13th Judicial Circuit Court

Technology Services
2021 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, Programmer Analyst

- Hardware, Software and Network Management
- Help Desk & End-User Support Tier 2
- Digital Sign Development

Jenniffer Macharia, Computer Information Specialist

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

Staff Changes in 2021

- None

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
- Support Webex, and Scopia video conferencing platforms
- 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
- iPads dedicated to Webex

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 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/courtrooms
- Work to support current custom software as needed

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 2021 the unit tracked the following technical assets:

Hardware
- Boone-owned: 690
- Callaway-owned: 162
- State-owned: 254

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: 102
- Callaway workstations: 8
- State workstations: 134

Workstations

The 13th Circuit utilizes approximately:
- 185 workstations (99 provided by the state),
- 50 notebook computers (23 provided by the state).

Printers

The 13th Circuit utilizes approximately 112 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 in both courthouses, as well as units incorporated into the technology of the Ground Floor, 2 South, 3 West and Ceremonial courtrooms of the Boone County Courthouse. Additionally, 3 Cisco video mobile units were added to facilitate video in low tech courtrooms.

In 2021 The Boone and Callaway County Jails transitioned to managing their own video units due to the changeover to Webex as our main video platform. Special network configurations are no longer needed saving considerable time and expense.

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.

Technology Services

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 10	Operating system
Office 2019	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:
	• 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

Technology Services

2021 ACCOMPLISHMENTS

Expanded Digital Docket Signs

Technology Services expanded our digital docket signs to each individual courtroom. This has eliminated the time and expense of paper dockets being printed and hung each day while allowing us to react more quickly to schedule changes.

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. All four courtrooms were upgraded in Feb 2021 on a staggered schedule to decrease interruption.

Transition to Webex for all video conferencing

During the pandemic, the Zoom video conferencing platform was temporarily approved for use for non-confidential court proceedings. Zoom was used in addition to our older video client Avaya. In 2021, by Supreme Court order the circuit transitioned to Webex as our only video platform. Technology services worked to test and program our existing room video conferencing systems and mobile units to work with Webex. We also did the same for the judge's iPads that are dedicated to video.

Added four additional, mobile, video conferencing units

Boone County received three additional mobile video conferencing units from OSCA from CARES Act funding. Callaway County also received a mobile video conferencing unit from OSCA from the same funding. These additional video units allow us to hold hybrid court proceedings in our low-tech courtrooms. This has been a huge improvement in streamlining the hybrid process. Additionally, IT created some easy to follow quick start guides for each unit to maximize use.

Upgraded External Network Connection

The process of upgrading to fiber internet was officially completed in 2021. The upgrade was even better than expected, allowing every division to hold virtual court at the same time with essentially no slowdown or interruption of normal day to day court functions.

Phone System Upgrade (Phase 1)

In 2021 we anticipated upgrading our current analog phone system to a digital phone system hosted by Boone County. This project was underway at the end of 2021 with some wiring put in place to accommodate new phones and switches. However, the actual transition has been delayed and will now be scheduled for completion in 2022.
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2022 UPCOMING ACTIVITIES

Phone System Upgrade

In 2022 we anticipate that we will be able to move forward on upgrading our current phone system. This new timeline is dependent on the completion of Boone County's upgrade which has also faced many delays. Once implemented County IT will help train Court IT on the use and management of the system. Going forward Court IT will have much more control of the phone system which will improve the user experience.

Upgrade Two Technology Courtrooms

After many delays due to the COVID Pandemic we anticipate upgrading the 3 West Technology courtroom as well as the smaller 2 South technology courtroom. This will be a major undertaking for our department. The 3 West courtroom was initially upgraded in 2008. Much of the technology in this courtroom is deteriorating and most importantly not compatible with Webex. Courtroom 2 South was last upgraded in 2013. Due to a failure of the current video conferencing equipment it was decided to upgrade this courtroom as well.

Network Switch Upgrades

In 2022 we anticipate replacing the ageing network switches in cooperation with the Office of State Courts (OSCA). These switches will be replaced after hours on a rolling basis to minimize disruption to courthouse operations.

State Workstation Replacements

To keep pace with technology, the state replaces its computers every four years. 2022 will see the approximately 99 computers it provides to its 13th Circuit employees replaced.

Each county replaces a portion of its workstations each year on a 5-year rotating schedule as opposed to replacing all in the same year.

Hearing Room One FTR Upgrade

To expand our courtroom capacity, it was decided to purchase and deploy a new FTR recording computer as well as microphones and other needed equipment to facilitate recording in Hearing Room One.

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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.

2020 Issues Opened
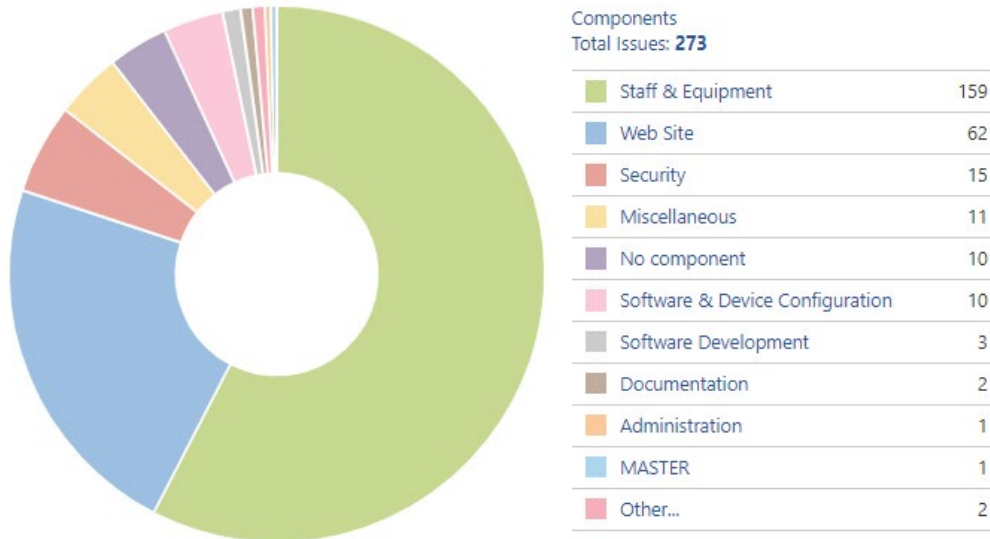
On January 1, 2021, a total of 27 issues were pending

Throughout 2021 a total of 273 issues were opened and categorized as follows:

58% were related to **Staff & Equipment** which are typically activities associated with employee hires, resignations, and equipment moves.

22% were related to **Website Updates** which are typically job postings, news and meeting updates or other general website updates.

5% were related to **Security** which are typically related to requests to extract security camera footage or to modify application or network access.

10% were related to **Miscellaneous** which typically mean work not previously categized. This is not surprising given the changes made during the pandemic.

These four categories constitute 95% of the tasks recorded.

Throughout 2021 a total of 239 issues were resolved. Staff and equipment changes were the bulk of the issues this year.

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 2021 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.

TRACKS – In 2020 TRACKS replaced the previous learning system, the Judicial Education Web-Enabled Learning System (JEWELS) The Training Resources And Court Knowledge System (TRACKS) is a web-based training delivery system managed by OSCA on the courts intranet. TRACKS 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.