Network 21: Scenarios for the Coming Ubiquity of High-Speed Networking

by Ivars Balkits
Planning, Strategy & Administration

The Network 21 Project to construct a more robust and ubiquitous network on campus encompasses more than the installation of fiber-optic cable, equipment closets, distribution frames, access modules, and miscellaneous construction work. Rather, Network 21 is about placing in the hands of campus faculty, students, and staff the power to create a customized working environment suited to each individual, with immediate access to resources across the Davis campus and from around the world.

To illustrate this vision for the UC Davis infrastructure, three scenarios are presented here as part of a working-day portrait of campus life under the auspices of a completed Network 21. These vignettes are written from the perspectives of a faculty member, student, and staff member in a hypothetical year when all central administrative systems and all departmental systems are linked and when high-speed networking is as commonplace on campus as bicycles are now.

The IT Times editorial staff invites submissions from readers of their own visions of a completely networked campus of the future. Make this a two-way affair by sending us descriptions of your applications, experiences, and ideas pertinent to this topic. IT would especially like to hear from those persons applying the services of a supercomputer for research. Send all materials to Ivars Balkits, Planning, Strategy & Administration; e-mail: isbalkits@ucdavis.edu; voice: 757-3263.

DISCLAIMER: Please keep in mind that these scenarios are highly speculative in nature. Though most technologies described are available now, their implementation at UC Davis depends on factors (financial, organizational, political) that are difficult to assess and, in any case, beyond the scope of this article.
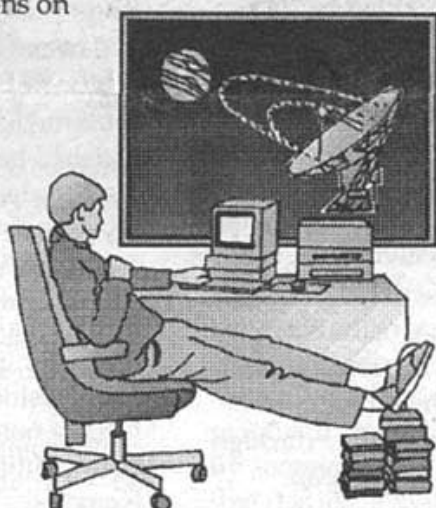
Professor A (Faculty Member in African Studies)

For the half-hour before starting work that day, Professor A had been listening in her office to the popular news program "All Technologies Considered." Now, it was time to turn to the task of preparing a book list for an upper-division course she would be teaching that winter: AS 099 - Effects of Networked Communications on North African Politics.

illustration by Hanna Fischer

Instead of leaning over to turn off the knob on a radio, she clicked once on the mouse attached to her desktop workstation. Since the University had equipped it with free Internet access, she had decided to subscribe to the voice-based news and information service "NREN Talk Radio." (NREN = National Research & Educational Network.)

With a second click, Professor A opened a connection to the Campuswide Information System and the menu item "Online Campus Bookstore Catalog." The professor had been using this service since 1993, her first year with the University, to select and order textbooks.

The custom publishing system at the Bookstore (similar to Primus at UC San Diego) allowed her to have one book printed straight out of the can for her students and one composed from diverse materials in the database. For that second book, she chose essays, maps, etchings, and statistical data from various publications and punched in her order, knowing that the system would put all those elements together with an appropriate table of contents and index, pagination, acknowledgments, and copyright attribution.

As an afterthought, Professor A decided to require students to send away via the Internet for one electronic shareware textbook.

IT Presents Annual Report on October 29

On October 29, 1993, the campus will have the opportunity to hear and respond to the 1992-1993 annual report of the Information Technology organization. Dr. Carole Barone, Associate Vice Chancellor—Information Technology, will present this report at 10:00 a.m. in room MU II of the Memorial Union complex.

Described in the annual report are such IT accomplishments as:

- development of the Information Technology Strategic Plan;
- initiation of Network 21 (the Campus Fiber Backbone Network Project);
- creation of the IT Campus Access Point;
- co-establishment, with the General Library, of the Center for Advanced Information Technology;
- development of the Campuswide Information System;
- development of campus administrative systems, including the BANNER Student Information System.

The annual report also addresses IT goals and outcomes in the areas of campus site licenses; modem performance; support for distributed computing; outsourcing; vendor relations; Instructional Use of Computing Funds; Davis Community Network: support for instruction and research; systems integration; Departmental Support Program; access to administrative data; the IT Statement of Mission and Values; and the IT organization's responses to the Phase III recommendations.

Highlights of Recent Progress on the Network 21 Project

EDITOR'S NOTE: The following information has been gleaned mainly from the meeting minutes of the Network 21 Program Planning Committee. The purpose of the Committee has been to evaluate the scope of Network 21 to develop a "Project Planning Guide." This Guide will be presented at the November 18-19 meeting of the UC Board of Regents.

Funding

The Network 21 Program Planning Committee has been working with Planning and Budget on a funding scheme which, among other aspects, has involved researching the methods of network funding at other UC campuses.

"Network 21 Communications Infrastructure" is the term that will be used to link the various elements of the project budget.

Interim Network 21 Project

One of the first priorities of Network 21 is connecting all departments that need access to the Student Information System.

To facilitate this requirement, Communications Resources has initiated the Interim Network 21 Project. Solutions are sought to connect the 56 departments in the 30 buildings that currently do not have access to the SIS. Short-term alternatives involve the use of modems, the Develnet, and the existing campus network.

For more information, contact Rodger Hess at 752-3995 or rwhess@ucdavis.edu.

Connecting Classrooms

Over the next 2 1/2 years, 50 classrooms will be connected as part of Network 21.

