

UC DAVIS REPORT TO THE INFORMATION TECHNOLOGY LEADERSHIP COUNCIL

February 15-16, 2005

I. CAMPUSWIDE TECHNOLOGY HIGHLIGHTS

UC Davis Enters Second Annual IT Planning Phase. Summer 2004 marked the launch of the second annual IT planning process, this time targeting FY 2005-07. Between July and November 2004, IET consulted with each of the vice chancellors, vice provosts, and deans to collect feedback on the campuswide IT projects identified last year, and to determine whether new administrative and academic information technology needs had surfaced. A draft Information Technology Plan for FY 2005-07 is expected in February 2005. Included here are updates on two of these campuswide IT projects (see <http://itstrategicplan.ucdavis.edu> for a complete list):

Faculty Merit and Promotion Project. This project proposes to create faculty digital portfolios that can be used in support of the academic merit and promotion processes, as well as other processes. The implementation work group has been formed and is launching a pilot over the next six months with the College of Agricultural and Environmental Sciences (CAES) and the Division of Biological Sciences (DBS). Funding to cover one-time costs has been allocated by the provost, and ongoing funding is still being discussed. The application, known as MyInfoVault, was developed by the UC Davis School of Medicine. The goal of the project is to determine the feasibility of a wider campus implementation. A demo of MyInfoVault is available at <http://media.ucdavis.edu:8080/ramgen/IET/MyInfoVault.rm>.

Electronic Research Administration System. This system will enable electronic submission, review, approval, and tracking of research grant proposals. The project proposal was reviewed and funding to cover one-time costs has been allocated (ongoing funding is still being discussed). Contract negotiations with the vendor will be in progress through January 2005. The system is to be implemented by module over the next three years: Project Tracking (2005), Project Proposal (2006-07), and Project Management (2006-07).

Improving Campus Email Architecture. Recognizing that the campus email system is one of the most widely used applications at UC Davis, IET is preparing an RFI regarding solutions for improvement to the campus email architecture. This effort will be a campus strategic project. It is critical that the email system be designed for maximum performance, content integrity, high availability, and security. Included in this review is the method by which email messages are scanned for virus infections and spam content. IET also plans to seek assistance from an external consultant for strategic guidance and input into the review process.

Electronic Grade Submission Efforts. IET worked extensively with the campus during Fall 2004 to ensure the successful implementation of electronic grade submission. As a result, the Registrar's office provided grades to students and staff more quickly than in past years, and most found the system friendly and easy to use. In response to the campus mandate for the electronic submission of all grades for Fall 2004, a much larger database server for Course Management was obtained, and the Web server farm for Course Management was enhanced to ensure greater response time. Web servers for the MyUCDavis portal were also upgraded to the newest version of Cold Fusion, which has proven to be far more stable than previous releases. IET worked with the Teaching Resources Center and the Office of the Registrar to test and roll out enhancements to the Online Grading application, as well as prepare communications explaining the grade submission process. The resulting two-week grading period in December 2004 proved worth the upfront planning and work efforts, as there were no reported significant problems from instructors or programmers, and the network adequately handled the timely submission of all grades. IET groups will continue to work with campus departments and instructors to make improvements to the submission process.

II. MIDDLEWARE INITIATIVES & SERVICES

Distauth Log-in/Log-out Form Rollout. The Distauth Log-in/Log-out Form rolled out on schedule in September 2004, and several departmental offices are currently using the form and are reporting good results. This Web application allows end users to authenticate to secured sites without storing user name information in the Web browser. The form-based log-in application also completes an effective log-out from the secured site, not possible earlier with Web browser authentication. In Winter 2005, IET will roll out the form-based login application for the MyUCDavis portal and the Geckomail Web-based email service.

Development of Authority Management System. IET is working with Stanford University developers through the Internet2 Consortium to construct a UC Davis version of Signet. Signet is an open source authority management system used for creating and managing institutional privileges. Signet will store and maintain the actual assigned institutional privileges of UC Davis people, their department information, and specified conditions of their authority. IET will continue working on Signet, with a possible pilot implementation by Summer 2005.

