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Introduction

Information Services is a strategic asset for UMKC’s missions of teaching and learning, research, service and economic development.

MISSION

We are a strategic asset for UMKC’s missions of Teaching, Learning, Research, Service, and Economic Development.

2018 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
- 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

2018 IS PROJECT LIST & POINT PERSON

- Campus New Construction/Renovation – Guggenmos/Technology Management Services
  - Whole Foods Development (Student Disability Services, Student Health, Counseling Center)
  - Chemistry – Biology Renovations – Phase 2
  - SCE Educational and Research Center
  - Bloch Heritage Hall Building Renovations
- Academic Works – Guggenmos/Technology Management Services
- Center for Academic Development HCF Grant – Guggenmos/Technology Management Services
- Oak Place Water Damage – Guggenmos/Technology Management Services
- Performing Arts Center Infrastructure Upgrades – Guggenmos/Technology Management Services
- Campus Building Security – Guggenmos/Technology Management Services
- Rave Guardian Deployment – Guggenmos/Technology Management Services
- Smart City Kiosks – Guggenmos/Technology Management Services
- Scofield Hall Infrastructure Upgrades – Guggenmos/Technology Management Services
- ILE Classroom Lifecycle Upgrades Phase 4 – Guggenmos/Technology Management Services
- Active Directory Consolidation – Guggenmos/Technology Management Services
- Expansion of wireless coverage – Schonemann/Network Architecture
- Building Network Switch Refresh – Schonemann/Network Architecture
- Data Center Network Switch Refresh – Schonemann/Network Architecture
- Campus Core Network Switch Refresh – Schonemann/Network Architecture
- Implement Amazon Web Services Enterprise Firewall – Malyn/Security
- Distribution List Management – Kurup/Information Access
- Generic/Resource Account Management – Kurup/Information Access
- Academic Credentialing Database – Kurup/Information Access
• MySQL 5.7 Upgrade - Vishal Kurup/Information Access
• Filemaker 16 Upgrade – Vishal Kurup/Information Access
• Oracle 12.2 Upgrade – Vishal Kurup/Information Access
• SQL Server Upgrade – Vishal Kurup/Information Access

2018 Shared Services Project List

- Accounts Management – Goodenow/Reisenbichler/Kurup – Information Services
- Establish Enterprise Architecture – Schonemann/Network Architecture
- UM Network Architecture – Schonemann/Network Architecture
- Implement Cherwell – Phase 1 – Reisenbichler/Support Services
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 last half of 2017.

During this past review period, IS Support Services has increased the number of Windows 10 computers from 1,787 to 3,538; a 100% increase. We now support Max OS 10.13 which is now the new campus standard. This includes supporting a new file system (APFS) and many changes with FileVault. The call center created 13,504 support requests, resolved 11,126, and escalated 2,378.

By coordinating UMKC’s bulk computer purchase, we were able to obtain additional vendor discounts totaling $89,513.70 this year.

In the Shared Services area, we worked with our sister campuses on ITSM replacement. Cherwell has been identified as the provider and we are working on implementation timelines. Locally we have signed MOU agreements with the School of Education and University Libraries to provide desktop support and other IS services.

Campus Technology Services completed technology upgrades to 23 ILE rooms to HD widescreen digital video & projection systems, enhanced audio processing with web conferencing, and voice over IP features. Our Video Services group supported 771 hours of ITV distance learning. The additional hours show an upward trend continuing the last few years.

The Project Management and Infrastructure Services departments worked a number of high profile projects including the following:

- 51st and Holmes Street Renovation
- PerfSONAR Network Monitoring
- Chemistry/Biology Building Renovation
- Canvas Pilot
- CourseLeaf
- SCE Educational and Research Center
- Law School Expanded Wireless Coverage

Efforts of the Information Access Division were notable for the improvements made in measurements of customer response times, despite a steady increase in requests for service. Internal applications completed new software/application solution for University Libraries, Continuing Education, and undergraduate research. The campus expanded our dive into SalesForce with three projects and supported the campus goal of student retention with additional data and reporting from uAchieve.

ITS worked with Infrastructure Services and various campus groups to bring the Canvas LMS online. We developed training plans for internal staff, created internal and external documentation, and worked with UMKC Online to prepare for the first phase of our transition to Canvas, which began on January 1, 2018.
For the fall 2017 semester, we piloted Top Hat in select courses as a replacement for Turning Technologies Clicker ResponseWare tool. The pilot was a success with those faculty and students involved, and Top Hat was chosen as the Clicker replacement product for spring 2018.

Foundation Services hosted over 400 servers in our local data centers or via Amazon Web Services.

Academic Enhancement supported live streaming or video events for over 20 different units on campus.

The UMKC networking team continued work on the 10-year building-wiring plan. We replaced switches in 5 campus buildings. The group also worked on renovation/new constructions projects with Whole Foods and the Chemistry and Biological Sciences buildings.

UMKC phone operators handled ~34.5K phone calls with 76.9% of the calls being automatically routed and the remainder requiring human interaction.

The IS Security Team assisted with PCI (credit card security) audits and reviews for 20 campus merchants. This included special scans on 101 computers that have the potential to be involved with card handling. We setup a new forensic processing product FTK to help with forensic processing.

Looking forward, Information Services is establishing new long range staffing and budget planning processes. IS is exploring new services and offerings to streamline the service and offerings for students, faculty, staff and the entire UMKC community.
Computing Facilities

We had **12,770** distinct individuals use computing sites between 7/1/2017 and 12/31/2017. This represents a very large percentage of our student base and exemplifies the usefulness and importance of these student-computing facilities.

In addition to the physical computer sites, we had **1,524** distinct individuals who logged into Remote Labs 13,478 times.

IS also performed many lab upgrades including:

- Revamped the HSB3304 computer lab to ensure the needs of students would be met.
- Changed the layout of the Bloch 110 to meet the needs of Bloch.
- Replaced many kiosks across campus, including Haag Hall, Oak Hall, and Royall Hall.

**Printing.** Performed application upgrades on PaperCut across the student computer labs. This upgrade provides additional functionality for students and ensures that we are up-to-date from a security perspective. IS revamped the user interface for the PaperCut website, providing a modern and customer friendly portal.

The Lab Management Office maintained operations in five IS-managed general-use student computer labs and eight restricted access labs.

- 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 carpets in several facilities over Winter Break:
Maintained sufficient student employees to staff labs by processing over 88 applications for Student Assistant positions, conducting over 79 computer skills tests, interviewing 54 prospective new hires, and hiring six new Student Assistants for IS-managed labs.

Ensured that all Student Assistants completed Title IX training.

Supported student-printing needs in the general-use labs by keeping supplies on hand and printers ready for use. Over 128,000 print jobs were printed in IS-managed general-use student computer labs, totaling nearly 880,000 pages.

6,143 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>884</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>905</td>
</tr>
<tr>
<td>Miller Nichols 2nd Floor</td>
<td>1,624</td>
</tr>
<tr>
<td>Royall Hall</td>
<td>2,334</td>
</tr>
<tr>
<td>Student Union</td>
<td>3,368</td>
</tr>
<tr>
<td><strong>Total (selected labs combined)</strong></td>
<td><strong>6,143</strong></td>
</tr>
</tbody>
</table>

Reviewed approximately 175 ISSS web pages and created an index to track future updates of online information.

Residence Halls

Supported student-printing needs in the Residence Hall computer labs by keeping printers ready for use. Over 11,100 print jobs were printed in the Oak Place and Johnson Hall computer labs, totaling over 60,200 pages.

Seven hundred and thirty-five 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>342</td>
</tr>
<tr>
<td>Oak Place North</td>
<td>228</td>
</tr>
<tr>
<td>Oak Place South</td>
<td>254</td>
</tr>
</tbody>
</table>
Totals and Trends in IT Procurement

- Purchased roughly $2,462,000 worth of IT hardware and software, including computers, tablets, printers, peripherals, specialty systems, software, web services, subscriptions, service warranties, maintenance agreements and usage fees
  - This represents a 34% decrease in total spend over the same period one year ago
  - These decreases were spread evenly over both hardware ($1,207,789) and software ($1,254,837) spends, representing reductions of 33% and 35%, respectively
  - This may be largely attributed to the tight budget UMKC faced in the second-half of the 2017 calendar year as state funding and systemic issues required further, sizeable budget cuts to most departments

![IT Procurement Spend by Fiscal Year (2008-2017)](chart)

Note:
The chart above reflects the amount of IT products and services purchased by IS. While it appears that the overall IT spend has risen significantly, the chart does not reflect all of the IT purchases that occurred in the departments during the earlier years. It has not been until the last few years that IT purchases were required to be approved/purchased centrally.

IT Procurement: Distribution by Vendor

- The distribution of IT Hardware spending over primary vendors continues to demonstrate support for standards at UMKC, which helps reduce the total cost of ownership.
- The distribution of IT Software spending over primary vendors continues to demonstrate the diversity of the market
  - This six-month period introduced total of 73 new product titles to our software environment
  - The following table lists the Top 5 IT Software Vendors by total spend
To manage the diversity and ever-increasing number of products and services acquired, IT Procurement continues to update and improve on our ability to track and deploy software. Adopting these best practices allows IS to get the maximum value from our software assets and it reduces IT costs. It also helps us to avoid security risks and compliance issues.

**Workstation Replacement 2018**

- The first half of each fiscal year culminates with the Provost’s Workstation Replacement Program
- Its primary goal is to replace faculty/staff workstations on a four-year lifecycle to benefit productivity and mitigate the security concerns endemic to older operating systems
- Adherence to a small number of standard systems and ordering in large quantities allows IS Support Services to negotiate favorable pricing, including nearly $200 off the standard Dell Latitude 5480 laptop
- The FY2018 WRP accounted for the replacement of 530 systems at a total spend of about $556,000
- 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>Systems</th>
<th>Total Spend</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2016</td>
<td>$320,519.57</td>
<td>$319,601.59</td>
<td>659</td>
<td>$640,121.16</td>
</tr>
<tr>
<td>FY2017</td>
<td>$295,884.13</td>
<td>$395,453.20</td>
<td>664</td>
<td>$691,337.33</td>
</tr>
<tr>
<td>FY2018</td>
<td>$316,950.06</td>
<td>$239,224.59</td>
<td>530</td>
<td>$556,174.65</td>
</tr>
</tbody>
</table>
Support Services

Highlights and Key Initiatives

New IT Service Agreements with University Libraries and School of Education

In September 2017, Information Services and University Libraries (UL) entered into an agreement to collaborate on IT services. As part of this agreement, two of members of their technical staff joined Information Services. These staff continue to remain onsite and support the Libraries. Information Services has worked closely with University Libraries over the past several months to become familiar with their specific systems and services and we meet regularly to stay current with their IT projects and priorities.

