



13th Judicial Circuit Court

Technology Services 2014 Annual Report

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Technology Services Supervisor

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STAFF AND RESPONSIBILITIES

The Technology Services unit of the 13th 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

Paul Christus / Michelle Wheeler

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

Nicholas Stultz

- Applications Development

Staff Changes in 2014

- Paul Christus left in August 2014. Michelle Wheeler began in September 2014.

TECHNOLOGY AREAS SUPPORTED

Summary of the technology-related components managed and activities routinely performed by the unit:

NETWORK

Network Management

- User & computer network account management
- Work w/ patch panels / patch cables / switches / hubs
- Collaborate with Office of State Courts Administrator (OSCA) staff to resolve network-related issues

Workstations

- Install/configure operating system
- Install/configure numerous software products
- Locate and eradicate viruses and other mal-ware
- Manage workstations and work with user issues over the phone & in person

Servers & Storage Devices

- Install/configure operating system
- Manage RAID devices (servers and Network Attached Storage)

Printers & Multi-Function Devices

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

Video Conferencing Technologies

- Program video conferencing 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

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

GENERAL SUPPORT

Support

- Manage Help Desk requests
- Collaborate with other government technical entities

Technology Training

- Train users in office products
- Train users in use of video conferencing components
- Develop & manage technology-related training materials

Security

- Extract video recordings of courthouse incidents to DVD
- Configure software managing courthouse door locks
- Ensure appropriate user access for applications and network files

Other

- Develop & update technical documentation
- Manage technical inventory

APPLICATIONS MANAGEMENT

Development

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

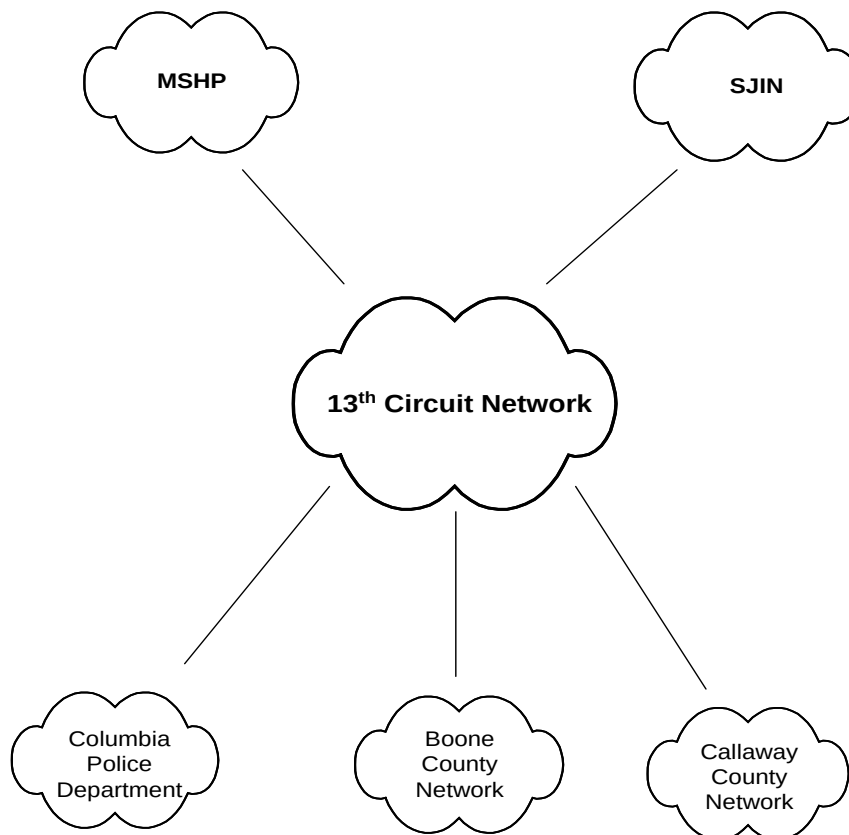
The computer network utilized by the 13th Circuit is part of the larger Statewide Judicial Information Network (SJIN) managed by OSCA. The SJIN is the backbone that interconnects all trial and appellate courts in Missouri.

