Information Services Current Goals and Projects

MISSION
We are a strategic asset for UMKC’s missions of

- Teaching and Learning
- Research
- Service
- Economic Development

2017 GOALS

- Infrastructure that delivers seamless, secure, reliable, anytime and anyplace user access
- User technologies and support that enhance and facilitate Teaching and Learning, Research, Service, and Economic Development
- Effective and efficient management of resources
- Accurate, understandable, and accessible communication, documentation and resource use
- Continuous improvement in services, facilities and professional development
- Further automation of campus procedures to increase our efficiency as a campus
- Investigate new sources of revenue to fund campus initiatives

FY2016 IS PROJECT LIST & POINT PERSON

- Campus New Construction/Renovation – Guggenmos/Technology Management Services
  - Robert W. Plaster Free Enterprise Center
  - SOD Expansion to MSSU
  - Down Town Arts Campus
  - Chemistry / Biology Renovations
  - SCE Education & Research Center
  - Cherry Hall 4th Floor Renovation
  - Whole Foods Development
- Expansion of wireless coverage – Schonemann/Network Architecture
- ILE Classroom Lifecycle Upgrades – Guggenmos/Technology Management Services
- Blackboard Analytics – Guggenmos/Technology Management Services
- Investigate 3-D Printing – Reisenbichler/Support Services, Guggenmos/Technology Management Services
- VoIP rollout – Johnston/Infrastructure Services

FY2016 Shared Services Project List

- Accounts Management – Goodenow/Information Access
- Expand Enterprise Architecture – Schonemann/Networking
- ITSM – BMC Remedy Deployment – Reisenbichler/Support Services
- UM Network Architecture – Schonemann/Networking
- ERP Review – Goodenow/Information Access
- Core IT – Fritts/CIO
- Knowledge Base – Reisenbichler/Support Services
- Implement UM IT Project Portfolio Management Tool - Guggenmos/Technology Management Services

Details on each of the above projects can be found in the individual sections for the responsible department.
Executive Summary

Information Services is a strategic asset for UMKC’s missions of teaching and learning, research, service and economic development. We continued to make progress toward our defined goals and this document details the progress we have made during the final two quarters of the fiscal year 2016.

The Technology Management Services department (TMS) successfully managed approximately 21 IT projects with a collective value of $7,840,000.00. Since the last report, 11 projects have been closed with a total dollar amount of approx. $623,000.00. New positions such as an Office Support Assistant and an IT Project Manager have been created to increase productivity. In addition to this, TMS is working with UM SPMO to schedule “Introduction to Project Management” training for 15-20 UMKC IT project resources and worked with other departments to conduct additional ILE user training sessions for faculty. Several one-on-one sessions with faculty who teach in other ILE environments were also performed as needed.

TMS Project Management completed Phase 2 of implementation for remote monitoring and have added several new Tier III systems bringing the total to 70 rooms across 17 different buildings capable of being online and actively monitored.

TMS is also currently managing the upgrade of video switching gear, device/ transport cabling, projection systems, audio processors, and conferencing hardware in ILE classrooms to align with current user’s devices and user video & audio expectations. TMS is additionally working on the Blackboard Analytics for Learn tool which combines data from Blackboard Learn with student/course attributes from PeopleSoft to create comprehensive reports and dashboards for students, instructors, and staff.

IS Support Services (SS) has responded to and resolved 3,272 desktop support requests and expanded support for additional computer labs on campus. The annual workstation replacement program and a robust fall schedule of projects kept the support team busy during this period. Two new agreements for IT support services were signed July 1st with the Schools of Law and Nursing and Health Sciences. Frequent meetings, project discussions and onboarding of current and new staff occurred during this period.

The Call Center responded to 13,808 support requests, resolving 11,246 requests and escalating 2,562 requests. Customer satisfaction continues to remain extremely high. Over the last six months Support Services has a 94% “Very Satisfied” rating.

Support requests generated though SS’s online problem report tool remained consistent during this period as well. This tool allows users to submit requests 24 hours a day, 7 days a week, and the requests are generally addressed during business hours. Additionally, SS increased purchasing for select academic units that have historically made their own purchases.

Several new applications were requested for the SCE labs for the spring 2016 semester. Technicians worked to vet, purchase and install the following applications - Sonnet, Structure Point, MatLab Toolboxes, COMSOL, etc. Each of these new technologies will help drive new levels of operational
efficiency and innovation. Both Apple and Microsoft released new operating systems that introduce a host of new features and improvements. Microsoft also debuted new productivity suites for both Apple and Windows platforms.

Infrastructure Services completed upgrades in the Bloch School of Business, Health Sciences Building, Union Station, Biological Sciences, Spencer Chemistry, Fine Arts, School of Education, Durwood Soccer Stadium, Johnson Hall, Pershing Place Bldg., Student Union, Law School, Miller Nichols Library, Student Success Center, Cherry Street Garage, Block Executive Hall, Miller Nichols Library Learning Center, Troost Street Residence Hall and are currently working on the Performing Arts Center lobby remodel and Medical School.

IS Security assisted UMKC and other UM campuses with recovery of over 200 compromised student email accounts stolen via phishing. They also continued testing and development of Amazon AWS and Microsoft Azure cloud service options. Review work began on AppleTV4 with exciting applications for use in ILE Classrooms.

Information Access (IA) was involved in numerous projects spanning multiple departments. We completed a successful move to Blackboard Managed Hosting in August 2015. UMKC users have experienced less downtime and increased application performance. Foundation Services provides secure, professionally managed data centers to meet the growing information technology needs of academic and administrative units at UMKC. Internal Applications implemented additional project management, documentation and sharing initiatives to increase effectiveness internally. The addition of JIRA and Confluence have improved change management, workflow and documentation of key processes for the campus.

The UMKC Data Warehouse continued supporting the campus by providing a one-stop shop for data and numbers regarding campus activities. Working with the Office of Records and Registration, the Human Resources Officer, the Officer of Admissions, and the Division of Advancement Services, the UMKC Data Warehouse provided another quarter of reporting services.
IS Accomplishment Report  |  July-December 2015
Technology Management Services (TMS)

IS Project Management – General Update

Notable Accomplishments

- Successfully managed ~21 IT projects with a collective value of $7,840,000.00
- Since the last report 11 projects have been closed with a total dollar amount of approx. ~$623,000.00 processed
- Created a new Office Support Assistant IV position to support IS Project activities
- Created and posted new IT Project Manager position to support IS Project activities
- Developed new IT Project estimate template based off client defined features
- Defined standard admin/PM fees associated with typical projects
- Began evaluation of Atlassian’s Jira and Confluence tools for detailed issue/project management
- Working with UM SPMO to schedule “Introduction to Project Management” training for 15-20 UMKC IT project resources
- Continued adoption of OneNote for tracking IS project related communications
- With templates we have provided 100% match to PS accounts and project charges

ILE Classroom Lifecycle Upgrades

Below is the current list of approved strategic ILE initiatives we will be working on during FY 15/16

<table>
<thead>
<tr>
<th>Priority</th>
<th>Name</th>
<th>Est. Cost</th>
<th>Period</th>
<th>Initiative Description/Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENTLY FUNDED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Select Large Auditorium Upgrades – Phase 2</td>
<td>$60K</td>
<td>FY16/17</td>
<td>Updating large ILE auditoriums with improved projection systems, sound systems and infrastructure for recording to align with what students experience in newly designed auditoriums in both MNL and Bloch Hall. (Phase includes 1 room at approximately $60,000)</td>
</tr>
<tr>
<td>2</td>
<td>Phase 2 - Digital Switching &amp; Transport - in ILE Rooms with Wide Screen Projection Systems</td>
<td>$590K</td>
<td>FY16/17</td>
<td>Upgrading video switching gear, device/transport cabling, projection systems, audio processors, and conferencing hardware in ILE classrooms to align with current user’s devices and user video &amp; audio expectations. (This includes approximately 29 rooms with costs estimated at ~$20.3K per room)</td>
</tr>
</tbody>
</table>
### FUTURE – NOT FUNDED

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Cost</th>
<th>Status</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phase 3 - Select Large Auditorium Upgrades</td>
<td>$60K</td>
<td>TBD</td>
<td>Updating large ILE auditoriums to include improved projection systems,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sound systems and infrastructure for recording to align with what</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>students experience in newly designed auditoriums in both MNL and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bloch Hall. (Phase 1 rooms at approximately $60,000)</td>
</tr>
<tr>
<td>2</td>
<td>Phases 3-6 - Digital Switching &amp; Transport - in ILE Rooms</td>
<td>$2.4M</td>
<td>TBD</td>
<td>Upgrading video switching gear, device/transport cabling, projection</td>
</tr>
<tr>
<td></td>
<td>Wide Screen Projection Systems - in ILE Rooms</td>
<td></td>
<td></td>
<td>systems, audio processors, and conferencing hardware in ILE classrooms</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>to align with current user’s devices and user video &amp; audio expectations. (This includes approximately 29 rooms/year with costs estimated at ~$20.3K per room for phases 3-6.)</td>
</tr>
</tbody>
</table>

### TMS System Support Pool

The number of classrooms, conference rooms, teaching labs and signage systems supported by TMS grows steadily every year with new construction and building renovations. During this review period, the number of supported systems increased to 368 due to the addition of 3 new systems.