The School of Education also signed an agreement with Information Services in September for IT services. During the fall months, a new technician was recruited and trained to support the School of Education. After training within IS, he will relocate to the School of Education to provide onsite support.

IT Service Management (ITSM)

The ITSM platform, which was implemented in 2012, was not keeping pace with required functionality. As a result, campuses decided to review options to replace the older system.

ITSM is based on the IT Infrastructure Library (ITIL) framework and has numerous modules including incident, problem, change, knowledge, asset management, etc.

In planning for a replacement system, stakeholders presented information on what worked in the current system and the functionality and features requirements.

After numerous demos and reviews, a new product was selected. The goal is to have a new system operational prior to the start of the FY19 school year.

Windows 10. IS continues to move forward with Windows 10 as the standard operating system. Over the last 6 months, we increased the number of Windows 10 computers from 1,787 to 3,538, an increase of 100%.

Desktop Support has developed and tested build 1709, which is the new campus standard. This must be done with each new build to keep up with Microsoft’s new Software as a Service (SaaS) model for Windows 10.
In addition to the faculty and staff computer upgrades, Desktop Support has migrated ~1,300 lab and Ideal Learning Environment (ILE) computers to Windows 10. This included developing new images and performing software compatibility testing for over 200 pieces of software used in the various Academic labs throughout campus. This was a significant project that took a year of planning and testing to ensure a smooth rollout.

**Mac OS.** Over the last 6 months IS has completed a major shift in imaging processes for Mac OS. “Thick” images have now been replaced with “thin” images. These “thin images” are defined as a series of profiles. To accomplish this transition, many new profiles were created. This allowed us to expand our capabilities and remotely deploy applications on Mac OS. Information Services has begun utilizing Apple’s Device Enrollment Program (DEP) to streamline new deployments. IS has also updated our asset management processes on Mac OS to align with existing Windows standards.

Information Services now supports Mac OS 10.13 which is now the new campus standard. This included supporting a new file system (APFS) and many changes with FileVault.

**IS Support Services – Service Requests**

Over the last five years, the number of service requests have fluctuated depending on projects, outages and hours of operations. During the past six months, we have seen a reduction in the number of support requests. Part of the reduction can be attributed to the loss of two FTE in our Call Center and shorter hours of operation. Another contributing factor is the lower number of system/network outages during this period. Lastly, the changes with SecureAuth have reduced the number of password-related requests as users can use SecureAuth and two-phase authentication to gain access.
Customer satisfaction continues to remain very high. Over the last six months, Support Services has seen an increase in satisfied customers with a 96% very satisfied rating. The following chart represents customer satisfaction data collected from surveys closed by IS Support Services for the period of July 2017 through December 2017.

### Call Center Metrics

- The Call Center created **13,504** support requests, resolved **11,126**, and escalated **2,378**.
- The Call Center’s first-contact resolution rate over the last six months was **80%**.
Call Center

- The Call Center created 8,627 support requests, resolved 6,811, and escalated 1,816.
- The Call Center’s first-contact resolution rate over the last six months 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 2016</td>
<td>12,300</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2016</td>
<td>14,183</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2017</td>
<td>13,504</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2017</td>
<td>8,627</td>
</tr>
</tbody>
</table>

- Support requests generated through 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 normal business hours. However, we are able to spot and address 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 2015</td>
<td>408</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2015</td>
<td>542</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2016</td>
<td>491</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2016</td>
<td>549</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2017</td>
<td>469</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2017</td>
<td>504</td>
</tr>
</tbody>
</table>

- **Account Management**
  - Office 365 – The Call Center continues to be the primary support contact for students using the Office 365 email system
    - Set up 26 Office 365 email accounts for alumni in conjunction with the Alumni Association
  - Created 61 guest/ resource/ departmental accounts and worked with office of Operations and Administration to bill accordingly.
  - Worked with Admissions, Registration and Records and various UM IT groups to address SSO account creation and maintenance issues.
  - **AIMS** – Account Management tool which is used by UMKC, MST, MU, and UMSL
    - AIMS updates that enhanced performance and efficiency were tested and approved for production in August, October, and November.
    - The Call Center tested and offered recommendations to help refine new tools throughout this period.
  - **ITSM** – IT Service Management tool
    - Created new templates for the Call Center to use when creating incidents
    - Worked with ITSM Steering Committee, Service Desk Committee and technical teams to test the SmartIT service management tool
  - **SecureAuth** – Two Phase Authentication Toolkit
    - The Call Center assisted numerous users throughout this period so that they could use the new SecureAuth tools. The Call Center had a significant uptick in the number of callers when UM implemented SecureAuth around myHR on December 19. This change required
employees to set their passwords before they could access myHR. The Call Center assisted with SecureAuth testing and offered suggestions to help refine procedures.

- **Box** – Cloud storage option for faculty and staff
  - Helped manage the provisioning and de-provisioning of accounts in conjunction with Foundation Services and Internal Applications.
  - The Call Center runs a provisioning process once every day.

- **RightAnswers** – Self-service knowledge base solution used by UMKC, MST, MU, and UMSL
  - Worked with UM and RightAnswers to correct problems.
    - i. RightAnswers solution links were pointing to the wrong host when sent via email.
    - ii. Feeds from our IS blog and outages on the portal page were not updating.
  - Approved and published RightAnswers articles created by Call Center staff.

- **Bomgar** – UMKC-hosted remote support solution used by UMKC, MST, MU, and UMSL
  - Performed other appliance and instance upgrades as necessary.

### Desktop Support

### Ticket Requests

- Responded to and resolved 3,444 Desktop Support requests. Breakdown of supported groups is below.

<table>
<thead>
<tr>
<th>Group</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee-Student</td>
<td>131</td>
</tr>
<tr>
<td>Faculty</td>
<td>942</td>
</tr>
<tr>
<td>Generic</td>
<td>83</td>
</tr>
<tr>
<td>Retiree</td>
<td>11</td>
</tr>
<tr>
<td>Staff</td>
<td>1,557</td>
</tr>
<tr>
<td>Student</td>
<td>851</td>
</tr>
</tbody>
</table>

### School of Computing and Engineering (SCE).

Support Services worked closely with SCE and the IT Ops Committee Chair throughout the semester to ensure the needs of Faculty and Students were being met. Listed below are a few key projects we worked to complete during this period.
• IS Imaged ~150 SCE General Lab Computers. This is a large undertaking due to the complex software suite required for this academic unit.
• Worked with SCE on newly created DST Student Services suite. This renovation consolidated six academic advisors into one location as well as creating a new meeting room to meet with incoming students.
• Reviewed, purchased and installed numerous software titles for SCE
• Worked with CFM to ensure the environment was maintained at an optimal level, including deep-cleaning lab floors:

  ![Image of cleaned lab floors]

• Assisted with upgrading the MFD in SCE 463.
• Staffed School of Computing and Engineering labs for extended hours during fall semester midterms and finals.
• Supported student-printing needs by keeping supplies on hand and printers ready for use. Nearly 61,300 print jobs were printed in the SCE computer labs located in rooms 364, 460, 462, 463, and 464, totaling over 536,600 pages
• 1,405 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>568</td>
</tr>
<tr>
<td>SCE 460</td>
<td>715</td>
</tr>
<tr>
<td>SCE 462</td>
<td>956</td>
</tr>
<tr>
<td>SCE 463</td>
<td>631</td>
</tr>
<tr>
<td>SCE 464</td>
<td>833</td>
</tr>
</tbody>
</table>
• Staffed registration sessions during five new student orientations, including providing printing and guest account resources.

College of Arts and Sciences (A&S)

• The Theater department upgraded the sound lab and stage management area with 2 new iMac’s and a HP DesignJet 5000 plotter for scene design. Assisted the Chemistry department in the transfer of ADF and VASP licenses. These licenses were used on the TUX cluster by students conducting research.
• Moved large amounts of research data for Physics and SCE from local NAS drives, with no backups, to a centrally managed and backed-up research storage option. As part of this process, IS evaluated several different software connection options. These options were based on user requirements and data usage in order to optimize the group’s workflow.
• Information Services worked with the History department on a new lab. The department was recently awarded a Kemper Foundation Grant for the creation of a new Digital History Lab. Currently in the construction phase, this lab will house multiple iMacs with video editing software. When completed, the lab will provide students with access to video recording equipment. The lab will be located on the third floor of Cockefair Hall.
• Desktop Support refreshed nineteen systems in the Environmental Sciences lab for the Geosciences department.
• Information Services completed the collaborative workspace for Dr. Sun’s research lab in Geoscience. This included an open meeting area with a large wireless display screen.
• Added an additional eight computer systems to the Physics Electronics Computing Interface lab.
• Desktop Support assisted with multiple large computer equipment moves and remodeling efforts within the College:
  o PACE moved to Cherry Hall
  o Relocate a research lab in Psychology
  o A&S Recruiting moved to the first floor
  o A&S Advising office moved to temporary office location for water damage repairs

University Libraries (UL)

With the new agreement for IT services in place at the start of the semester, IS worked to become more familiar with the technology in the Libraries. We also made progress on a number of projects, including:
• Worked with Datamax to provide service to all UL printers
• Migrated all Lab printers from UL servers to central IS servers
• Standardized on “Find-Me” printing with both UL and IS print release stations
• Migrated Iliad from on premise to cloud based hosting

School of Education (SoE)

IS met a number of times with the School of Education last fall to better understand their goal and priorities. We also spent considerable time recruiting, hiring and training a new technician so that he’s familiar with IS policies and procedures. Other accomplishments include:

• Worked with the Community Counseling and Assessment Services division to implement Titanium Schedule. Migrating to Titanium Schedule allowed the group to move to electronic medical records and scheduling.
Coordinated an effort to review security permissions on the departments file share.
- Provided technical support while the technical position was being filled

**Conservatory of Music and Dance**
- Completed various technical support requested
- Upgraded a complex high-end iMac configuration within the IMPACT Center. The IMPACT center is a studio space that can be used to create musical scores.
- Reviewed Conservatory software.
- Purchased and installed various software apps for the Conservatory
- Provided a number of OS upgrades

**School of Biological Sciences (BIO)**
The School of Biological Sciences is undergoing a major renovation project that has a significant impact on their technology. During this period, IS worked on numerous IT initiatives including the following:
- Phase 1 of the remodel project was completed during this period and the vast majority of equipment has been placed in the newly renovated space. For IS this translated into numerous computer equipment relocations and the testing of an 800-megawatt generator. This change was coordinated to occur over a weekend and it required a complete shutdown of all non-essential systems in order to limit damage from a power surge. IS made sure that the equipment was disconnected and reconnected after the testing to avoid damage.
- Upgraded the computer that controls the departments Gel Logic 200 camera. This required moving the camera to a newer iMac and configuring the use of MicroManager, a software provided free of charge from NIH, in order to control the camera and the images.
- Coordinated with Chemistry for the replacement of a specialized Linux computer with a very specific set of components.
- Provided an introduction of UMKC IT for the Biology Boot Camp. This was prepared for new students that are majoring in Biology, instructing them where to find the technical resources they may need during their studies.

