



CAMPUS IT REPORT

FEBRUARY 2009 – MAY 2009

*A collaborative report of campus technology initiatives,
brought to you by Information and Educational Technology.*

CAMPUS INFORMATION TECHNOLOGY REPORT

FEBRUARY-MAY 2009

This report offers UC Davis faculty, staff, and students brief descriptions and updates on major projects, cross-campus partnerships, and collaborative initiatives in which the IT Administrative Domain Conveners, Information and Educational Technology (IET), and the UC Davis Health System have been involved since February 2009.

IET publishes the report for the campus community three times per year (in September, February, and May). The report presents major highlights organized into three broad areas:

- **UC Davis Information and Technology Planning and Initiatives**, which includes entries in the eight campus IT administrative services domains : Academic Personnel Administration, Enterprise Asset Management and Planning, Finance, Payroll/Human Resources, Research Administration, and Student and Curriculum Support; plus Common Architecture and Common Administrative Services.
- **Information and Educational Technology Highlights**, which feature operational highlights about a broad range of services provided by IET, including Telecommunications and Networking; Security; User Support, Communication and Outreach; Multimedia; and Software.
- **UC Davis Health System Technology Highlights**, which includes Clinical Technology, Educational Technology, Research Technology, Health Informatics Graduate Program, Privacy and Security, Management Reporting and Data Analysis, Technology Support and Reliability, Technology Management, Customer Service, and Operational and Financial Systems.

For copies of this report, go to iet.ucdavis.edu/pubs/iet_reports.cfm. Current and previous editions are available for viewing or printing.

Technology news online.

For ongoing campus technology and computing news, see TechNews at technews.ucdavis.edu. This site provides a convenient, focused, and regularly updated source of news ranging from IET announcements to stories about campus information technology initiatives, security alerts, items about the use of technology in teaching and research, and more.

Technology news by email.

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We welcome your comments on this report. Please contact ietpubs@ucdavis.edu.

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I. UC DAVIS INFORMATION TECHNOLOGY PLANNING AND INITIATIVES

Planning for campus budget reductions

In March 2009 the deans, vice chancellors, vice provosts, and university librarian were asked to provide a plan to the campus for meeting budget reduction targets for 2009-2010, with a submission due on Tuesday, May 5, 2009. IET approached this request as a collaborative effort among the IET leadership to methodically review every IET program and activity and to identify every possible reduction – regardless of unit affiliation - to determine the combination that best protects the critical interests of the campus. These reductions are differential and based on programs, rather than prorated assessments based on administrative unit boundaries. Many of the proposed reductions will require additional discussion and analysis to determine the most effective way to implement while protecting valuable resources. In addition to the budget reductions, IET is actively pursuing a number of strategic programs that will provide long-term efficiencies and cost savings. These programs are: consolidation of various units in the areas of business services, project management, application development, desktop support, and communications; development of a sustainable funding model for telecommunications; outsourcing options for the management of SmartSite; realignment of the UC DNet3 telecommunications upgrade project's goals and timeline; and development of a funding model for key infrastructure and security programs beyond 2009-10. Contact Dave Shelby, drshelby@ucdavis.edu

Campus Council for Information Technology (CCFIT)

The Campus Council for Information Technology (CCFIT) is a campus committee led by Chair François Gygi, to provide advice and recommendations to the Provost and Executive Vice Chancellor, and to the Vice Provost for IET, on educational and information technology and its use at UC Davis in support of instruction, research, administration, and public service. During winter and spring quarters, the council sponsored two public sessions to discuss key initiatives with interested campus constituents and gather feedback that could be used to inform strategic direction and recommendations. The first public session was held on January 29, and provided a brief overview of the new campus approach to administrative IT systems and investments. CCFIT offered this public session in response to interest from the campus administrative management group (ADMAN), and to engage others on campus interested on the subject. The second public session was held on April 28, 2009 to provide open discussions

on wireless networking, network connectivity, and the telecommunications rate model (See the slides from the presentation and the TechNews article, April 23, 2009, “A Dialogue with the Community: Wireless expansion, network connectivity, and rate model”). This event was offered in the context of recommendations being developed by the CCFIT Telecommunications Advisory Board and as a way to engage interested members of the community in a discussion of needs and options for telecommunications on campus. Contact: council-support@ucdavis.edu. See slides, agendas, and notes from past open forums at ccfit.ucdavis.edu/open_forums.cfm.

Data Center planning update

In 2007, the Provost established the Strategic Approach to Investments in Computing Facilities (SAICF) committee to address the growing need for data center space. The committee has actively met throughout the last year to discuss managing the campus' investments in computing facilities as well as the overall management of the effective use of campus resources.

During this reporting period, the group oversaw the work of the Server Room Space Evaluation Committee (SRSEC) subcommittee as they investigated available spaces for suitability as prospective consolidated collocation locations. The group also utilized information gained from the previously established “early warning system” from the Office of Research and the Provost's Office to identify new needs associated with extramural funding proposals and recruitment of new faculty. The group utilized the previously developed phased strategy to address near-term and long-term needs, established a liaisons list of contacts, and interviewed the contacts as well as researchers in an effort to better predict the appetite for data center type facilities to house their computing resources. The workgroup's analysis revealed that at least 10,000 square feet of data center space will be needed by 2012.

System-wide efforts have also begun to address – through collaboration and shared investments – data center needs throughout the UC system. Two facilities, the Oakland Scientific Facility (OSF) and the San Diego Supercomputer Center (SDSC) have availed themselves to collocation considerations for the UC system in the future. The Office of the President is in strong support of the SDSC as an option for a collocation facility to be used by the entire UC system. Contact: Morna Mellor, director, IET-Data Center & Client Services, mwmellor@ucdavis.edu

Administrative Computing Policy

Since the UC Davis Administrative Computing Policy (PPM 200-45) was adopted in September 2007, eighteen administrative IT projects have been reviewed with the most recent being Quali Rice, NetID Replacement, Kerberos KDC Replacement, Department Listings for

Online Directory, and IET's Virtualization Service. Planned reviews include UC Ready, Identity Management, and Kualii Research Administration. To see the latest project review status visit: admincomputing.ucdavis.edu/projects.

In February of 2009, PPM 200-45 was revised based on feedback from participating project sponsors and reviewers. Key changes included the addition of conceptual reviews earlier in the process to help inform sponsors before projects are fully defined; clarification and streamlining of the review process; and improved integration with the Administrative IT Roadmap. These changes were broadly endorsed by the campus community. Contact: Jeff Barrett, jtbarrett@ucdavis.edu; Web site: admincomputing.ucdavis.edu

IT Roadmap

In early winter 2009, the campus Council of Deans and Vice Chancellors (CODVC) designated individual conveners for each of the nine administrative "domains" identified by the IT Administrative Services Roadmap. Vice Provost Pete Siegel and the Roadmap Steering Committee held an orientation meeting for the conveners in February 2009. The domain conveners have two distinct roles: the management and organization of their domains; and, participating together, as members of a campus "Coordinating Council." The governance structure for the Coordinating Council is to receive input and guidance from the domains, various campus committees and constituent groups, with oversight provided by the CODVC. The Coordinating Council is meeting on a monthly basis to build a framework that will ensure campus IT investments add to the campus community, establish and leverage common architectural components and balance both local and central IT innovation. Contact: Dave Shelby, drshelby@ucdavis.edu. Web site: vpiet.ucdavis.edu/itroadmap.cfm

FINANCE DOMAIN

Kualii Financial System (KFS) ramps up for Release 3.0

The Kualii Foundation is developing a modular financial accounting system using the Community Source development model and includes others investing partners like Colorado State University, Cornell University, Indiana University, Michigan State University, San Joaquin Delta Community College, University of Arizona, University of California (UC Davis, UC Irvine, UC Santa Barbara), University of Hawaii, University of Maryland, University of Southern California, and other commercial affiliates. KFS Release 3.0 is expected for June 2009 and will include Chart of Accounts, Contracts & Grants (Post-award), Financial Transactions, General Ledger, Labor Distribution, Accounts Receivable, Purchasing, Accounts Payable and Capital Asset. UC functional and technical

resources are currently devoted towards meeting the Release 3.0 milestone. KFS brings all the advantages of a Web-based system built on J2EE architecture without any vendor or licensing fee and provides the opportunity for collaboration with other higher education institutions. Local implementation efforts are gearing up for UC Davis specific configuration and enhancements after Release 3.0. Web site: accounting.ucdavis.edu/projects/UCDKualii

