

# UC DAVIS REPORT TO INFORMATION TECHNOLOGY LEADERSHIP COUNCIL

MAY 9-10, 2006

**Core Data Survey Results.** UC Davis recently completed an analysis of the IT data submitted for Educause's 2004 Core Data Service Survey. The review of this data for a select group of peer institutions confirmed that UC Davis is a late technology adopter and is, in comparison, under-funded and under-staffed in the technology areas. A follow-up analysis was undertaken to see how five of the UC campuses that participated in the survey (UC Berkeley, UC Davis, UC Irvine, UC San Diego, and UC Santa Cruz) compared with each other. This information was also supplemented with data Huron collected on IT expenditures. While there are inherent inconsistencies in any type of institutional survey like this, there are recognizable trends.

- Examining data from the Educause survey for the five UC campuses:
  - UC Davis falls second to UC Berkeley in staffing and funding. This is true whether examining overall figures or by normalizing the data by student count. Two factors are important to point out about this: (1) despite being second, the gap is rather large; (2) UC Berkeley is near the middle of the set of comparison institutions we examined as part of the larger Educause survey.
  - This basically implies that, with the exception of UC Berkeley, the UC institutions that reported data to Educause are on the lower end of the scale for staffing and budgeting.
- Combining Huron data with Educause data provides a better picture of overall IT expenditures and IT expenditures per student.
  - Positions UC Davis in third place behind UC San Diego and UC Berkeley. If UCLA data were available, UC Davis would fall into fourth position.
  - The position is less important than the size of the funding gap and less important still than what would appear to be a systemic problem across the UC system: UC is not funded to be a technology leader and is, in fact, behind the technology curve. This issue is exacerbated by the loss of economy of scale associated with the independent development of technology on each of the campuses.
  - The combination of the funding and scaling issues could be a significant detriment as technology continues to gravitate more to the core of the teaching and research missions of the institutions.

IET has initiated discussions of the IT funding problem as it relates to UC Davis with the campus planning and budget office. Given that it is highly unlikely that we can close the significant funding gaps between UC institutions and other public and private R1 institution leaders across the United States, UC will likely need to adopt another strategy to be technologically competitive. Rather than duplicating systems on each campus, we will need to leverage the collective whole. The Calren2 approach may very well be the model we need to explore in order to do this, which further underscores the value of the UC-wide ITLC and the IT Guidance Committee's deliberations.

**Avian Flu Pandemic Planning.** UC Davis is hard at work on a plan to keep the university up and running in the event of an avian influenza pandemic. The UC Davis Business Continuity Plan for Avian Influenza is being developed with contributions from each of the deans and vice chancellors, all of whom have been asked to appoint a workgroup and submit their individual emergency plans by July 1. A planning guide has been developed that includes a template and questionnaire that each workgroup must fill out, and several two-hour workshops are scheduled to help workgroups along. The campus's Pandemic Management Team and Emergency Management Advisory Council will then have until Sept. 1 to integrate the information into a single plan, looking for common issues and preparing solutions for the entire campus. As part of these planning efforts, IET is preparing a plan outlining the campus network's and data center's ability to support a large number of connections from employees and students working from home. See [www.news.ucdavis.edu/special\\_reports/avian\\_flu](http://www.news.ucdavis.edu/special_reports/avian_flu).

**Sakai Implementation.** Working with the Schools of Medicine and Veterinary Medicine, IET is coordinating a campus initiative to implement Sakai. In preparation for the first campus offering this Fall, twelve faculty members experimented with the new course management and collaboration tools in winter and spring. The pilot group met weekly to discuss pedagogy and practical applications of the tools, and to offer suggestions for improvements. IET has extended its pilot to summer and plans to welcome several new faculty members over the next few months. To help gauge support that will be needed in the fall, IET will be assisting the School of Medicine by hosting two classes from their Family Nurse Practitioner/Physician Assistant Program. In addition, UC Davis is working closely with UC Berkeley and Stanford, providing programming support for enhancements to the gradebook and tests/quizzes modules (expected by Winter 2007).

