



## **INFORMATION AND EDUCATIONAL TECHNOLOGY REPORT**

May-August 2004

This report is designed to provide UC Davis faculty, staff, and students with brief descriptions and updates on major projects and initiatives in which Information and Educational Technology (IET) has been involved since May 2004. IET's reports to the campus community are published three times each academic year (in September, January, and May), and each report covers a wide range of topics grouped into four major categories. These categories are:

- Campuswide Technology Highlights
- Infrastructure Highlights
- Educational Technology Highlights
- Administrative Computing Highlights

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Feedback on this report is greatly encouraged. Please contact [ietpubs@ucdavis.edu](mailto:ietpubs@ucdavis.edu).



## TABLE OF CONTENTS

<b>CAMPUSWIDE TECHNOLOGY HIGHLIGHTS</b> .....	<b>5</b>
MAJOR CAMPUS IT PROJECTS, PLANNING UNDERWAY.....	5
TECHNOLOGY COUNCILS MERGE, EMPHASIZE COMMUNICATION WITH CAMPUS GROUPS.....	6
<b>INFRASTRUCTURE HIGHLIGHTS</b> .....	<b>7</b>
MIDDLEWARE INITIATIVES AND SERVICES.....	7
• Middleware Team Works Closely with New Technology Infrastructure Subcommittee.....	7
• New Service Allows Online Resetting of Passwords.....	7
• Form-based DistAuth Improves Log-in, Log-out Capabilities.....	7
• Key Projects Drive Development of Central Roles Database.....	8
• UC Davis Faculty Index To Be Available Via The Web.....	8
• Active Directory Service Upgraded to Window 2003 Software.....	8
COMPUTER AND NETWORK SECURITY.....	8
• Automatic Computer Vulnerability Scanning Reduces Risk of Virus Infections.....	8
• Filtering of Unsafe Email Attachments Set for Late August.....	9
• Campus Prepares for Secure Email Authentication.....	9
• Remedy Help Desk Application Pilot Implemented for Incident Response.....	10
• IET Participates in Campus Emergency Operations Center Exercise.....	10
• IET Hosts Computer Security Training, Prepares for Next Symposium.....	10
• Security Initiatives Assist New On-Campus Residents.....	10
• Symantec AntiVirus Available to Students For Free Download.....	10
SOFTWARE AND USER SUPPORT.....	11
• 2004-05 Edition of the UC Davis Internet Tools CD on its Way.....	11
• Campus Recommended Computer Specifications Updated for 2004-05.....	11
TELECOMMUNICATIONS & NETWORKING HIGHLIGHTS.....	11
• MyNetwork Portal to Improve Access to Critical Security Information.....	11
• Campus Central Firewall Services Project Moves to Pilot Test Phase.....	11
• Campus- and Wide-area Networking Improvements Continue.....	11
• Fiber Installation Agreements Provide Connectivity to Off-Campus Locations.....	11
• Wireless Network Expansion Underway.....	12
• FCC Rule Changes Allow for Re-allocation of Educational Frequencies.....	12
VIDEO AND PHOTOGRAPHY SERVICES.....	12
• Video Screens Debut at New Activity and Recreation Center.....	12
• Campus Investigates Webcasting of Special Events.....	12
• Photo & Scanning Services Restructured to Streamline Digitizing Media, Almagest Use.....	12
COMMUNICATION NEWS.....	13
• Summer Advising Communications Provide Computing Info to New Students, Families.....	13
• Posters Highlight Campus Technology Efforts at UC Conference.....	13
• <i>IT Times</i> Summer Edition Features Major Campus Technology Efforts.....	13
• IET Again Uses Unitrans Buses to Share Computing Services With Students.....	13
• Technology News Delivered Directly Into Campus Users' Mailboxes.....	13
• IET Service Guides Updated For 2004-05.....	14
<b>EDUCATIONAL TECHNOLOGY HIGHLIGHTS</b> .....	<b>15</b>
ONLINE COURSES & EDUCATIONAL TOOLS.....	15
• New Support Structure for MyUCDavis Course Management Tools.....	15
• Online College Prep Literature Course to Debut in Fall 2004.....	15
• Pilot Project Explores Breeze Capabilities, Puts Nervous System Online.....	15
FACULTY TRAINING AND PRESENTATIONS.....	16
• ET Partners Extends Support to Department Level.....	16

**COMPUTER LABS & CLASSROOMS** ..... 16

- Recent Efforts Complete Mediation of All General Assignment Classrooms ..... 16
- Mac OSX and Windows XP Installed In All Computer Rooms ..... 16
- Computer Rooms Get 170 New Computers ..... 16
- Large Computational Cluster Pilot to Assist Campus Researchers ..... 16
- Computer Room Print Quota Reduced to 100 Sheets Per Quarter ..... 17
- Computer Seat Capacity Increased to Accommodate Demand ..... 17
- Meyer Media Lab Offers Fee-based Color Printing ..... 17

**ADMINISTRATIVE COMPUTING HIGHLIGHTS** ..... 18

**PAYROLL PERSONNEL SYSTEM (PPS)** ..... 18

- New Employee History Reports Respond to Central Office and Department Needs ..... 18

**BANNER STUDENT INFORMATION SYSTEM** ..... 18

- Completion of Student ID Change Project Highlights Summer Efforts ..... 18
- Workgroup Formed to Research Upgrade to Banner 7 ..... 18
- J-Scholar Application to be Developed for International Scholars & Students Office ..... 19



## CAMPUSWIDE TECHNOLOGY HIGHLIGHTS

*This section focuses on the development and implementation of overarching campus-wide computing and technology initiatives and policies. Some examples of these initiatives and policies include the development of an IT planning framework for the campus as well as major IT projects for the UC Davis campus.*

### Major Campus IT Projects, Planning Underway

Last year represented a milestone for UC Davis with the development of a consultative planning process for identifying, discussing, and prioritizing “IT” projects across the campus. Out of this process, twenty-nine IT projects were ranked and sorted into three categories. One of the lists, labeled “IT Projects Proposed for 2003-05”, features those projects that have been identified by Provost and Executive Vice Chancellor Virginia Hinshaw – after extensive consultation - as the highest priorities for central campus funding. The other two lists feature projects already underway and projects for future consideration. (The three resulting lists of projects are available at <http://itstrategicplan.ucdavis.edu>.)

