

# UC DAVIS REPORT TO THE INFORMATION TECHNOLOGY LEADERSHIP COUNCIL

## October 2003 – January 2004

### I. MAJOR CAMPUSWIDE TECHNOLOGY HIGHLIGHTS

**IT STRATEGIC PLAN AND PROJECT LIST.** In December, IET shared with the Council of Deans and Vice Chancellors and several other advisory groups a draft UC Davis Information Technology Strategic Plan and Projects for 2003-05. The purpose of this planning effort is twofold: a) provide a strategic planning framework for information technology at UC Davis, and b) develop an inventory of campuswide information technology projects that are already in progress or have been suggested for consideration as the campus sets out to prioritize investments in information technology. The IT Strategic Plan builds on and supports the UC Davis Strategic Plan (see <http://strategicplan.ucdavis.edu>) which was recently finalized and shared with the campus community.

In January, John Bruno distributed a revised List of IT Projects for 2003-05. The document includes preliminary ratings for each of the original fifteen IT projects as well as descriptions for fourteen new projects. All of these projects will be taken into consideration as the campus prioritizes investments in information technology. For more information, see <http://itstrategicplan.ucdavis.edu>.

**CAMPUS COMPUTING COUNCILS REVIEW TWO MAJOR IT PROJECTS.** This Fall, the Academic and Administrative Computing Coordinating Councils have discussed two of the projects featured in the UC Davis List of IT Projects for 2003-05.

- **Faculty and Merit Promotion Project:** Headed by the Office of Academic Personnel, with support from IET. Three main options are under consideration to improve the current, paper-based system: a) InfoVault, the system the School of Medicine is using; b) a document management system capable of supporting workflow functionality; and c) a customized, in-house solution. An oversight committee has been appointed to coordinate the information gathering process and to analyze the extent to which the various approaches under consideration will provide the functionality desired in a Web-based Faculty Merit and Promotion system. The committee is co-chaired by Connie Melendy, Assistant Vice Provost for Academic Personnel, and Dave Shelby, Assistant Vice Provost-IET (see meeting minutes at [http://ac4.ucdavis.edu/combined\\_meetings/10\\_20\\_03/index.cfm#agend3](http://ac4.ucdavis.edu/combined_meetings/10_20_03/index.cfm#agend3)).
- **Electronic Research Administration (ERA) Project:** Headed by the Office of Research, with support from IET. Currently, academic research and grant proposal development, review, approval, submission, and administration is a complex series of processes. One of the goals for a campuswide ERA system would be to enable the creation of an electronic warehouse to support the development, submission, and administration of proposals by faculty and the administration of funded research grants by faculty, staff and administrators (see meeting minutes at [http://ac4.ucdavis.edu/combined\\_meetings/12\\_01\\_03/](http://ac4.ucdavis.edu/combined_meetings/12_01_03/)).

**NBA Assists with New Facilities Ordering System.** On December 8, the Facilities department released its updated Operations & Maintenance Web Work Order System. Developed in collaboration with the New Business Architecture (NBA) project team, the new system is designed to make submitting, tracking the progress of service requests and monitoring charges easier and more secure. In addition to being available from the Facilities Web site (<http://facilities.ucdavis.edu/>), the system is accessible via the campus Web portal, MyUCDavis. The NBA Project Management Office and Change Management Team assisted the Facilities Project Team with project management, user change readiness assessment as well as planning for and development of communications and training prior to the roll-out (see <http://nba.ucdavis.edu/FacilitiesAnn.pdf>).

**Document Management.** In December and January, the offices of the Registrar, Undergraduate Admissions, and Financial Aid will be rolling out the OnBase Document Management system. This first phase of the project includes developing workflow processes for entering and updating financial aid and admissions information. All offices are hoping to eventually scan every piece of paper that comes into the offices.

**MyAdmissions.** IET has been assisting the Office of Undergraduate Admissions with a new project to create an interactive Web site for UC Davis applicants and admitted students. The new Web site, nicknamed "MyAdmissions," provides students with application status information, admission decision information, and an online version of the admissions packet that includes Web-based forms for students to fill out as part of the admission process. A secure authentication mechanism was developed that allows undergraduate applicants to

create UC Davis computing accounts within the central Kerberos system. Starting winter quarter, the campus will be able to provide secure information and status updates to applicants via the Web using these computing accounts. The first phase of the project was completed at the end of November when students were given the ability to view the status of their applications online (see <http://myadmissions.ucdavis.edu/>).

