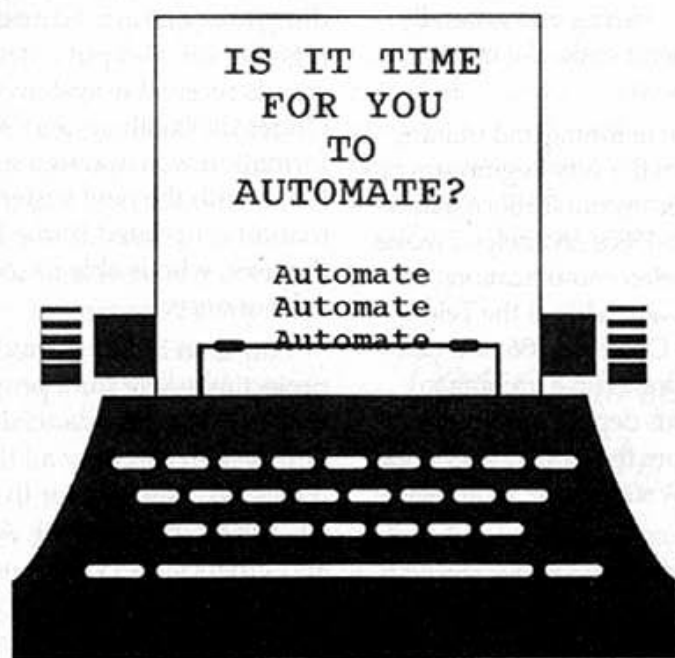


## Technology Gives Service a Boost



**Editor's Note:** Conserve resources and improve service. How to achieve these opposing goals may be the challenge of the decade. Pinched by budget cuts of the early '90s, many campus departments have had to find ways to do more with less. This edition of the I.T. Times looks at two groups that have found technical solutions to service dilemmas.

**Environmental Health & Safety** underwent a major restructuring that resulted in new network services and electronic information dissemination. I.T.'s **Communications Resources** eliminated long lines and staff overtime by using voice mail to sign students up for telephone service.

## Students Use Voice Mail to Request Telephone Service

by Anne Jackson, Information Technology Publications

Budget cuts. Staff cuts. More to do and fewer people to do it. And hordes of new students arriving on campus every year.

That was the situation facing Communications Resources in the fall of 1992.

Responsible for signing up some 1,600 students for telephone service and no longer able to afford the additional employees needed to sit at four different dorm locations having students complete a three-part contract, Student Services Coordinator Donna Carrasco called on voice mail for help.

Now when new students arrive at the dorm, they plug in a telephone and are

prompted through simple directions to complete the telephone sign-up. After the order is processed, the student receives a written confirmation in the mail. As a result, instead of needing 12 to 15 extra employees in the fall, Student Services processes all of the sign-ups during the first month of school with one person working overtime to type the information on a computerized form.

The new system has streamlined billing and eliminated the need for the paper contract used in the past. And instead of waiting in long lines, students have a month to sign up at their own convenience in the evening and on the weekends when they won't overburden the

Continued on Page 4

## EH&S Puts Network to Work

by Anne Jackson, Information Technology Publications

Two years ago the staff at UC Davis Environmental Health and Safety looked around and realized something was gaining on them. State and federal regulations governing the way hazardous materials were handled and stored were becoming more complex, requiring more and more information to be collected and reported. New regulations increased the university's burden of accountability in the creation and handling of hazardous materials. Increased enrollments meant more courses were being offered, many of which would generate hazardous substances. And budget cuts were squeezing staff resources.

Charged with responsibility for developing and carrying out health, safety, and environmental protection programs on campus, the task of EH&S was already formidable. By 1991 the volume of hazardous materials stored in various buildings on campus amounted to 81,000 gallons of hazardous liquids, 31,000 pounds of hazardous solids, 4,600 compressed gas cylinders, and 15,200 millicuries of radioactivity. More than 7,500 hazardous chemicals were in use on campus, not counting new chemicals produced as a result of research activities. Laboratory space was projected to increase by 69% by the year 2005, bringing with it the promise of ever-more hazardous waste.