Functional Specs for Organizational Database. The IET Middleware team has completed the functional specifications for the Organizational Database, which will provide a department-based hierarchical repository for the campus for a variety of systems, from a variety of sources. Clients for this data include InfoEd (a newly purchased system in early stages of implementation), the Faculty Directory Web application (a Middleware product currently in test mode), and Signet, the authority management system. Middleware expects to complete Phase I of the Organizational Database to support InfoEd, Signet and the Faculty Directory during Winter 2005.

Password Reset Process Now Part of MyAdmissions. The Password Reset process, first implemented in Summer 2004, has been added to the MyAdmissions and MyGradAdmissions sites and has proven popular with new applicants. The Password Reset Web application allows end users to create challenge questions--common throughout the Internet for resetting forgotten passwords--when setting up new accounts or changing existing passwords. More than 90% of undergraduate applicants setting up MyAdmissions accounts for Fall 2005 admittance have set up challenge questions. Another benefit to password reset is the reduction in telephone calls to the IT Express Computing Help Desk, particularly from applicants who cannot remember their passwords. Last year, IT Express received almost 3000 contacts from applicants who had forgotten passwords. It is hoped that, in the future, a decrease will be seen in IT Express' involvement in manual password reset.

III. COMPUTER & NETWORK SECURITY

Security Symposium in June 2005. Planning is underway for the 2005 Information Technology Security Symposium, to be held on campus June 22-24. This event, the second of its kind at UC Davis, will provide system administrators, technical professionals and administrative managers with practical information for enhancing computer and network security levels within a university environment. The two-and-half-day schedule includes relevant hands-on instruction, technical security discussions and several networking opportunities. The registration fee will be \$100. Scott Charney, Microsoft Chief Security Strategist, has been confirmed as the keynote speaker for this event, and several vendors have been confirmed as sponsors. The call for presentation proposals went out on January 17, 2005, and presenters are expected to be confirmed by mid-March 2005. Registration will open in April. Additional information about the 2005 IT Security Symposium is available at <http://itsecuritysymposium.ucdavis.edu>.

Expanded Vulnerability Scanning. In September 2004, IET expanded the campus' vulnerability scanning service, which was first implemented in Fall 2003. The expanded scanning service allows the campus to detect multiple vulnerabilities and infections on the campus network, and provides an improved searchable database to help system administrators identify and isolate vulnerable or infected systems. Still included is a vulnerability self test that allows individuals to scan their systems for critical vulnerabilities or infections that may prevent them from accessing the campus network. In the second phase of this multi-phased project, a honeypot and intrusion detection system (IDS) will be integrated into the expanded system and begin reporting results to the searchable database. Email notifications will also go out daily to the system administrators assigned to one or more vulnerable or infected systems. This phase is expected to be completed in February 2005. For more information, see http://security.ucdavis.edu/vuln_resources.cfm.

Central Firewall Services Project Pilot Complete. A committee comprised of IET staff and campus technical staff has evaluated a number of firewall products and selected NetScreen as a potential firewall provider for the campus. Testing of NetScreen (for the intermediate distribution frame, or IDF, level) was completed in November 2004, with tests indicating the product met established performance specifications. The firewall committee is reviewing findings from these tests and is expected to release a report in late March 2005 recommending the NetScreen product to the campus. It is expected that IET will offer the following four NetScreen firewall service level options: complete turnkey service managed by IET; department-owned and operated service; sparing service; and custom installation service. The next phase of the project, which began in January 2005, involves a comprehensive confidence test of the firewalls in the campus network. After a successful confidence test, deployment in the campus network will proceed. Additional information about this project is available at <http://security.ucdavis.edu/firewalls.cfm>.

IV. TELECOMMUNICATIONS & NETWORKING HIGHLIGHTS

Campus- and Wide-Area Networking. UC Davis is preparing to implement a second border router that will separate HP and DC traffic from ISP traffic. This will further improve reliability and stability, will simplify routing and traffic management, and will set the stage for increasing the HPR link connection speed to 10 gigabits per second. The timing of the increase will be determined in coordination with CENIC's backbone planning group.