<table>
<thead>
<tr>
<th>System Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full ILE Classrooms</td>
<td>90</td>
</tr>
<tr>
<td>Partial ILE Classrooms</td>
<td>2</td>
</tr>
<tr>
<td>Hybrid ILE Classrooms</td>
<td>66</td>
</tr>
<tr>
<td>ILE - Conference, Seminar &amp; Training Rooms</td>
<td>6</td>
</tr>
<tr>
<td>Departmental ILE (class &amp; conference rooms)</td>
<td>104</td>
</tr>
<tr>
<td>Departmental AV Systems</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total Systems Supported</strong></td>
<td><strong>368</strong></td>
</tr>
</tbody>
</table>

### Remote Monitoring for TMS Supported Systems

With the system support pool’s continued growth, we worked on an ongoing project to upgrade to the newest version of Extron’s Global Viewer software. This software, once fully implemented, will allow technicians to see all connected systems in order to quickly identify equipment failures and guide troubleshooting and other support responses. We have previously completed Phase 2 of implementation and have added several new Tier III systems bringing our total to 70 rooms across 17
different buildings capable of being online and actively monitored. We are currently working through a lengthy process with equipment manufacturers and the software vendor to troubleshoot issues we are experiencing trying to bring non-Extron hardware online.

**ILE Lifecycle/Maintenance & Repair Investments**

During this review period approximately $18,500 was invested in equipment and parts to keep the campus ILE classrooms and teaching environments up and running. This includes reactive maintenance and repair initiatives such as replacing defective equipment, projector bulbs, batteries, damaged cabling, etc.

**On-Demand Video Hosting**

Information Services provides a tool for UMKC faculty and staff to play videos on computers, laptops and mobile devices. These videos are used to aid in the delivery of instruction or in some cases to promote schools, departments or their services. As an example, the Schools of Nursing, Pharmacy and Dentistry have submitted videos instructing students in specific procedures so that these can be handed out as homework assignments allowing more time to cover other topics during class lectures. Our new platform, Kaltura, makes it easy for faculty and students to record video using a web camera. As a result, students are now submitting video essays as part of coursework.

This period, Technology Management Services (TMS) worked with ITS to identify faculty and staff that are still using links to our legacy streaming servers, and to reach out to those users. We developed and distributed a brief instructional pdf, focusing on steps faculty must take to transition to Kaltura.

As in past semesters, our on-demand video library has grown. During this period, **1832** new streaming videos were added. It is notable that tools allowing both faculty and students to upload videos are causing a dramatic increase in the usage of streaming media technology.
ILE/AV User Training

We continued our partnership with Desktop Support, the Call Center and Instructional Technologies to conduct additional ILE user training sessions for faculty. Several one-on-one sessions with faculty who teach in other ILE environments were also performed as needed.

Other Notable Accomplishments

During the summer/fall semesters (July - Dec 2015) utilization of full ILE classrooms was roughly 25% higher than non-ILE classrooms. Hybrid ILE classrooms utilization was also 17% higher than usage of non-ILE classrooms.
Technology Management Services provided maintenance and support for ILE and AV systems on the Volker and Hospital Hill campuses. During this period 76% of all support tickets assigned to TMS were resolved within a 24 hour period and 56% were resolved within 1 hour.

Technology Management Services provided maintenance and first-tier technical support for ILE and AV equipment in the Health Sciences Building, Diastole and School of Medicine. During this period 89% of all support tickets assigned to Video Services were resolved within a 24 hour period. 82% were resolved within 1 hour.
Technology Management Services provided technical support for videoconferencing meetings on the Volker Campus and a portion of the Hospital Hill Campus. During this review period, we set up and supported 100 hours of videoconference involved meetings. We used a meeting room to provide a distance classroom for Labor Studies’ Saturday courses.

**Videoconferencing Set Up & Support Hours**

- **School of Pharmacy**: 78%
- **School of Nursing**: 11%
- **Bloch School**: 10%
- **Missouri Library Association**: 1%

Technology Management Services provided technicians to support ITV Distance Education programs for a number of academic units with a majority of the support load dedicated to the School of Pharmacy. This group has supported 748 hours of ITV distance learning during this review period.

**ITV Distance Education Support Hours**

- **School of Pharmacy**: 99%
- **Labor Studies**: 1%
Technology Management Services provided technicians to support curricular events recorded in the new HSB Simulation Center. The Center is equipped with 12 simulated examination rooms, each with 3 ceiling mounted video cameras and 2 microphones. Activities in each of the 12 rooms can be recorded separately. Students learning to provide health care gain practice interacting with “standardized patients” in these rooms, who are actors trained to pretend to have medical conditions, and to evaluate the students’ performance.

During this period, TMS provided support for 122 hours of recorded HSB Simulation Center events.

**Continued Professional Development for Staff**

During this review period the following professional development sessions were completed:

- Several TMS staff attended Right Answers Training in July
- Several TMS staff completed First Aid/CPR/AED training in August
- All TMS Staff completed UM Information Security Training in August
- Don Fuller (Programmer)
  - Completed Crestron DMC-E-4K certification in September
  - Completed AMX Programming 2 training in September
- Justin Guggenmos attended remote Educause Virtual Conference in October
- Christopher Lalk (Technician)
  - Completed BiAmp Tesira training in October

All TMS Staff completed Customer Service / Communication Seminar in November.
Support Services

Key Initiatives

Several campus initiatives, new product releases, the annual workstation replacement program and a robust fall schedule of projects kept the support team busy during this period. Two new agreements for IT services were signed July 1st with the Schools of Law and Nursing and Health Sciences. Frequent meetings, project discussions and onboarding of current and new staff occurred during this period. Prepping for the start of the fall semester and making sure the student computing labs were updated kept the support team very busy. Another important initiative was providing support to incoming students. To that end, Support Services worked overtime and extended hours on several weekends in August. Technicians also staffed the Residence Halls as students moved in to answer the technical questions and make sure their devices were connected to the network. Student orientations were also staffed throughout the summer months to ensure students had their accounts setups.

Support Services organized the annual Provost Workstation Replacement Program (WRP) this fall. This program provides one new computer every four years for full-time faculty and staff in the academic units. This program saves the university significant funds by taking advantage of vendor discounts with a bulk purchase.

Several new product releases along with newly purchased systems came into focus during this time period. Each of these new technologies will help drive new levels of operational efficiency and innovation. Both Apple and Microsoft released new operating systems that introduce a host of new features and improvements. Microsoft also debuted new productivity suites for both Apple and Windows platforms. Each of these products saw performance enhancements, better security, and collaboration improvements. The digital signage projects also made significant headway during this period after a new contract was secured last summer with Four Winds Interactive (FWI). This new system will gradually replace the aging SCALA systems that currently drive many of the digital signs on campus. Casper, a leading asset management system for Apple devices was also purchased last summer. It offers new tools and efficiencies to manage Apple devices.

All of these new IT tools and resources provide a step forward in productivity, security, efficiencies and collaboration. Each delivers new value to our campus community and helps empower students and educators to create and share in new ways. The sections below contain more information about each of these exciting new technologies.
Four Winds Interactive

Significant progress was made on the digital signage project. Teams worked to design and communicate a new life-cycle-replacement model so that departments with digital signage had a path forward. Business assessment needs were completed and roles and responsibilities were defined. Training sessions were coordinated and the new system was installed and configured. The first basic digital signage system was brought online at 4825 Troost. The new signage provides wayfinding building maps, bus schedules, product announcements and other new content. The Conservatory is scheduled to deploy their new FWI systems in Grant Hall and PAC in January with other areas to follow.

Casper

The most notable addition to the Mac support infrastructure is the implementation of Casper, an enterprise management suite for OS X. Casper is a client-server based product that offers automation of management tasks previously available to us only on the Windows platform. New Enterprise Management capabilities for Macs include:

- FileVault management – Recovery key data for Macs secured with FileVault storage encryption are centrally managed with Casper, making it practical to secure Macs against data theft.
- Software deployment – Software installations and updates can now be effectively scheduled for Casper-enrolled Macs with the same flexibility of SCCM. This can significantly reduce deployment time, especially in labs.
- Image deployment – Multiple remote imaging options are now possible, from complete “thick image” refreshes for labs, to “thin image” OS and software customizations that build on existing images.
- Software package building and customization – Software packages can be built from stock install media to suit various user requirements and to speed remote deployment.
- Self Service – A variety of services can be made available to end users to apply at their own convenience, including software installation and system maintenance tasks.

New server hardware was acquired to host Casper, the software image repository, and the existing DeployStudio NetBoot service. Network throughput was effectively doubled to 2 Tb, and a new, expandable storage array provides 9 TB, allowing more overhead for software image development and storage.
El Capitan OS X 10.11 and MS Office 2016 for Mac

The standard OS X software image Support Services maintains has undergone significant changes. The image is now based around OS X 10.11 El Capitan, the latest version released September 30, 2015. As new Macs always require the latest version of OS X at the time of purchase, thorough testing of El Capitan began the day of its release, and it was applied to our standard image by November. The included Microsoft Office for Mac suite is upgraded to version 2016, a significant improvement over Office 2011 for Mac in terms of stability and feature parity with the Windows version. A UMKC serialized install package was also created to streamline the update process from Office 2011 on existing Macs.