In short, just as its staff was shrinking because of budget reductions, EH&S saw that its responsibilities were burgeoning.

"We knew we had to change," says EH&S Acting Assistant Director and Information Manager Evelyn Profita.

The answer was reengineering —

Continued on Page 4

## I.T.'s Technical Services Remain Intact

Over the past six months, Information Technology has been working with the campus community to assess the level and scope of services provided by I.T.'s Technology Resources.

Computer repair, printer repair, and workstation support are among the services that have been provided by Technology Resources, formerly Computing Support Services and before that, Digital Systems.

Although the services made available by the Technology Resources group remain intact, effective January 1, 1995, the Technology Resources unit

was integrated into I.T.'s Information Resources group, which is under the direction of Lana Moffitt.

Information Technology will continue to work with the campus community to assess service needs, and the information gathered will be used to develop service models for the coming year. Any modifications to services provided by Information Technology will be announced prior to implementation.

In the meantime, if your computing equipment is in need of repair, call 752-7762.



## On the Inside

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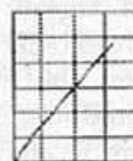
## Weekend Hours

The I.T.-CAP Walk-in Facility is now open on Saturday and Sunday afternoons from 1 - 5, in addition to its regular weekday hours. The I.T. CAP Walk-in Facility is located with the Copy Center on the first floor of Shields Library.

- **See Computer Chat**  
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## Use E-mail to Reserve Lab

Faculty now can reserve computer classrooms by sending e-mail to [lab-reserve@ucdavis.edu](mailto:lab-reserve@ucdavis.edu).



## Account Watch

The beginning of Winter Quarter marked a flurry of computing activity. Between Jan. 15 and Jan. 23, 487 new accounts were registered with I.T.'s new account facility. Nearly half of the new accounts (234) were opened by students in the College of Letters and Science. Students in the College of Agriculture and Environmental Sciences opened 97 new accounts.

**E-mail Count:** January statistics show 28,982 e-mail addresses registered in I.T.'s electronic database.



## Quotables

"The technology may be a threat to educational structures but it is not a threat to the educational process."

George Gilder  
Educom '94  
General Session Speaker  
December 1994



CAIT'S  
Corner

## CAIT Welcomes Your Feedback

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.

At the CAIT, our 1995 New Year's resolution is simple. We want to get to know you better. Which topics interest you? What kind of presentations would you like to attend now — and in the future. Please send us your feedback via mail, e-mail, [advancedit@ucdavis.edu](mailto:advancedit@ucdavis.edu), or phone 752-5711. You're welcome to visit us in person on the first floor of Shields Library. Or you can travel online to the CAIT through Gopher ([cait.ucdavis.edu](http://cait.ucdavis.edu)) or the World Wide Web (<http://cait.ucdavis.edu>).

### New Equipment

• **Macintosh 8100/110:** The latest in the Power Mac line, the 8100/110 is the fastest and most powerful Mac yet. Our Machine has a 2 GB HD, 16 MB, RAM and a CD-ROM. If you want to try out multimedia, rendering, or authoring software, now is your chance.

### Evaluations

• **Internet Tools:** Sick of searching the network to find the "best" thing out there? Well, the CAIT has been evaluating commercial, shareware, and freeware products to find the best Telnet, Gopher, FTP, newsreader, and Web browser for Macintosh, PC, and terminal users. Links to our findings will soon be posted on our home page (<http://cait.ucdavis.edu>).

• **X-Windows (PC):** UC Davis is working with other UC campuses to decide what PC X-Windows Server software we should use. We are currently moving into the second stage of the evaluation: we need to find 5 UCD sites that differ in configuration. The sites will be evaluating four products: Xvision, Reflection X, Xoftware 32, and eXceed. If you are interested please contact us for more information.