OSCA provides to the courts certain hardware components and software products utilized by all judiciary sites including file, print and database servers, communication 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 13th 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 13th Circuit. It also installs and manages purchased “off-the-shelf” software not provided by OSCA such as accounting and various office products.

Additionally, the 13th 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.



ASSETS

Asset Tracking

The Technology Services unit uses an internally-developed application to track the various technology assets of the circuit. This includes both hardware and software assets. Some assets are owned by Boone County, some by Callaway County and others by OSCA. However, the Technology Services unit tracks and manages technology components regardless of their ownership.

At the end of 2014 the unit tracked the following technical assets:

Hardware

- Boone-owned: 655
- Callaway-owned: 165
- State-owned: 178

The majority of these hardware assets are workstations, monitors and printers.

Licensed Software*

- Boone-owned: 59 licenses
- Callaway-owned: 4 licenses

*Note: *Licensed software* refers to software purchased under a software license agreement. Examples include Case Catalyst used by the court reporters, FTR for sound recording, and Quickbooks utilized by the Boone Circuit Clerk's office and both Juvenile offices. Such products can be installed on workstations only as agreed to in the licensing agreements.

Non-Licensed Software**

- Boone workstations: 104
- Callaway workstations: 6
- State workstations: 137

**Note: *Non-licensed* products are provided free-of-charge by a vendor or by the state. Examples include the MULES software provided by the Missouri State Highway Patrol, MACSS provided by Missouri Department of Social Services, and the AS/400 terminal emulation product provided by Boone County IT. The operating system

and other system software are not included in this count.

Workstations

The 13th Circuit utilizes approximately:

- 201 workstations (98 provided by the state),
- 17 tablet computers (12 provided by the state), and
- 30 notebook computers (1 provided by the state).

The operating system for these devices is Windows 7.

Printers

The 13th Circuit utilizes approximately 111 network and local printers, 7 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 Floor, 2 South, 3 West and Ceremonial 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 uses telephonic interpreters to accommodate non-English speakers through Language Line whereby interpreters are available on short notice to provide language interpreting services over the conference telephone.

Other Courtroom Technology

In Boone County, the 2 South courtroom has teleconferencing and video conferencing abilities. Additionally, the 3 West and Ceremonial courtrooms in the Boone County Courthouse have technology components for evidence presentation, teleconferencing and video conferencing.

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

Enterprise Software Provided by OSCA

Product	Primary Use
Windows 7	Operating system
Office 2010	Office automation (word processing, spreadsheet)
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
MULES	Mo Uniform Law Enforcement System
eFiling	Allows attorneys to file case documents electronically
eBench	Allows judges to electronically manage the court docket

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 • Court Services
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	Schedules cases going to trial
BIRS	Booking and Incident Reporting System

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
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
wIntegrate	Allows select Juvenile staff access to City of Columbia records
FTR	Courtroom sound recording

2014 ACCOMPLISHMENTS

ACS Rewrite

The Adult Court Services unit has, for several years, used the locally-developed 'Court Services' application and the 'Fines and Costs' application to track offenders and costs. Both applications were written several years ago in now-aging technologies.

As part of an overall goal of migrating applications into current technologies, a major development effort was undertaken during 2014 to rewrite these applications and migrate them into a single module within CCTS.

The new application allows Adult Court Services staff to:

- manage defendant demographic information,
- manage programs, fines and costs to case defendants, and
- produce reports and export data.

The application interacts directly with JIS to pull existing defendant demographic, case, cost and fine information where possible.

Initial meetings were held early in 2014 to define requirements. The coding and comprehensive end-user testing took most of the year.

The application was deployed December 31st, 2014.

Booking and Incident Reporting System (BIRS)

The 13th Judicial Circuit marshal's office for several years had made use of the RECORDS application to record booking-related information for arrests made at the Boone County Courthouse. The application ran in aging software (Windows XP) and would not run under Windows 7. All access to Windows XP was scheduled to be terminated by OSCA after 12/31/2014.

