

2006-2007 State of Information Services Executive Summary

Information Services (IS) has done an analysis of the current state of the IS budget and the projected needs over the next five years, particularly as they relate to staffing and equipment replacement.

There are six divisions within Information Services: Networking and Telecommunications, Central Systems, Security and Research, Support Services, Educational Technology Services, and Operations and Administration. Information Access is also included in this analysis because it ties very closely to the work within Information Services. Each of these areas of responsibility is overviewed in terms of the current services they provide, and the current priorities. The current priorities of each area are aligned with the overall priorities of Information Services.

Over the past year, Information Services/Access, in anticipation of a responsibility centered budget model, has undertaken an operations analysis. Historically, IS/A has not had a capital equipment fund. In past years where transparency and accountability were not necessarily the hallmarks of our budget processes, this was an issue but was always solvable because of the reserves carried by the Vice Chancellors. As our budgeting became more transparent, these reserves were earmarked for other purposes, and IS/A was left with no ability to plan capital expenditures. IS/A created a lifecycle replacement database that documented every piece of equipment owned by the central IS/A operation, its projected lifecycle, and its replacement cost (if in fact it would be replaced). The lifecycle replacement budget was created to show how much would need to be budgeted each year to address the technology infrastructure.

Additionally, each area of responsibility was asked to do a staffing analysis. The first part of the analysis was to examine what is currently being done today in terms of services, identify any staffing gap, and then project staffing needs based on the goal of 25% SCH growth over the next five years (from the Chancellor's goals).

These analyses were then included in a total cost of employment/enrollment analysis. There are two ways to address the IS/A costs related to total cost of employment/enrollment: direct chargeback for services to the consuming responsibility center or calculate a figure to be included in an administrative overhead charge. There are pros and cons of each approach, however, IS/A believes that the administrative overhead charge inclusion is more appropriate given that the services provided by IS/A are generally not discipline specific (i.e., they are used by all) and the overhead to chargeback given the breadth of services would be very labor intensive. The figure calculated for the FY08 budget is \$823 per faculty/staff/student.

There are three adjustments that also need to be considered. First is the cost to support central administration. If the assumption is that the IS/A costs for central administration should be part of the administrative overhead charge, then the calculations are shown for the needed increase per faculty/staff/student to the academic units. For the FY08 budget the cost would be \$887 or an increase of \$64 per faculty/staff/student.

The second adjustment that needs to be considered is the workstation replacement costs. The workstation replacement program has been funded by earmarked funds within each Division. Those funds have not been held by IS/A. If those funds are dispersed to the academic units, then the annual amount per faculty/staff would increase by \$400 (by \$432 to support central administration).

The third adjustment relates to the Infrastructure Technology Fee (sometimes called the TIF or the Student Computing Fee). The budget analyses included here do not include an offset for the revenue generated by this student fee. Using this fee to offset the total cost of enrollment would be one additional way to motivate increase of student credit hours.

The last component of the budget analyses included costs to create and staff an Enterprise Solutions group which is needed to address the specialized and custom applications of the campus along with the maintenance of general applications.

Not addressed by this analyses are continuing and new technology use training costs, e.g., PeopleSoft training, Microsoft Office 2007 training, etc.

Finally this overview looks at comparator data summarized below:

- *College Technology Review*: Average technology budget per student for ALL institutions regardless of size or level is \$219; UMKC's is \$159.
- *Tschibanda Report*: Compared to the other UM campuses, UMKC has a staffing gap of 30 to 60 positions. UMKC has the lowest percentage of the IS budget supplied by charge backs of all UM campuses.
- *Educause Core Data*: For all doctoral granting institutions, the central IS expenditure per student was \$1,027.92; UMKC's was \$671.28. This puts UMKC 36th from the bottom of the 121 participating doctoral institutions. Of the Urban 21 participants (11) UMKC was 2nd to the lowest in central IS expenditures per student; only the University of Toledo was lower.
- *IT Salary Survey*: UM System conducted an IT salary market survey last summer. Across the System, IT staff are 17-20% below market.

UMKC Information Services/Access continue to do much with relatively little budget. We have, however, reached a critical point where decisions will have to be made about which services to cut or eliminate, or what services to start charging.

2006-2007 State of Information Services

Background:

Information Services (IS) has done an analysis of the current state of the IS budget and the projected needs over the next five years, particularly as they relate to staffing and equipment replacement.

Each division within IS is reviewed to highlight the breadth and depth of services offered. Newly identified services are listed, including those in early phases of research and deployment. All are in response to needs recognized by UMKC faculty and staff which will support the academic mission and the student credit-hour growth goal. The document provides an overview of staffing plans and financial information and includes a review of Information Access, which is closely tied to Information Services. The 2006-2007 State of Information Services concludes with a review of comparator information.

Overview of Divisions

Networking & Telecommunications – David Johnston, Director

The Networking and Telecommunications Division supports, manages and maintains UMKC's voice and data systems, which includes the infrastructure in and between 40 major buildings, 40 houses and smaller buildings, affiliate connections, remote locations, Internet and Internet2 connectivity. This Division, which operates without interruption, employs a small staff which is responsible for the installation, repair and maintenance of hundreds of miles of fiber optic cable plant, thousands of miles of copper plant, hundreds of routers, switches, access points, PBX's, gateways, firewalls and radio equipment.

The Division is divided into three main support-staff areas: office, telecommunications and network. The Office area includes staff support of customer services, both in and out of the office, which includes billing and accounting functions, work order processing, cell phones, PDA and pager support, voice mail accounts, operator services and student assistants. The telecommunications area involves staff support of infrastructure engineering and design, installer repair technicians for both inside and outside fiber and copper cable plants, PBX, voice mail systems programming and support. The networking support staff focuses on network design and management, configuration, programming and installation of routers, switches, access points, firewalls, gateways and operating system level support of voice and data systems. (See Appendix B for N&T historical timeline.)

Current Services:

- Voice and data jack installation (see historical growth chart Appendix C)
- Mark & locate underground cable
- Program voice automated attendant, routing trees, contact center functions
- Unified messaging & voice mail boxes
- Campus operator services
- Repair and splice voice or data, copper or fiber optic cable
- Phone adds, moves, changes
- Wireless access point installation, management
- UMKC domain name management
- IP address space allocation and management
- Internet and Internet2 connectivity
- Great Plains network support
- Long distance services, calling cards
- Network equipment installation, configuration and management
- Cell phone, PDA, hand held device hardware and plan recommendations
- Billing for local, long distance, cell and leased services
- Training on voice mail and phone services

- Tower management for cell, radio and other antennas
- MOREnet collocation network support
- Emergency & elevator phones
- Campus radio system
- Phone number allocation and management
- Television cable plant through campus cable systems or satellite services
- Off campus voice and data connectivity to remote sites

Current Priorities:

Networking and Telecommunications Division's top priority is ensuring that voice and data networks are continually up, running and reliable. In order to achieve this goal, the Division continuously monitors, tests and upgrades voice and data equipment. Current projects include:

Infrastructure Upgrade – This involves installing new CAT-6 cable to jacks in every building, new patch panels, patch cables and fiber optic cable between each IT room. It is a multi-year project to bring the entire campus up to industry standards. (See Appendix D for progress chart.)

Network Upgrade – This project is 99% complete and involves replacing the University's legacy hubs with new network switches, a redundant gigabit uplink to each major building and redundant gigabit core switches.

Internet Increase – Recently Internet usage has exceeded the 60M Internet connection. The Division has upgraded the link to 80M and is closely monitoring usage of this resource.

Wireless Access – With more than 150 access points deployed, this project will blanket every major building on campus with wireless access. The Division currently has some coverage in every building and is working to expand coverage in major academic buildings.

New Health Sciences Building – The new Health Sciences Building will come online before fall semester of 2007. It will have CAT-6 cable for gigabit connectivity to the desktop and wireless access throughout the building. Voice-over IP phones will be deployed to all faculty and staff.

VOIP Migration – The University's PBX is now almost 25 years old and needs expensive hardware and software upgrades. Rather than invest in old technology the Division will migrate to a voice-over IP system. Since 2000, the Division has been running a voice-over IP PBX, which has been a very reliable and robust platform. Currently, the Division has more than 200 users on this system. The new Health Sciences Building will be the first complete building that is all IP.

Western Missouri Mental Health – The University has leased some research space in the Western Missouri Mental Health building. We are installing all the voice and data services, including a high speed fiber optic connection back to the main campus network.

