

The Digital Library Comes of Age

Historic Photographs Headed for the Internet

by Anne Jackson, Information Technology Publications

When Jervie Henry Eastman was bouncing around the dusty backroads of Northern California taking photographs during the early part of the century, he couldn't have imagined that his pictures would one day be making technological history at the University of California. But that's exactly what will happen when UCD's newly acquired

Editor's Note: The University of California library system is putting an ever-increasing number of published materials at your fingertips through online databases. Many of the databases that can be accessed through the UC library system are described on Page 6.

Eastman collection of historic photographs becomes the first of the campus's extensive museum collections to go on the Internet.

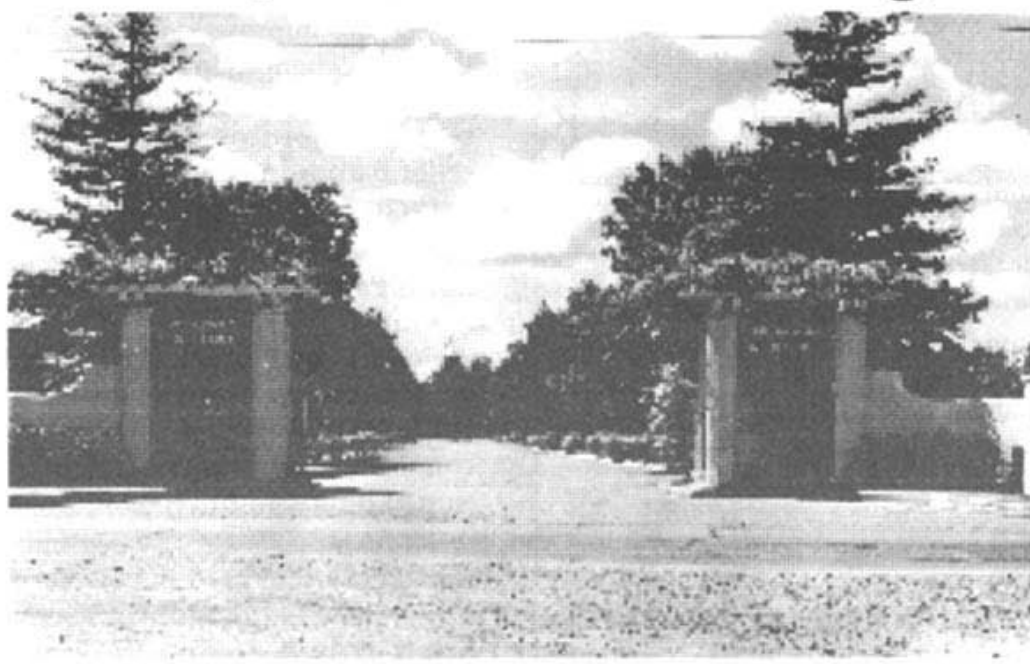
Eastman was a postcard photographer whose territory covered

roughly the northeast quadrant of California, along with parts of southern Oregon and the Mendocino coast. His collection of 12,500 original negatives and an as-yet-uncounted number of prints includes photographs of American Indians in native dress as well as pictures of the eruption of Mount Lassen, the building of Shasta Dam, area logging operations, and small towns and scenic landscapes of the entire region. Early images of the UCD campus and the city of Davis are represented, and because Eastman and his partner, Mirl Simmons, were amateur pilots, some of the photographs are early aerial shots. Although Eastman and Simmons took most of the photographs themselves, the collection also includes pictures they bought from other Northern California studios.

The collection, which spans the years from about 1890 to 1960, was donated to the Shields Library Special Collections Department last year by Anne Fisher of Susanville, who bought Eastman's postcard business after he died and Simmons retired.

"It's a unique body of work photographically," says Special Collections Head John Skarstad, "partly because there was an ethic among postcard photographers of the time of not intruding on each other's territory, but

Continued on Page 7



Eastman Originals Collection, Department of Special Collections, University of California Library, Davis, California.

An early view of the campus front entrance by photographer Jervie Henry Eastman.

Art Library Begins Mounting Collection on Computer

by Catherine Curran, Information Technology Publications

In the near future, when a geology student goes to the Art Library looking for pictures of volcanoes, Bonnie Holt won't have to paw through hundreds of slides and prints.

Instead, she will go to the computer and do a "volcano search."

In a matter of seconds, several ex-

amples of artwork with volcanoes will be displayed on the screen.

Over the past two years, Bonnie Holt has been working to create a pilot database from the Art Department Slide Library. She has teamed with Information Technology to put the Art Library's collection of slides and mounted reproductions on computer. Using QBIC software from IBM and an XTerminal

Continued on Page 7

I.T. and SD&PS Launch Brown Bag Series



To keep the campus abreast of trends in information technology, the Division of Information Technology and Staff Development & Professional Services are cosponsoring a series of brown bag presentations this month. The brown bag presentations are part of the Information Technology Outreach Program and will continue in the 1995-96 academic year. All members of the campus community

are welcome to attend the presentations, which are scheduled from noon to 1 p.m. Dates, topics, and locations are as follows:

- **Wednesday, May 17: Network 21 Status Update, Silo Cabernet Room.** Carole Barone, Associate Vice Chancellor for Information Technology, will provide a project status report and answer your questions.
- **Wednesday, May 24: Computing Support: Where Is It When You Need It? MU East Conference Room.** Information Technology's Joan Gargano, Zack O'Donnell, and Tim Leehane will describe distributed computing on campus, tell how it applies to your work at the university, and how computing support is accomplished in a distributed environment.
- **Wednesday, May 31: Hardware/Software Recommendations, Silo Cabernet Room.** Joan Gargano, director of I.T.'s Distributed Computing Analysis and Support (DCAS) will provide tips that will help you plan your computing purchases.

The Brown Bag series is just one of many forums Information Technology and Staff Development are using to keep the campus up to date on new developments in information technologies. To suggest topics, send e-mail to neharrington@ucdavis.edu or call 752-5946.

For further information on events sponsored by Information Technology and other groups interested in promoting the use of information technology, please see the *I.T. Calendar* on Page 8.

On the Inside

- **Outreach Program Underway** Page 2
- **CAIT's Corner** Page 3
- **Services Change to Meet Computing Needs** Page 4

E-mail



Stories Welcome

Does it make you want to scream when an e-mail message arrives with nothing in the subject line? Send your e-mail pet peeves and horror stories to itpubs@ucdavis.edu. We'll include them in our soon-to-be-published *Guide to E-Mail Etiquette*.



MSOs Form Users' Group

Marilyn Kays of Environmental Studies and Pomology and Judy Martin of Plant Pathology and Nematology are forming an ACCESS 2.0 Users' Group. The group will explore ways in which databases can be used to streamline administrative functions. The group will meet from 9 - 10 a.m. on the third Tuesday of each month. Contact Marilyn Kays for more information and the room location at mmkays@ucdavis.edu.



Quotables

"We think it would be irresponsible for the administration to ignore the fact that encryption could be used for criminal activities as well as legitimate business purposes."

Mike Nelson
White House Technology Advisor

"I don't like to see criminals use this technology. If I had invented an automobile and was told that criminals used it to rob banks, I would feel bad, too."

Phil Zimmermann
Programmer and creator of Pretty Good Privacy (PGP) encryption software

Courtesy of Edupage

Information Express Is Now Open in Shields

The location is the same, but the name has changed from Copy Services to Information Express. The service is a collaboration of Repro Graphics copy service department and I.T. CAP-Walk-in Facility.

Information Express is conveniently located on the first floor of Shields Library. In addition to providing network publishing and photo copy services, Information Express is a place where campus clients can get information on how to access Internet resources.

The Information Express copy center can make copies of library materials, including those that can't be removed from the premises (microfilm, microfiche, special collections, etc.).

Information Express also operates as a satellite of Repro Graphics, and can accept and service jobs that require services provided by Repro Graphics (i.e., copyright permissions, course readers, banners, color copies, graphic design and a wide variety of binding services).

General computing information on electronic mail access can be obtained at Information Express. Consulting on the Unix, DOS/Windows and the Mac platforms is available. Other services include software distribution, recovery of damaged diskettes, file translations and I.T. publications and documentation. If unable to assist you, staff will refer you to the appropriate I.T. resource.

Hours for the technology consulting services part of Information Express are Monday through Thursday 8 a.m. - 7 p.m. (and until 9 p.m. for the copy center), Friday 8 a.m. - 6 p.m., and Saturday and Sunday from 1 - 5 p.m. Students and the public can pay for copy services with cash or check, and departments can charge expenses to their UCD-ID number. If you have any questions, you may visit Information Express or call 752-1622 for copy questions and 752-2548 for computing questions.

Enigma Logic Password Information

To improve password security when accessing the Banner Student Information System, the Enigma Logic Password Security System is being implemented. Information is being sent to departments that have access to Banner but have not already made the transition to Enigma Logic. The mailed information will include the types of tokens available and the procedures for obtaining them. The information will be mailed through June 1995.

