

**Campus Information Technology
Strategic and Tactical Plan, 2008-2009
Goals and Action Items
Status Report
July 2009**

Infrastructure (Server, Storage, Database, Network, Voice, Video, Data)

Goal: Build and maintain a contemporary Cyberinfrastructure, including server, database, storage, network, voice, video, and data infrastructure, which effectively supports the research, education, and administration of UMB.

Action Items and Status:

- Discuss and identify Cyberinfrastructure needs across campus and pursue opportunities for strengthening the UMB CyberInfrastructure. **In Progress**
- As part of the needs analysis, determine initial interest and demand for using a common high-performance computing center and systems for supporting UMB research and education projects. **In Progress:**

We have obtained a “seed sponsor” (Dell), have met with potential pilot departments, and are formulating an HPC operations model. Dell will provide a 16 node cluster with 15TB of storage and cluster software and operating system. The tentative date for hardware shipment and installation is the week of July 27, 2009.

- Based on need and demand, construct a common campus-wide computing facility for use by faculty for research and education projects which offers computational resources, back-up systems, storage resources, software, support personnel, and which is connected to the high-speed campus network and Internet. (2009) **In Progress.**

Discussions are underway to acquire space in a building contiguous to the UMB campus: 300 W. Lexington Street.

- Participate on national Cyber infrastructure workgroups and connect with higher education and federal agency sponsored computing grids, so that faculty have access to and can use available Cyberinfrastructure resources outside of the UMB network. (2008 and Ongoing) **Completed and Ongoing**

- Implement an electronic file transfer solution (Accellion product) that allows large files to be sent and received via email messages. (January 2008) **Completed for all faculty, staff and students.**
- Implement new hardware & software used for anti-spam, anti-virus, and message delivery. **Implementation complete. E-mail delivery, spam, and virus protection has been cutover to the IronPort appliances. The Meridius and Symantec architecture has been taken out of service.**
 - Re-architect systems (Fall 2007) **Completed**
 - Acquire new technology solutions (Fall/Winter 2007) **Completed**
 - Pilot test, evaluate, plan implementation (Winter 2007-2008) **Completed**
 - Transition to new services (Spring 2008-Summer 2008) **Completed**
- Active Directory/eDirectory linkage and information passing between the two directories **Planned (Nothing new to report now)**
 - Perform analysis
 - Develop implementation plan, including the detailed technology tasks
 - Implement
- Upgrade enterprise directory servers and software **Completed**
- Undertake planning and implementation of Microsoft Exchange 2007. **In Progress:**

All hardware is configured and ready to go. Our hosted partner schools and departments are currently testing. Migrations scheduled to begin in July/August 2009 timeframe

- Undertake planning **Completed**
- Exchange 2007 implementation **In Progress (Fall 2009)**
- Develop process and plan for replacing the student email system
 - Undertake research and explore options **Completed**
 - Develop an implementation plan to move the services (review technology, processes, and create a timeline of activities) **Completed**
 - Implementation **Completed**
 - Evaluate outsourcing to Microsoft or Google **Planned**
- Retire the existing Continuing Education Server and integrate into the Enterprise Blackboard server.

Due to Budget constraints this has become a priority in CITS. Various means are being explored to substitute the functionality of the CE server. These include implementation of WebEx, Community branding within the Blackboard Enterprise instance, and investigation of third party Building Blocks for Blackboard.

- Upgrade Howard Hall to a redundant core infrastructure **Completed**
- Investigate with Facilities Management and propose a solution for a redundant network core in a second campus location. **In Progress.**

Rerouting of campus cabling around the old Dental School demolition project has opened the way for a second network core to be created in the Lexington Building. We are analyzing this possibility for a near term implementation.

- Implement a redundant network core in a second campus location. **Planned.**
- To continue to build, expand and maintain a converged voice, video and data infrastructure and deploy IP telephony (VoIP) **Completed and Ongoing.**

Successfully implemented VOIP in areas of HS/HSL, Social Work, Dental, Law, and for BioPark2 (Genome group), New Lexington (Administration) Bldg, Homeland Security, President's Office and University Counsel.

Completed installation and testing of the new network for the Cecil County Dental School site, with VoIP phones (approx. 100) installed at the clinic and Donaldson Brown Center. Card access is in the process of being installed and configured and is targeted for completion at the end of July 2009.

An additional 58 phones were converted to VoIP on July 10th in the Law School; new VoIP phones were also installed in the HS/HSL, School of Social Work, ORD, and OEA.