Central Systems – Jim Hisle, Director

Central Systems Division maintains approximately 100 servers which are part of the UMKC computing infrastructure or departmental application servers. Central Systems maintains a sound stewardship of its limited budget by seeking cooperative projects with other UM System campuses and by sharing mutually effective techniques and practices with those campuses.

Current Services:

- E-mail (Microsoft Exchange), serving approximately 27,000 Email boxes
- Centralized File Sharing/Storage Services (Administrative), providing departmental storage of shared files as well as individual account storage.
- Centralized Printer Queues, managing a network for administrative and academic units
- Campus Database Support for local Oracle and Microsoft SQL servers
- Departmental Application Server Support for applications such as LAMBS for the Research Office and TutorTrac for the English Department.
- Infrastructure Programming Support, offering programming and maintenance of utilities such as the web based E-mail quota report and the account verification page.
- E-Learning (Blackboard Server Support), providing management and programming support for the campus learning management system.

- Video Streaming Services Server Support, maintaining shared management of the storage and streaming services of UMKC.TV, UMKC's digital cable.
- Campus Web Server, providing the management of the server and related infrastructure for the Campus' main web site.
- Research Computing (UNIX/Linux), administering the general purpose UNIX and Linux research computing with limited staff support.
- Active Directory Services – Active Directory, operating the University's computer resource authentication and managing the on-campus Active Directory infrastructure for more than 27,000 accounts.
- Optical Mark Scanning, providing more than 70,000 scanned tests per year.
- E-Commerce Infrastructure Support Server, maintaining the necessary linkage from on-campus E-commerce activities to a system supported E-commerce gateway.
- Life Sciences Research Support, providing Linux support and centralized file storage
- List Server Support, operating dozens of specialized mailing and discussion boards, with one or more lists exceeding ten thousand subscribers.
- Centralized File/Print Services (Student), overseeing printers supported in IS-managed student computing labs.
- Addressing Services Support, producing Addressing Service's mail lists for external and on-campus mailing.
- Core System Account Maintenance – Security, administering CICS accounts on the legacy mainframe system.
- Netbotz Video/ Environmental Monitoring System Support, operating the environmental and security monitoring system in ILE classrooms and IS facilities.
- Lenel Video, managing the servers for parking lot surveillance systems for three parking structures on Volker and the Health Sciences Campuses.
- Lenel Access Control, maintaining the Card access system to fifteen buildings on Volker and Hospital Hill Campuses
- Licensing Servers, administering licenses for selected packages, such as the ESRI software, which is a geographic information system, use by students and researchers on campus.
- Backups / Infrastructure Support, managing the tape and disk backup resources for on-campus resources.
- InfoPrint Monitoring, overseeing the queue management software for legacy mainframe and PeopleSoft applications.
- Administrative Printing, offering service for print generated by legacy mainframe and PeopleSoft applications.
- Production of the University's Course Catalog

Current Priorities:

Intercampus Level

- **BlackBoard Intercampus Collaboration** – A top priority project, the Division has committed staff resources to all phases of the project.
- **E-mail Consolidation Committee** – The Division has targeted staff resources to the Microsoft LiveMail pilot project, a spin-off of this committee's work.
- **Remote Backup Storage** – This working group has signed an agreement, which is currently implementing the rack space for owned storage systems at UMSL and is trading a similar amount and type of space with UMSL. (UMSL would have data storage at UMKC).
- **Grid Computing Initiative** – This is a System-wide effort to review the possibilities of establishing a grid framework in the UM System, allowing campuses to share research CPU time and software tools.

Campus Level

- **Podcast Pilot Project** – The project will explore and test Podcasting at UMKC. Three IS departments, Support Services, Central Systems, and CTS, have teamed up to establish a strategic plan. The team has also conferred with academic liaisons about the support of this technology.
- **Backup Software Upgrade** – The current software platform for backing up servers has become outmoded and cumbersome, due to the expanded number of servers maintained by UMKC over time. The BSU is a long-term project to develop and install, as budget and time allow, a new, streamlined software platform.

- **Printer Management Standards** – Central Systems will work with Support Services to establish standards for printer queue definition and management. This effort would only apply to IS supported print queues and services, but could serve as a template for other units which manage their own print queues.
- **Updating IS Disaster Recovery Document and Procedures** – The IS Disaster Recovery document will be reviewed for updates in procedures and names of key contacts. The document will be reviewed by all IS departments and the CIO.
- **General Catalog Production and Publication** – Central Systems staff is working with the IRAP staff to identify software or process changes for a new catalog production system.
- **Server Infrastructure Documentation, Inventory and Budgeting** – This is a continuing effort internal to Central Systems to document and account for all server hardware and ancillary equipment. The nearly completed database will allow a better analysis of system ownership and status and will be used for capital and non-capital equipment in the Division.
- **Improved Web Server Architecture and Management** – The Division continues to work with University Communications and the Information Access department to deliver improved web services and to seek the best methods to manage content and space on the servers.
- **Storage Management Accounting and Reporting** – The Division will search for the most cost effective solution for tracking storage use and reporting user base. The University System has indicated the need for management of electronic records, but has not recommended a System solution. Consequently, UMKC may need to develop its own solution.
- **Professional Development** – Central Systems management, in coordination with the Operations and Administration manager, will create and formalize a professional development plan for each member of Central Systems. The CS Division will look at certifications as a possible pathway to job promotions.

Security and Research – Justin Malyn, Manager

The Security and Research group manages the campus network security devices.

Current Services:

- Firewalls, blocking unwanted network traffic from the Internet, and unwanted traffic between computers.
- IPS Units, inspecting network traffic, and blocking traffic that is a part of specific types of network attacks.
- AntiVirus, detecting and removing unwanted and corrupting programs.
- AntiSpyware, detecting and removing known programs and web-tracking 'cookies' used to steal information from desktop computers.
- Windows Updates Services, ensuring that managed Windows computers on campus are patched with the latest security and bug fixes. This system reduces risks due to software flaws by installing fixes to overcome the flaw.
- AntiSpam, blocking unwanted junk emails (Spam) that flood the campus email system. Using low-cost solutions, the Division blocks about 80 percent of inbound spam.
- Security Incidents, researching reported cases of electronic identity theft and electronic stalking. (Identity theft cases are incidents of attackers accessing victims' social security numbers, thereby compromising the victims' University accounts.) This service also covers other intrusion events.
- Vulnerability Scanning, running local tools to scan systems on the campus network for known weaknesses. This service identifies systems that are at risk of being compromised, and initiates proactive measures to fix the system. An outside vendor scans UMKC servers that are visible on the Internet to ensure that these systems are properly secured.
- Network Policy, drafting the guidelines for properly securing networked-computer systems on campus and incident-handling guidelines.
- Product Research, evaluating computing technologies that could simplify or improve the campus computing environment. This service includes researching products such as thin-client computers and supporting implementations of new product releases, such as Windows Vista.

Support Services – Marilyn Reisenbichler, Director

Support Services Division provides a variety of technology services for UMKC. The Call Center (UMKC's computer Helpdesk) is the starting point for technology-related questions and problems from faculty, staff and students. The Helpdesk resolves approximately 75 percent of incoming requests.

In addition to the increasing number of University computers requiring support, the need for additional new services, such as podcasting, is also anticipated. The Division's goal is to hire a sufficient number of highly qualified staff required to support these activities:

- Technicians to triage customer requests and access the appropriate Information Services Division for assessment and resolution.
- Desktop Support [DS] to provide support at the intermediate and advanced levels for 2,750 computers. (DS also supports numerous computers of students living on campus.)
- The Lab Management Office to manage student staffing and technical support for several general-use student computer labs at UMKC.

Current Services:

- Call Center and Computer Helpdesk, providing computer assistance and troubleshooting services and, when necessary, accessing the appropriate Information Services Division for assessment and resolution.
- Remedy Call, managing and coordinating the tracking system for Information Services
- Single Sign On (SSO), creating and monitoring SSO accounts, the username and password system used to log on to Campus computers.
- Student Orientation, providing students with information regarding email and other IT services.
- Hardware and Software Procurement, providing software, hardware and peripheral consultation and procurement services.
- Workstation Replacement Program [WRP], coordinating the replacement of hundreds of computers annually, an initiative based in the Provost Office.
- Multi-vendor Management, overseeing vendor relationships, including the Microsoft Select and Campus Agreement program.
- Desktop Support [DS], providing security incident response, warranty parts replacement services for Dell computers, system refresh/rebuild, research and development on new technologies, and web and client/server programming to manage UMKC computers; coordinating and providing asset disposal services; and developing standardized software images used on campus computers.
- Enterprise Solutions/Change Management, offering Systems Management Server (SMS) and other scripting services that automate software deployments; developing and designing the internal IS website; and maintaining reporting databases related to management UMKC's computers.
- Support Services Management, developing policies, reports and budgets; managing staff; setting IT standards; providing project management and consulting; and offering business development (Service Level Agreements, MOUs).
- Lab Management Office, managing and monitoring eight student computer labs; and managing 87 student workers who assist with customer questions and technical issues.