Collaboration on the next generation UCDBuy continues

Kualii Stores will be the "Next Generation" UCDBuy with shopping cart functionality. The Kualii Stores application is under development in a partnership between UC Davis and Michigan State University to provide storehouse inventory and ordering functionality. The Kualii Stores application is modeled after the UC Davis Storehouse Inventory System, which UCDBuy is a component of. Upon Michigan State's review of UCDBuy, the partnership agreed to include the UCDBuy shopping cart in the Kualii Stores application with additional enhancements. Kualii Stores is expected to have a two year development effort. The Kualii Foundation is in full support of this development effort as the first application to be built outside of the Kualii Foundation umbrella. The Foundation is supporting this project by providing tools, such as Confluence and Jira, and database and configuration management support. Contact: Karl Reinking, business administrator, Materiel Management, kwreinking@ucdavis.edu

New UC Travel Booking Portal to be rolled out at UC Davis

The University of California Travel Council has created a new online portal, Connexus, for booking UC travel through a one-stop shop that includes airfare, lodging and rental cars. Travel may be booked online or by phone through full service agents that include BCD Travel, Orbitz for Connexus, and UCLA's Travel Center. When booking travel through Connexus, UC travelers automatically receive the University's negotiated discounted rates for airfare, hotel and car rentals. The system accepts payments through CTS accounts, corporate cards and personal credit cards. Although the requirement to go through one of a few University-selected agencies for CTS booking has previously been in place, the selected agencies and the ability to book CTS flights online are new features. The new portal will be available to employees in May 2009 through UC Davis's travel and entertainment expense reporting system, MyTravel. Web site: accounting.ucdavis.edu/projects/connexus/

Student Accounting, Environment Health and Safety Services, and UC DMC Finance switch to document imaging

UC Davis Office of Administration in partnership with

the UC Davis Health System, is deploying an Electronic Document Management System at several of its units as part of a five phase implementation plan. The system is comprised of hardware and software which allows for the capture, retrieval, modification, and storage of all forms of paper and electronic documents and includes workflow and Web services integration into DaFIS Decision Support. The system was previously deployed in the Accounts Payable and Payroll offices of the Davis and Sacramento campuses. The imaging system was recently configured for Student Accounting, Environment Health and Safety as well as UCDMC Finance units to streamline their processes and better manage official records. In addition, the project has submitted an EDMS rate that would allow new units to leverage the system for their business operations. Web site: accounting.ucdavis.edu/projects/edms

PAYROLL/HUMAN RESOURCES DOMAIN

Temporary Employment Services project

Human Resources launched a project to update and automate the Temporary Employment Services (TES) timekeeping, recharge and payroll functions. TES places employees with clerical/administrative, service, and other specialized skills at the UC Davis campus and Health System departments that need temporary staff support. This project is intended to automate numerous manual processes, simplify and streamline the time and attendance process for departments, TES employees, and administrative staff. HR will be evaluating existing time and attendance applications such as the L&S Online Timesheet System for adaptability. Phase I requirements gathering is underway with an implementation date scheduled for late summer.

Web New Hire Screens Project aims at providing intuitive interface to PPS

UC Davis, UC Irvine, UC Los Angeles, UC Santa Barbara, UC San Diego, and the Office of the President are jointly undertaking a new project to provide a Web-based real-time interface to the Payroll Personnel System (PPS). The Web screens will be a significant improvement to the current PPS new hire bundle and will include several time-saving features like embedded drop-down screens, guided screen flow, saving partially-completed transactions and template capability for common transactions. The Web screens are being designed to be intuitive, easy to use and will provide several levels of help displays. The new screens will save users a significant amount of time and improve the accuracy of data. The new interface is expected to be rolled out at UC Davis in late fall 2009. Contact: Cindy Jones, manager, Accounting & Financial Services – Payroll, cynjones@ucdavis.edu

Kuali HR/Payroll project initiated

Human Resources joined Payroll staff as part of a Pre-Project Working Team evaluating the potential initiation of a Kuali HR/Payroll project. UC Davis staff joined with staff from UCOP, UCLA, Indiana University, Penn State University, University of Chicago and the University of Southern California along with Kuali Foundation staff. The Pre-Project working team met four times in two-hour blocks via telephone conference and has drafted a report to be finalized and submitted to the Strategic Planning team by mid-May.

PeopleAdmin implementation update

The position management/applicant tracking application, PeopleAdmin, was successfully implemented December 15, 2008. HR has one additional training session scheduled for May 27. The next phase of this project is the development and release of various standard reports. A six-month Post-Implementation Review will be conducted and the findings and revision recommendations will be released in late summer.

Tax reporting system for international employees is fully operational

Since November 2008, UC Davis has successfully processed tax information for approximately 2000 international faculty, staff and student employees using Glacier, a secure Web-based tax reporting and compliance system. Glacier determines tax residency and withholding rates as well as any income tax treaty eligibility by using an individual's immigration and tax residency status. The system also manages paperwork, data, and file reporting statements with the Internal Revenue Service (IRS). As part of a future phase, the system will be incorporated into the new hire process. Contact: glacier-help@ucdavis.edu; Web site: accounting.ucdavis.edu/glacier

ACADEMIC PERSONNEL ADMINISTRATION DOMAIN

MyInfoVault upgrades continue

IET and Academic Personnel continue to enhance MyInfoVault (MIV), the system that creates electronic dossiers for faculty academic promotion and merit actions. The newest version became available in December and offers users the ability to upload letters and documents from departments and deans' offices.

This new feature makes it easy to add documentation in support of personnel actions while still maintaining the data repository for dossier data. The design phase for the workflow and role management upgrade continues; the anticipated release of Version 3.0 in October 2009 will eliminate the last of the legacy code and provide for online reviews at the Office of the Vice Provost and CAP. Improved features will include more refined roles and

permissions, improved dossier routing, notifications, and tracking information. Schools and colleges representing over 125 departments and 3,200 accounts use MIV and have provided important feedback as the MIV group develops each upgrade. Contact: Joyce Johnstone, project manager, jmjohnstone@ucdavis.edu. Web site: myinfovault.ucdavis.edu

Academic Personnel forms go online

Academic Personnel is developing a Web interface for several administrative processes such as the Category I Pre-approval, Annual Report of Professional Activities, and Leave Forms. Faculty and department administrators will be able to enter information electronically using this Web format and a workflow routing component will provide deans and the vice provost with online review capability. Currently the Category I and Annual Report forms are in Beta test and the Leave Form should be released for Beta test this summer. Contact: Everett Wilson, ewilson@ucdavis.edu

UC Systemwide IT Summit for Academic Personnel

UC San Francisco will host the fourth annual Systemwide Academic Personnel IT summit on May 11 in San Francisco. Academic Personnel directors and IT representatives from each campus will convene to share information about the status of their IT systems (online personnel reviews, academic recruitment and voting modules, etc.) and about how they collaborate to leverage investments, such as hosting applications at one campus to serve multiple campuses, and using open source products to enhance application developments.

RESEARCH ADMINISTRATION DOMAIN

Collaboration continues on new research administration and compliance system, Kuali Coeus (KC)

The Office of Research and Office of Administration (OOA) are co-sponsoring and partnering with the Kuali Foundation on the planning and development of the Kuali Coeus system. At present, the UC Davis team is collaborating and coordinating with four other UC campuses on the implementation of the KC product releases. The UC Davis team is also collaborating with IET and A&FS on the enterprise implementation of the Kuali middleware system known as Kuali Rice. The team is working on the implementation of KC Release 1 which includes proposal development, budget development, and grants.gov integration. UC Davis plans to pilot the Kuali Proposal Development system by summer 2010. The Kuali research administration system will provide principal investigators with an electronic workflow for routing of research proposals, seamless integration for submitting

grants.gov proposals, a tool to build multiple budgets and, integration within the Kuali Financial System. Contact: Safa Hussain, project manager, Safety Services, smhussain@ucdavis.edu. Web site: kuali.ucdavis.edu

ALUMNI & UNIVERSITY RELATIONS DOMAIN

Advancement Services department upgrades AIS

In March 2009, Advancement Services, lead by Director Karen Latora, upgraded the AIS (SunGard Advance) database from version 8.2 to 9.3. This upgrade was managed by Project Manager, John Finazzo. Other team members included: Robert Ware, Ron Purnell, Joe Hurley, Dale Hurt, Ralph Castaneda, John Lovell, Donna Pingrey, Vivian Lam, Teri Robinson and Melissa Ivanusich from Advancement Services with Bill Wagman serving as DBA from IET. This upgrade delivered many enhancements centrally for our Gift Processing team as well as enhancements enjoyed by all users to the ID and clipboard features. In addition, this version provided many vendor bug fixes and aligns AIS (Advance) as current with the most recent release of the Advance Windows software. For more information and or training, please contact the AIS Help Desk at aishelpdesk@ucdavis.edu or 530-754-1106.

Advancement Services meets with its customers on a monthly basis at the AIS Customer Advisory Committee meeting. This meeting is held on the 1st Tuesday of each month from 1:30 p.m. to 3:30 p.m. in 1460 Drew Avenue Suite 100 Conference room. This meeting is open to all customers of AIS to discuss customer system needs, enhancements, reporting, training and future opportunities with SunGard.