New VoIP implementation currently underway in the new Campus Center.

Completed the development of a new feature available on VoIP phones, i.e., access to telephone numbers for people in the campus directory. Individuals with VoIP phones (that are Java-enabled phones) can now look-up telephone numbers and call individuals listed in the campus web directory with their VoIP phone.

- Continue to work with Administration and Finance to build the financial models for deployment of a contemporary communications infrastructure and VoIP in new and existing campus buildings. **Completed and Ongoing**
- Articulate these financial models to the campus community **Completed and Ongoing**
- Consult and work with Facilities Management and school and department IT and facilities personnel, as well as with vendor contractor personnel, to implement and support this new infrastructure and VoIP in new buildings as well as when opportunities arise in existing buildings (renovations, department moves, facilities and technology upgrades)

- **Meetings are underway to discuss project methodology and adding “checkpoints” to ensure that IT/AV equipment meets current specifications and standards.**

- **Continuing to expand VoIP implementations in the Dental, Social Work, Law Schools, and HS/HSL.**
 - **Existing Pharmacy Hall Planned (Fall 2009)**
 - **UMCP Smith School in Bio-Park Building #2 (Nov. 2009)**
 - **New Pharmacy Hall Addition Planned (Summer 2010)**
- Investigate a campus feed for LCD-TV’s on campus (fosters campus unity, helps in emergency/disaster management). **Completed and ongoing. The Schools of Social Work and Dental are using a Direct TV feed and Cisco Digital Media Systems with NEC & SONY monitors for Digital Signage capability and displaying content in their buildings. The new Campus Center will also have a DirecTV feed and Digital Signage.**
 - Investigate a remote TV studio for campus (similar to http://ucsdnews.ucsd.edu/thisweek/2004/oct/10_18_experts.asp). **Planned**
 - Investigate the possibility of strengthening and expanding cellular coverage in campus buildings. **Planned**
 - Document every building’s copper/fiber connections as well as switch configurations for the campus. **Completed and ongoing**
 - Implement new DNS services for the campus **Completed**
 - Provide storage and associated technical support for a campus document imaging/management system. **Completed.**
Accounts Payable and Working Fund departments are in production. Phase one (non-eUMB terminated employees) for HRMS is in production. SOM, Graduate School, Financial Aid,

and Social Work are in the planning stages for document management projects.

Nursing School is in process of mapping scanned images to SIMS documents for enhancing their Admissions and Registrations/Records processes.

Continue to explore the current and future needs for network infrastructure to support the use of the new technologies utilized by the schools. **In Progress**

- Work on the vendor contracts to allow for more buying power, ease of support, and standardization of core elements. **In Progress**
- Complete the selection and implementation of a load testing tool for performance testing. **Completed**
- Conduct Storage Area Network (SAN) capacity planning to accommodate current and near-term production system growth.

- **EMC SAN has been physically installed. Infrastructure Services and Database Groups are beginning implementation and analysis with our vendor to plan migration from existing SANS/storage to the new architecture.**

- Install and configure Oracle Data Guard for stand-by environments. The applications targeted for stand-by environments are Blackboard, SIMS and CMS (Site Executive). This will first be tested in a development environment and later moved to production.

Blackboard, QuestionMark, COEUS, SIMS and Content Management System: Completed. Other applications are being evaluated for the implementation of additional redundant hardware/database. (In Progress)

- Install and configure Oracle for the new Blackboard development and production database servers. **Completed**
- Perform application and/or database upgrades, hotfixes and patches as necessary. **In Progress and Ongoing**
- Revisit Oracle backup strategy (e.g. RMAN, scripts) based on requirements and improved Oracle features. **Completed and In Progress**
- Investigate current Oracle features to address regulatory requirements regarding databases. **In Progress**

Enterprise Systems

Goal: Implement and provide support for systems which provide members of the UMB community with convenient, intuitive and authorized access to data that promotes the efficient administration of the University.

Action Items and Status:

- Web Admissions Credit Card rollout. **Completed**
- Expand availability of eUMB enterprises systems by 3 hours/day. **Completed**
- Continue investigating additional contemporary methods and technologies, and if feasible, proceeding to further expand the availability of systems **Ongoing**
- Enhancements to the EHS Training application. **Completed**
- Implement Non-Resident Alien solution and create new interface to the State Central Payroll Bureau **Completed.**
- Archibus Space Inventory System implementation

Phase I (access to space data) is complete. Training for Phase I is complete. Phase II (tying space data to research) awaiting vendor deliverable before implementation can be finished.