Current Priorities:

Support Services' highest priority is providing customers with excellent technology support and prompt service. Current projects include:

- **Change Management** – The Division will draft new policies and procedures on change management practices in IS. In addition, the first draft will be expanded to include all change management in IS.
- **Podcast/Coursecasting Project** – After several academic units expressed an interest in podcasting, Support Services was asked to lead an initiative to identify a solution. During the past few months, the Division has increased technical knowledge, examined vendor solutions and reviewed infrastructure requirements to support this initiative. A smaller working group

has completed this review and will take its findings to the larger committee. A technical report which summarizes the findings will be forthcoming in March.

- **Electronic Data Preservation Project** – The Division will continue to schedule and backup numerous UMKC employee hard drives for e-Discovery preservation related to federal litigation. This project is approximately 66 percent complete.
- **Workstation Replacement** – The Division's consultation and procurement for UMKC hardware purchases is ongoing. The Provost Office annually sponsors a large computer replacement effort managed by Support Services. The Division is currently mid-cycle with this program, with many systems ordered and arriving on campus. The program continues to save funds through aggregating orders and negotiating additional discounts.
- **Desktop Support** – In addition to a myriad of desktop projects and break/fix requests, Desktop Support technicians are replacing approximately 250 faculty and staff desktops and laptops. Almost 100 systems have been installed to date, and others are in progress.
- **Student Affairs PeopleSoft [PS] Implementation** – Representatives from the Division are attending numerous planning meetings to discuss Helpdesk's role with PS self-help applications and password security changes. New utilities are being tested; web pages developed and updates to procedures; and documentation are ongoing.
- **Lifecycle Planning** – The Division's continuous planning for life-cycle replacement of the University assets and desktop computers is vital in order that faculty and staff have required tools.
- **Printer Management Project** – The Division is currently migrating services from Central Systems to Support Services and developing new standards and procedures to better manage printers.
- **Vista / Office 2007** – The Division continues to evaluate and test Microsoft's new operating system and Office productivity suite.
- **Staff training** – The Division maintains on-going staff development initiatives, including work on Microsoft, Dell and Apple certifications. In addition, efforts are underway to secure the Division's first person with Apple certification, with the objective of offering warranty parts replacement on that platform.
- **Technical Support for new Health Sciences** – The Division is involved in ongoing discussions regarding equipment and technical support for this new facility.
- **eProcurement** – An advisory group is developing a plan for eProcurement. UM Procurement is building workflow processes, which are scheduled to go live this spring.
- **IS Computer Labs** – The Division is currently working with Scott Laurent on Americans with Disabilities Act [ADA] requirements for student labs.
- **Enterprise Solutions** – The Division is deploying numerous vulnerability patches for Adobe Reader and for time zone issues related to Java. Microsoft's Office Compatibility Pack for Office 2003 is also being deployed. The Division will continue to work with departments to use automated software deployment tools, such as Systems Management Server [SMS] to keep systems patched and to reduce downtime and manual installations.
- **Software Procurement** – The Division continues to purchase software and is currently updating the licensing related to changes with Microsoft Campus Agreement and Select programs.
- **Service Level Agreement [SLA] for Technical Support** - In keeping with the new budget model, service level agreements are being prepared to outline technical services and costs. The Division is currently working on three SLAs.
- **Ricoh Printer Project** – As a result of Roo Prints projects being outsourced to Ricoh Business Systems, Support Services is working on a SLA to install and support three computer systems and numerous print queues required for this operation.
- **Right Answers Knowledgebase** – In conjunction with its UM counterparts, the Division is installing and implementing the Right Answers Knowledgebase. Once available, the system will provide additional self-help for UMKC customers.

Educational Technologies – Justin Guggenmos, Manager

Educational Technology Services [ETS] Division was formed by consolidating the former ILE Blue Print project group and other AV affiliates. ETS is responsible for all IS contracted AV support and provides several AV services to the main campus on a cost-recovery basis. These services include System Design and Consultation, various installation and Project Management services.

Current Services

- **Classroom Technology Services (CTS)** – CTS's primary function is to install and maintain the University's system of Ideal Learning Environment (ILE) Classrooms. These classrooms bring education into the digital age by allowing instructors to implement easily standard teaching methods (35 mm slides, overhead projectors, VHS movies, etc.) with the latest in educational technology (computers, student response systems, DVD, Polycom). CTS is responsible for the design, build, program, installation and maintenance of the systems.
- **Netbotz System** – With each ILE classroom and IS computer lab containing a large quantity of expensive equipment, the Division has installed the Netbotz surveillance system to monitor the activities around the components of these areas. The ILE desk, video projector, and IS computer lab PCs are all covered by this surveillance system. The Netbotz system allows us to place into each classroom low profile cameras and sensors that record to a central storage server via network connection. The cameras are aimed and focused in such a way to monitor the equipment without intruding upon the privacy of the instructors or the students in the classrooms.

The Netbotz network is employed as an administration monitoring system. This allows managers to monitor sensitive areas such as server closets and inventory rooms. Each Netbotz unit also contains sensors that can monitor climate variations in sensitive locations, such as server and equipment rooms.

In most instances involving theft, vandalism or inappropriate behaviors that have occurred in areas covered by Netbotz, the surveillance system has allowed the Division to provide evidence to the UMKC Police for investigation.

- **Faculty Training** – The Division provides private training for faculty, staff or special presenters, who request personal instruction about the ILE equipment. Experience has demonstrated that proper training reduces the number of trouble reports and increases the efficiency of instructors to implement the available technology.
- **A/V Support for the College of Arts and Sciences** -- IS and the College of Arts and Sciences have a Memorandum of Understanding (MOU) that ETS will provide audio/visual support for the College. This support includes providing other optional audio/video equipment for check out by the faculty and staff of the College in locations that do not currently have ILE Classrooms. This equipment includes 35mm slide projectors, overhead projectors, televisions, DVD and VHS players; 16mm film projectors, and two portable computer and video projector carts. ETS also provides maintenance and repairs for all of the equipment made available to the College of Arts and Sciences.
- **A/V Equipment Check-Out** – The Division supplies and maintains an inventory of video projectors, sound systems, and other equipment, which is available to faculty and staff on a free check-out basis. By providing a refundable deposit based on the relative value of the requested equipment, students or non-University personnel can also check out equipment.
- **Audio – Visual Systems Design, Consultation, and Project Management** – The Division traditionally has provided design and consultation services to UMKC departments and personnel, but is now expanding these services, as time permits, to other organizations outside of the University.

Current projects:

- **Digital Signage/Entertainment:** multiple flat panels in the workout facility for Sweeney Recreation Center and in the dining/lounge facilities for University Center.
- **Digital Signage/Entertainment:** multiple MTVU flat panels in RH dining/lounge facilities.
- **Digital Signage:** multiple flat panels in building entrances for School of Medicine.
- **HSB1 AV Project:** Design ILE classrooms with full video production capabilities.

- **Chancellor's Conference Room:** Installation of LCD panel with satellite service and a Video Conference system.
- A number of AV systems for UMKC schools and departments.