### Technical Talk

• **Speed Bumps:** You may have heard the latest catch phrase, "Speed Bumps." Unlike their counterparts on the roadways, which slow you down, these bumps will make your applications run faster. The whole line of Power Macs has been bumped up. The 6100/60 now runs at 66 Mhz. The 7100/66 at 80 Mhz, and the 8100/80 at 100 Mhz. You may be asking, "Well how much more do I have to pay?" Compared to their slower counterparts, the 7100 and 8100 have dropped in price. For the 6100, you will have to pay about \$100 more.

• **Pentium Flaw:** A hot issue in recent months has been the flaw in the floating point unit of the Pentium processor. According to Intel, the flaw can produce reduced precision in floating point divide operations once every nine billion random number pairs. As of Dec. 21, 1994, Intel instituted a Pentium exchange policy. Any owner who requests it can exchange the current version of the Pentium processor for an updated version in which this floating point divide flaw is corrected free of charge anytime during the life of the computer. Just call 1-800-628-8686.

# The Insider

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

## Networking Services Reports to Hartline

Effective February 1, 1995, Communications Resources and Networking Services will report to Doug Hartline, project director for Network 21.

Hartline will oversee the expansion of the campus communication infrastructure.

"As UC Davis moves toward Network 21 and a fully networked environment, we will see a stronger integration of voice and data services," says Carole Barone, Associate Vice Chancellor for Information Technology. "It is important that the campus has someone to orchestrate a smooth merging of these technologies."

According to Hartline, the rapid emergence of new technologies has also sparked a need for the campus to perform small scale experimental implementations with new technologies in order to be technically prepared when these technologies move into the mainstream. "If we are going to address the technical needs of the campus community, we must invest time researching and understanding new applications and their relevance to the university's functions before they become universally available," says Hartline.

Wireless communication is an example of such a technology as it will touch all of our lives in one form or another through the availability of future products that can take advantage of it.

Hartline will continue in his role as Executive Assistant to the Associate Vice Chancellor for Information Technology.

## On Call for Staff and Students

Donna Carrasco fulfills not one, but two roles on campus. As the Student Services coordinator for Communications Resources she manages telephone service for dorm residents, which means solving any problems that arise



Doug Hartline

with student telephone service and helping new students moving into campus residence halls sign up for telephone service each fall. (Story on Page 1)

And as one of the three campus Customer Services Representatives (along with Sandy Kelleher and Marsha Readdick) Carrasco provides telecommunications support to departments. Tasks include conducting training on voice mail, designing automated attendant systems, providing help with modem lines, coordinating large office moves, and generally helping departments make the most of the telephone system.

A combination of timing and training placed Carrasco at the very beginnings of the change in telecommunications that occurred in the mid-1980s and helped make her an expert in telecommunications services on campus. Arriving at the Telecommunications Office in 1986, she underwent comprehensive training to help guide campus departments as they switched over from the old key telephone system to the new single-line, multi-feature telephones.

When voice mail came along, she was chosen to represent the student market on the committee that researched voice mail systems. She also was selected to be trained by the vendor, Octel, in how to design voice mail for departments.

If you have questions about your telephone or voice mail service, call 752-4603.

## Partnering with Others

When Environmental Health and Safety asked Information Technology for guidance on the reengineering process, they were part of a trend, said I.T. Program Analyst Supervisor Debbie Lauriano. "We find ourselves being asked to participate in projects like this more and more, offering high-level planning for other departments on campus." (Story on Page 1)

"Environmental Health and Safety wanted to make sure they weren't developing their plan in a vacuum so they asked if I.T. would offer consulting on the resources and staffing they would need," said Lauriano. "They contacted Joan Gargano at DCAS (Distributed Computing Analysis and Support), because they anticipated needing a client-server distributed system. They also identified a need for a toxic chemical tracking program.

"I put together a very high level project plan for resources and a time line for implementing a tracking system. Joan and I also volunteered to come in periodically



Debbie Lauriano

as overseers after the project was initiated and after staffing was in place."

Lauriano has had a crucial role in several other partnership projects that are revolutionizing the way the campus processes information and conducts business.