The Enigma Logic mailing includes information to help departments choose the token type that is right for their environment. Also included will be a list of existing accounts eligible for hard tokens.



The Insider

The Insider provides a look at the people, events, and issues facing the Division of Information Technology.

Supporting Your Networking Needs

If you're a network administrator and you're having trouble with your networked computers, or



Katie Stevens

even if you just want to find out how to link up to the campus computer network, **Katie Stevens** is the person to call. Stevens is the campus Network Administrator Coordinator, and as such, provides support for network computing on campus.

If a department calls wanting to be put on the network, Stevens will guide them through the process and let them know about upcoming training workshops.

She also makes life easier for department Network Administrators. If a department calls to report that a software program worked on four networked machines but won't work on a fifth, for example, Stevens will troubleshoot to solve the problem. "Most of the time," she reports, "we can get it going."

Stevens also created special keyboard maps to help those using the BANNER student information system navigate through the many BANNER functions and posted the maps and accompanying instructions on the Campuswide Information System (CWIS) to give network administrators easy access.

Currently Stevens is working to make sure that all network administrators are represented on the campus network administrators mailing list (UCD Net-Admin@ucdavis.edu) to facilitate sending messages about upcoming courses, for instance, or instructions on how to create a mailing list or how to request a host name to get into the World Wide Web server.

Some 90% of departments on campus are now using e-mail, says Stevens, but many of them are connecting over modems. The advent of Network 21 will enable departments to move beyond e-mail to use many other Internet services not readily available through modem-based connections. But using those new services will require changing some of the tools they're using, says Stevens. Working with Stevens and other I.T. staff will help departments make the most of Internet services and the other advantages offered by Network 21.

To contact Stevens, call 752-3426, or send e-mail to dkstevens@ucdavis.edu.

Implementation Underway for Campus Outreach Program

"This is the most important thing happening in Information Technology right now," is how Associate Vice Chancellor for Information Technology, **Carole Barone**, sums up the implementation of the Information Technology Outreach Program (ITOP).

In 1994 Carole Barone appointed a task force to design an outreach program that would help the campus adjust to rapid changes in information technologies. The ITOP task force examined how changes in information technologies are impacting the way business is conducted throughout the university, and presented a report based on those findings to associate vice chancellor Barone in January of this year.

Information Technology is now implementing recommendations made in the ITOP report. Chairing the implementation effort is **Paula King**, Assistant Director of I.T.'s Information Resources group. As implementation coordinator, King is overseeing the work of the ITOP Oversight Committee and four subcommittees: Communication and Outreach, Recommended Solutions, Technology Literacy, and Technology Support. All committees have campus representatives from outside the Division of Information Technology.

The campus is already beginning to see work of the ITOP implementation group. A *Hardware Solutions* document offering tips on how to configure office computing systems was published in April. This month, Information Technology in conjunction with Staff Development & Professional Services, will launch a series of lunchtime presentations (See story on Page 1).

Implementation of a departmental Technology Support Program is underway, and selected departments will begin participating in the pilot program in June.

For further information about the ITOP program, contact Paula King at 752-0342 or send e-mail to pmking@ucdavis.edu.

Designing Sites for the Internet

No one would accuse **Ken Weiss** of shying away from the big stuff. As a programmer/analyst with I.T.'s Distributed Computing Analysis and Support team, his job is to facilitate the use of computing network tools on campus and thereby help expand access to electronic information resources and services.



Ken Weiss

Along with **Steve Faith**, also of DCAS, he maintains UCD's World Wide Web server, the UC Davis Home Page, and the DCAS Home Page. He is also the UC Project Manager for the Whois++ testbed project, which will expand the online white pages Whois directory protocol to the entire UC system—and perhaps ultimately to the whole world through the Internet (See article, Page 4). In addition, he is the project leader for a joint I.T./Library endeavor to develop distributed multimedia databases on campus.

Weiss is also working to help instructors use information technology in teaching, particularly through high-speed data networks. So far he has helped develop applications in political science, environmental studies, entomology, religious studies, computer science and English. At the same time, he is working with IBM on a multimedia indexing project that makes it possible

to search a collection of images in a database according to color, shape, pattern, texture and other visual attributes. And he coordinates I.T. activities aimed at implementing digital libraries and at developing distributed multimedia databases on campus.

Does he enjoy the challenge? "That's why I show up for work every day," he says.

Service Award

Kerie Holck, Acting Assistant Director of Repro Graphics at UCD has been awarded the Customer Service Excellence Award from the Society for Service Professionals in Printing, a national industry information and support organization. Holck was one of only five printing professionals in the country to win the award. Each award winner was nominated by letters from a peer, a supervisor, and a customer. Holck has been with Repro Graphics for 15 years and oversees job planning, outside purchases, billing, customer service, and design.

Site License Coordinator

Effective May 15, **Dan Todd** will assume the eagerly awaited new position of campus Site License Coordinator. Todd is currently working in the I.T.-CAP as a computer consultant. More information on the role of the Site License Coordinator will be published in the future.

Holistic Computing

Individual Attitude Plays Big Role in Your Overall Computing Health

by Anne Jackson, Information Technology Publications

If your work causes you physical pain or leaves you wiped out by the end of the day, a few simple adjustments in your workstation or work habits may be all that's needed to solve the problem. But don't neglect the bigger picture.

What you eat, whether you get enough exercise, whether you smoke, all contribute to how your body handles work and to how you feel by five o'clock.

Ford gives presentations on how to adjust computer workstations.

That's the message from Janet Ford of Environmental Health and Safety whose job it is to advise UCD departments and individual employees on how to avoid the aches and pains and fatigue that result from not observing sound ergonomic principles.

Janet Ford shows how **not** to sit at your computer.

For those of us who work at computers, Ford offers one piece of comforting news — that the dreaded carpal tunnel syndrome so often suspected as the culprit in computer-related injuries actually turns up infrequently and is most often linked to other risk factors: women are much more prone to carpal tunnel syndrome than men, for example, with hormones, thyroid problems, smoking, and genetics all playing a role.

Usually pain in the hand and wrist that develops after prolonged work at the computer results from simple tendonitis, says Ford. Tendonitis, meaning simply an inflamed tendon, is caused by activities that strain the tendon beyond capacity, such as strong exertion, unnatural positioning, or repetitive movement. A tendon works like a bike cable, moving back and forth inside a sheath, says Ford, who is a

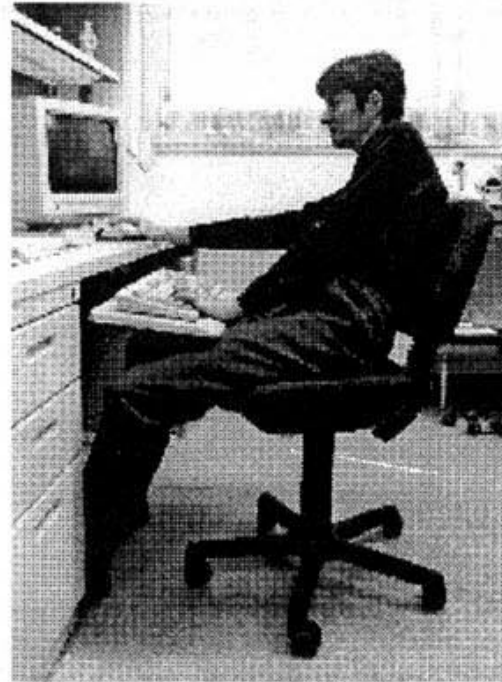


Photo by Jim vonRummelhoff

Physical Therapist and who also holds a Master's degree in Biomechanics.

"If a small injury develops and you ignore it, the inflammation can spread along the length of the sheath. The lesson is, back off the activity and get treatment right away, not two months later. Your body can handle most of these injuries if you address the problem early," says Ford.

"The bottom line is, it's not just how you sit at your computer, it's your whole attitude toward health and well being that's going to make or break the situation."

For departments wanting to know how to set up or adjust workstations ergonomically, or for individuals having problems, Ford will come out and give a 45-minute presentation or offer specific problem-solving advice.

Often simple adjustments can make a big difference. A few years ago several of the employees of one campus department began complaining of aches and fatigue soon after receiving new computer furniture. They called Ford, who came out and discovered that the furniture company had installed all of the furniture at the same height.

These days a big problem among campus computer users is mice — that is, increased use of the mouse as more and more people switch over to Microsoft Windows. The difficulty is that existing workstations often have no room to accommodate a mouse next to the keyboard where it belongs, so workers end up improvising a spot farther away. That's bad for two reasons, says Ford.

"If you have to reach for the mouse, that can cause you to manipulate the mouse mainly from the wrist instead of distributing the movement over the whole arm, and reaching out causes 'the shoulder to round forward, leading to soreness and fatigue of the arm and shoulder."

All of that can be solved by just moving the mouse to a new location," says Ford.

And scoot in close to the keyboard — 50 percent of people reach out too far, says Ford. "Figure out why you want to sit so far back. Maybe the monitor is too close. Try moving the monitor back, but sit closer to the keyboard. Your elbows should be at your side, along your seamline."