This summer and fall, John Bruno, Vice Provost for Information and Educational Technology (IET), and Dave Shelby, Assistant Vice Provost and Chief Operating Officer, will visit again with each dean, vice chancellor, and vice provost to review the existing lists and to discuss updates since last year. Part of an annual process, these consultations have proved very helpful in enhancing communications between IET, the campus leadership, and various campus groups.

Among the highest IT priorities for 2003-05 are the following projects:

- **IT Security**  
IET is preparing to implement a number of additional preventive measures designed to protect the campus against increasing attacks on campus systems and to prevent the proliferation of computer viruses. Two of those measures are the filtering of unsafe attachments distributed by email and the expansion of the computer vulnerability detection and virus scanning system in place since last Fall. For more information on these and other IT security measures, see *Infrastructure Highlights*.
- **Electronic Document Management Project**  
This project proposes to explore a coordinated campus strategy to meet various departments’ document management needs. An executive-level oversight committee has been appointed, and the OnBase product has been implemented in Student Affairs’ Enrollment Services unit as well as in the Offices of the Chancellor and Provost. In addition, the Office of Administration has issued a Request for Information (RFI), and the College of Letters and Science has obtained funding for a document management solution.
- **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. An implementation workgroup, reporting to Vice Provosts Bruno and Horwitz, has been formed (Melendy and Shelby, co-chairs). The project was discussed with campus computing advisory groups in 2003-04 (see deliberations and report at <http://ac4.ucdavis.edu>). A pilot project will be launched in September (see demo at <http://media.ucdavis.edu:8080/ramgen/IET/MyInfoVault.rm>).
- **Electronic Research Administration System**  
Once implemented, this system will enable electronic submission, review, approval, and tracking of research grant proposals. An oversight committee has been appointed (Meyer and Bruno, co-chairs) as well as an implementation workgroup (Chronister and Hartline, co-chairs). The project was discussed with campus computing advisory groups in 2003-04 (see deliberations and report at <http://ac4.ucdavis.edu>). A proposal is expected in September.

- **Effort Reporting Project**

UC Davis has entered into a collaborative partnership with the Office of the President and several other UC campuses. The goal is to improve the current, paper-based effort reporting process. At UC Davis, this project is headed by the Office of Administration. Funding has been granted, and the project is underway.

For more information about these and other campus information technology projects and planning activities, see <http://itstrategicplan.ucdavis.edu>.

### **Technology Councils Merge, Emphasize Communication with Campus Groups**

In June, the UC Davis Academic and Administrative Computing Coordinating Councils (AC4/AdC3) were officially merged into a single Campus Council for Information Technology (CCFIT). Under the leadership of Chair Caroline Bledsoe and Vice Chair James Chalfant, both Academic Senate members, the Council provides advice and recommendations to Virginia Hinshaw, Provost and Executive Vice Chancellor, and to John Bruno, Vice Provost for Information and Educational Technology (IET), on educational and information technology and its use at UC Davis in support of instruction, research, administration, and public service. Specifically, the Council assists the Provost and the Vice Provost for IET by:

- Coordinating the discussion and exploration of information technology ideas, issues, and activities with Council members who represent a variety of units and groups at UC Davis.
- Reviewing information and educational technology proposals and plans, and developing recommendations to be shared with all appropriate parties. The Council may also recommend its own proposals and plans.
- Providing a forum for the wider campus community to stay informed about major information and educational technology developments at UC Davis and for the community to identify additional topics for Council consideration and discussion.

Council members represent major segments of the campus community, from students, faculty, and staff, to deans and other campus administrators. This broad representation is expected to assist the Council in making recommendations such that campus resources are deployed to their most strategic advantage. In addition, the new Council has made a high priority frequent and ongoing two-way communication with the campus community. To help meet this goal, all Council members will report back to their constituent groups periodically on topics under Council consideration, and they will submit to the Council feedback on those topics as well as new discussion items, issues and concerns from their constituencies. In addition, every year, Council will produce and publicize an annual report summarizing past discussions and findings and identifying topics for future discussion.

A Web site is under development. It will be accessible from <http://ccfit.ucdavis.edu> in late September.



## INFRASTRUCTURE HIGHLIGHTS

*This section discusses the extensive infrastructure technology services and support that IET provides to the campus. These cover quite a wide range, including: middleware projects; campus network security; software and technology support; telecommunications and wireless networking; video and photography services; and publications and news.*

### Middleware Initiatives and Services

- **Middleware Team Works Closely with New Technology Infrastructure Subcommittee**  
The recently-formed IET Middleware Team continues to identify, develop, and add new elements to the campus' information technology infrastructure. The team is made up of IET programmers, developers, and other middleware specialists who are working with a variety of campus groups to develop solutions for meeting the campus' long- and short-term middleware needs. One such group is the UC Davis Technology Infrastructure Forum (TIF) comprised of technology leads from each college and school, and more specifically its Infrastructure Subcommittee. This subcommittee held its first meeting in July. This was the first in a series of regular meetings between subcommittee members and the IET Middleware Team.