**National Museum of Toys / Miniatures**
- IS provided a secure guest network for the three-day Miniature Masterworks event held in September. IS also provided on-site support during the first part of the event to assist international exhibitors and vendors to connect to the guest network.
- Assisted the Museum with their interactive displays. This included working with outside vendors and the IS security team to identify a secure process for displaying and updating content.

**School of Management**
Information Services meets regularly with the IT Ops Committee Chair at the School of Management to ensure that we stay on top of their current IT projects and priorities. A few of their technical initiatives during this period were as follows:
• Worked with Bloch to identify needs for new Venture Hub located off-site. This included working with Networking to ensure connectivity and the deployment of technology to support the unique needs of this community resource.
• Worked with Bloch Faculty and Staff to identify, procure, and configure numerous software applications.
• Purchased numerous computer systems and software to support teaching and learning.
• 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.

• Addressed multiple incidents with flooding in the lab, working with CFM and outside contractors.
• Finalized preparation work for repurposing of back two rooms of the suite.
• Supported student-printing needs in the BHH 005 computer classroom by keeping supplies on hand and printers ready for use. Nearly 1,300 print jobs were printed in BHH 005, totaling over 6,500 pages.

The School of Law
Support Services regularly meets with the Law School to ensure service needs are being met. A few key projects where IS collaborated with the Law School during this period are listed below.

RooLaw v2. The School of Law is moving to a new version of RooLaw. Desktop Support technicians worked throughout the semester to identify requirements and support this new portal. It will utilize the existing automation in order to streamline the implementation process.
ILG Exam 360. Supported the development of a new tool to facilitate online exams. This app will replace ExamSoft in the spring.
Printers. Continued to migrate additional lab printers to central services. With this last round of migrations, the need for a dedicated Law Print Server has been eliminated, thus saving the school valuable resources.
**12Twenty.** IS provided support for Career Services migration to 12Twenty. This included assistance with the procurement and vetting of security requirements for the new product.

**School of Nursing and Health Sciences (SoNHS) and School of Pharmacy**

IS continues to work with both Nursing and Pharmacy to support their IT needs. Below are a few of the projects that IS worked on during this review period.

- **Multi-function Devices.** IS replaced eight large-scale multi-function devices throughout the HSB building and on the Columbia campus where Pharmacy has offices.
- **NiaRx.** IS worked with Pharmacy to implement NiaRX. This is a new web-based learning platform that offers augmentable and escalating care-planning case studies for students and faculty in healthcare professions. This platform has been moved into production and is actively being used.
  - IS worked to procure and setup a new Gel Doc Imager for Pharmacy.
  - Desktop support is working with Nursing to better utilize Box cloud storage and UMKC file server storage. They are in the process of migrating data that is currently stored on file servers and locally to Box. In addition, they are reorganizing it for easier access.

**KCUR**

IS continues to support KCUR and has worked on a number of new projects during this period. Below are a few of the larger projects.

- Rebuilt the Allegiance servers used for many KCUR operations. This included updated applications as well as servers.
- KCUR has been embedding RDS data in the FM broadcast for many years. RDS Data typically provides the song and artist data that you see while you are playing your radio. For KCUR, this data has been a static generic message. Last fall, KCUR added additional software and hardware so that they can now provide real time updates to this data. This change will allow KCUR listeners to receive updates from programs such as National Public Radio so that they see RDS data for these programs. It lets KCUR provide specific messages for local shows, newscasts, and membership drives. With the first phase of the project completed, a second phase called “Tornado Alley” will be worked on. This will enable emergency alerts to display via this system.
  - Configured the automated use of “pre-roll” files to aid in Fundraising and other uses.

**Desktop Support - Enterprise Support Projects**

**AirWatch.** 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.

- IS upgraded AirWatch to 9.1 during this period.
- Upgraded the eight mobile devices used by parking control officers to issue parking tickets
- Planned a major cell phone upgrade for CFM, which will complete in early 2018
**SCCM.** Continue to use Microsoft’s SCCM as the primary asset management tool and our preferred method of software installation.

- Over the last 6 months, SCCM was used to install 23,326 software apps across campus. 1,229 of these were initiated via our Software Deployment webpage by IS technicians and IT Liaisons. We also imaged 1,235 lab computers using the Operating System Deployment functionality of SCCM.
- A major upgrade of SCCM was completed to the current branch, 1708. This allows us to continue to manage the new Windows 10 builds across campus.
- Began developing self-service options via SCCM. Phase 1 will enable Faculty/Staff to upgrade to newer builds of Windows 10 on their own with just a couple clicks. In the future, we are looking at expanding this to site-licensed and commonly requested software.

**Remote Labs.** Performed a complete refresh of Remote Labs in preparation for the fall semester. This included updating all servers and applications.

**License Servers.** Updated over 20 individual license servers with updated daemons and/or license files.

**Reporting.** The Enterprise Support team updated over two dozen online reports, including improving the Workstation Reporting Program Inventories.

**Website.** Updated the IS website throughout this period with meeting notes, new product information, new software and hardware options, etc.

**Software updates.** Planned, tested, and deployed several updates to all Windows campus computers to ensure software is up-to-date. This is done to give our faculty and staff the latest products and to limit vulnerabilities since older software is often less secure.

Over 200 SCCM packages were created during this period. During this timeframe, we began deploying Google Chrome campus-wide. This was requested by HR after a PeopleSoft update where other browsers did not always allow them to connect to required websites.

A few of the major software packages upgraded are listed below.

<table>
<thead>
<tr>
<th>Maple/SPSS/AMOS</th>
<th>Adobe Reader/Acrobat</th>
<th>Mozilla Firefox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Chrome</td>
<td>Panopto</td>
<td>Java</td>
</tr>
</tbody>
</table>
Desktop Support updated many of our online order forms to utilize real-time fiscal authorization look-ups. This eliminates many of the need for numerous emails between departments to obtain the necessary approvals.

IS created a new self-service solution for Faculty/Staff to request and download EndNote on their personal computers. Previously, this required approval for each download. This solution can be expanded to other similar software processes in the future.

**Scheduling.** Worked with the Administrative Center Conference Facility and the Student Union Events groups to move from CEO Scheduler to the Ad Astra. UMKC already owns Ad Astra and there was no charge for adding these groups to our existing configuration. This resulted in a significant cost savings in yearly maintenance agreement for the departments.
IS Project Updates

As a division, we have worked with several academic & business units to renovate, design, install and provide ongoing support for multifaceted information technology and audiovisual systems. The following sections touch on the key IT/AV projects by phase that consumed a significant amount of IS resources/time during this last review period.

Completed Projects

IS completed (6) IT/AV projects. The following projects were the most significant and time-consuming. *See Appendix “A” for individual project detail.*

- **P202 - 51st Holmes St Renovation** - CFM project to widen Holmes Street between 51st and 52nd Streets to allow for better emergency vehicle access. The IT components of this project included adding additional in-ground conduits for future use and keeping existing voice and data services from being damaged during construction.

- **P219 - Building Switch Refresh** - IT project to replace ~144 access and distribution layer switches in 18 buildings. During this review period, we upgraded network switches in four campus buildings (Flarsheim Hall, Law School, Royall Hall, School of Education) completing Phase III of the Switch Refresh Program.

- **P283 – PerfSONAR Network Monitoring** – IT project to enhance our network monitoring capabilities. PerfSONAR was developed by the ESnet and Internet2 networks specifically to monitor network traffic between sites. During this review period, we configured UMKC’s perfSONAR node, established peering with 4 sites (MOREnet’s KC-Core, StL-Core & Springfield-Core nodes and the Research network in Columbia) and successfully tested and implemented the solution.

Current Projects – Implementation Phase

IS progressed in implementing (27) IT/AV projects during this review period. The following projects were the most significant and time-consuming. *See Appendix “A” for individual project detail.*

- **P171 - Chemistry/Biology Building Renovation** – Multi-year CFM building renovation project. The IS scope includes demoing and replacing building network infrastructure and installing new IT closets and network switch gear on Biology floors 2-4 and Chemistry floor 2, as well as with updating (9) classroom/lab environments, (2) conference rooms and (9) collaboration/student spaces. During this review period, IS developed (3) new IT closets with new network switch gear and upgraded the Biology building with new 10GB network infrastructure. We also installed ~75% of the AV gear in the classroom/lab environments as well as the conference spaces.
• **P215 - IP Address Management** – IT project to refresh our campus DNS/DHCP infrastructure. The new system will include an IP address management tool, DNS security features and will provide a consolidated management console for IP address functions. During this review period, we virtualized the environment and upgraded to the latest version NIOS (Infoblox OS), successfully migrated voice DHCP services to the new Infoblox server, and established syncing with Microsoft DHCP servers servicing the data networks.

• **P217 - Telepresence VCS-VCE** – IT Project to enhance video conferencing on and off campus by leveraging key components of our existing VoIP phone system and Telepresence video conference system. We plan to add new modules to increase the number of video conference endpoints on campus. These new video endpoints are designed for a wide range of use cases from personal webcams, to conference rooms, to large classroom environments. The new modules will also integrate our existing H.323 Polycom, LifeSize, Tandberg and other room-based video endpoints into a streamlined dialing plan. During this review period, we resolved complex issues related to MOREnet’s ability to communicate with our Telepresence devices, established a testing environment for further expansion of UMKC Telepresence site deployments, and began to identify sites across campus for deployment.

• **P265 - ILE Classroom Upgrades FY18-IS Funded** - IS Project to upgrade 23 ILE rooms in FY 18 to HD widescreen digital video and projection systems, enhanced audio processing with web conferencing, and voice over IP features. During this review period, we partnered with the Registrar’s Office to identify and schedule rooms to be upgraded, updated system designs to accommodate ILE spaces with more equipment than typical, installed a test system for staff and purchased equipment. We also began room upgrades completing two during this review period.