Connecting Remote Sites

Dormitories — The wiring of dorms initially was considered outside the scope of Network 21. Fiber to the buildings, however, is part of the project, and Student Housing with IT are discussing potential arrangements with cable companies to wire dorms.

Primate Center — Microwave has been proposed as a short-term solution to link the Primate Center to the campus infrastructure. However, because of that group's need for high bandwidth connections, the Primate Center is looking into financial support for pulling fiber to its location.

Research Park — A 4" conduit has been placed in the overpass for Richards Blvd., now under construction, to provide a vehicle for reaching Research Park.

NETIQUETTE & INFO TECH CULTURE

The "Netiquette & Info Tech Culture" column is written by various authors to help persons deal effectively with the social side of networking, computing, audio/visual media, and related information technology.

Unacceptable Uses of Campus Systems and Network

[Editor's Note: The following information is from "UCD - Computer Use Policy," a document adapted in large part from UC Berkeley's "Computer Use Policy." The UCD document was approved for dissemination and implementation on an interim basis by the Computing Administrative Advisory Committee/Academic Senate Committee on Computing at its June 11, 1993 meeting.]

Computers and networks can provide access to resources on and off campus, as well as the ability to communicate with other users worldwide. Such open access is a privilege, and requires that individual users act responsibly. Users must respect the rights of other users, respect the integrity of the systems and related physical resources, and observe all relevant laws, regulations, and contractual obligations.

Existing Legal Context

All existing laws (federal and state) and University regulations and policies apply, including those that are specific to computers and networks, as well as those also those that may apply generally to personal conduct.

Misuse of computing, networking or information resources may result in the loss of privileges on those resources that IT administers, and those that may exist in other departments associated with UC Davis and connected to its network. Also, misuse can be prosecuted under applicable statutes. Users may be held accountable for their conduct under all applicable University or campus policies, procedures, or collective bargaining agreements. Complaints alleging misuse of IT resources will be directed to those responsible for taking appropriate disciplinary action as specified under "Enforcement" below. Illegal reproduction of software protected by US Copyright Law is subject to civil damages and criminal penalties including fines and imprisonment.

Other organizations operating computing and network facilities that are reachable via the UC Davis network may have their own policies governing the use of those resources. When accessing remote resources from UC Davis facilities, users are responsible for obeying both the policies set forth in this document and the policies of the other organizations.

Examples of Misuse

Here are guidelines to determine when misuse of UCD computer systems and the campus network has occurred. Examples of misuse include the activities in the following list.

- Using a computer account that you are not authorized to use, and/or obtaining a password for a computer account without the consent of the account owner. If you, as an authorized user, give out your account and password to another individual, you can still be held accountable for any actions that may arise from use of your account.
- Using the campus network to gain unauthorized access to any computer system.
- Knowingly or carelessly performing an act that will interfere with the normal operation of computers, terminals, peripherals, or networks.
- Knowingly or carelessly running or installing on any computer system or network, or giving to another user, a program intended to damage or to place excessive load on a computer system or network. This prohibition includes programs known as computer viruses, Trojan Horses, and worms.
- Attempting to circumvent data-protection schemes or uncover security loopholes, including creating and/or running programs designed to identify security loopholes and/or decrypt intentionally secure data. This proscription includes programs contained within an account, or under ownership of an account, that are designed or associated with security cracking.
- Violating terms of applicable software licensing agreements or copyright laws.
- Deliberately wasting or overloading computing resources. This prohibition includes printing multiple copies of a document or printing large documents that may be available online or, if printed, that may impact significantly on other users' printing resources.
- Using electronic mail to harass other persons.
- Creating mail or electronic distribution lists larger than 10 addressees that send electronic communications to other accounts without prior permission of the receiving individuals.
- Moving large files across networks during peak usage periods or prime hours such that it degrades resource performance. Prime hours will be considered to be Monday through Friday from 1:00 to 5:00 p.m.
- Storing large files on the systems that could compromise system integrity or preclude other users right of access to disk storage. The IT staff may remove or compress disk files

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Working with Presentation Software

Information Resources encourages faculty, students and staff to use the Meyer Production Lab to develop instructional presentations. Located in 1154 Meyer Hall, the lab is equipped with a 35mm film recorder on a Macintosh, a VHS video tape editor and a 35mm copy camera stand. The lab also has Microsoft PowerPoint software running on both Macintosh and IBM platforms. If interested in using the equipment, make a reservation by calling 752-5215.

Note: If you are thinking of purchasing presentation software, you may want to evaluate vendor-donated copies first in the Center for Advanced Information Technology (CAIT). Located in the southeast corner of the first floor of Shields Library, the CAIT has Compel by Asymetric, Persuasion by Aldus, Presentation 2.0 by WordPerfect, PowerPoint by Microsoft, and others. For more information, call 752-5711.

Scenarios...

"That settles the administrative end of the day's business," thought the professor. "Now to get cracking on the research for 'Linked Continent' (an annual conference initiated in the early 1990s to foster information-technology related activities in Africa)."

For the conference, Professor A was preparing a paper on the history of networked distance education in Africa. Earlier that week, she had signed onto the listserv mailing list AFRICANA (Information Technology and Africa). Now, firing up the electronic mail application, she soon was immersed in the listserv discussion, following the thread of a topic she herself had initiated the day she had signed on.

After a few messages, Professor A came across exactly what she needed (volunteered by a colleague in Ghana): a reference to the online location of the 1990 publication "Distance Education in Anglophone Africa." She would explore that lead later in the day, using the FTP program to access the online archive and retrieve the document.

"Just one more message, " thought Professor A.

