

Information Technology Services

Annual Report

July 1, 2005

We have organized this year's report slightly differently than in the past, structuring it according to the services that align with the University's mission rather than along organizational units.

Most units 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 a vital resource 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.

A. Teaching, Learning and Technology

1. Special Events

- a) Facilitated wider discussions of the use of technology in teaching and learning, by initiating the Provost's Forum for Teaching and Learning with Technology. We collaborated with the Center for Teaching and Learning and the Provost's Office to hold two events attended by faculty and staff. This effort was strongly supported by the Provost and the Chancellor.
- b) Introduced the idea of Electronic Portfolios to the campus to help gauge interest beyond the College of Education that has been using the technology for several years, by organizing an E-Portfolio seminar with the CoE and Oracle.
- c) Co-sponsored Focus on Teaching and Technology Conference with the Center for Teaching and Learning

2. Online Tools

- a) Stabilized MyGateway (Blackboard) web-based course management system. Greatly enhanced reliability.
- b) MyGateway usage greatly increased again this year (July 2004 thru June 2005)

<u>Visits</u>	<u>Hits</u>	<u>Bandwidth(GB)</u>	<u>Courses</u>
2,711,966	225,554,055	1,612	3,755
- c) Migrated production Centra servers to a production group and setup a development installation to mirror the production environment.
- d) Centra usage continues to grow

<u>Total Live Sessions</u>	<u>Total Live Minutes</u>
5,939	71,096

3. Classrooms and Labs

- a) Pursuant to the Action Plan, three additional Media Enhanced Classrooms were added to the inventory of classrooms having at least instructor computers, overhead data projection systems, sound systems, VCRs, and Internet connectivity. There are now 70 such classrooms on campus.
- b) Instructional Computing partnered with the Library to open a new Library Research Commons computing lab in the Ward E. Barnes Library on South Campus in Fall Semester 2004. The new lab has 57 Windows computing stations and additional seating for students to plug in their laptops and utilize the wireless access available.
- c) A Mimio Digital Meeting Assistant has been installed in SSB 134 and CCB 104. This tool attaches to a whiteboard to give the ability to digitally capture notes or drawings that are written on the board that can be saved, shared, and/or integrated into other materials.
- d) A CPS Personal Response System has been installed in Stadler Hall 104 and Lucas Hall 200. CPS is a wireless student response system. The response pads enable students to provide immediate feedback for quizzes, voting, etc.
- e) A revised online student technology guide was created to guide students in their use of the many technological services available at UMSL and through the Internet (<http://www.umsl.edu/technology/publications/stutechguide/>).
- f) Instructional Computing is partnering with the Mathematics & Computer Science department to convert University Center 50 to a new Math Emporium lab with 115 student computer stations, scheduled to open in Fall Semester 2005. IC has participated in the planning and is contributing time, effort and the computers.
- g) In response to student requests, the hours of computer labs were extended to remain open later on the weekdays and longer on the weekends during the weeks leading up to final exams in Spring Semester 2005.
- h) The utilization of the computing labs has grown by 19% this year.
- i) The utilization of the Online Testing Center has grown by 20% this year.

4. Video and Multimedia

- a) Collaborated with the Missouri National Guard, FEMA and St. Louis City ESDA to create a state wide emergency satellite IP network to support data, videoconferencing, and IP telephony. Installation of VST Satellite equipment in ITS to act as a redundant emergency route for the National Guard at Ike Skelton in Jefferson City
- b) Produced a twelve-part video series entitled “Great Philosophers” for the Philosophy Department.
- c) In the Spring 2005 semester, one hundred and forty-four hours of ITV courses were archived as streaming videos.
- d) Video Streaming Statistics:

Windows Media Services

Unique Visitors

Hits

Bandwidth

2147	13862	207 GB
QuickTime Streamer Services		
<u>Unique Visitors</u>	<u>Hits</u>	<u>Bandwidth</u>
1234	4058	89.76 GB

- e) Provided a video over IP connection to stream Commencement to Keith Lucas, a graduating senior who is currently stationed in Iraq.
- f) Collaborated with the Missouri National Guard to provide video streaming of five virtual USO shows for the military in Iraq.