She was the project manager for the just-completed Banner Student Information System (SIS) project, which was carried out over a three-year period by I.T. and Student Affairs. That project brought in touch-tone student registration, replaced the old batch system for handling financial aid, admissions, and registration, and put a new accounts receivable system in place. Under the batch system, student information was updated nightly. Now, with the new system, information is updated immediately by the user, who is able to see the results at once.

Lauriano is also the technical project manager for a project that will revamp the financial information systems used by all the departments on campus. For that project, I.T. has teamed up with Accounting and Financial Services under Assistant Vice Chancellor Anthony Flores. The new system will enable departments to query account balances daily in real time. The target date for implementation of that project is July 1, 1997.

## Photographer Looks Beyond Camera

Gabriel Unda, a principal photographer with I.T.'s Center for Creative Communications, was a guest lecturer at the MacWorld conference held in San Francisco the first week in January.

Unda gave a talk entitled "Medical Visualization," in which he showed how Photoshop and other Adobe software programs can be used to enhance and quantify medical data. Unda gave an expanded version of the same presentation at the World Congress on Biomedical Communications last summer in Orlando, Fla.

The Center for Creative Communications uses digital technology to produce slides and other visuals for professional presentations given by faculty in the School of Medicine and other disciplines.

Unda will be teaching a course in Photoshop this spring through University Extension. He welcomes questions and can be reached at 752-2133 or via e-mail ([ggunda@ucdavis.edu](mailto:ggunda@ucdavis.edu)).



Gabriel Unda



Donna Carrasco

## I.T. Expands Electronic Communication Series

Due to increasing interest in Internet resources, Information Technology has revised and expanded its series of Electronic Communication Courses. The courses provide hands-on practice with programs used to navigate the Internet. All courses in the series are offered free of charge to faculty, students, and staff.

"We found that participants wanted to

take a course tailored to a specific computer platform," says Jeff Barrett, who teaches a number of computing workshops and helped develop the Electronic Communication series. "For this reason, we updated and revised our existing workshops and added some new communication classes for Winter Quarter."

The most noticeable changes are in

the electronic mail courses. E-mail workshops in Eudora and Pine now are platform specific. There are separate Eudora workshops for both Macintosh and Windows users.

For further information about the Electronic Communication series, call 754-8091 or send e-mail to [learnit@ucdavis.edu](mailto:learnit@ucdavis.edu).

# Modem Pool Expands to Meet Demand for Network Services

by Dick Kaye, Communications Resources

For those of us who rely on collecting and disseminating information, connecting to the campus network — and the Internet — is no longer a luxury. It is a necessity.

Although campus infrastructure has been expanded and the migration to a computing-intensive environment has been brisk and steady, providing network access continues to be a challenge — especially when it comes to those who depend on modems.

The campus data network (UCDNet) and the number of local area networks (LANs) connected to it has grown tremendously in the last five years. In 1989, 17 buildings on campus were connected to UCDNet. Now more than 72 campus buildings have direct network access. Once in place, Network 21 will add nearly 200 more campus buildings to the equation.

The growth in local area networks has been paralleled by growth in the campus modem pool.

In 1992 Carole Barone, newly appointed as Associate Vice Chancellor for Information Technology, forecasted a huge and inevitable growth in the demand for modem access. To meet the campus need, she initiated a crash project to increase the size of the campus modem pool. Her prediction has proven correct, and since then, the campus modem pool has more than quadrupled in size. The current modem pool consists of 372 modems, the bulk of which provide nominal 14.4 kbps service.

Modems are especially popular among those who work at home or who need network access while traveling. Once used mainly to access e-mail, modems are

now used to reach a burgeoning number of online information resources. Despite efforts to accommodate modem traffic, many modem users still encounter gridlock (busy signal) at times. The explanation is simple: for every originating modem there must be a corresponding receiver. While the number of receivers — or gateways — continues to increase so do the number of users, creating an upward spiral in which supply and demand are never in perfect balance.

