

Information Technology Services

Annual Report
August 10, 2007

“We Help You Succeed with Technology”

The campus is preparing for UMSL’s accreditation process in 2008. Accordingly, many of our activities are directed towards a successful outcome of that process. We are examining our own operations in that light as well as supporting other departments.

The AVC of IT attended the Higher Learning Commission meetings in Chicago to learn more about the accreditation process. He is also on the Steering Committee for the accreditation.

ITS organized a Presidential Team jointly with the Provost’s Office to attend the annual ASCUE/Educause workshop on strategies to engage the current generation of learners and to facilitate their use of technology. Held on the campus of the University of Central Florida, the workshop was an opportunity to meet colleagues at similar institutions as well as to discuss our own campus needs and directions at a strategic level. The Provost and several Deans were on the team, along with the AVC of IT and the Director of Computing Services from ITS.

ITS was one of the departments reviewed by UM System Internal Audit in FY2007. The auditors were contracted from PWC and focused on datacenter operations. The final report was submitted to UM System VP of Finance and others, including UMSL VC of Managerial and Technological Services. It contained a number of good suggestions that we will act upon by March 2008.

ITS is the first UM System department to be recognized with the University of Missouri “Showcase” award for doing business with minority and women-owned business enterprises (M/WBE). The award was for FY2007; we were recognized at a luncheon in August 2007.

Most units continue to require significant amounts of customer contact and problem resolution skills necessary for excellent customer service. As technology changes, each group relies on the others as vital resources to provide technical expertise and to devise common and consistent solutions for the campus community. We continue to develop our intradepartmental communications to that end.

We also continue to enhance our communications with campus units. We have made positive changes in the frequency and quality of our notices to campus about technological services that impact their work.

A. Teaching, Learning and Technology

1. Special Events

- a) In Fall 2006, we again co-sponsored the Focus on Teaching and Technology Conference with the Center for Teaching and Learning. The Conference was able to begin the process of expansion to include regional partners with the participation of Saint Louis University in the planning. Attendees came from our sister UM campuses as well as SLU, SLCC and Harris-Stowe. We again obtained significant sponsorship from Blackboard, Dell, Apple, HP and other vendors allowing us to increase the scope of the program as well as the level of excitement. UMSystem President Elson Floyd was able to join us in person to launch the conference; we were gratified for his personal support of technology in teaching and learning. We increased attendance by 70% over the 2005 event and planning is underway to make the Fall 2007 conference even more inclusive, by involving colleagues from SLCC, Maryville University and SLU.
- b) We worked with Apple to co-sponsor several seminars on Apple technology for faculty, staff and students.
- c) Our implementation of Horizon Live Classroom and Wimba voice tools for enhancing web-based courses has now completely replaced our use of Centra. We held several seminars to introduce the technology, including one sponsored by Wimba. The tools are being used by Modern Languages and other departments.
- d) We held one "Technology and Career Briefing" seminar to continue the series begun in the Fall of 2005. Targeted towards students, these briefings brought technology experts to campus to talk about a "hot" technology topic as well as career opportunities in technology companies. The series was co-sponsored by Cisco Systems.

2. Online Tools

The Blackboard Intercampus Collaboration (BbIC) intensified consolidation and collaboration between campuses in FY2007. UMSL began hosting Blackboard (MyGateway) for the UMKC and UMR campuses starting with the Fall 2006 semester. Further collaborative efforts to improve faculty and student support and user experience are also under way. This effort also proactively supports the UM System drive for "administrative efficiencies" by avoiding future increases in costs caused by projected increased demands in usage and support.

During this past fiscal year, the BbIC team solidified the infrastructure and also formalized the collaboration process by creating a Memorandum of Understanding between UMKC, UMR and UMSL. The MOU helps to define the roles and participation as well as Service Level Agreement and cost allocation models. The MOU was signed by each of the campus CIOs late in FY2007.

- a) To support the increased usage and reliance on Blackboard, all three campuses were upgraded to Blackboard version 7.1 from their previous 6.x software. The

software system now runs on a newly architected hardware environment that leverages multiple front end application servers (two for each campus), two backend Oracle database servers, network load balancers and the campus SAN to provide a redundant, reliable and scalable service to the users of all three campuses.