As Ford points out, it is the university's responsibility to provide proper equipment and a proper work environment and training. "But it's the responsibility of the person to keep themselves healthy, to utilize equipment properly, and take breaks. People forget about that part," Ford says.

15 Ways to Practice Safe Computing

Observing ergonomic principles and following good work habits will help prevent aches and fatigue and boost productivity. The reason is that poor postures force the body to expend more muscle energy. Janet Ford of Environmental Health and Safety offers the following checklist to help computer users adjust workstations and improve work habits. For more advice, or for help with specific problems, call Ford at 752-5408.

1. Make sure your chair height allows you to sit with your feet flat on the floor (or on a footrest) with your thighs parallel to the seat and knees bent at about a 90-degree angle. (You don't have to sit that way all day—in fact, it's good to wiggle around — but you should be able to achieve this L-shaped position.) Remove any boxes or other items from under your desk so that you can stretch out your legs.
2. Raise or lower the chair back if necessary so that the chair supports your lower back.
3. Make sure your keyboard is at elbow level, that your elbows are bent at 90 degrees, and that your arms are at your sides as you work, not stretched out in front of you. If you find yourself sitting back from the computer because the monitor seems too close, move the monitor back and sit closer to the keyboard. If the work surface isn't large enough to allow the monitor to be moved back, add a keyboard tray.
4. Keep the mouse next to the keyboard and at the same level.
5. Use your whole arm to move the mouse. Don't concentrate movement in the wrist and hand. And hold the mouse loosely, not in a death grip.
6. As you use the keyboard, keep your wrists in line with your forearms — don't drop your wrists up or down. Avoid wrist rests, since these tend to keep the wrist stationary while the fingers and hand do all the work.
7. Position the monitor at least 18 inches away and directly in front of you, not off to one side. If necessary, control the lighting in the room to prevent glare on the monitor screen.
8. Make sure the top of the monitor screen is at or just below eye level. If you wear bifocals or trifocals, make sure you're not tilting your head back to see the monitor.
9. Use a light touch on the keyboard and keep your fingers, forearms, and shoulders relaxed.
10. If you spend a lot of time on the telephone, use a headset rather than cradling the phone between your ear and shoulder.
11. If you must glance frequently at reference materials as you sit at the computer, use a copy holder.
12. Take frequent short breaks throughout the day to relieve fatigue. At least every 45 minutes, benefit your circulation by standing up.
13. Change body positions frequently as you work.
14. Take 30-second vision breaks throughout the day by looking out a window or at a distant object. Focusing at one distance all day forces your eyes to hold an isometric contraction for long periods.
15. Exercise aerobically.



Do You Want to Try Something New?

A joint project of the General Library and the Division of Information Technology, the Center for Advanced Information Technology (CAIT) is located on the first floor of Shields Library. Hours are 9 a.m. - noon and 1 - 4 p.m., Monday through Friday. CAIT's Corner is brought to you by the CAIT staff.

New Hardware

We now have an Austin Pentium 90 with 40MB RAM and a 1GB hard drive. It has a PCI bus, 64-bit video card and a built-in 14.4 modem. It is running Windows NT, and will serve FTP and HTTP files. This machine is being used for administrative purposes, but you are welcome to come in and take a look at it.

We also have two new machines on loan to us from Apple Computer, Inc. — a Performa 6115CD and a Workgroup Server 6150. Both machines have the PowerPC 601 microprocessor. The Performa 6115CD has 8MB RAM, 350MB hard drive, a double-speed CD-ROM drive and a GeoPort Teleport 14.4 Fax Modem. The Workgroup Server 6150 has 8MB RAM and a 500MB hard drive.

New Software

The software listed here is new in the CAIT this Spring. To evaluate any of these titles, please give us a call and schedule an appointment.

- Freehand 5.0 for the Mac by Macromedia
- Perfect Office for Win by Novell
- Delphi for Win by Borland
- Stata 4.0 for Win by Stata Corp.
- Insignia Solutions Soft. Library for Mac and PC by Insignia
- 5 Random
- Superbase '95 for Win by Superbase Inc.
- PixelPaint for Mac by SuperMAC
- Peachtree Accounting 2.0 for Win by Peachtree FileGuard for Mac by Highware
- Pixar Typestry 2.1 for Mac by Pixar

Tech Talk

Macintosh clones. Yes, it is true. The Macintosh architecture is going to be built into computers produced by manufacturers other than Apple. As many as 50 vendors will be competing for different markets in the once-strictly Apple arena.

CAIT Projects

To support the burgeoning campus interest in establishing sites on the World Wide Web (WWW), the CAIT offers PubWeb, a Web server available to departments, faculty, and ASUCD recognized clubs or organizations. This service is designed for those who 1) do not have network connections, or 2) do not have the hardware for a proper WWW server. The information that is put on PubWeb can be stored there for a one-year period (negotiable). PubWeb uses a Macintosh WGS 95 running system 7.1.

Groups that would like some coaching on how to write a home page, can request a short lesson in HTML basics. Information can be transferred to PubWeb from Unix, PC, and Mac systems using either floppies or FTP. If you are interested in establishing a home page on PubWeb, call 752-6387 to schedule an appointment.



Network News

• **Radio Resources on the Net:** The North American Network's RadioSpace on the World Wide Web offers scripts of news events, sound bites, a list of potential interviewees, and a link to 200 U.S. radio stations.

The Web site is free to users and is sponsored by organizations that provide the information. Users are encouraged to share their own tips for morning-show comedy routines or rewriting scripts. (*Broadcasting & Cable* 4/3/95 p.39)



• **Encyclopedia Is Changing:** The world's oldest continuously-published English language encyclopedia is seeking a cash infusion, and possibly even a new owner, as it mulls over strategies for catching up to its multimedia competitors. Encyclopaedia Britannica is published by the William Benton Foundation, a charitable trust affiliated with the University of Chicago. "Technology and the information age have radically transformed our landscape, and will require our company to make a significant transition from our historical past," says the company. Last year the company made its 44-million word database available online to college and university students, and it released an abridged version on CD-ROM this year, but sales for the \$995 product have been limited. (*Financial Times* 4/7/95 p.18)

• **Global Community College:** Jones Education Networks is teaming up with the League for Innovation in the Community College to create The International Community College. The cable company's education division and the League's member institutions will supply the educational content, which will be distributed over Jones's global satellite and cable network. (*WCET Communique*, Mar. '95 p.16)

• **Online Commerce:** The U.S. Chamber of Commerce's new International Business Exchange (IBEX) will allow companies with Windows-based software and a modem to link up with business partners throughout the world. AT&T will provide the network, Dun & Bradstreet will provide links to its databases, SHL Systemhouse will build the systems, the Global Business Alliance will distribute IBEX, and the electronic data interchange will be provided by GE Information Services. (*Information Week* 4/10/95 p.32)

• **Distance Learning in Maine:** The Chancellor of the University of Maine has resigned because of faculty opposition to his "distance learning" plan that would have created an eighth campus devoted exclusively to televising instruction for use on the other seven. A faculty critic of the plan said that the faculty weren't opposed to distance learning as such, but that "we didn't accept the particular technology that was being pushed on us. It wasn't interactive two-way television, but one-way television and two-way voice." (*New York Times* 4/4/95 A8)

• **Who's on the Net?** Married couples make up 53% of Internet users, with unmarried males comprising 28%, unmarried females 11%, and other families 8%, according to NPD Group Inc. (*Investor's Business Daily* 4/3/95 A4)

• **Is There a Mom in the House?** Fifty-nine percent of households with a college-educated mother own a PC, according to

Changes Implemented to Keep Pace with Computing Needs

by Dana Drennan, Information Resources

To keep pace with the growing demand for both local and global information resources, Information Technology is constantly looking at ways to better manage central computing systems, while maintaining system security and accessibility.

To achieve these goals and satisfy the diverse needs of the campus community, Information Technology will be implementing several changes in computing services over the next few months. Changes include the following:

• **E-mail Storage:** Information Technology is now enforcing quotas on the amount of e-mail you can store on central computing systems. If your electronic mail file on the central campus computer system (e.g., Rocky, Bullwinkle) reaches 2 MB, you will be able to compose mail, but messages sent to you will be returned to the sender with a note explaining that the recipient's mail file has exceeded its quota.

The quotas will be enforced automatically by the operating system. The policy directly affects those who use Pine and other e-mail programs that run on central computing systems. It also will affect Eudora users who have the program configured to store messages on a central campus server.

Information Technology encourages those interested in archiving large volumes of electronic mail to use Eudora or another e-mail program that allows you to store electronic mail on your personal computer. Programs like Eudora (available free of charge to campus users) allow you to store electronic mail on your hard disk.

Information Technology recognizes that there are special circumstances that would require you to use additional

Information Technology encourages those interested in archiving large volumes of electronic mail to use Eudora or another e-mail program that allows you to store electronic mail on your personal computer.

diskspace on the central system. To apply for an additional allocation of disk space, you can retrieve the "Application for Additional Disk Space" from the Campuswide Information System. Using gopher, follow these paths: *The Campus /Using Computers.../Computing Policies*.