Usage data compiled by Communications Resources suggests that human behavior plays an important role as well. As one might expect, modem pool usage is heaviest during the afternoon and evening hours and tapers off between 2 and 7 a.m. Suggesting users work in the

middle of the night to avoid gridlock is an unrealistic demand, so other alternatives must be explored.

## Exploring Alternatives

The Information Technology Administrative Advisory Committee (ITAAC) has formed a subcommittee to explore issues related to network access via modem. Geoffrey Wandesforde-Smith is chair of the modem subcommittee, which will look at alternatives including — but not limited to — those being examined by the Division of Information Technology. Here are some of the alternatives being explored:

- Encourage the establishment of departmental LANs. Estimates based on available data suggest that there are hun-

Continued on Page 4

## Teaching Resources Center Schedules Workshop for TAs

Building upon the success of last summer's Institute on Technology in Teaching in which 40 faculty participated, the Teaching Resources Center has scheduled a technology-oriented workshop for teaching assistants (TAs) on Friday, March 31.

"Using Electronic Communication in Undergraduate Courses," is the theme for the all-day event, which will focus on communication and networking tools. Participants will be introduced to e-mail, newsgroups, electronic bulletin boards, the Internet Relay Channel, and the World Wide Web.

"Many participants in the Summer Institute told us they got a great head start on the instructional applications they set out to tackle," says Frank Samaniego, director of the Teaching Resources Center.

"We plan to hold another Institute for faculty next summer, but also recognize the need to provide similar learning opportunities to our teaching assistants," Samaniego adds.

The March 31st workshop will accommodate 40 TAs. Department chairs have been asked to nominate two potential participants.

"It is clear that much of the instruction at UCD involves teams of faculty members and teaching assistants working together. It thus makes little sense to bring one segment of our teaching corps along in its technological capabilities while ignoring the other segment. It is our intention to sponsor a workshop this spring that will provide some of the balance we need," says Samaniego.



Network News

- **Global Campus Debut:** The road to Marshall McLuhan's global village passes another milestone with the official debut in Canada on January 13th of the "global campus." Thirty-five University of Toronto graduate students will link up with 25 Universite d'Orleans south of Paris for a 12-week course on culture and technology taught by some of France's leading intellectuals. (*Toronto Globe & Mail* 1/12/95 C2)

- **Visible Man on the Internet:** A convicted murderer executed in Texas 16 months ago who left his body to science, can now be seen on the Internet as the "Visible Man," a digitized encyclopedia of the human body available free through the auspices of the National Library of Medicine. The 15 gigabyte file comprises thousands of X-rays, magnetic and photo images of razor-thin cross sections of the human body. (*New York Times* 11/29/94 A14)

- **"Thomas" Offers WWW Access to Legislation:** The Library of Congress unveiled the new Web "Thomas" (after Thomas Jefferson) as a way to allow people to use the Internet to call up the full text of any bill introduced in Congress since 1992. Its URL is <http://thomas.loc.gov>. (*New York Times* 1/6/95 A22)

- **Iowa is Wired:** Iowa is the first state to have all of its counties linked through a fiber-optics communications system, which is transforming the state's schools, hospitals, and criminal system. One administrator there cautions: "Teachers must be specially trained or they'll end up teaching the same way they have for the last 30 years — but in front of a camera." (*Newsweek* 12/19/94 p.55)

- **More Internet Facts:** Traffic on the NSFnet grew a whopping 110% in 1994, and the number of countries online increased from approximately 137 in 1993 to approximately 159 this past year. There were 1,964 phone calls to InterNIC Registration Services during November '94. For more facts, check out <http://www.openmarket.com/info/internet-index/current-sources.html>. (*The Internet Index*, Number 5)

- **The Future of Higher Ed:** "Intellectual work is social work — notwithstanding the myth of the solitary genius — and the university is a social institution. The Internet can enhance the society of the university and quicken its pace of discovery and invention, but the electronic environment cannot replace physical human society. We humans cannot thrive in a bodiless, frownless, smileless ecology, and our intellectual society cannot be complete without physical interaction," says the University of Pennsylvania's provost — a point of view that author Lewis Perelman characterizes as "an expression of hope triumphing over logic." (*Chronicle of Higher Education* 1/27/95 A22)

- **Totally Hip, Totally Wired:** Newsweek contributing editor Katie Hafner says that "to be a totally hip campus is to be totally wired. That means installing a high-speed network that spans from the bursar's office to the library to the freshmen dorms." (*Newsweek* 1/30/95 p.62)

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

## New 'White Pages' Available Online

by Dan Dorough, Distributed Computing Analysis and Support

Information Technology has established a new "whois" database for the Davis campus.