Windows 10

Microsoft released the latest version of its flagship operating system - Windows 10 last summer. Technicians successfully tested numerous university applications with the new operating system. Desktop support created, tested and updated numerous Universal Windows images and updated the PXE server. The PXE server is a key tool used by the technicians to image and troubleshoot client workstations across the campus. Windows 10 will be deployed on a number of the new WRP systems this spring, if the software they use is compatible.

Microsoft Office 2016

In September, Microsoft released a new version of their office productivity suite for Windows. The new suite brings more collaboration features and new search tools, but minimal changes to the interface. MS Office will be phased in gradually on campus, as there are a few key university software applications that are not fully compatible.

Best Practices and Internal Controls

Adhering to university policies, government laws and regulations and ensuring that best IT practices are being followed is a vital component of managing IT. During this review period, Information Services worked on an internal audit with UM System on our Change Management system and practices. The audit included review of changes to existing, new software or hardware within a production environment. The objective of the audit was to determine whether change management programs at each of the four campuses are controlled, monitored and following best practices. Responses to data requests were submitted during this period with an audit report expected in spring, 2016.

Tickets Created
August remains the busiest month for Support Services. This past year tickets were up some due to a Blackboard outage and two new agreements for service.

Customer satisfaction continues to remain extremely high. Over the last six months Support Services has a 94% “Very Satisfied” rating. The following chart represents customer satisfaction data collected from surveys closed by IS Support Services for the period of July 2015 through December 2015.
Call Center

- The Call Center responded to **13,808** support requests, resolving **11,246** requests and escalating **2,562** requests.
- The Call Center’s first-contact resolution rate was 79%.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Total Number of Call Center Support Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 &amp; Q2 2013</td>
<td>11272</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2013</td>
<td>14413</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2014</td>
<td>11753</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2014</td>
<td>12723</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2015</td>
<td>12746</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2015</td>
<td>14176</td>
</tr>
</tbody>
</table>

Support requests generated though our online problem report tool remained consistent during this period. This tool allows users to submit requests 24 hours a day, 7 days a week, and the requests are generally addressed during business hours. However, we are able to spot trends in off-hours, when multiple users report problems with the same services.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Total Number of Web Submission Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 &amp; Q2 2013</td>
<td>344</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2013</td>
<td>481</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2014</td>
<td>420</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2014</td>
<td>468</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2015</td>
<td>408</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2015</td>
<td>542</td>
</tr>
</tbody>
</table>

Account

**Management**

MS Office 365 Student email system
- Provided accounts for several alumni at the request of the Alumni Association
- Participated in the new O365 password reset tool that was implemented in July
- Set up **161** Emeritus accounts for the new Emeritus College
- Worked with Admissions, Registration and Records and various UM IT groups to address SSO account creation and maintenance issues

Bomgar

Coordinated an upgrade of this support system for each of the UM campuses using this system.

Box

Assisted with the provisioning and de-provisioning process of Box cloud storage accounts.

ITSM

IT Service Management tool used by UMKC, MST, MU, and UMSL
- Worked with ITSM Steering Committee, Service Desk Committee and technical teams to prepare for implementation of more ITSM modules and improve current processes and functionality
- Created several new templates for the Call Center to use to help expedite ticket handling.
- Worked with ITSM Steering Committee, Service Desk Committee and technical teams to test new SmartIT service management tool

**Cisco Finesse**
This is the solution for UMKC hosted phone queue software. We began testing in November with a tentative implementation scheduled for Feb 2016.

**RightAnswers**
Self-service knowledge base solution used by UMKC, MST, MU, and UMSL
- Continued to maintain **WordPress** installations of IS Blog and internal Support Services blog sites to aid in communication

**Desktop Support**

**Ticket Requests**
Responded to and resolved **3,272** Desktop Support requests. Breakdown of supported groups is below.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee-Student</td>
<td>161</td>
</tr>
<tr>
<td>Faculty</td>
<td>931</td>
</tr>
<tr>
<td>Generic</td>
<td>40</td>
</tr>
<tr>
<td>Retiree</td>
<td>12</td>
</tr>
<tr>
<td>Staff</td>
<td>1634</td>
</tr>
<tr>
<td>Student</td>
<td>493</td>
</tr>
</tbody>
</table>

**Percentage of Incidents by Division**

- College of Arts & Sciences
- Conservatory of Music & Dance
- School of Pharmacy
- School of Law
- School of Biological Sciences
- School of Computing & Engineering
- School of Education
- School of Management
- School of Nursing & Health Studies
- Honors College
- VC Administration & Finance
Academic Support

School of Computing and Engineering (SCE)

The IT Operations Committee remained active and met regularly during this review period. These committee meetings are vital, particularly with SCE’s continually changing environments and expanding curriculum.

The student computing labs at SCE consumed considerable technician time during this review period. These computer labs are installed with over 100+ applications, some of which are very complex to install and configure. These labs are also some of the busiest labs on campus, so it’s important that they be reliable and available to support SCE students and faculty. After a software vetting process that begins in March, numerous applications were approved, purchased and tested for compatibility and stability. License servers were updated to accommodate the changes. Just before the start of the fall semester, all of the SCE labs were re-imaged.

A new student computing lab request came in for the Mechanical Engineering curriculum in December. Teams worked to gather curriculum requirements and begin purchase process for new hardware and software.

Several new applications were requested for the SCE labs for the Spring 2016 semester. Technicians worked to vet, purchase and install the following applications - Sonnet, Structure Point, MatLab Toolboxes, COMSOL, etc.

Worked with CFM to ensure the environment was maintained at an optimal level, including deep-cleaning the carpet in FH 464 and the floors in FH 364, 462, and 463:
- Staffed School of Computing and Engineering labs for extended hours during Fall semester midterms and finals.
- Assisted with special events as needed, including facilitating communications about guest accounts, software requirements, and access.
- Supported student printing needs by keeping supplies on hand and printers ready for use. Over 93,000 print jobs were printed in the SCE computer labs located in rooms 364, 460, 462, 463, and 464, totaling over 1,014,000 pages.
- 1,683 individuals used the general-use student computer labs during this time period:

<table>
<thead>
<tr>
<th>Departmental Labs</th>
<th>Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCE 364</td>
<td>873</td>
</tr>
<tr>
<td>SCE 460</td>
<td>1,017</td>
</tr>
<tr>
<td>SCE 462</td>
<td>1,257</td>
</tr>
<tr>
<td>SCE 463</td>
<td>991</td>
</tr>
<tr>
<td>SCE 464</td>
<td>1,161</td>
</tr>
</tbody>
</table>

**School of Education**

Performed major renovations of the two larger computer labs for School of Education. The general use computer lab was moved into room 129b (below) and outfitted with new All-in-One computers to provide a great user experience for our students. We also moved the Learning Commons Lab (formerly Technology Learning Lab) into a new space that will be used for classroom use and as an academic specific lab for SOE students.
The College of Arts and Sciences
GeoSciences
The Geographic Information Systems (GIS) lab was expanded to accommodate more students and newer technology. GIS is a rapidly growing field, and the old lab had become inadequate to meet student computing needs. Seating was increased from 15 to 29. New student computers were installed with more powerful graphics capability and dual monitors. Updated lab furniture allows for better ergonomics and more efficient use of space. A full ILE system and new projection equipment now provides better screen visibility and allows instructors to interact directly with student computers from the podium.

Communication Studies
To meet the needs of a UMRB funded research project, a mobile iPad solution was created to facilitate field collection of survey data. Prof. Jason Martin initiated the project “to examine students’ transition and assimilation to college life.” The iPads are carted to a given classroom on campus, where the devices can be quickly distributed to students at the site. Bringing iPads to students in a formal classroom setting is expected to increase study participation rate (estimated 95%). Data is collected on iPads in the form of narratives at 3 points throughout the semester; survey responses are collected via web browser and managed in Qualtrics. The cart allows for easy transport, secure storage, and mass charging of iPads, 40 of which were acquired for the project. iPads are configured, managed, and updated using our existing AirWatch MDM system.
Architecture, Urban Planning + Design (AUPD). Support Services partnered with AUPD to outfit the new Center for Neighborhoods with lab computers, laptops, and specialized printing hardware for its offices at 4747 Troost and at Katz Hall. The Missouri State funded center “will provide a one-stop location where neighborhood leaders and residents can access the available resources and capacities of the Department ...Western Missouri Legal Aid, and other community partners.” Guests of the center will use new lab computers to access GIS tools and related online services, receive GIS instruction, and will have access to large-format printer hardware.

The School of Biological Sciences
A new research lab in Biological Sciences required unique computing resources to support new ÄKTA chromatography hardware. This new facility for Prof. Ryan Mohan, recently recruited from the Stowers Institute, supports his continuing research on the molecular mechanisms causing neurodegeneration (Huntington’s disease). Support Services worked in concert with GE and IS Security & Research to provision ÄKTA’s unique networking requirements.

The Conservatory of Music and Dance
The music composition lab in the Conservatory of Music and Dance was outfitted with new computers. Pro Tools is newly included in the software image to add full audio production capability.