Send the completed application to sysadmin@ucdavis.edu.

• **VMS System Upgrade:** To accommodate the need to run new software used for scientific and statistical analysis, the Open VMS operating system will be upgraded to 6.1 this summer. There will be minor changes in some DCL commands (e.g. the /PAGE qualifier), but don't expect to see a lot of obvious changes. Any modifications made as a result of the upgrade will be posted to the online help and to the CWIS.

• **Restriction of .rhost Files:** To protect the security of campus computing systems, Information Technology will enforce its policy restricting the use of .rhost files. Because they allow users to connect to certain hosts without a password, .rhost files can pose a threat to system security. Currently, the only allowed .rhost files are those needed for specific applications to run, in which case they are allowed to remain on the system only while the application is running.

Beginning June 19, 1995, all .rhost files will be automatically removed from central campus computing servers. In Fall

1995, Information Technology will implement a .rhost-registration program for those users with a demonstrated need to use .rhost files. We will not allow .rhost files solely for the convenience of logging onto the Information Technology servers without having to provide a login-ID and password.

Beginning Fall Quarter 1995 users caught violating the .rhost policy will have their accounts suspended without warning.

• **Password Improvements:** The use of the proactive password checker, `passwd+`, written by Computing Sciences Professor Matt Bishop has enabled Information Technology to extend password lifetime to one year. The system will inform you when your password needs to be changed.

• **New Login Name for Accessing Central Servers:** You no longer have to pick a server (e.g. Chip, Dale, Rocky & Bullwinkle) when logging into the campus computing system. You can now login by typing the node name ISUN at the Request prompt. ISUN will connect you to the server with the least amount of traffic at the time. For more efficient access and better performance, we urge you to login with the ISUN name.

For further information contact Dana Drennan at 752-0235 or dldrennan@ucdavis.edu.

Project Is Testbed for Global White Pages

Funded by National Science Foundation

Today the campus, tomorrow, the world. That's the outlook for the Whois++ project underway at UCD under the direction of I.T.'s Ken Weiss. Whois, of course, is the online white pages directory that allows us to find the e-mail address of any UC Davis account holder through gopher with the stroke of a key. Similar Whois directories in place at other campuses can be accessed through the World Wide Web.

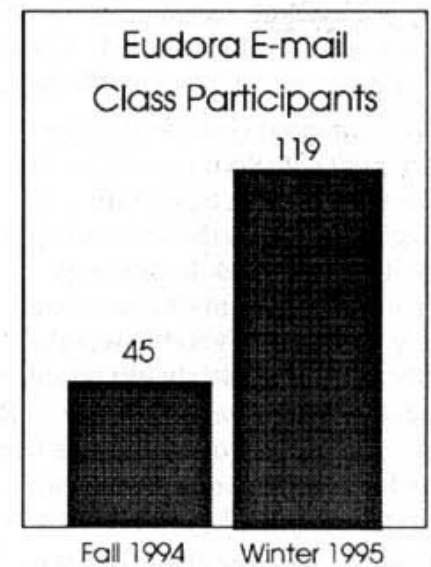
The Whois++ project will expand the Whois search capability to the entire University of California system, enabling a user to track down an e-mail account holder at any of the university campuses simply by typing in Whois++ and a last name. In other words, when Whois++ is in place in six or eight months, it will no longer be necessary to know the name of the campus in order to locate e-mail account holders anywhere in the UC system.

But that's only the beginning. If the project is successful and satisfies

Internet "rough consensus" standards of efficacy, the protocol is likely to be ballooned to global scale — making it possible to find e-mail account holders anywhere in the world without the need for knowing the name of the appropriate server. Instead, Whois++ will go to what Weiss calls "a world centroid" to locate e-mail addresses.

Weiss, who is the UC Project Manager for the National Science Foundation-funded Whois++ testbed project, believes the prospects for global application are good.

"I think it will work," he says, "and in the electronic world, rough consensus can happen fairly rapidly, like (it did) with the World Wide Web — in just a few months." The white pages project was chosen for funding, says Weiss, "because it's a small enough data problem that you don't have to argue about what to include or not include, but it's also applicable to other kinds of information."



Eudora Attendance

Campus attendance in Eudora e-mail classes increased dramatically in Winter Quarter. To meet demand, Information Technology added five Eudora classes to its Winter 1995 Electronic Communication Series. Forty-five attended Eudora classes in the fall, and participation more than doubled in the winter, when 119 attended Eudora training.

A campus site-license agreement makes Eudora available free of charge to faculty, staff, and students. You can obtain the software from the World Wide Web at <http://www.ucdavis.edu/IT/DCAS/SiteLicSoft/software.html>

Continued on Page 5

Workshop Introduces TAs to a Variety of Networking Tools

"Using Electronic Communication in Undergraduate Courses" was the theme of an all-day workshop for Teaching Assistants (TAs) held on Friday, March 31.

Sponsored by the Teaching Resources Center, the workshop introduced participants to e-mail, newsgroups, gophers, the Internet Relay Channel, and the World Wide Web. The workshop accommodated 40 TAs, who were nominated for participation by department chairs.

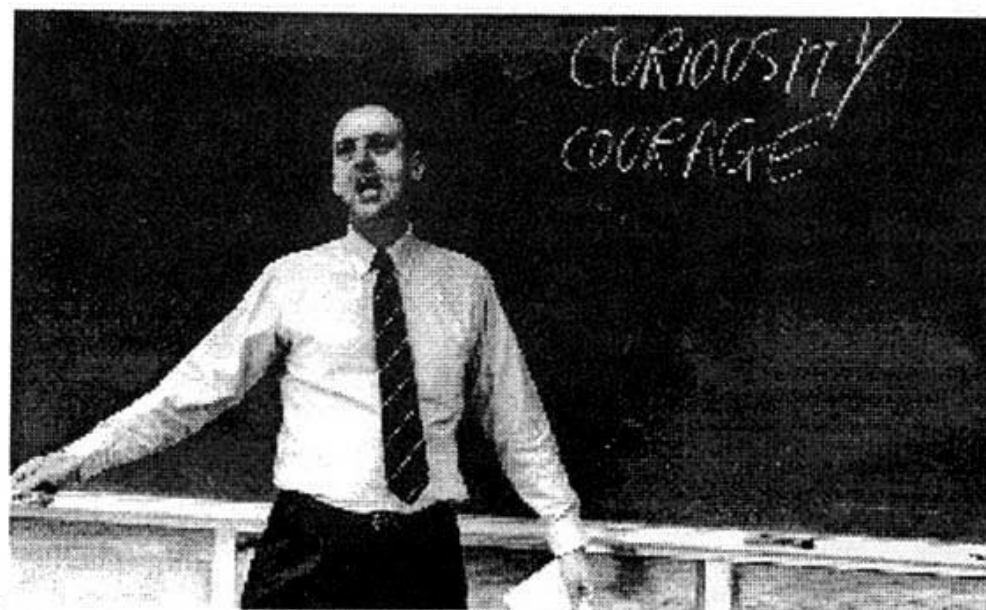
The all-day workshop was taught by a team of faculty members and TAs: Kevin Roddy, Medieval Studies/I.T.; Geoffrey Wandesforde-Smith, Political Science; Dean Messer, Environmental Studies; and Mitchell Watnik, Statistics. Additional staff included: Joe Aimone, English; Brian Hill, Information Technology; Scott Sherman, Environmental Horticulture; and Harry Spanglet, Environmental Studies.

The workshop was hosted by Frank Samaniego and Winifred Anderson of the Teaching Resources Center.

Participating in the workshop for TAs are (from top to bottom): Dean Messer and Kim Nalder; Emma Cornell and Kevin Roddy; and Geoffrey Wandesforde-Smith.



Summer Institute Scheduled. The second annual Summer Institute on Applications of Technology in Teaching is scheduled for the week of July 10-14, 1995. The institute is sponsored by the Teaching Resources Center in collaboration with the Office of the Provost and the Division of Information Technology. Applications are due Monday, May 15. Call Winifred Anderson at 752-6050.