Among the middleware services already available to the campus are an LDAP directory service, distributed authentication service, an extended account service, and an account provisioning service. In addition, a number of projects are underway. A brief description and status update on several of the projects the team is working on are provided below. To find out more about middleware services and to access technical documentation as well as descriptions of projects under development, visit the Middleware Web site at: <http://middleware.ucdavis.edu>.

- **New Service Allows Online Resetting of Passwords**  
A new password reset service was implemented on August 18. With this service, anyone with a UC Davis computing account can now change their Kerberos password or reset a forgotten password via the Web. Account holders must first access the Web-based form with their Kerberos passwords and answer two or more questions from the list. Answers to these questions will be used later to verify their identity when they return to change or reset their passwords. Online Password Reset is now an integral part of the account set-up and password change processes (to access these services, see the UC Davis Computing Accounts Web site at <http://computingaccounts.ucdavis.edu>).

To set up this service, account holders will need to know their Kerberos passwords. Those who have forgotten their passwords prior to setting up this service will need to take a photo ID to the IT Express office in 182 Shields Library (for office hours, see <http://itexpress.ucdavis.edu>). A communications approach is under development. It will aim to educate faculty, students and staff about sound practices for safeguarding and changing their computing passwords. The first phase of communications will be initiated in the coming weeks; a second phase will target students and faculty by the beginning of Fall Quarter.

- **Form-based DistAuth Improves Log-in, Log-out Capabilities**  
With this project, another important layer of security will be added to the process of logging into secure campus Web sites. This project will also make "true" log-outs possible. The goal of the Form-based login application is to provide an effective way to log out of a DistAuth-enabled Web application by avoiding the use of browser-cached passwords that are a side effect of basic http authentication. By avoiding the caching of userID and passwords, the form-based login application will make it possible for authorized applications to completely log out users by invalidating authentication cookies. Technical testing is already underway, and a listserv is available (distauth-dev) for comments, feedback, discussion, etc. regarding this project. Roll-out of this new service is scheduled for Fall Quarter (see <http://middleware.ucdavis.edu>).

- **Key Projects Drive Development of Central Roles Database**

The IET Middleware Team is developing a central, accessible database in which personnel roles as they relate to actual business processes and workflow are specified. A couple of projects are driving the development of this new service. One is the creation of a contact database (part of the MyNetwork Project) that IET-Communications Resources is developing and expects to make available to campus units in December (see *Telecommunications Highlights* below). The second project is the development of a consolidated view of the university's organization. Various campus systems, such as DaFIS, PPS and HR, provide different views of the campus structure (e.g., financial, personnel, academic, voice/data views, etc.). To develop a unified view of the campus organization, a group composed of representatives from IET, Accounting, the Payroll Personnel System (PPS), Academic Affairs, and others has been formed. The third driver for this new service is Provost Hinshaw's request for a current, Web-based, campus-wide listing of faculty members (see *UC Davis Faculty Index to be Available Via the Web* below).

- **UC Davis Faculty Index To Be Available Via The Web**

Last year, Provost Hinshaw asked IET-Communications Resources to include in the campus telephone directory an index of UC Davis faculty by department and rank. This index appeared for the first time in the back of the 2003-04 print edition of the directory and has since proved quite useful to members of the campus community. More recently, the provost requested an online version of this same directory. For the last few weeks, the Middleware Team has been developing a prototype of this new Web-based index. Once completed, the index will make it possible to click on a faculty's name in any campus department or program to bring up the campus directory information for that individual. A link to this index will be added to the search options on the campus Web site (<http://www.ucdavis.edu/search/>).

Before the index can go live, campus departments and programs will be given an opportunity to review their listings and submit revisions and additions, as appropriate, so the index can be as accurate and complete as possible. This is expected to take a couple of months. An update on this project will be provided in the next IET Report.

- **Active Directory Service Upgraded to Window 2003 Software**

Beginning July 1, the Microsoft Active Directory service maintained at the Data Center began operating a production forest using Windows 2003 software. The forest is accessed by campus departments when sharing computer resources and calendars using Microsoft Outlook and Exchange. Current production users have developed a migration plan to move from the Windows 2000 forest to the Windows 2003 forest. The Windows 2000 forest will be discontinued after the migration is complete, which is expected by the start of Fall. Information at <http://windows.ucdavis.edu> is being updated to reflect these changes.

## Computer and Network Security

- **Automatic Computer Vulnerability Scanning Reduces Risk of Virus Infections**

In preparation for the start of the new academic year, IET has been updating and expanding the vulnerability scanning service that was implemented last Fall. With these new measures, computers that connect to the campus network or secure Web-based applications will now be automatically scanned to determine whether they are susceptible to specific computer viruses or vulnerabilities, or whether they have already been infected. Computers found to be infected or vulnerable will be denied access to the network, thereby preventing further dissemination of potentially harmful viruses. Owners of those computers will also be provided information and instructions to correct the vulnerability or infection before they are permitted to access the campus network.

During Fall 2003, similar measures were implemented. Though they were limited to a specific type of virus, they proved highly successful in quickly reducing the number of infected or vulnerable computers connected to the campus network. A UC Davis workgroup examined the system in Spring 2004 and recommended the current vulnerability and infection detection tools be strengthened to include



identifying computers that are susceptible to anticipated and existing attacks. The workgroup also recommended that vulnerability scanning be incorporated as a basic infrastructure element of the campus data network.

The new expanded scanning measures are expected to be implemented in September. Once in place, they will enhance the detection of critical computer viruses and vulnerabilities and reduce the chance of serious disruption to the campus computing network. They will also streamline vulnerability tracking and reporting, and improve the efficiency and timeliness of corrective actions needed by vulnerable or infected systems. The total number of infected systems will be reduced, reducing in turn the campus resources that would otherwise be needed to clean compromised systems. For more information, see <http://security.ucdavis.edu>.