- Tools and database upgrades for Financials, RAVEN, and Portal. **Financials and RAVEN completed. Portal upgrade is dependent on a technical fix from the vendor.**
- Create new faculty training and support opportunities for Blackboard and QuestionMark. **Underway and more activities planned under the auspices of the Training and Development Subcommittee of the Education Technology Committee (ETC).**
- Incorporate Central Billing into eUMB. **Planned. Will begin analysis in late calendar year 2009.**
- Work with Administration and Finance to implement a new solution to replace the existing Check Tracking System for student refund management. **Completed.**
- Provide application support during Blackboard hardware upgrade and stabilization period. **Completed**
- COEUS implementation through conversion, proposal development, Institute Proposal, Award, and Subcontract Modules **Completed.**

Reporting and interfaces: RAVEN reporting pages currently are in production with limited user access. Broader campus access and training will be available once data reconciliation issues are resolved. Development is in progress for interfaces between eUMB and COEUS. Anticipated completion of phase I (New Awards) is in August 2009.

- Implement Asset Management Module. **Completed**
- Replace Working Fund system with eUMB functions **Planned. After Central Billing Project is finished.**
- Begin planning for HRMS upgrade to new version with new functional capabilities.

On Hold. Current budget situation has required a hold be put on the HRMS upgrade. Available resources will focus on automating and enhancing certain manual processes within existing HRMS release.

- Implement new Direct Loan Program within Banner financial aid. **Completed.**
- Develop and implement an electronic timesheet for use by Exempt category UMB staff who currently complete a paper timesheet.

Development is underway: implementation completion is expected in the Fall 2009 timeframe.

Currently investigating technical solutions for automating other business processes and developing electronic forms.

- Undertake a technical assessment and make needed modifications to enhance RAVEN performance. **Development is underway and ongoing.**
- Analyze and develop reporting capabilities to meet the requirements and needs for complying with the American Recovery and Reinvestment Act (stimulus plan).

Analysis is currently underway: target implementation timeframe is late fall, 2009.

- Work with financial services to re-engineer and automate processes within restricted funds department related to billing/contracts, receivables management, grant setup, reporting, and grant close out. **Ongoing.**

- **New Project: Working with OEA and participating in Alumni Development/ Advancement Information System evaluations leading to eventual implementation.**

- **New Project: Working with Academic Affairs on a project to acquire a Customer Relations Management system for use by departments in the Campus Center.**

- Student Information Management System (SIMS)

Current priorities/activities underway:

- **Additional Banner training/refresher courses being held**
- **Document imaging projects**
 - **SOM getting close to going live**
- **Enhanced transcript printing capabilities available**
 - **Completed in late May**
- **Implementation of CAPP module for tracking student progress/achievement underway**
 - **SOL in final stages**
- **Preparing for new Federal Race/Ethnicity mandates, scheduled to go live in October 2009**
- **Preparing for Banner version 8 with targeted production implementation date of October 2010**
- **Ongoing software releases are being applied with support for each version**
 - **Financial Aid releases and Student/Student Web**
- **Implementing Web Admissions, Registration, and Recruiting for Public Health**

- Student Information Management System (SIMS)

Near term priorities:

- Create a Standards working group comprised of central offices and school personnel that would address data issues and recommend standards related to data definitions, data values, data entry, reporting, etc.
- Develop a MHEC scholarship interface for Financial Aid and Bursar's areas
- Investigate the possibility of acquiring services from SunGard to help complete this project
- Address recruitment management and communications to prospective students
- A demonstration of SunGard's enrollment management module is scheduled for late June. After which, a TargetX demonstration will be arranged to compare functionality and fit
- Continue with document imaging projects
- SON designing and planning pilot project
- Continue implementation of CAPP module for tracking student progress/achievement
- SOP will be targeted after SOL
- Enhance student service provider interfaces into Banner (i.e. GRE test scores, ADSAS DAT scores)
 - Load PharmCAS decision codes from Pharm Admit
 - Load AADSAS GPAs, Test Scores, and decision codes
 - Load GRE test scores

Campus Directory Services, Identity Management

Goal: Continue to use and build upon the directory services, identity management architecture that facilitates the use of a common ID and single sign-on, as well as the provisioning and de-provisioning of computer accounts.