II. IET OPERATIONAL HIGHLIGHTS

REPORTING

IET provides data analysis on computing trends

The IET Client Services Reporting group continues to publish reports for IET management and the UC Davis technical community on campus computing trends and the performance of units and services. Last quarter, the Reporting group developed a monthly report to analyze support requests received by the IT Express Computing Services Help Desk regarding the campus DavisMail service. The report includes information on the types of requests and the methods by which they were received, client affiliations, and summaries of the incidents reported. The report is used by IET management to evaluate trends and/or problems and to identify potential needs, such as additional training for help desk staff or communications to the campus about DavisMail. An ad-hoc report produced

in January also compared support requests for the Cyrus email server to support requests for DavisMail.

The Reporting group also began evaluating select business intelligence and reporting software for potential future reporting management. While the group primarily uses Excel, Crystal Reports, Tableau, BIRT, and other products are being reviewed. The group has also been working with the IET Middleware group to evaluate existing database structures and scripts used for reporting. The evaluation will enable the Reporting group to identify ways to improve Reporting systems, effectively gather additional data from other systems and applications, and streamline data extraction methods. Finally, the Reporting group has been summarizing the processes, analytical methods, and data sources used to produce existing reports in an effort to communicate the results effectively. Contact: reporting@ucdavis.edu

SOFTWARE LICENSING

LabView licenses are now available

The IET Software License Coordination (SLC) unit finalized an agreement for LabView software, which will be available for use by faculty, staff, and students. There are two types of licenses: a single client license, available for \$350 per license, and a teaching classroom (lab) license, available for \$70 per license. Student use is limited to research or lab use, and the lab license is restricted to use in labs. These licenses may be purchased from the Software Web site: my.ucdavis.edu/software

JMP license gets renewed for another year

IET's SLC unit renewed the JMP license for another year. Staff and faculty may now purchase these products from the Software Web site, my.ucdavis.edu/software, at the discounted price of \$15 per license. Students may purchase licenses from the campus Bookstore. Web site: bookstore.ucdavis.edu/

Microsoft and SHI present information on the benefits of enrolling in MCCA

IET held the annual presentation for enrollment in the Microsoft Consolidated Campus Agreement (MCCA) on March 4. A presentation by Software House International (SHI), the UC software reseller, immediately followed the MCCA presentation. Taylor Kao, the UC Microsoft representative, and Mandy Moler, the UC account executive from SHI, provided information to departments on enrollment in the MCCA through SHI. Departments learned about the benefits of enrolling in MCCA, its entitlements, and new Microsoft products. Moler also provided a demonstration on using the campus SHI Web site and presented other useful information regarding SHI and the campus. Enrollment in MCCA opens in mid-April and closes in early May. Web site: iet.ucdavis.edu

edu/microsoft/campus_agreement.cfm

UC-wide Adobe TSL agreement

UC Office of the President (UCOP) finalized a UC-wide agreement for Adobe's new Acrobat Term Site License (TSL) option. The University's designated Adobe software reseller, SHI, is managing the agreement. While the TSL terms and conditions differ from the current Adobe Contractual License Program (CLP) and Adobe High Volume agreement (both of which are still available), the products are the same. The TSL includes Acrobat Pro and Acrobat Pro Extended. Whereas the current agreements provide perpetual licenses with renewable maintenance, the TSL terms of agreement include:

- Annual licenses
- Updates and upgrades available at no additional cost
- Pricing based upon the number of FTE faculty and administrative staff instead of the number of computers
- Simplified compliance and administration. May be installed on new computers mid-year at no additional cost.
- Lab computer installations are included at no additional cost
- Work at home rights for eligible faculty and staff to use on one additional computer

This year's enrollment period occurred between late March and early April. New enrollment and renewals will occur annually. Contact: software@ucdavis.edu

Possible campus agreements for MatLab and Vector NTI software

IET-SLC has been pursuing campus-wide site license agreements for MatLab and Vector NTI software. SLC is close to finalizing the MatLab agreement, and will offer the following licensing options:

- Non-Teaching (standalone): license available for research purposes
- Non-Teaching (network): departments may run their own server to manage research licenses
- Teaching (standalone): license available for use in a teaching classroom only
- Teaching (network): departments may run their own server to manage teaching classroom licenses

These licenses are annual, and may be purchased from the Software Web site, , after May 1. IET is continuing negotiations with Invitrogen for a site license for Vector NTI software. SLC anticipates a finalized contract in late May. Contact: software@ucdavis.edu; Web site: my.ucdavis.edu/software

Internet Explorer (IE) 8 compatibility testing complete

With the release of Microsoft's Internet Explorer version 8 on March 20, IET coordinated a campus-wide application compatibility testing effort. IET solicited volunteers to

identify and test applications and services, and would like to thank these individuals and departments for their valuable contributions. Compatibility information for widely-used applications and services on campus are posted on the campus Microsoft Web site at microsoft.ucdavis.edu.

APPLICATION DEVELOPMENT

Banner update

Student Affairs and IET have completed most of the Banner Revitalization project. Two critical items still need to be implemented:

- A scheduling form which gives the departmental course schedulers the ability to manage departmental courses
- Transfer of credit, which automates most of the work involved in evaluating and documenting students' credit for work completed at other institutions

The project team expects both items to move into production by July 2009. The team began focusing on re-engineering some of the campus business processes in order to take advantage of enhancements made by SunGard. The Banner 8 upgrade is scheduled for implementation by fall 2010. Contact: Peter Brinkerhoff, pjbrinkerhoff@ucdavis.edu

Campus Data Warehouse project wraps up

The Campus Data Warehouse team has completed a major project overhaul for all of the programs used to extract data from campus source systems: (i.e., Banner, Instructional Activity, PPS). Complexity and stability issues in the original data extraction tool made it increasingly costly in hardware, staffing and financial commitments. The team also validated and updated the campus's business rules. While the project was lengthy, IET gained system stability, documentation, and confirmation of business rules, plus the replacement of the costly ETL tool with non-proprietary solutions. Contact: cdw-eproj-team@ucdavis.edu

CAMPUS IT INFRASTRUCTURE

IT architecture update

IET's IT architecture continues to play an integral role in analyzing design and deployment of various technology projects so that they meet campus technical and business requirements and further the campus mission of research, teaching and public service. Specific projects that have been addressed during the past quarter include: Identity management, middleware, cyberinfrastructure, data warehouse, and collaboration.

The goals of IT architecture aim to create principles and a framework to ensure IT-based systems evolve and support the needs of the campus effectively and securely over time. It also seeks to apply this framework (via the PPM 200-45

process) to areas that directly support business functions to promulgate the use of standards, reduce duplication of effort, and provide road maps for future planning. In order to assure alignment of UC Davis's architecture within the broader higher education community, IET participates in multiple UC-wide and nationwide organizations like UC's IT Architecture Group, the UCTrust Work Group, UC Grid, UC's Cloud Computing Task Force, the InCommon Technical Advisory Committee, and IT Architects in Academia (ITANA). Contact: David Walker, IT architect, dhwalker@ucdavis.edu

CAS campus deployment

The Central Authentication Service (CAS) has replaced Distauth for a number of significant central applications, most notably, the campus portal MyUCDavis. So far, CAS has not experienced any detrimental throughput effects from the additional usage. Three improved client modules were released for campus use including, Cold Fusion, Mod_Auth CAS, and ISAPI. Additionally, the service underwent additional security testing and a test server was deployed for use by those looking to implement CAS. The high availability configuration and the software upgrade to version 3.3.1 are on hold pending the purchase and installation of new hardware. Upon the successful deployment of the high availability configuration, planning for the retirement of Distauth will commence. Contact: Hampton Sublett, Middleware program manager, hbsublett@ucdavis.edu. Web site: confluence.ucdavis.edu/confluence/x/eFY

Central Kuali Rice service to be offered by IET

Kuali Rice is a set of middleware tools created by the Kuali Foundation to ease integration between other Kuali, and non-Kuali, applications. By implementing Kuali Rice, IET-Middleware offers the campus a standard set of tools, namely a workflow engine and an enterprise service bus, among others, to reduce the need for campus departments to recreate these functions within their own applications. Kuali Rice will be integrated with MyInfoVault (MIV) later this year and with Kuali Financial System (KFS), Kuali Coeus (KC) sometime after that. eDocLite will be released three to six months after the integration with MIV. Contact: Hampton Sublett, Middleware program manager, hbsublett@ucdavis.edu

Bids received for new Domain Name System (DNS)

In autumn 2008, IET released an RFP for bids to procure the most effective and cost efficient Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP) system to replace NetID which is no longer supported on campus. The finalist vendor has installed its equipment,

and a test team with representation from across the campus has been assembled. A test of the vendor's equipment will run through April, and the contract will be awarded based on the outcome. Contact: Mark Redican, Network Operations Center manager, mredican@ucdavis.edu