- **Filtering of Unsafe Email Attachments Set for Late August**

On August 30, like several other universities, UC Davis started blocking unsafe file attachments from being transmitted through the campus email system. This preventive measure involves only those types of file extensions that present a known and significant threat of infection. Since most viruses, including Klez, MyDoom, and Bagle, are now being transmitted as attachments through electronic email, blocking the attachments most commonly used by viruses will help protect both individual computers and University systems, research, and data.

The list of file attachment types that the campus has decided to block is derived from Microsoft's list of "unsafe" file types. It includes such extension types as ".exe," ".cmd" and ".pif" (i.e., extensions not commonly used by most campus members). The UC Davis list has been reviewed by various campus groups, including senior campus administrators, technical staff, and faculty representatives, who have expressed their support for this measure. Microsoft in fact already blocks these unsafe extensions in Microsoft Outlook and Outlook Express. In addition, similar restrictions have already been implemented by various UC Davis departments with success and minimal, if any, disruption to legitimate email.

A Web page has been developed that provides detailed information about this measure as well as the list of file extensions that will be blocked and alternatives for transmitting the files (see [http://security.ucdavis.edu/attach\\_restrict.cfm](http://security.ucdavis.edu/attach_restrict.cfm)). To read the campus directive announcing this new preventive measure, see <http://directives.ucdavis.edu/2004/04-084.cfm>.

- **Campus Prepares for Secure Email Authentication**

As part of a campus effort to improve computer and network security, IET plans in November 2004 to turn off the option that allows the transmission of clear text passwords through the campus email system. Over 3 million clear-text passwords are transmitted between on- and off-campus locations and the campus' central email servers every week. Transmission of passwords in clear text presents a very high security risk as there are numerous hardware devices and software programs that can intercept this network traffic. If intercepted, email account passwords could potentially be used to compromise not only email accounts but also other campus assets (many people use the same user ID and password for all of their campus computing accounts).

Before this improvement is made, campus email users will need to ensure that the security settings on the email program(s) they use to access their campus email are configured properly. Improperly configured settings will prevent a computer from sending or receiving email messages using a UC Davis account. Communications began in August 2004, targeting Technology Support Coordinators (TSCs), who will assist faculty and staff in their departments in configuring their computers properly. Fall communications will target specific computing account owners using non-secure connections. Communications include step-by-step instructions for changing the configurations on all campus-supported email programs. More information is available on the Security Web site ([http://security.ucdavis.edu/secure\\_email.cfm](http://security.ucdavis.edu/secure_email.cfm)).

- **Remedy Help Desk Application Pilot Implemented for Incident Response**

In July, IET started using the Remedy Help Desk application for the incident response process. Remedy is an automated system that support staff use to create trouble (or “incident”) tickets. The system tracks progress made on those tickets as well as on the resolution of the original trouble cause. The system can automatically create work tickets from incoming email, a Web page, or an application screen. With this phase of the pilot, email messages to [abuse@ucdavis.edu](mailto:abuse@ucdavis.edu) are automatically converted into Remedy trouble tickets. These tickets are assigned and worked on according to the type of incident, be it spam, virus infections, generation of excessive network traffic, unauthorized network scanning, or other Acceptable Use Policy violations. Work progress on the ticket can be managed and, if needed, escalated for greater attention. IET plans to use this new application in support of other services in the near future. For more on Remedy Help Desk, see [http://www.remedy.com/solutions/servicemgmt/help\\_desk.htm](http://www.remedy.com/solutions/servicemgmt/help_desk.htm).

- **IET Participates in Campus Emergency Operations Center Exercise**

In June, IET staff from Communications Resources, Data Center and Client Services, and the Office of the Vice Provost participated in the campus annual emergency operations exercise. This exercise required activation of the campus Emergency Operations Center (EOC) and support for EOC computers, telecommunications and information security. This event, for the first time, required the establishment and staffing of the campus emergency call center. These events are critical to campus emergency preparedness, as the exercise strengthens the coordination between public safety, planning, finance, and logistics support units. For more on the campus emergency operations plan, see <http://planit.ucdavis.edu>.

- **IET Hosts Computer Security Training, Prepares for Next Symposium**

On May 10<sup>th</sup> and 11<sup>th</sup>, in a continuing effort to provide computer security support to the UC Davis technical community, IET hosted an on-campus no-fee Microsoft training seminar. Topics included client and server security, patch management, application and data security, and security strategies. This event was extremely popular as pre-enrollment quickly exceeded the 125 seats within days of announcing the security session. The material and sessions were well received by campus technical staff. A planning committee has also been formed to prepare for the next Information Technology Security Symposium, to be held on campus in late Spring 2005. This event, similar to the Information Technology Security Symposium UC Davis hosted in 2003, will focus on providing relevant hands-on instruction and technical security discussions for system administrators. A Web page featuring registration, symposium and presenter information is under development. For more information, please contact Bob Ono, IT Security Coordinator, at [raono@ucdavis.edu](mailto:raono@ucdavis.edu).

- **Security Initiatives Assist New On-Campus Residents**

Several computer security initiatives are being planned to assist new campus residents scheduled to arrive on campus in late September. First, all new residents will receive security awareness publications identifying common information security risks and explaining measures they should take to mitigate those risks. When attempting to connect to the residential computing network, students will receive a brief notification if their computers are found to be vulnerable or infected with a virus. Students will also be provided in-residence assistance with the re-activation process. For those computers requiring patches or security updates, on-site consultants will be available to install or apply the latest maintenance releases for operating systems and anti-virus programs. In addition, CDs of the latest service pack for Windows XP (Service Pack 2) will be distributed to those who need it.

