13th Judicial Circuit Court

Technology Services
2019 Annual Report

Christopher Fishman-Weaver
Technology Services Supervisor

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STAFF AND RESPONSIBILITIES

The Technology Services unit of the 13th Circuit is staffed by 3 people:

Christopher Fishman-Weaver, Supervisor

- Staff Supervision
- Technical Project Management
- Hardware, Software and Network Management
- Applications Development Management
- Technology Bid & Contract Preparation and Review
- Statewide & Local Committee Participation

Dickson Njoroge, Computer Information Specialist

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

Jenniffer Macharia, Computer Information Specialist

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

Staff Changes in 2019

- Nicholas Stultz left in April 2019. We thank him for his 10 years of service to the courts.

TECHNOLOGY AREAS SUPPORTED

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

Network

Network Management
- User and computer network account management
- Manage patch panels, cables and switches
- Collaborate with other technology staff to resolve network-related issues

Workstations
- Install and configure operating system and applications
- Locate and eradicate viruses and other mal-ware
- Manage workstations and resolve user issues both remotely and locally

Servers & Storage Devices
- Install and configure operating system and applications
- Manage storage devices (servers and Network Attached Storage)

Printers & Multi-Function Devices
- Configure network printers and multi-function devices
- Program printers for scanning and email
- Perform minor printer repairs and routine maintenance
- Manage printer maintenance vendors

Video Conferencing Technologies
- Configure video conferencing devices
- Manage video conferencing bridge to schedule and conduct conferences

Audio/Visual

Courtroom Technology
- Train and assist staff on courtroom evidence presentation systems
- Manage vendors troubleshooting and resolving issues

Audio/Video
- Manage audio technology (microphones, speakers, amplifiers & XLR cabling)
- Set up and manage projectors and document cameras

Digital Docket signs
- Manage digital docket signs

Telephones

Telephones
- Manage portable conference phones
- Collaborate with phone company regarding programming changes and issue resolution
- Route internal phone lines via patch panels

General Support

Support
- Manage Help Desk requests
- Collaborate with local and state government technical entities

Technology Training
- Train users in office products
- Train users in use of video conferencing and courtroom evidence presentation
- Develop and manage technology-related training materials
- Provide self-help information via the Circuit 13 Technology Help wiki

Security
- Extract video recordings of incidents
- Apply appropriate user access for applications and network files

Other
- Technology budget preparation and implementation
- Develop and update technical documentation
- Manage technical inventory

Applications Management

Development
- Development of digital signage for all dockets
- Collaborate with court staff to enhance locally-developed applications

Reporting
- Create and manage ad-hoc reports using COGNOS
- 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 connects all trial and appellate courts in Missouri. From a computer networking perspective, Missouri's courts are a united enterprise and the 13th Circuit is part of that enterprise.

OSCA provides for the courts certain **hardware components** utilized by 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 services have consolidated into centralized judicial data centers located in different geographical locations within Missouri.

OSCA also provides and manages enterprise-wide **software products** including, but not limited to, court case management software, jury management software, email, office automation products, Case.Net and the judiciary's "Your Missouri Courts" website.

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 certain software applications in-house used solely by 13th Circuit staff. It also installs and manages "off-the-shelf" software not provided by OSCA such as local accounting and other office automation products.

Additionally, the courts network interacts with the networks of Boone County, Callaway County, the City of Columbia, and the Missouri state network. The result is a blended responsibility and cooperation among circuit, state and local government entities.

ASSETS

Asset Tracking

The Technology Services unit uses software to track and manage the various hardware and software assets of the circuit. Some assets are owned by Boone County, some by Callaway County, and others by the state. However, the Technology Services unit tracks and manages all of the court-related technology components regardless of ownership.

At the end of 2019 the unit tracked the following technical assets:

Hardware
- Boone-owned: 675
- Callaway-owned: 165
- State-owned: 230

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

Licensed Software Installed
- Boone-owned: 66 licenses
- Callaway-owned: 4 licenses

Non-Licensed Software Installed
- Boone workstations: 99
- Callaway workstations: 8
- State workstations: 123

Workstations

The 13th Circuit utilizes approximately:
- 191 workstations (98 provided by the state),
- 5 tablet computers and,
- 45 notebook computers (16 provided by the state).

Printers

The 13th Circuit utilizes approximately 115 network and local printers, 12 of which are provided by the state.

Video Conferencing

The 13th Circuit utilizes video conferencing equipment to help reduce overall costs for staff travel for meetings and prisoner transport. There are several mobile units, as well as units incorporated into the technology of the Ground Floor, 2 South, 3 West and Ceremonial courtrooms of the Boone County Courthouse.