- b) We also made a few modifications to improve the appearance of the front login page of MyGateway to make it more user friendly and provide the ability to post system announcements.
- c) MyGateway usage increased again this year (July 2006 – June 2007)

| <u>Visits</u> | <u>Hits</u> | <u>Bandwidth (Gb)</u> | <u>Courses</u> |
|---------------|-------------|-----------------------|----------------|
| 4,499,015 | 667,167,443 | 3,611 | 5,450 |

This represents an 11% increase in the number of courses using MyGateway, a 16% increase in visits, a 106% increase in hits and a 44% increase in bandwidth usage.

- d) In order to streamline enrollments and account creation processes in MyGateway, we redesigned our data flow structure to provide a single, standardized database for this information. We also changed our account creation process to begin providing accounts to admitted students to aid in recruitment and other efforts such as the math placement exam.
- e) Another of our regular surveys of MyGateway usage again demonstrated the contribution of MyGateway to student recruitment, retention and success.
- f) We implemented three new building blocks in MyGateway including:
 - i. Wimba Live Classroom which provides a real time online interactive environment that can be used to hold online classes, office hours and meetings.
 - ii. Wimba Voice Tools which provide Voice (discussion) Boards and the ability to post audio recorded announcements in courses. Although these two Wimba tools are available separately from MyGateway, these building blocks enable much tighter integration with MyGateway.
 - iii. Blackboard Health Check which is an administrative tool that is used to find and remove orphaned course content in the system.
- g) After piloting Wimba Live Classroom and Voice Tools in FY2006, we completed the transition from Centra in FY2007. These tools are better and more cost-effective than Centra. ITS staff also participated in a MOREnet committee to look for alternatives to Centra for MOREnet customers. It appears likely that MOREnet will also migrate to Wimba.

Live Classroom Usage:

602 Unique Users, 624 Live Usage Hours, and 18,782 hours of archive playback usage.

Voice Tools Usage:

187 Unique Users, 480 Live Usage Hours, 32,016 hours of archive playback usage.

Centra uses a different methodology for statistics, so these numbers are not comparable to last year's numbers for Centra usage.

3. Classrooms and Labs

- a) As a direct result of the consultation we had with campus through last year's Provost's Forum on Innovative Classroom design, we began planning for the construction of our first "flexible" technology enhanced classroom early in FY2007. We partnered with the Center for Academic Development and the Administrative Services Division to combine and convert Social Science Building rooms 448 and 449 to a new "flexible" Technology Enhanced Classroom with capacity for 30 students. We have coined the term "Learning Studio" to describe these new types of rooms. The classroom opened for use in January, 2007, and was substantially booked for Spring 2007 by departments that included Modern Languages, English, Business and Mathematics. We worked with faculty and students to explicitly incorporate assessment of their use of the facility to determine its effect on teaching, learning and retention. These results would also guide our development of subsequent classrooms.
- b) The department of Modern Languages was particularly excited about the different modes of teaching and learning enabled by the new flexible classroom. We are partnering with that department, Anthropology and the Administrative Services Division to create a second Learning Studio in two rooms formerly used to provide traditional language lab services (Clark Hall 400/401). Planning is underway and the room is expected to open for the Spring 2008 semester. Our partnership is captured in a MOU which spells out the responsibilities of ITS and the Department of Modern Languages as well as the scheduling requirements of the room. We anticipate that the room will be as popular as SSB449, and we wanted to ensure that we provided access for other departments while meeting the department's needs for classroom space.
- c) In Spring 2007 semester, we were asked by a Chemistry faculty member to support use of laptops for laboratory instruction. In opening up discussions with the departments in the Science Complex, we found that others would also be interested in this teaching model. ITS partnered with Chemistry, Physics, Psychology, and Biology departments to provide a laptop cart and 15 laptop computers for use within the Benton/Research/Stadler complex. The cart is stored in the complex and can be scheduled for use in classes or labs as needed by faculty. We also increased the number of wireless hot spots in the complex to accommodate teaching with the technology provided. This is a pilot program that is not quite as elaborate as a full Learning Studio, but could prove to be a cost-effective intermediate solution. The program could be expanded to other areas on the campus.