Continued from Page 4

the March issue of the "13 Report." In contrast, the portion of PC-equipped households where the mother has just a high school degree is 33%. (*St. Petersburg Times* 4/3/95 p.8)

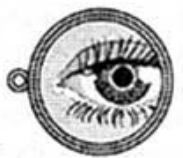
• **Prospector's Guide to the Internet:** Harvest, an indexing and retrieval system for Web- and other Internet-based information, is available free from the University of Colorado: <http://harvest.cs.colorado.edu> (*Data Communications* 3/21/95 p.16)

• **High-Tech Physics Studio:** Rensselaer Polytechnic Institute is saving money and increasing student-professor contact through a "studio" approach to its introductory physics course. The students use computers to work out the answers to their problems, with an instructor roaming the room and providing individual help as needed. The approach has enabled class sizes to be cut from 345 to about 50, and students using the studio approach need only four hours a week to learn the information imparted in the five-and-a-half hour traditional format. "It's both high-tech and high-touch says a professor of education at the University of California at Berkeley. (*Chronicle of Higher Education* 3/31/95 A19)

• **Libraries House Computers:** A new survey by the American Electronics Association's National Information Infrastructure Task Force reports that tomorrow's college students likely will not have had much experience with computer technology when they show up on campus, unless they've spent a lot of time hanging out with the school librarian. Only 59% of teachers surveyed reported access to multimedia computers, and only 20% had an Internet connection. However, half of the school librarians surveyed had Internet accounts and 85% had multimedia computers. (*Chronicle of Higher Education* 3/31/95 A19)

• **Seeing-Eye Technology for the Net:**

A scanning laser ophthalmoscope, or SLO, can be used by the visually-impaired to read words on a computer screen. The SLO is essentially a \$100,000 miniature projection-TV system that is used as a research tool for probing inside the eye. But people with very poor eyesight may one day be able to use goggle-sized SLOs with lenses made from semiconductor lasers to access the words and images on their computers. The scientist at Schepens Eye Research Institute in Boston who invented the SLO notes that commercial production is not yet viable: "If the video-game people would just grab this, it would take off like a rocket." (*Business Week* 3/27/95 p.182)



• **Peterson's on the Net:** Peterson's — a provider of information on colleges and other schools — has now staked its claim on the Net. The Peterson's Education Center provides news on public and private colleges and universities, as well as summer programs for students and college application forms. <http://www.petersons.com> (*Tampa Tribune* 3/13/95 B&F3)

Items appearing in this column were gleaned from *EduPage*, a summary of news provided by EDUCOM — a consortium of leading colleges and universities seeking to transform education through the use of information technology.

Campus Examines Modem Use Policies

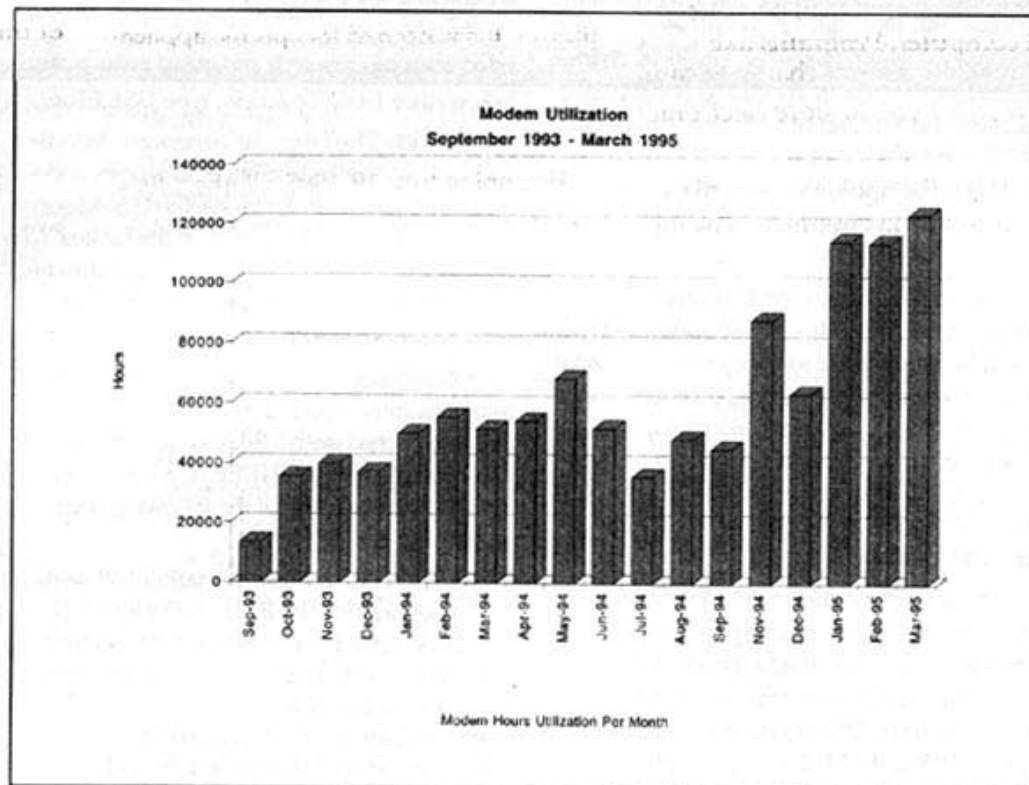
by Kevin Kawaguchi, Communications Resources

Because the number of people gaining network access via the campus modem pool continues to increase, you will soon be asked for a valid I.T. username/password before you see the request prompt. This new password feature will ensure that the campus modem pool is used only for university-related business. The new login process is similar to that used by those who use SLIP and PPP services.

Accommodating the growing demand for modem services is an ongoing challenge, and the Division of Information Technology and the Information Technology Administrative Advisory Committee (ITAAC) will examine the implementation of several new "modem policies" in the months to come.

Information Technology will make every effort to relay necessary information to the campus community. Please look for announcements on the Campuswide Information System and in the *I.T. Times*.

If you have comments or suggestions on ways to facilitate access to



In the past year, utilization of the campus Modem Pool has more than doubled. In March 1995, the Modem Pool logged more than 120,000 hours of active service.

the campus modem pool (e.g. session lengths, automatic timeouts, and express modem services), please send e-mail to ktkawaguchi@ucdavis.edu.

Making Room for More Addresses

Due to shortages in IP address space on the Internet and to make address space for Network 21, a new routing protocol will be implemented on campus. The OSPF (Open Shortest Path First) routing protocol will be activated, allowing for the configuration of smaller sized subnets. Currently most subnets can have about 250 hosts, which is more than an average department needs. Departmental hosts are not required to speak OSPF

since we will continue to transmit RIP updates on departmental interfaces.

Implementation of the new routing protocol will require the following changes to departmental LANs:

- Changing IP addresses to use contiguous ranges.
- Changing subnet masks
- Changing the default router address

Information Technology will maintain close contacts with departmental Network Administrators throughout the process to minimize any confusion. For general questions or comments about these changes, please send e-mail to ktkawaguchi@ucdavis.edu.

Online Databases Grow in Size and Subject

by Anne Jackson, *Information Technology Publications*

How many remember only fourteen years ago when "research" nearly always meant a trip to the library to thumb through a card catalog and page manually through endless printed indexes to periodical literature? Now, what looks like nothing more than a screen on a box with a keyboard provides an instantaneous eye into decades—and in some cases centuries—of research and published material from all over the world in every imaginable discipline and subject area.

The University of California Library system has been busy developing and harnessing these vast resources for UC faculty, students, and staff through an ever-growing collection of online databases. The databases are available to anyone with a campus computer account from a network-linked campus computer or from a home computer through a modem connection. They are also available to the public through computers in campus libraries.

The databases provide citations to books, journal articles, dissertations, and other published materials. Increasingly, abstracts and full text are included. Short courses explaining how to access and search the databases as well as how to download and print search results are presented throughout the academic year by Data Services Librarian Ken Firestein. Class schedules are posted in the library and on the Campuswide Information System (via gopher). Most of the databases also provide online search guidance.

The databases fall generally into four categories:

- **MELVYL Catalog and Databases** include the holdings of the University of California Library system as well as other selected libraries and, under special site-licenses, eight commercial journal article databases: MEDLINE PLUS®, Current Contents®, MAGS, NEWS, COMP, INSPEC, PsycINFO®, and ABI/INFORM®. In Fall 1995, BIOSIS, a large biological sciences database, will also become available to UC users. All of the MELVYL databases employ the same search commands. Although the MELVYL catalog is available to any member of the public, use of the MELVYL databases from remote locations is restricted to members of the UC community. To access these databases from a remote connection, users must either log onto the campus computer system by giving a campus computer account username and password, or provide a special MELVYL system password (available to UC faculty, staff, and students with UC identification from any UCD reference librarian or from the Shields Library information desk). Passwords are good for one year. A special bonus feature available only for MELVYL databases is an UPDATE service, which provides for search requests to be periodically repeated and results mailed automatically to the subscriber.

- **MELVYL Gateway Databases**, each with specialized features and search procedures, are commercial databases, site-licensed for UC users and made available through the MELVYL system. Some of these databases can also be searched with MELVYL commands. MELVYL gateway databases include two giant information services, EUREKA and FirstSearch, each containing a suite of databases in various subject areas. Others in the MELVYL Gateway category include ERIC, HAPI, GeoRef, and CQ Washington Alert. Those logging on from remote locations must supply a campus computer account username and password.

- **Networked CD-ROM Databases** are available to campus computer account-holders from network-linked campus computers, from home computers through modem con-

nections, or from networked computers in library reference departments. For remote access, users must supply a campus computer account username and password, as well as a separate CD-ROM password, available from any UC Davis general library reference desk.

- **Stand-alone CD-ROM Databases** are available on computers in the various library departments. Reference librarians can advise on CD-ROM resources and help with search procedures.