Current Priorities

- **Podcast/Coursecasting Project** – As stated above in Support Services [SS] Division's analysis, Support Services was asked to lead an initiative to identify a solution to the academic units' interest in podcasting. During the past few months, the Educational Technologies Division has worked with SS to increase technical knowledge, examine vendor solutions and review infrastructure requirements to support this initiative.
- **Change Management** – New policies and procedures on change management practices in IS are being drafted and will include specific guidelines for the Division related to the issue.
- **ILE Equipment Lifecycle** – In order to protect the University's investment in ILE classrooms, the Division ensures that all ILE equipment eligible for a lifecycle refresh is indeed refreshed, thereby maintaining the integrity of the equipment and environment in which it is used. Currently several rooms, which urgently need a refresh, will take priority over any new installations of ILE equipment. In light of these lifecycle needs, the installation of new systems will cease until sufficient funding is available.
- **HSB1 AV Project** – The Division is working with the Schools of Nursing and Pharmacy to solidify the technology and support staff requirements for the new HSB1 building. The next step involves funding, purchasing and installing the new systems. The Division will work closely on this project with Multimedia Technology Services [MTS] to design the new ILE-ITV rooms and to provide support for the Interactive Video part of the classrooms.
- **Netbotz MOU** – During the last few months, a significant amount of equipment has been stolen, adversely affecting the Division's installation budget and causing extra work to repair the damaged rooms. In order to facilitate the process for reporting these crimes and ultimately to reduce the number of thefts, the Division is finalizing a draft MOU between UMKC Information Services and the Police Department.
- **Netbotz Lifecycle Upgrade** – Two-thirds of the noncompliant Netbotz cameras have been replaced and are compatible with the new Netbotz server. The Division's goal is to replace all of the old cameras. This upgrade will put every camera on the same platform, allow users to login to one server, and provide a higher resolution, which will help mitigate risk-management issues.
- **AMX Meeting Manager** – The Division's goal to bring ILE classrooms online with Meeting Manager is one-third complete. This project will facilitate technical support for software issues in the ILE classrooms. It will also give the Division remote capabilities with the ILE classrooms and allow for repair and troubleshooting problems from the Division's office. This project requires initial programming so that all of the rooms are online and networked. Once accomplished, the project will be a great asset to ETS.
- **ILE Classroom Card Swipe System** – Currently ILE classrooms are not equipped with controlled access or effective locking systems. A card swipe system is the only reliable and effective solution. Discussions have begun with CFM and the UMKC Police Department about ways to address and fund this project. Reallocating funds from new installations is being considered as a means to underwrite card swipe system. In addition, securing the ILE Classrooms may become part of a larger project to provide all buildings secured with electronic access.
- **IS Project Management** – In partnership with IS's Operations and Administration Division, the Educational Technologies Division is involved in all University projects that have IS components, in order to verify adherence to deadlines, budgets, and IS standards. As IS's representative on these projects, the Division ensures that IS's role is established during the early stages of these projects.
- **Roo Prints Outsourcing Project** – In conjunction with Support Services Division, the Educational Technologies Division is working with Ricoh Business Systems, Procurement Services, T-com, Desktop Support and Central Systems to reorganize UMKC's three Roo

Print locations, and to transfer the staff and services from Roo Print to Ricoh, which is an outside business.

Information Access – Andy Goodenow, Director

Information Access is comprised of three subdivisions: Instructional Technology Services, Information Manipulation Services, and Information Presentation Services.

Instructional Technology Services (ITS) manages and develops online learning and distance education delivery systems. Services include technical support, training, media conversion for online learning objects and course-site design consultation. ITS will research and test courseware tool solutions for the faculty's online teaching needs. The campus systems administered by ITS include Blackboard course-management system, Centra virtual classroom platform, Turnitin plagiarism detection tool, the L-Soft Listserver, and MoCAT, a confidential system for collecting student feedback, which enables instructors to improve teaching and learning. ITS provides free training to individuals and small groups for all supported systems and applications.

Information Manipulation Services (IMS) works in association with Institutional Research and Student Affairs to transform data from multiple databases to external systems (Blackboard, HSCP, VSI, etc.). IMS uses multiple programming languages in association with Oracle, Microsoft SQL server and MySQL databases.

Information Presentation Services (IPS) oversees module developments within My.UMKC.edu, e-commerce projects and custom web programming for web sites, surveys and extranet sites.

Current Services:

- Campus website functionality, in partnership with University Communications on look/feel and content
- External web programming
- Portal development
- E-commerce
- Online surveys/email campaigns/forums
- Review of programming standards
- Improvements to accessibility and data flow
- Assistance on Cognos, Peoplesoft, Darwin, Ad Astra Blue
- Blackboard and other teaching tools

Current Priorities:

- Launch My.UMKC.edu.
- Expand usage of Blackboard/Darwin/Ad Astra/Cognos.
- Coordinate UMKC Sharepoint collaboration with UM Columbia and Central Systems.
- Launch Peoplesoft Student information system.
- Develop criteria for reports and data feeds and establish workflow for assignments and implementation as related to Data Integrity Reporting Group projects.
- Finalize role in Podcasting and emphasize relation to Blackboard.

Operations and Administration – Janet Carnett

Operations and Administration provides for the administrative needs of Information Services and Information Access, oversees distribution of funds and volume purchases associated with instructional computing fees, and processes all employment documents.

Current Services:

- Administer budget and other financials for Information Services and Information Access
- Develop IS Employment Opportunities
- Coordinate Service Level and other Project Agreements

- Oversee new construction and major remodeling involving computer/server rooms and other computing facilities

Current Priorities:

Operations and Administration has targeted as top priorities the following new and additional services:

- **Podcasting/Vodcasting/Coursecasting** – Podcasting distributes audio programs using web-based technology which allows new material to be automatically downloaded. Vodcasting is a variant of podcasting that includes the distribution of video. Coursecasting records lectures using the same method as described above but often includes multimedia such as imagery, slides or screen annotations, in addition to audio content.
- **Digital Asset Management** – These software and/or hardware computer systems consists of tasks and decisions surrounding annotating, cataloguing, storing and retrieving digital assets, such as digital photographs, animations, videos and music.
- **Technical Training for Non-Technical Staff** – This service focuses on instructor-led training or short seminars for UMKC faculty and staff for specific hardware and/or software applications. Training employees increases productivity, fosters confidence and promotes retention.
- **Security**
- **Specialized Lab Management (e.g., Conservatory)** – Serving the University's various internal constituencies requires an understanding of academic priorities and in-depth knowledge of discipline-specific hardware and software. Consequently, to ensure consistent and quality technical services, the Division will develop training opportunities for IS technicians to become fluent in the specific technology.
- **ePortal** – A portal is a web-based application offering users access to a broad range of information and service databases. (Well-known commercial portals include Yahoo! and MSN.) Institutional information portals provide a personalized gateway to useful applications, information and services. The Division is currently developing a portal solution for UMKC which will use the existing Blackboard framework for security and authentication.
- **ePortfolios** – The Division will create an electronic resource for assessing student learning; tracking learning objectives of individual departments and schools; and developing online portfolios for students' career placement and awards.
- **IS Project Management** – The Division will work with IS's Educational Technologies Division to ensure that all University projects adhere to deadlines, budgets, and IS standards. The Division will also ensure that IS's role is established during the early stages of these projects.
- **Change Management** – The Division manages structured transitions that are necessary to allow a smooth transfer from one electronic system to another. Changes to IT systems and applications must be managed properly. The Division avoids business interruptions during these transfers by maintaining clear policies and guidelines.
- **Research Computing Support** – The IS budget currently does not fund the maintenance and replacement of equipment for research computing. In the future, the Division will oversee IS's efforts provide a comprehensive computing environment for research.
- **Application Programming Support** – The Division will provide support for Enterprise Solutions (ES), which reports to Information Access. ES will assist UMKC's teaching, research, service, and economic development missions by designing, implementing and supporting academic and administrative database applications.

Staffing Plans

Each Director conducted an analysis of their Division's current staffing level. This analysis assumed no growth in faculty/staff/student headcount. It included documentation of current staffing levels; staffing gap analysis (if IS did nothing more than currently is being done, what is the staffing needed to adequately support those activities); staffing needed to support increased demand for services; and a five-year projection. All IS Divisions also projected their current staffing requirements for the next generation of students' demands of technology and the future needs identified by the faculty and staff.

These analyses did not take into account that virtually every UMKC unit, with the exception of the College of Arts & Sciences, employs one or more technology personnel who do not have any reporting accountability to IS. Several problems arise because these units' technology offices are frequently understaffed. For example, the staffs have no backup for vacation/sick time; the units' support needs far exceed the number of support staff; and professional development is often ignored or not budgeted.

As the analyses conducted by the Divisions' Directors demonstrate, the increased demand on IS's current staff (86 FTE) and the anticipated future demands will necessitate increasing full-time staff by 11 FTE in the next fiscal year. These positions would be distributed as follows:

Security -	1.0
Central Systems -	2.0
Classroom Tech -	2.0
Telecomm -	1.0
Support Services -	3.0
Info Access -	2.0

The projected growth in the demand of Classroom Technology, On-line Learning Management systems, web development, secure servers, new construction and the exponential increase of issues related to Network Security will "stretch to the limit" the staff, even if these new positions are added.