Wireless Network Upgrades Underway. IET continues to partner with campus departments to expand secure access to campus wireless computing. IET is currently upgrading to a more robust gateway from Bluesocket and a wireless management system from AirWave. With the installation of the Bluesocket gateway, UC Davis will be able to direct users automatically to the authentication Web page, and will gain the ability to set up a workable guest access service for campus visitors and departmental guests. The Airwave management system will allow IET to better manage campus wireless network users, and will greatly improve the ease of compiling valuable usage statistics. The Bluesocket gateway and Airwave system will be made operational in early Winter 2005.

Telecommunications Master Plan Development. IET is working with Western Telecommunications Consulting (WTC) to develop a Campus Telecommunications Master Plan. An important phase of the plan is a survey of the 1,500+ campus telecommunications rooms (TR), 60% of which was complete in early January 2005. The purpose of the survey (begun in October 2004) is to identify current conditions and determine future requirements for the campus cable plants. Survey information will be used to prepare the recommendations for the final Telecommunications Master Plan, scheduled for completion in Summer 2005.

V. EDUCATIONAL TECHNOLOGY HIGHLIGHTS

Successful Breeze Software Pilots. During Fall 2004, a pilot project using Macromedia Breeze software for an introductory Biology course produced very positive results. Breeze supports real-time audio/video chat, a shared whiteboard, screen sharing and embedded Flash or streamed PowerPoint, all as part of the same online session. There are plans in the Division of Biological Sciences to pursue additional use of the online office hours environment, and during Winter 2005, Mediaworks will test a new tool, called Captivate, that can add pre-recorded computer demonstrations to the application.

Using Breeze, IET also completed phase one of an instructional pilot program for the School of Medicine. The pilot consisted of converting PowerPoint slides, which are enhanced with animations and audio, into the Breeze format, where they can be delivered as streamed media online, and students can view them from a Web browser (i.e., they no longer have to own a copy of PowerPoint). The use of this software also allows the instructor to deliver materials without enabling simple downloading or copying of potentially copyrighted or copyrightable materials.

New 41-Seat Computer Classroom. A new 41-seat computer classroom was opened in January 2005. Located in room 2020 of the new Sciences Laboratory Building, the computer classroom was made possible through a joint proposal from the Division of Biological Sciences (DBS) and IET. Microsoft and Dell Computer Corp. provided 36 computers for the facility. Under the agreement, IET will manage the computer classroom, and DBS classes will have priority scheduling. When not reserved for class, the room will be open for use by the campus community.

Extensive Media Construction, Installation Support for New Sciences Building. IET recently provided a wide range of media construction and installation support for the newly-opened Sciences Lab Building and Sciences Lecture Hall. For the 519-seat Sciences Lecture Hall, IET handled all equipment and cabling design, ordering and installation, including the first campus-classroom-installed High Definition data projector. The installation of other audio-video media in the Sciences Laboratory Building will continue through Winter 2005. Various configurations of A-V media systems are being installed in a total of 38 labs, meeting areas and two computer labs.

New Overhead Media Equipment. Six new document cameras were approved and funded by the Registrar during Fall 2004 and installed by IET. These document cameras are ideal for large lecture halls that require larger and better quality images than those that traditionally come from overhead transparency projectors. Additionally, these document cameras allow for viewing objects and hard copies of materials. The camera units connect to the data projector via a VGA cable (similar to laptop computers).

VI. ADMINISTRATIVE COMPUTING HIGHLIGHTS

Web-Based Student Information System Decision Support. A new Web-based reporting system, Student Information System Decision Support (SIS DS), was rolled into production in January 2005. Initial reports from this system give staff and faculty access to student Instructional Activity statistics. Development of this system was a joint effort between IET and the Office of Resource Management and Planning. Future development of additional student data-related reporting components will be joint development projects between the functional offices and IET.

New Banner Log-In Software. In December 2004, new Banner log-in software was implemented to prepare for an upcoming Kerberos upgrade. As a result, the new log-in procedures were streamlined by combining the log-in ID and password prompts within one dialogue pop-up box.

Banner 7 Planning Complete. The Banner 7 planning work group recently completed research on the major tasks involved in upgrading to Banner 7, due for release in Winter 2005. The workgroup gathered input from the administrative Banner users to analyze the requirements, dependencies, and effort required for implementing this major release. The workgroup also prepared a planning guide that offers suggestions and recommendations for implementation. The report is currently being reviewed by the Banner Oversight Committee.