Over the past few years there was anticipation that a unified county-wide application for recording booking and other law enforcement information might be implemented, and that

the court marshal staff would make use of that system to replace RECORDS.

However, early in 2014 it became clear that the county-wide application would not be ready for use by the court marshal staff by the time it was needed. To alleviate this problem Technology Services staff developed and implemented an in-house application to record and process both booking information and incident reports.

The Booking and Incident Reporting System (BIRS) was implemented November 1st, 2014. The application features a workflow processing scheme that allows deputy marshals an ability to draft reports, then have them reviewed and approved by supervisors.

Boone Jail Video Conferencing Unit

As part of a routine replacement cycle the video conferencing unit at the Boone County Jail was replaced in August 2014.

The unit and its peripheral components (television, speaker, etc.) were housed in a tamper-resistant cabinet in the jail chapel.

Due to their shape and size the replacement components would not fit within the existing cabinet. Therefore, a new custom cabinet was built by a local contractor.

Callaway Jail Video Conferencing

In early 2014 the Callaway County Commission discussed with the court and other offices the potential to conduct certain court proceedings with jail inmates by video conference. This proven strategy combines both cost-savings and enhanced security by not having to transport jail inmates for court proceedings.

The Callaway County Commission requested participation for a pilot project. OSCA, the court and others partnered to connect a high-speed fiber connection from the Callaway County Courthouse to the jail.

In late 2013 the 13th Circuit received a replacement video conferencing unit from OSCA. The former unit was still serviceable and had been set aside as a spare. This spare unit was loaned to the jail as part of the pilot. On July 1st, 2014 the unit was available for service and began video conferenced court proceedings shortly thereafter.

Electronic Filing (eFiling) – Boone Implementation

The Missouri judiciary's Electronic Filing project, also known as **eFiling**, allows attorneys to file court documents electronically online. Documents are sent electronically to a queue, examined by court staff, accepted and attached to the appropriate case in the database. Additional paper documents for a case received outside of eFiling can be scanned and attached electronically.

Case documents are retrieved via computer by court staff and by attorneys 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; and attorneys view case documents online without having to visit the courthouse. In fact, everyone can view the same case documents simultaneously.

Once stored electronically the 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 the courts on eFiling can provide much greater accessibility to case files and reduce storage costs.

Callaway County went live with eFiling and eBench in October 2012. Boone County went live with eFiling in February 2014.

Electronic Filing (eFiling) Case Processing Contingency Plan

Sites on eFiling no longer maintain paper case files. Additionally, dockets are processed electronically using eBench. While network resources are reliably available nearly all the

time during normal business hours, there are occasional outages which prevent access to the electronic records.

As part of the Memorandum of Understanding (MOU) OSCA has with sites that are on eFiling, each site is expected to develop their own contingency plans memorializing how they plan to handle case processing activities when the electronic case resources are unavailable.

In late 2013 a committee was formed consisting of staff representing the Circuit Clerk offices, judges, the Juvenile office, and Technology Services. The committee met multiple times to discuss potential outage scenarios and identified steps to be taken under different circumstances.

In early 2014 the committee finalized the *Circuit 13 Case Processing Contingency Plan*. In this plan outage scenarios and responses were synthesized into easy-to-read flowcharts. The plan has been printed and is readily available in each courtroom and the various clerical offices.

This plan was provided to OSCA as part of the MOU. OSCA was impressed with the plan and now provides it as a template to other sites considering eFiling.

Hotspots for On-Call Activities

The work of the court is not limited to normal business hours. Judges and juvenile office staff may be on-call and contacted during nights and weekends to conduct court business. Each Boone County judge has a FAX machine installed in their residence. In Callaway County law enforcement staff may travel to a judge's home to obtain a signature for warrants and other documents. Juvenile office staff were using a combination of iPads with mobile access or their personal home internet connections to conduct court business.

