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TIMES

Technology To the Rescue
Campus Tours Award-Winning Fire Department Web Site

http://cityofdavis.org/fire/pct/

Web site images courtesy of City of Davis

After a locally designed Web site recently gained national attention, technologists here on campus got the chance to meet the man behind the magic. On December 10, IET Mediaworks hosted a presentation by Seth Duffey, Webmaster for the City of Davis. Duffey spoke about the processes involved in designing and implementing a Web site for the Davis Fire Department. He designed the Firefighter Protective Clothing Tour Web site (*http://cityofdavis.org/fire/pct/*) using the Web-design program FlashMX, a software product enabling designers to integrate animation, video, and graphics-heavy elements into Web sites.

The site originally came to the attention of UC Davis technologists by way of Lisa Wilson, programmer for Mediaworks, when she attended the Macromedia Developers Convention in October. Wilson, who first met Seth Duffey at local Sacramento ColdFusion User Group (SacCFUG) meetings (*http://saccfug.com/*), recognized this "great opportunity to learn and share information with other IET and campus groups."

The Firefighter Protective Clothing Tour Web site, developed in Duffey's spare time over the course of a year, was intended to familiarize children with the bulky clothing and equipment worn and used by firefighters, thus mitigating fears children have when confronted with a firefighter during traumatic situations. The site includes dramatic video of firefighters tending to fires, demonstrating ventilation procedures, and donning special gear and shields for both water and grass fire conditions. Duffey reports that since the site went live in mid-October, he has received "a lot of good feedback from kids, parents, teachers and firefighters" who agree that the site is "cool" and "tremendously educational and interesting." Teachers have reported using the site as an educational tool in the classroom, and the fire department recently used the site during their fire-prevention week open house.

By engineering the multiple layers of the site to load individually, Duffey ensured that people with computers of all speeds would easily be able to view the sophisticated site. Visitors can skip quickly from photo albums of gear, to instructional videos on using a fire extinguisher or seeing through the lens of a thermal image camera in a smoky room, to audio commentary from firefighters themselves, and even to a printable firefighter paper-doll cut-out page.

Not only has this dynamic Web site gained local attention, but it also gained national recognition for its presentation of text, audio, graphics and video when it was displayed at Macromedia's Developers Convention in October. Additionally, the site was named Macromedia's Site of

the Day (*http://www.macromedia.com/showcase/archive/archive02/index_november02.html/*) on November 6 and is featured in the 'Video Spotlight' section of the *December Edge* newsletter.

Duffey has worked for the City of Davis Information Services division for three years. His background includes HTML coding, database administration, ColdFusion and Flash. His recent work with Flash for the City of Davis Web site includes both the Firefighter Protective Clothing Tour and the Fire Engine Tour (http://cityofdavis.org/fire/tour/).

Children are not the only ones who have learned from these Web sites. Duffey states he enjoys creating the tours because he learns "new things about Flash and about firefighting."

Learning was certainly a theme throughout Duffey's presentation. He explained how much he had to learn to create the site. The Davis audience was all ears to his tales of arranging photo shoots of fire department employees and their equipment (including 360 degree shots), editing some of the 150 photos taken (some in front of a specialized movie-set style blue-screen), creating interface movies, shooting and editing video of live and simulated fires, obtaining and editing audio of fire engine sirens and other equipment, and incorporating photos, video and audio into Flash. To accomplish all of this, Duffey collaborated with the City of Davis Fire Department staff, and Robert Schulz, Media Services Specialist for the City of Davis. Fire Department staff provided all of the text information for the site, and Duffey worked with Schulz on the image and sound acquisition. Everybody involved helped with

proofing the extensive site. By the end of the whole process Duffey had taken advantage of many software programs such as ColdFusion, FlashMX, Photoshop, Sorensen Squeeze, and SoundForge.