**Image and Media Management Pilot.** This fall IET-Mediaworks explored the desirability of offering an image and media management tool to instructors. An overwhelming need for this kind of resource was uncovered, and one of Mediaworks' projects in particular (AMS21) was found to be well-suited to an application available from Princeton University (Almagest). As a result, Mediaworks will install and test the Almagest system. Two servers (development and production) have been configured to run the software, which is scheduled to go online winter quarter (see <http://mediaworks.ucdavis.edu/>.)

**PPS Decision Support.** In January, PPS Decision Support (DS) replaced the distribution of two monthly payroll reports, giving departments faster access to the reports while saving the Accounting Office production and distribution costs. Both reports had been in production on PPS DS over the summer and fall months giving departments lead time to familiarize themselves with the new distribution. Working with the Accounting Office, the IET team is developing two more monthly payroll reports that are slated to follow this new distribution during winter quarter.

**Two-Day Workshop on Software Development.** On January 29th, Joel Spolsky, software development veteran and author of "User Interface Design for Programmers," will be addressing members of the UC Davis community as part of a two-day visit sponsored by Information and Educational Technology (IET). In addition to the keynote, Spolsky will facilitate small group discussion sessions on topics ranging from the MyUCDavis portal to writing functional specifications, determining when to buy or build a software solution, and defining development strategies. Representatives from IET and various campus partners have been invited to those targeted sessions.

Spolsky has worked for Microsoft and is the founder of Fog Creek, a company that has developed CityDesk, a content management system, and FogBUGZ, a Web-based system for managing software projects. The keynote is open to the general public, and is free of charge (see <http://vpiet.ucdavis.edu/daum.html>).

## II. COMPUTER AND NETWORK SECURITY

**Firewall Guidelines and Procedures.** In October, a campus workgroup completed its Departmental Firewall Guidelines and Procedures document. This document provides a roadmap for campus units to follow when considering the use of a department network firewall and is available via <http://security.ucdavis.edu/>.

**Microsoft Vulnerabilities.** On September 19, IET began a broad campaign to assist students, staff and faculty members in reducing computer vulnerabilities associated with a serious Microsoft operating system flaw. These vulnerabilities and exploits negatively impacted commercial enterprises and academic institutions around the world. The campus program included the distribution of CD-ROMs with corrective operating system patches and virus scanning utilities, use of network infection scanners, integration of vulnerability scanning with Web authentication, indefinite use of Netbios network traffic filters at key network locations, enhanced IT help desk services, increased print and Web communications about the vulnerability and suggested corrective measures, and hands-on security assistance during the fall quarter welcoming of incoming students.

The program significantly reduced the risks of damage to the campus network. On the first day of the program, nearly 500 infected systems and 600 vulnerable systems were identified. By mid-October, only about 100 vulnerable systems and 60 infected systems had been found. Scanning for Welchia-infected computers will continue indefinitely. The campus is now exploring methods to integrate successful vulnerability mitigation measures into the security program (see [http://security.ucdavis.edu/vuln\\_resources.cfm](http://security.ucdavis.edu/vuln_resources.cfm)).

**Vulnerability Scanning.** During fall 2003, the campus deployed several methods to reduce the number of computers with vulnerable Windows RPC services or related worm infections. Among the most successful approaches was an automated vulnerability scan that occurred when users authenticated themselves to secure Web-based applications or resources. In December, a workgroup was formed to assist the campus in defining

specific tasks and related resources to expand the Web authentication (DistAuth) vulnerability scanning mechanism into a more proactive tool. The workgroup's findings and recommendations are expected to be complete by March 31, 2004 (see [http://security.ucdavis.edu/sec\\_projects.cfm](http://security.ucdavis.edu/sec_projects.cfm)).

**File Encryption.** To explore encryption methodologies, in early December 2003 a workgroup was formed to assist the campus in defining the functions and requirements for a file and disk encryption that can support the academic, research and administrative needs on campus. The workgroup's findings and recommendations are expected to be complete by March 31, 2004 (see [http://security.ucdavis.edu/sec\\_projects.cfm](http://security.ucdavis.edu/sec_projects.cfm)).

**CAN-SPAM Act.** Following the passage of the new CAN-SPAM Act, IET developed a number of communications to inform the campus community. These communications include a campus directive, several announcements to technical staff and the campus community, and a special section of the Computer and Network Security Web site called **CAN-SPAM Act** (see [http://security.ucdavis.edu/can\\_spam.cfm](http://security.ucdavis.edu/can_spam.cfm)). The directive states that "campus units have an obligation to ensure electronic mail messages comply with the new law."