For judges this means the on-call judge is more or less confined to home in order to receive and process FAX requests for warrants and other items.

In 2014 several 'hotspots' were obtained for use by judges and juvenile office staff for their on-call activities. A hotspot is a small device which combines wi-fi connectivity with cellular data thus allowing any device with a wireless connection such as tablets, notebooks and iPads access to the internet through the cellular data component.

There are multiple benefits to using the hotspots, primarily:

1. the person can connect their device to the internet wherever there is a cell phone signal thus allowing the person to be away from home;
2. recurring monthly data charges for cellular data are limited to only the hotspots themselves instead of the multitude of devices used by all judges and juvenile office staff. A hotspot can be handed off from one person to another when needed; and
3. staff need not use their own personal home networks for court-related business.

State Workstation & Monitor Replacements

The 13th Circuit has a blend of state-paid and county-paid employees. Accordingly the Technology Services staff manages a blend of both state- and county-owned workstations for those employees.

Every four years OSCA replaces the state-owned workstations. OSCA last replaced state workstations in 2010 and planned to replace workstations again in June 2014.

Over the years due to prior practices some state-paid employees were using county-owned workstations and vice versa. With the upcoming workstation replacement the Technology Services staff developed a plan to migrate county-owned workstations to county-paid employees, and to migrate state-owned workstations to state-paid employees in advance of the state workstation replacement.

During the development of the plan it was discovered there were not enough existing

state workstations in Boone County to supply all state-paid employees. The county had supplied workstations to approximately 10 state-paid employees to cover the shortage. This discovery was made known to OSCA which agreed to supply the additional workstations during the workstation replacement project.

During the first half of 2014 Technology Services staff migrated workstations piecemeal over time so that most state-paid employees were working on state-provided workstations and vice versa. Such changes were often accomplished during employee turnover or while employees were on leave.

At the conclusion of the state workstation replacement project state-paid employees were using state-owned workstations and county-paid employees were using county-owned workstations. This arrangement will remain in place for the foreseeable future.

Monitors

In past years the state provided workstations for its employees. However, it was left to each county to provide monitors for all workstations including those workstations provided by the state.

During the 2014 workstation replacement the state provided one 23" wide-screen monitor for each workstation it replaced. This means the county is now responsible for far fewer monitors and no longer needs to provide monitors for state-provided workstations.

Training Conducted

During 2014 the 13th Circuit Technology Services staff offered 19 formal training classes in the areas of Lotus Notes, WebNotes, eBench, courtroom technology and video conferencing technology. Due to Boone County moving to eBench in 2014, several eBench demonstrations were conducted for attorneys.

Collectively 108 people attended trainings, and 59.5 hours of training were provided.

Windows 7 & Discontinuation of Windows XP

Effective April 2014 Microsoft stopped supporting Windows XP. OSCA informed the judiciary that Windows XP workstations would not be allowed to access the statewide judicial network after 12/31/2014. This announcement had two impacts to the 13th Circuit.

First, during 2013 numerous county-owned workstations were upgraded to Windows 7 or replaced. In 2014 the remainder of those workstations - approximately 20 - were upgraded to Windows 7 or replaced.

Second, there were still a handful of legacy applications originally provided by OSCA (chiefly ACMS and MOCIS) that were still desired for use by a handful of Boone County staff. Such applications are not able to run under Windows XP. To accommodate this desire two dedicated XP workstations were set aside and configured to run such applications locally. While these workstations will not be able to access network resources after December 31, 2014 they can still run those applications locally until such time as the machines fail.

2015 UPCOMING ACTIVITIES

Applications

Budget Program

In 2014 the Technology Services staff met with Boone IT and the Boone Auditor's office to discuss a change in the budget information shared between the court and Boone County. Specifically, information about the manner of vendor payment (ACH vs. check) was requested by the Auditor's office to be collected and reported both in paper and electronic interfaces.

It is anticipated this enhancement will be added to the court's Budget program in 2015.