The "whois" database is an electronic "white-pages" directory of faculty, staff, and students at the university. Searchable by name or by "MailID", the "whois" database includes such optional information as department and title for staff and faculty, or college and major for students, as well as telephone numbers and electronic mail addresses. The "whois" service is a common feature on the worldwide Internet, allowing peers and colleagues to find each other electronically.

The previous "whois" database, in service since 1989, was built for a population of about 5,000 e-mail users, required manual entry and update of all information, and included many incorrect or out-of-date entries. The new database is highly automated, uses data sources from other databases, can handle at least 100,000 e-mail users, and allows faculty, staff, and students to update their own entry online.

The new database already contains over 56,700 entries. More than 28,000 of those entries have registered MailID e-mail addresses.

The "whois" database can be accessed from any Information Resources login

server with the "ucdwhois" command, or from any Unix system on the Internet with the "whois -h directory.ucdavis.edu" command. You may search the database using a last name, or a last and first name in the form "last, first". If you know an individual's MailID, you can search faster with the form "MailID". The "whois" server will return a brief help message if you search for the name "?".

The "whois" database can also be accessed via the CWIS (Gopher) and via the World Wide Web (Mosaic).

By default, faculty, staff, and students have a "whois" listing showing the standard information extracted from UCOP and BANNER databases, for example home department (for faculty and staff) or major college (for students). If you would like to override this information or add to it (with a U.S. mail address, for ex-

ample), you can do so directly online, from any computer or terminal connected to the campus network.

To update the "whois" information follow these steps:

1. Use the **telnet** command or **menu** option of your computer to access the host **mothra.ucdavis.edu**
2. At the **login prompt**, type the word **services**. You'll be placed in the "Mothra Services Menu".
3. Select the **W menu option** to override the "whois" information. From there, just follow the instructions.

Future enhancements are planned for the "whois" database, including an automatic linkage with the campus telephone directory, faster searching methods for name searches, and integration with the UC systemwide "whois" directory.

## E-mail List Provides Network 21 Information

Interested in online, up-to-date information about the Network 21 project? You may obtain regular Network 21 updates by subscribing to a new electronic mail list — [net21info@ucdavis.edu](mailto:net21info@ucdavis.edu).

To subscribe to the list, send e-mail

to [listproc@ucdavis.edu](mailto:listproc@ucdavis.edu). Leave the subject line blank, and in the body of the message type:

Subscribe net21info <firstname> <lastname>.

Substitute your own first name and last name for "firstname and lastname."



## Computer Chat

### I.T.-CAP Supports Site-Licensed Software

by Karen Munoz, Information Resources

*Computer Chat answers the most frequently asked 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](mailto:itpubs@ucdavis.edu).*

The Information Technology Campus Access Point (I.T.-CAP) is the place for students, faculty, and staff to go for help with computing needs. The I.T.-CAP staff provides technical support for certain public domain and site-licensed software, including Internet tools like Eudora, Pine, Gopher, Tin, Mosaic, Netscape, Fetch and Listprocessors; and for communications tools like Clarkson Telnet, Kermit, PC/TCP, SLIP, PPP, FTP, MacIP, NCSA Telnet, and Mac TCP. The I.T.-CAP can provide only limited technical support for commercial software where other technical support is readily available from the software company; for basic UNIX programs like RN/Read News and UNIX Mail; and for popular word-processing and spreadsheet programs like MSWord, WordPerfect, and MSeXcel.