5. Faculty and Student Support

a) Technology Support Center (Helpdesk)

- i. In FY2005, the total number of Remedy trouble tickets logged by Information Technology Services staff was 15,558. The Technology Support Center (TSC) logged 13,454 Remedy trouble tickets.
- ii. Out of the 15,558 Remedy trouble tickets logged in FY2005, TSC staff resolved 11,521. This represents a first call resolution rate of 74%.
- iii. Created self-service Remedy Ticket Submission for users via a Web interface.

b) Training

<u>Training Topic</u>	<u>Attendees</u>
Centra	20
Classroom Technology – Clickers	15
Classroom Technology – Mimeo	28
Desktop Introduction	24
Dreamweaver	93
Human Resources	28
ITV	4
Outlook	74
Peoplesoft	508
Web	41
Windows Media Streaming	8
Word	20

c) Mark-sense Scanning in support of exams and evaluations:

- i. 7 new scan tool applications created
- ii. 5 new form designs
- iii. Exams scanned – 1,258
- iv. Evaluations scanned - 96
- v. Data collection – 32

- vi. On campus sheets scanned – 88,315
- vii. Off campus sheets scanned – 83,258
- viii. 79 hours of billable programming

- d) The Degree Audit Requirements system (DARS) continues to grow in usage. 171 Advisors/Faculty have requested access to use DarsWeb. New live audits were added for Advisors. This actually retrieves the student's academic record from the CICS student system in real time and then returns the completed audit to the web. A Batch Audit facility was created for the Advisors to run bulk audits at key times during the semester. The basic stats for 2005 consist of
- Advisors and Faculty submitting audits – 110
 - Unique Students submitting own audits - 7,130
 - Audits submitted – 195,246
 - Avg. lines of audit output per semester – 8,290,817

The 3.5.1 version will be deployed in July 2005. This version has an enhanced Interactive audit consisting of course carts, graphical displays of student degree progress and an easy link to our new course schedule page. The Transfer Articulation (TA) module will also be deployed in FY2006. Besides replacing the rules for External Institution courses, TA will allow potential new UMSL student to submit What-If degree audits with their courses from other institutions. This will give prospective students a direct path of coursework to follow at UMSL in order to complete their desired degree.

- e) A new Course Schedule application was deployed allowing a current student, advisor or prospective student a very easy and quick way to query course schedules by day, time, curriculum, instructor, credit hours, description content with wildcards and more. A course schedule cart will be deployed in FY2006 allowing a student to save and make an Ad-Hoc schedule. For FY2006, ITS and Student Services will work to automate taking the resulting Ad-Hoc schedule and actually register the student with their selections.
- f) Continuing Education provides Advanced Credit Programs for qualifying High School students. A newly created Web process was created to accept student application and registration. This system is being piloted with several participating High Schools.
- g) Created or enhanced the following user support tasks as self-service web applications:
- i. Generic Account requests
 - ii. New Faculty Account requests
 - iii. MyGateway requests
 - iv. Centra Requests
 - v. ITS Notify Distribution List Membership Change
- h) The Faculty Resource Center (FRC) increased the amount of equipment available for faculty and staff checkout purposes.
- i) FRC Staff members learned how to serve as MyGateway administrators to increase the level of direct support to faculty.

- j) The Web Office completed a redesign of the University's home page (<http://www.umsl.edu>) and secondary tier pages. This redesign was a collaboration between ITS and an ad hoc campus committee of faculty, staff and students
- k) The Web Office adopted a new design standard for school/college web pages; this resulted in a template that can be used by different units, allowing them flexibility, but which creates a consistent look and feel for all campus web pages.

B. Research Computing

1. In support of research computing, sponsored High Performance Computing Day; partnered with Dell Computers to hold the event.
2. Continued collaboration with the Office of Research Administration to develop the plans for the IT Incubator building and associated Center for High-Performance Computing. The Incubator is due to be available in August 2006.
3. The intent is that the Center for High-Performance Computing will offer computing resources and services to Incubator tenants and the larger community. We have begun development of the service and business model that would put the Center on a fiscally sustainable basis.
4. Pursuant to the Action Plan, a new 64 node (128 CPU) Dell Xeon cluster was brought online January 2005. This brings the total number of processors to 192 available on the cluster.
5. Presented "Linux Cluster in 60 Minutes" demo at Helix conference.
6. New cluster processed 76,627 jobs for 19 users since coming online in January.
7. Old cluster processed 68,855 jobs for 17 users July 2004 thru June 2005.
8. Reached agreement with the Research Channel to retransmit Educational Research video programming via satellite to create an UMSL 24/7 Internet 2 Webcasting Channel. Streaming Video educational library is now available through this agreement for educational resources.