## **Multi-Phase, Multi-Component Email Improvement Plan**

**Email Architecture.** IET released an RFP for a commercial email anti-spam/anti-virus and SMTP routing solution. Proofpoint was selected from among eight proposals as the finalist to undertake a confidence test at the Campus Data Center. Testing indicated that ProofPoint filtered 3% less spam than what is currently in place. Consequently, given the significant pricing differential with other products, the decision was made to cancel the RFP. Efforts will still be required to find an anti-virus solution by the end of June. Trend has announced a new anti-virus product, and opportunities to extend the existing Trend agreement are being pursued while clamAV is being evaluated as a possible alternative. The next phase of the e-mail upgrade plan is to evaluate a SUN solution for backend mail storage and web based e-mail. Office of the President currently has a contract with SUN and, pending a successful evaluation of SUN's Java Communication Suites, this would allow a solution to be in place by Fall Quarter. The campus is also discussing the potential of offering Microsoft's MSN LiveMail service to students in Fall 2007. The project team completed the technical evaluation of the service but discussions with various student groups need to be undertaken prior to reaching any conclusions.

**Centralized Active Directory and Exchange Services.** IET and Office of Administration collaborated over the past year to develop a centralized campus Exchange Service as an augmentation to the existing campus Active Directory Service. Office of Administration (OOA) is nearing completion of its project to migrate approximately 1,400 staff members to this new service. Once the OOA migration is complete, IET will start converting its 300 staff members to the service, thus enabling shared calendaring and file sharing across divisions. Standardization on methods for group policies, email services, and automated security and system updates are among the other anticipated benefits. The centralized Exchange services (hosted by the Data Center) are now ready for full campus use, at a rate of ~\$8-10/month per user. A number of campus units have already started using the service (e.g., Office of Research, Office of Resource Management and Planning), and several others (e.g., Student Affairs) have expressed interest.

**Transition to Mailman.** IET is preparing to transition from ListProc, the electronic mailing list management software now used on campus but no longer supported by the vendor, to Mailman, in use at many universities. In April, the project team started testing the software, provided training for support staff, and drafted a transition plan and communication plan. The transition is expected this summer.

**Web-based Bulk Email Application.** A project is underway to develop a Web-based application that will facilitate the submission, review, and approval process for bulk email communications, as outlined in campus policy PPM 310-18. Based on the data entered into the system, this new application will determine and then track all necessary components required to accurately distribute a message to its intended recipients. The application is expected this summer.

**ECP Revision.** The UC Davis Electronic Communications Policy has been revised to ensure consistency with the UC-wide ECP, and to make the policy more clear and succinct for campus users. As part of the revision, the workgroup split the existing campus policy into two sections: a) acceptable use and b) privacy and access. The draft policy was vetted with the campus community, and the final version is expected to be officially adopted in early May.

**Microsoft Best Practices Event.** On June 20, UC Davis will host a Microsoft Best Practices for Higher Education event. Registration opened on April 11 and will remain open through June 9. At this free, day-long event, attendees will be provided a range of strategic insights and tactical directions, and they will have the opportunity to interact directly with technology specialists from Microsoft's Education Team. The agenda includes sessions on management technologies, resources for information workers, Microsoft(r) Antigen and Client Protector, ISA Server and an open discussion session with all of the speakers. The keynote will discuss Windows Vista. Starting May 30, space permitting, registration will be extended to colleagues across the UC system. For more information, see [security.ucdavis.edu/training.cfm](http://security.ucdavis.edu/training.cfm).

**High-Performance Scientific Computing.** Information from a fall 2005 IET survey on high-performance scientific computing was provided to the UC Davis Architects and Engineers (A&E) department as supporting documentation to the feasibility study for a Data Center expansion. The feasibility study, which was completed in April, indicates that a \$2.8 million investment would be required of the existing Data Center, but that even this is inadequate to meet the ever-growing campus demand for high-performance computing space. As a result, the Office of Resource Management and Planning, IET, and Architects and Engineers have agreed to develop a feasibility study for a new high-performance computing center near the existing network operations center.