• **P277 - Canvas Pilot** – UMKC Online multi-year project to evaluate moving UMKC’s Learning Management System from Blackboard to Canvas. The goal of the project/feasibility study is to present the risks and benefits associated with a migration, potential costs, impact on operations and final recommendations that, if warranted, would include a transition plan and timeline. During this review period, we collaborated with the UMKC Online to identify a transition timeline, sign a formal contract with Canvas, prepare the LMS space with proper system/data integrations and began the pilot process for the transition from Blackboard to Canvas.

• **P284 - CourseLeaf (CLSS)** – Institutional Effectiveness project to implement CourseLeaf, which is an online class scheduling and reporting module that streamlines the academic course planning and scheduling process for all constituents in one central tool. The CourseLeaf Section Scheduler (CLSS) module provides an end-user friendly interface for academic units and departments to determine their class offerings each term, including inputting, editing, validating, approving and updating course section information. It provides mechanisms for departments to achieve required class distribution, identifies both intradepartmental and interdepartmental class section schedule conflicts, and visualize and modify course section schedules. These additional tools will allow departments to create their schedules more holistically and deploy resources more efficiently, gaining efficiencies in the units and the Registrar’s Offices. During this review period, we completed preliminary vendor questionnaires, provided the data extract requirements and hosted/attended pre-pilot training.
Current Projects – Development Phase

IS has made good progress working with units to plan (12) IT/AV projects during this review period. The following projects were the most significant and time-consuming. See Appendix “A” for individual project detail.

• **P174 - SCE Educational and Research Center** – CFM/SCE project to build a new multi-story building addition to Flarsheim Hall. IT/AV scope is undefined at this point. The project is still pending Board of Curators (BOC) approval. During this review period, the current area of focus for IT has been the possible elimination of the Old Maintenance Building (OMB), which is within the project footprint, and finding a new/suitable location for Classroom Technology Services staff located in OMB. IS has shared space requirements with the project team and has been working to identify an alternative location. Additional space planning progress is expected in the spring of 2018.

• **P249 - SLATE** - Admissions project to replace UMKC’s current admission CRM vendor (Hobsons Connect) with Technolutions “Slate” CRM, as UMKC’s Hobsons Connect contract has expired. Slate is marketed as a one-stop-shop for everything Admissions. This project includes rolling in existing supplemental unit applications developed by IS, allowing these apps to be retired. During this review period, we facilitated all IT interactions in assisting the Admissions team with their implementation and hosted collaborative meetings where IT could provide knowledge and assistance to the Admissions and SATO teams.

• **P264 - Law School Expanded Wireless Coverage** - IS project is to relocate existing and install additional wireless access points to expand wireless coverage throughout the Law School building. During this review period, Networking reviewed the Wi-Fi site surveys results and recommended the installation of 17 new access points to resolve wireless issues.

• **P289 - 600MHz Microphone Replacement** – IS project to replace all wireless classroom microphones that transmit on the 600MHz frequency due to recent FCC mandate. During this review period, we have identified all affected systems and started working with equipment manufacturers to develop a budget for replacement.

• **P293 - ILE Classroom Upgrades FY19 IS Funded** – IS Project to upgrade 35 ILE rooms in FY 18 to HD widescreen digital video and projection systems, enhanced audio processing, with web conferencing, and voice over IP features. During this review period, we collaborated with the Registrar’s Office to develop a draft room upgrade list. We have also started the process of reviewing/updating AV system designs for these spaces that will ultimately yield a bill of materials for the project.
TMS Support Client Experience

For each of the 540 TMS support tickets received during this review period, clients were sent a client experience survey to complete. Below is both the monthly aggregate data and Net Promoter Score (NPS) based on the “average” scores.

- **Average NPS was 87.5**
  - 45 Promoter survey responses
  - 0 Passive survey responses
  - 3 Detractor survey responses
  - ~9% of all Clients responded

![Net Promoter Score Chart]

![TMS Support Average Survey Data Chart]

![NPS Chart]
ILE Classrooms, Video Conferencing, Distance Ed, and On-Demand Video

IS made great progress on ILE classroom upgrade initiatives during this review period. We also managed to keep issue resolution times low, minimizing the impact on students in the classrooms. Highlights on outlined below.

- Began technology upgrades to 23 ILE classrooms to HD widescreen digital video and projection systems, enhanced audio processing with web conferencing, and voice over IP features

![Classroom Updates by Fiscal Year](image)

- Resolved 48% of all ILE/Classroom support issues within 1 hour and 71% of all support issues within a 24-hour period

![Issue Resolution Time - All Classrooms](image)
• Resolved 60% of Hospital Hill ILE/Classroom support issues within 1 hour and 85% of all support issues within a 24 hour period.

![ISSUE RESOLUTION TIME - HOSPITAL HILL](image)

• Partnered with Desktop Support to upgrade 26 ILE desktop PCs as part of the Provost’s Workstation Replacement Program.
• Successfully supported and maintained 371 ILE/AV systems. These systems include classrooms, conference rooms, performance spaces, collaboration spaces, teaching labs and signage systems.
• Invested ~$12,000 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.
• Provided technical support for 299 new streaming videos, images and audio clips added to Kaltura by faculty and students.
• Supported 771 hours of ITV distance learning during this review period. The chart below tracks support over the last two years.

![Hours of Video Distance Education Supported](image)
During this review period, TMS provided support for 10 hours of recorded HSB Simulation Center events. The chart below tracks support since the Assessment Lab was installed.

**Hours of HSB Simulation Center Events Supported**

![Chart showing hours of support from Spring 2016 to Fall 2017 for School of Medicine and School of Nursing.](chart_image)
UMKC Operators

The UMKC Operator number (ext. 1000) handled 34,448 phone calls during this review period. Of those ~34.5K calls, users were able to self-route approximately 76.9% of the calls using our automated call routing tree. During this period, 23% of the calls required human interaction from campus operators.

Calls Routed/Processed

- Self Routed Calls
- Calls Answered by Operators

[Bar chart showing calls routed and processed by month from July to December.]
Building Network Infrastructure

IS made great progress on ongoing infrastructure upgrade initiatives while supporting phone and data related add, move and change requests, a large number of buried cable marking requests, and support tickets. The highlights are summarized below. **See Appendix “B” for a 10-year snapshot of building wiring progress.**

- Completed 100% of the Category 6 planned infrastructure upgrades in Cockefair Hall
- Completed 15% of the Category 6 planned infrastructure upgrades in Scofield Hall
  - We expect to complete the remaining 85% during the next review period

![Infrastructure Upgrades](image)

- Completed infrastructure upgrades to the new Category 6A 10Gb platform in Chemistry and Biological Sciences buildings as part of the renovation project
- Completed infrastructure installation of the new Category 6A 10Gb platform as part of the Whole Foods office space construction.
- In planning/design phase for the Downtown Arts Campus
- Infrastructure Services staff attended over 88 hours of training
- Completed over 188 adds, moves and changes in voice jacks, data jacks, and phones
- Resolved 130 infrastructure related trouble tickets recorded in ITSM (Remedy)
- Marked University buried cable plant locations as required by Missouri Law for One Call services 378 times
Network Architecture

Network Activities

- Refreshed building switches in the following buildings
  - GSB
  - Scofield
  - Cherry Street Distribution & 4th Floor switches
  - Cockefair Hall 1st Floor
  - Biology Building & Chemistry Building
- Migrated in-car video system to new wireless network at Cherry St Parking garage for UMKC Police
- Worked with vendor to implement Shot Tracker “Old Swinney” for Athletics
- Migrated SafeConnect system to virtual server & upgraded version
- Replaced UPS batteries as needed in various telecom rooms
- Connected new KCUR office in Topeka to UMKCnet
- Implemented Cisco ISE authentication service for network devices
- Upgraded Cisco Prime network management application to version 3.2
- Installed new Cisco UCS cluster in Newcomb Hall Data Center and migrated virtual servers onto new platform
- Upgraded Infoblox DNS/DHCP servers to version 8, virtualized servers, migrated internal DNS queries to Infoblox servers
- Upgraded Microcall call accounting software to version 6.2 and SQL 2014 database

Domain Activities

- Purchased .com domains registered / renewed = 2
- Purchased .org domains registered / renewed = 5
- Purchased Wordpress Hosting Subscriptions = 5
- Purchased Website SSL certificates = 9
Internal Applications

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 of all central Filemaker servers
- 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

Software Design and Development

The following new software/solutions were rolled out during this period:

- ASM SI eCommerce

Software enhancements and maintenance was provided for the following custom software applications & websites during this period:

1. SEARCH
2. Starfish Connect
3. myCPE
4. UMKC Online eLearning Tracker
5. Scantron Evaluation Reporting
6. Exit Exams
7. Canvas SIS integrations
8. Salesforce
9. BACH
10. Instructor Issues Reports
11. ALEKS
12. IAP Studio Abroad
13. RooEval
14. IS Labs Shift Tracking System
15. RooWriter
16. UMKC Polls
17. UMKC Attendance
18. UMKC Police Property Registration Website
19. IPhD. Database
20. Special Accounts
21. FERPA Exam Website
22. Provost Business Travel Request form
23. Distribution List MetaData
24. Honors College
25. IS Change Management & Outages
26. Bloch CE eCommerce Website
27. Orientation Website

Software Administration

- Served as technical contact for the CourseLeaf Catalog software
- WordPress management, setup and administration
- Trumba Calendar management, setup and administration
- Created and updated multiple distribution lists
- Regonline eCommerce
- Weekly termination reports processing

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

Scanning Services provided during this period include:
- Total exams scanned: 596
- Total evaluations scanned: 1350, for 84 sections, in 3 scan requests.

Exam Scans by School
- College of Arts and Sciences 257
- Henry W. Bloch School of Management 170
- Conservatory of Music and Dance 4
- School of Education 4
- School of Law 17
- School of Pharmacy 20
- School of Biological Sciences 112
- School of Computing and Engineering 1
- Anchor Courses 11
- Total Exams Scanned: 596

Evaluations Scan Requests by School
- School of Computing and Engineering: 1
- School of Law: 1
- Henry W. Bloch School of Management 1
- Total Evaluation Scan Requests 3
Security

- We assisted with PCI (credit card security) audits and reviews for 20 campus merchants. This included special scans on 101 computers that have the potential to be involved with card handling.
- We assisted with a large eDiscovery project with Columbia involving a campus organization.
- We setup a new forensics-processing product, FTK, to help with forensic processing.
- We added additional PCI involved servers to our PCI monitoring service.
- We started initial work on a new forensics workstation.
- We participated in a major portion of the Active Directory consolidation planning project.
- We participated in a major portion of the Office 365 Faculty/Staff planning project.
- We assisted with the first phase of the campus migration to Infoblox for DNS management.
- We assisted with a HIPAA risk assessment with the Dental School and UM.
- We disabled TLS 1.0 on most campus servers. This is a security standard that has been replaced by newer TLS 1.1 and 1.2. TLS 1.3 standard is being completed, and will eventually replace the older standards.
- We assisted with the roll out of 2-factor authentication for MyHR.
MOUs

Bloch School of Management

IS continues to provide IT support and services for the Bloch School of Management. Listed below is an overview of the services provided to Bloch over the last 6 months.