The five year projection for staffing levels is as follows:

Current (FY06-07)	- 86
FY07 – 08	- 97
FY08-09	- 103
FY09-10	- 109
FY10-11	- 114

This means a total increase of 28 full-time FTE over the five-year period.

Financials

In preparing financial information for this report, Information Services first prepared a lifecycle replacement database which consists of every piece of equipment that IS owns; its replacement cycle in years; its estimated cost of replacement; and the amount per year that must be set aside in order to replace the equipment in a timely fashion. (Note: technology equipment not owned/maintained by IS is NOT included, e.g., equipment in academic units such as research machines, etc. Much of this equipment needs to be replaced, and the software needs current licenses or upgraded licenses, as well as the funding to purchase licenses.) Additionally, a service database was developed, which shows roughly the costs to support each service which IS currently offers. While useful, information from this database was ambiguous due to the integrated nature of the IS operations. Nevertheless, it provided a practical indication of the distribution of IS expenses relative to activities.

The proposed Budget Model assigns a budget unit of faculty/staff/student headcount to IS with Medical Residents counted at .25.

Headcount Allocation Basis:

On the basis of the information received about the current student/faculty/staff headcount from IRAP, the following calculations were used.

Students:	14,213
Medical Residents: 328*.25	82
Faculty/Staff:	<u>3,155</u>
Total	17,450

FIVE YEAR OPERATING PROJECTIONS SUMMARY

The following three spreadsheets show calculations on projected revenue and expenses for Information Services for July 1, 2006 through June 30, 2011. The projections assume no growth in headcount and no increase in services. They also assume that IT liaisons (unit IT staff) will remain autonomous from IS; that IS will not provide the primary support for those academic units, and that research computing will not be supported centrally.

Spreadsheet # 1: Expenses Plus Staffing Gap Calculations:

Staffing Gap:

The Directors of IS prepared a Five-Year Staffing Plan for their Divisions. The actual amounts for salary and benefits were calculated for each position. The Staffing Gap is the gap between current staffing levels and staffing levels needed to support current operations.

Expense Calculations Only:

The increase in the number of Full- and Part-time employees is based on the staffing projections in the Directors' Five-Year Plan.

The increase in FTE salary was calculated as follows: The current amount multiplied by a three percent annual increase, whose results are then added in the projected amount for the gap. Ex: FY07/08

$$\begin{aligned} \$ 4,153,150^* \times 3 \% &= \$ 124,595 \\ \$ 4,153,150 + \$ 124,595 &= \$ 4,277,745 \\ \$ 4,277,745 + \$ 277,500^* &= \$ 4,555,245 \end{aligned}$$

*\$ 277,500 calculated increase in projected staffing needs.

Part-time salary was also based on the three percent annual increase

Benefits were calculated on 31.5 percent average annual increase, which includes the full- and part-time calculations.

Total Salary and Wages [S&W]: FTE Staff (86), Part-time Staff (82), plus Benefits

Total Other Expenses: Increased at five percent annually.

Annual Replacement Cost Only:

These calculations came from a larger Lifecycle Replacement report for all of IS equipment, furniture, etc.

The Total Unit Cost was calculated by adding all the expenses and dividing by 17,450.

The Full Per Unit Cost was calculated using the Total of S&W and Other Expenses, **plus** the full Lifecycle Replacement Costs divided by 17,450.

The difference between the Annual Replacement Cost and the Lifecycle Replacement Cost is as follows: Annual Replacement Cost is based on replacing only equipment which is in critical need annually and not putting anything in reserve. Lifecycle Replacement is calculated on what needs to be replaced annually, plus the amount needed to be held in reserve for future years. For instance, if a piece of equipment has a five-year life expectancy and the replacement cost is estimated to be \$10,000; under the Annual Replacement Cost plan IS would not reserve any funds and hope that at the end of five years IS would have \$10,000 in the budget to replace the equipment. Under the Lifecycle plan, IS would set aside \$2,000 annually in order to have the \$10,000 in the budget when the equipment needs to be replaced.

Spreadsheet 1

EXPENSES PLUS STAFFING GAP CALCULATIONS					
HEADCOUNT ALLOCATION BASIS			STAFFING GAP		
	2006		2006-2007	11	
Students	14,213		2007-2008	6	
Medical Residents*	82		2008-2009	6	
Faculty/Staff	3,155		2009-2010	5	
TOTAL	17,450				
Medical Residents calculated at 25% each (328.25 = 82)					
EXPENSE CALCULATIONS ONLY					
Description	FY06/07	FY07/08	FY08/09	FY09/10	FY10/11
FTE Employees (All IS Departments)	86	97	103	109	114
Part Time Employees (GRA's included)	82	85	87	91	91
TOTAL S&W	5,391,697	5,997,912	6,569,062	7,193,509	7,720,969
TOTAL OTHER EXPENSES (5%)	3,908,540	4,103,967	4,309,165	4,524,624	4,750,855
ANNUAL REPLACEMENT COST ONLY	2,372,554	2,617,866	2,567,678	2,232,198	2,981,341
TOTAL OPERATING EXP	11,672,791	12,719,746	13,445,904	13,950,330	15,453,166
TOTAL UNIT COST	669	729	771	799	886
TOTAL S&W and OTHER EXPENSES	9,300,237	10,101,879	10,878,227	11,718,133	12,471,824
LIFECYCLE REPLACEMENT SECTION	4,063,679	4,257,758	4,398,263	4,596,198	4,793,209
	13,363,916	14,359,637	15,276,490	16,314,331	17,265,033
FULL PER UNIT COST	766	823	875	935	989

Spreadsheet # 2: Current Operations Plus Lifecycle Funding Needs:

These calculations are as follows:

- All revenue projections have an annual two percent increase.
- Balance Available is all of the revenue, minus the operating expense.

Lifecycle Replacement Section:

Actual numbers are taken from Lifecycle Replacement Database.

Balance Available After All Expenses:

These are calculated by deducting the Lifecycle Replacement Expenses from the Balance Available. The Balance Available After Expenses is then the Beginning Balance for the next Fiscal Year.

The discrepancy between the Balance Available on spreadsheet two and three is due to the difference between the Annual Replacement cost and the full Lifecycle Replacement costs.

Spreadsheet 2

CURRENT OPERATIONS PLUS LIFECYCLE FUNDING NEEDS					
Description	FY06/07	FY07/08	FY08/09	FY09/10	FY10/11
BEGINNING BALANCE	3,492,263	-1,328,895	-6,974,919	-13,245,286	-19,953,567
TOTAL ANNUAL REVENUE	8,542,758	8,713,613	8,887,885	9,065,643	9,246,956
TOTAL OPERATING EXPENSE	9,300,237	10,101,879	10,759,990	11,177,726	11,500,596
BALANCE AVAILABLE	2,734,784	-2,717,161	-8,847,023	-15,357,369	-22,207,207
LIFECYCLE REPLACEMENT SECTION					
STUDENT COMPUTER LABS	222,216	233,327	244,993	257,243	270,105
NETWORKING & TELECOMMUNICATIONS	2,165,290	2,273,555	2,387,232	2,506,594	2,631,924
SECURITY	418,095	429,895	379,007	375,979	361,979
SUPPORT SERVICES	53,700	56,385	59,204	62,164	65,273
CAMPUS SOFTWARE	297,493	312,368	327,986	344,385	361,605
CENTRAL SYSTEMS	452,685	475,319	499,085	524,039	550,241
EDUCATIONAL TECHNOLOGY SERVICES	454,200	476,910	500,756	525,793	552,083
TOTAL LIFECYCLE REPLACEMENT COSTS	4,063,679	4,257,758	4,398,263	4,596,198	4,793,209
BALANCE AVAILABLE AFTER EXPENSES	-1,328,895	-6,974,919	-13,245,286	-19,953,567	-27,000,416

Spreadsheet # 3: Five-Year Projections Using Current Numbers:

These calculations are as follows:

All revenue projections have an annual two percent increase.

S&W is calculated at three percent annual increase.

Benefits calculated at 31.5 percent

Operating Expenses are based on five percent annual increase.

This section also uses current Beginning Balances and calculates ending balances based on the increase in expenses, plus the Annual Replacement Cost.

Per Headcount Calculations:

At the current level of GRA, IS would have \$250 per current budget unit to spend, and the current cost per budget unit for S&W alone calculates to \$309 per budget unit. Without other funding obligations, IS would be in a deficit with S&W only.