Outside of court facilities, two units are located in the Boone County Jail and one unit is located in the Callaway County Jail.

Conference Telephones

Both Circuit Courts routinely see case participants who either do not speak English fluently or do not speak English at all. Each court sometimes uses telephonic interpreters to accommodate non-English speakers through Language Line™, whereby interpreters provide language interpreting services over a portable conference telephone placed in the courtroom.

Courtroom Technology

In Boone County the 2 South and Ground Floor courtrooms have both teleconferencing and video conferencing abilities. Additionally, the 3 West, Ground Floor and Ceremonial courtrooms in the Boone County Courthouse have technology components for evidence presentation as well as teleconferencing and video conferencing.

NOTE: These lists show major products in use and is not an exhaustive list of all software items.

Enterprise Software Provided by State Entities

These products are provided by OSCA, the Missouri State Highway Patrol and Missouri's Department of Social Services:

Product	Primary Use
Windows 7 / Windows 10	Operating system
Office 2013	Office automation
JIS / Show-Me Courts	Court case management
OSCA Reports	Court case reporting
COGNOS	Ad-hoc reporting
JMS	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

Local Software Provided by Technology Services

Product	Primary Use
CCTS	Modules for:
	• Focus on Kids
	• Budget
	• Case Scheduler
	• Court Services
Technology Asset Tracker	Manage technology inventory
Training Repository	Records training of staff under Court Admin authority
Court Admin Personnel	Records personnel info for staff under Court Admin authority
Attorney Conflict Calendar	Reporting calendar conflicts for attorneys
BIRS	Booking and Incident Reporting System for court marshal staff
Court Keys	Manages physical key distribution
Technology Help Wiki	Technology-related self-help web site for circuit staff

Other Third-Party Software

Product	Primary Use
Case Catalyst	Court reporter transcription
Quickbooks	Boone Circuit Clerk's office accounting
Nutrikids	Track nutritional information at JJC
Dreamweaver	Web site management
Cookin' with Pillsbury	Recipe management for 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
Papervision	Allows select court clerks to manage and access digitally archived documents

2019 ACCOMPLISHMENTS

Digital Docket Signs

The Digital Docket Sign pilot was deployed to the front entrance hallway of the Boone County Courthouse in late 2019. The two digital signs display the courtroom schedule and daily docket on a rotating basis and eliminate the need to print daily paper schedules. The digital signs were met with positive response and are actively being used by the public. The success of this long anticipated project will pave the way to expanding to digital signs outside each courtroom in the coming year.

FTR Upgrades

In 2019, 5 of the 8 FTR workstations in Boone County were replaced, and all 3 FTR workstations in Callaway County were replaced as part of the routine equipment replacement schedule. Additionally, per the judiciary, we have upgraded each FTR to version 6. This version is a major upgrade and was budgeted by both courts in 2018 for this 2019 purchase.

Replace Network Routers

In order to keep pace with technology, OSCA provided the 13th Circuit with two replacement routers, one in Callaway County and one in Boone County. These routers facilitate the connection between the local courts and the state wide judicial network, including Show-Me courts, and all network file storage. Both counties have seen a measurable improvement in network speeds.

Replace Internal Application Server

The original internal applications server was purchased at the start of 2015. It hosts many home grown applications that are heavily utilized by multiple departments. Given its age and the essential nature of these applications the server was replaced in 2019. The new server currently hosts our Digital Docket Sign program and database. Due to the departure of our full time programmer the application migration is expected to be completed in 2020. The older server will be repurposed as a test environment for all future application web/development.

Video Interpreter Pilot

In 2019 Boone County completed the first pilot run of video interpreting. Instead of an interpreter connecting to the courthouse via conference phone, the interpreter was able to attend via video conferencing. This allowed the interpreter to react to exactly what was happening in the courtroom, and better connect with all participants.

2020 UPCOMING ACTIVITIES

Expand Digital Docket Signs

Beginning in 2020 technology services will be expanding our digital docket signs to each individual courtroom with the goal of placing one additional sign outside each courtroom. This will eliminate the time and expense of paper dockets being printed and hung each day, while allowing us to react more quickly to schedule changes.

Transition all home grown applications to new server

Due to the departure of our long time programmer the transition of the home grown applications, from the old to new server, was delayed until 2020 to give current staff ample time and training to complete the required moves.