• Technical support for special events, conferences, career fairs, etc. continues to be a primary function of full time IS and student staff.
  o Bloch Executive Hall averages 5 to 10 events each week
    ▪ These events range in size from 10-200 attendees
  o 311 events have been scheduled so far in 2017
    ▪ 116 of those have requested/were provided support by Bloch IS staff.
• Bloch IS continues to publish a newsletter that provides all Bloch faculty and staff with campus wide IS updates, Bloch specific updates, tips and tricks, Client experience results and contact information.
• Bloch IS developed and deployed an operating cost reduction plan now runs on 100% rebuilt lamp assemblies.
  o OEM raw lamps are ordered and failed lamp assemblies are rebuilt.
    ▪ Lamp life is identical.
    ▪ Lamp cost has been reduced by 70% annually.
• Bloch IS continues to manage the contracted relationship with SKC (Audiovisual integrator).
  o SKC currently functions as an intermediary between UMKC and equipment vendors for replacement and repair.
  o Notable pieces of equipment replaced/pulled for repairs have included:
    ▪ Sennheiser Microphone Antenna Distribution amplifier.
    ▪ Extron Audio Amplifier.
    ▪ Crestron Scaler Power Supplies (4).
    ▪ Crestron Room Controller.
• Bloch IS maintains a close relationship with Marketing in relation to digital signage (Four Winds).
  o Content editing and deployment to Bloch’s FWI players is handled by IS.
  o FWI hardware/software functionality is a responsibility of Bloch IS.
• Bloch IS staff performs daily preventive maintenance checks in all Bloch classroom spaces prior to the start of morning classes daily to minimize disruptions.
  o On top of standard technology issue reporting methods, Bloch utilizes room logs to allow our Clients to ask questions, request training and report issues. Information from these are collected during these maintenance checks.
• Bloch technicians support both Heritage and Executive Halls and are available to assist Clients during all class hours.
  o Technicians are scheduled in both buildings based on class schedule.
    ▪ This ensures we meet Client support expectations as well as our financial obligations in relation to labor spend.
  o Technicians are scheduled on weekends when classes/events dictate.
• Bloch IS continues to put a strong emphasis on Client Experience.
  o 26% of closed tickets resulted in a survey submission by the Client.
  o NPS for Bloch IS from 1/1/2017 to 7/1/2017 was 100.
Information Services also met regularly with the School of Management for various projects and initiatives. Listed below are a few of the accomplishments IS successfully achieved over the last 6 months.

- Deployed Lanschool® in Bloch Executive Hall rooms 211 and 413 to help facilitate collaborative learning experiences
- Added Skype/Webex capability to Bloch Executive Hall room 419
- Supported the Association to Advance Collegiate Schools of Business with their technology needs during their review
- Migrated all network printers from a Bloch print server to the campus print server, eliminating the need for duplicate servers and reducing support costs by aligning Bloch processes with the central IS team
- VITA Tax Program. This program offers free tax help to students needing assistance in preparing their own tax returns. IS supported the technology needs for this program in Bloch 005.
- Worked with Bloch Faculty and Staff to ensure their many software needs were met.
- Supported student printing needs in the BHH 005 computer classroom by keeping supplies on hand and printers ready for use. Over 1,660 print jobs were printed in BHH 005, totaling over 9,900 pages
- 469 individuals used the BHH 005 computer classroom during this period
- Cleared out back two sections of the BHH 110 computer lab in preparation for renovations
- Supported student printing needs in the BHH 005 computer classroom by keeping supplies on hand and printers ready for use. Over 1,660 print jobs were printed in BHH 005, totaling over 9,900 pages
- 469 individuals used the BHH 005 computer classroom during this period
- Cleared out back two sections of the BHH 110 computer lab in preparation for renovations

School of Nursing and Health Sciences (SoNHS) and School of Pharmacy

IS continues to work with Nursing to support their IT needs, including regular meetings with the IT Ops Committee. As new projects come up, this allows us to provide guidance and technical resources to ensure their goals are met. Below are some of the projects IS was involved in.

- IS has provided daily room checks and as-needed technical assistance via ITSM, phone and direct reports.
- Laerdal SimView “Simulation lab” IS provided on-demand operational assistance in this space, as well as on-call technical support when needed.
- IS has documented and shared budgetary estimates to maintain support for KBPort equipment in the "SON Dispensing lab".
• IS has initiated negotiations to reduce the cost of maintaining support in the Laerdal "Simulation Lab"
• After the installation phase of P228 4th floor “SON dispensing lab”, IS staff have provided support on demand.
• IS provided budgetary estimates to maintain technology infrastructure.

Listed below are a few of the projects we worked on with the Schools of Pharmacy and Nursing and Health Sciences.

**ExamSoft.** IS has fully implemented ExamSoft and Pharmacy is successfully using this to streamline their testing process.

**NiaRx.** IS worked with Pharmacy to implement NiaRX, which is a web-based software learning platform offering augmentable and escalating care-planning case studies for students and faculty of healthcare professions. Pharmacy is expected to start using this solution in the Fall semester.

**Laerdal.** Started planning for future Laerdal SimView upgrade. Laerdal is a critical system used by many of the Academic groups located on Hospital Hill.

IS continues to work with Pharmacy to support their IT needs, including regular meetings with the IT Ops Committee. As new projects come up, this allows us to provide guidance and technical resources to ensure their goals are met. Below are some of the projects IS was involved in.

• IS has provided daily room checks and as-needed technical assistance via ITSM, phone and direct report.
• IS provided budgetary estimates to maintain technology infrastructure.
• IS 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, and provided daily coordination/support for distance courses between UMKC, MU and MSU.
• IS initiated regular internal meetings between technical service staff at SoP campuses and design engineers to expedite solutions for persistent problems and help inform future infrastructure designs.
• IS worked internally and with MOREnet to resolve dialing and connection modality with upgraded VC backbone equipment.
• IS initiated a project to examine a potential conversion from videoconferencing hardware to software based platforms. Such a conversion may drastically reduce system maintenance costs and may introduce support efficiencies.
• Worked with IS project teams on the renovations project for Biological Sciences building. This involved moving all labs and faculty equipment from the various floors to other spaces to accommodate the renovations.
• Upgraded the computer that controls the departments Gel Logic 200 camera. This required moving the camera to a newer iMac and configuring the use of MicroManger, a software provided free of charge from NIH, to control the camera and the images it takes.
School of Computing and Engineering (SCE)

Support Services worked with SCE and the IT Ops Committee Chair to review and plan lab updates including any new or changes to software for both the physical and remote labs for the Fall semester. After much discussion, software will be purchased, packaged and configured over the summer months for 100+ software titles currently in use at SCE. These committee meetings are vital, particularly with SCE’s continually changing lab environments and their expanding curriculum. Additionally, Support Services accomplished the following:

- Setup 4 Linux based Alienware GPU systems for the Multimedia Computing Lab
- Configured 4 specialized Precision 3620 workstations, which are very high-end research systems
- Staffed School of Computing and Engineering labs for extended hours during fall semester midterms and finals
- Supported student printing. Over 74,100 print jobs were printed in the SCE computer labs located in rooms 364, 460, 462, 463, and 464, totaling almost 644,700 pages
- 1,396 individuals used the general-use student computer labs during this time period

College of Arts and Sciences (A&S)

- Worked with Communication Studies to provide day-to-day management of the 19-seat Apple computer lab in Haag 103. This required the coordination and installation of 19 data jacks and the creation of a new up-to-date image. Historically, this support was provided directly by faculty.
- Consulted with new Geosciences Professor on the creation of a new research lab. This lab includes one high-powered GPU workstation and two other systems for use by graduate research assistants. This lab space also contains an interactive collaborative meeting space.

School of Education (SoE)

- IS performed a major redesign of SoE computer labs. This included moving a computer based teaching lab from room 034 to room 129B. Because of this change the IS computer lab in 129B had to be removed and the computers repurposed in another lab.
- Assisted the counseling group located within the School of Education with options on scheduling and record keeping of sessions. This includes consulting on software, hardware, and the security concerns associated with the storage of sensitive data.
School of Law

Information Services worked with the IT Ops Committee chair throughout the year on several key projects:

- **RooLaw.** Over the last 6 months IS has automated the entire data import process for this key service. This will not only greatly reduce staff time but also provide more consistent and reliable data. This significant project involved several groups within IS.
- **Server OS Upgrades.** Updated the Tax server to 2016 to stay on a supported OS.
- **ExamSoft.** Worked with Law and ExamSoft to integrate Shibboleth for authentication. This will streamline the login process for both students and faculty.
- **Printers.** Migrated all network printers from a Law print server to the campus print server. This eliminated the need for duplicate servers and reduces support costs by aligning Law processes with the central IS team.

Conservatory of Music and Dance

With the support of Interim Dean Petrella, IS was able to utilize existing equipment in the Conservatory and establish a small video editing lab.

National Museum of Toys/Miniatures

- Assisted with an upgrade to the Toy and Miniature Museum’s QuickBooks installation as well as their point of sale systems.
- Conducted an upgrade of PastPerfect, a software package used to inventory and track museum exhibits, to the latest version to be compatible with Windows 10.
- Improved the workflow and upgraded various computer to Windows 10.

Residence Halls

- Supported student-printing needs in the Residence Hall computer labs. Over 17,700 print jobs were printed in the Oak Place and Johnson Hall computer labs, totaling over 101,000 pages.
- 694 individuals used these Residence Hall computer labs during this time period.
• **PCI.** KCUR has been working closely with UM’s Treasury Office, UMKC Security team and Allegiance Software to make changes. KCUR added an additional secure computer to manage certain processes.

• **Radio Data System (RDS).** KCUR has been embedding RDS data in the FM broadcast for many years but with recent additions, they will be able to provide real time updates to this data. KCUR will now get updates from NPR on programming and then send this RDS data out to the listeners. In addition, KCUR will be able to provide specific messages for local shows, newscasts, etc. This is a larger project that should be completed by 7/31/17.