**Campus Data Warehouse.** In March, the UC Davis Institutional Research (IR) Workgroup issued a report offering several recommendations on how to develop the campus Data Warehouse operations and outlining other campus efforts to more effectively develop, coordinate, and provide greater access to campus institutional data. This report was developed at the request of the Institutional Research (IR) Policy Committee. In the report, the workgroup noted that the campus appetite for new institutional data sets continues to grow, which further emphasizes the need for an overall plan for organizing and improving access to institutional data on campus. Among other recommendations, near-term priorities were identified for the Warehouse, including developing a new integrated graduate students database with emphasis on financial support; and providing a specified number of retrieval tools, beyond pre-defined reports, to take the place of Hyperion Analyzer.

**Faculty Merit and Promotion Project.** The Faculty Merit and Promotion Project aims to develop an online system (based on the MyInfoVault application) that will create faculty digital portfolios used in support of academic merit and promotion actions. The pilot project was extended to 2005-06, with two primary goals: test the system with the pilot departments through at least one merit and promotion cycle, and finalize technical and functional enhancements to the application prior to campuswide deployment. Based on the recently-completed capacity planning analysis for future hardware needs, new application servers will be added this spring. Many architectural changes have already been identified; development and implementation of these improvements will also begin this spring. In addition, classes continue to be offered. By late April, several schools and colleges representing 102 departments and 2263 accounts were participating in the pilot ([myinfovault.ucdavis.edu](http://myinfovault.ucdavis.edu)).

**Copyright/File Sharing.** Information provided by the campus' designated agent for Digital Millennium Copyright Act (DMCA) notifications indicates that the number of illegal file sharing notifications at UC Davis for 05-06 shows a trend upwards over previous years. Notifications in 04-05 totaled 132, while 05-06 through the end of April was 172 and 05-06 will surpass the 03-04 total of 181 to be the second highest year since the DMCA was enacted. FY 02-03 notifications numbered 392. For more information, see [www.research.ucdavis.edu/copyright](http://www.research.ucdavis.edu/copyright) or email [dmca@ucdavis.edu](mailto:dmca@ucdavis.edu). Last year, after looking into options for providing legal online entertainment services tailored to the UC community, the Office of the President negotiated a campus license with cDigix, an online music provider. cDigix is now offering UC campuses a free streaming music service option. Representatives from Student Housing and the IT Security Coordinator will meet with cDigix in early May to discuss this latest offer.

### **Computing and Network Security**

**End-Point Security Solution.** UC Davis administers a general purpose computer vulnerability scanning system that was developed in-house. While the system was awarded a Sautter Golden Award last year, with the increasing presence of internal firewall functions, more and more computers are becoming resistant to the server-based vulnerability scanners. Commercial end-point scanning systems are able to interrogate computers much more thoroughly than the UC Davis system. A commercial solution would require an investment of ~ \$310,000 for initial implementation and ~ \$82,000 annually. The current proposal suggests using instructional television fixes services revenue to fund this critical security service.

**Cyber-Safety Auditing Tool.** The new Web-based Vulnerability Scanning Cluster designed by IET to audit systems for compliance with the UC Davis Cyber-Safety Program is expected to be available in May. Using this tool, system administrators who are officially identified as the departments' technical contacts will be able to run scans against systems for which they are responsible and generate reports to help them identify and prioritize vulnerable or potentially vulnerable systems. This auditing tool (which includes the Nessus plug-ins already integrated into the vulnerability scanning and remediation service) provides a centralized, cost-efficient method for campus units to scan their VLANs for security vulnerabilities.

**Cyber-Safety Program Policy.** The campus workgroup tasked in February with enhancing the UC Davis Cyber-Safety Program Policy has issued a series of proposed enhancements, including: clarifying standards language; adding two security standards (relating to campus unit incident response planning and Web application security); and clarifying the format of the annual reports submitted by campus units. The revised policy exhibit is expected to be adopted by June 1. The deadline for campus units to submit their cyber-safety reports this year is July 1. (See [security.ucdavis.edu/cybersafety.cfm](http://security.ucdavis.edu/cybersafety.cfm))

**Encryption for Mobile Devices.** UC Davis is preparing to take advantage of the system-wide contract for mobile device encryption recently signed with Pointsec. This summer, IET will initiate a project to implement the Pointsec encryption solution. This project will provide central support for campus units to deploy Pointsec for laptop computers and PDAs. For more information about the UC-wide contract with PointSec, see <http://www.ucop.edu/purchserv/agree/tas/pointsec.html>.