JIS Changes

Charge codes in JIS are currently 9 characters in length. Beginning January 1st 2016 the length of charge codes in JIS will expand to 23 characters to accommodate an overhaul of criminal charge codes enacted by the Missouri Legislature.

During 2015 Technology Services staff will evaluate the existing locally-developed applications and will make any necessary modifications to accommodate the change in length of the charge code.

Boone Jail 2nd Video Conferencing Unit

A Criminal Justice Administration Coordination Committee meets monthly to discuss ways to reduce overcrowding at the Boone County Jail.

In 2014 the committee discussed and agreed that a second video conferencing unit should be added at the jail to handle additional video dockets.

A second unit was purchased in late 2014 and will be deployed in early 2015.

Ground Floor Courtroom Video Conferencing Upgrade

The video conferencing equipment in the Ground Floor Courtroom of the Boone County Courthouse is aging. The video conferencing codec was installed in 2004. The cameras and other technology are 1990's-era.

During 2014 the audio quality of the connections with some locations, particularly with the Boone County Jail, started to degrade making it difficult for video participants to understand each other.

It is anticipated in 2015 the Boone County Circuit Court will investigate the potential to replace and upgrade the video conferencing capabilities in this courtroom with more modern technology.

Microphone Replacement for 3 West Courtroom

The Boone 3 West Courtroom makes use of both wired and wireless microphones. Some of the technology - installed in 2008 - is starting to show signs of wear.

Specifically, the wireless microphones used by attorneys in this courtroom are degrading. Due to the use of FTR sound recordings in this courtroom it is not a simple matter to just replace the wireless microphones with another brand.

After internal discussions among judges and other key court staff it is anticipated that the attorney wireless microphones may be replaced with wired microphones in 2015.

Server Replacement

The BNEAS1301 server was a “used” server donated by OSCA in 2010 to the 13th Circuit and is currently the hosting server for locally-developed applications.

It is planned in 2015 to purchase a replacement server and re-purpose the existing server as a secondary or backup server, and as a testing platform.

Staff Training

Application development has been performed primarily by the application developer utilizing Ruby and Rails. Other local application development is performed by the Supervisor utilizing Lotus Notes.

While each is well-versed in their respective application development languages they are not fluent in each other's languages. With a small staff it is important to cross-train staff in the various disciplines encountered in Technology Services.

During 2015 it is planned that the application development languages and server operating systems will be cross-trained.

Wireless Access Points for JJC

Wireless access points are used throughout four of the five buildings utilized by the 13th Circuit – the Juvenile Justice Center being the one facility without them.

As court staff make more use of notebooks and other wireless technology it is desired to have wireless capability in all facilities.

It is anticipated that in 2015 wireless access points will be added to the Juvenile Justice Center.

APPENDIX A

Workload Analysis

Categories of Issues

In order to analyze the overall workload, several categories of issues have been identified and established in JIRA, the issue management software utilized by the Technology Services team. As each issue is recorded it is assigned to one of the following categories:

1. **Staff & Equipment** - Tasks typically related to:
 - a) personnel changes (e.g. new hires and resignations), and
 - b) equipment moves or troubleshooting for computers & phones, etc.
2. **Software & Device Configuration** - Requests to install software, configure printers, etc.
3. **Documentation** - Updating technical documentation such as operational checklists.
4. **Software Development** - Requests to change software functionality or fix software bugs.
5. **Security** – Includes requests to modify user network and application security, and requests to extract security video footage.
6. **Purchases** - Requests to purchase technology-related equipment such as workstations and monitors.
7. **Web Site** - Requests to modify web site content such as posting and pulling job advertisements.
8. **Vendor Management** – Contacting and managing outside repair staff or technicians.
9. **Reporting & Data Research** - Requests for ad-hoc data queries and reports.
10. **Training & Demonstrations** - In-service training on technology-related topics.
11. **Wiring** - Requests to pull network and telephone cable, or reroute telephone lines via patch panels.
12. **Miscellaneous** - Items that don't fit into any other category.