• **Kansas News Service (KNS).** KCUR has recently entered into a joint agreement with KNS to enhance their coverage in Kansas. As part of this process IS facilitated direct networking connections to Topeka, installed and configured new equipment, and developed processes for remote management of this extension office. As part of this 5 addition staff were added to KCUR.

• **Server OS Updates.** In the last 6 months, KCUR has moved two virtual servers to the newest Operating System. KCUR’s streaming server was rebuilt and then the primary file server and Allegiance Traffic server was rebuilt – both with little or no downtime.
**Academic Enhancement**

**SCHOOL OF BIOLOGY**

Meet with Loretta Klamm/Edit demo program

**SCHOOL OF PHARMACY**

Planning phase meting for project with UMKC’s School of Pharmacy
Record Student POV demonstration video

**DEPT OF DIVERSITY & EQUITY**

UMKC Climate Survey LIVE Stream
Record Pride Lecture featuring Staceyann Chin
Record Martin Luther King jr. Lecture

**VICE CHANCELLORS OFFICE**

Chairs and Directors meeting (4)
Record Event for Vice Chancellor's office

**BLOCH SCHOOL**

RIP 2 DVDs and provide footage
Record Event at Diastole (Alumni Assoc.)
Record 3 minute Thesis event
Record short Lecture for future class

**SCHOOL OF ECONOMICS**

Record 14 Economics classes
Record 3 day Economics & Geosciences Conference

**SCHOOL OF ED**

Record FaCET Conference workshop (3)
Record School of Grad. Studies event (2)
Record School morning/afternoon ritual (on location)
Record Welborne Elementary (on location)
Overflow streaming to MNL rm 351
ECE KC Campaign Pre production meeting
Record Broll and interview (2 events/ locations)
Union Station planning meeting with SOE (new project)
DEPT OF BLACK STUDIES
Slide conversions to digital for Black Studies

OFFICE OF MULTICULTURAL STUDENT AFFAIRS
AACE mentoring program Terence

CHANCELLORS OFFICE
Single camera event coverage – record RPK group (3 events)
UMKC Chancellor Search - Campus Forum Livestream
Record Town Hall Forum Chancellor search
record event for Chancellor (provide gear/they record)
Record/stream live Mid term Graduation ceremony’s
Live stream Missouri Kansas State Authorization Network conference

SCHOOL OF MEDICINE
White coat ceremony Med school

CONSERVATORY
Synching music Folly Jazz show 2017
Music event- Live muti cam record and stream from Kauffman PAC
Stereo audio configuration with Bob Beck for Conservatory Broadcasts
Music event- Live muti cam record and stream from Folly Combined bands
Opera Event 2 nights Live muti cam record and stream
Work with Corey on Conservatory Wind Folly program (edit)
Record Dance Program White  Recital Hall
Record piano auditions (2 events) Edit and sweeten audio

DEPT. OF INFORMATION TECHNOLOGY
Record UMKC Online conference

MCOMM
Record Live stream new chancellor introduction

UMKC TRUSTEES
Produce company video for McCownGordon Construction
SCHOOL OF DENTISTRY

Edit/add music to Johnson and Johnson 1 minute scholarship video

AMERICAN PUBLIC SQUARE

Record Multi-camera event/American Public Square
Meet A.P.S. and audio personnel to scout for Dec 6 event

LINDA HALL LIBRARY

Cockefair course with Dr. William Ashworth (record/upload 3 programs)

WOMEN’S CENTER

Planning for Women's Foundation Event Simulcast on October 3, 2017
Women’s Foundation TEDx event (live stream gear only Scott)

MISC.

Tech  AVID system
Professinal Development Traning:Terence
KCPSD Area advisory committee meeting:Jim
Foundation Services

IS Foundation Services (ISFS) provides secure, professionally managed data centers to meet the growing information technology (IT) needs of academic and administrative units at UMKC. ISFS serves as the primary system administrators for 400+ servers as well as providing assistance and technical support for campus IT Liaisons.

Storage/SAN/Backup

- New Research Managed Backup Storage (RMBS) service created to provide low-cost high-capacity backup storage for researchers.
  - Deployed to: UMKC Caruso Research Group, UMKC ISSS, and UMKC Dental School, MU Library, MU Gil-Schrum Lab, MU RCSS
- Upgraded CommVault to version 11SP8 improving backup speed.

ITSM (Remedy)

- As part of a UM System shared initiative, ISFS hosted the ITSM infrastructure and exceeded the goal of 99.9% uptime.

Server Virtualization

- Upgraded vSphere 5.5 environment (including vCenter and all ESXi host servers) to 6.5.
- Migrated from legacy Cisco UCS B200 M1 platform to new four-host Cisco UCS B200 M4 platform.
- Provisioned approximately 15 new virtual servers.
- Continued to target physical server infrastructure for virtualization by working with IT Liaisons to retire aging hardware.

Miscellaneous

- Remedied and closed 651 Remedy tickets
  - Ticket completion times continue to be held low
- Info and InfoDev WordPress servers moved to Ubuntu 16.04 LTS
  - Updated all blogs to latest WordPress version
  - Created auto-update WordPress plugin used by all blogs to enhance the overall security of the platform
  - Created creation and management scripts to speed up blog creations and simplify management
- Upgraded Tux Cluster nodes to CentOS 6
  - Added new Cadence components
  - Installed new Mentor Graphics software
  - Updated environment modules to support new software/OS
- Multiple server OS (Windows and Linux) and application upgrades including CBORD Odyssey, ARMS, Titanium, TutorTrac, AdAstra, TMA, Redcap, Bitbucket, RooBox (formally DropBox), Confluence, JIRA, and ColdFusion
  Shibbolized dozens of websites and multiple new services allowing single sign-on
- Active Directory Domain Controllers upgraded from Server 2012R2 to Server 2016
- Migrated Windows WordPress installations to Linux
- Facilitated data import of 2017 edition of HealthFacts for the Center for Health Insights’ (CHI) HPC environment
- Deployed Cloudera Linux virtual server to support Hadoop analysis of HealthFacts data marts, in support of a Center for Health Insights’ strategic funds initiative
Instructional Technologies (ITS)

During the period of July 1st, 2017 through December 31st, 2017, ITS worked with Infrastructure Services and various campus groups to bring the Canvas LMS online at UMKC. We developed training plans for internal staff, created internal and external documentation, and worked with UMKC Online to prepare for the first phase of our transition to Canvas, which began on January 1st, 2018.

For the fall 2017 semester, we piloted Top Hat in select courses as a replacement for Turning Technologies Clicker ResponseWare tool. The pilot was a success with those faculty and students involved, and Top Hat was chosen as the Clicker replacement product for spring 2018.

We also changed our 24x7 help desk solution from Blackboard to BlackBeltHelp, resulting in cost-savings for the university.

In addition, proctoring products like Respondus Monitor, and video services such as Panopto and Kaltura, continued to be popular among faculty and students.

Blackboard Course and Organization Usage (January 2017 through June 2017)

<table>
<thead>
<tr>
<th>Number of Active Courses</th>
<th>5528</th>
<th>Number of Active Organizations</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Active Users</td>
<td>13950</td>
<td>Number of Users</td>
<td>91738</td>
</tr>
<tr>
<td>Number of Instructor/Leader Users</td>
<td>4273</td>
<td>Page Views on Most Active Date</td>
<td>872907</td>
</tr>
<tr>
<td>Average Page Views Per Day</td>
<td>185556</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Foliotek

- 4 School of Dentistry programs (web access).
- 1 School of Nursing program (Bb LTI integration).
- 978 users in total.
- 182 new registrations
- No technical issues reported.

<table>
<thead>
<tr>
<th>Program</th>
<th>New Registrations Jan-Jun 2017</th>
<th>Total Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSDH Clinical Entry</td>
<td>0</td>
<td>145</td>
</tr>
<tr>
<td>BSDH Degree Completion</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>Dental Hygiene Graduates</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Predoctoral</td>
<td>111</td>
<td>543</td>
</tr>
<tr>
<td>SON</td>
<td>66</td>
<td>230</td>
</tr>
</tbody>
</table>

Blackboard Collaborate

- No major service interruptions reported.
- No system statistics available for Ultra usage at this moment.
Information Services Accomplishments July - December 2017

Usage Breakdown (Classic Environment)

<table>
<thead>
<tr>
<th></th>
<th>Jan-Jun 2017</th>
<th>Jul-Dec 2017</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sessions Launched</td>
<td>3109</td>
<td>2448</td>
<td>-21%</td>
</tr>
<tr>
<td>Recordings</td>
<td>696</td>
<td>622</td>
<td>-11%</td>
</tr>
<tr>
<td>Max Concurrent Sessions</td>
<td>10</td>
<td>7</td>
<td>-30%</td>
</tr>
<tr>
<td>Attendees</td>
<td>15369</td>
<td>13722</td>
<td>-11%</td>
</tr>
<tr>
<td>Mobile Access</td>
<td>1361</td>
<td>828</td>
<td>-40%</td>
</tr>
<tr>
<td>Desktop Access</td>
<td>12602</td>
<td>14029</td>
<td>+11%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Sessions Launched Monthly</td>
<td>518</td>
<td>408</td>
<td>-21%</td>
</tr>
<tr>
<td>Average Attendees Monthly</td>
<td>2561</td>
<td>2287</td>
<td>-11%</td>
</tr>
</tbody>
</table>

VoiceThread

- 33 Bb courses/organizations unitized or tested VT.
- 606 VT created by both instructors and students.
- No major service technical problem reported. Most cases were user error or hardware issue.

Turning Technologies (Clickers)

- 9500+ student registration accumulated (handheld clickers or/and mobile devices)
- 70+ ILS Classrooms are TT enabled
- Software Version in ILE classroom 5.4
- The Bb building block topped working after a system update. Students were asked to re-register.
- Top Hat will be piloted in FS2017 as a potential replacement of TurningPoint

RedCAP

- No major issues reported

<table>
<thead>
<tr>
<th></th>
<th>By Jun 2017</th>
<th>By Dec 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects Total</td>
<td>449</td>
<td>542</td>
</tr>
<tr>
<td>Production Type</td>
<td>163</td>
<td>208</td>
</tr>
<tr>
<td>Development Type</td>
<td>268</td>
<td>313</td>
</tr>
<tr>
<td>Active Users</td>
<td>422</td>
<td>470</td>
</tr>
<tr>
<td>Survey responses</td>
<td>20317</td>
<td>25637</td>
</tr>
</tbody>
</table>

WebEx

- No major system issue reported
- Current host seats limit: 3301
Information Services Accomplishments July - December 2017

<table>
<thead>
<tr>
<th></th>
<th>Jul – Dec 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Users</td>
<td>50</td>
</tr>
<tr>
<td>Total Users</td>
<td>354</td>
</tr>
<tr>
<td>Meetings</td>
<td>1186</td>
</tr>
<tr>
<td>Total Duration (minutes)</td>
<td>58278</td>
</tr>
<tr>
<td>Total Attendee</td>
<td>2967</td>
</tr>
<tr>
<td>Teleconference (minutes)</td>
<td>67209</td>
</tr>
<tr>
<td>VoIP</td>
<td>58156</td>
</tr>
</tbody>
</table>

Panopto

UMKC started using Panopto for all classes during the fall 2016 semester. Panopto data is collected for usage, user access, recording counts, and more.