Departmental listings for online directory

IET's Communications Resources department has begun a project to enable the campus and general public the ability to view departmental listings online. The departmental listings, normally only available in the printed directory, contain contact information for campus services and academic departments and serve as a valuable set of cross-references and key terms that make searching the listings more efficient. A new advisory board will be convened to provide input on design and functionality for the project. Contact: Nick Barbulesco, ucdlesco@ucdavis.edu

WarnMe gets put to the test

Work continues towards making the campus emergency notification system, WarnMe, as robust and efficient as possible. A WarnMe project, now underway, will let initiators — the people who use the system to send messages — group recipients quickly, based on dynamic affiliations, and create more focused notices. In February, IET's Network Operations Center and Data Center conducted a closed test of WarnMe to determine the network capacity and set a benchmark for the number of concurrent notifications. A full campus-wide test of the system was conducted in late April. And, as news spread in late April of an international outbreak of swine flu — an outbreak serious enough for the campus to monitor developments (see ucdavis.edu/help/swine_flu) — WarnMe stood ready to distribute urgent information to the campus if needed. Web site: warnme.ucdavis.edu

MyInfoVault to upgrade workflow and role management

IET and Academic Personnel continue to enhance MyInfoVault (MIV), the system that creates electronic dossiers for faculty academic promotion and merit actions. The design phase for workflow and role management is complete. Development has begun to implement Quali-Rice Enterprise Workflow as a centralized service to be used by MIV. Enhanced features will include improved interfaces, more refined roles and permissions, improved dossier routing, notifications, and tracking information. Schools and colleges representing 91 departments and 2,700 accounts use MIV and have provided important feedback as the MIV group develops this upgrade. Contact: Joyce Johnstone, project manager, jmjohnstone@ucdavis.edu. Web site: myinfovault.ucdavis.edu

DATA CENTER

Campus virtualization service enters production stage

The IET-Data Center will soon begin offering a production server and storage virtualization service. Savings, simplicity, and increased productivity are some of the benefits that campus departments may enjoy by taking advantage of this service. Campus clients may still maintain complete autonomy over the administration of their virtual systems while enjoying the advantages of highly available server and storage services, or they may take advantage of the full service system administration offered by the Data Center. These services are built on the VMWare virtualization platform, which was selected because it provides the best management features for an enterprise-level service. Internal tests with pilot clients are currently in progress and the service expects to be available to campus clients in May 2009. Contact: Dave Zavatson, project lead, dhzavatson@ucdavis.edu. Web site: virtualization.ucdavis.edu

COMMUNICATIONS

IET communications group expands online efforts

IET's communications unit, part of Data Center & Client Services, moved more of its output to online formats during winter quarter. In March it produced a PDF version of the *IT Times* newsletter, which had been a print publication until fall 2008 (ittimes.ucdavis.edu). Going forward the group will increase its emphasis on its *TechNews* information service (technews.ucdavis.edu). *TechNews* includes all the articles that have traditionally appeared in the *IT Times*, but costs less to produce, is more flexible, and distributes information more quickly than the printed publication did. The unit is also working with social media, and other parts of the campus, to build the audience for *TechNews*. In early spring, the Teaching Resources Center Web site added a link to *TechNews*. University Communications linked some *TechNews* articles to the main campus Web page, ucdavis.edu, or included them in its *Friday Update* online newsletter during winter quarter. And the communications group began posting its *TechNews* stories to a Twitter account (UCDavisTechNews).

IET updates several Web pages, starts on 754-HELP promotional video for students

IET's communications group combed, revised and updated several pages linked to IET's student and faculty computing sites during winter quarter, and began an overhaul of the 10,000-word glossary of campus tech terms on the main IET page (iet.ucdavis.edu). It also began work on its next short video to promote IET services to students: this one will promote, especially to new students, the IT

Express computer assistance help line, 754-HELP.

CLIENT SERVICE

The help desk provides phone support for prospective students

On March 12 -13, 44,387 undergraduate applicants received email notifications regarding the status of their applications for the 2009-2010 school year. The IT Express Computing Services Help Desk received over 1600 phone support requests for account-related assistance, an amount almost double that of the same period in 2008. IT Express staff supplemented support needs during peak call hours with IET staff from other areas, including Desktop Enterprise Solutions and Software Licensing. In addition, IT Express extended support hours to 11 p.m.

The help desk used a three-tiered call structure to facilitate handling of calls. Applicants were directed to one call queue for password resets and account creation assistance. Parents of applicants were directed to a message informing them that IT Express cannot provide information to anyone other than the actual account holder and advising them to have the applicant call IT Express directly. All other calls, including those from current students, faculty and staff, were directed to a separate call queue for immediate assistance. IT Express will continue to assist incoming freshmen, transfer students, and first-year Law School students with computing accounts issues until the students arrive on campus and begin classes. Contact: IT Express Computing Services Help Desk, 530-754-HELP (4357)

TELECOMMUNICATIONS AND NETWORKING

New Multi-VLAN data feature – rolled out to campus departments

A new data feature called “Multi-VLAN” was made available to campus departments in February 2009. This feature allows department systems administrators to request network connections that carry up to six virtual local area networks (VLANs) This feature provides systems administrators with the opportunity to use campus network resources more flexibly and efficiently.

Before Multi-VLAN, a computing resource (database, file server, monitoring station, etc.) required one network connection for each VLAN it spanned. With Multi-VLAN, the same computing resource would require only one Multi-VLAN-enabled NAM, thus reducing the one-time charges by more than 60 percent and reducing the monthly charges by 20 percent to 50percent, depending on how many old, single-VLAN NAMs are combined together. Contact: Zack O'Donnell, service manager, zmodonnell@ucdavis.edu. Web site: cr.ucdavis.edu/commsrv/network/multivlan.cfm

UCDNet3 - update

IET-Communications Resources' UCDNet3 project team continues to work on the three year plan for upgrading the entire UC Davis network infrastructure. In January, IET completed the first stage of the UCDNet3 project which replaced the network core and the Area Distribution Frame (ADF) routers. IET will begin selective replacement of the Building Distribution Frame (BDF) and Intermediate Distribution Frame (IDF) routers. The Telecommunications Advisory Board (TAB), a focus group of student, staff and faculty representatives, is assisting IET with the work prioritization of the network upgrade. The findings of the TAB will help IET plan this next phase of network infrastructure renewal. Contact: Mark Redican, NOC manager, mredican@ucdavis.edu. Web site: ucdnet3.ucdavis.edu

West Campus Utilities Project - update

IET-Communications Resources engineers and technicians are in the process of converting the voice telecommunications backbone infrastructure at the Primate Center from older, copper-based technologies to fiber-optic-based Digital Loop Carrier (DLC). The next phase of the project, installing new fiber optic and copper cable in the surrounding buildings and cutting the communications services over to the new lines, has begun. This final phase of the project is scheduled for completion in July 2009. Contact: Diane Bahr, ECM manager, ldbahr@ucdavis.edu

Cellular coverage expansion completed

Over the past two years, UC Davis worked with AT&T, Sprint, T-Mobile and Verizon to install cell sites on the main campus, and in January, the last of the new sites went live. Since the installation, IET has received several incidental reports that cellular coverage has improved and is available in areas that previously had spotty coverage. cellsites.ucdavis.edu, an informational Web site created by IET-Communications Resources, shows the cell tower locations on campus. Also, the Mobile Communication Services Web page, cr.ucdavis.edu/commsrv/wireless/wireless.cfm, provides links to carrier-managed coverage maps. Contact: Zack O'Donnell, service manager, zmodonnell@ucdavis.edu

SECURITY

Computing services and security conference planning almost complete

UC Computing Services Conference (UCCSC) planning accelerated in January in preparation to welcome attendees from the entire UC System on June 16th and 17th. The 59 sessions offered cover a wide range of security and non-security topics, and include speakers from many campuses as well as vendor sponsors. The registration fee is \$115, and discounted to \$65 for attendees who choose to stay in

the residence halls. Registration opened on April 6 with over 150 people registering in the first two weeks. All ten campuses, UCOP and Lawrence Berkeley and Livermore Laboratories will be represented among the registrants. For more information, including a copy of the sessions offered, please visit the Web site uccsc2009.ucdavis.edu. Contact: Julie McCall, jdmccall@ucdavis.edu

Cyber-safety reporting

IET reviewed the 2008 cyber-safety reports submitted in December and began meeting with departments in March to discuss areas for improvement. In May, IET will provide its “state of information security” report to the Council of Deans and Vice Chancellors (CODVC). This report will include an overview of findings as well as next steps for improvement. For the first time, the 2008 cyber-safety survey included compliance indicators for information security standards in the secondary priority category. Contact: Bob Ono, IT security coordinator, raono@ucdavis.edu