The School of Law
With any new partnership for IT services the first year is always a year of learning. To aid in the transition of projects, personnel and services, Information Services met regularly with the Law School to ensure that service needs were being met. As part of this agreement, four employees were transitioned to IS – one for the Classroom technology, two for desktop
support and a fourth position for the Law School Laptop clinic, which was vacant when the agreement was signed. Recruitment and training of a new staff member was an important and top initiative. A hiring committee selected a new technician in mid-fall and he now staffs the busy laptop clinic and helps to back-stop other technology initiatives in the Law School. As we partnered with the Law School to review technology systems and processes, some areas were identified for immediate improvements. These included the following:

RooLaw
This is a custom application built on SharePoint. Last September this system experienced an unexpected outage and students were unable to get to their data. After a review, it was found that the code used to import data required better error checking capabilities. With the root cause identified, Support Services is working with the vendor-supported application to fix the issue.

RooLaw SQL server
This server’s memory allocation was reconfigured to improve performance after experiencing issues. This made an immediate improvement in page load times throughout the application.

Automated system notifications
IS identified notification thresholds for key systems so that technical teams would receive advance notification of issues or problems with the Law School servers and other resources. IS performed several maintenance tasks to increase overall responsiveness of systems.

MediaSite
IS worked with the Law School to better understand the needs of their online video streaming solution and better project future memory and storage allocations to avoid unexpected outages. After review, a MediaSite update was scheduled to provide the necessary streaming capabilities. Long term, IS is working with the Law School to review and update the MediaSite server hardware.

Security
IS worked with the IRS on an encrypted email communication solution for the Tax Clinic and to facilitate a smoother, and more secure workflow.

Law School Student Lab
Discussed and recommended new All-in-One model computers for the Law School student computer lab. New computers were ordered and the new lab was installed in December using a new more efficient imaging process. The new, more modern technology provide an updated lab for teaching and learning.

Bloch School of Management
Worked with CFM to ensure the environment was maintained at an optimal level, including deep-cleaning the floor in the BHH 110 general-use computer lab over Winter Break:
• Supported student printing needs in the BHH 005 computer classroom by keeping supplies on hand and printers ready for use. Over 1,500 print jobs were printed in BHH 005, totaling over 5,900 pages.
• 552 individuals used the BHH 005 computer classroom during this time period.

School of Nursing and Health Sciences (SoNHS)
Completed an MOU with the School of Nursing to provide technical support for faculty and staff on July 1st. Similar to the Law School, IS had frequent meetings with the IT Ops committee to ensure that we understood their priorities, we were appropriately transitioning technical staff and that we were on track with their initiatives.

An IS-wide project where significant progress was made during this period included the planning, design and installation of the Simulation Center at HSB. The Laerdal SIM View platform was purchased and installed last August. Training was coordinated and a new system was launched this fall. This new technology was designed to allow faculty to observe, record and evaluate student/patient interaction in each exam room. Twelve separate exam areas and a control room comprise the new space.
Another important SoNHS project involved transitioning a critical database to a secure virtual location. To accommodate this need, a new virtual server was created and the database was migrated to the system. IS coordinated and trained SoNHS staff on this new process. IS also provided staffing, guest accounts, and support for three special events in the Health Sciences Building room 3304 computer lab.

School of Pharmacy
Continued to provide technical support for multiple campus locations including the main facility at HSB, the MU location as well as the site on the Springfield campus. We also worked with Pharmacy on the Laerdal SIM system as mentioned above in the SoNHS section. We are continuing to work with both Nursing and Pharmacy on options to replace the computers in their testing lab located in HSB 3309.

Student Affairs
- Expanded the Counseling Health and Testing Lab to meet their growing needs. In addition to physically expanding the number of seats we recreated the entire backend software process to better align with other labs on campus and provide a more efficient imaging process. As part of this renovation we worked with several software testing vendors to ensure compatibility.
- Staffed four New Student Orientation sessions
- Developed the new “Getting Started with IT Resources for Students” website to assist students with technology questions
- Served on campus committee to develop a Student Orientation for Online Students
- Support Services assisted with numerous special event requests that require computing resources. These resources often include guest accounts, specialized software, or access to wireless, printing, teaching, or other computer resources.

Residence Halls
- Supported student printing needs in the Residence Hall computer labs by keeping printers ready for use. Over 10,600 print jobs were printed in the Oak Place and Johnson Hall computer labs, totaling over 54,700 pages.
- 758 individuals used these Residence Hall computer labs during this time period:

<table>
<thead>
<tr>
<th>Residence Hall Labs</th>
<th>Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson Hall</td>
<td>288</td>
</tr>
<tr>
<td>Oak Place North</td>
<td>248</td>
</tr>
<tr>
<td>Oak Place South</td>
<td>351</td>
</tr>
</tbody>
</table>
Continued to expand the use of our Mobile Device Management solution, AirWatch, across both UMKC and the other campuses. This tool is valuable for increasing efficiencies when managing mobile devices as well as protecting University data. Some of the larger projects we’ve completed includes:

- Addition of 100+ University cell phones
- Setup and delivered iPads and documentation to the University of Swaziland to assist Dr. Morello.
- Configured iPads to use in classrooms to facilitate the learning of modern journalism techniques
- Upgraded AirWatch to version 8.1

Continue to use Microsoft’s SCCM as our primary asset management tool and our preferred method of software installation. Specifically, over the last 6 months we have used SCCM to install 27,204 pieces of software across campus. 683 of these were initiated via our Software Deployment webpage by IS technicians and IT Liaisons. We also imaged over 1,000 lab computers using the Operating System Deployment functionality of SCCM. We have also started research into the next major version of SCCM 2016, which is scheduled for release in 2016.

Reporting
The Enterprise Management team updated many of the online reports, including a total overhaul of the Remedy ITSM reports.
Updated the IS website throughout this period with meeting notes, new product information, new software and hardware options, etc. Our goal is to enable Students/Faculty/Staff to find the information they need quickly and easily.

Software Updates
Planned, tested, and deployed several updates to all Windows campus computers to ensure software is up-to-date. This is done to both give our customers the latest products and tools but also to limit vulnerabilities as older software is often less secure. Approximately 150 SCCM packages were created during this period. A few of the major software packages are listed below.

- Adobe Reader/Acrobat
- Adobe Flash/Shockwave
- Mozilla Firefox and Google Chrome
- Java
- Box Edit/Sync
- ViewMail for Outlook
Print Quota
Starting with the fall 2015 semester the method for allocating print quotes was changed for campus computing labs. Print quotas are now provisioned for the entire semester instead of the smaller, weekly quotas. This change was made at the request of the Student Government Association. In order to accommodate this change, the enterprise management team re-configured the PaperCut print management system and made several programe changes to the system. The PaperCut software had to be updated and internal procedures for managing the print quota were also revised.

Supported Hardware Updated
Several new devices were tested and added to the supported hardware list during this period. These included the Dell OptiPlex 5040, Microsoft Surface 4 Pro and the Apple iPad Pro. This includes image support, warranty repair, and asset management.

Hardware Procurement
Purchased nearly $1,350,000 worth of IT hardware, including computers, tablets, printers, peripherals and related service warranties. This represents an increase of nearly 42% over the same period one year ago. A similar trend is apparent in IT software totals where expenditures increased roughly 72%. This explosive growth can also be measured by looking at other activity such as the number of distinct orders being placed. Increased consolidation of IT purchasing for academic units is one significant factor to consider when we measure growth in spending year over year.
Hardware spending by division and academic unit provides a glimpse into the scope of the value IT equipment offers these units and the investment committed to lifecycle replacement and sustainability.
The distribution of spending over primary vendors and payment method demonstrates strong support for standards at UMKC. UMKC has large-scale Volume Purchase Agreements for both Dell and Apple, our preferred vendors. These two vendors account for 92% of the total IT hardware spend. Roughly 83% of all orders were placed through eProcurement with the remainder of purchases using the PCard. Vendors offering UM ShowMe Shop contracts and services represent about 77% of the total eProcurement spent.
Workstation Replacement Program

The first half of each fiscal year culminates with the Provost’s Workstation Replacement Program. Its goal is to replace primary faculty/staff workstations on a four-year lifecycle to benefit productivity and mitigate the security concerns endemic to older computers and operating systems. This year’s WRP marks the first year where the mainstream Windows desktop and laptop have been configured with a high-performance solid state drive and boasts a tremendous savings of roughly $100 per unit over UMKC’s normal discounted prices. The WRP has collected 659 orders for a total spend of about $640,000 in FY2016. A brief summary of spend patterns over recent years demonstrates the collaboration and commitment of the Provost’s Office and the various divisions and units to fund the initiative.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Provost Spend</th>
<th>Unit Spend</th>
<th>Orders</th>
<th>Total Spend</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2011</td>
<td>$285,058.00</td>
<td>$252,418.00</td>
<td>634</td>
<td>$537,476.00</td>
</tr>
<tr>
<td>FY2012</td>
<td>$329,064.00</td>
<td>$260,289.00</td>
<td>676</td>
<td>$589,353.00</td>
</tr>
<tr>
<td>FY2013</td>
<td>$339,673.45</td>
<td>$240,580.00</td>
<td>666</td>
<td>$580,253.45</td>
</tr>
<tr>
<td>FY2014</td>
<td>$306,443.40</td>
<td>$218,663.07</td>
<td>561</td>
<td>$525,106.47</td>
</tr>
<tr>
<td>FY2015</td>
<td>$256,837.10</td>
<td>$238,721.40</td>
<td>571</td>
<td>$495,558.50</td>
</tr>
<tr>
<td>FY2016</td>
<td>$320,519.57</td>
<td>$319,601.59</td>
<td>659</td>
<td>$640,121.16</td>
</tr>
</tbody>
</table>

FY2016 WRP SPEND BY UNIT

Administrative Affairs $29,687.00
Advancement $14,897.00
Bloch School of Management $17,001.00
Chancellor’s Office $1,305.00
College of Arts & Sciences $19,888.90
Conservatory of Music and Dance $21,024.00
Information Services $15,731.00
Marketing & Communications $9,007.00
Provost’s Office $14,920.00
Research and Economic Development $14,003.00
School of Biological Sciences $35,022.67
School of Computing & Engineering $27,041.00
School of Dentistry $4,515.00
School of Education $33,521.69
School of Graduate Studies $39,327.00
School of Law $28,636.00
School of Medicine $20,073.00
School of Nursing and Health Studies $38,635.00
School of Pharmacy $64,310.00
Student Affairs $0.00
University Libraries $88,137.48
College of Arts & Sciences $103,438.42
Marketing & Communications $64,121.16
Significant work goes into managing the Workstation Replacement Program each year. Some of these tasks are listed below.