User Viewing Usage:

<table>
<thead>
<tr>
<th>Number of users</th>
<th>Minutes viewed</th>
<th>Number of sessions viewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>9455</td>
<td>3783696</td>
<td>119765</td>
</tr>
</tbody>
</table>

User Creation Usage:

<table>
<thead>
<tr>
<th>Number of users</th>
<th>Minutes created</th>
<th>Number of sessions created</th>
</tr>
</thead>
<tbody>
<tr>
<td>1354</td>
<td>174990</td>
<td>5781</td>
</tr>
</tbody>
</table>

Folder usage:

<table>
<thead>
<tr>
<th>Number of folders*</th>
<th>Views</th>
<th>Unique Viewers</th>
</tr>
</thead>
<tbody>
<tr>
<td>949</td>
<td>190180</td>
<td>21043</td>
</tr>
</tbody>
</table>

Session Usage:

<table>
<thead>
<tr>
<th>Number of sessions **</th>
<th>Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>8040</td>
<td>190180</td>
</tr>
</tbody>
</table>

*One folder is one course site
**One session is one recording
Moodle

Active course and organization sites: 62

SharePoint

- UMKC has 49 sites running for faculty, staff and research purposes. All new SharePoint users are now encouraged to use UMKC box.
- Total unique users: 3510

ListServ

ListServ Usage

<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 2017</td>
<td>583</td>
<td>243,445</td>
<td>20,704</td>
<td>2,025,544</td>
</tr>
</tbody>
</table>

Customer Support

Requests for support to ITS can come through multiple avenues. Phone calls during business hours, as well as emails and requests made through the Blackboard Request System are triaged and addressed by the ITS Help Desk and full-time ITS staff. The table below represents these requests for support that were subsequently logged into the ITSM ticketing system over the last ten quarters.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Number of Remedy Tickets Handled by ITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3 &amp; Q4 2015</td>
<td>945</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2016</td>
<td>1255</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2016</td>
<td>741</td>
</tr>
<tr>
<td>Q1 &amp; Q2 2017</td>
<td>852</td>
</tr>
<tr>
<td>Q3 &amp; Q4 2017</td>
<td>755</td>
</tr>
</tbody>
</table>

24x7 Help Desk

The provider of 24x7 help desk support for ITS changed during this period from Blackboard to BlackBeltHelp. Data for calls and escalation will be available for the next report period.
Appendix A

Individual Project Updates – Completed Projects

P177 - BEH 333 ILE conversion
This is a renovation project to repurpose a small break room into a teaching and seminar space with AV/ILE capabilities that match the other classrooms in Bloch Executive Hall. The renovated classroom will provide seating for ~20 students. This space will be used primarily for upper level and graduate classes in the Department of Global Entrepreneurship and Innovation. The technology will provide for lecture-style teaching as well as student-centered active learning. During this review period, a funding source was identified and the project approved, system installation was completed, client and user groups were trained, and the room is back online for regular use.

P202 – 51st Holmes St Renovation
This CFM project involves the widening of Holmes Street between 51st and 52nd Streets. The primary purpose is to allow emergency vehicle access when cars are parked on both sides of the street. The Infrastructure components of this project include keeping existing voice and data services from being damaged and adding additional conduits for future use. During this review period, conduits were installed and the project was completed.

P219 - Building Switch Refresh
This project involves replacing approximately 144 access and distribution layer switches in 18 buildings. UMKC Networking will be installing Cisco 4500X series distribution switches and Cisco 3850 series access switches. The new switches will increase the building backbone from 2 GB to 20 GB. The access switches will also provide 802.3at (60 watts) Power over Ethernet, PowerStack & M-Gig Ethernet ports for next-generation wireless access points. See project # 268 for new fiscal year phase IV of this project. During this review period, Phase III was completed and closed.

P250 - FH Classroom to Lab Renovation
This project was developed due to a request from SCE to reclassify existing rooms to faulty lab spaces. The IS scope includes modifying (7) existing classrooms to be (6) new faculty lab spaces which will include some CFM facility renovations, and several ILE/AV system changes. During this review period, the systems were installed and the rooms were back online for regular use.

P270 – FH 205 Projector Upgrade
The project entails adding a projector to an existing lab/conference room space for use during meetings. During this review period, we completed installation of the equipment and turned the room over to the client for use.

P283 – PerfSONAR
IT project to enhance our network monitoring capabilities. PerfSONAR was developed by the ESnet and Internet2 networks specifically to monitor network traffic between sites. During this review period, we configured UMKC’s perfSONAR node, established peering with 4 sites (MOREnet’s KC-Core, Stl-Core & Springfield-Core nodes and the Research network in Columbia) and successfully tested and implemented the solution.
Individual Project Updates – Implementation Phase

P126-Whole Foods Development
This project will provide a new Whole Foods store, a new UMKC Student Health and Counseling Center, new luxury apartments, and a new parking garage. IT/AV scope is not fully defined but IS has installed a new network utility corridor in preparation for this project, which involved removing all existing overhead cabling and installation into an underground vault. During this review period, IT/AV scope was defined and the IT/AV estimate was approved. We anticipate the installation will be completed with a tentative opening date of May 2018.

P171-Chemistry/Biology Building Renovation
Multi-year CFM building renovation project. IS scope includes demoing and replacing building network infrastructure and installing new IT closets and network switch gear on Biology floors 2-4 and Chemistry floor 2, as well as updating (9) classroom/lab environments, (2) conference rooms and (9) collaboration/student spaces. During this review period, IS developed (3) new IT closets with network switch gear and upgraded the Biology building with new 10GB network infrastructure. We also installed ~75% of the AV gear in the classroom/lab environments as well as the conference spaces.

P196-IS Multi-Departmental Inventory Tool – IS Funded
IS is working on developing a new custom inventory application to provide real-time asset management, inventory management, and equipment life-cycle planning for IT equipment that is not being currently tracked. This solution will have a web application component paired with a mobile app. During this review period, we completed a series of workshops with Information Access to identify and refine tool requirements, reviewed final requirements with key user groups and began the process of building value lists for application development. During this next review period, we hope to develop the Alpha version of the app and run through testing.

P205- SU401 Wall Plate Upgrade
At the request of Student Affairs, IS is proposing technology upgrades to Student Union 401 that will overhaul the video and control system and adjustments to the audio section. The upgrades will include new projectors, a video switcher and wall plates. During this review period, IS completed the install and turned the space over to the client for regular use by the start of Fall Semester and to test the functionality of the new setup. In the next review period, IS will meet with the client to make any functionality changes needed in the room.

P215- IP Address Management
This IT project will refresh our campus DNS/DHCP infrastructure. The new system will include an IP address management tool, DNS security features and will provide a consolidated management console for IP address functions. During this review period, we virtualized the environment and upgraded to the latest version NIOS (Infoblox OS), successfully migrated voice DHCP services to the new Infoblox server, and established syncing with Microsoft DHCP servers servicing the data networks.

P216 – Fujitsu Optical
This project involves replacing UMKC's old optical gear with new Fujitsu gear. Extending the existing MOREnet optical network between Newcomb Hall and the 1102 Grand data center downtown includes a new optical node on UMKC's Hospital Hill campus. This new “Ring” will utilize Fujitsu 9500 DWDM equipment which can support forty-four 100Gb simultaneous “waves”. UMKC will use some of these new waves to increase the Hospital Hill building network uplinks from 1Gb to 10Gb. The new
equipment provides the possibility of creating dedicated research waves between the UMKC campuses or anywhere on the MOREnet network. During this review period, equipment was installed at UMKC and line cards at MOREnet. Fiber optic cable has been patched out and MOREnet is currently working on the configurations.

P217 - Telepresence VCS-VCE
This project is designed to enhance video conferencing on and off campus by leveraging key components of our existing VoIP phone system and Telepresence video conference system. We plan to add new modules to greatly increase the number of video conference endpoints on campus. These new video endpoints are designed for a wide range of use cases from personal webcams, to conference rooms, to large classroom environments. The new modules will also integrate our existing H.323 Polycom, LifeSize, Tandberg, etc. room-based video endpoints into a streamlined dialing plan. During this review period, we resolved complex issues related to MOREnet’s ability to communicate with our Telepresence devices, established a testing environment for further expansion of UMKC Telepresence site deployments, and began to identify sites across campus for deployment.

P229 - Jabber Campus Wide
This project will expand UMKC’s existing Cisco Jabber offering from a small pilot group to a campus-wide solution. Cisco Jabber is an all-in-one communication tool including functionality for instant messaging, presence, telephony, voicemail, and video conferencing. UMKC intends to use Jabber to Skype for Business instant messaging. The finished Jabber platforms will be federated with each campus for system-wide communications. Cisco Jabber is device agnostic and includes clients for Windows and Mac computers, Apple, Android, Blackberry smartphones, and tablets. During this review period, we compiled a comprehensive list of parts, costs and processes for installing Jabber for new users as the final steps for this project.

P236 - ASA Life Cycle
This project is designed to replace many of the small network firewalls used across UMKC to protect HIPPA, FERPA, PCI and additional sensitive network traffic. The new firewalls will utilize Gigabit Ethernet interfaces and advanced traffic shaping and police features while being centrally managed for more consistent software upgrades. During this review period, we developed migration order and determined the replacement firewall model.

P240 – SCE Student Affairs Suite
This project is part of the School of Computing and Engineering’s DST Student Services Center project. It includes a digital signage component in the lobby area and a presentation system in FH337. This presentation system will include a small AV system with a digital video projection system, and enhanced audio processing. During this review period, the equipment was installed and the project was completed.