- d) Through a partnership with Continuing Education, we established an additional Online Testing Center in JC Penney Room 75 with 27 seats. As noted in previous reports, utilization of the original OTC had reached its capacity. The partnership is captured in a MOU between ITS and CE, and has increased our concurrent capacity for testing to 47 seats. We continue to work with Continuing Education to provide support for testing operations in the new On-Line Testing Center.
- e) The utilization of the Online Testing Center has continued to increase substantially; showing a 20% increase in utilization this year after a 27% increase in FY06.
- f) 12 additional Media Enhanced Classrooms were added to the inventory of classrooms having at a minimum: instructor computers, overhead data projection systems, sound systems, VCRs, and Internet connectivity. There are now 92 such classrooms on campus.
- g) The utilization of the open computing labs has grown by 9.3% this year.
- h) We completed a total renovation of Computer Center Building 005 classroom with all new furniture, carpet, paint, and technology.
- i) We collaborated with the Office of the Registrar to compile a list of classroom attributes (including technologies available) for all open campus classrooms in PeopleSoft. These attributes will be used within the new classroom scheduling application which should be implemented in FY08.

4. Video and Multimedia

- a) In May 2007, we completed the History department's two History Course series of Video Productions. Each series consists of 30 lectures recorded in the TV Studio. The series have been published on DVD, Windows Media Streaming and Video Podcast formats.
- b) UMSL has created a presence on Apple's "iTunes U" podcasting site. This complements development of Podcasting services on our own servers, making UMSL learning material available worldwide.
- c) Video Streaming Statistics: July06 – Jun07

Windows Media Services

| <u>Unique Visitors</u> | <u>Hits</u> | <u>Volume</u> |
|------------------------|-------------|---------------|
| 8099 | 54547 | 876.24GB |

QuickTime Streaming Services

| <u>Unique Visitors</u> | <u>Hits</u> | <u>Volume</u> |
|------------------------|-------------|---------------|
| 1927 | 7343 | 65.7GB |

As measured by "unique visitors," the overall usage has grown by almost 50% over FY2006, mostly due to growth in use of Windows Media. Measured by total "volume," the usage has grown by 155%.

5. Faculty, Staff and Student Support

a) Technology Support Center (Helpdesk)

- i. In FY2007, the total number of Remedy trouble tickets logged by Information Technology Services staff was 20,991. Of those, the Technology Support Center (TSC) logged 13,301 tickets.
- ii. Out of the 13,301 TSC Remedy trouble tickets logged in FY2007, TSC staff resolved 11,002. This represents a first call resolution rate of 82.72%, an improvement over the rate of 81.63% in FY2006.
- iii. Out of the 20,991 tickets created by ITS, TSC closed a total of 13,977 tickets.
- iv. The self-service Remedy Ticket Submission tool was created in FY2006 to enable students and staff to generate trouble tickets themselves. 3632 tickets were created through the use of this system.
- v. In FY2007, we implemented a self service knowledge base. The website, <http://help.umsl.edu>, is named Knowledge@UMSL. The website is designed to assist users with questions about applications they use every day. The website also allows users to check and track the support tickets that are open with the TSC. During the implementation, campus wide emails were sent announcing the coming website. We also distributed printed posters for display on campus. We have held several training courses for campus staff. A new page has been added to My Gateway for easy access to the knowledge base.

The knowledge base can be supplemented with UMSL specific information. In the coming year, we expect to work with other campus departments to include answers to questions about a variety of campus services and activities, so that the knowledge base will transcend technology-oriented services.

Since the April 2 implementation, 1929 individual users have accessed the site for 2675 sessions and have executed 3893 searches.