Recording of Issues

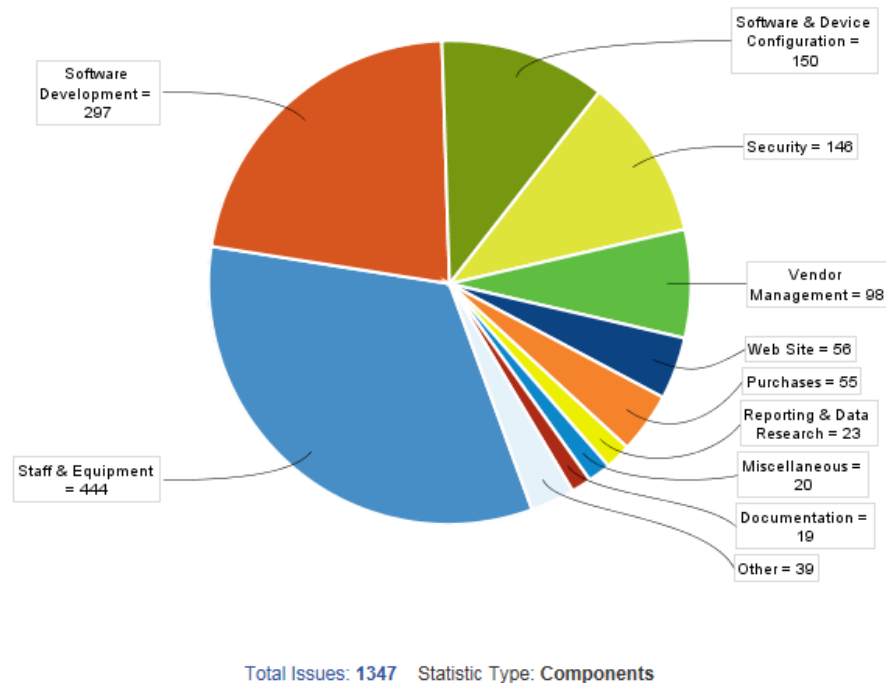
The primary reasons for recording issues in JIRA are to ensure that nothing is overlooked and that priority issues are handled in a timely manner.

Not all issues are recorded in JIRA. Technology Services staff routinely receive calls for courtroom emergencies, password assistance, and similar issues which are immediately resolved. Such issues are typically NOT recorded in JIRA after-the-fact.

Issues that cannot be immediately resolved –or- are scheduled to be worked at a later date are recorded. Examples include employee changes (hires and resignations), scheduled equipment moves, or removing job advertisements from the web site once the ad expires. This is to ensure no issues are missed or take too long to resolve.

Clock time spent on issues is not recorded. Some issues may be resolved in as little as 5 minutes. Others could take much longer. Therefore the numbers below are simply *counts* of issues and do not reflect the total amount of time spent on recorded issues.

2014 Issues Opened



On January 1st of 2014 a total of 66 issues were pending.

Throughout 2014 a total of 1,347 issues were opened and categorized as follows:

33% were related to **Staff and Equipment** which are typically activities associated with employee hires, resignations, and moves.

22% were related to **Software Development*** which are associated to application programming requests and bug reports.

11% were related to **Software & Device Configuration** which are typically requests to install and/or configure software.

These three categories constitute nearly two-thirds of the tasks recorded.

Throughout 2014 a total of 1,365 issues were resolved. The percentages among the categories were virtually the same.

On December 31st, 2014 a total of 48 issues remain pending.

Additional Notes:

*In 2013 *Software Development* items were tracked more at a 'group' level, meaning that a request or bug report that required multiple changes was generally counted as 1 JIRA issue. During 2014 the 13th Circuit began tracking Software Development items on a more individual level. During the ACS re-write project beta testing as staff discovered bugs or identified new desirable features those items were individually tracked. This explains the significant increase in this category of 71 items in 2013 to 297 items in 2014.