P265 – ILE Classroom Upgrades FY18-IS Funded
As part of our continual process of keeping the highest quality student experience, IS plans to upgrade 23 ILE rooms in FY 18 to HD widescreen digital video and projection systems, enhanced audio processing, with web conferencing, and voice over IP features. During this review period, we partnered with the Registrar’s Office to identify and schedule rooms to be upgraded, updated system designs to accommodate ILE spaces with more equipment than typical, installed a test system for staff and procured equipment. We also began room upgrades completing two by the end of this period.
P267 – UPS Battery Replacement
This project is to replace old batteries in the existing IT Closet (UPSs if possible). In some cases, the UPS will actually need to be replaced. During this review period, we replaced the batteries in all the IT rooms in four campus buildings including, Scofield Hall, General Services Building, Biology and Chemistry.

P268 – BSR Phase IV FY18
This project involves replacing the remaining access and distribution layer switches after BSR phases 1-3 are completed. These are buildings where we had previously installed Cisco 4506 series switches. UMKC Networking will be installing Cisco 4500X series distribution switches and Cisco 3850 series access switches. The new switches will increase the building backbone from 2 GB to 20 GB. The access switches will also provide 802.3 at (60 watts) Power over Ethernet, PowerStack & M-Gig Ethernet ports for next-generation wireless access points. During this review period, upgrades to the building switches were completed in four campus buildings (General Services Building, Cherry Hall, Chemistry, and Biology).

P274 – Scofield Hall Infrastructure Replacement
This project is to bring the building infrastructure in Scofield Hall to current standards by rewiring the voice and data jacks on all floors in the building. This process involves ongoing infrastructure improvement efforts, but we are managing each building as individual projects to better track costs/materials/timelines. This building has five floors and is being rewired one floor at a time. During this review period, the IT closet on the 3rd floor was built out with racks, power, bonding, and grounding. We will start pulling new cable yearly beginning next year.

P277 – Canvas Pilot
This is a multi-year project that will begin with the evaluation of Canvas. The intent is to implement Canvas and convert all activities performed in Blackboard to the Canvas platform. The eLearning Advisory Committee (eLAC) recommends to the provost that UMKC undertake a feasibility study associated with moving UMKC’s Learning Management System from BlackBoard to Canvas. The study should present the risks and benefits associated with a migration, potential costs, impact on operations and final recommendations that, if warranted, would include a transition plan and timeline. During this review period, we collaborated with the Provost’s Online Learning team to identify timelines, sign a formal contract, prepare LMS space with proper integrations, and began the pilot process for the transition from Blackboard to Canvas. To get the most out of Blackboard we can for the next year, we facilitated upgrades on Pyramid and Analytics for Learn (A4L), facilitated coordination of training for Pyramid and Ally, and assisted with contract negotiations for Innovations Funds, used for Ally purchase, and consulting funds used for analytics purchase.

P278 – FH421 Display Addition
This is a project to design and install a simple portable display cart for presentations. During this review period, IS finalized this project and delivered the finished product to the client.

P279 – SOE Lab Move/Changes
This project is to install typical ILE classroom equipment into SOE 129B and 034. During this review period, 034 was added to project 232 ILE upgrade list and ILE equipment was installed. System design for 129B was finalized and the upgrade was scheduled for summer break 2017. This system was installed by the start of the fall semester.
P280 – SOD 209 AV Upgrade
This project is part of the School of Dentistry expansion program at Missouri Southern State University in Joplin. For this phase two project, the IT/AV scope includes upgrading the Dental School selected SOD room #209 with similar distance Ed technology as the room upgraded in phase one. During this review period, IS attended the project meetings and worked with SKC (AV Integrator) on installation. The installation was started and will complete over winter break of 2017 with a project completion of January of 2018.

P282 – Parking and Transportation Camera Upgrade
This project involves replacing approximately 40 cameras in the Hospital Hill parking structure and two Hospital Hill surface lots and move all cameras to the NICE security system. During this review period, we met with the client, reviewed camera needs, selected and ordered new cameras and have installed approximately half of the new cameras. We plan to finish this project during the next review period.

P284 – CourseLeaf (CLSS)
CourseLeaf is an online class scheduling and reporting module that streamlines the academic course planning and scheduling process for all constituents in one central tool. The CourseLeaf Section Scheduler (CLSS) module provides an end-user friendly interface for academic units and departments to determine their class offerings each term, including inputting, editing, validating, approving and updating course section information. It provides mechanisms for departments to achieve required class distribution, identifies both intradepartmental and interdepartmental class section schedule conflicts, and visualize and modify course section schedules. These additional tools will allow departments to create their schedules more holistically and deploy resources more efficiently gaining efficiencies in the units and the Registrar’s Offices. During this review period, we completed preliminary vendor questionnaires, completed the data extract requirements and hosted and attended pre-pilot training.

P285 – Student Union IPTV Upgrade
The Student Union is upgrading their signage distribution to IPTV boxes, allowing the ability to stream content over existing network connections. IS will be adding to (2) encoders and connecting existing TVs to the network. During this review period, we procured and began the installation of the equipment. We plan to complete installation and configuration of the new system during the next review period.

P288 – History Computer Lab Upgrade
This project is to upgrade a small computer lab in the History Department with additional computers. Additional data jacks, electrical work, and new carpeting may also be added to the room. During this review period, remodel work on the room was completed and the computer was ordered and installed. This project was completed and closed.

P290 – Law FWI Signage Display
The scope of this project involves adding a new touch screen to the main entrance hallway for wayfinding and signage. The Law School will be creating the content for the new display. The project was completed during this review period.

P291 – GH227 Switcher Replacement Project Standup
The project will replace a broken AMX swicher with a new Extron switcher and touch panel. The project was completed during this review period.
P292 – Network Core Refresh FY18
This project will replace the existing two primary campus core routers that form the backbone of the UMKC network. Currently, each of these routers supports 55 building uplinks. The new core routers will be installed in geographically separated data centers on campus and will support high-density 10Gb and 40Gb uplinks to the campus buildings. The new uplinks will greatly increase the available bandwidth on UMKCnet. During this review period, we received and installed the new core boxes in Newcomb Hall and the Administrative Center. We are currently working on the transition to these new systems.

P294 – MNL 151 Projector Replacement
This capital project will replace the two projectors in MNL 151 that are at the end of life cycle, with new Christie projectors. During this review period, we procured all equipment and scheduled installation for the next period.

Individual Project Updates – Development Phase

P174 – SCE Educational and Research Center
This is a project to build a new multi-story building addition to Flarsheim Hall that would sit on the FH/OMB parking lot with the length of the building running east/west. The IT/AV scope is not finalized at this point. During this review period, the current area of focus for IT has been the possible elimination of the Old Maintenance Building, which is within the project footprint and finding a new/suitable location for the CTS staff currently located in OMB. IS has shared space requirements with CFM and has been working with CFM to identify alternative locations with little to no luck to date. Additional space planning progress is expected in the spring of 2018.

P185 – Thompson Courtroom Upgrade
This is a project to upgrade all existing presentation, teaching, and recording technology in the courtroom to the current digital HD Video standards. Enhancements to the user interface, system usability, and video recording quality are also included, as well as a possible redesign of the lighting systems throughout the space. Initial scope meetings are scheduled for spring of 2018.

P225- PAC Infrastructure Replacement
This project is to bring the building infrastructure up to current standards by rewiring all the voice and data jacks on all floors in the building. This building has five floors and will be rewired one floor at a time. We plan to begin this project once Scofield Hall upgrades are complete.

P249- SLATE
This is a project to replace UMKC's current admission CRM vendor (Hobsons Connect) with Technolutions "Slate" CRM, as UMKC's Hobsons Connect contract has expired. Slate is marketed as a one-stop-shop for everything Admissions. This project will also include rolling in existing supplemental unit applications developed by IS allowing these apps to be retired going forward. During this review period, we facilitated all IT interactions in assisting the Admissions team with their implementation and hosted collaborative meetings where IT could provide knowledge and assistance to the Admissions and SATO teams.

P261 – Smart City Kiosks
This is a Kansas City project to install digital information Kiosks around the city, including several potential locations on the UMKC campus. IS’ scope will include providing fiber and network connectivity to the UMKC Kiosk locations. During this review period, several potential Kiosk locations were identified.
and an MOU was drafted and signed by campus leadership. The vendor is working on the planning details for implementation, which will likely begin around springtime in 2018.

**P264 – Law School Expanded Wireless Coverage**
This project is to relocate existing and install additional wireless access points to expand wireless coverage throughout the Law School building. During this review period, Wi-Fi site surveys were completed to produce a coverage heat map. Networking will review this data and make a recommendation to the Law School regarding how many access points are needed to meet their coverage requirements. During this review period, Networking reviewed the Wi-Fi site surveys and recommended the installation of 17 new access points to resolve wireless issues.

**P281 – SOD FWI Signage Upgrade**
The scope of this project involves adding 2 new FWI signage locations in the School of Dentistry. One 80” signage display will be in the main patient lobby on the first floor and one 70” signage display will be on the 2nd floor outside room 209. During this review period, IT/AV scope was defined and the IT/AV estimate was supplied to the client. We anticipate approval and installation will be completed during the next review period.

**P287 – Wireless Network – HHA**
This project involves the purchase and installation of approximately 12 new Wireless Access Points to improve the wireless coverage and bandwidth in the student living spaces at Hospital Hill Apartments. During this review period, the project received CIO approval, locations for new access points were identified and new access points have been ordered.

**P289 – 600MHz Microphone Replacement**
This project is looking into replacing all wireless classroom microphones that transmit on the 600MHz frequency as there is an FCC mandate to remove them. During this review period, we have identified all affected classrooms and started working with the manufacturer to develop a budget for replacement.

**P293 – ILE Classroom Upgrades FY19 IS Funded**
As part of our continual process of keeping the highest quality student experience, IS plans to upgrade 35 ILE rooms in FY 18 to HD widescreen digital video and projection systems, enhanced audio processing with web conferencing, and voice over IP features. During this review period, we have partnered with the Registrar’s office to identify the rooms to be upgraded.

**P295 – ILE Auditorium Upgrades FY19**
As part of our continual process of keeping the highest quality student experience, IS plans to upgrade an ILE Auditorium to HD widescreen digital video and projection systems, enhanced audio processing with web conferencing, and voice over IP features. During this review period, we have partnered with CFM to identify the room to be upgraded.

**P296 – Fa307 Projector Addition**
The project entails adding a projector to an existing conference room space for use during meetings and training. During this review period, we have received approval and ordered equipment. We plan to complete installation of the equipment and turn the room over to the client for use during the next review period.
Appendix B

Building Cable Plant Infrastructure Upgrades