The next message was from a colleague on campus, announcing that a multimedia module on African agriculture had been tied into the UC Davis Nematode Library. This new module would allow African teachers and researchers to access the most extensive nematode database in the world, an extremely valuable resource considering the major impact of nematodes on crop and livestock production. Professor A made a note, using the desktop Reminder utility, to contact the UCD Nematology department for statistics on the module's use by African teachers for her research.

For the remainder of the afternoon, Professor A reviewed and supplied electronic comments to the first chapters of a graduate thesis — interactively discussing those changes with the student (based in Fresno) via a workstation-based video teleconference. This setup allowed the two to see and hear each other and to view and annotate the document on their screens. All communications (audio, video, and the document window) were conducted over the Internet wide area network.

At 5:00 p.m., she was strongly tempted to just curl up with her notebook computer to read an interactive hypertext novel she had downloaded from an archive in Cambridge, MA. Professor A really enjoyed moving forward and backward through the narrative to read it from the point of view of any character she selected.

"But duty calls," thought Professor A, and she switched over to the application that would connect her via the campus network to a videoconferenced seminar on the effects of global weather change on the African Sahara. Environmental studies was not an area she had studied much, but she looked forward to this new subject to give her additional understanding of factors affecting African life.

Student B (Undeclared Major — Leaning toward Astronomy)

On his way to African Studies 099, the student B stopped at the computer terminal in the atrium of Engineering II. This terminal looked very much like an ATM banking device. Indeed, B removed a University ID card from his wallet, inserted it, and typed in his username and password, the same username and password he had used every day this winter quarter to get onto the communications network from lab, classroom, or dormitory.

In the minutes before the 8:00 a.m. class, B queried the BANNER Student Information System for the status of his federal loan, checked which electives were still open in Comparative Literature, and printed out his revised class schedule on the attached eight-inch printer. Then he hurried on to the upper-division class that Professor A had allowed him to attend, though still a sophomore, because of his many years in Morocco as the son of diplomats.

At 9:00 a.m., B walked over to the network "docking station" in Hart Hall, connected his laptop computer to the campus network, and (supplying the same usercode and password) accessed the visualization lab server in Academic Surge. For the next few hours, B continued work on a 3-D visualization exercise for a Physics class that incorporated sound, video, and computer animation as well as text. Around noon, he submitted this report through file transfer over the network to the instructor's workstation in Engineering II.

After lunch, B returned to the dorm to study for a short quiz in Nutrition to be distributed that afternoon over the class newsgroup on the Usenet News system.

At 2:00 p.m., he logged onto the campus network from his room. Using electronic mail, B decided to go ahead and enroll in the 30-week astronomy course offered via the Internet by Tidewater Community College in Virginia. This course, featuring online guest lecturers renown in the field of astronomy, utilized conferencing, file transfer, and email to foster class interaction.

Once he completed the course, B's transcript would be automatically updated through the national transcript service, and Tidewater would debit his UCD account. B was grateful that his parents could transfer funds to his educational account electronically through the University payment plan.

Next, B activated the newsreader program and downloaded the quiz to his desktop computer from the Usenet newsgroup. Browsing a bit, he learned, through a newsgroup devoted to astronomy, of an interactive CD created by a Los-Angeles-based astrophysicist and musician. This CD contained recordings of radiowave transmissions collected from a galaxy 180 million light-years away. B made a note, using the desktop Reminder utility, to check whether this product was listed in the online catalog of a CD clearinghouse based in San Jose.

B then completed the quiz, submitted it to the instructor by email, and headed back to campus for his 3:00 and 4:00 p.m. classes. When those were over, he walked over to the Memorial

The Online Library

University Librarian Looks at How Information Will Stack Up

by Catherine Curran, Planning, Strategy & Administration

As a student, I remember lots of time spent talking about the library. It was the center of the campus universe — a place to meet, a place to study and a place to do research.

We learned how to avoid waiting in line to use the card catalog. And we learned how to judge the success of our subject searches by the number of books we found stacked on the shelf.

To those of us who matriculated in the Pre-PC Era, information was a tangible thing. We could touch it, hold it and carry it with us. We never dreamed that going to the library might someday mean going online. But it's happening. And it's bound to happen more.

Typing a few commands on the computer keyboard will plug you into MELVYL, the University of California's electronic catalog.

MELVYL is actually much more than a catalog. It provides instant access to databases of articles and abstracts in a broad range of disciplines, and its catalog goes beyond UC to include materials in the California State Library. You can view the information at any UC library terminal or from your home or office, if you have network access. (See "Going to the Library Online" sidebar.)

"MELVYL is one of the most important library tools that has been developed," says Marilyn J. Sharrow, librarian for the Davis campus.

Marilyn Sharrow

From Sharrow's perspective, MELVYL is technology at its best. It's convenient, it's responsive and it provides an orderly and efficient way of accessing much of the vast store of information archived in UC libraries.

But it is not immune to irony. What MELVYL does not and cannot do is lead us to work that has not been archived. And with more and more information being created on computers and exchanged on electronic networks, that task is becoming more difficult.

As University Librarian, Sharrow is working actively with information technologists, librarians, scholars and university administrators from institutions across the country to develop processes for capturing and archiving the scholarly works that are being created, edited and exchanged electronically.

A past president of the Association of Research Libraries (ARL), Sharrow is a member of the ARL Working Group on Scientific and Technology Information. She serves on the California State Library's Network Planning Group, the Network Resource Libraries Group and the Network Steering Group. A member of the Coalition for Networked Information Task Force, Sharrow also is a founding officer and first chairperson of the Higher Education Resources Alliance (HEIRA), of ARL, CAUSE and EDUCOM.

