 2013.

## **Web Site Enhancements**

Effective January 1, 2012, the new and improved 13<sup>th</sup> Judicial Circuit web site was implemented. The new web site, located at <http://www.courts.mo.gov/hosted/circuit13>, provides several improvements over the former web site including search features, up-to-date information regarding office units, daily docket updates, and numerous online forms.

During 2012 some of the forms were modified allowing a web site visitor to complete and save the PDF file so that it could be returned in an electronic format. The first forms to have this feature in 2012 were the Jury Questionnaire and the job applications.

## 2013 UPCOMING ACTIVITIES

### Case Scheduler

The Attorney Conflict Calendar was deployed in 2011 as the first phase of a two-phase project to automate the process of scheduling cases on the trial setting docket.

The second phase of the process is the development of the **Case Scheduler**, a new application that will evaluate several factors including judge schedules, attorney availability, division calendars, and others to propose dates for trial. This second phase is designed to automate the manual processes undertaken today. The majority of the development of this new application was undertaken in 2012 and is expected to be fully operational by Spring 2013.

### Booking Software

The booking software used by the Boone County Circuit Court is antiquated. The 13th Circuit's Technology Services staff are collaborating with other law enforcement and emergency response departments to develop a coordinated records management system that will include a booking component. The present booking software needs to remain functional until the upgraded software becomes available.

### Windows 7 & Office Automation

The judiciary's current desktop operating system and office automation suite, Windows XP and Office XP respectively, will be phased out in the judiciary in favor of Windows 7 and a new office automation suite, Office 2010, in Spring of 2014.

Existing workstations and notebooks not capable of running this new configuration are scheduled to be replaced or upgraded throughout 2013 and early 2014.

Additionally, existing in-house applications will be tested in the new configuration and any necessary programming modifications implemented before the mass transition.

### eFiling and eBench

The Office of State Courts Administrator (OSCA) is implementing eFiling and eBench throughout the judiciary. **eFiling** allows attorneys to electronically file documents with the court through the internet, and allows court staff to view court documents electronically through computer monitors on the judicial network.

**eBench** allows court proceedings to be managed in the courtroom paper-free by having the judge manage them electronically at the bench.

OSCA's eFiling and eBench model utilizes two monitors positioned side-by-side. This dual-monitor configuration provides more screen viewing area so that numerous applications, primarily Case.net, eBench and JIS, may appear simultaneously in front of the user thereby reducing the need to constantly raise and lower applications from the Windows task bar.

The dual-monitor setup is used primarily by judges, court clerks, and others who use the court case management system on a daily basis and also in the courtrooms.

eFiling and eBench were implemented in Callaway County in October 2012. Boone County is expected to go live effective January 1, 2014. Therefore, much of 2013 will be spent acquiring, deploying and configuring appropriate hardware such as courtroom bench and courtroom clerk workstations, monitors, scanners and printers.

### FTR Backups

As noted above, FTR (For The Record) is a software product used to make audio recordings of courtroom proceedings. The audio recordings are stored on the FTR workstations, and are also archived to CD for posterity.

Over time the storage of the CDs requires ever increasing amounts of space.

To alleviate this growing problem the Office of State Courts Administrator (OSCA) recommends the strategy of using a Network Attached Storage (NAS) device to archive sound recordings instead of CDs. A NAS device uses a pair of mirrored disk drives for redundancy and has vast storage potential. Each NAS device can provide real-time archiving for up to five FTR workstations.

In 2012 the Callaway County Circuit Court and Boone County Circuit Court each acquired a NAS device. All three of Callaway's FTR workstations were reconfigured to archive to the device. Four Boone County's eight FTR workstations were configured to archive to the NAS device.

In 2013 Boone County plans to acquire a second NAS device and will configure its four remaining FTR workstations to archive to this device, thereby eliminating the need to manually archive any recordings to CD.

## Application Updates

Several of the 13<sup>th</sup> Circuit's in-house applications were developed using what are now aging and antiquated software languages. As technologies change these languages will likely cease to function.

Technology Services staff previously began an effort to migrate and upgrade older applications to operate on more modern, currently technologies. The Circuit Court Technology Services (CCTS) application has become the foundation for this transition. CCTS uses a combination of SQL server as its database, Apache as its web server and Ruby on Rails as the application development tool.

Users are defined to CCTS once and granted privileges to the various applications as needed.

At the end of 2012 CCTS was used for the Focus on Kids and JJC Case Management applications. In 2013 the Case Scheduler will be added as a module. Additionally Technology Services staff plan to rewrite the Court Services program.