## **User Access and Support**

**Five-Fold Increase in Call Volume on Admission Day.** On March 15, 34,000 prospective undergraduates received email notifications that admissions decisions had been made, and could be viewed on the UC Davis My Admissions Web site ([myadmissions.ucdavis.edu](http://myadmissions.ucdavis.edu)). Almost 1,000 applicants contacted the campus computing help desk for help resetting their passwords for the site or creating accounts so that they could check their admissions status—a call volume of nearly five times the usual. In order to accommodate the anticipated increase, staff from other IET units were recruited, and the help desk stayed open until 10 p.m. on that day. March 16 was almost as busy, with approximately 600 calls. Staffers estimated that 20-40% of the callers on both days were parents of applicants.

**Troubleshoot Tracking Program.** Two years ago, IET support staff started using BMC Software's Remedy problem ticketing software to generate tickets from phone calls and email messages sent to the computing help desk as well as from messages to other IET customer support functions. As a first step towards the long-term goal to provide a Web-based user interface, in December the MyUCDavis portal team rolled out a new Contact Us application that enables users to report issues or questions about the portal, thereby interacting seamlessly with the Remedy ticketing system without ever leaving the MyUCDavis environment. The project team is now preparing to roll out in May a Web-based reporting mechanism for Banner users.

**MyUCDavis Upgrade.** On March 20, the MyUCDavis portal received 1.9 million hits, roughly 25 percent more than normal. This dramatic increase resulted in a system failure. To prevent similar failures in the future, IET has begun replacing older, slower hardware, including seven application servers and two database servers. The benefits of some of the new implementations are already evident as response times on the site have been reduced by roughly one-third. The upgrade is slated for completion in late May, at which point the system is expected to operate approximately five times faster than it did prior to the upgrade.

**Web-based Temporary Affiliate Form.** IET is developing a new Web-based application for departments to request (and extend) access for guests and visitors to campus network resources. In addition to minimizing time and effort spent processing temporary affiliate approvals, this application will enable sponsors to track the status of their temporary affiliates over time. Development and testing of components—applicant interface, authorized approvers database, and approver database management interface—are underway. Roll-out is expected this summer.

## **Telecommunications and Networking**

**VPN Report.** The workgroup appointed last December to review VPN technology and to suggest how this technology might be applied to serve UC Davis released its findings and recommendations in March. In addition to outlining UC Davis VPN needs, the workgroup studied issues related to VPN technology and identified preliminary costs for adopting both a commercial and an open source solution. The recommendations put forth by the workgroup include issuing an RFI for an SSL VPN solution, solidifying funding support, and starting a pilot with an SSL VPN solution. See [security.ucdavis.edu/vpn.cfm](http://security.ucdavis.edu/vpn.cfm).

**“White Pages” Project.** UC Davis maintains both a print and an online version of the UC Davis and UC Davis Health System directory. Until recently, there was no authoritative data source to house directory data; the various attributes could be found in one or more records systems, but no single system contains all attributes. The manual process to update the print publication, which included reviewing several iterations on paper, was labor-intensive and often resulted in errors. This data was also used to update the online directory. To address these issues and to increase the accuracy of the publications, in January, IET initiated the UC Davis White Pages Project, in collaboration with UCDHS and University Communications representatives. An application is being developed that will centrally manage and function as the system of record for online and printed directory information. This application will be used by departmental contacts to update individual listings starting in early June.

**Cellular In-Building Coverage.** The UC Davis Exterior Projects Committee approved a recommendation from IET to coordinate campus requests for cellular in-building amplification systems. Proper documentation and management of these systems, as well as interference concerns with the 800MHz Public Safety radio system, were the primary reasons behind the decision. IET will begin working with cellular providers to establish policies and procedures for the installation and management of cellular amplification systems in campus buildings.

**Cellular-managed Services.** IET is investigating options for offering an integrated cellular service portal to the campus. This service portal would allow campus affiliates to procure cellular services from multiple vendors through a single company. Although multiple carriers are represented on campus, only Cingular service bills are processed through IET-Communications Resources and included on monthly department

bills. This spring and summer, a business case will be developed that will include the additional value-add services offered to departments and the cost savings to campus.