- **Symantec AntiVirus Available to Students For Free Download**

For the second year in a row, the latest edition of Symantec AntiVirus software is available for free download to UC Davis students. Both PC and Mac versions of Symantec (formerly Norton) AntiVirus can be downloaded from the Software section of the MyUCDavis portal (<http://my.ucdavis.edu/software>). Symantec AntiVirus is also available to faculty and staff at a significant discount via MyUCDavis. The versions of Symantec AntiVirus available for students on MyUCDavis come with a subscription to the Live Update service that lasts through September 30, 2005. The software will also be included in the 2004-05 edition of the UC Davis Internet Tools CD (see *Software and User Support*).



## Software and User Support

- **2004-05 Edition of the UC Davis Internet Tools CD on its Way**  
The latest edition of the popular UC Davis Internet Tools CD will be available for purchase in September. The CD, now in its eighth year, includes anti-virus, email, telnet, FTP and Internet software, along with a tool that will configure a campus affiliate's computer to access the Internet through the campus network. The CD can be purchased at the UC Davis Bookstore Computer Shop for less than ten dollars. For more information about the Internet Tools CD, see <http://online.ucdavis.edu>.
- **Campus Recommended Computer Specifications Updated for 2004-05**  
In preparation for the upcoming academic year, a group of IET representatives, in consultation with the campus technical community, has updated the campus' recommendations for computer purchases. These specifications, featured on the Computer Ownership Web site (<http://computerownership.ucdavis.edu>), are geared to faculty and staff, as well as students and their families. Other recommended hardware purchases (i.e., printers) are also discussed.

## Telecommunications & Networking Highlights

- **MyNetwork Portal to Improve Access to Critical Security Information**  
A Web portal currently under development will place key information in the hands of critical users, allowing them to more effectively manage the campus network, particularly when addressing potential security issues. This portal, called "MyNetwork," will provide a front end that unifies information residing in many other network management applications, and will provide campus access to network information based upon an enterprise-wide roles directory (part of the campus middleware initiatives). MyNetwork access will be governed by authorization levels related to a staff member's campus role (i.e., NOC personnel, campus network administrators, general population). The MyNetwork portal, when fully developed, will also provide enhancements to Pinnacle functionality on work order flow and resource management. For more information about networking services, see <http://cr.ucdavis.edu>.
- **Campus Central Firewall Services Project Moves to Pilot Test Phase**  
IET and the Firewall Project Team began pilot testing of core network (CDF), building deployment (BDF), and independent (IDF) level firewalls on August 23rd. A thorough feasibility analysis for deploying a campuswide BDF firewall solution has already been completed. It was determined that a full campus-wide BDF deployment would be cost prohibitive; as such, IET will pursue the deployment of a CDF-level firewall solution. For more information about firewalls at UC Davis, including departmental firewall guidelines and procedures, see <http://security.ucdavis.edu/firewalls.cfm>.
- **Campus- and Wide-area Networking Improvements Continue**  
CENIC connections to UC Davis have been stable since their commissioning in January 2004. The connections that provide a redundant path via the UC Davis Medical Center have been stable, and the effort to stabilize the redundant HPR link via UCDMC continues. As part of a project to further enhance emergency preparedness, UCDMC is creating a second point of entry for network connections to the main campus and to CENIC. This partly entails relocation of one of the paths by which wide-area fiber enters the UCDMC campus. Completion is expected mid-fall.
- **Fiber Installation Agreements Provide Connectivity to Off-Campus Locations**  
A three-way agreement between UC Davis, the City of Davis, and Comcast (the local cable TV provider) will provide faster, more reliable connectivity to off-campus locations. The fiber infrastructure is now being installed. Through this new agreement, UC Davis gained use of a segment of City-owned duct and 24 strands of Comcast fiber, the City of Davis gained use of 6 strands of UC Davis fiber, and Comcast gained use of conduit across a corner of the campus. Completion of these fiber paths will allow for the cancellation of an expensive SONET ring.

- **Wireless Network Expansion Underway**

By the beginning of Fall Quarter, Communications Resources (CR) expects to double the number of campus wireless access points on its centralized authentication system to just over 100. IET-CR continues to expand the campus wireless network through departmental partnerships with numerous campus facility managers. Future plans include an upgrade of the wireless network infrastructure to include a new authentication server, new management system, and a more secure login via 802.1x.

- **FCC Rule Changes Allow for Re-allocation of Educational Frequencies**

A campus lease agreement with Sprint Broadband of excess Instructional Technology Fixed Service (ITFS) capacity is expiring this fall, and Communications Resources is exploring other alternatives for use of this spectrum. Instructional Television Fixed Service (ITFS) is an educational service in which licensees make use of the spectrum to provide formal classroom instruction, distance learning, and videoconference capability to a wide variety of users. Recent FCC rule changes allow for the digitization of these frequencies for two-way communication, making them excellent for wide-area data system deployment. Sprint Broadband and other service providers have tested this technology for fixed wireless services to residential customers over the last several years. Sprint continues to be interested in working with UC Davis on a new ITFS contract.

California State University, Sacramento (CSUS) has issued a Request for Proposals (RFP) to use their current ITFS channels to deploy a fee-for-service wide-area wireless data system in the Sacramento area for CSUS faculty, staff and students. UC Davis will closely observe the CSUS deployment, with an eye towards expanding wireless data service to the Davis area.

## Video and Photography Services

- **Video Screens Debut at New Activity and Recreation Center**

Debuting at the popular Doxie Derby races on Picnic Day, "Big Board" video screens are a new feature of the Pavilion at the Activities and Recreation Center that opened in April. The ARC (formerly known as the Rec Hall) hosts many recreational activities for UC Davis students, faculty and staff. The Big Boards, which allow for instant replay and high-end graphics, gathered applause from the Doxie Derby crowd, who loved the slow-motion replays of the little dogs at the finish line. The Mediaworks video group switches between three cameras in order to feed video onto the giant screens. To watch a video of the Doxie Derby, visit [www.vetmed.ucdavis.edu/clubs/class\\_2006/news.html](http://www.vetmed.ucdavis.edu/clubs/class_2006/news.html).