"Over the years, we realized that people within the university have two needs — the need to collect, archive and store information and the need to generate information. Library staff need to be working with the researchers to collect and disseminate the information," says Sharrow.

"The issue isn't that the technology exists or that it is not wonderful — because it is," says Sharrow.

The issue is how the information that lives in electronic limbo will be saved and archived for posterity.
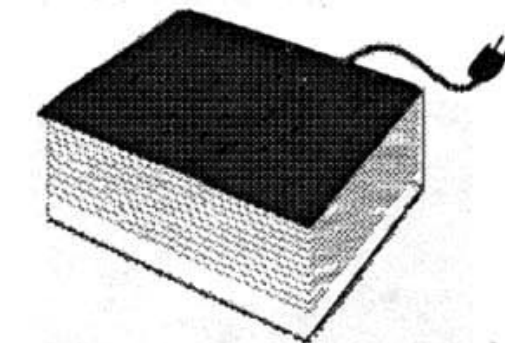
"Librarians love to help people find information. We want to be able to gather it and help people access it," says Sharrow, noting that there are some important questions that need to be answered before we can ensure that today's intellectual endeavors live to benefit tomorrow's scholars.

• Who should decide what information will be saved? When information is exchanged on the network, it is instantly available to those who want it. But what happens to that information after the initial ingestion. Even if it remains in electronic form, Sharrow says there is no mechanism in place for librarians to organize or index it. "Who is going to say in the next 25 years what will be saved and what won't?" Sharrow asks.

• How will we record the progression of scholarly research? "Having copies of incomplete works is important to scholars, especially those studying poetry and literature," says Sharrow. For instance, having incomplete works of poetry gives scholars an opportunity to analyze why a certain word was used or changed. Because works created on computer are subject to constant and instant revisions, future scholars may not have the luxury of studying works in progress.

• What happens when the technology itself becomes obsolete? "The future conversion issues should be addressed," says Sharrow. Not only is it costly to convert existing records to CD ROMs and other technical formats, but there is an accessibility issue as well.

Libraries, for instance, once stored information on microcards — a technical innovation that is now obsolete. "How will libraries convert the information to a new format so it can be easily accessed?" asks Sharrow, adding that it is just a matter of time before librarians ask the same question about information now on microfiche.

Long-playing records are a case in point.

"People invested billions of dollars in turntables. Now, you can't buy vinyl records," says Sharrow. "Everybody has gone to CDs and next it will be a form of floppy disk."

Maybe we can't expect information to come full circle anymore.

Going to the Library Online

by Catherine Curran, Planning, Strategy & Administration

Some important keys to using the library are now available on the UCD Campuswide Information System (CWIS). By accessing the CWIS, you can retrieve information ranging from library hours to library workshops and obtain access to MELVYL, the online "card catalog" for all University of California libraries.

Reaching the Library Online

You can access MELVYL directly from a library terminal or use gopher to access the data from your terminal at home or office. [For more information on Gopher, see "From the CWIS Administrator: Gopher (Go for) the CWIS!" in the "CWIS, Lately" column on page 7.]

To access the CWIS using the gopher program on Information Technology UNIX machines, follow these steps:

1. After your normal login, type gopher<return> (pressing the RETURN or ENTER key to execute).
2. When the top-level menu of choices appears, type 6 (for "Libraries").
3. Then type 2 and 2 again for the MELVYL system. Or, make other selections under the "Libraries" menu to reach the information you wish.

Library Training and Workshops

Throughout the year, the library gives workshops on using MELVYL. Dates, times and workshop descriptions are found on the CWIS. Among the many workshop topics are "Useful Knowledge and Techniques for Working Efficiently in the MELVYL Library System," "Finding Journal Articles in Current Contents," and "Management of Bibliographies and Reprint Files." To sign up for a workshop, send electronic mail to klfirestein@ucdavis.edu. (Note: Exact workshop hours are subject to change.)

Databases on MELVYL

Using the MELVYL system provides instant access to a wealth of information. In addition to information on what's to be found in University libraries, MELVYL provides access to many other databases.

Databases currently mounted on MELVYL include:

MAGS: Magazines & Journals: Expanded Academic Index to 1,500 general interest and scholarly magazines and journals from 1988 to the present.

NEWS: Newspaper Articles: Index to major US newspapers from 1982 to the present, including Christian Science Monitor, Los Angeles Times, New York Times, and Wall Street Journal, Washington Post.

CC: Current Contents: Index and tables of contents for 6,500 scholarly journals in all fields, 1989-

INS: INSPEC: Index and abstracts for 4,000 physics, electronic and computing journals, conference proceedings, books, etc., 1969 to the present.

MED: MEDLINE: Index and abstracts for 4,000 medical and

Union videoconferencing center to attend the presentation delivered by a UCSC faculty member from Lick Observatory to UC students systemwide.

The MU was a great place for students to have a wholesome dinner, share a big screen videoconference, and exchange ideas. Based on the movie review he'd seen on the Campuswide Information System, B decided to stay for the ASUCD-sponsored movie that followed the videoconference.

Staff Member C (Management Services Officer, Academic Department)

The office had just opened for the day's business, and her assistant found C already at work writing comments in the margin of an administrative advisory committee report. The report was displayed on an electronic whiteboard hanging on the wall behind C's desk.

C stopped writing long enough to sign her name to the bit of paper her assistant held out to her. It was one the few paper items still circulating in offices at the school — a birthday card for a fellow employee.