#### Weekend Hours

Expanded hours at the I.T. CAP Walk-in Facility make it easier than ever to get help with your computer needs. Located with the Copy Center on the first floor of Shields Library, the I.T.-CAP Walk-in Facility is now open Saturday and Sunday from 1-5 p.m., as well as Monday - Thursday 8 a.m. - 7 p.m. and Fridays from 8 a.m. - 6 p.m. To avoid long lines, come to the I.T.-CAP on the weekend. On weekdays, the quietest times are before 10 a.m. and between 5 and 7 p.m. You can also get help by calling 752-2548, or online through [ithelp@ucdavis.edu](mailto:ithelp@ucdavis.edu).

#### New Accounts

For anyone who doesn't have a campus computer account yet, it's not too late to open one. You can open an account from your home or office computer or from a computer in one of the campus computer labs, where how-to instructions are available. (Try the less-crowded lab in TB 114.)

#### What is the World Wide Web?

The World Wide Web (Also known as WWW or W3) is an electronic depository for information from all over the world. Accessible through the Internet, it includes text, data, graphic images, and sound. The navigational programs Mosaic and Netscape will help find information on the Web and give you access to graphic images, as well as text.

To reach the World Wide Web from a machine in a Macintosh lab, and to access graphics as well as text, double-click on the Mosaic icon, in the network utilities folder. To reach Mosaic from an IBM lab, select the Windows option in the menu and double-click on the Mosaic 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 the Mosaic software by logging into the campus computer system through chip, dale, or rocky, and typing lynx at the prompt.

## EH&S Puts Network to Work

Continued from Page 1

meaning a top-to-bottom restructuring of tasks to incorporate computer technology wherever feasible. Now, two years into the process, Profita says the results are impressive.

"We've been able to maximize personnel resources by eliminating redundancy in tasks, and the campus as a whole has benefited because we're able to respond to requests in a more comprehensive and organized way," she says.

How did they do it? The first step was a systematic look at how they were already spending their resources — and the results surprised them. They expected the analysis to show that most of their efforts were being devoted to environmental monitoring, and, in fact, the survey put that share of the workload at 28%. But the study also revealed that a fully equal amount of time and effort fell into the category of information management — sending and receiving information — with a much lesser share, 10%, allocated to managing hazardous materials.

With that information in hand, EH&S began looking at how processes could be combined or reengineered to electronic format. The idea was to not merely impose technology on existing tasks, but to make structural changes in the way tasks were accomplished.

With the guidance of Joan Gargano, Director of Distributed Computing Analysis and Support, and other Information Technology staff, EH&S bought the necessary hardware and software to set up a Local Area Network. The LAN allows staff to share files, software programs, and printing from a central computer, as well as to use e-mail to communicate with one another and with the campus at large.

Through the Campuswide Information System (CWIS), EH&S also began making resource materials available online. Now any campus computer user can obtain environmental health and safety class schedules, safety handouts, product recall notices, workplace health and safety postings, material safety data, and other information simply by access-

**TO ACCESS** Environmental Health and Safety Information online, login to one of the Unix machines (Chip, Dale, etc.), type **gopher** at the prompt, and choose the following in succession from the menu options: **the Campus, Departmental Information, and Environmental Health and Safety.**

ing the CWIS. (See box for instructions).

They also purchased a SUN server, which will enable them to convert the task of hazardous materials monitoring and tracking from a manual, face-to-face operation to an electronic process. They hired a programmer, Catherine King, who has been working since late January to develop a program that will allow departments to report directly to EH&S through an electronic network. EH&S will no longer have to send staff to laboratories to gather information or require departments to send reports on paper.

Next King will develop similar automated programs to help EH&S and other campus departments comply with regulatory requirements in such areas as injury-illness prevention, the handling of blood-borne pathogens, and laboratory safety standards.

In the meantime, EH&S has also begun automating its internal office practices. With the PROCITE software program, they were able to revamp internal filing processes and create a tracking system, eliminating the need for the same document to be filed in more than one place.