C. Administrative Process Enhancements

1. We worked extensively with the Touhill Performing Arts Center to implement online ticket sales. We used Tessitura, a third party software application that manages ticketing and enables us to take payments securely over the Web.
2. ITS began evaluation of online collaboration tools, which have the potential to change the way people work on collaborative projects and committees. Currently using a pilot installation of Microsoft Sharepoint Server for document sharing and management.
3. A new Web application was developed for Cashiers that streamlines the process of assigning student parking permits. It also allows for timely uploads into the student information data base. This system was then expanded to include assigning of temporary/guest parking permits by Cashiers. A database of handicapped student

parking information was also added so that those students with permanent disabilities do not have to get their handicapped status renewed every year.

4. A student data cleanup Web application for Continuing Education non-credit program student database was deployed allowing CE to 'combine' students and update enrollment tables, etc. as needed. Along with the application, a cleanup of student mailing lists and archiving student information reduced the size of the non-credit continuing education database and eliminated stale mailing lists.
5. An email marketing Web application for Continuing Education allows administrators to edit the email message and then send to a select group.
6. A Web application for Nursing's end-of-semester evaluations. Improved their on-line evaluations by adding SSO login and administrative functions to select the version of the evaluation to be given for each course. Results were given by paper report. They would like this to be improved to get on-line results.
7. A new Telephone Web application for service will be deployed in FY2006. The current system data is being cleaned and new tables have been defined.
8. ITS evaluated TickeTrak and replacement systems for Parking and Transportation department. TickeTrak seems to have the fullest features for the lowest incremental cost. We will give them additional queries from their database and a web application to better search student and faculty/staff databases for vehicle owners. In addition, we are researching a semi-automated method to resolve non-permit related tickets with the Regional Justice Information System (REJIS).
9. We created People Soft Financial System Version 8 feeder changes for Continuing Education, Mailroom, Parking Permit and ITS local extracts.
10. The Mid-semester feedback system was modified to be used as an end-of-semester tool. Teaching and Learning piloted the system to several Faculty. This was in addition to the department mandated end-of-semester evaluation.
11. ITS hosted the Kids Voting Missouri project. Although we did minimal scanning locally, ITS performed all programming to read and tabulate the November 2004 election ballots. UMSL distributed the ScanTools programs to all scanning sites, collected all data via FTP to UMSL, ran SAS programs to tabulate, and posted results live on the web.
12. ITS is working with BlackBoard, our IDCard provider, in changing the magnetic stripe to contain the People Soft EMPLID. The changeover is scheduled for the fall of 2005 and will affect all Faculty and Staff.
13. A Space Request Web application was developed for Administrative Services. It allows a structured method of submitting and reviewing space requests.
14. A system to collect Lab Logins and Domain logins was created. Now the labs require individuals to login when using a PC. This removed the need for Card ID swipes and increased the lab usage statistics granularity.
15. Over 240 new CICS userids created with an additional 300 password resets.
16. Specialized reports: Business School (55), Student Loans (40), and General Label Requests (87).
17. Performed various data extracts for Washington University – Joint Engineering, Card ID system and the Missouri Learning Network
18. The Disability Access Services application was enhanced to create reports to aid in statistics for filing federal government reports.

19. UM is deploying a Business Intelligence querying and reporting package called Cognos. The product has been tested and a Data Architect will be identified to handle data naming, collection and reporting within the Cognos system sometime in FY2006.

D. Core Infrastructure

1. E-mail and Identity Management

- a) Upgraded faculty and staff email from Exchange 2000 to Exchange 2003.
- b) Implemented new version of MyGateway which provided pass through authentication to campus services.
- c) Integrated Centra into MyGateway using the Faculty Request System for session scheduling.
- d) Provided pass through authentication to Exchange Outlook Web Access client from MyGateway to faculty and staff (part of Exchange 2003 upgrade).

2. Information and Network Security

- a) Improved security of campus desktops by delivering patches through SMS and installing up to date anti-virus software.
- b) Delivered several security awareness presentations to colleges and departments on campus. These sessions were very well received, and will continue next year.