Gerry Russell, Senior Lecturer in Food Science and Technology, was among the 45 UC Davis folks who attended the presentation held in the Silo Cabernet Room. Russell showed up to get some ideas about how to better communicate his Web site needs to specialized programmers. He was impressed by Duffey's Web site and appreciated his explanations of the design trade-offs [of using Flash]. Russell felt Duffey's site demonstrated a wise use of Flash without "falling into the all-too-common generation of glitz."

Erol Layiktez, Programmer for the Office of the Vice Chancellor for Research, chose to attend because he believes that "Flash is becoming more and more important in the design field" for its capacity to allow users to obtain data from any database and its recent integration into the new Palm Operating System.

Always in search of opportunities to share techniques that help campus folks improve education, Lisa Wilson and other Mediaworks staff—the organizers of the presentation—also regularly present at the Arbor's *Meet the Experts* series and provide one-hour presentations on Internet, photography, video tools and multimedia production techniques. Wilson recognizes the importance of these kinds of gatherings: "With new technologies emerging daily, there is a lot to learn, and shared experiences provide us with new perspectives and ideas."
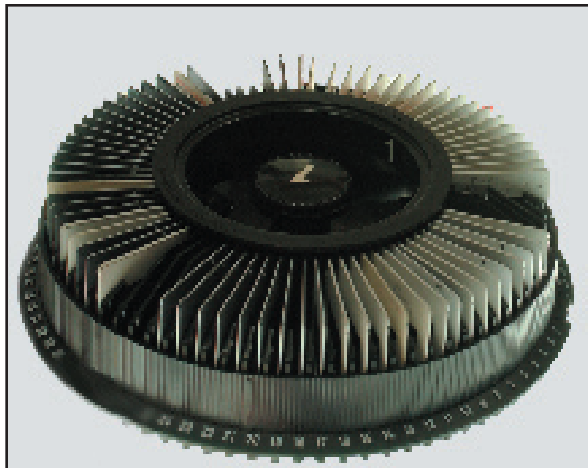
Making the Switch to Digital

Q: I have a large collection of 35mm slides that I often use in my classes. Would it be worthwhile to convert them to digital format? Is there any place on campus that can help me?

A: The benefits of converting slides to a digital format are numerous and compelling. Once your slides are converted to digital images, you will no longer need to tote all those unwieldy carousel slide trays from your office to the lecture hall, and struggling with bulky slide projectors will be a thing of the past. These digital images can be easily dropped into PowerPoint presentations, course Web pages, and even become email attachments you send to colleagues around the world. More importantly, you can place your digitized images on Photo CDs, so you will always have a sturdy high-quality image archive that is much less likely to fade or deteriorate.

There are two ways IET can help you convert slides to digital files. You can either do it yourself at a campus computer lab operated by IET, or avail yourself of IET Mediaworks' services (Mediaworks is the instructional technology and digital media service unit on campus, located in Surge II).

Slide carousels could become a thing of the past now that digital transfer is easy and affordable. *Photo provided by IET Mediaworks.*

To tackle the slide conversion process yourself, you can use one of the two slide scanners in the Meyer Hall Media Lab. When not reserved for classes, this computer room (located in 1154 Meyer) is open for use by the campus community. However, it is important to note that you will be on your own handling any digital image cleanup and optimization (such as color correction or any other kind of image editing). For Meyer Media Lab hours, and available hardware/software, you can visit *http://clm.ucdavis.edu/rooms/* or call the Meyer Media Lab at (530) 752-5215.

To get help from Mediaworks, call 752-2133. The Art and Photography Group in Mediaworks regularly works with instructors to convert 35mm slide collections into digital images. Using a Kodak high production 35mm scanner, Mediaworks can produce digital images in both TIFF and JPEG digital file formats at a very high resolution from both slides and photo negatives. Included in the service is any image optimization or color correction necessary. Standard service takes about two business days, while economy service takes about five business days. This service has become popular at Mediaworks, as faculty recognize the many benefits of digitizing their collections.