Replace audio equipment in four standard courtrooms

In 2018 the audio amplifier in the 1 West courtroom failed and overhead voice amplification was no longer available. The same system is also in 1 East, 2 West, and 2 East. In 2019 the audio amplifier in 1 East and 2 West also failed in the same manner. Given that the equipment was originally placed in the year 2000 it was decided that replacements be budgeted for 2020.

Adding additional Video Conferencing Units.

It is expected the court will add and configure two additional video conferencing units to expand our video capabilities at the Boone County Courthouse. This will be especially beneficial as we work to add video interpreters.

Continued Technology Evaluations

The technology in the Boone 3 West courtroom and jury assembly room was installed in 2008. Due to its age we will continue to reach out to multiple vendors to resume evaluations of the technology in the 3 West Courtroom and Jury Assembly in order to budget for replacements in 2021 and beyond.

Replace onsite Firewall

Due to the original firewall reaching end of life the Office of State Courts Administrator ("OSCA") will be replacing the current firewall. This will require coordination with onsite IT and OSCA IT to make sure the transition is as smooth as possible.

TRiPOS Terminal

In order to expand payment options for court costs and fines, the Circuit Clerks Office has opted to install credit card terminals provided by TriPOS. Each terminal will require that we run a dedicated Ethernet line and work with the Office of State Courts Administrator ("OSCA") to configure the network to allow the operation of the terminals. Technology Services will coordinate with the Clerk's office and Facilities maintenance to get the terminals up and running.

APPENDIX A - Workload Analysis

Categories of Issues

In order to manage 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** – Requests to modify user network/application security & to extract security video.
6. **Purchases** - Requests to purchase technology-related equipment such as workstations.
7. **Web Site** - Requests to modify web site content.
8. **Vendor Management** - Contacting and managing outside vendor/OSCA 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** - Pull network & telephone cable, or reroute telephone lines via patch panels.
12. **Administration** – Committee participation, bid activities, other administrative tasks.
13. **Miscellaneous** - Items that don't readily fit into any other category.

Documentation 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.
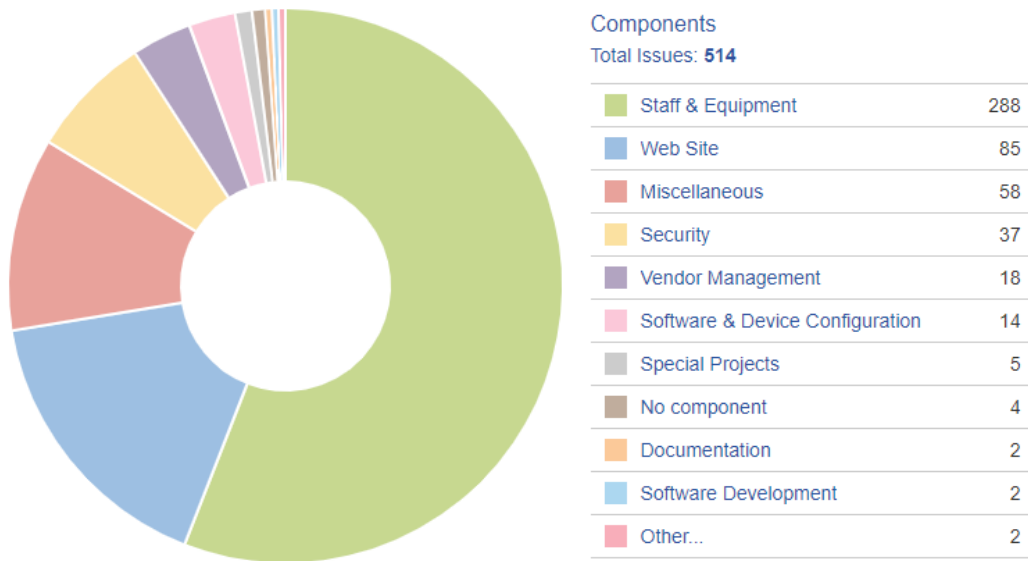
Issues must be documented in JIRA if they:
   a) cannot be immediately resolved,
   b) are scheduled to be worked at a later date, or
   c) are mandated by the judiciary's Security Guidelines.

It is important the reader note not all issues are recorded in JIRA. Technology Services staff routinely receive calls for courtroom assistance, password resets and other issues which are immediately resolved. Such issues are typically NOT recorded in JIRA after-the-fact. Therefore, the numbers noted in the chart on the next page are not an accurate reflection of the *total activities* performed by the Technology Services staff.

Clock time spent on issues is not recorded. Some issues documented in JIRA may be resolved in as little as 1 minute while others can take much longer. Therefore the numbers in the chart on the next page are simply *counts* of issues and do not reflect the total amount of time spent on recorded issues.