Her assistant watched as a second annotation appeared in the margin of the report, apparently writing itself on the MSO's whiteboard. Then he left, unruffled. The software on the campus whiteboards allowed personnel in several departments to brainstorm or work on drafts of the same document, simultaneously or asynchronously. It had been that way for years.

The MSO rolled the whiteboard

sheet through the machine to load that information to a diskette for backup — just as her desktop workstation notified her that she had mail waiting:

"You have mail waiting," it said, "with message # 8 requiring immediate attention." The machine "spoke" in the voice of her favorite opera tenor, which C had selected from the Clip Sound CD that came bundled with the system.

C checked her email: "Open electronic mail, and read message #8." C preferred to use the voice recognition software for commands to email and voice mail (integrated since 1995 with the digital network). The tenor began the task set for it.

The urgent request was from the department head to have a grant payment delivered via the worldwide network to a field researcher's bank account in

Music Students Score High With Computer

by Catherine Curran, Planning, Strategy & Administration

D. Kern Holoman makes sure students in his Music 10 course learn the keyboard. Make that the computer keyboard.

A professor of music and conductor of the UCD Symphony Orchestra, Holoman is using the computer to introduce his students to musical concepts, musical instruments, musical history, musical texts, and musical, well, you name it.

"Masterworks — An Interactive Guide to Music" is what Holoman calls the software program he developed to take students on a self-guided, audio-visual journey through the world of music.

Students who wish to learn more about their professor's instrument of choice can do so by clicking on Bassoon. In addition to a drawing of the U-shaped woodwind, they will find references to pieces in which the bassoon is heard.

Tips from Holoman's book and 1992 Book of the Month Club Selection, Evenings with the Orchestra: A Norton

D. Kern Holloman

Guide for Concert-Goers, no doubt appear in the section titled "Going to A Concert."

"When students come to take a general education course in music, their backgrounds and abilities are mixed.

Some have never even been to a concert," says Holoman.

The challenge in teaching an introductory course, Holoman notes, is finding a way to expose students to the basics without taking up too much time in the classroom.

Holoman incorporates information from "Masterworks" into his classroom lectures and often illustrates his talks by projecting screens from the software program. Students, in turn, can go to a computer to review lecture material or take a more in-depth look at topics and concepts presented. Self-paced quizzes are built into the program.

"The idea is that eventually students will have their own disks," says Holoman, who took his journey into computer learning a step farther last spring when he gave students in one course their final exam on computer.

The results looked promising, says Holoman. "Ninety percent of the scores were 95 percent or higher, which means they mastered a great deal of the material."

Highlights

Program: Masterworks - An Interactive Guide to Music

Application: Interactive, multimedia program used to teach Music 10 - "Introduction to Music Literature" and Music 24 - "Music History for Music Majors"

Creators: D. Kern Holoman, Professor of Music, is responsible for the overall program design, including the facts and concepts incorporated into the package. Two undergraduate engineering students worked on writing the software and an undergraduate student of art and music worked on graphic design.

Software: Plus by Spinnaker was used to develop the program

Platform: Runs on Windows but can cross over to the Macintosh.

Distinctions: CD ROM technology allows students to move directly to a specific movement within a piece, view the notation, see how much time is elapsing and listen to the score all at the same time. A $6,585 grant from the Instructional Technology Awards Program was used to fund the purchase and development of the computer hardware and software.

Med Students Manipulate Molecules on Screen

by Catherine Curran, Planning, Strategy & Administration

While future physicians of America arrive at medical school with a knack for memorizing scientific detail, the medical practices that await them demand an ability to assimilate the details into diagnoses.

Enter "MoBy: A Study Aid for Medical Students." Created by Harry Matthews, a professor of Biological Chemistry in the School of Medicine, MoBy teaches students how to apply medical knowledge to new situations.

"The lecture format does a good job of explaining things, but students need to have the ability to take information from two different lectures and put it together," says Matthews who developed MoBy to supplement lectures in his molecular and cell biology classes for first- and second-year medical students.

Structured in a traditional question-and-answer format, MoBy hosts a number of support utilities which allow
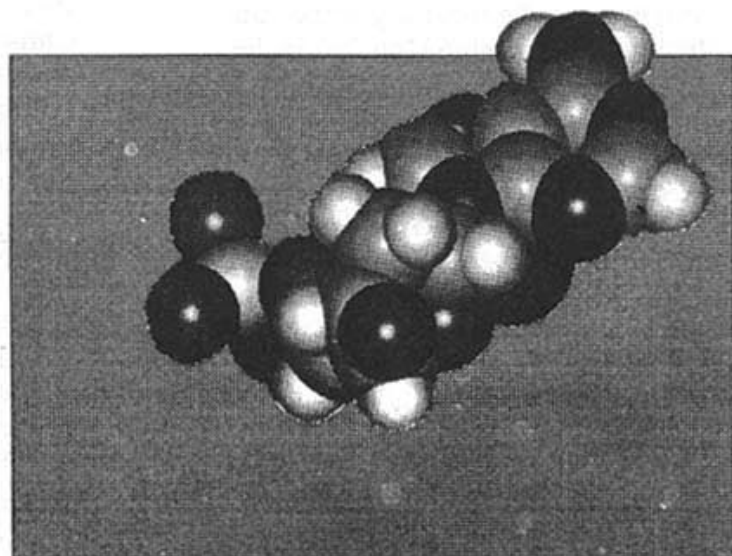
students to work at different levels depending on where they are in their studies.

Students questioning the information can find out which lecture covered the topic, and they can test their test-taking skills. If a student answers one of the 250 questions incorrectly, MoBy tells why the selected answer was a bad choice.