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Technology Report Online

Each quarter, Information and Educational Technology (IET) publishes the IET Quarterly Report to inform the campus public of its activities, accomplishments, and contributions to the campus mission. These reports are ideal quick-reads for those intending to stay up-to-date on IET's activities. The latest Quarterly Report spans from October-December, 2002. (Visit *http://iet.ucdavis.edu/whatsnew/index.cfm.*) Previous reports are available for public viewing online at *http://iet.ucdavis.edu/pubs/reports.html.* ¤

Campus Meets USA Patriot Act Deadline
Works with INS to Retain International Visitors

UC Davis currently hosts 1,400 international students and 1,200 international scholars, and those numbers are growing every year. Beyond financial contributions to the campus, international students and scholars enhance both the academic and cultural atmosphere on campus, raising the level of teaching, research and learning on campus.

In order to guarantee the place of these international students and scholars at UC Davis, the campus must comply with new federal laws. The USA Patriot Act, passed just shortly after September 11, 2001, introduced changes in the way the nation's campuses are required to track international students, scholars, and exchange visitors.

Even prior to the passage of the Patriot Act, the federal government was concerned with keeping a database of visitors to U.S. Educational Institutions. In 1996, when Congress passed the Illegal Immigration Reform and Immigrant Responsibility Act, the federal government mandated the creation of an electronic database that can track international students and scholars to ensure that requirements of their visas are being met. Prior to and since 1996, campuses nationwide collected information on their students and reported it to Immigration and Naturalization Services (INS) only upon the INS' request. Campuses gathered this information using their own preferred systems and processes, many of which involved completing and maintaining paper-based forms and records. Now with the new

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The international students and scholars at UC Davis raise the level of teaching, research and learning.

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requirements in place, campuses will be required to automatically report their information and use the information-tracking system preferred by INS, called SEVIS (Student and Exchange Visitor Information System).

By summer of 2000, a federal task force had created SEVIS for the INS. SEVIS was designed to centralize student-tracking information from all institutions at the INS. It is a Web-based database to which campuses can either link their own student information systems, or directly manually enter such information. SEVIS changes the types of information campuses must track; now records of visitors' spouses and children must be kept, as well.

The system was still in pilot version when Congress passed the USA Patriot Act in fall of 2001. The Patriot Act ordered that the INS coordinate all educational institutions to use SEVIS for student tracking by January 31, 2003. Even with a recent deadline extension to February 15, this has been a tall order for many colleges, since the new information system has not yet been perfected. For example, SEVIS initially did not allow campuses to interface their own information databases with the federal system, which, given the relatively rushed deadline, creates significant administrative and monetary demands. As a result, the INS has been working to ensure that individual campuses would be able to leverage their existing database technologies to satisfy the Patriot Act.

UC Davis Acts Quickly

In the past year, the campus has worked carefully to establish an infrastructure capable of tracking students in the way the government requires. UC Davis began its process of compliance in the summer of 2002 when a workgroup was formed by Vice Provost John Bruno, Vice Provost William Lacy, and Assistant Vice Chancellor Jan Gong. The workgroup examined the new federal rules, the UC Davis information systems already in use (such as the Banner Student Information System), and the amount of data currently collected by those systems. To accomplish the task of reporting information to the INS, the workgroup made every effort to leverage the technology already in use on campus and worked with other campus units in proposing the changes to campus business processes, policies and systems necessary for meeting the new federal mandate.

Getting the Technology in Place

In the process of weaving campus data into SEVIS, UC Davis considered immigration information system products and eventually settled on one called FsaAtlas from NewFront Software in October 2002. The FsaAltas system was selected because it successfully manages the information the campus must collect, and it also provides a buffer system that allows designated campus officials to verify accuracy of that information before transmitting it to the INS. "The FsaAtlas system is also easy for end-users to navigate," says Kent Kuo, Associate Director of Communication Resources, IET, who was instrumental in choosing the new immigration system and installing it in the central campus data center.