Using all Revenue sources currently available, including the service operation income from TeleComm, the per-budget unit revenue increases to \$690. In addition, the total cost of operations, including annual replacement only, that is, no lifecycle replacement funding, calculates to \$669 per budget unit.

Adding in the current gap for S&W/Benefits and the two percent estimated increase in annual revenue and expenses will result in approximately a **\$ 3.6 million deficit by the end of FY07/08**. Note that the revenue available for FY06/07 includes a \$3.5M carryover, which is targeted for contingencies, replacements, etc. This carryover will be depleted this year.

Spreadsheet 3

INFORMATION SERVICES					
5 YEAR OPERATION PROJECTIONS					
Description	FY06/07	FY07/08	FY08/09	FY09/10	FY10/11
BEGINNING BALANCE	3,492,263	362,230	(3,643,902)	(8,083,684)	(12,427,964)
GENERAL REVENUE ALLOC	4,367,562	4,454,913	4,544,012	4,634,892	4,727,590
INSTRUCTIONAL COMPUTING FEES	2,925,196	2,983,700	3,043,374	3,104,241	3,166,326
INTERNAL SALES & SERVICES	1,250,000	1,275,000	1,300,500	1,326,510	1,353,040
TOTAL SOURCES OF REVENUE	12,035,021	9,075,843	5,243,983	981,959	(3,181,008)
TOTAL S&W	5,391,697	5,997,912	6,450,825	6,653,102	6,749,741
TOTAL OTHER EXPENSES	3,908,540	4,103,967	4,309,165	4,524,624	4,750,855
TOTAL OPERATING EXPENSES	9,300,237	10,101,879	10,759,990	11,177,726	11,500,596
ANNUAL REPLACEMENT COST	2,372,554	2,617,866	2,567,678	2,232,198	2,981,341
TOTAL OPERATING COST	11,672,791	12,719,746	13,327,667	13,409,924	14,481,937
BALANCE AVAILABLE	362,230	(3,643,902)	(8,083,684)	(12,427,964)	(17,662,945)
PER HEADCOUNT ALLOCATION					
TOTAL HEADCOUNT	17,450				
REVENUE PER UNIT	TOTAL REVENUE (\$12,035,021) DIVIDED BY(17450)				\$ 690
GRA PER UNIT	TOTAL GRA (\$ 4,367,562) / 17,450				\$ 250
COST PER UNIT	TOTAL OPERATING COST (\$ 11,672,791) / 17,450				\$ 669
S&W COST PER UNIT	TOTAL S&W (\$ 5,391,697) /17,450				\$ 309

Considering the overall IS budget requirements and taking into account the proposed Budget Model and the IS funding formula (faculty/staff/student headcount with adjustment for medical residents), the total cost of employment/enrollment must include (in FY07/08) \$823 per faculty/staff/student (see Spreadsheet 1). Most of this cost (and the increase in subsequent years) is due to the current lack of lifecycle replacement funding, the lack of a plant/contingency fund, and the chronic understaffing of Information Services.

Funding of Centralized Operations:

The per-budget unit amounts calculated above do not account for IS support for central operations (Student Service, Chancellor’s Office, etc.). To arrive at a true cost of support to the academic units, two additional calculations are needed: subtract the total cost of IS support for central operations and then offset the student budget unit amount by the TIF fee charged.

There are 1,260 employees who are not part of one of the academic units. (For the purposes of this analysis, Libraries and the School of Graduate Studies are included as central operations).

Spreadsheet 4

EXPENSES PLUS STAFFING GAP CALCULATIONS ADJUSTED FOR CENTRAL OPERATIONS

HEADCOUNT ALLOCATION BASIS	
	2006
Students	14,213
Medical Residents*	82
Faculty/Staff	3,155
TOTAL	17,450
Minus 1,260	16,190
Medical Residents calculated at 25% each (328.25 = 82)	

STAFFING GAP	
2006-2007	11
2007-2008	6
2008-2009	6
2009-2010	5

EXPENSE CALCULATIONS ONLY

Description	FY06/07	FY07/08	FY08/09	FY09/10	FY10/11
FTE Employees (All IS Departments)	86	97	103	109	114
Part Time Employees (GRA's included)	82	85	87	91	91
FTE SALARY (3% INCREASE)	\$ 3,700,150	\$ 4,153,150	\$ 4,555,245	\$ 4,976,902	\$ 5,343,209
PART-TIME SALARY	\$ 400,000	\$ 408,000	\$ 440,240	\$ 493,447	\$ 528,251
BENEFITS (31.5%)	\$ 1,291,547	\$ 1,436,762	\$ 1,573,577	\$ 1,723,160	\$ 1,849,510
TOTAL S&W	\$ 5,391,697	\$ 5,997,912	\$ 6,569,062	\$ 7,193,509	\$ 7,720,969
TOTAL OTHER EXPENSES (5%)	\$ 3,908,540	\$ 4,103,967	\$ 4,309,165	\$ 4,524,624	\$ 4,750,855
ANNUAL REPLACEMENT COST ONLY	\$ 2,372,554	\$ 2,617,866	\$ 2,567,678	\$ 2,232,198	\$ 2,981,341
TOTAL OPERATING EXP + REPLACEMENT	\$ 11,672,791	\$ 12,719,746	\$ 13,445,904	\$ 13,950,330	\$ 15,453,166
TOTAL UNIT COST	\$ 669	\$ 729	\$ 771	\$ 799	\$ 886

TOTAL S&W and OTHER EXPENSES	\$ 9,300,237	\$ 10,101,879	\$ 10,878,227	\$ 11,718,133	\$ 12,471,824
LIFECYCLE REPLACEMENT SECTION	\$ 4,063,679	\$ 4,257,758	\$ 4,398,263	\$ 4,596,198	\$ 4,793,209
	\$ 13,363,916	\$ 14,359,637	\$ 15,276,490	\$ 16,314,331	\$ 17,265,033
FULL PER UNIT COST	\$ 766	\$ 823	\$ 875	\$ 935	\$ 989
ADJUSTED FOR CENTRAL OPERATIONS	\$825	\$887	\$944	\$1,008	\$1,066

Thus the total cost of employment (faculty/staff) amount for IS would need to increase by \$60 to \$77 per year to cover technology support for central operations (assuming no growth in central operations), or each central operation will need to include in its operation costs the appropriate per-budget unit cost, which then would be transferred to Information Services. (It seems easier and more efficient to charge and transfer this once. However, either method is workable.)

These financial statements do NOT include the Workstation Replacement Program. Those funds have always been held by the four divisions of UMKC: Academic Affairs (Provost Office); Student Affairs; Advancement/Development; and Administration and Finance. For each faculty/staff member, \$400/year should be budgeted for Workstation Replacement, assuming a four year replacement cycle. Alternatively, this could become part of the IS budget, in which case the total cost of the employment figure would need to increase an additional \$400/faculty/staff budget unit.

Adjustment for TIF fee:

The total cost of enrollment (students) for each academic unit is described here. It should be calculated by taking the total cost of enrollment figure from above, multiplying headcount of those students who pay the TIF fee (e.g., first- and second-year Medical students pay this fee but third- to six-year do not) by the total cost of enrollment amount to find total for the academic unit, subtracting the TIF generated by the academic unit, and finally dividing that figure by the headcount. This formula produces the new total cost of enrollment amount and provides another incentive to increase SCH production as the TIF amount is a per-credit hour amount.

One area of service that does not currently exist at UMKC is an Enterprise Solutions group; this group would be responsible for application programming and for maintenance of current applications. Currently these activities are done as programmers in other groups have time. An Enterprise Solutions group needs to be created as we move forward with more enterprise wide applications, e.g., PeopleSoft, ePortal, etc. Two options are possible if IS adds an Enterprise Solutions group:

- Supporting PeopleSoft programming will require nine total positions.
- Not-supporting PeopleSoft Programming will require five total positions.

This analysis is shown in Spreadsheet #5 of the Financials below, but has not been included in the overall financials.