MoBy's "hotwords" system directs students to a glossary of over 600 medical terms. When a student comes to a "hotword," the pointer turns to a box. A click on the mouse, and the meaning appears.

Bringing the biological concepts to life is an animation of a molecule which allows students to study the 3-dimensional structure from different angles. Students can use MoBy to manipulate the speed at which the molecule rotates and pause to study how different chemicals prompt changes in the molecular structure.

"The information sticks in students minds better when they can visualize it," Matthews says.

Highlights

Program: MoBy: A Study Aid for Medical Students.

Application: Interactive program used as study aid for first- and second-year medical students enrolled in "BCM 410A — Molecular and Cell Biology." Content also prepares students for National Board Examinations taken after the second year of medical school.

Creator: Harry Matthews, Professor of Biological Chemistry, School of Medicine.

Software: ToolBook by Asymetrix was used to develop MoBy. Hyperchem from Autodesk was used to create images of molecular structure, which were animated in ToolBook.

Platform: IBM

Distinctions: Structured in a question-and-answer format, MoBy teaches test-taking skills as well as technical information. When students click on the wrong answer, the program tells them why their selection was a poor choice.

Program allows students to visualize how chemical reactions prompt changes in molecular structure by running an animation of a molecule. Students can pause and study changes by manipulating the speed at which the molecule rotates on the screen.

MoBy is installed on the School of Medicine server and can be used in both of the school's computer labs. The program is also available on floppy disks.

Students can use MoBy to manipulate the speed at which the molecule rotates.

MED: MEDLINE: Index and abstracts for 4,000 medical and life sciences journals. 1966 to the present.

COMP: Computer Articles: Index and some full-text for 200 computer-related magazines.Psyc: PsycInfo: Index and abstracts for 1,300 journals, conference proceedings, books, etc., 1967 to the present.

Databases for which MELVYL serves as a gateway (reached by USE command):

CQ: CQ Washington Alert: Congressional Quarterly containing current US legislative and regulatory information.

ERIC: Educational Resources Information Center: Education article and report citations and abstracts, 1966 to the present (database on the Stanford University's FOLIO system).

GeoRef: American Geological Institute database: Geology and geophysics citations, 1785 to the present (database on Stanford University's FOLIO system)

HAPI: Hispanic American Periodicals Index; Citations to articles, documents, book reviews, and original literary works in approximately 400 social science and humanities journals that regularly contain information on Latin America, the US-Mexico borderlands, and Hispanics in the United States, 1970 to the present (database on UCLA's ORION system).

Kids Compute on Campus

by Catherine Curran,
Planning, Strategy &
Administration

photographs by Catherine Curran

Budding Consultants: Taking a team approach to computing are (left) 9-year-old Erik Skonovd of Davis and 8-year-old Matt Taylor of Stockton. Sonya Kluk of Davis and her partner Meredith Black of Sacramento, both 11, (shown right) copy pictures from the scrapbook on the Macintosh computer.

This summer, the Division of Information Technology teamed forces with Cal Aggie Kids Sports Camp to show nearly 300 six- to twelve-year-olds how computing is used on campus.

On Tuesday and Thursday afternoons, children enrolled in Cal Aggie Kids Sports Camp traded kickballs for keyboards as they were treated to a first-hand look at campus computing facilities.

"We wanted each child to have a good understanding of how a computer works," said Pete Peterson, who coordinated the program for IT and made sure all campers toured the Center for Advanced Information Technology (CAIT) in Shields Library and had an opportu- nity to work on both Macintosh and IBM computers.

The computing experiences provided during each of the camp's four two-week sessions were many and varied. Campers created their own name tags and designed paper airplanes with desktop publishing. They found out what the term multimedia can mean when they participated in video conferences, experimented with QuickTime videos and queried image databases for photographs and graphics. They journeyed into different computing networks with e-mail, and some campers even looked into current events by accessing Usenet news.
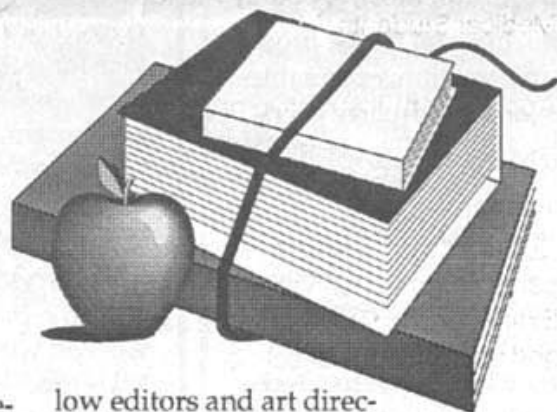
Information Resources instructors for Kids Camp were Jennifer Koester, Peter Peterson, Jeff Barrett, Faust Gorham, and Jen Alex. Tina Perez, Donna Wilson and Dave Zavatson provided instructional assistance.

When campers were asked how they liked the computing program, they didn't mince their words.

"It's fun," they said.

Information Goes Beyond the Book

[EDITOR'S NOTE: The ability to create and exchange text, graphics and audio information on computer networks literally is changing the way we do business. Examples of the impact information technology is making in our society appear below. These highlights were gleaned with permission from recent editions of EDUPAGE, a twice-weekly summary of news items on information technology. To subscribe to EDUPAGE, send e-mail to listserv@bitnic.educom.edu containing the text: SUB EDUPAGE firstname lastname.]