- b) We continue to offer training workshops on a variety of topics to the campus community:

| <u>Workshop Topic</u> | <u>Attendees</u> |
|--|-------------------------|
| Connect with your students using Live Classroom | 24 |
| eInstruction CPSrf | 22 |
| HR Functions using PeopleSoft | 24 |
| IC Short Course - Adobe Photoshop Basics Session 1 | 32 |
| IC Short Course - Adobe Photoshop Basics Session 2 | 18 |
| IC Short Course - File Management Basics | 12 |
| IC Short Course - Macintosh Basics and UNIX Commands | 6 |

| | |
|--|------------|
| IC Short Course - Microsoft Excel Basics Session 1 | 27 |
| IC Short Course - Microsoft Excel Basics Session 2 | 18 |
| IC Short Course - PowerPoint Basics | 43 |
| IC Short Course - Using CD Writers | 13 |
| IC Short Course - Viruses and SpyWare | 4 |
| IC Short Course - Web Page Building and HTML | 55 |
| Making MyGateway Work for You | 41 |
| MyGateway V7.1: Discussion Board, Gradebook, Assignment Manager and more..... | 7 |
| PS Grant Training | 8 |
| Teaching in a Technology Classroom | 6 |
| Using SMART Symposium Technology | 21 |
| Using the Grade book in MyGateway 7.1 | 13 |
| What's new with MyGateway: upgrade to V7.1 and more | 19 |
| Total Attendees | 413 |

- c) Mark-sense Scanning in support of exams and evaluations for year ended June 2007:

Data collection – 50
 Sheets Sold -111,397
 On Campus sheets scanned – 92,851
 Off Campus sheets scanned – 74,798
 Programming on-campus – 711 hours
 Programming off-campus – 51 hours

- d) The Degree Audit Requirements system (DARS) continues to grow in usage. The basic statistics for 2007 are:

Advisors and Faculty submitting audits – 155
 Unique Students submitting own audits – 9,215
 Total Audits submitted – 240,134
 Student Submitted Audits – 73,212
 Advisor Submitted Audits – 166,922

- e) We created a course equivalency application to replace the web application at UM. It allows anyone to review what courses from other institutions are equivalent at UMSL. This application aids students that transfer into UMSL permanently and those students returning for the summer but need to take courses that are equivalent at their schools.
- f) Through a competitive proposal process, we awarded Innovation Grants again in Fall 2006 to support faculty wishing to use technology in their teaching or to help their students learn. An Innovation Grants on-line submission page was created to simplify the proposal process.

- g) The on-line proposal submission for the Teaching and Technology conference was enhanced to give users an easy way to submit ideas and for conference planners to review the proposals.
- h) Replaced paper and spreadsheets with an on-line searchable data base of agency information for Social Work. The administrators can maintain the data base on-line so students have the latest version available on-line instead of a printed version.
- i) An application for the Collegiate Learning Assessment (CLA) is partially deployed this year. It allows Freshman and Seniors to register for testing in the fall and spring. It gives students on-line registration for the exam and administrators the ability to set up test sessions, email students to encourage participation, email reminders to registrants, etc.
- j) The Early Alert System was enhanced and fully deployed in 2007. This application allows faculty and student advisors to facilitate the monitoring of student course activity. Students are expected to meet the academic standards of the courses in which they are enrolled. If a student is not meeting these expectations, they will be made aware of this through the Early Alert System.
- k) The Undergraduate Research Symposium (URS) application was released in 2007. It allows students to electronically submit their projects with file attachments, and administrators to maintain and update the content of the application.
- l) We partnered with the Parking and Transportation department to upgrade and relocate the TickeTrack server to the campus data center.
- m) We partnered with the Psychology department, Child Advocacy Center, and Center for Trauma Recovery to develop a secure server environment for patient data. Purchased and installed a server and implemented secure communications to that server from various on and off campus locations to meet HIPAA requirements.
- n) Installed a redundant server for the Optometry department to ensure uninterrupted operations for the clinics.
- o) Upgraded the computers in the South Computer Building 107 classroom utilized for campus PeopleSoft training.
- p) We have also extensively investigated thin client desktops, using a Linux-based thin client to provide computer access for staff who do not have office space.
- q) In addition to the “thin clients” we used to provide computer access starting FY2007 to staff who are not in offices, we have begun to investigate thin clients that can provide a more “standard” Windows environment. This project uses a combination of Sun SunRay hardware and VMware to provide virtualized Windows desktops. This could be used as a lower-cost alternative for the Faculty/Staff DSP. We have established proof-of-concept, and will move further into a pilot deployment in FY2008.