This newly-installed system will provide the support necessary for managing all of the visa-holding populations on campus. It will also manage special processes necessary to support the tracking and reporting of SEVIS reportable events (such as a change in address, academic status or employment status) to the INS.

Campus Explores Password Technology
Common Authentication System in the Works

UC Davis is looking into making it easier for computer users to manage their Login IDs and passwords. As computer usage continues to expand, so does the number of ways users identify themselves with various kinds of passwords as they enter and available computer applications. "Keeping login secure and user passwords straight should be as simple and efficient as possible," says Robert Ono, IT Security Coordinator for Davis.

Who Are You? What Are You Allowed to Do?
Since the early days of computing, operating system and application developers have struggled with providing methods to permit or deny user access to computer and network resources. The process consists of two steps – authentication and authorization. Authentication allows verification of an identity credential (often a password) supplied by an end-user. For example, upon logging on to a system, authentication is the process asking a person to identify herself or himself with a username and password. Next, the authorization process determines which features the person is allowed to access, based on his or her authentication credentials. For instance, in the campus Web portal, MyUCDavis, each user is authorized to see certain features, based on his/her role on campus (instructors see course management tools, students see course registration options, etc.).

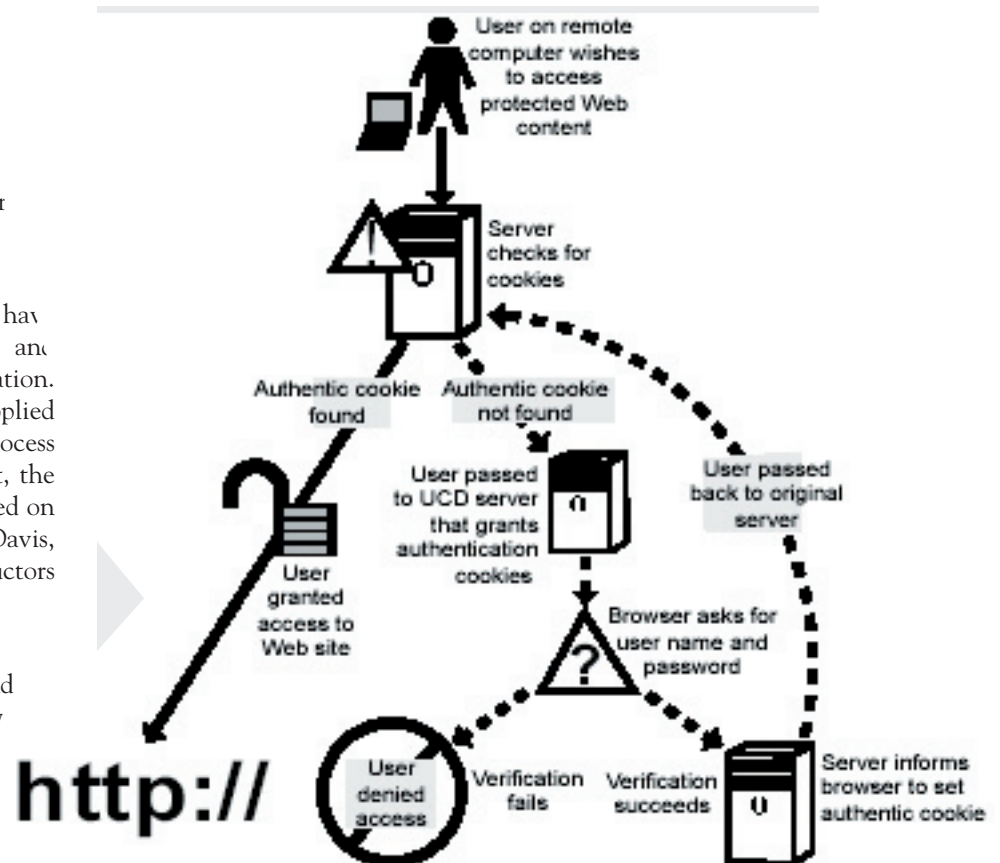### Making Login Easy with Common Authentication Services
Given that many applications require some sort of authentication, it is to user and campus advantage to support common authentication services, since they simplify the process altogether. "Common authentication services would make it possible for technologists to weave multiple systems so users see fewer kinds of login prompts and need to remember fewer passwords," says Ono. Otherwise, we would all have to carry around a notebook storing the long list of each and every one of our user accounts and passwords. Not only would common authentication service make logins easier, it could also ease other authentication processes, such as the one used to grant physical access to buildings, for example.