PUBLIC LIBRARIES OFFER INTERNET ACCESS — Anyone with a PC and a modem can now access major Internet databases through public libraries in Cleveland, Seattle, and Morris County, NJ. These library systems offer gateway access through local telephone numbers and vary in their information offerings and restrictions on use. Other librarians around the country are examining the pioneering efforts, looking for models their own libraries might use. (Investor's Business Daily 9/3/93 p.4)

DIGITAL PHOTO CATALOGS — Eastman Kodak is developing a computerized system that allows advertising agencies and publishers to browse through catalogs of low-resolution images via modem. Another system, by Picture Network International, will al- low editors and art directors to negotiate a price and download high-resolution images off the same phone connection used to view them. (Investor's Business Daily 9/9/93 p.3)

UNIVERSITY PRESSES — The Coalition for Networked Information (CNI) and the American Association of University Presses (AAUP) are seeking assistance in developing projects that demonstrate the roles and capacities of university presses in the networked information environment. For information send e-mail to: paul@cni.org.

ROUNDTABLE ESTABLISHES PRINCIPLES — More than 50 members of the Washington-based Telecommunications Policy Roundtable met recently to discuss "Public Interest Principles" for the development of the nation's information infrastructure. The principles include universal access, civic involvement, and privacy, among others. The group is dedicated to making the public voice heard as long-range decisions are made on how communications and information services will be owned, managed and delivered in the next century.

FLOPPY COPY — LA Times columnist Michael Schrage suggests that book publishers, for an extra buck or so, should package a floppy-disk version of the book with each hard copy sold.

He argues that digital and printed versions of a book are complements to, rather than substitutes for, each other. (Washington Post 9/3/93 D2)

MORE NEWS FOR THE NET — The purchase by publishing mogul Rupert Murdoch's News Corporation of Delphi, the nation's fifth-largest online computer services, signals that many of the former company's newspapers and magazines will be made available over the Internet. Commercial networks have increased more than six-fold in the past two years. (New York Times 9/3/93 C1)

LAW ON A DISK — Lawyer's Cooperative Publishing of Rochester NY is marketing the equivalent of 250,000 pages of case law on a single CD called LawDesk, which sells for $1,995. Yearly updates cost $795. For info: 800-828-6373. (Atlanta Constitution 8/19/93 E2)

E-MAIL'S NOT GOING TO THE SHREDDER — A US Court of Appeals ruled that the government must preserve electronic messages and memoranda under the same standards used for paper communications. The decision was hailed by historians and journalists. (NY Times 8/14/93 A1)

Computer Thieves Raiding West Coast Universities

[Editor's Note: The following notice has been adapted from an article distributed over the Internet by Kip Hauch of Chemical Engineering at the University of Washington. You can contact him by electronic mail at hauch@cheme.washington.edu.]

Indications are that a ring of professional computer thieves may be at work on university campuses on the West Coast, and perhaps elsewhere in the US.

During spring 1993, the University of Washington in Seattle was hit several times by a professional ring of computer thieves. In total, well over 150 offices were forcibly broken into, and over three dozen high-end Macintosh computers stolen.

The thieves took only the Macintosh computer CPU and mouse, leaving the keyboards and monitors behind. The thieves also carefully removed all Ethernet and other cards from the CPUs.

Similar Macintosh thefts are being reported throughout the West Coast. Desktop units (IIci,vx, Centris, Quadra) and PowerBooks are favorite targets. And buildings with a high concentration of Macs in faculty offices are specially at risk — the thieves have often passed up student computer labs to pillage dozens of individual faculty/staff offices with high-end machines.

If you have been a victim [after contacting the Police Department], you may wish to contact the following group to report the serial numbers of stolen items:

The Stolen Computer Registry
PO Box 1490
Madison Square Station
New York, NY 10159
phone: (212) 777-1 291
fax (212) 777-1290

The registry is a nonprofit arm of the National Computer Exchange, a nationwide computer brokerage firm. This list is distributed and used by some (not all) computer resellers.

IT Secures Enhanced Technical Support through Vendor Programs

by Jennifer Koester, Information Resources

Information Technology staff have been working with vendors to provide enhanced technical support for campus users of Microsoft, WordPerfect, and Apple products. Here are the most recent successes!

Microsoft Support Coordinator Program

During the past six years, Information Technology staff have been active members in the Microsoft Support Coordinator Program. Attendance at quarterly meetings has proven to be extremely beneficial.

With our membership, the Davis campus has received monthly CDs containing technical information and software. The software CD has provided customers of the Center for Advanced Information Technology with immediate access to the Microsoft product line for evaluation and testing. The technical CDs have proved to be a valuable resource for consulting efforts at the IT-Campus Access Point.

Most importantly, participation has established our campus as a viable site for alpha and beta testing of software, due to the diverse users and technological platforms currently in place. This relationship has allowed UC Davis to preview forthcoming changes and to update Microsoft Corporation officials on the migration of Microsoft products on campus.

Increased Support for 1993-1994

During the coming fiscal year, Information Technology staff will continue to serve as Support Coordinator liaisons through membership in the new Microsoft TechNet Program:

TechNet Membership gives access to:

- Microsoft KnowledgeBase, an extensive library of technical support information used by Microsoft Product Support Specialists;
- Resource Kits, packages of technical references, troubleshooting information, utilities, and accessories to aid in the installation and support of Microsoft applications;
- Training Materials, including tutorials, training guides, and training-session slides with notes for support of Microsoft products;
- Customer Solution Profiles, detailing how other information services professionals have solved real business problems with Microsoft products;
- Strategic Information on Microsoft products and services to keep UC Davis ahead of the game on the direction Microsoft is taking.
- Plus session notes from Microsoft conferences, ROM discs, monthly TechNet CDs, and more!

Throughout the year IT staff will receive updates of these support materials, as well as new information on the features, functions, and system requirements of Microsoft products.