Following is a guide to some of the many databases now available to the UC community:

■ MELVYL Databases

- **MELVYL catalog.** Lists the library holdings of the nine-campus University of California system and the California State Library, including books, serials, musical scores, maps, audiovisual materials, and computer files. To access, type CAT at the MELVYL prompt. To search only material published in the last ten years, type TEN at the MELVYL prompt. This more limited search will run faster than a search of the entire catalog.

- **PERIODICALS.** Lists more than 1 million periodical holdings of UC, California State Library, California Academy of Sciences, Stanford University, University of Southern California, California State University, and other selected libraries. A search for the location of a particular periodical can be performed in the middle of another search by typing the command Find PE or Find XPE.

- **MEDLINE PLUS®.** Article citations from more than 4,000 journals in health, life sciences, health administration, and related disciplines. Covers the years 1966-74 (MED66); 1975-79 (MED75); 1980-84 (MED80); 1985-89 (MED85) and 1990 - date (MED). To access, type MED (Or, e.g., MED80) at the MELVYL prompt.

- **Current Contents® (CC, CCT).** Article citations from more than 6,500 journals in agriculture, biology, environmental sciences, clinical medicine, life sciences, engineering, technology, applied sciences; physical, chemical, and earth sciences, social and behavioral sciences; and arts and humanities. Covers 1989 to present. To access, type CC at the MELVYL prompt. Users can also view tables of contents of journals in the database by typing CCT at the MELVYL prompt.

- **Magazine and Journal Articles (MAGS).** Article citations from some 1,500 periodicals, including academic journals in social sciences, humanities, sciences, business, and law, as well as popular magazines such as *Time* and *Newsweek*. Many listings include article abstracts. Full text is included for some publications. To access, type MAGS at the MELVYL prompt.

- **Newspaper Articles (NEWS).** Article citations from five major newspapers: *The New York Times*, *Los Angeles Times*, *Washington Post*, *Wall Street Journal*, and *Christian Science Monitor*. Covers 1992 to present. To access, type NEWS at the MELVYL prompt.

- **Computer Articles (COMP).** Article citations from more than 200 journals in various computer fields. Covers 1988 to present. Full text included for some periodicals. To access, type COMP at the MELVYL prompt.

- **INSPEC.** Article citations from more than 4,200 journals and 1,000 conference proceedings, books, reports, and dissertations in physics, astronomy, electrical engineering and electronics, computers, control technology, communications, and information technology. Covers the years 1969 to present. For 1989 to present, type INS at the MELVYL prompt; for 1985-88, type INS85; for 1980-84, type INS80; for 1969-79, type INS69.

- **PsycINFO®.** Citations from more than 1,300 journals, books, book chapters, dissertations and reports in psychology, social sciences, and related disciplines. Covers 1967 to present for articles and 1987 to present for books. Includes abstracts. Type PSYC at the MELVYL prompt.

- **ABI/INFORM®.** Article citations from more than 1200 business, management, and finance journals. Covers 1985 to present. Includes abstracts. Full text included for 500 publications from 1991 to present. To access,

Task Force Envisions Library of the Future

Digital Library Research and Development was the topic of discussion when librarians, information technologists, researchers and college administrators gathered in Washington D.C., April 10-11. The occasion was the Spring 1995 meeting of the Coalition for Network Information, a consortium of ARL, CAUSE, and EDUCOM.

With presentations exploring what's practical, problematic, and possible, participants pieced together visions of the library of the future. Discussions covering everything from downloading images from the Vatican to viewing educational sports and entertainment videos offered snapshots of an online, interactive library.

Addressing the challenges surrounding the discovery and retrieval of networked information was Clifford A. Lynch, Director, Library Automation, University of California Office of the President. Lynch noted that current expectations often exceed capabilities as he discussed the nuts and bolts of information retrieval -- addressing everything from infrastructure, to system architecture, to resource identification.

type ABI at the MELVYL prompt.

■ MELVYL Gateway Databases

- **English Short Title Catalog.** Catalog of British, British colonial, and other English-language printed materials produced between 1473 and 1800. To access, type USE ESTC at the MELVYL prompt.

- **CQ Washington Alert.** U.S. legislative and regulatory information, provided by Congressional Quarterly, Inc. To access, type USE CQ at the MELVYL prompt.

- **GeoRef.** Citations for more than 3,500 journals and other publications in more than 40 languages in the fields of geology and geophysics, covering the years 1785 to present for the geology of North America and 1933 to present for the geology of other areas. To access, type USE GEOREF.

- **ERIC.** Covers journal articles and reports in educational research and allied areas published since 1966. To access, type USE ERIC.

- **HAPI.** The Hispanic American Periodicals Index contains references to articles and other items on Latin America, the U.S.-Mexico border region, and Hispanics in the United States in about 400 social science and humanities journals. Covers 1970 to present. To access, type USE HAPI.

- **EUREKA.** Eureka is an information system containing selected databases. Most can be searched with MELVYL commands. To access, type USE EUREKA, followed by the command for any of the following databases:

- **Research Libraries Information Network Bibliographic File (BIB).** A catalog of 22 million items from more than 200 leading university and research libraries, archives, museums and historical societies, law, medical, art, music, and theological libraries, as well as some public and corporate libraries.

- **Anthropological Literature (ANL).** An index to several hundred journals in anthropology and archaeology, published by the Tozzer Anthropology Library at Harvard University.

- **Avery Index to Architectural Periodicals (AVE).** Index of articles in more than 1,000 periodicals in architecture and related disciplines, including general architecture, architectural design, interior design, landscape architecture, history of architecture, city planning, and historic preservation.

- **Handbook of Latin American Studies (HLA).** Citations to books, book chapters, articles, and conference papers in Latin American studies from 1990 to the present. About 75% of the citations include content summaries.

- **History of Science and Technology (HST).** Index to journal articles, conference proceedings, books, book reviews, and dissertations in the history and science and technology and in related historical fields.
- **Index to Foreign Legal Periodicals (IFLP).** Index to articles in more than 450 legal journals, as well as essay collections and conference proceedings in the areas of

international law, comparative law, and municipal law of countries other than the U.S. and Great Britain.

- **Index to Hispanic Legislation (WLI).** Index to laws, regulations, and decrees of 29 Spanish-speaking countries and former Portuguese colonies in Africa from 1976 - present. Includes English abstracts.

- **Inside Information (IIN).** Index to articles in 10,000 journals and magazines from the British Library Document Supply Centre from October 1992 - present. Covers all topics.

- **FirstSearch** is a second group of databases available to UC affiliates through a special licensing agreement. Most can be searched with MELVYL commands. To access, type USE FirstSearch, followed by the command for any of the following databases:

- **World Cat.** The world's largest database of bibliographic information, containing 27 million records of materials owned by some 12,000 libraries around the world.

- **ArticleFirst™.** Citations from the contents pages of more than 11,000 journals in science, technology, medicine, social science, business, humanities, and popular culture. Covers 1990 to present. Includes many abstracts. Comparable to **Current Contents**, but covers more journals.

- **ContentsFirst™.** Tables of Contents of the 11,000 journals indexed in **ArticleFirst** (see above).

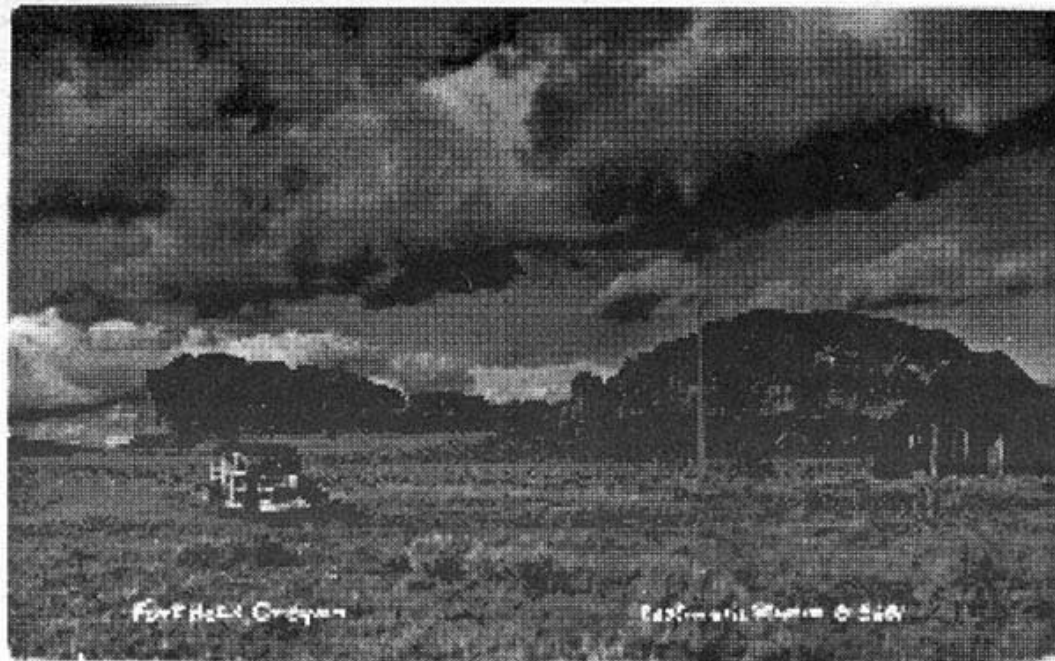
- **ART INDEX.** Available to UC users only since January 1995, this database provides citations to 200 key international English-language arts publications, including periodicals, yearbooks, museum bulletins, competitions and award notices, exhibition listings, interviews, and film reviews. Covers September 1984 to present.