- Created and sent 220 departmental computer inventories prepared using the custom asset management system
- Updated the WRP application with numerous requested changes. Developed a single source database for Fiscal Officers.
- Created new process/application to streamline the data transfer between old and new computers

UMKC IS Software Procurement

The software procurement process continues to change and expand. Increasingly, requested software is no longer a locally installed box copy, but a web-based subscription. This creates unprecedented problems of authentication, integration, privacy, and security.

The amount of software purchased by IS continues to increase and you will see that reflected in the charts below. With the centralization of IT staff in the academic units coupled with the UMKC IT Purchasing Policy, Information Services is now consulting and purchasing all university software.

Support Services placed software orders and renewals this period totaling **$1,593,366.74** from 131 vendors for 55 departments.

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackboard Inc</td>
<td>$389,819.12</td>
</tr>
<tr>
<td>Microsoft Corporation</td>
<td>$239,851.79</td>
</tr>
<tr>
<td>Civitas Learning, Inc</td>
<td>$116,564.00</td>
</tr>
<tr>
<td>Panopto, Inc</td>
<td>$72,657.00</td>
</tr>
<tr>
<td>Zap Solutions, Inc.</td>
<td>$66,500.00</td>
</tr>
<tr>
<td>Hobson, Inc</td>
<td>$63,999.50</td>
</tr>
<tr>
<td>Key Solutions, Inc</td>
<td>$53,200.00</td>
</tr>
<tr>
<td>iParadigms LLC</td>
<td>$44,255.86</td>
</tr>
<tr>
<td>Wharton Research Data</td>
<td>$42,400.00</td>
</tr>
<tr>
<td>Standard &amp; Poor's Finan</td>
<td>$40,943.00</td>
</tr>
</tbody>
</table>
Support Services recovered $38,442.00 from various departments to partially cover Adobe ETLA costs and continued to expand coverage of ISSS Software Database.

### IT Software Spend by Unit
**July - December 2015**

<table>
<thead>
<tr>
<th>Department</th>
<th>Total Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloch School of Business and Public Administration</td>
<td>$169,662.76</td>
</tr>
<tr>
<td>Online and Distance Learning</td>
<td>$159,214.28</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>$116,859.10</td>
</tr>
<tr>
<td>Administrative Affairs</td>
<td>$116,564.00</td>
</tr>
<tr>
<td>Admissions Office</td>
<td>$63,999.50</td>
</tr>
<tr>
<td>Research Services</td>
<td>$53,200.00</td>
</tr>
<tr>
<td>School of Computing and Engineering</td>
<td>$51,546.04</td>
</tr>
<tr>
<td>Academic Affairs</td>
<td>$29,308.80</td>
</tr>
<tr>
<td>College of Arts &amp; Sciences</td>
<td>$23,637.95</td>
</tr>
<tr>
<td>Parking Operations</td>
<td>$22,500.00</td>
</tr>
<tr>
<td>School of Dentistry</td>
<td>$21,526.45</td>
</tr>
<tr>
<td>Environmental Health and Safety</td>
<td>$20,750.00</td>
</tr>
<tr>
<td>Law School</td>
<td>$12,532.40</td>
</tr>
<tr>
<td>Campus Facilities Management</td>
<td>$12,173.34</td>
</tr>
<tr>
<td>Conservatory of Music</td>
<td>$6,136.37</td>
</tr>
<tr>
<td>Student Auxiliary Services</td>
<td>$5,110.09</td>
</tr>
<tr>
<td>School of Biological Sciences</td>
<td>$3,810.67</td>
</tr>
<tr>
<td>School of Education</td>
<td>$2,929.98</td>
</tr>
<tr>
<td>Intercollegiate Athletics</td>
<td>$2,660.00</td>
</tr>
<tr>
<td>Student Residence Hall</td>
<td>$1,716.00</td>
</tr>
<tr>
<td>Financial Aid and Scholarships</td>
<td>$654.95</td>
</tr>
<tr>
<td>University Libraries</td>
<td>$592.80</td>
</tr>
<tr>
<td>Kansas City Repertory Theatre</td>
<td>$470.55</td>
</tr>
<tr>
<td>School of Pharmacy</td>
<td>$447.90</td>
</tr>
<tr>
<td>University Communications</td>
<td>$408.00</td>
</tr>
<tr>
<td>Communitiversity</td>
<td>$249.00</td>
</tr>
<tr>
<td>Institute for Human Development</td>
<td>$240.00</td>
</tr>
<tr>
<td>University College</td>
<td>$216.00</td>
</tr>
<tr>
<td>KCUR-FM</td>
<td>$200.85</td>
</tr>
<tr>
<td>Addiction Transfer Technology Center (Mid-America)</td>
<td>$120.00</td>
</tr>
<tr>
<td>School of Nursing and Health Studies</td>
<td>$104.16</td>
</tr>
<tr>
<td>Chancellors Office</td>
<td>$55.20</td>
</tr>
<tr>
<td>School of Pharmacy - Brick City</td>
<td>$37.24</td>
</tr>
<tr>
<td>SPARK</td>
<td>$34.73</td>
</tr>
</tbody>
</table>
We had **13,908** distinct individuals use the public computing sites between 7/1/2015 and 12/31/2015. This represents a very large percentage of our student base and exemplifies the usefulness and importance of these student computing facilities. We also expanded the number of computer labs supported by IS, both with newly created labs and labs in recently supported Academic units. To ensure the Student Computing Labs provided a stable, consistent, and updated environment for our students we imaged over 1,000 lab computers. These computers are imaged with new software requested by Faculty and updated versions of existing software.

In addition to the physical computer sites we had **1,762** distinct individuals who logged into Remote Labs **27,544** times over the same time period.

The Lab Management Office maintained operations in six IS-managed general use student computer labs, eight restricted access labs, and supplied one associated computer classroom.

- Expanded select lab hours during peak usage periods, including over midterms and finals, to give students greater access to computing resources when they needed them.
- Worked with CFM and multiple other Departments and Schools to ensure lab environments were maintained at an optimal level, including deep-cleaning the carpet in the Royall Hall room 303 general-use computer lab over Winter Break:
- Maintained sufficient student employees to staff labs by processing over 210 applications for Student Assistant positions, conducting over 172 computer skills tests, interviewing 56 prospective new hires, and hiring 23 new Student Assistants for IS-managed labs.
- Supported student printing needs in the general-use labs by keeping supplies on hand and printers ready for use. Over 145,000 print jobs were printed in IS-managed general use student computer labs, totaling over 873,000 pages.
- 7,578 individuals used the general-use student computer labs during this time period:

<table>
<thead>
<tr>
<th>Open-Use Labs</th>
<th>Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloch 110</td>
<td>1,173</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>1,049</td>
</tr>
<tr>
<td>Miller Nichols 2nd Floor</td>
<td>2,334</td>
</tr>
<tr>
<td>Royall Hall</td>
<td>2,572</td>
</tr>
<tr>
<td>School of Education</td>
<td>1,157</td>
</tr>
<tr>
<td>Student Union</td>
<td>3,987</td>
</tr>
</tbody>
</table>

**Other Notable Activities**

- Provided IT item selection and configuration consultation in response to a myriad of different request scenarios in accordance with UMKC and UM standards
- Worked with Procurement and fiscal officers to ensure IT and Procurement approval policies are followed, resolve budget errors and direct expense transfers as necessary
- Communicated with IT and client constituents to provide information on models, configurations and pricing on UMKC standards for computers, tablets, cell phones, printers and other IT-related items
- Information Services assists the campus with special events that require computing resources. These resources may include guest accounts, specialized software, or access to wireless, printing, teaching, or other computer resources
- Began working with MU on DocuSign, which allows for the electronic processing of documents that require signatures technical teams are working on authentication and policies and procedures
- Continue to grow IT staff and management. Coordinated various educational and training events for Information Services including a virtual Educause event, customer service training, etc
- Represented the campus on numerous technical committees and volunteer groups on campus
- Assisted the Dental School with special projects on several weekends in July during this period
Infrastructure Services

IS Project – Infrastructure Improvements

Upgrade Building Wiring Infrastructure

We have completed infrastructure upgrades in the Bloch School of Business, Health Sciences building, Union Station, Biological Sciences, Spencer Chemistry, Fine Arts, School of Education, Durwood Soccer Stadium, Johnson Hall, Pershing Place Bldg., Student Union, Law School, Miller Nichols Library, Student Success Center, Cherry Street Garage, Block Executive Hall, Miller Nichols Library Learning Center, Troost Street Residence Hall and are currently working on the Performing Arts Center lobby remodel and Medical School. We finished the Performing Arts Center Lobby before the end of 2015 and hope to complete the Medical School upgrade to Category 6 cable over the next year. See Appendix for status chart by building.
Infrastructure & Network New Buildings
UMKC is currently planning the remodel of the Chemistry and Biological Sciences buildings, Whole Foods office space and a new Enterprise Center. These projects require extensive planning, engineering and staff time both before and during the buildings construction. Bringing voice and data systems online when a building is completed and installing outside plant requires the efforts of the entire Infrastructure Services department.