3. Desktop System Program

- a) The base configurations offered were: Dell OptiPlex GX280 with 17" flat panel monitor, Dell Latitude D810, Apple iMac with 17" LCD and Apple PowerBook G4. The following enhancements were also offered: upgrade to a 20" LCD Apple iMac from the 17". Users with no monitor or a CRT-style monitor were given a 17" flat panel monitor with a Dell desktop order. Users with existing flat panel monitors did not receive replacements.
- b) The year 2 database indicates 446 records. The status of each is as follows:
 - i. 382 – Year 2 orders installed.
 - 326 – Dell OptiPlex desktops
 - 16 – Dell Latitude laptops
 - 27 – Apple iMacs
 - 10 – Apple PowerBooks
 - 3 – other (3 Apple G5 Towers)
 - ii. 20 – Open slots
 - iii. 44 – Did not order

4. Networking

- a) DHCP - the main UMSL campus has been upgraded to a system called Dynamic Host Control Protocol (DHCP), where the network automatically assigns computers and printers an IP address.
- b) Pursuant to the Action Plan, wireless Internet connectivity was broadened across campus as 21 additional wireless “hot spots” were created for faculty, staff and student use. A total of 57 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) Network access was brought to Parking & Transportation Building.
- d) Participated in planning of the new South Campus Residence Hall.

5. Telephone Services

During FY2005, Telephone Services completed a number of tasks to improve services and accommodate the telecommunications needs of the campus community.

- a) In October of 2005, Telephone Services began an upgrade of the campus telecommunications system, including hardware and software. The upgrade of the PBX was necessary due to equipment that was no longer supported by the original vendor.
- b) As a result of the hardware upgrade, several software upgrades were also implemented, including:
 - i. The Meridian voicemail system was upgraded to CallPilot.
 - ii. The existing ACD (Automated Call Distribution) platform was upgraded to Symposium.
 - iii. The existing telemanagement tool was upgraded to Optivity Telephony Manager.

These upgrades provide the Telephone Services staff with a more user-friendly interface to perform more efficient telephone service moves, adds and changes, voicemail box additions and changes, including voice menu services, and configurations ACD reporting needs.

- c) Statistics:

Installs	141
Moves.....	177
Disconnects	82
Upgrades ..	111
Other.....	38
Data Ports .	5
Feature Changes	149
VMail updates	61
Other.....	33

(including the number of phones enabled/disabled at U Meadows through the course of a year)

Other tasks included:

- d) Planning for services to a new dormitory building on South Campus which is due for occupancy in August 2006.
- e) Relocated fiber remote to Parking and Transportation Building.
- f) Worked with Facilities to relocate pole and cable for emergency phone at MSC parking lot.
- g) Planning of the move of Facilities department from GSB to the Parking Garage.
- h) Facilitated Administrative Services' move from GSB to Normandie Hall.
- i) Call Pilot, OTM and Symposium servers installed, tested and put on network.
- j) Migrated Meridian Mail users to Call Pilot.
- k) Configured Symposium with current ACD groups and trained supervisors and agents.

6. Machine Room

- a) Performed a study/analysis of a network monitoring system that can be used by Operations to assist Networking in locating network anomalies, intrusions, etc.
- b) A redundant data center is being constructed on the first floor of Lucas Hall. The new data center will house the Beowulf Cluster, in addition to redundant servers and networking equipment. In addition to providing redundancy, it will also provide space for future growth for services provided to the campus.

7. Servers and Storage

- a) Installed MirrorStore appliances to continuously mirror the data in the general use filestore (Samba-based "steamboat") and the production database files.
- b) Installed Qualstar SAIT tape robot to consolidate archival and offsite backups.
- c) Began consolidation of departmental backups to existing L700e tape robot.
- d) Installed new database server for DARS project.
- e) Tuned server and data storage for My Gateway to improve performance.

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 continue 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 members gave presentations at Helix and Educause conferences on UMSL's Single Sign On system and High Performance Computing.
2. All Directors participated in a mini-MBA program offered by College of Business and Continuing Education and the UMSystem Administrative Leadership development program.
3. Several staff were promoted into supervisory positions; they were asked to attend management training.
4. Continued specialized technical training for staff.