■ Networked CD-ROM Databases

The following CD-ROM databases can be reached through networked connections from home or campus computers or from designated terminals in library reference departments. Remote access to these databases requires a separate password, available from any UCD reference librarian. To access the CD-ROM network from an off-campus computer, type libcdrom <enter> at the Request prompt. From a campus computer, type telnet libcdrom <enter> at the system prompt (e.g., %, \$, or >) or type gopher <enter> and follow the path: Library Area, MELVYL Library System and Other Databases and Catalogs, and select CD-ROMS.

- Aquatic Sciences and Fisheries Abstracts
- Chicano Database
- AGRICOLA
- Dissertation Abstracts
- Economic Literature
- Food Sciences and Technology Abstracts
- Life Sciences
- MLA Bibliography
- MathSci
- National Technical Information Service
- Water Resources Abstracts

* MELVYL is a registered trademark of the Regents of the University of California.



Eastman Originals Collection, Department of Special Collections, University of California Library, Davis, California

Historic Photographs Headed for the Internet

Continued from Page 1

also because Eastman was a professional photographer, so the images have a uniformity of tone, size, and format."

Much of the value of the collection, says Skarstad, will be to historians, biologists, lawyers, to those preparing

environmental impact reports, and to others interested in documenting, for example, the appearance of a particular forest before clear-cutting took place or before Oroville Dam was built.

The Special Collections staff will soon begin the work of scanning and cataloging the images, and when the

Fort Rock, Oregon in October 1947 with an automobile probably belonging to the photographer, Jervie Henry Eastman.

project is finished, computer users anywhere in the world will be able to get on the World Wide Web, select "Eastman Original Collection" from the UC Davis Shields Library Home Page, and search the collection by asking to see photos of, for instance, downtown Chico in 1925. The search will bring up a low-resolution thumbnail image along with a text description of each photograph. A high resolution copy of any particular photograph can then be downloaded to the computer screen.

Having a copy of the photograph appear on the computer screen will enable the user to sharpen the image using software like Adobe PhotoShop® and to magnify particular areas to reveal details not readily seen in a hand-held print. Users will also have the option of ordering a photographic image printed from the original negative and sent through the mail.

The project will be a boon to researchers. Before this, anyone looking for old photographs has had to come in person to the library to sift manually through the collection and to rely upon

the memory and expertise of the Special Collections staff for guidance to particular subject matter. Now, thanks to rapidly developing computer imaging technology, anyone will be able to browse the collection by computer for free. The result, says Skarstad "will be to put good quality images in people's hands without the library having to deal with potential damage from overhandling."

But the main significance of the project, says Skarstad, "is not preservation, but access. We're really talking about access to nontextual material that you would otherwise have to come here to see. We're expanding access to wherever you are with your computer."

And the Eastman collection is only the first. Waiting in the wings are some 200 other, often much larger, campus museum collections—including the Bohart Museum of Entomology, an Anthropology Department basket collection, a nematode collection, an arboretum collection, and a herbarium collection—images from which are also slated to eventually go online.

UC Davis is able to make the Eastman collection available on the Internet because the campus owns the collection outright. Images from some of the other collections, where the university in some cases owns only the rights for viewing the material in an academic setting, will be made available for viewing by computer only to the campus community.

Art Library Mounts Collection on Computer

Continued from Page 1

purchased with Instructional Use of Computing Funds, Holt — with the help of a part-time research assistant — has watched the library's digital database grow to over 1,000 images.

"IBM was looking for people to test its new QBIC software," says Holt. "Joan Gargano (of I.T.'s Distributed Computing Analysis and Support) asked if we would be interested in participating in the project."

The answer, of course, was yes. And with the help of I.T. programmer/analyst Ken Weiss, Holt has added a digital dimension to her role as art librarian by using a scanner and computer to mount portraits, landscapes, sketches, and a variety of other genres on computer.

While the image database is still growing, the Art Library and its customers are already seeing the potential benefits:

- Freed from having to manually search through slides and prints, library

staff will have more time to perform other duties.

- Slides, prints, and other pieces will be spared wear and tear.
- Viewers will be treated to fresh perspectives since the software's searching capabilities allow them to instantly compare works in a variety of ways (e.g. by artist, period, and subject.)

Short for Query by Image Content, QBIC indexes artwork by text, shape, texture, color, and object. Textual information is being added to the database, and eventually each image will be labeled with the artist's name, date, medium, and dimensions.

"I think what's really interesting about having the images on computer is the surprise element," says Stacey Vetter, a graduate student who is assisting with the project. "You can do a search by shape and find a whole set of paintings you didn't think fit into the category."



The Art Library's image database allows you to search by shape, texture, and color. Searching by an oval shape uncovers a variety of portraits.

"For instance, rape is a recurring theme in art, even though paintings are rarely labeled as such. With the digital database, someone researching the topic could use a reclining figure to search by image and identify paintings that may fall into the category," says Vetter.

Searches can be specific or general. You can ask the computer to display all images with a red ball in the top right hand corner. Or, you can be more general, and draw an oval shape in hopes of finding a wide variety of portraits.

Because of its ability to categorize artwork in a variety of ways, the database will be useful to faculty who teach technique as well as to art historians who will be able to use the data to show how different images are depicted through time.

Judging from previous requests, the Art Department thinks its digital li-

brary will be useful to people in other disciplines as well. For example:

- The Physical Education department has requested images of women for dance instruction.
- Faculty in the School of Veterinary Medicine have requested images of animals to illustrate lectures.
- Sociologists have requested portraits to show how people of race and gender have been depicted in different eras.
- Geology students have requested images of volcanoes.

These are the kinds of requests that inspired the librarians to pursue the image database project.

Located on the second floor of the Art Building, the Art Library is open Monday - Thursday from 9 a.m. - 4 p.m., and Friday from 9 - 11:30 a.m. For more information on the image database, call 752-0152.

UC Davis Selected as Site for New Media Center

Efforts to bring multimedia capabilities into the classroom got an enormous boost this spring when UC Davis was selected to participate in the national New Media Centers program. The New Media Center will provide a focal point for developing, producing, and distributing multimedia instructional materials.

To be housed in three locations on campus and staffed by artists, photographers, audiovisual technicians, an animator, and technical professionals, the program will deliver multimedia materials and tools to faculty through the campus network.

UC Davis was one of 30 institutions across the country chosen for the program this year out of some 100 applicants. Associate Vice Chancellor for Information Technology, Carole Barone, was recently named to the eleven-member New Media Center Board, which consists of corporate and academic representatives. Watch for more details about the New Media Center in future issues of the *I.T. Times*.

I.T. Calendar May 1995

SUN	MON	TUES	WED	THU	FRI	SAT
	1	2	3	4	5 CAIT Demo	6
7	8 CD-ROM Data	9 Electronic Comm	10 Voice Mail	11	12	13
14	15 Access 2.0	16 WWW Server	17 CAIT Event	18 WWW Resources	19	20
21	22 Excel 5.0	23 Usenet News	24 Listserv Admin	25 CAIT Demo	26	27
28	29	30 FoxPro 2.5	31 Electronic Comm			

I.T. Calendar of Events

Note: The events listed here are sponsored by the Division of Information Technology and other campus organizations interested in enhancing and promoting the use of information technology on the Davis campus. Contributions are welcome. Call 752-5965 or e-mail itpubs@ucdavis.edu

✓ **TO REGISTER** for courses listed below or request further information, call the phone number which appears in the listing.

Friday, May 5

PC X-Server: Center for Advanced Information Technology, 10-11:30 a.m., CAIT - 1st floor Shields; 752-5711.

Monday, May 8

Networked CD-ROM Databases at the UC Davis Library: Library Services, 3:10-4:00 p.m., Shields Second Floor Instruction Room; 752-1678 or e-mail kfirestein@ucdavis.edu.

Tuesday, May 9

Electronic Communication - Pine: Staff Development, 8:30-11:30 a.m., 40 Mrak; 752-1766.

Wednesday, May 10

Voice Mail System Training: Managing Your Voice Mail Box: Communications Resources, 10:30 a.m.-noon, Communications Building, Tercero Hall Circle; 752-6888.

Monday, May 15

MS Access 2.0 for Windows: Introductory: (two-part course offered May 15 & 17) Staff Development, 8:30-11:30 a.m., 40 Mrak; 752-1766.