Shared Services - Network Architecture Engagement
UMKC is actively participating in the system-wide Shared Services Initiative. This initiative includes projects that span multiple campuses designed to cut costs, share resources and even staff when possible. Specific to IS -Infrastructure Services is the Network Architecture Engagement Project. The goal of this project is to enhance the University’s intercampus data network in support of shared services.

Other Infrastructure Services Accomplishments This Period
- Infrastructure Services staff attended over 233 hours of training during this reporting period
- Staff member served as the campus building liaison representative
- Completed over 188 moves, adds and changes on voice jacks, data jacks and phones
- Designed and planned infrastructure, voice and data networks for the Performing Arts Center Lobby remodel project
- Responded to, solved and closed 283 trouble tickets recorded in ITSM (Remedy)
- Installed Fiber Optic tray infrastructure in Newcomb Hall Data Center
- Staff member served on the Inter Campus Network Committee
- Provided construction documents and Division 27 standards for the Biology-Chemistry remodel, Whole Foods office space and the Performing Arts Center Lobby remodel projects.
- Installed redundant conduit route to the Dental School, pulled in fiber optic cable, spliced and terminated
- Installed new infrastructure for Rockhill Parking Garage IP camera system
- Staff member served as the department space representative
- Updated IS Disaster Plan
- Processed over 1.9 million calls through voice systems
- Marked University buried cable plant locations as required by Missouri Law for One Call services 276 times during this reporting period

Infrastructure Services Training Program Overview
Infrastructure Services training plan includes a comprehensive array of courses to acquire and keep technicians certified as Belden Cable Installation Professionals. Training also includes a wide range of courses on University related policies and procedures, safety, telecommunications and copper or fiber
optic cable related topics. The BiCSi Registered Communication Distribution Designer (RCDD) on staff must also follow a specific training program throughout the year to maintain his certification credentials. New staff members attend a week long training course followed by a certification test to become a Belden Cable certified installer within their first year of employment. All technicians then attend an update course once every 2 years on the latest in cable and fiber optic technology and installation techniques. All staff members are encouraged to take local courses throughout the year on work related topics when they are available.

Below are samples of some of the certifications maintained by Infrastructure Services personnel:
Security

July 2015 to December 2015 Accomplishments report:

- Completed 2015 PCI credit card audit
- Majority migration to new event log collection system
- Assisted UMKC and other UM campuses with recovery of over 200 compromised student email accounts stolen via phishing
- Continued testing and development of Amazon AWS and Microsoft Azure cloud service options
- Assisted with Windows 10 policy and update settings
- Work on testing Outlook Application for iOS and Android – pending changes in Columbia for expanded use
- Assisted with live and stored media streaming issues for one school
- Assisted with the completion of the 2015 end user security awareness training for Faculty/Staff
- Assisted with a departmental camera system upgrade
- Assisted with an Active Directory health review for UM-System
- Started review work on AppleTV4 for use in ILE Classrooms
- Worked on shutdown of multiple legacy Windows 2003 servers
- Worked on a secure file server project for a department
- Assisted with a project related to memory leak troubleshooting on two Active Directory servers
Introduction

Efforts of the Information Access Division during the period July through December 2015 were notable for the improvements made in measurements of customer response times, despite a steady increase in requests for service. All divisions had singular and combined successes.

**Instructional Technologies (ITS)** ITS completed a successful move to Blackboard Managed Hosting in August 2015. UMKC users have experienced less downtime and increased application performance. ITS also launched Blackboard Analytics, a tool to study usage of Blackboard Learn course and organization sites with added input from PeopleSoft. Student, department, academic unit, and instructor trends and activity are readily available through pre-defined and custom reports.

**Foundation Services (FS)** Foundation Services provides secure, professionally managed data centers to meet the growing information technology needs of academic and administrative units at UMKC. FS completed an agreement with Amazon Web Services. This agreement provides a more flexible and cost effective structure to provide students, faculty and staff with server, storage and online services not capable internally in the past.

**Internal Applications (IA)** Internal Applications worked on large projects for a number of colleges and schools and performed semi-annual account cleanup processes. IA implemented additional project management, documentation and sharing initiatives to increase effectiveness internally. The addition of JIRA and confluence have improved change management, workflow and documentation of key processes for the university.

**Academic Enhancement (AE)** AE continues to provide academic support for instructors providing supplemental material for courses. In the past six months the group produced over thirty videotaped or streamed events. AE worked with multiple academic units and provided streaming coverage and post production DVDs for ten commencement ceremonies.

**Digital Media (DM)** The Digital Media along with other portions of Information Services formally launched Four Winds Interactive Software as the standard for digital signage on the UMKC campus. User training and an initial rollout of hardware for IS locations and content development took place in fall 2015. In early 2016, over 10 additional signage locations on campus will switch to this software platform.
Instructional Technologies (ITS) Accomplishments

During the last 6 months, ITS has played a pivotal role in the implementation and testing of two new products. The first, Blackboard Analytics for Learn (A4L), combines extensive data from Blackboard Learn with student and course data to create comprehensive dashboards and reports for relevant campus constituents. The second, Panopto, is a lecture-capture product that will replace Tegrity on our campus in the coming year. ITS has been involved in all aspects of the Panopto roll-out, from the selection phase, to client installation, documentation, and end-user training. Overall, use of ITS-related tools, including Blackboard, Tegrity, Collaborate, and Turning Point clicker technology increased following the trend of the last few years. Both VoiceThread and Kaltura, introduced last year, continue to gain in popularity with instructors and students alike.

Blackboard Usage Data (fall semester)

<table>
<thead>
<tr>
<th>Total Learn Course Shells</th>
<th>7,630</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Learn Courses with Students</td>
<td>3,521</td>
<td>100%</td>
</tr>
<tr>
<td>Active Learn Courses</td>
<td>2,778</td>
<td>78.9%</td>
</tr>
<tr>
<td>Learn Courses Using Grade Center</td>
<td>1,261</td>
<td>35.8%</td>
</tr>
<tr>
<td>Avg. Course Accesses per Student</td>
<td>33.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Avg. Interactions per Student</td>
<td>187.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Avg. Minutes per Student</td>
<td>1,059.4</td>
<td>N/A</td>
</tr>
<tr>
<td>Avg. Submissions per Student</td>
<td>4.6</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Course Item Growth by Item Type: Average Content Items per Course

<table>
<thead>
<tr>
<th>Content Type</th>
<th>2014 Fall</th>
<th>2015 Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announcement</td>
<td>10.6</td>
<td>11.3</td>
</tr>
<tr>
<td>Assignment</td>
<td>16.1</td>
<td>15.5</td>
</tr>
<tr>
<td>Audio</td>
<td>3.9</td>
<td>6.6</td>
</tr>
<tr>
<td>Bb Collaborate</td>
<td>3.9</td>
<td>7.2</td>
</tr>
<tr>
<td>Bb Mobile Assessment</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Blog</td>
<td>6.5</td>
<td>7.6</td>
</tr>
<tr>
<td>Calendar Events</td>
<td>60.7</td>
<td>25.0</td>
</tr>
<tr>
<td>Cengage Mindlinks</td>
<td>37.7</td>
<td>31.3</td>
</tr>
<tr>
<td>Chat</td>
<td>2.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Contacts</td>
<td>1.7</td>
<td>1.9</td>
</tr>
<tr>
<td>Discussion Forum</td>
<td>11.4</td>
<td>11.0</td>
</tr>
<tr>
<td>Discussion Thread</td>
<td>9.0</td>
<td>13.7</td>
</tr>
<tr>
<td>File</td>
<td>16.6</td>
<td>17.7</td>
</tr>
<tr>
<td>Groups</td>
<td>4.2</td>
<td>4.8</td>
</tr>
<tr>
<td>Image</td>
<td>2.8</td>
<td>3.0</td>
</tr>
</tbody>
</table>
IS Accomplishment Report

July - December 2015

Foliotek
Foliotek enrollment from the period of 07/01/2015 to 12/31/2015:

- 4 School of Dentistry programs.
- 617 users in total
- 114 new registrations.
- No major technical issues occurred.
- Next Step: Establish LTI integration in Blackboard for School of Nursing.