The New Business Architecture (NBA) initiative (*http://nba.ucdavis.edu*) of the University of California also recognizes the value of a single process for Web-based authentication. In recognition of the need to support common authentication services and the NBA vision, Information and Educational Technology (IET) initiated a project to develop a common authentication strategy for the campus computing environment.

During the spring and fall of 2002, the project members met with technology specialists throughout the UC Davis community and with leading vendors of authentication technology. The discussions led to the formation of a list of long-term requirements necessary for UC Davis to fully support common authentication services. The project team was also able to examine alternative ways for the campus to meet these requirements.

Stronger Passwords Have Priority
In the December final report, the project team recommended the continued expansion of the campus Web-based authentication system, known as Distauth (see sidebar above for more information). The team specifically recommended that the expansion efforts include the development and support of authentication levels. In addition to regular passwords, some systems require hard tokens (a series of number combinations entered into and retrieved from a calculator-like device) or biometric identification (a digital scan of a user's fingerprint, iris, or vocal timbre). Under the proposed approach, use of a stronger credential, such as a hard token, could be accepted for the applications that require a lower level of authentication, such as a password. Thus, users would have to bother with only one mechanism for all the computing applications they sign in to.

What is Distauth?
In the mid-1990s, UC Davis developed and implemented a central campus authentication service for access to computing and network resources. This service implements the Kerberos password that you use to enter MyUCDavis. In the late 1990's, campus technical staff, using the campus Kerberos system, developed a Web authentication system, referred to as "Distauth." Distauth provides Web browser authentication support along with access lists for all secure campus systems.

Expanding Secure Login to Outside Users
In addition, the project team recommended that the campus further explore the advantages and disadvantages of expanding campus authentication services to accept what is known as federated authentication service. Federated authentication service permits individuals without campus computing accounts—such as prospective student applicants, parents and alumni—to access secure Web material using some other form of commonly-accepted user identification. In addition to this effort, the team recommended that the campus continue to participate in UC-wide and other higher education efforts to develop Web-based single sign-on systems.

The recommendations are currently being reviewed. IET is prioritizing and identifying the resources necessary to implement the recommendations. The team's report is available online at: *http://vpiet.ucdavis.edu/advancedprojects/AATPFinal%20Report.pdf/*. Questions should be addressed to Robert Ono at raono@ucdavis.edu

MyUCDavis Offers Portable Email

Every day, about 18,000 people check their email using MyUCDavis, and 12,000 of those people do so from off campus. Web-based email makes this possible. This month, we feature yet another service the portal offers, making it just as relevant to faculty and staff as it is to students.

Portable Email
One key feature of MyUCDavis is its Web-based email application. "Web-based" means that the email tools are located on the Internet, rather than on your personal hard drive (in the Eudora application, for example). Thus, because MyUCDavis email works in an Internet browser such as Mozilla, Netscape or Internet Explorer, it is completely portable. You can check your email from any computer that has Internet access, whether it's your personal computer at home, at work, or in Taiwan…all by logging on to *http://my.ucdavis.edu/*.