Your Personal Library: Using Melvyl and Other Electronic Library Systems: Library Services, 3:10-5:00 p.m., Shields Library Microcomputer Room; 752-1678 or e-mail kfirestein@ucdavis.edu.

Tuesday, May 16

WWW Server for Macintosh: (two-part course offered May 16 & 18) Instruction Services, 8:30-11:30 a.m., 1102 Hart; 754-8091 or e-mail learnit@ucdavis.edu.

Electronic Communication: Remote Access Tools for the PC: Staff Development, 8:30-10:30 a.m., 40 Mrak; 752-1766.

Wednesday, May 17

Network 21 Status Update: Information Technology & Staff Dev, Noon, Silo Cabernet; 752-5946.

WWW Server for Windows: (two-part course offered May 17 and 19) Instruction Services, 1:30-4:30 p.m., 1131 Meyer; 754-8091 or e-mail learnit@ucdavis.edu.

SUN Day: Center for Advanced Information Technology, 2:30 - 4 p.m., CAIT - 1st floor Shields; 752-5711.

Working Efficiently in the Melvyl=FE Library System: Library Services, 4:10-5:30 p.m., Shields Library Microcomputer Room; 752-1678 or e-mail kfirestein@ucdavis.edu.

Thursday, May 18

The Gopher/Veronica System and World Wide Web Resources: Library Services, 10:00-11:40 a.m., Carlson Health Sciences Library; 752-1678 or e-mail kfirestein@ucdavis.edu.

Monday, May 22

Electronic Communication: Unix Internet Tools: Staff Development, 1:30-4:30 p.m., 40 Mrak; 752-1766.

Microsoft Excel 5.0: Advanced (Windows): (two-part course offered May 22 & 24) Staff Development, 8:30-11:30 a.m., 40 Mrak; 752-1766.

The Gopher/Veronica System Resources: Library Services, 3:10-4:00 p.m., Shields Library Microcomputer Room; 752-1678 or e-mail kfirestein@ucdavis.edu.

Tuesday, May 23

Usenet Newsgroups, Electronic Discussion Groups (Listservs), and Electronic Journals: Library Services, 11:00-11:50 a.m., Carlson Health Sciences Library; 752-1678 or e-mail kfirestein@ucdavis.edu.

World Wide Web Server Administration - Windows: (two-part course offered May 23 & 25) Staff Development, 8:30-11:30 a.m., 40 Mrak; 752-1766.

World Wide Web Server Administration - Macintosh: (two-part course offered May 23 & 25) Staff Development, 1:30-4:30 p.m., 40 Mrak; 752-1766.

Wednesday, May 24

Distributed Computing: Information Technology & Staff Dev, Noon, MU East Conference Room; 752-5946.

Listserv Administration: Instruction Services, 8:30-11:30 a.m., 1102 Hart; 754-8091 or e-mail learnit@ucdavis.edu.

Voice Mail System Training: Managing Your Voice Mail Box: Communications Resources, 1:30-3:30 p.m., Communications Building, Tercero Hall Circle; 752-6888.

Thursday, May 25

PC X-Server Presentation: Center for Advanced Information Technology, 10 - 11 a.m., CAIT - 1st floor Shields; 752-5711.

Tuesday, May 30

FoxPro 2.5 for Windows: Introductory: (two-part course offered May 30 and June 1) Staff Development, 8:30-11:30 a.m., 40 Mrak; 752-1766.

Wednesday, May 31

Hardware/Software Recommendations: Information Technology & Staff Dev, Noon, Silo Cabernet; 752-5946.

Electronic Communication - Pine: Staff Development, 1:30-4:30 p.m., 40 Mrak; 752-1766.

The World Wide Web Resources: Library Services, 3:10-4:00 p.m., Shields Library Microcomputer Room; 752-1678 or e-mail kfirestein@ucdavis.edu.

Looking Ahead

Monday, June 5

PageMaker 5.0: Introductory: (two-part course offered June 5 & 7) Staff Development, 8:30-11:30 a.m., 40 Mrak; 752-1766.



How to Get on the Web

by Karen Munoz, Information Resources

Computer Chat answers frequently asked campus computer questions. Any question you would like to have addressed in this column can be directed to 754-8302 or sent by e-mail to itpubs@ucdavis.edu.

Walk Right In

Answers to your computing questions can be found at Information Express, a collaboration of the I.T. CAP-Walk-in Facility and Repro Graphics copy service department. Located on the first floor of Shields Library, Information Express provides technology consulting services on Saturdays and Sundays from 1-5 p.m. as well as Monday through Thursday from 8 a.m. to 7 p.m., and Friday 8 a.m. to 6 p.m. To avoid long lines, visit Information Express on the weekend or on weekdays before 10 a.m. and after 5 p.m. You can also get help by calling 752-2548, or online through ithelp@ucdavis.edu.

How Can I Access the World Wide Web on the Internet?

You can access the WWW through a web browser like Netscape or Mosaic on a PC or Mac or through your campus computer account. To reach the WWW from a machine in a campus Macintosh lab, and to access graphics as well as text, double-click on the Netscape icon. If the UC Davis home page does not come up, select the Open button and type <http://www.ucdavis.edu>.

To use Netscape in a campus PC lab, select the windows option in the menu and double-click on the Netscape icon, which is in the Network Utilities Window under Program Manager. You can also access the Web from home using a modem even if you don't have Netscape or Mosaic software. This can be done by logging into the campus computer system on *bullwinkle*, *rocky*, *chip* or *dale*, and typing *lynx* at the prompt. With *lynx*, you will then be able to access text without graphics.



The I.T. Times is published by the Division of Information Technology, University of California, Davis, to inform the campus community and others of information technology services, facilities, and activities at UC Davis. It is distributed free of charge to members of the user community and to other universities.

Use of trade or corporation names in this publication does not constitute endorsement by the University of California, Davis.

I.T. Times articles may be reprinted as long as the source is accurately quoted and credited.

Editor: Catherine Fehr Curran, 752-5965

Writer: Anne Jackson, 754-8302

Assistant: Bonnie Johnston, 752-1009

The following persons contributed to this issue of I.T. Times:

Joan Gargano	Bonnie Holt
Doug Hartline	Jeff Barrett
Russ Hobby	Katie Stevens
Dick Kaye	Rodger Hess
Lana Moffitt	Ken Weiss
Lois Unger	Kevin Roddy
Paula King	Winifred Anderson
Karen Munoz	Jim vonRummelhoff
Ken Weiss	Gabriel Unda
Joyce Johnstone	Beverlee French
Faust Gorham	Carole Barone
Dana Drennan	

Program Adds New Dimension to GIS

by Bonnie Johnston, Information Technology Publications

Since UCD established a beginning Geographic Information Systems class in the spring of 1994, students have been applying the ARC/INFO software to a wide range of disciplines.

Student projects have included a study of cheetah migration in Africa, flood plain analysis of Sacramento county, and an examination of the influence of topography on medfly distribution in Los Angeles county. What do these projects have in common? They all depend on data that can be expressed spatially, producing an image that can then be manipulated and analyzed — using software like ARC/INFO significantly reduces the amount of time that researchers have to spend "massaging" their data, leaving them free to spend more time to analyze their results.

This quarter, UCD has introduced an advanced GIS class — Applied Biological Systems Technology 198. It is team taught in the Visualization Laboratory by Wes Wallender of Hydrologic Science and Paul Grant of Information

Technology, with assistance from Glenn Fitzgerald, a graduate student in Agronomy & Range Science. Where the beginning class focuses on the analysis of data stored and displayed using vector graphics, this new class takes advantage of ARC/INFO's grid module, which allows students to create and analyze raster datasets as well.

Vector graphics, which are composed of arcs, lines, and irregularly shaped polygons, take up less file space than raster graphics; but creating graphical overlays with vector images can be a lengthy process, requiring complicated algorithms. Raster graphics, on the other hand, tend to require more storage space, but because they are laid out on a grid, calculations based on data expressed in raster form are much quicker.

"Neither is necessarily better or more accurate," says Grant. "There are certain tasks which are easier to perform using rasters, and there are situations where each type of image has its advantages. For example, raster-based GIS would be used when representing a continuous variable, such as elevation, slope or aspect."

Students in the advanced GIS class not only learn more advanced analysis techniques using ARC/INFO, they are also taught to use Data Explorer, a scientific visualization software package from IBM that allows students to take the same data that they would analyze in ARC/INFO and express it in three or four dimensions.

Data Explorer expresses data in three dimensions by plotting data to create three-dimensional shapes; the program expresses data in four dimensions in two ways: either by plotting three of the data sets as a three-dimensional surface and then mapping the fourth data set onto that surface, or by plotting three data sets as a three-dimensional shape and then showing their progression through time via animation. In order to run Data Explorer, I.T. has expanded the Visualization Lab to include five Silicon Graphics Indy workstations, which contain hardware for quicker processing and manipulation of graphics.

For more information about GIS, you can contact Paul Grant at 752-8266 or via e-mail at pwgrant@ucdavis.edu.