Spreadsheet 5a: Enterprise Solutions Staffing and Operations

Includes PeopleSoft support positions

Position	Status	Salary
Peoplesoft Student Programmer	Full Time	\$75,000
Peoplesoft Student Programmer	Full Time	\$75,000
Peoplesoft Finance/HR Programmer	Full Time	\$75,000
UMKC Peoplesoft lead between 3 versions	Full Time	\$60,000
C# ASP.net programmer	Full Time	\$45,000
JAVA programmer	Full Time	\$45,000
Cold Fusion/PHP Programmer	Full Time	\$45,000
Miscellaneous programming solutions (ASCII, CGI, other languages)	Full Time	\$45,000
Database Tuning Expert	Full Time	\$70,000
Subtotal S&W		\$535,000
Benefits (calculated at 31.5%)		\$168,525
Total S&W plus Benefits		\$703,525
Startup Costs for each staff member		
Would include telephone, personal, computer,		
Cell Phone,		\$450
Telephone,		\$800
Personal Computer		\$3,500
Furnishings		\$5,000
Training/Travel		\$2,500
Total per position		\$12,250
9 Positions		\$110,250
Testing software		\$50,000
Total for the Proposal		\$888,275

Spreadsheet 5b: Enterprise Solutions Staffing and Operations

Does not include PeopleSoft support positions

Position	Status	Salary
C# ASP.net programmer	Full Time	\$45,000
JAVA programmer	Full Time	\$45,000
Cold Fusion/PHP Programmer	Full Time	\$45,000
Miscellaneous programming solutions (ASCII, CGI, other languages)	Full Time	\$45,000
Database Tuning Expert	Full Time	\$70,000
Subtotal S&W		\$250,000
Benefits (calculated at 31.5%)		\$78,750
Total S&W plus Benefits		\$328,750
Startup Costs for each staff member		
Would include telephone, personal, computer,		
Cell Phone,		\$450
Telephone,		\$800
Personal Computer		\$3,500
Furnishings		\$5,000
Training/Travel		\$2,500
Total per position		\$12,250
9 Positions		\$61,250
Testing software		\$50,000
Total for the Proposal		\$464,500

Comparator Information

College Technology Review

The College Technology Review: 2005-2006 Academic Year is a survey conducted annually by Market Data Retrieval, and referenced in several articles on IT expenditures in, for example, *The Chronicle of Higher Education*. This survey reports annual expenditures for hardware and software purchases, outside service, and technology training but does not report other expenses such as salary/benefits.

The relevant data from this survey are:

- U.S. colleges and universities are expected to spend 35 percent more compared to last year in these categories of IT expenditures. UMKC's will remain relatively flat.
- Hardware purchases account for, on average, 50 percent of the IT expenditures. UMKC's average expenditures, which were examined during a three-year period, was approximately 78 percent. This reflects the lack of financial support (lack of a plant fund) available for infrastructure updates and equipment replacement.
- Average technology budgets at public institutions rose by 20 percent. The average budget per student for the specific expenses examined at public institutions was \$219, including all two-year and four-year institutions. UMKC's expenditure per student for FY06 was \$156.
- For institutions of comparable size to UMKC (10,001 – 25,000 students), the average technology budget for FY05-06 for four categories of expenditures was \$4.496M. This is broken down as follows: hardware - \$2.045M; software - \$1.124M; outside services – \$1.191M; technology training - \$135,800. The UMKC totals for FY06: hardware - \$995,908; software – \$499,999; technology training - \$47,074; outside services - \$213,262; totaling \$1.756M.

Tshibanda Report

Tshibanda and Associates was retained in the summer of 2006 by UM System IT to do an UM System-wide analysis of IT. Several points of interest were included in the preliminary report (November 2006):

- More than 33 percent of the information technology-related positions are funded from non-IT departments/divisions (System-wide). The exception is UMR, at which five percent are non-IT funded.
- UMKC has the lowest IT staffing per instructional faculty member at 80 IT staff per 1,000 instructional faculty. By contrast, UMC's and UMR's ratio is 143/1,000; UMSL is 112/1,000. UMKC is, comparatively, 30 to 60 positions short of being able to support adequately faculty, staff and students.
- UMKC also has the lowest percentage of revenue generated through services (charge-backs) at 15 percent. UMC is 48 percent; UMR is 21 percent; and UMSL is 19 percent.

Educause

Educause is regarded as the best source for information about IS/IT and higher education. The organization's core data set for FY03-04 (latest for which all needed data was available) examines central IS expenditure per student. In FY03-04, UMKC's full-time student headcount was 9,797, according to UMKC's Registration and Records. The actual GRA budget for IS that year was \$4,010,569, (excluding PeopleSoft allocation), and TIF funds allocated were \$2,565,925. UMKC's expenditure per student from GRA was \$409.37 and from TIF was \$261.91, for a total of \$671.28.

The Educause core data set shows that for all doctoral granting institutions, the FY03-04 mean central IS expenditure per student was \$1,027.92, and the median was \$912.30. The Idaho State University ranked lowest with \$222.25, and the University of Alabama - Birmingham ranked highest with \$5,527.18. Of the institutions (121) participating in the survey, 35 spent less per student than UMKC.

Of the Urban 21 doctoral schools (11) participating in the survey, the low was \$506.59 (University of Toledo) and the high was, again, UAB at \$5,527.18. The mean for the Urban 21 schools was \$1,306.20 and the median was \$1,034.23. Only one of the Urban 21 schools (Toledo) spent less on IS than UMKC, placing UMKC tenth out of the 11 reporting Urban 21 schools.

Below are the results of the Educause survey of the participating Urban 21 schools, in order from lowest IS spending to highest:

- University of Toledo (\$506.59)
- UMKC (\$671.28)
- UW-Milwaukee (\$815.65)
- University of Memphis (\$912.30)
- Wayne State (\$927.99)
- Georgia State (\$1,034.23)
- IUPUI (\$1,113.02)
- University of Houston (\$1,152.06)
- University of Cincinnati (\$1,166.84)
- Temple University (\$1,195.12)
- UAB (\$5,527.18)

As the survey indicates, UMKC is in the lowest 30 percent of reporting doctoral institutions nationally and second to the lowest among the reporting Urban 21 schools.

Information Technology Salary Survey

The Information Technology Salary Survey conducted last summer by UM System showed that across all positions, information technology staff are 17% below market.

Summary

Clearly, Information Services is doing much with relatively little. IS has, however, reached a critical point in its ability to continue to provide quality infrastructure and service to UMKC, and/or to offer new services. The Department can no longer compromise UMKC's infrastructure, security or lifecycle replacement. Without adequate funding, IS will be required to cut services and/or increase charges to users significantly.

Appendix A

Comparison of Telecommunications/Networking Charges across UM System and Urban 21 schools:

	Dial Tone (monthly)	Voice Mail/Unified Messaging (monthly)	Domestic Long Distance (per minute)	Phone programming charge (per hour)	Network access per Data Jack (monthly)	Jack Installation	Jack Activation
UM Campus							
UMKC	\$22.50	Unified messaging included with dial tone	\$0.10	\$50.00	No cost to department	\$175.00	\$25.00
UMSL	\$25.74	Voice mail included with dial tone	\$0.15	\$55.00	\$43.75 if not in Desktop Plan \$22.92 if in Plan	\$145.00 + Facilities cost (\$250.00 minimum)	No cost to department
UMR	\$22.00 to \$26.00 depending on phone set type	\$3.75 voice mail	\$0.08	Variable based on cost of task	No cost to department	Facilities cost	\$25.00
UMC	\$13.50 to \$19.25 depending on phone set type	\$2.35 voice mail \$4-5 unified messaging	\$0.07	\$50.00	\$12.00	\$75.00 + \$50 per hour for labor	No cost to department
Urban 21 Schools							
U-Toledo	\$6.00	\$0.25 voice mail	\$0.06	\$15.00	No cost to department	\$500.00	\$60.00
UW-Milwaukee	\$18.00 + \$6.75 for caller ID & other features	\$6.50 voice mail	\$0.10	\$45.00	No cost to department	\$120.00	No cost to department
U-Memphis	\$21.00 + \$9.00 to \$13.00 depending on phone set type	Voice mail included with dial tone	\$0.10	\$25.00	No cost to department	\$350.00	\$100.00
Wayne State	\$31.51	Voice mail included with dial tone	\$0.28	\$60 to \$120 depending on task	No cost to department	\$410.00 to \$506.00	No cost to department