MyUCDavis email is particularly convenient when traveling, working from home or using any remote computer. Have you ever tried to get your email remotely when someone has sent you a huge file? If you are using a modem connection, your email may time out before you can get everything downloaded, and if you are paying by the minute for the phone line usage in a hotel, it could get pricey. In MyUCDavis, the email tool does not automatically download attached files to your computer. This means that you can choose whether to download the attachments. The files stay on the server where your UC Davis email is held (here on campus) and you can download the file at your convenience when you're at a computer that can handle the download. You choose to download by simply clicking on the "Download" link at the bottom of the email message. Further, if you set up and maintain your address book using MyUCDavis email, it— and all your saved emails— travels with you. If you access your

My **UCDAVIS**   What's In It For Me?

New Software Web Site

http://my.ucdavis.edu/software/

A new feature has been added to the MyUCDavis portal that allows you to download free software and order programs distributed by the Software Licensing Coordination Team (SLC). The new feature offers services designed to make obtaining software easier and includes:

- Information on more than 60 software products (such as anti-virus, email and Internet programs) for all major platforms (Mac, Windows, UNIX, etc.).
- The ability to download free or site-licensed products directly from the site. This includes easy, automated access to the "Jukebox," the server used to download software. The site also links you to other vendors, such as the Technology Resources Center (TRC), the campus' reseller for a variety of software products, so you can easily purchase products from vendors.
- The ability to search for all products, using a variety of criteria.
- The option to purchase some site-licensed software using a departmental billing ID or DaFIS account number and download immediately (currently available are Norton Anti-Virus, ArcGIS, ArcView, Ghost, and Mathematica). SLC is looking into making more products purchasable from the site in the future.

Accessing the Site

To access the new software site, you can visit *http://my.ucdavis.edu/software/*. The former Web sites found at *http://slc.ucdavis.edu/* and *http://software.ucdavis.edu/* will automatically redirect you to the new site. For security reasons, you will need to login with your UCD LoginID and Kerberos password (the same password you use to log in to MyUCDavis). For more information on how to access MyUCDavis, you can go to *http://my.ucdavis.edu/project/login_info.html*.

If you are already logged into MyUCDavis, click on the "UCD Resources" tab (in the top navigation menu) and select *Software*.

More information about the new site, including an FAQ, is available on the Software Site Fact Sheet PDF available at *http://iet.ucdavis.edu/softwarefactsheet.pdf/*.

If you have questions or suggestions about software licensing, please contact the Software License Coordination Team at *software@ucdavis.edu*. For help accessing MyUCDavis, contact the IT Express Computing Help Desk at 530-754-HELP or ithelp@ucdavis.edu.
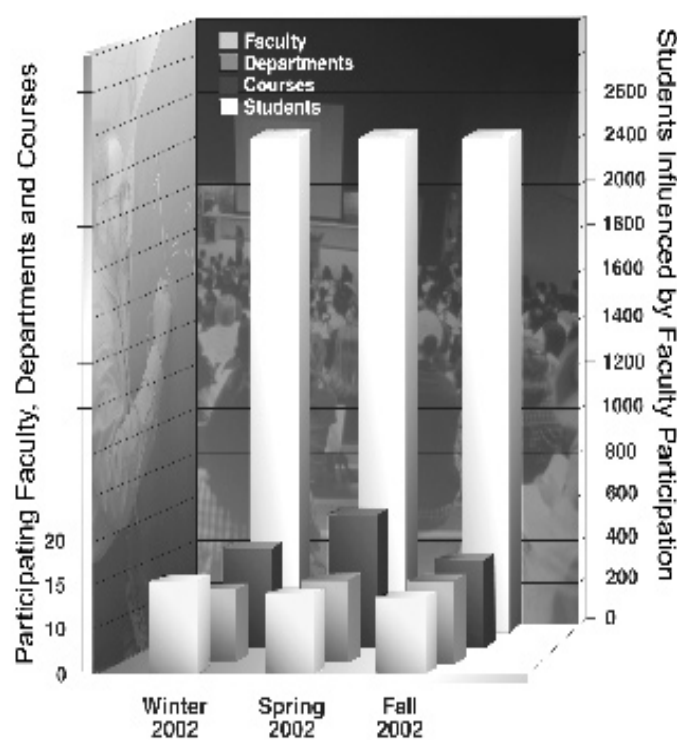
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ET Partners' First Three Quarters