B. Research Computing

1. In support of research computing, we partnered with Dell Computers, Intel and Totalview to sponsor the third annual High Performance Computing Day in February 2007. Software specialists from Intel, Platform Computing, Cisco and Totalview gave seminars on software and management tools for efficient use of multi-threaded and multi-processor computing. We again attracted attendees from public and private sector entities throughout the region.
2. We continued to develop the academic core of the UMSL High Performance Computing Collaboratory (HPCC), a virtual nexus of research activities on campus that use high performance computing. Prof. Jerrold Siegel developed and offered the first UMSL graduate seminar on High Performance Computing through the Math and Computer Science Department.
3. We continued collaboration with the Office of Research Services to develop the plans for an IT Incubator and associated Center for High-Performance Computing. The building has been purchased (4633 World Parkway Drive) and is being developed to be available in December 2007.
4. Usage of the HPC facility continues to grow:

Usage Statistics:

- a) Expedition (new cluster) processed 597,645 jobs for 25 users July 2006 thru June 2007 compared to 19 users last year. Although the number of jobs has decreased by 27%, CPU utilization has increased by 31%.
 - b) Valhalla (old cluster) processed 516,107 jobs for 9 users July 2006 thru June 2007. The number of jobs has increased by 114%, but CPU utilization has decreased by 56%.
5. In addition to purchasing a small IBM bladecenter for teaching purposes, we have begun planning for the purchase of a new cluster with 64-bit processors for the Center for High-Performance Computing in the IT incubator.

C. Administrative Process Enhancement

1. The COGNOS reporting system is still in its early stages of use with the following reports now deployed:
 - a. Datamarts and Packages were created for Business School, Cashiers and Student Financial Aid
 - b. Reports:
 - i. Cashier account detail by term and transaction code
 - ii. All athletes by aidyear, Athletes less than full time and all athletes with aid by year
 - iii. Business students expected to graduate by term, Ladue Chapel Scholarship and Kennedy Capital Management Scholarship

2. Developed a self-evaluation for Institutional Research allowing an on-line survey of their customers.
3. University Development previously received all payments and RSVPs by mail or phone for their special event offerings. This year, an on-line registration was introduced allowing a convenient option for participants wanting to pay by credit card.
4. UMSL again hosted the Kids Voting Missouri project. ITS created the scanning programs, coordinated data collection for tallying and posting Kids Voting results on the web for the state of Missouri. UMC provided most of the scanning. 22 St. Louis School districts and 3 out state districts participated with 126,725 ballots scanned.
5. Multiple database instances were created to support the Data Staging/Warehousing of BlackBoard data for the 3 campuses. For the St. Louis campus, daily scripts were created to Extract, Translate and Load (ETL) data from various sources at UM and reload it in a more strategic format. This data drives the basic access for Courses, Enrollment and lists in BlackBoard.
6. All local Oracle 8i databases were converted to Oracle 10g during the Fiscal 2007 year providing new features and enhancements and a more supportable environment.
7. A Discover UMSL website was deployed for the Administrative Leadership Development Program (ALDP). It allows registering and scheduling of tours and programs that highlight the UMSL campus.
8. UMSL hosted a State-wide online election for the Missouri Department of Higher Education Committee on Transfer Articulation (COTA). It allowed users from across the state to log in and vote to elect members to the committee consisting of 9 candidates.
9. UMSL's implementation of Peoplesoft Student Administration began in January 2007, preceded by an intense planning process in the final months of 2006. Now called "MyView," to reflect its provision of "self-service" to students, faculty and staff in their roles in the management of student information. We are currently working with consultants, project managers and functional specialists from the Student Affairs areas to ensure that the project continues to meet milestones.
10. The MyView team required space to house the entire team in order to remove them from the day-to-day activities of their "normal" job. This was recommended by consultants as well as published articles from other institutions that had implemented PeopleSoft. The Chapel at Normandie Hall was available, so ITS worked with ASD to plan and prepare the space, including provision of networking, computers and furniture.
11. As part of the Myview student administration conversion team, ITS has assisted the functional members in the following areas:
 - a. Bio-Demo Conversion
 - b. MyView Look and Feel
 - c. Academic Structure Setup
 - d. Course Schedules
 - e. Student Data Cleanup
 - f. Facilities and Rooms