Action Items and Status:

- Create a campus-wide group to discuss Directory Services, Identity Management, and related technologies (e.g. Shibboleth).
 - Provide regular information exchange between CITS and campus schools in order to leverage these technologies

Completed and ongoing

- Work with Applications staff to reduce the number of UserIDs, utilizing the enterprise directory for authentication
 - Work with the SIMS/Banner team to configure Banner & SURFS to authenticate using the myUMB ID and password
 - Perform analysis **Completed**
 - Configure Banner and SURFS **Completed**
 - Implement **Completed**
 - Work with the Blackboard team to configure Blackboard to authenticate using the myUMB ID and password
 - Perform analysis **Completed in Test Environment**
 - Bring up Shibboleth services **Completed in Test Environment**
 - Configure Blackboard **Completed in Test Environment**

Authentication to Blackboard using the myUMBid is scheduled to go live July 28.

- Work with the Student Email team to analyze & configure student email system to authenticate using the myUMB ID and password
 - Undertake research and explore options **Completed**
 - Begin technology review process, implementation planning **Completed**
 - Implement and launch **Completed**

- **New Project!: Self-Service E-Mail. Students will be able to provision (e.g. pick and set up) their own e-mail accounts. Implementation will occur over the Fall 2009 semester.**

- Creation/Launch of ID Management Web site **Completed**
- Active Directory-Directory Services Linkage information passing **Planned**
- Work with entities not in the campus Enterprise Forest. **Planned**
- “Day Zero” account creation & access to UMB systems. **Planned**

Disaster Recovery

Goal: Ensure that the campus is able to continue critical operations during a crisis which affects the equipment normally used to support those operations.

Action Items and Status:

- Off-site tape storage will be done twice-*weekly* at the Iron Mountain Corporation secured facility. **Completed**
 - Test the restoration of the backup media from off-site storage **Completed**
- Online systems backup and data storage will be created outside of the HS/HSL. A redundant failover campus location, as well as an off-campus site for equipment and online back-ups of critical systems and data will be pursued. **Redundant hardware, purchased to avoid risk, includes COEUS web server for emergency use at Howard Hall; myUMB Mail server and Mediasite server and storage placed at the Dental School.**
- Install a second network switch for redundancy at the core location in Howard Hall **Completed**

• **Two Cisco ASR’s (Aggregation Services Routers) have been purchased to provide us with a backup connection to the MAX (Mid-Atlantic Crossroads Network) in the event we lose our connection to UMATS (University of Maryland Academic Telecommunications System). They will also be used to route specific traffic destined for the NLR (National Lambda Rail Network). We are configuring new switches that just arrived. IP addressing and connecting to UMATS will be completed soon. When that work is complete we will work with MAX to finalize this connection.**

- Investigate with Facilities Management and propose a solution for a redundant network core in a second campus location **Location identified, negotiations In Progress**
- Implement a redundant network core in a second campus location **Planned**

- Continue to promote the use of the UMB text messaging solution for emergency communications and disaster management.

The Campus has purchased a new service (e2Campus) that is replacing the current system. The project is underway to implement this new system.

- D/R Maintenance and Training
 - Create procedures for testing D/R Plan to address D/R Plan scenarios
 - Loss of Backup Storage **Completed**
 - Loss of Voice Services
 - Document the testing of temporarily rerouting voice and data services from any campus building, based on the SSW implementation. **Completed**
- Backup Computer Facilities:
 - Test the restoration of a Campus Active Directory schema via VMWare in a lab environment. **Completed**
 - Relocate development hardware for critical application to a remote site (e.g. Howard Hall) **Completed**
 - Create stand-by databases for critical applications.

Blackboard, QuestionMark, COEUS, SIMS, and Content Management System: Completed. Other applications are being evaluated for the implementation of additional redundant hardware/database.

- Loss of Campus Active Directory Forest **Completed**
- Test technology and procedures in the disaster recovery plan **Completed and In Progress**
- Documentation on D/R testing and any new procedures **Completed and In Progress**

Technology Security

Goal: Address requirements and vulnerabilities with appropriate technologies and create greater awareness of the impact and importance of IT security.

Action Items and Status:

- Implement new hardware & software to strengthen the current infrastructure for anti-spam, anti-virus, and message delivery prior to the implementation and migration to a new architecture and new

technologies for anti-spam, anti-virus, and message delivery.