Kerberos KDC Replacement project update

The Kerberos KDC replacement project proposal was recently submitted for review via the PPM 200-45 administrative review process. Draft feedback and recommendations have been posted to admincomputing.ucdavis.edu/projects/kdc.cfm, and sponsor responses are expected to post in May. Also, in December 2008, IET contracted with Certified Security Solutions to identify a migration strategy that will allow the campus to make a transparent transition to the new MIT KDC. The contract was fulfilled in March 2009 and IET expects the migration to be complete by August 2009. Contact: Bob Ono, IT security coordinator, raono@ucdavis.edu

Anti-phishing measures

On March 3, in light of repeated attempts by phish attackers to compromise the integrity of campus email accounts and other electronic resources, IET implemented new anti-phishing measures. After evaluating collected data, reviewing practices at other campuses and consulting with the Campus Council for Information Technology, Office of Research, Deans Technical Council, and Technical Infrastructure Forum, the following measures were implemented:

- Restrictions on the number of individual “To:” addresses permitted for a single email message
 - Limited government addresses on the campus “allow” list to the specific government domains required by the research community. Major funding agencies, such as NSF, DOE, DOD, NIH, and USDA are not affected. Previously, all government agency initiated messages were exempt from spam inspection.
 - Implemented spam filtering on outgoing email
- IET is also developing a security awareness campaign to

educate all faculty, staff and students about key cyber-safety practices, and the costs incurred when safe and secure computing practices are not followed. Contact: Bob Ono, IT security coordinator, raono@ucdavis.edu

Incident response update

The IT Express Computing Services Help Desk recently assumed primary responsibility for responding to reports of abuse of campus network resources. These reports may include use of unauthorized networking equipment (such as a wireless router), violations of the Digital Millennium Copyright Act, and connecting a virus-infected system to the campus network. Contact: IT Express Computing Services Help Desk, 530-754-HELP (4357).

EDUCATIONAL TECHNOLOGY SERVICES

SmartSite moves forward on guest access tool, account retention

SmartSite, the campus’s course management and collaboration system, has seen the following progress in past four months:

- Guest access tool: Before the guest access tool was created, only members of the campus community and individuals with a registered Temporary Affiliates (TAF) account could access SmartSite. This tool allows a maintainer to grant guests access to an individual SmartSite without giving them access to other UC Davis computing resources. The new tool is expected to be open to all users soon.
- Computing accounts and UC Extension accounts retained in SmartSite: The SmartSite team recently changed how SmartSite receives student and faculty computing account information. Before the change, Gradebook records for inactive students were not viewable. The SmartSite team changed the process so that all accounts are viewable and accounts will not be deleted. The SmartSite team also changed the UC Davis Extension program to include all open campus students, past and present, which allows SmartSite to display past academic records to faculty these members as well. Contact: Kirk Alexander, kdalex@ucdavis.edu; Web site: smartsite.ucdavis.edu

COMPUTER LAB MANAGEMENT

Smart Phones survey reveals interesting data

IET-Computer Lab Management (CLM) is investigating how the increasing use and capabilities of Smart Phones (i.e., iPhone, Blackberry, Samsung Instinct, Palm Treo, etc.) will affect how clients can interact with campus services.

The survey results reveal that Smart phones are used heavily for making phone calls, checking email, viewing Web pages, and texting/IMing. The phones are used less often for reading documents, connecting to Moobilenet,

and listening to music. They appear to rarely be used for taking notes in class, listening to class podcasts, or recording lectures.

As a result, it appears that Smart phones use will reduce the likelihood that students will bring their laptops to campus. The smaller-size factor and phone capability appear to be driving the change. This trend may be accelerated and supported by ensuring campus applications (SmartSite, MyUCDavis, Moobilenet, etc.) work well with Smart Phones. Other possible improvements would be to support compact Bluetooth keyboards so Smart phones could be used for note taking and printing. Contact Tim Leamy, 752-0242; Web site: clm.ucdavis.edu/pubs/survey/student-w09-2.html

A-V Engineering installs multi-media, document cameras

IET's Audio-visual engineering team completed the installation of multimedia in the Robert Mondavi Institute for one large lecture hall, five labs, and a conference room. The multimedia added includes Extron control systems that are user-friendly for faculty and lecturers in all rooms. The team also completed the installation of 20 new document cameras in the Registrar general assignment classrooms. This is an ongoing project, with IET eventually scheduled to install document cameras in each of the 126 Registrar rooms. In addition, IET completed the installation of multimedia in the Med Sci 180 lecture hall and Hunt Hall, room 110. Contact: Joe Kelley, jrkelly@ucdavis.edu

Night Crew registrar room maintenance

The number of Registrar general assignment classrooms increased from 123 to 126, with a projection of 128 rooms in fiscal year 2009/10. Even with an increase of equipment in the rooms requiring more testing and maintenance, the amount of staff to repair, maintain, and test the equipment remained the same. In addition, the number of times the rooms are visited for preventive maintenance and repair and on-time room readiness for the next day has increased.

The IET maintenance crew's ESP reporting has become more efficient with increasingly accurate metrics. These results are predicated on the fact that Quick Response calls are streamlined through one person during the day and night shifts. IET staff performs an immediate follow-up in the classroom with faculty when there is a problem reported. This is an automatic courtesy call for the next scheduled class, which increases classroom visit stats, but serves the faculty well. Contact: Contact: Joe Kelley, jrkelly@ucdavis.edu; Web site: iet.ucdavis.edu/rooms/classrooms.cfm

TV studio assists recording of class review sessions

IET's ATS unit assisted in the TV studio recordings

of mid-term and final review sessions for Andreas Toupadakis' Chemistry 2B class. The 90 minute review sessions were provided to students before exams as an on-demand Webcast. The Webcasts were extremely popular and received more than 4,000 requests with over 650 GB of bandwidth usage. The popularity of on-demand Webcasting has increased and over the last six months; IET has seen on average, 586 GB of bandwidth usage with over 1.3 TB of content streamed in March 2009. Contact: Paul Ver Wey, paverwey@ucdavis.edu

Cooperative Extension for the Better Process Control School

The IET-ATS unit videotaped and provided amplified audio services for a four day short course conference/ seminar for Diane Barrett and the Cooperative Extension for the Better Process Control School. This federally mandated processing course will be converted into 16 on-line modules using Adobe Presenter and PowerPoint. The modules will also contain an on-line testing/quiz function. Future production plans include converting the English modules into Spanish Modules.

IET also recorded the second of three Energy Efficiency Center seminars with the main theme "The Roots of Energy Efficiency...How California Changed the Way the World Uses Energy". The series explores California's rich past, and promising future, as a global innovator of energy efficient technologies and policies. The seminars are currently being edited for UCTV and will appear on the Energy Efficiency Center's and Chevron's Web sites. Contact: Paul Ver Wey, paverwey@ucdavis.edu; Web site: eecl.ucdavis.edu/news

Collaboration leads to installation of dedicated fiber in TV studio

IET's ATS and Communication Resources units worked together with AT&T to install dedicated fiber and encoding equipment for a TV1 circuit/video hub service linking the new television studio to Sacramento. The AT&T circuit will allow for live broadcasts of events/interviews with major media networks in Sacramento, California, and internationally. Contact: Paul Ver Wey, paverwey@ucdavis.edu

Recording and simulcast for Law Review, Picnic day, etc.

During the first quarter of 2009, IET's ATS unit provided video, audio, and Webcasting services for various campus projects including:

- Law School: Provided a recording and simulcast of the 2009 Law Review from the Moot Court Room at King Hall. The Law Review panel examined the career of US Supreme Court Justice, John Paul Stevens. The video feed overflowed to locations in the library and central hall and the audio feed was distributed to a C-SPAN television crew.