D. Core Infrastructure

1. E-mail and Identity Management

We began to pilot student email with Microsoft's WindowsLive@edu, a free email service operated by Microsoft for any U.S. university. Progress has been slowed by delays in Microsoft's implementation of several required features. We remain hopeful that we will be able to move students in FY 2008 because the service has the potential to save the UM System approximately \$300,000 per year.

2. Information and Network Security

- a) Delivered critical Windows operating system patches through SMS and installed up to date anti-virus software to secure campus desktops.
- b) Continued to deliver security awareness presentations to colleges and departments on campus. These sessions were very well received, and will continue as needed.
- c) Tightened password security by blocking the use of common programs that send passwords in clear text like ftp and telnet.
- d) Started implementing a Network Access Control system to keep systems off of the network that do not meet our security standards. This will continue into the next year.
- e) Increased the usage of encryption software on campus owned laptops to keep private data safe in the event of laptop theft.
- f) Tightened and condensed network firewall rules to make the network more secure and reduce the risk of administrative error.
- g) Increased and improved encryption levels and security to sensitive remote sites to prevent possible data theft.

3. Desktop System Program

- a) The base configurations offered were: Dell OptiPlex GX620/GX745 with 19" flat panel monitor, Dell Latitude D820 or D620 laptop, Apple iMac with 20" LCD and Apple MacBook Pro. Users with no monitor, a CRT-style monitor, or a 15" flat panel monitor received a 19" flat panel monitor. Users with existing 17" flat panel monitors did not receive replacements.
- b) Year 1 had an increase of 5% (24) new eligible DSP recipients added to the program.
- c) The year 1 database indicates 478 records. The status of each is as follows:
 - i. 442 – Year 1 orders installed.
 - 344 – Dell OptiPlex desktops
 - 48 – Dell Latitude laptops
 - 30 – Apple iMacs
 - 11 – Apple MacBook Pro

- 8 – other
- ii. 8 – Open slots
- iii. 28 – Did not order

4. Networking

- a) Installed campus network infrastructure into the new Oak Hall student building. This new facility has both wired and wireless networking available throughout the building and wireless is also available in the pool area outside.
- b) Pursuant to the Action Plan, wireless Internet connectivity was broadened across campus as 58 additional wireless “hot spots” were created for faculty, staff and student use, including 41 in the new Oak Hall student dorm. 133 secure Wireless Access Points have now been deployed on campus. An interactive campus map is available online to view Wireless “hot spots”; a building with a hot spot is indicated by a red dot on the building. One can click on the red dot, which will allow the user to select which floor of the building they would like to view.
- c) Networking Services continued a life-cycle management project for network hardware. This is a three year project which includes updating data wiring closets with newer hardware and wiring, while consolidating equipment when possible to reduce maintenance requirements and purchase costs.
- d) Integrated with special support for such events as the Board of Curators Meeting, Technology in Teaching, St. Louis Regional Wireless Demo, various student summer camps and other groups meeting on campus that required network connectivity. Installed special connectivity for the Performing Arts Center (PAC) with Dance St. Louis to support ticket sales through the PAC for Dance St. Louis events.