Program Breakdown

<table>
<thead>
<tr>
<th>Program</th>
<th>New Registrations 07-12/2015</th>
<th>Number of Active Students (accumulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSDH Clinical Entry</td>
<td>0</td>
<td>222</td>
</tr>
<tr>
<td>BSDH Degree Completion</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Dental Hygiene Graduates</td>
<td>3</td>
<td>62</td>
</tr>
<tr>
<td>Predoctoral</td>
<td>109</td>
<td>328</td>
</tr>
</tbody>
</table>

Blackboard Collaborate
- No major service interruptions observed

Information Access
• Support was provided to end users on individual cases, which were mostly user error or computer issues.
• Although there are drops in the number of sessions and recordings initiated, there are significant increase in attendees. The decrease in sessions and recordings could be an indication of the stabilization on user activities. When Collaborate was firstly introduced to UMKC, it was common for the instructors to launch and test the same session multiple times before getting ready for class meetings. There were also more testing recordings made.
• Next Step: Plan for the promotion and training for Blackboard Collaborate ULTRA.

Usage Breakdown

<table>
<thead>
<tr>
<th></th>
<th>01 - 06/15</th>
<th>07 - 12/15</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sessions Launched</td>
<td>3983</td>
<td>3048</td>
<td>-23%</td>
</tr>
<tr>
<td>Recordings</td>
<td>1460</td>
<td>1154</td>
<td>-20%</td>
</tr>
<tr>
<td>Max Concurrent Sessions</td>
<td>10</td>
<td>9</td>
<td>-10%</td>
</tr>
<tr>
<td>Attendees</td>
<td>15884</td>
<td>21204</td>
<td>+33%</td>
</tr>
<tr>
<td>Mobile Access</td>
<td>1120</td>
<td>1976</td>
<td>+76%</td>
</tr>
<tr>
<td>Desktop Access</td>
<td>15001</td>
<td>17260</td>
<td>+15%</td>
</tr>
<tr>
<td>Average Sessions Launched Monthly</td>
<td>663</td>
<td>508</td>
<td>-23%</td>
</tr>
<tr>
<td>Average Attendees Monthly</td>
<td>1741</td>
<td>2766</td>
<td>+58%</td>
</tr>
</tbody>
</table>
Blackboard Blog and Wiki

- Instructors were suggested to switch to Blackboard’s native Blog and Wiki tools after Campus Pack was discontinued in FS2015. I helped a few courses to migrate their CP content to Blackboard, and archived content for over 600 courses and organizations.
- 43 academic courses used Bb Wiki during SS and FS2015.
- 37 courses used Bb Blog during SS and FS2015.
- No major system-wide issues reported.
- Next step: collect feedbacks from instructors and make improvement suggestions to Bb.

VoiceThread

- A total of 39 academic courses used VoiceThread in the FS2015 semester. The increased number could be interpreted as, after testing VT during the previous semesters, some instructors decided not to adopt this application in classes, either because it did not meeting specific teaching needs, or the technical issues/difficulties was hard for them to adapt to.
- No major service interruption reported. Most escalated tickets were user errors or incompatibility between VT and Bb, or VT and browsers.
- Next steps:
  - Explore similar software with more user-friendly features
  - Organize faculty trainings

Turning Technologies (Clickers)

(Most numbers are accumulated)

- 100+ instructors have used, or are using, or expressed interest in the technology.
- 40 Instructors used ResponseWare (Mobile devices).
- Increasing usage by SOD and SON.
- 8577 student registration accumulated (handheld clickers or/and mobile devices).
- 1538 new registrations during FS2015.
- 70+ ILS Classrooms are now TT enabled.
- Software Version in ILE classroom 5.4 (last version for TP5 which is going to EOL in 06/15).

REDCap

REDCap usages continued to grow in the second half of 2015. The number projects and logged events doubled and tripled during FS2015.

See the chart below for numbers accumulated in 06/2015 and 12/2015.

<table>
<thead>
<tr>
<th></th>
<th>06/2015</th>
<th>12/2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects Total</td>
<td>114</td>
<td>207</td>
<td>+82%</td>
</tr>
<tr>
<td>Production Type</td>
<td>35</td>
<td>99</td>
<td>+183%</td>
</tr>
<tr>
<td>Development Type</td>
<td>78</td>
<td>94</td>
<td>+21%</td>
</tr>
<tr>
<td>Active Users</td>
<td>191</td>
<td>242</td>
<td>+27%</td>
</tr>
<tr>
<td>Logged Events</td>
<td>12788</td>
<td>38811</td>
<td>+200%</td>
</tr>
</tbody>
</table>
Tegrity

Tegrity is being replaced by a new product called Panopto in early 2016.

From July 1 to December 31, 2015 the campus had 5,380 active Tegrity users.

<table>
<thead>
<tr>
<th>Times Viewed</th>
<th>Viewing Duration</th>
<th>number of recordings</th>
<th>Recording duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>162,626</td>
<td>78,713:40:06 hours</td>
<td>5,407</td>
<td>3,675:44:04 hours</td>
</tr>
</tbody>
</table>

Downloads from July 1 to December 31, 2015

<table>
<thead>
<tr>
<th>Podcast Downloads</th>
<th>Vodcast Downloads</th>
<th>Recording Downloads</th>
<th>Active Tegrity users</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>24</td>
<td>1,246</td>
<td>5,380</td>
</tr>
</tbody>
</table>

Listserv

<table>
<thead>
<tr>
<th>Term</th>
<th>Lists</th>
<th>Subscribers</th>
<th>Postings</th>
<th>Emails Sent (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS 2015</td>
<td>555</td>
<td>267,694</td>
<td>15,398</td>
<td>2,941,433</td>
</tr>
<tr>
<td>SP 2015</td>
<td>533</td>
<td>226,618</td>
<td>17,470</td>
<td>4,306,528</td>
</tr>
</tbody>
</table>

Maestro

- Active accounts: 1
- Tracking Events: 471,555
Directly distributed Recipients: 1,397,367
Moodle
  • Active course sites plus organization sites: 67
SharePoint
  • UMKC has 47 sites running for faculty, staff and research purposes.
  • Total unique users: 2,423

Foundation Services (FS) Accomplishments
Foundation Services (FS) provides secure, professionally managed data centers to meet the growing information technology (IT) needs of academic and administrative units at UMKC. FS upgraded our virtual server hosting platform software and storage hardware. FS served as the primary system administrators for 400+ servers as well as provided assistance and technical support for campus IT Liaisons.

Storage/SAN/Backup
  • Our primary backup product (Simpana by CommVault) was upgraded to version 10SP11 allowing for even greater reliability and speed
  • Decommissioned all remaining vTrak SANs.

ITSM
  • As part of a UM System shared initiative, Foundation Services hosted the ITSM infrastructure and exceeded the goal of 99.9% uptime

Server Virtualization
  • The vSphere environment was upgraded to 5.5U3b.
  • Controller upgrades were performed on both our Compellent SANs to enable volume compression allowing for space savings.
  • Provisioned approximately 25 new virtual servers.
  • Foundation Services continued to target physical server infrastructure for virtualization by working with IT Liaisons to retire aging hardware.
  • Investigated Amazon AWS as a hosting platform for multiple server type including database, file, and application.
Miscellaneous
- Remedied and closed 700 Remedy tickets. Ticket completion times continue to be held low
- Multiple server OS (Windows and Linux) and application upgrades including Redcap, Stash, DropBox, Confluence, JIRA, Bit Bucket, ColdFusion, Gene6FTP, Titanium, Cadence, Synopsys, WordPress, and TMA FS
- Installed additional NICE video recorders to increase capacity
- Major UPS maintenance performed on both datacenters including full battery replacement
- Began utilizing Box for Department/Project storage

Internal Applications Accomplishments

Database Server Design, Implementation & Administration:
- Administration and support of all central Oracle servers
- Administration and support of all central MS SQL servers
- Administration and support all central MySQL servers
- Administration and support all central Filemaker servers
- Created a Proof of Concept in relation to Amazon Web Services
- Create a Proof of Concept in relation to SQL Compliance Manager
- UMKC Police SQL Server migration
- Miscellaneous:
  - Did a presentation for an SCE course on the DBA career path and gave an overview of the typical duties associated with the position
- Set up development server for Starfish Connect
- Administration and support of all CHI/HealthFacts servers
- Administration and support of all School of Dentistry Axium servers
- Administration and support of all Data Warehouse Oracle servers
- CBORD Oracle server patches and upgrades
The following new software was rolled out during this period:

- Information form for a new School of Nursing campaign.
- Blackboard migration to Managed Hosting
- Bloch Regnier Institute Hatchery Form
- Bloch Regnier Institute RSVP Form
- IS Retiree Email Request & Administration
- Sent out multiple survey notifications for Institutional Research
- SCE Marketing Form
- Comment Submission site for Town halls
Software enhancements and maintenance was provided for the following custom software applications & websites during this period:

- UMKC Polls Mobile App
- UMKC Attendance Mobile App
- Bloch & Regnier Institute websites
- Starfish Connect
- eLearning Tracker used to track online course certifications
- Roowriter
- Studio Abroad (International Academic Programs)
- Baja Basins
- Online Readiness Survey for students
- UMKC Police Property Registration Website
- Honors College Application
- OSI Appointment Scheduler
- Blackboard Analytics
- ITS Website
- Blackboard Snapshot
- Blackboard User Request (BBUR)
- Conservatory Website Content Management System
- Bloch EMBA Supplementary Application
- HSCP Tuition Assistance form
- iPhD Supplementary Application
- Communiversity eCommerce Website
- School of Dentistry Career Opportunities Center
- UMKC Commencement RSVP
- Moodle Gradebook Export
- Admissions SSO Emails
- Blackboard CRM Data Feed (BBCRM)
- Residential Life Housing Calculator
- Bloch Entrepreneur Hall of Fame Registration
- Kasey Kudos
- SB389 Data Collection
- UMKC Mobile App
- Registrar’s Office Leave of Absence
- School of Nursing Card Picker
- IS Change Management & Outages
- Blackboard Web Services
- Outlook Photos
- UMKC Portal
- Box.com Account Management
- Bloch FT MBA Supplemental Application
- New Letters BookMark Press eCommerce
- UMKC Online/ITS Workshop Registration
- UMKC Consulting Activity Reporting
- Chancellor’s Office/Special Events Master Calendar
- Conservatory End of Semester Evaluations
- Studio Logs
- UMKC QR Mobile App
- Arts & Sciences End of Semester Evaluations
- New Letters eCommerce
- Bloch Appointment Scheduler
Software Administration:
- Served as technical contact for the CourseLeaf Catalog software
- WordPress management, setup and administration
- Trumba Calendar management, setup and administration
- Exchange: Ran the weekly termination report process and archived ineligible mailboxes
- Created and updated multiple distribution lists

Scanning Services:
- Generated several detailed reports for departments based on their evaluation scan data

Academic Enhancement Accomplishments

Dept. Of Black Studies
- Multiple separate event coverage on location recordings with program output to client

Conservatory
- Transform and upload video
- Record/edit/upload piano recitals
- Record/Live Stream multi-camera event at Kauffman PAC, White Recital Hall and the Folly Theatre

College of A&S
- Single camera event coverage for the Foreign Language Dept./process and DropBox to Client
- Produce promo for recruiting Chinese High School Students

Bloch School of B&A
- 2 Single camera event coverage programs process and send via DropBox.
- Record/produce Levitt Challenge video

School of Nursing
- Shot on location/Produce/edit deliver four separate programs on At Risk Behavior

School of Medicine
- Produced Rheumatoid Arthritis of the Elbow Surgery training tape.
- Videotaped Shoulder Surgery on location, Truman East Hospital

Addiction Tech. Transfer Center
- Record Green Screen talking head on Taking HIV Medications

School of Education
- Single camera event coverage Guest Speaker/
- Recorded on location and delivered to Client
• Advised and assisted in streaming the Chancellor’s first Listening Session
• Recorded Chancellor’s Breakfast
• Produced Staff Emergency Fund Promo

**Dept. Of Physics**
• Discussion started on producing 12 video based labs

**Miscellaneous**
• Created new live streaming protocols
• Performed yearly upgrades to ISIS and AVID systems
• Participated in Kaltura training sessions

**Digital Media Accomplishments**

• Worked with campus staff regarding Four Winds Interactive (FWI) new campus digital signage implementation, infrastructure, as well as roles, responsibilities, and ongoing support needed for FWI signage system
• Began creation of campus protocol and infrastructure in new Four Winds Interactive visual communications network
• Began template creation and layout design of Four Winds Interactive displays in Bloch Heritage Hall and Bloch Executive Hall
• Worked with the Bloch School to propose 4 new wayfinding displays in Heritage Hall
• Attended Four Winds Workshop- week long intensive training here on campus
• Attended multiple Four Winds Interactive webinars to learn the new software
- Participated in the Digital Signage Federation, “Google Hangout” on Implementing Room Signage
- Worked with the Dean of Art and Art History department to regarding a student class projects to create video/animation for the BEH video wall, and material for signage across campus.
- Met with Study Abroad Director for signage strategy
- Met with Bloch Alumni regarding ongoing signage space

**Digital Signage: Bloch Executive Hall/Bloch Heritage Hall**

- Ongoing content design and management
  - Total: 93 new published scripts
  - Breakdown:
    - Number of live events supported: 29
    - Number of new info, promotional, or recruiting advertisements: 64
- Curved LED Stock Ticker Messaging:
  - Displayed custom messaging for various Entrepreneurship and graduation events.
- Wayfinding/Directory signage
  - Updated data in Bloch Executive Hall (multiple times)
  - Redesigned building layout upon facilities changes
Data Warehouse

Introduction
The UMKC Data Warehouse supports the campus by providing a one-stop shop for data and numbers regarding campus activities. Working with the Office of Records and Registration, the Human Resources Officer, the Officer of Admissions, and the Division of Advancement Services, the UMKC Data Warehouse provides reporting services to the campus.

Data Requests Processed
The UMKC Data Warehouse provides a number of self-service, online reporting tools to allow users to retrieve information about UMKC. However, not every request can be met this way; thus we allow users to submit ad-hoc requests to our office. Below is a chart detailing the number of requests we have completed.

<table>
<thead>
<tr>
<th>Request Area</th>
<th># of Requests Completed</th>
<th>Average Feedback</th>
<th>Average Turnaround Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Records</td>
<td>225</td>
<td>3.9 / 4.0 (N=18)</td>
<td>4.8 days</td>
</tr>
<tr>
<td>Admissions</td>
<td>34</td>
<td>(N=0)</td>
<td>3.9 days</td>
</tr>
<tr>
<td>Human Resources</td>
<td>13</td>
<td>4.0 / 4.0 (N=1)</td>
<td>2.2 days</td>
</tr>
<tr>
<td>Advancement Services</td>
<td>273</td>
<td>(N=0)</td>
<td>3.4 days</td>
</tr>
</tbody>
</table>

Currently the UMKC Data Warehouse has 97 reports logged into the Cognos Report Inventory. These reports are all designed and maintained by members of the UMKC Data Warehouse to help support reporting efforts on the campus.

These reports provide both automated, scheduled delivery and on-demand reporting for users. The chart below outlines the number of distinct rendition of reports that were generated by users on the campus during the last six months.
Online Dashboards

The UMKC Data Warehouse offers a variety of online dashboards for campus users. The most popular of dashboards is rooPlan which contains a variety of historical counts on enrollments, credit hours, new students, and employment information. The chart lists the number of times a chart was accessed by a member of the campus community during the last size months.

**Usage of rooPlan charts users**

completed Projects

Below is a listing of major projects that the UMKC Data Warehouse completed during the timeframe.

- Fall Semester 2015 Census Process and Reporting
- Summer Semester 2015 Degree Review and AY2014 Reporting
- Summer Semester 2015 degree load for Advancement Services
- 2015 Voluntary Support of Education (VSE) submission
- Upgrade website to mobile content and format
- Advance 9.90 web upgrade
- FusionCharts XT 3.9 upgrade

external Surveys completed

On behalf of the campus and various schools/departments, the UMKC Data Warehouse completes a variety of surveys from third-party organizations. These surveys vary in length and time, some requiring vast amounts of time, so are simpler. Below is a listing of surveys that we completed during the timeframe.

- IPEDS Institutional Characteristics Survey
- Bloomberg Business School Survey
- US News – Best Schools of Engineering Survey
- US News – Best Schools of Education Survey
- US News – Best Schools of Business Survey
- Business Journal Top Area Colleges & Universities
- Business Journal Top Area MBA Programs
- Business Journal Top Area Public Employees Survey
- CUPA-HR National Faculty Salaries Survey
- College Board Annual Survey of Colleges
- Oklahoma State University (OSU) Faculty Salary Survey
- National Association of Schools of Music Annual Survey
- National Association of Schools of Dance Annual Survey
- National Association of Schools of Theatre Annual Survey
- ST. Louis Magazine Survey of Colleges
- EDUCAUSE Campus Computing Survey
Network Architecture

- Replaced building switches to support dual 10Gb network backbone and 802.3at Power- over-Ethernet.
  - Haag Hall – 2 Distribution Switches, 3 Telecom Room switches
  - Manheim Hall – 2 Distribution Switches, 3 Telecom Room switches
  - 4825 Troost – 2 Distribution Switches, 8 Telecom Room switches
  - Cockefair Hall – 2 Distribution Switches, 3 Telecom Room switches
  - Student Success Center – 2 Distribution Switches, 2 Telecom Room switches
  - Hospital Hill Annex – 1 Telecom Room switch
  - Newcomb Hall – 2 Telecom Room switches
- Created a private network connection between UMKCnet and Blackboard’s hosted network
- Created a private network connection between UMKCnet and AWS cloud services
- Designed and installed wired & wireless network in Chi Omega House
- Designed and installed wired network for HSB Simulation Lab
- Configured and installed 4 network switches for new ILE rooms
- Configured 20+ Primex wifi clocks for Biological Sciences and Chemistry buildings
- Designed and installed network in Rockhill Parking Structure & Oak Place Parking Garage for security cameras
- Replaced uninterruptable power supply (UPS) batteries in the telecom rooms of Medical School, School of Education, Flarsheim Hall, Administrative Center, Haag Hall, 4825 Troost, Cockefair Hall, Hospital Hill Annex & Bloch Heritage Hall
- Upgraded contact center phone queuing software to UCCX v10.6 to support web based agents
- Upgraded voicemail system to v10.5
- Virtualized and upgraded e911 system to latest release
- Upgraded wireless controllers and 700+ access points to latest software release