Since then, Mediaworks has recorded other events at the ARC. Recent examples include production and video display support for nine UC Davis commencement graduation ceremonies located at the Pavilion. The Video Group also completed a very successful year of partnering with Intercollegiate Athletics to provide graphic and video display production services for all athletic events in the Pavilion. Mediaworks will maintain a library of these and other videos. For more information, see <http://mediaworks.ucdavis.edu>.

- **Campus Investigates Webcasting of Special Events**

A team made up of representatives from University Communications, Mediaworks, and Communications Resources have developed a proposal to provide live and on-demand Webcasting services for campus events. This project is one of a few IT projects identified as priorities for campus funding for 2003-05 (see <http://itstrategicplan.ucdavis.edu>).

- **Photo & Scanning Services Restructured to Streamline Digitizing Media, Almagest Use**

Digital Photography and Scanning and Video services offered by Mediaworks have been restructured in order to provide more coherent services for faculty wishing to put digital media online. In particular, this should help streamline the overall process of digitizing visual material and serving it online using the Almagest image and media repository (see <http://almagest.ucdavis.edu>).



## Communication News

*IET produces a number of publications and regular news items. All are designed to keep various segments of the campus community informed about services available to them as well as recent or upcoming on-campus technology developments. Recent communication highlights follow.*

- **Summer Advising Communications Provide Computing Info to New Students, Families**  
With summer comes Summer Advising, when incoming freshmen, transfers, and their families are introduced to the campus. To assist them, IET developed a variety of communications. A special Summer Advising section of the Student Computing Guide Web site (<http://scg.ucdavis.edu/summeradvising/>) was developed, and a copy of the Summer Advising edition of the *Hypertext* student newsletter was included in each of the Summer Advising packets. These provided all of the essential computing information for students new to UC Davis, including which computing activities to take care of while at Summer Advising, and which to complete before arriving in the fall.

A downloadable PDF of the latest *Hypertext* is available on the Student Computing Guide Web site (<http://scg.ucdavis.edu/hypertext/>), and students can also pick up a print copy of this newsletter at IT Express (182 Shields Library) and any of the computer rooms. To submit comments or suggestions about this publication, or to be notified when a new issue is published, email [ietpubs@ucdavis.edu](mailto:ietpubs@ucdavis.edu).

- **Posters Highlight Campus Technology Efforts at UC Conference**  
In early August, representatives from all UC campuses gathered together at UC Riverside for the University of California Computing Services Conference (UCCSC). This conference provides IT professionals with the opportunity to share information and ideas. This year, more than 200 people (including colleagues from IET) attended the annual, two-and-a-half day event, which featured presentations on new applications, Web commerce, digital media, wireless, and video streaming.

As in the past, each school created and put on display posters with highlights from the previous year so attendees could learn about projects from other campuses. UC Davis submitted two colorful posters this year, highlighting the steps our campus is taking to enhance computer security, and featuring the new admissions Web site, the new Big Board video screens in the ARC, and the multimedia program Almagest. These posters will be displayed in the Memorial Union throughout the academic year. To view these posters online, go to <http://iet.ucdavis.edu/pubs/uccsc/uccsc04.pdf>.

- **IT Times Summer Edition Features Major Campus Technology Efforts**  
In the Summer 2004 edition of the quarterly newsletter for faculty and staff, the *IT Times* looked back at some of the more exciting applications of technology at UC Davis this year, including a new interactive Web site for student applicants, an online digital imaging system for faculty, and an online AP Spanish course for high school students around the state. Download a PDF version of this issue at <http://ittimes.ucdavis.edu/pdf/summer04.pdf> or read the stories online at <http://technews.ucdavis.edu>.
- **IET Again Uses Unitrans Buses to Share Computing Services With Students**  
For the fourth consecutive year, several IET units are working together to create a series of posters to be placed in the Unitrans buses. These posters are designed to increase awareness of campus computing services and initiatives among students, who traditionally comprise the large majority of the more than 20,000 daily Unitrans bus riders. This year's posters will be placed in 39 different buses and will highlight services like the IT Express computing help desk, the Meyer Media lab, and the lesser-known computer rooms. Last year's bus ads are posted at <http://iet.ucdavis.edu/pubs/unitrans/unitrans0304.pdf>.
- **Technology News Delivered Directly Into Campus Users' Mailboxes**  
The campus computing news Web site (<http://technews.ucdavis.edu>) and companion listserv offer an easy and convenient option for members of the campus community to stay informed about new initiatives, status of projects, security alerts, computer viruses, applications of technology in the classroom, major technology issues, and other uses of technology on campus. During Spring 2004,

articles in TechNews included security-related information, as well as links to computer-related columns in the *Aggie* student newspaper, *IT Times* stories, and announcements regarding IET services. To receive a weekly abstract with links to the latest headlines, fill out the brief subscription form at <http://technews.ucdavis.edu/subscribe.cfm>.

- **IET Service Guides Updated For 2004-05**

IET's Communications Office is updating the 2004-05 print versions of the Student Computing Guide and Faculty Technology Guide, pocket-sized print brochures outlining the technology resources available to UC Davis students and instructors. Designed as quick reference publications to keep in a backpack or at a desk, they feature short descriptions of campus technology services as well as a handy chart of important phone numbers and URLs. The guides are distributed to key locations around campus, including all computer rooms, the IT Express Help Desk, and the Memorial Union Information Center. Their more comprehensive companion Web sites, where PDF versions of the brochures can be downloaded and detailed descriptions of services, news, and other information are available, can be accessed at <http://scg.ucdavis.edu> (Student Computing Guide) and <http://ftg.ucdavis.edu> (Faculty Technology Guide). To receive copies of the brochures, contact [ietpubs@ucdavis.edu](mailto:ietpubs@ucdavis.edu).