Ripple Effects In Educational Technology
In just three quarters' time at UC Davis, the ET Partners program has had a far-reaching effect. Pairing specially-trained students with instructors who work together to bring educational technology into the classroom, ET Partners has seen how a mere handful of partnerships have helped to influence the learning experience of more than 7,000 students. This quarter, a thousand more students will attend classes taught by participating faculty. The innovative program continues to draw interest from faculty and will be featured at an upcoming EDUCAUSE conference. To read more stories about the program, you can visit *http://ittimes.ucdavis.edu/indexfiles/etpartners.html*.

email from a departmental email server (for which the address contains the name of your department, such as: *username@math.ucdavis.edu*), you can still check your email from MyUCDavis. Just be sure you enter your departmental email account and password.

In addition to being convenient, MyUCDavis email is secure. You won't have to worry about anyone else seeing your email. Just don't share your password or login with anyone.

To use MyUCDavis email:

1. Go to *http://my.ucdavis.edu/* and login with your UCD LoginID and Kerberos password. (If you need help with this, contact the IT Express Computing Help desk at 754-HELP (4-4357).
2. Once logged into MyUCDavis, click on the email icon at the top or navigate to *My Tools→Email* to immediately gain access to your inbox.
3. Once in *Email*, you have the same main options available to you in most other email programs. You can compose, send, and reply to messages; set up folders to organize your messages; set up and maintain your address book; and configure the program with options such as adding a signature to all your outgoing messages. If you need help using any of the features in MyUCDavis email, contact IT Express at 754-HELP (4-4357).

The ever-growing list of MyUCDavis features that staff and faculty may find useful is available at *http://my.ucdavis.edu/project/features.html*.

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IT Security Symposium
Date Set, Presentations Sought

Most computer users and administrators readily acknowledge that the number of computer security incidents is increasing. In answer to the myriad of unauthorized break-ins, attacks, and identity theft incidents that cost system administrators and programmers time and effort, Information and Educational Technology (IET), in conjunction with the University of California Office of the President, is pleased to announce an IT Security Symposium, to be held on campus June 18-20, 2003.

A program committee with representatives from IET, the Technology Infrastructure Forum and the Technology Support Program is developing a "hands-on" conference, offering a lab environment for learning tips and practices for securing computers. The symposium will be drawing from campus security resources, other UC campus IT specialists and nationally recognized IT security experts to conduct the lab sessions. In addition, a special management track will be offered for non-technical managers and supervisors. This track will cover such important topics as management expectations of security administrators, and building and supporting solid information security programs.

In hopes that the symposium will leverage expertise of campus folks, organizers are seeking proposals for presentations. The deadline for Proposals is February 28, 2003. The Call for Proposal form, along with a schedule and other information is available online. Visit *http://ietsymposia.ucdavis.edu/security/index.cfm*. Registration for attendance will begin in April.

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The project team expects that all existing student, scholar, and exchange visitor information will be converted over to FsaAtlas by late April. Anne George, Interim Co-Director for Services for International Students and Scholars (SISS) on campus, says that SEVIS will eventually make administrative demands easier, thus making it easier to welcome our campus' valuable visitors. "Once SEVIS is fully operational," she explains, "applications for work authorization, change of status and new or replacement documentation will be handled electronically resulting in faster processing of applications." This will help UC Davis attract and retain international students and scholars that are so integral to the success of this campus.

For a thorough background about the USA Patriot Act as it affects college campuses, search the article archives at EDUCAUSE (http://www.educause.edu/) and The Chronicle of Higher Education (http://www.chronicle.com/), both publications that have covered this issue closely, and from which this article borrows.

Kent Kuo (IET) and Anne George (SISS) contributed to this article.