- Picnic day: Provided audio services and equipment to twelve event venues for Picnic day 2009. Highlights included multiple sound systems for the grandstand and Picnic day parade along with a large sound system for the Silo main stage.
- Intercollegiate Athletics: Completed 19 partnership productions for Intercollegiate Athletics as part of the Daktronic's Video Board service at the Pavilion. 2009 events include men's and women's basketball, wrestling and gymnastics.
- First National Symposium on Food Systems and Sustainability: Videotaped, Webcast and provided audio feeds for the First National Symposium on Food Systems and Sustainability for the Agriculture Sustainability Institute. The national event was held at the ARC Ballroom and Webcast live to 150 remote sites throughout the country.
- Institute of Government Affairs: Recorded, Webcast, and provided audio support for a debate sponsored by the Institute of Government Affairs entitled: Stimulus SmackDown: Can Deficit Spending Save the Economy? The on-demand Webcast has streamed over 4800 requests.
- Economic Stimulus in California: Provided audio and AV support for the Office of Government and Community Relations panel on Economic Stimulus in California. The production, which was identical to the Board of Regents set-up, included 18 microphones, data projector and four 32 inch monitors. Contact: Paul Ver Wey, paverwey@ucdavis.edu

IET continues to provide faculty and staff graphic design and video support

Over the past four months, IET-ATS has provided graphic design and video support for the following projects:

- Catalyst Magazine design: Designed a 20 page, full color 8 x 11 magazine, entitled "Catalyst" for Donna Justice and the School of Education. The new magazine features alumni news, school highlights, student activities, and donor news. The first press run will include up to 10,000 copies.
- Trauma Prevention Program: Developed and designed a campaign for the Trauma Prevention Program at the UC Davis Medical Center. The safety campaign funded by Kohl's Department stores and the UC Davis Medical Center (UCDMC) Children's Hospital consists of brochures, stickers, tattoos, t-shirts, and booklets that teach parents and children about bike safety, helmet safety and car seat installations and safety.
- Cancer Center: Designed and created a 4' x 8' poster for the UC Davis Cancer Center and Dr. de Vere White. The poster and PowerPoint presentation highlights efforts of the Virtual Tumor Board, which virtually brings together five hospitals to pool knowledge, share research and discuss difficult cases. The poster was so well received that additional copies have been requested by the Cancer Center

for display at UCDMC and satellite offices.

- Nutrition 10: Designed and created a series of animations and PowerPoint slides for Dr. Liz Applegate to visually represent how good and bad bacteria work in the digestive system. Dr. Applegate used the animation and PowerPoint slides to help students in her Nutrition 10 course to visualize a very complex and difficult concept.
- School of Veterinary Medicine: Created 55 illustrations from photographs for Dr. Steven Crow and the School of Veterinary Medicine. The illustrations were included in a training book/manual on proper techniques for handling animals, collecting blood and giving injections. The book is widely used by veterinarians and their staff.
- Mind Matters Newsletter: Photographed a series of pictures for the center spread of Mind Matters, a newsletter created by the Mind Institute and The School of Education Newsletter.
- School of Medicine 2009 Match Day: Photographed and documented the School of Medicine 2009 Match Day. Match day, hosted by SOM Dean Claire Pomeroy, is a ceremony/celebration where fourth year medical students learn where they will continue their internship and residency education. Contact: Paul Ver Wey, paverwey@ucdavis.edu

iTunes U sees increase in usage

The IET-ATS programming group continued to provide development and production support to the iTunes U program. During the first quarter of 2009, ATS staff uploaded 154 new video and audio files. Development continues on automation of the processing sequence. During this same period of time, 11 new feature albums were created as well as 11 courses. Course content in iTunes U has proven to be the most popular content for viewers. iTunes U usage has been climbing steadily since UC Davis started posting academic content – rising to 14,000 downloads per week during March, 2009. Contact: Charlie Turner, cjturner@ucdavis.edu

Webcasts considered to increase communications and cut down on travel

The IET-ATS programming group designed and developed a prototype Web application for the *UC Seminar Network*. The application is being designed jointly with Dr. James Carey, Chair of the University Committee on Research Policy (UCORP). The committee proposes to create a network to Webcast the hundreds of seminars presented each week in the 10-campus UC system. This enterprise would increase intra-, inter- and off-campus seminar access, reduce travel, augment outreach, and generate digitized records. The UC Seminar Network would establish a precedent for the creation of an international research seminar network, and create new opportunities for enhancing the exchange of scientific information such

as linking published papers to archived videos of author's presentations. Contact: Charlie Turner, cjturner@ucdavis.edu

IET maintains campus podcasting system and sees an increase in usage

In the first four months of 2009, IET's podcast system delivered course content to 6,284 students, faculty, and staff. Faculty in 18 different departments created 61 new course podcasts and uploaded 870 individual course lecture recordings. The largest users of the system continue to be faculty in the departments of Psychology, Biology, and Neurobiology, Physiology and Behavior. Collectively, students have downloaded 151,661 lectures from the podcast Web site since January 1, 2009. Contact: Charlie Turner, cjturner@ucdavis.edu

Colorectal cancer screening survey

IET-ATS has been providing programming support to Dr. Anthony Jerant, Associate Professor in the Department of Family and Community Medicine at the UC Davis Medical Center. Dr. Jerant receives funding from the National Cancer Institute to develop effective and resource-efficient methods of enhancing patient self-efficacy for health-related tasks, evaluating the influence of patient personality characteristics in health care and clinical research, and understanding and mitigating health disparities. ATS is developing the Colorectal Cancer Screening Survey using an open-source survey software package that allows incorporation of branch questions, audio, animations, and videos. Contact: Charlie Turner, cjturner@ucdavis.edu

Food Science 3D immersive learning environment (FDA)

IET-ATS programming personnel are designing a new software system for Dr. Paul Singh, a professor in the Department of Food Science and Technology at UC Davis. Dr. Singh is funded by the US Department of Agriculture to develop computer-based immersive learning platforms of three food processing plants (brewery, dairy, tomato cannery) that will provide highly engaging content for learning food science. Contact: Charlie Turner, cjturner@ucdavis.edu

Almagest multimedia database is migrated to new servers

During the first quarter of 2009, ATS programmers upgraded and migrated the Almagest multimedia database to new servers. Almagest is a tool for teaching and learning that can manage and store media, create and display digital lectures and presentations, as well as annotate and contextualize data for teaching. The upgrade required a migration from the Solaris operating system to Red Hat Linux. Almagest is currently used on the UC Davis campus by the FAZDD project in Vet Med, as well as five courses

in the Art History department. Contact: Charlie Turner, cjturner@ucdavis.edu

III. UC DAVIS HEALTH SYSTEM TECHNOLOGY HIGHLIGHTS

CLINICAL TECHNOLOGY

Visit Navigator enhanced with new Vitals Flowsheet section

In March 2009, outpatient providers were given access to a new, enhanced flowsheet. The Vitals section of the Visit Navigator within the Epic electronic medical record (EMR) application was replaced with the Vitals Flowsheet section. Key benefits of this enhancement include:

- Ability to time stamp vitals taken at multiple times
- Document patient reassessments after implementing orders for pain medications and breathing treatments
- Document orthostatic vital signs
- Comment boxes included for each row
- Easily access multiple vital rows from the closed Vitals Flowsheet section view, the Doc Flowsheet activity and Chart Review reports

The Vitals Flowsheet section also includes a new section titled Medications Given. This section is used to document medications ordered by physicians and given at the clinic (i.e., at the point of service). This information was previously documented in Nursing Notes. Contact: John Cook, john.cook@ucdmc.ucdavis.edu

Workflow function changes for all physicians and nurses

In support of UCDHS' transition toward a more robust and complete electronic medical record, upcoming workflow function changes will require all physicians and nurses to place progress and procedure notes into the Epic electronic medical record (EMR) rather than documenting them on paper. Training of all affected staff began in April and continues through early May. The workflow function changes are currently planned for implementation in May, 2009. Contact: John Cook, john.cook@ucdmc.ucdavis.edu

Partnership collaboration on providing access to Non-UCDHS clinical images

Growth in the use of electronic imaging systems to support diagnostic and treatment of patients has led to an increase in the number of patients referred to UCDHS clinics who arrive with CDs containing radiology studies and other clinical images from external facilities. Accessing and viewing these studies and images poses a number of workflow and technical challenges. For security reasons, the standard clinical workstation configuration does not allow viewers embedded on CDs to launch and display images. Accessing and viewing these images is allowed on administrative workstations, but requires providers review

the information with patients in shared spaces that may create privacy issues. Since vendors support many different viewers and versions, providers must learn and use a wide variety of tools and options. More importantly, neither Health Information Management (HIM) nor the Radiology department provides storage of radiology studies presented on CDs. Consequently, the CD is either returned to the patient (in which case, UC Davis no longer has a record of the studies used in determining treatment) or is kept by the individual providers and clinics in informal storage.

To address the workflow and technical challenges, IT and Clinical Information Systems (CIS) partnered with HIM and Radiology to provide a standard method for accessing and viewing radiology studies presented on CD, with an option for providers to archive selected studies. A technology solution by PACSGear was researched and selected for a pilot project in the Spine Clinic. CIS staff worked with Spine Clinic staff to plan and implement the pilot project, which was completed in March, 2009. The project team is currently evaluating results of the pilot to clarify the scope for full implementation; determine if the current workflow and configuration will work enterprise-wide; identify additional hardware/software requirements; and create a full rollout plan and schedule. Contact: John Cook, john.cook@ucdmc.ucdavis.edu or Amy Mentjox, amy.mentjox@ucdmc.ucdavis.edu

Epic software upgrade

The 2008 Epic software upgrade project has moved to the 3rd quarter of 2009. Contact: John Cook, john.cook@ucdmc.ucdavis.edu

Philips PACS software

IT and Radiology staff have partnered for many months to renegotiate the Philips (Stentor) Picture Archiving Communication System (PACS) software contract (due to expire) and improve service levels. Technical assessments are in process to assess the PACS server and storage infrastructure and the network elements that support the movement of clinical images. Most of the servers, storage, and network elements are now over seven years old.