**Lunchtime Security Discussions.** As part of the ongoing efforts to educate the campus community about computer and network security, the campus IT Security Coordinator, Bob Ono, has developed a plan for providing lunchtime security discussions. These discussions will focus on key security topics and may include guest speakers with specialized knowledge of security issues. The first of these events was held on Monday, January 26. A Microsoft representative presented and facilitated a discussion about patch management, strategies for reducing security risks, and security best practices (see <http://security.ucdavis.edu/training.cfm>).

### III. TELECOMMUNICATIONS HIGHLIGHTS

**Telecommunications Master Plan RFP.** UC Davis has developed a Request for Proposal (RFP) for a telecommunications master plan. The selected vendor will evaluate deployment and technology models to determine the most cost-effective way to provide infrastructure to support the campus' long-range development plan and the new services that will run over it. Additional analysis must also be conducted to minimize the risk of large stranded investments in telecommunications infrastructure, and to address campus areas that are exposed to potential failures. This analysis will result in a master plan that will guide telecommunications infrastructure capital improvement and replacement cycles over the next ten years, with the recognition that it should be re-evaluated every three years due to the rapid change in external trends and outside influences. The RFP will go out in winter quarter; the contract is expected to be awarded in March 2004.

**Campus- and Wide-area Networking Improvements.** All three of the UC Davis Campus CENIC Wide-area gigabit network connections – Internet Service Provider (ISP), Digital California (DC), and High Performance Research (HPR) – are up and running at full capacity, as designed. The three similar connections scheduled for UCD Medical Center are up and running in an interim mode, pending completion of the CENIC Central Valley Path and the Sacramento Internet Service Point of Presence. During the interim period, ISP service to UCDCMC is sharing the bandwidth of the UCDCMC DC connection, and the UCDCMC HPR connection is not a true diverse path from the Davis HPR connection. The final schedule for these activities has been extended to facilitate a deployment sequencing scheme that will avoid risk of service interruptions while a National Lambda Rail network is being built out.

Metropolitan area fiber connectivity to Cousteau Place, an off-campus office complex that houses campus Architects and Engineers as well as several research programs, is now in production, providing multi-gigabit speeds via diverse fiber paths. Planning is underway to extend this connectivity across Interstate 80 to reach other off-campus concentrations of university activities.

**Cutover of Network 21 & ResNet Replacement Project.** The Network 21 Replacement affected 275 buildings and connections for 14,000 +/- NAMs. The ResNet Replacement occurred in 112 buildings with connections for 5,000 +/- NAMs. The project started on July 1, 2002. The equipment installation start date was delayed until June 2003 because of a change in the model of the electronic equipment. The project cutover to the new equipment was completed September 15, 2003.

Following the cutover to the new equipment in the core area of the campus, the previously-installed older version of the Gigabit equipment in the outlying area of the campus was replaced with the newest version used

in the core area. This required the replacement of 342 edge devices in over two hundred locations and the replacement of the control cards in the ADFs and BDFs. The work was completed November 24, 2003 and allowed for the inter-connection of the links between all ADFs and the Network Operation Center. The final work to establish the out-of-band network management system via terminal server procurement and installation will be completed in winter quarter (see <http://cr.ucdavis.edu/projects.cfm>).

**Data Network Information Migration Project.** Information related to the campus data network is stored in a variety of databases – HP Openview and a variety of homegrown tools. The feasibility of migrating this information to the Pinnacle Telemangement system is underway. The Pinnacle system currently houses only information related to service billing and voice infrastructure. As part of this project, an additional interface will be built to provide a “MyNetwork” Web channel to the campus portal. This will address the campus need for an authenticated single point of entry (Web access) that will provide vital network operations and contact information to campus network and systems administrators.

**Wireless Proposal.** Continuing campus interest in wireless (802.11b) networking has prompted a study of the costs for expanding and improving wireless services in common areas. The completed study provides several recommendations which address coverage, security, privacy, and management issues. The use of “smart” access points using an 802.1x authentication framework with RADIUS, accessing the LDAP directory populated with Kerberos passwords, will improve security and privacy. In addition, a stand-alone multi-vendor access point management system will provide significant improvement in the management of capacity, usage, and hardware of the expanded wireless footprint (see <http://wireless.ucdavis.edu/>).

This report can be accessed on the Web at <http://itlc.ucdavis.edu/>. For more UC Davis technology highlights and to read the IET Report for October 2003-January 2004, see <http://technews.ucdavis.edu/>.