Completed

- Implement a campus web-based VPN server and solution.

CITS staff is testing the new WebVPN service. Personnel in schools and departments will be pilot testers before rollout to the entire campus. A launch date to the entire campus will be announced soon.

- Reconfigure central services into protected VLAN's and DMZ's
Completed
- Enhance wireless security. **Ongoing.**
- Extend quarterly scans to include schools/departments
Planned (Summer 2009)

Service Delivery

Goal: Provide a highly effective delivery of service and support system which focuses on the needs and requests of students, faculty, staff, and administrators; apply and adapt technology to improve the quality of this delivery.

Action Items and Status:

- Expand Help Desk service hours to 24 hours a day and 7 days a week. **Completed but; due to low call volume and the service was not being delivered as expected, it was not prudent nor cost effective to continue with this approach. CITS has implemented additional measures this year to strengthen systems availability which has been a contributing factor in the low after-hours call volume. We have also implemented automated notification systems to alert appropriate support staff in the event of a critical systems problem. CITS is staffing the HELP Desk on Saturdays and Sundays from 8:00 a.m. until 5:00 p.m. to assist users via phone and email. CITS will also be staffing a limited second shift to support critical systems (Monday to Friday 5:00 p.m. to 10:30 p.m.). Users can report problems by leaving a voice mail message at 410-706-HELP or sending an email to help@umaryland.edu. Support staff will check the voice mail messages and notify appropriate staff members. They will also follow-up with the caller to confirm that the message was received and recorded.**
- Provide regular communications (CITS Bits, email, text alerts)
Completed and Ongoing
- Upgrade the T-Metrics Help Desk call management software
Completed

- Replace the T-Metrics hardware with a more powerful server
Completed
- Implement a “knowledgebase” to replace Frequently Asked Questions (FAQs) **Planned**
- Streamline the process for providing email and Blackboard IDs for new students

The move to account provisioning from the Enterprise Directory is currently in process as part of the tasks in taking UMnet out of service. This activity is a prerequisite for the move to LDAP authentication using the myUMBid for Blackboard that will occur on July 28, 2009.

- Investigate new help desk software as a replacement for Remedy
Planned
- Further structure/develop the software licensing office to provide greater volume purchasing power for the campus commonly used software products. **Ongoing**
- Continue to coordinate and offer training in the use of enterprise systems. **In Progress**
 - Create a model for campus wide training in all essential enterprise systems.
 - Develop an online infrastructure to support and deliver the training.

Technology for Teaching and Learning

Goal: Support faculty in their use of on-line and classroom technologies and their initiatives to enhance instruction and learning with technology.

Action Items and Status:

- Leverage the enterprise directory so that students and faculty have a single login to multiple applications. **Completed and In Progress.**

SIMS and myUMB mail are completed and in production; and, Blackboard will be completed on July 28, 2009.

- Develop a structured online faculty development environment that would include available resources and services for faculty. **In Progress**
 - Consult with colleagues at other institutions that have created online faculty development environments.
 - Identify a list of relevant UMB and school specific resources and services.
 - Design a template for this environment.

- Complete and distribute this online faculty development environment to faculty.
- Develop a standard training program that could be used by either the enterprise training group or individual schools. Regardless of the platform, it would allow the schools to share both training content and user data. The program would do the following:
 - Deliver text, image, Flash, etc. training. **Completed**
 - Develop campus-wide multimedia training, including the use of audio/video technologies. **Completed**
 - Create training and support program for faculty in using Blackboard, QuestionMark, and other eLearning software. **Completed**
- Installation and configuration of new Blackboard architecture **Completed**
- Install and configure Oracle for the new Blackboard development and production database servers. **Completed**
- Create an AV support team that would include support for Mediasite, Crestron, and other products used in classrooms. **In Progress.**
Individuals have been identified and are communicating and working together as needed.
 - Leverage school and department Audio Visual needs and create a campus-wide AV team. The AV team would discuss needs, acquire and share knowledge, and coordinate the purchase, implementation, and support of AV technologies across the schools.
 - Creation of a support structure for basic or common end-user issues while using Mediasite for lecture viewing.
 - Creation of a group devoted to the continued support of the campus enterprise Mediasite installation directing use, advising on maintenance/support, sharing best practices, and providing advisement for other MediaSite related administrative issues.
 - Leverage the support offered by Crestron Corp. to acquire additional knowledge and enhance the software and hardware capabilities of the Crestron device.
- Reduce the number of Blackboard accounts to one per person.