Significant additions and replacements of imaging modalities are in the process of being installed in the Medical Center and clinic locations; the required connections with PACS are planned, and current network connections are being assessed. The PACS functionality will need expansion due to the growth in both the number and size of clinic image testing. Contact: Mike Minear, michael.minear@ucdmc.ucdavis.edu, Scott Foster, scott.foster@ucdmc.ucdavis.edu, or Marge Gorthy, marge.gorthy@ucdmc.ucdavis.edu

EDUCATIONAL TECHNOLOGY

School of Medicine process and software enhancement

IT and School of Medicine (SOM) staff have partnered to assess and reengineer the processes used to support faculty, students, and staff of SOM. These processes primarily focus on supporting medical students (admissions, grading, financial aid, transcripts, curriculum infrastructure) and how SOM staff, faculty, and students enter and access data. Previously, these processes were managed by staff using basic office automation tools (i.e., Excel, Access), requiring staff to maintain a large collection of spreadsheets and databases, and generating a massive amount of paper (approximately 140,000 documents annually). As the processes and tasks are reengineered, the implementation team then designs and implements software to support the new environment. The new system will integrate key data, largely eliminate paper, and provide dramatically enhanced functionality for all uses of the software.

In early March, 2009, the final instance of version 1 of the admissions module was released. The new Web-based tool has had a dramatic effect on how the admissions process within the SOM is conducted. Significant improvements have been realized, such as increased security of sensitive data, increased staff efficiencies, and lower department costs. In addition, the SOM was ahead of its overall admissions timeline this year as compared to years past. As of April, 2009, the software has been used to manage 4,635 applicants who have applied for the academic year starting in July, 2009 (Class of 2013), with applicants having used the portal to check and update their status 58,777 times.

In the near future, the implementation team will begin work on an online 4th year course scheduling module that is expected to have as much impact on the school as the admissions software did. Development teams will also begin work on version 2.0 of the admissions module, adding even more functionality and greater improvements in staff and faculty efficiencies. Contact: Dan Cotton, daniel.cotton@ucdmc.ucdavis.edu, or Roy Rai gurmeet.rai@ucdmc.ucdavis.edu

RESEARCH TECHNOLOGY

NeuroTherapeutics Research Institute (NTRI) high performance computing cluster

The NeuroTherapeutics Research Institute (NTRI) grant, IT, and the School of Medicine funded the purchase of a research computing cluster in mid-2008. Operational since November, 2008, the computing cluster provides valuable parallel computing resources to researchers at the Medical Investigation of Neurodevelopmental Disorders (MIND) Institute. Principal Investigator Dr. Tony Simon and his team have been able to dramatically increase their ability to produce extremely high resolution brain maps in their research of Fragile X Syndrome. Work is already underway to further expand the cluster in 2009, enhancing this resource for Dr. Simon and others interested in medical

research applications of high performance computing.
Contact: Dan Cotton, daniel.cotton@ucdmc.ucdavis.edu

Biospecimen inventory, tracking and annotation system (caTissue)

In partnership with the department of Pathology, IT and the School of Medicine are deploying the open source caTissue suite of biospecimen tracking, inventory and annotation tools as a pilot project with the goal of building an enterprise core supported tissue tracking system. Hardware for the system was purchased in late 2008 and the pilot environment was implemented in February, 2009. Principle Investigator, Dr. Mike Hogarth, along with the Department of Pathology, hopes to transition the department's tissue inventory system to caTissue. In addition, over 20 separate groups are interested in utilizing the system. This project provides part of the foundation for core IT supported research technology, and hopes to greatly reduce the need for multiple incompatible tissue tracking systems across the UCDHS. This system is part of a concerted effort with the i2B2 project to provide core IT supported comprehensive research and clinical data repositories. Contact: Dan Cotton, daniel.cotton@ucdmc.ucdavis.edu

i2b2 research chart

Informatics for Integrating Biology and the Bedside (i2b2) (i2b2.org/) is an NIH-funded National Center for Biomedical Computing (NCBC) based at Partners HealthCare System in Boston, Massachusetts. Established in 2004 in response to an NIH Roadmap Initiative RFA, the NCBC is one of the four national centers awarded in this competition. As one of 12 specific initiatives in the New Pathways to Discovery Cluster, the NCBCs will initiate the development of a national computational infrastructure for biomedical computing. The NCBCs and related R01s constitute the National Program of Excellence in Biomedical Computing. The software that came out of these grants has been put into open source, and UCDHS has joined the group based in Boston.

In June, 2008, UCDHS deployed a "proof of concept" instance of i2b2 and invited several prominent researchers within the Health System to a demonstration. Since this demonstration, the CTSC (ucdmc.ucdavis.edu/ctsc/) has obtained 2 IRB approvals to move forward with a production instance of the i2b2 database within the Health System. The purpose of the Research Data Warehouse is to provide a central data repository for research-related data within the UCDHS. Currently, comprehensive data concerning care provided in the health system is contained in numerous disparate data systems and each research-related request for data must be fielded in an ad hoc manner that is inefficient for investigators and costly to support with custom programming. I2b2 has unique capabilities to manage the data de-identification process.

An overview and demo of i2b2 was presented to a large UCDHS audience at the Health Informatics program in early December, 2008. Since then, an academic license of Oracle 11g was procured, as well as multiple servers that will host the production instance of i2b2. In addition, all Extract, Transform, Load procedures have been built to automate the lifecycle process of extracting data from host systems, de-identifying personal health information and populating a dedicated i2b2 database. Database optimization is currently underway to ensure protection of patient information and accuracy of data provided through the i2b2 interface. Production launch of the i2b2 application is expected in the summer, 2009. Contact: Kent Anderson, kent.anderson@ucdhs.ucdavis.edu

HEALTH INFORMATICS GRADUATE PROGRAM

UC Davis' Health Informatics Program continues to grow

The Health Informatics Program, with its focus on clinical informatics, continues to grow. Seventeen students are now enrolled in the Masters program and thirty students are enrolled in the newly introduced certificate program run in conjunction with UC Davis Extension. The Health Informatics Web site is attracting many student applicants (ucdmc.ucdavis.edu/informatics), as is the presence of the program on Facebook. The annual Health Informatics Conference, on March 7th, was highly successful, attracting approximately 100 participants, and featuring Colonel Ron Poropatich – director of the Telemedicine and Advanced Technology Research Center (TATRC) of the United States Army – as the keynote speaker. The program will operate an informational booth at the annual conferences of the American Nursing Informatics Association and the American Telemedicine Association, both of which are being held in Las Vegas in April, 2009. Contact: Peter Yellowlees, peter.yellowlees@ucdmc.ucdavis.edu

PRIVACY AND SECURITY

Identity and Access Management project update

The Identity and Access Management project represents the first significant joint project between the IT organizations at the UC Davis Health System (UCDHS) and the UC Davis campus. The collaborative effort leverages expertise from both groups and promises to create a better outcome with reduce installation and ongoing costs.

The project goal is to create a joint technology infrastructure to define the identity of all computer users in a central database, define roles and security access rules for all users, and provide common authentication and log-in tools that will manage log-in and access to all computer applications and functions. As the project proceeds, UC

Davis staff will eventually see a dramatic reduction in computer passwords they must use and remember. With the current decentralized log-in technologies (delivered within each software application), it is common for users to have to use and remember 15 or more different passwords.

Technology solutions for the Identity and Access Management (IAM) aspect of the project have been chosen. SUN Microsystems will provide the software for the large and complex effort of managing the numerous computer identities. A contract was signed with NextGate Solutions which will allow the project to move forward by bringing on board a key member of the implementation team. Members from Sun, Aegis, NextGate, Health System, and the campus are scheduled to meet in June to finalize a detailed project plan. Also, the first meeting in a series of biweekly meetings with the executive sponsors will take place in June. The purpose of these meetings is to provide project updates, and bring to the attention of the sponsors, issues that need executive input. A public Web site outlining the project goals will also be launched.