As a result, says Profita, information is shared in a much more systematic way. The automated filing system, "allows us to give a more coherent response," says Profita.

With the re-engineering well in hand, Profita has a request from the campus at large. "We'd like to know from our customers what automation projects might make our service better for them."

Profita can be reached at Environmental Health and Safety, 752-0368.

## Calling on Voice Mail for Help

Continued from Page 1

campus voice mail system.

Carrasco still gets just as many calls — during the first week of school it's not unusual for the system to record 500 attempts to reach her voice mailbox — but because she tailors her outgoing message to answer questions, not many of the calls require a callback.

"We've had absolutely no complaints from students on the voice mail system because they've grown up with it," says Carrasco. They much prefer it to long lines.

For those who object to technology supplanting contact between live human beings, Zack O'Donnell, Customer Service Center Manager for Communications Resources, has a suggestion — just try it.

A historical perspective also helps, adds O'Donnell. Think back just six years ago when the campus telephone system consisted of six-button phones shared by everyone in a department.

"People have forgotten what it was like. On busy days all the lines would be tied up and you couldn't get a dial tone."

Voice mail users may suffer from a similar kind of selective amnesia, says O'Donnell. "People who have voice mail may have already forgotten what it was like always having a stack of messages to

return and constantly playing telephone tag."

To date about 2,300 individual faculty and staff members on campus have signed up for voice mail, and the number continues to climb. In December university offices in Research Park were upgraded with a new, independent voice mail system that will bring voice mail services at that location up to speed with the rest of the campus.

A number of other departments on campus are also using voice mail for routing calls. At the campus employment office, for example, an automated voice mail attendant handles the job line.

Coming soon is a new voice mail feature — the ability to store FAX messages in voice mailboxes to be printed out at a time and location convenient to the recipient. The FAX feature can also be added to voice mail automated attendants so that a caller can ask for information to be sent automatically, eliminating the need for staff to send the FAX by hand.

The campus has a collective incentive to encourage faculty, staff, and departments to open voice mail accounts in that upgrades are entirely funded by voice mail fees — the more accounts, the more upgrades. For information on voice mail, talk to your department Area Telephone Representative or call Communications Resources at 752-4603.

## Exploring Modem Alternatives

Continued from Page 3

dreds of individuals on campus who use modems because they cannot access the network through a departmental LAN. Establishing a local area network can provide a department with network access and work to streamline other administrative functions as well.

- Outsource network access to bureaus or providers who could act as Internet gateways for both modem users and Integrated Services Digital Network (ISDN) Centrex subscribers. The access providers would own and operate the access facilities and charge for services on a usage-sensitive basis. Certainly worth mentioning is the Davis Community Network, a consortium dedicated to serving the Davis community with network access alternatives. UC Davis is a sponsor and partner in that effort, which recently launched a pilot program designed to test the concept of third-party network access provisioning.

- Provide network access via Cable Television (CATV) facilities. Wireless providers could also serve as a source for direct connection to the Internet.

- Find ways to prevent users from "camping" on the network. This process could begin by educating users that the network is a shared resource and encouraging them to log off when not using network resources. A software program could identify those who fail to log off the network. While some may interpret this as "policing" the network, it may be an effective means of traffic control.

UC Davis is not alone when it comes to dealing with the network access issue. The University of California Office of the President (UCOP) is drafting a Request for Proposal that invites commercial network providers to propose innovative solutions to this increasingly complex situation. The list of potential subscribers on a University-wide basis could be huge in terms of the economies of scale that might be realized.

Network service is vital to the entire University community — both on and off campus. Meeting the challenge of providing that service presents some new and interesting opportunities. Suggestions from the campus community are welcome. Please forward them to the ITAAC Modem Subcommittee by sending e-mail to [gawsmith@ucdavis.edu](mailto:gawsmith@ucdavis.edu).

*Note: The next issue of the I.T. Times will report on the progress of the ITAAC Modem Subcommittee. Data on campus modem usage also will be published.*

## I.T. TIMES

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