In Progress; this will be part of the cutover to use of the myUMBid for Blackboard authentication on July 28, 2009.

- Continue efforts to introduce iTunes U in the schools, HS/HSL and departments. **Completed.**

Campus site has been built. Schools and departments have taken ownership of their sites. Public content is being posted and the site is available to the public. The site received over 2300 visits in the first week of July, 2009.

- Coordinate and facilitate the development of a “program guide” for initiating distance-learning programs. **Planned**
- Develop an understanding of the “Domain Security” model provided as a part of the Blackboard Community System. Articulate guidelines for the use of this functionality by schools and departments on campus. **Completed**
- Develop the Blackboard Branding model to allow each school the ability to tailor it to their student body.

This is occurring over the summer of 2009. Law, Nursing, and Social Work have been completed.

- Implement Guest Access in Blackboard to allow enrollment of faculty in order to facilitate curriculum development and review. **Planned**
- Continue planning of Symposium with continued support and representation from the Education Technology Committee (ETC). **Completed**
- Continue to use contemporary technologies to support the delivery of content to remote locations. **Completed and Ongoing.**

New Services: Campus sites have been created on YouTube, FaceBook, and Twitter.

New Service: An enterprise-wide agreement and licenses have just been acquired from Cisco for the use of WebEx. UMB schools and departments now have access to WebEx licenses for holding online meetings and conferences, enhancing eLearning, and sharing voice, video, data, and text securely via a Cisco network.

- Continue to introduce and coordinate technological innovations that may have application across all schools. **Completed and ongoing**

IT Architecture for Interconnected Wireless Computing

Goal: Build a wireless environment that provides Internet access as well as a secure, universal authentication solution for gaining access to school, and department sub-networks.

Action Items and Status:

- Enhance wireless security while expanding campus wireless infrastructure **Completed, In Progress, and Planned**
 - Implement a wireless environment such that a user will be able to authenticate to the wireless network as faculty/staff, student, or guest. Once that authentication is complete, users will be

able to move to other areas of the campus and use a common ID for authenticating and using a wireless network. **In Progress.**

- The campus wireless will be activated in the Schools of Social Work, Law, Pharmacy, Dental, Nursing, A&F in the Saratoga Garage, the new Administration building, new Campus Center and in the HS/HSL. Additional departments and schools will be brought online as opportunities develop.

Completed for Law, Dental, Social Work, Lexington (Administration) Building, and HS/HSL. The Pharmacy project is currently underway. The Campus Center project will be next and then the Nursing School will be addressed. Other buildings and areas of campus will be brought online after Pharmacy, Campus Center and Nursing are completed.

- Authentication will be in conjunction with the campus enterprise directory. Currently there are four wireless VLANs (UMB Faculty/Staff, UMB Student, UMB Secure, and Guest). Based on the credentials of an individual at authentication, users will be routed to the appropriate network, i.e., the faculty/staff, student, or guest VLAN. New SSID's took effect the end of May 2009.

Web Development, Environments

Goal: Enhance the web presence for the schools and the University as a whole by building dynamic and interactive environments for sharing and collecting information.

Action Items and Status:

- Diet/Nutrition Study Application **Completed**
- Expand infrastructure and complete CMS hardware/software separation. **Completed.**
- Work with System Alliance to ensure the stability and reliability of the SiteExecutive content management system. **Completed**
- Complete Comprehensive Campus Calendar **Completed**
- Train school/department representatives in the use of this master calendar. **Completed**
- ORD Technology Application (Phase 2) **Completed**
- WAP online directory lookup **Completed**
- Nursing Global Health Website. **Completed**
- HR "Careers in Baltimore Healthcare" website. **Completed**

- **School of Social Work, Electronic Field Placement Application. Completed and ongoing**
- **Significant enhancements to Poison Center Application. Completed.**
- **Develop and implement a campus online directory phone number lookup capability on the new VOIP phones. Completed.**
- **Analyze and investigate options to upgrade/replace current Helix web media delivery capabilities. Completed.**
- **Work with OEA to redesign the campus web page(s).**
- **Work with SOD to redesign the school's web page(s).**
- **Develop new room scheduling application for Campus Center. Complete.**
- **Develop new Financial Aid website. Completed.**
- **Design and develop Dental School's student e-portfolio. Completed.**
- **Enable CMS with the capability to use myUMBid to authenticate. Fall 2009.**