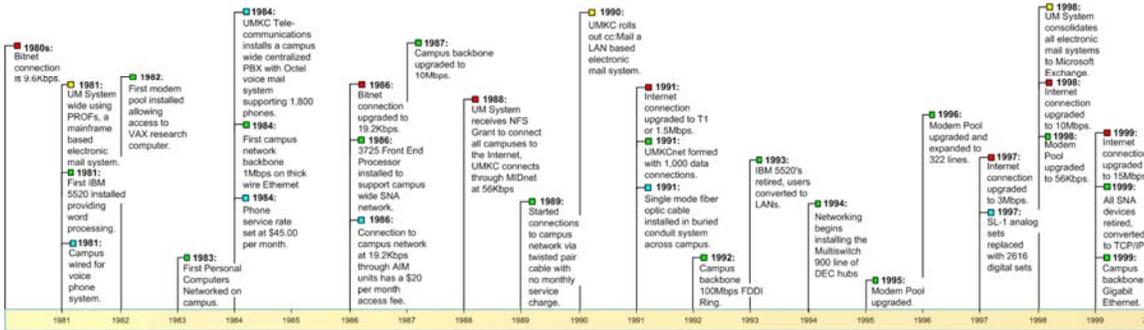
Georgia State	\$28.25	Voice mail included with dial tone	\$0.03	\$32.50	No cost to department	\$250.00	\$185.00
IUPUI	\$20.65	\$5.00 voice mail	\$0.11	\$50.00	\$19.49	Time and materials	No cost to department
U-Houston	\$30.00 + Phone lease cost	\$5.00 voice mail	\$0.06	\$40.00	No cost to department	\$150.00	\$40.00
U-Cincinnati	\$33.00	\$3.00 voice mail	\$0.05	\$50.00	\$23.00	Time at \$50.00 per hour + Materials	No cost to department
Temple-U	\$17.00 Analog \$55.00 Digital	Voice mail included with dial tone	\$0.11	\$75.00	\$11.50 10M \$16.00 100M \$30.00 Gigabit	\$330.00	No cost to department
UAB	\$15.00 + Phone lease cost	\$5.00 voice mail	\$0.05	\$40.00	No cost to department	\$410.00 10M \$610.00 100M \$1000.00 Gigabit	No cost to department

Appendix B

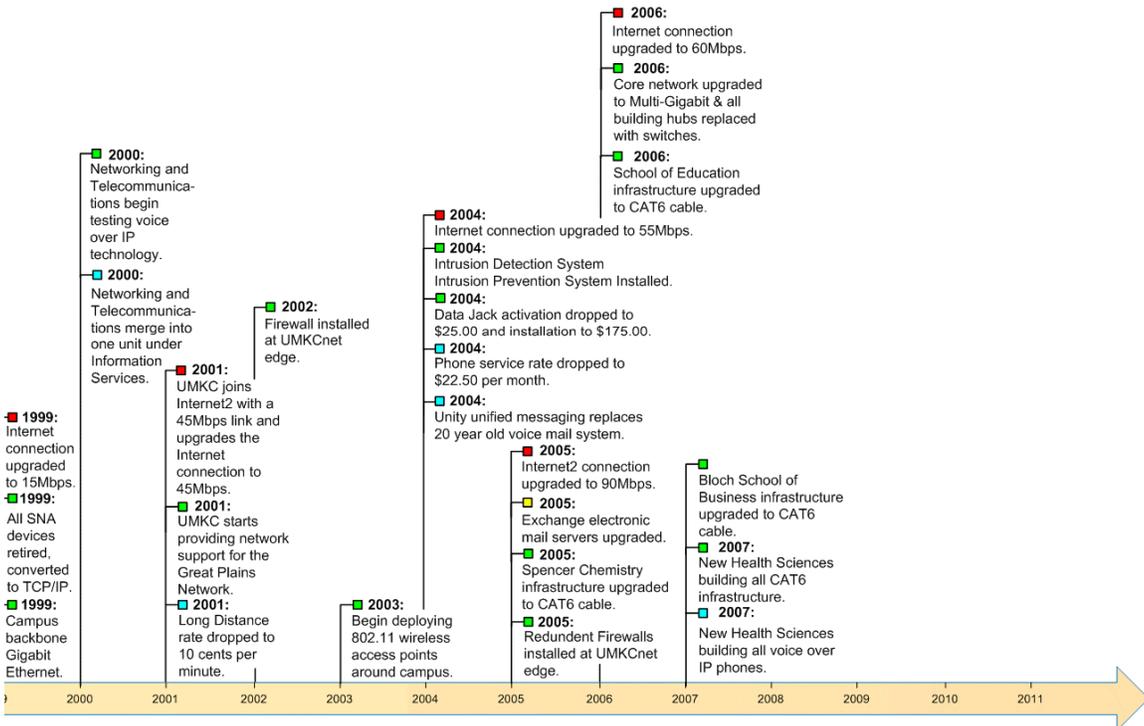
Information Services
 Networking & Telecommunications

- Internet
- Campus Network
- Telecommunications
- Electronic Mail

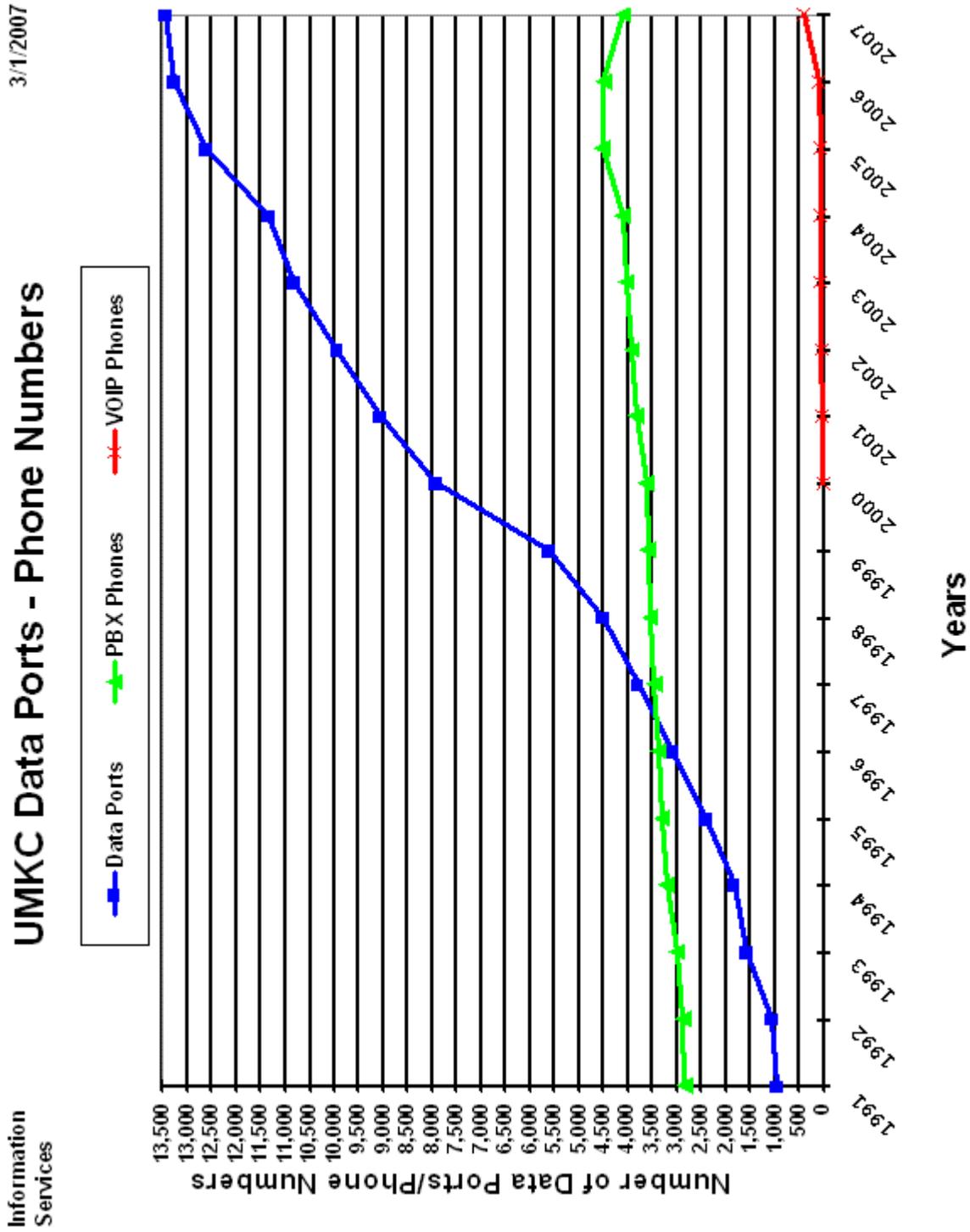
UMKC Networking & Telecommunications Over 25 Years of Service!



December 2006



Appendix C



Appendix D