### **Educational Technology**

**Successful Podcasting Pilot.** This past winter, IET expanded and refined the campus digital lecture recording and distribution pilot program initially launched in Fall 2005. One of the improvements made was the installation of a permanent digital recorder (Marantz PMD570) in the 123 Science Lecture Hall's media cabinet. In addition, the number of users in the pilot grew substantially this winter as IET helped podcast lectures for 13 undergraduate courses. Of the 2,500 students enrolled in these courses, more than 1,900 students uploaded MP3 lectures or subscribed to the course podcasts. For Neurobiology, Physiology, and Behavior courses, 65 percent of enrolled students downloaded and used podcast/MP3 lecture materials. Thanks to podcasting, IET is distributing over 330,000 MB of MP3-streaming content per month, an increase of 280,000 MB per month since last December. See [podcast.ucdavis.edu](http://podcast.ucdavis.edu).

**Student Printing.** IET-Classroom Technology Services is working with Reprographics to investigate the possibility of Reprographics assuming responsibility for student printing in open access computer labs. Currently students print approximately 5.5 million sheets annually. IET has studied and is interested in hearing about successful models for computer lab printing at other UC campuses. The point person at UC Davis is Jan Dickens, Director of IET-Classroom Technology Services ([jdickens@ucdavis.edu](mailto:jdickens@ucdavis.edu)).

**Screen Management Software Pilot.** To improve its computer-based teaching tools in PC classrooms, IET piloted a screen management program, AB Tutor Control, in 2020 Sciences Laboratory Building. AB Tutor Control helps instructors and students collaborate in the computer classroom and enables instructors (or network administrators) to control a number of student workstations in a computer room - or remote location - from one central workstation. This software, which also provides screen locking, remote viewing, and control capabilities, will be installed in all PC computer classrooms this spring and summer.

### **Administrative Computing**

**Electronic Research Administration System.** On March 27, the Office of Research, in collaboration with IET, replaced the existing campus Contracts and Grants database, maintained by the Sponsored Programs Office, with the new Proposal Tracking module. This marked the completion of the first phase of the eRA Project. Sponsored Programs and Deans' Offices for the College of Engineering and the School of Education are now using this Proposal Tracking module, replacing redundant shadow systems, and providing suggestions for small enhancements. In July, the focus will shift towards the second phase -- Proposal Development module-- which will enable proposals to be created, managed, and routed for approval online. Implementation of the final phase -- Project Management module-- is tentatively scheduled for 2008. This module has the unique capability of linking information stored in the eRA system to various campus systems (i.e., DaFIS, Faculty Merit & Promotion system, Cost Sharing and Effort Reporting systems).

**Banner 7 Upgrade.** In preparation for the Banner 7 upgrade on September 2-4, a number of presentations, communications, and training sessions have been developed. In March, users from core offices—Registrar's Office, Financial Aid, Undergraduate Admissions, and Graduate Studies—underwent Banner 7 training, and training for all Banner users will be available in late August and early September. (See [sis.ucdavis.edu/future.htm](http://sis.ucdavis.edu/future.htm).) In addition to working on the upgrade, the Banner team has continued to improve Banner 6 with addition of Fund Code tracking and TOEFL exam coding for the Office of Graduate Studies and Minimum Progress reporting. The large number of local modifications and programming effort each upgrade requires is generating increased interest in a return to a more 'baseline' approach for future upgrades. In the next few months, this 'baseline' approach will be discussed and defined in consultation with the SIS Oversight Committee.

**And.... The Silver Telly Award Goes to....** Eight members of IET-Mediaworks' video team were honored with a Silver Telly Award for their video production work on the March 13, 2005 Mahler Symphony No. 2 in C Minor preformed by the UC Davis Symphony Orchestra. Telly Awards ([www.tellyawards.com/](http://www.tellyawards.com/)) are a national telecommunications award that honors outstanding local, regional, and national television video and film productions. Last year, the Telly Awards received more than 12,000 entries from all 50 states and from 5 continents. The UC Davis Symphony Orchestra program was entered in the 27th annual Telly Awards by the University of California Television Channel (UCTV).