5. Telephone Services

- a) In FY 2007, Telephone Services accomplished the following with the help of our maintenance provider, AT&T. A major accomplishment was the completed installation of a Nortel IPE Fiber Remote in Oak Hall. After the building opened in August, a series of floods damaged the fiber remote and it was replaced in December. Other accomplishments with AT&T include: provided alternative system (Plexar) for the Optometry Clinic on Lindell; completed software application upgrades for our voicemail system (CallPilot) and our internal switch management system (OTM); completed installation of a new CallPilot Reporter Server.
- b) Telephone Services accomplished several campus moves including Registration/Records and Admissions, Development, and KWMU. Telephone Services also supplied services to new work groups including PeopleSoft Project staff located in Normandie Chapel and the new campus Radio Station located in MSC.

- c) Telephone Services coordinated installations for outside entities including an ATM machine for Bank of America and the US Bank facility located in MSC.
- d) Other accomplishments completed during FY2007 include the rewiring project for South Campus which provided phone service to the basement of the Provincial House (Honors College), the removal of Cisco IP phones from test stations and replacement with Nortel equipment, and the emergency generator project for the Switch Room at Benton Hall.
- e) Other projects currently in progress include relocating phone cable for the Observatory and new baseball facility, working with Facilities on the Great Rivers Greenway Bike Trail project, continued investigation of the fire suppression system at Benton Hall, testing a Nortel IP system, and creating a more “user friendly” work order system.
- f) Statistics (July 1, 2006 to June 30, 2007):
 - i. Remedy tickets – Telephone Services implemented an electronic ticket application within Remedy to track requests for service which resulted in approximately 1900 tickets for repairs, moves/adds/changes, feature changes including “voicemail and menu services” updates, and password resets.
 - ii. Approximately 300 of the 1900 tickets noted above were for moves/adds/changes work orders. These tickets resulted in programming for 425 stations:
 - 185 moves
 - 150 installs
 - 92 disconnects
 - 78 upgrades
 - 20 “other” (i.e., enabling phones for staff or non-UMSL student residents at University Meadows).
 - iii. Student registrations for phone and data services at University Meadows:
 - Fall 2006 – 276
 - Winter 2007 -269
 - Summer 2007 – 118

6. Machine Room

We installed a security cage in the Computer Center Building data center. Servers identified as needing additional physical security (credit card processing, HIPAA, etc.) have been moved to this locked cage.

7. Servers and Storage

- a) Finished and maintained the new hardware platform for My Gateway. This platform consists of 6 Sun T1000 front-end servers, two for each campus, and 2

Sun T2000 database servers, one active and one backup. These servers all run Solaris 10.

- b) Continued to expand the VMware installation, where we create several virtual Windows or Linux servers on each physical server, saving money on hardware, power, and cooling. We now have 5 production VMware servers, containing 48 virtual servers which are a mixture of production and test servers.
- c) Added two LTO-3 tape drives to our existing L700e tape robot to expand tape storage capacity and improve backup speed. Since we are still having problems backing up all our storage in a reasonable backup window, we investigated alternative technologies, leading to the purchase of a Virtual Tape Library, which emulates tape with disk. This VTL will be brought on line in FY2008.
- d) We investigated other alternatives to provide redundant data storage to replace existing Mirrorstore equipment whose performance was not adequate. We have decided on a Sun 5320 NAS Gateway Cluster to provide file services for “My Documents” and other directories. This system will also replicate this data to another disk array for safety. The system will also be placed in production in FY2008.
- e) We have also put extensive planning into expanding storage, both for primary storage and for mirrored volumes.

E. Staff Development

As a technology organization, ITS must pay special attention to staff training so that our skills are up to date in order to provide the proper level of service. In addition to the challenge of keeping current with the rapidly changing technological environment, we also need to make sure that our staff have appropriate interpersonal, supervisory and management skills.

We consider attending and presenting at professional and academic conferences to be an important component of staff development as well as an opportunity to promote UMSL accomplishments to the larger community.

1. Several staff gave presentations at Helix on Innovative Classroom Design.
2. We began the process to start an area user group called the Central States Blackboard Users Group (CSBUG) to develop a larger community to share ideas on the support of Blackboard.
3. We developed a presentation on the success of the BbIC collaboration project and presented it at three regional (including Helix) and BbWorld, a national/global conference on Blackboard technology.
4. Several staff were promoted into supervisory positions and were asked to attend management training.
5. Continued specialized technical training for staff.