## EDUCATIONAL TECHNOLOGY HIGHLIGHTS

*This section outlines some of IET's projects and service enhancements in support of UC Davis instructors and students. Often found within this section are the latest news on educational technology and media services available to instructors for their classes and research, and information about the campus computer rooms.*

### Online Courses & Educational Tools

- **New Support Structure for MyUCDavis Course Management Tools**

The maintenance and development of the instructional components of the MyUCDavis Web portal was recently transitioned to IET-Mediaworks. An arrangement has also been made with the IT Express Computing Help Desk to handle all front line support for this system. IT Express will now accept both phone calls, walk-in and email questions related to using MyUCDavis. The Educational Technology (ET) Student Partners will share MyUCDavis Course Management support responsibilities with IT Express. When faculty need help with the course management tools offered through MyUCDavis, the student partners will be available for one-on-one assistance. These meetings will be scheduled through the ET Partners program, by faculty, the Teaching Resources Center (TRC), or by IT Express. For a list of MyUCDavis course management tools and related materials (including tutorials), see <http://my.ucdavis.edu/project/gettingstarted.html>.

- **Online College Prep Literature Course to Debut in Fall 2004**

An Advanced Placement literature course developed by a team of Mediaworks specialists will be offered for the first time in the fall, as part of the University of California College Prep (UCCP) Initiative program. Mediaworks also continues to develop the Advanced Placement Spanish language, which begins its second year this fall. To read about the AP Spanish course, see the story that appeared in the Summer issue of *IT Times* (<http://technews.ucdavis.edu/news2.cfm?id=762>).

- **Pilot Project Explores Breeze Capabilities, Puts Nervous System Online**

Mediaworks is working with Dr. Vijaya Kumari from the School of Medicine on a pilot project using Macromedia's Breeze live technology to convert PowerPoint lectures on the nervous system into online presentations for distribution to incoming medical students. After converting Dr. Kumari's PowerPoint slides, which are enhanced with animations and audio, into the Breeze format, 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.

Mediaworks is also exploring the interactive capabilities of Breeze Live to offer Dr. Martin Wilson in the Division of Biological Sciences the ability to conduct online office hours or support sessions for students who need help with software that is required in a new modeling class he will be offering this fall (<http://www.dbs.ucdavis.edu/courses/modeling/>). The software allows an instructor to give an online demonstration of the software and/or take control of a student's machine to assist directly with the use of the software. Breeze supports real-time audio/video chat, a shared white-board, screen sharing and embedded Flash or streamed PowerPoint, all as part of the same online session.

In the future, Mediaworks expects to use the real-time capability of Breeze to provide remote support to its clients all over campus. Since Breeze does not require any software installation on the part of the user, support staff can help people with online tools directly over the network. This will allow for more personalized service without necessarily requiring a time-consuming trip across campus to provide an office visit. To view a demo of Macromedia's Breeze or read more about the software program, see <http://macromedia.com/software/breeze/>.

## Faculty Training and Presentations

- **ET Partners Extends Support to Department Level**

To broaden its support of faculty, ET Partners piloted a few special "partnerships" with departments during Spring 2004. In addition to the individual faculty partnerships the program routinely offers, pairs of students assisted faculty throughout three departments with their educational technology needs. This approach more than doubled the number of faculty who were able to meet one-to-one with a student technology advisor over the course of a single quarter.

One such partnership assisted the Department of Textiles and Clothing in creating a digital repository of their vast collection of analog teaching materials. This project now offers faculty quick access to the entire collection, and the ability to quickly create or revise digital lecture presentations using the Almagest online teaching and learning tool. For more information, visit <http://etpartners.ucdavis.edu/>.

## Computer Labs & Classrooms

- **Recent Efforts Complete Mediation of All General Assignment Classrooms**

A milestone was recently reached as Olson 109, the last remaining classroom without installed media equipment, was upgraded by Classroom Technology Services (CTS). With the completion of this upgrade, all 115 general assignment classrooms now have a media cabinet, data projector and associated audio and playback equipment, and provide instructors with fully installed projection and playback system capability. To access information about equipment available in the general assignment classrooms, see <http://registrar.ucdavis.edu/schedule/>. For instructions on how to use the media cabinet in each of these classrooms, see <http://av.ucdavis.edu/media-cabinet/>.

- **Mac OSX and Windows XP Installed In All Computer Rooms**

As part of an ongoing effort to provide stable and reliable software, 415 computers have been upgraded to either Mac OSX (from Mac OS9) or Windows XP (from Windows ME) for Fall 2004. Faculty were informed a full year in advance about these changes so as to allow sufficient time for any necessary changes to instructional materials for students using computer classrooms. For more information about computer rooms, see <http://clm.ucdavis.edu>.

- **Computer Rooms Get 170 New Computers**

To maintain up-to-date equipment for instructional use, over the summer, Classroom Technology Services purchased 170 new computers and set them up in three computer classrooms, two open access labs, and two media labs. This upgrade is part of the three-year equipment replacement cycle. These new computers included Dell Optiplex 3Ghz-P4 desktops and Apple PowerMac 1.8GHZ-G5 towers. All computers included a flat-panel LCD screen to increase the available desk space, and additional emergency replacement machines were purchased to cover breakage.