In conjunction with the IAM project, an Enterprise Single Sign-on solution was narrowed down to a single vendor for UCDHS. Confidence testing was completed and a recommendation will be made this summer. The project will include improvements in computer access security and logging as required by a growing number of regulations and computer threats that UC Davis technology, privacy, and compliance staff must manage. Contact: Gastón De Ferrari, project manager, gdeferrari@ucdavis.edu

Identity Finder tool keeps tabs on personal information

A new software tool has been acquired called Identity Finder. This tool was purchased in partnership with UC Davis campus IT. The tool provides the capability to search microcomputers, servers, databases, and storage devices for files and records that contain Personal Health Information (PHI) and Personal Information (PI). As identity information is found, it will be assessed for appropriateness and safe record keeping. This process will support audits and other assessment to comply with HIPPA and the new privacy oriented Federal and State regulations. This tool will be used throughout UC Davis and UCDHS, as similar tools are used to search for identity information at other UC campuses. Contact: Mike Minear, michael.minear@ucdmc.ucdavis.edu, or Teresa Porter, teresa.porter@ucdmc.ucdavis.edu

Email filtering for protected health information

An RFP was prepared and forwarded to Purchasing in April, 2009 to review email filtering software tools. These tools can audit, filter and/or block outgoing emails (emails sent from UCDHS to other organizations) for PHI and PI information. In addition, the tool will provide functionality

to send encrypted emails when confidential data needs to be sent, but must be secured to comply with Federal or State law. Under the direction of the UCDHS Executive Compliance Committee, an updated policy is being created around email usage and auditing as dictated by regulation. Email filtering tools are used by other UC Health Systems. Contact: Mike Minear, michael.minear@ucdmc.ucdavis.edu, or Teresa Porter, teresa.porter@ucdmc.ucdavis.edu

TECHNOLOGY UPGRADES

Vocera upgrade

IT supports over 4,400 Vocera badges giving clinicians instant hands-free communications. The Vocera software was upgraded to Version 4.1 in April, 2009. This version includes new features and improved functionality. The new version includes automatic application-level failover to backup servers, automatically restoring full service within minutes in the event of primary server failure. The auto failover capability is a significant improvement over the current manual failover process that may take 30-90 minutes. The new version also allows off-campus and non-badge telephones the ability to call any Vocera badge. Contact: Craig Solenberger, craig.solenberger@ucdmc.ucdavis.edu

Replacement of Wide Area Network (WAN) to UCDHS clinic locations

For many years, single or dual T1 circuits were used to provide network access to Primary Care Network (PCN) remote clinic locations. Increased clinical use of the electronic medical record (EMR) and Picture Archiving Communication System (PACS) applications has dramatically changed the network requirements for remote clinic sites. Main goals of the network upgrade include increasing bandwidth, improving redundant paths to support network failures, creating the ability to adjust network speeds as required to meet changing computer use requirements, and establishing comprehensive monitoring to ensure uptime and support quick problem resolution.

These goals are being achieved with the deployment of new network components, Cisco routers and AT&T circuits that provide high-speed, adjustable, monitorable, and redundant fiber connections to each location. Working with AT&T, new fiber cable was installed at all Primary Care Clinic locations except the Elk Grove Clinic, which resides in Frontier Communications territory. Contract negotiations with Frontier Communications are in process and new fiber to the Elk Grove Clinic is expected to be installed by July, 2009. Contact: Gary Jellis, gary.jellis@ucdmc.ucdavis.edu

UNIX servers and Storage Area Network to be replaced

The current UNIX servers and storage devices are almost eight years old which falls beyond the typical useful life

and past the deadline for warranty and vendor support. These are critical devices - supporting Epic and other applications. Using UC purchasing negotiated agreements, a vendor was selected and equipment was purchased. The new equipment was installed and readied in March, 2009. Unix technical staff are currently working with application owners to plan and test specific application migrations. Contact: Tony Pinillos, genaro.pinillos@ucdmc.ucdavis.edu

MS SQL databases upgraded to current version

In January, 2008, Microsoft announced that it would no longer provide standard support for older versions of the Microsoft SQL database product (SQL Server 2000 or earlier). As a result, a number of current and planned software applications require the new version. New hardware was purchased and configured to support SQL Server 2005. The new hardware runs on Windows Server 2003, a 64-bit operating system that will boost performance. SQL Server 2005 has several new features that offer better performance, functionality and security. Database administrators are currently working with application owners to plan and test specific application database migrations. Contact: Tony Pinillos, genaro.pinillos@ucdmc.ucdavis.edu

TECHNOLOGY MANAGEMENT

Technology Monitoring (Probes and Monitors)

UCDHS developed and published an RFP for a complete probe and monitoring system, and HP Business Technology Optimization (BTO) was awarded the contract. UCDHS purchased components of the BTO suite of applications which will provide immediate and future benefits for the enterprise. These components require significant customization to encompass the scope and depth of functionality UCDHS needs in order to manage its environment. IT teams, representing various units, have received specialized HP training and are working diligently to complete these modifications.

Once completed, the system will deliver real-time probing and monitoring of all UCDHS' critical systems, providing quick reaction alerts, detailed information, preventative action, and trend analysis. In addition to providing better customer service and technical functionality, this system will save UCDHS in downtime costs and consulting services. Contact: Gary Jellis, gary.jellis@ucdmc.ucdavis.edu

CUSTOMER SERVICE

IT Operations Center scheduled to open soon

Through the efforts of facility and IT staff, an area on the second floor of the Administrative Support Building

is being prepared to become the Operations Center for Information Technology. This space is being reconfigured to support the functions of a call center, technology deployments, and disaster response technology support and management. The new operations center will seat 60 staff comprising Levels 1, 2, and 3 expertises. The center is scheduled to open in May, 2009. Contact: Mike Minear, michael.minear@ucdmc.ucdavis.edu, or Amy Mentjox, amy.mentjox@ucdmc.ucdavis.edu

New Customer Service Management Software application

With the acquisition of the HP Business Technology Operations (BTO) probes and monitor software (see above entry), the HP customer service application was also purchased. This software application is fully integrated with the technology asset, real-time probing, and monitoring functionality. The service application will provide enhanced tools and support more sophisticated service response guideline creation and usage. In the past few months, work to develop the initial version, associated workflows, base guideline repository, and staff training have been completed. Testing is underway, along with the development of new process and operations manuals and procedure documents. Staff training of the new software began in March, 2008 and continued through April, 2009. The initial rollout of the application is scheduled for May, 2009 in conjunction with the opening of the new IT Operations Center. Contact: Mike Minear michael.minear@ucdmc.ucdavis.edu, or Bob O'Connor, robert.oconnor@ucdmc.ucdavis.edu

OPERATIONAL AND FINANCIAL SYSTEMS

Installation of New Employee Health software

UCDHS Employee Health has been using an internally developed application that has not optimally supported the group's needs for some time. The new STIX application is an Employee Health Information system that a number of UC campuses are already using. The system tracks routine immunizations and surveillance; manages all data related to workers' compensation cases and non work-related incidents; and provides a comprehensive reporting module to create reports required for regulatory compliance and infection control. The new system was installed in March, 2009. The old system (EH00) will continue to be accessed by a limited group of users for historical view purposes only. Contact: Amy Mentjox, amy.mentjox@ucdmc.ucdavis.edu

Quantim Coding software upgrade and database conversion

The Quantim hardware configuration includes a total of 13 servers running on an Oracle platform. The software

vendor, QuadraMed, announced that the Oracle platform would no longer be supported after March 31, 2009, and recommended that the database be converted from Oracle to Microsoft SQL for better support and performance. IT and Health Information Management staff partnered to deploy the new database and application software versions. Final system testing began in late November, and the new application version was implemented in January, 2009. Contact: Amy Mentjox, amy.mentjox@ucdmc.ucdavis.edu, or Mary Pat Curry, marypat.curry@ucdmc.ucdavis.edu

National Drug Code addition to medical claims

To ensure Medicaid/Medi-Cal benefits from drug manufacturer rebates, Medicaid/Medi-Cal are requiring the National Drug Code (NDC) codes to be added to all Medi-Cal claims by April, 2009. IT billing support staff partnered with Pharmacy and Patient Accounting staff to design and implement all required system changes to accommodate the addition of the NDC codes. Modifications included changes to the claims process, charge entry screen in Epic/Rx; and facility and professional fee records. Contact: Amy Mentjox, amy.mentjox@ucdmc.ucdavis.edu Contact: Amy Mentjox, amy.mentjox@ucdmc.ucdavis.edu

OnBase Document Management system

OnBase is a document management system that supports the scanning, storage and retrieval of paper documents, photographs, drawings and other types of files. Each department can define the documents they wish to store and the key words used for retrieval. The system accommodates security access functionality that controls access to documents; for example many departments could use OnBase to store documents and secure the files so only their department or function can access their documents. The system was initially implemented in the Dean's office in December, 2008. Planning is currently underway to implement the system in CEO Rice's office.

OnBase will also work with the Epic electronic medical record (EMR) application, and is used at a number of large Epic sites to scan and manage paper medical records. EMR support staff is currently working with the Health Information Management department to integrate with the Epic EMR and expect to work with OnBase vendor support to complete the Discovery and Analysis phase in May, 2009. Contact: Amy Mentjox, amy.mentjox@ucdmc.ucdavis.edu