2019 Issues Opened

Components
Total Issues: **514**

	Component	Count
🟩	Staff & Equipment	288
🟦	Web Site	85
🟥	Miscellaneous	58
🟨	Security	37
🟪	Vendor Management	18
🩷	Software & Device Configuration	14
⬜	Special Projects	5
🟫	No component	4
🟧	Documentation	2
🟦	Software Development	2
🩷	Other...	2

On January 1, 2019 a total of 43 issues were <u>pending</u>

Throughout 2019 a total of 514 issues were <u>opened</u> and categorized as follows:

56% were related to **Staff & Equipment** which are typically activities associated with employee hires, resignations, and equipment moves.

7% were related to **Security** which are typically related to requests to extract security camera footage or to modify application or network access.

2% were related to **Software & Device Configuration** which are typically requests to install and/or configure software.

16% were related to **Website Updates** which are typically job postings, news and meeting updates or other general website updates.

3% were related to **Vendor Management** which are typically tickets opened with the Office of State Courts

These Five categories constitute three fourths of the tasks recorded.

Throughout 2019 a total of 535 issues were <u>resolved</u>. The percentages among the categories were virtually the same.

APPENDIX B - Glossary

CCTS - The Technology Services staff develop and manage several applications locally - applications not provided by OSCA. Several of these are developed and managed as a suite of "modules" under the umbrella of a single user and system management module. That suite of modules is branded as *Circuit Court Technology Services*, or CCTS. Court staff utilize a web interface on the court intranet to access the various modules within the application. At the end of 2018 the modules in this application are: Focus on Kids, JJC Case Management, Court Services, Case Scheduler, and Court Budget.

FTR - *For The Record* ™ (FTR) is the software product used to make on-the-record sound recordings of certain cases at the associate circuit court level. The audio from at least 4 microphones (judge, witness, attorney A and attorney B) are routed to an FTR mixer. Audio is routed to the FTR computer workstation and managed using the specialized FTR software. Recordings are stored both on the local FTR workstation in the courtroom AND on a separate Network Attached Storage (NAS) device for redundancy.

JEWELS – The Judicial Education Web-Enabled Learning System (JEWELS) is a web-based training delivery system managed by OSCA on the courts intranet. JEWELS provides a host of training chiefly aimed at court staff regarding court case management, jury management, office automation products and other areas of interest to court employees.

Licensed/Non-Licensed Software – *Licensed software* refers to software that is purchased under a software licensing agreement. Examples include Case Catalyst used by the court reporters, FTR for sound recording, and QuickBooks utilized by the Boone Circuit Clerk's office. Such products can be installed on workstations only as defined in the end-user licensing agreements (EULAs). There is usually a cost associated with each workstation license. Licensed software is recorded as an asset in the Technology Asset Tracker software.

Non-Licensed Software products are provided free-of-charge to the 13th Circuit by a vendor or others. 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 license counts in this document do NOT include the Windows operating system nor do they include the Microsoft Office software as both are part of every computer workstation in the circuit.

Multi-Function Devices (MFPs) – A device that incorporates several functions into a single device, typically consisting of two or more of the following: printer, scanner, copier, FAX.

OSCA - The Office of State Courts Administrator (OSCA) is the central governmental entity that oversees state courts administration. As part of the organization's duties it carries out the mandates of the Missouri Court Automation (MCA) Committee. Missouri utilizes common applications for court case management and office administration. OSCA provides a number of key enterprise applications and infrastructure components.

Polycom - Video conferencing is the simultaneous exchange of video and audio communication among 2 or more participants. "Polycom" is a brand of video conferencing unit as are "Cisco" and "Tandberg". Polycom is the most commonly used brand of video conferencing unit within the 13th Circuit.

Security Guidelines – A set of guidelines intended to safeguard the integrity, confidentiality, and operation of the statewide judicial information network. The Security Guidelines are approved by the MCA committee. All judiciary employees, as well as volunteers, interns, etc. – anyone with a judicial network account – is required to comply with the guidelines.

Show-Me Courts (SMC) – The original court case management system, Judicial Information System (JIS), was developed in now-aging technologies. OSCA is rewriting JIS using leading technologies. The new system is branded as **Show-Me Courts**.

Wireless Access Points (WAP) – A wireless access point (WAP) is a radio transmitter/receiver that allows computers and other devices with wireless capability wirelessly connect to either the courts network or to the public internet. These devices are approximately 8 to 10 inches square and are mounted either high on a wall or ceiling in strategically-located positions to provide coverage.