- **Large Computational Cluster Pilot to Assist Campus Researchers**

Classroom Technology Services (CTS) recently began a year-long test to utilize its 415 publicly accessible computers as a large computational cluster to assist UC Davis researchers. Working with staff from the Department of Computational Science and Engineering to create the cluster, CTS will provide an additional service where unused computers can run calculations. When the machine is not being used or a user is not actively logged onto the computer, the machine will run small programs to analyze a portion of research data. This method creates a virtual super computer out of the 415 computers. During the 2004-05 academic year, CTS will review the impact of the program on the core instructional support mission and value to the research mission.



- **Computer Room Print Quota Reduced to 100 Sheets Per Quarter**

To curtail the rising cost of printing and promote responsible printing, the number of free sheets each student is allowed to print in the computer rooms will be lowered in Fall 2004. The change will reduce the quota from 200 to 100 free sheets each academic quarter. Students who print in excess of 100 sheets will be charged five cents per sheet beyond 100. Since print charging was introduced in Fall 2001, the number of print-outs has increased by 90 percent, almost doubling over the past three academic years. The policy will be reviewed at the end of the year to determine if further changes are necessary. For more information on IET computer room printing policies, see <http://clm.ucdavis.edu/rooms/printing/>.
- **Computer Seat Capacity Increased to Accommodate Demand**

Drop-in access to the computer rooms continues to grow steadily, and Classroom Technology Services is finding creative ways of helping students. To increase capacity, the small storage room in 15 Olson will be opened to accommodate five more drop-in computer stations. The storage room's size can allow only stand-up stations. In addition, two traditional media stations in the Media Distribution Lab will be converted into quick-access, Windows-based computer stations. This will add to the four existing Windows-based, and two Mac-based computer stations in the lab used for quick-access. Based on a five year growth projection, CTS expects over 1,000 more unique users in 04-05 over the 03-04 year.
- **Meyer Media Lab Offers Fee-based Color Printing**

Responding to long-term demand for color printing in the computer rooms, Classroom Technology Services made color printing available in the Meyer Media Lab at 1154 Meyer Hall. Users have asked for color printing primarily as a means to check the print quality of their 2-D multimedia design work. Meyer Media Lab was selected because of the existing hardware, software, and trained student support for multimedia work. The service will be fee-based to recover costs from those who use the service. A rate of \$1.50 per sheet was proposed to the campus rate committee charge to cover all costs related to the service. For location, contact, equipment, and software information for the Meyer Media Lab, see <http://clm.ucdavis.edu/rooms/>.

## ADMINISTRATIVE COMPUTING HIGHLIGHTS

*Frequently included in this section is information on campus administrative upgrades to major campus computing systems (i.e., Banner, PPS) as well as partnerships and projects IET is engaged in with other campus departments to improve administrative computing at UC Davis.*

### Payroll Personnel System (PPS)

- **New Employee History Reports Respond to Central Office and Department Needs**

In January, the Employee History reports, initially developed for Human Resources, were opened to the Customer Advisors who represent central offices, dean's offices and departments. Upon their approval, the HR History reports were opened to the campus and medical center departments in June. The departments can now easily review hire, separation, leave of absence and salary change transactions on departmental employees and replicate an employee's position history record from 2002 forward.

A new series of detail and summarized reports were also developed to assist the Accounting and Financial Aid Offices in resolving Work Study account balance issues and for reporting to government agencies. Once the current beta test with the Financial Aid Office is completed, the detail Work Study expense report will also be opened to departments. Another series of reports were developed to aid Extramural Accounting in researching expense transfers affecting Contracts and Grants. A departmental version of this report will be released shortly so the individual departments and colleges can do similar research. Finally, a probation date audit report was developed for Human Resources and the Registrar's Office. This new report has now been released to departments.

The PPS Decision Support system has been available for 6 years. Over the last two years, there has been a 15% average growth rate both in the number of active users as well as the report usage. This past fiscal year 1139 campus and medical center employees ran a total of 243,148 reports. Additional system enhancements and a database upgrade will be completed before the end of this calendar year in order to support the additional data requirements of new reports, to handle increased usage load and to comply with the Oracle data base support. These changes will be timed so as to not impact the system's usage.

### Banner Student Information System

- **Completion of Student ID Change Project Highlights Summer Efforts**

A major campus project replacing the old student ID numbers was completed in Summer 2004. All students (mostly seniors) whose primary ID number was their Social Security Number (SSN) were given a computer-generated student ID number. This will complete the Campus ID project begun in 2000 to eliminate the use of SSNs as the primary ID in campus computing systems.

While no major upgrades are planned for this academic year, minor upgrades are still expected for the various Banner modules. The Financial Aid system is expecting a new release in August for the Summer regulatory requirements. A Banner trainer, hired in Spring 2004, is meeting with administrative Banner users to determine their training requirements in order to develop a curriculum for a Banner user training program. Info about the Banner Student Information System and its implementation at UC Davis is available on the IET-Application Development Web site (<http://sysdev.ucdavis.edu/bsdu/banner/faq.cfm>).

- **Workgroup Formed to Research Upgrade to Banner 7**

A Banner 7 planning workgroup has been formed to research the major tasks involved in upgrading to the next version of Banner due for release in December 2004. The workgroup will gather input from the administrative Banner users to analyze the requirements, dependencies, and effort required for implementing this major release. The goal of the workgroup is to prepare a planning guide that offers suggestions and recommendations for implementation.



- **J-Scholar Application to be Developed for International Scholars & Students Office**

The purpose of this project is to facilitate the processing of the J-Scholar request forms for the office of Services for International Students and Scholars (SISS). The new system should improve the process by capturing data at the source - the sponsoring department, student or scholar - validating data at time of entry and automating the transfer of this information into fsaATLAS to improve the flow of the business process. (fsaATLAS is the application used to store the campus' international student/scholar/employee information; it is compliant with SEVIS, the Student and Exchange Visitor Information System.) UC Berkeley is currently developing this application. Plans are to implement this application at UC Davis once UC Berkeley has completed development.