WordPerfect Customer Advantage Program

Information Technology staff are currently qualifying the campus for membership in the WordPerfect Customer Advantage Program (i.e., the contracts have been sent to Purchasing and Business and Contracts for approval). Membership will grant Davis customers special licensing rights to the WPCorp family of products.

Benefits will include:

Software duplication — Davis customers will be authorized to duplicate WordPerfect software and materials as needed, thus reducing the need to order, procure, handle, and warehouse software.

Electronic Distribution — Information Technology will be able to distribute software electronically to clients on campus, thus reducing the costly process of duplicating diskettes. New users will be able to get the software they need, and others will be able to stay current with the latest release supported by Information Technology.

Multi-platform Licensing — As technology and the needs of the campus change, departments may find the need to move to another operating system. WPCorp's multi-platform licensing will provide that flexibility for a substantial cost savings.

Multilingual Licensing — Through the Customer Advantage Program, the campus will have the opportunity to purchase a multilingual license of any of the languages supported by WordPerfect.

Administrative Savings — All licenses will be consolidated under a single number and under a single agreement. Plus, WordPerfect will supply appropriate software so that key administrators of the program will have an easy method of communicating with WordPerfect to obtain updated information.

Interim Releases and Upgrades — Our campus will be kept abreast of the latest software technology with access to interim releases and upgrades on all products that we specify.

Access to Pre-Release Software — Information Technology access to WPCorp software in its beta stage will enable the campus to plan and prepare for its installation and know beforehand the increased benefits it will add to our institution.

Long-Term Evaluation Software — Current WPCorp products will continue to be donated to the campus, allowing Davis users to evaluate new software in the Center for Advanced Information Technology.

Electronic Documentation — Electronic documentation, tutorials, and workbooks will be available for use by the campus.

Technical Support Database — WPCorp Customer Support personnel use the Technical Support Database as a reference when answering questions over the toll-free support lines. This same database will be made available through the IT Campus Access Point help desk.

Customer Service — Information Technology will receive a monthly CD ROM that includes the following: Customer Advantage Program newsletter, WordPerfect Report, editorial from the Board of Directors, questions and answers, tips and tricks, product demonstrations, product information, executable evaluation copies of products, and third-party product information.

Apple Computer Support Professional Program

During the past two years, Information Technology staff have been active members of the Apple Computer Western Operations Advisory Council. Our efforts as part of this council have been focused on assisting Apple Computer to develop the "Support Professional Program."

The goal of this program is to provide Macintosh wisdom to corporate help desk staff. Information Technology staff helped develop the program's structure and criteria. They also alpha- and beta- tested all the new products in the program.

Here are the highlights:

Support Automation System — A client-server system will allow access to a CD-ROM database containing Apple manuals, software archives, and installer scripts using AppleSearch. This text-retrieval system will allow the indexing of any material for search and retrieval.

Remote Briefings — Desktop technical briefings will include multimedia QuickTime movies. An interactive component will let customers submit questions via electronic mail or fax. Responses will be made via conference calls, which also will be used to announce new products. In conjunction with the Apple Desktop Seminar Toolkit, Davis users will be able to customize their own internal briefings as well.

Key Users/Infrastructure Building Tools — A self-learning application will aid help desk staffs and key users in mastering three levels of competency.

Information Technology is particularly proud of its involvement in this advisory group. *Due to our aggressive participation and the UC Davis technical profile, we were chosen as the national Higher Education sponsor of the program.* This is clearly a successful case of the vendor listening to the "enduser"!

For more on the Microsoft Tech-Net Program, WordPerfect Customer Advantage Program, or Apple Support Professional Program, contact Jennifer Koester at jakoester@ucdavis.edu or 752-1904. ⌨

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New Login Security System for Fall 1993

Information Technology has been examining ways to improve password security on IT-managed computer systems at UC Davis. It has settled on Kerberos as a means to achieve this goal.

The Kerberos login authentication system offers two essential ingredients for password security at UC Davis:

1. it moves the password file away from the system that users log onto, and
2. it prevents passwords going across the network unencoded. Both features are designed to protect networked systems from password "crackers."

The newly-established IT Distributed Computing Analysis & Support unit has already begun installing Kerberos on IT-managed systems. The first implementation of Kerberos will provide login security for access to records of the Student Information System. It will also be used to provide security on academic systems.

IT staff hope to make the changes to the password security environment as transparent as possible for administrative and academic users. Please direct any questions about Kerberos to Dan Dorough of Distributed Computing Analysis & Support; phone: 752-3420; email: dadorough@ucdavis.edu.

Apple Service Provided On-Site

Along with the UCD Bookstore Computer Shop, Technology Advancement & Resources (TR) has become an Authorized Apple Service Provider Plus. Not only does TR continue to provide warranty and non-warranty repair and installation of Apple products, TR personnel now provide on-site service anywhere on the main campus, at select off-campus departmental sites (e.g., Research Park), and at the UCD Medical Center.

On-site warranty service covers many Apple products purchased on or after February 1, 1993 (excluding PowerBooks and some other equipment). On-site service for out-of-warranty equipment is available to departments only for an additional charge. If your equipment needs service or to obtain information concerning warranty coverage of your equipment, call Technology Advancement & Resources 752-7762.

MBL Service Less Costly to Davis Customers

In the past, Communications Resources (CR) worked with Pacific Bell to process and pay PacBell's Measured Business Line (MBL) service orders. These orders incurred charges to a department's monthly Telecommunications Billing Statement — including a 25 percent administrative fee on monthly charges and a 9.5 percent administrative fee on toll charges.

CR will no longer coordinate MBL service requests. Departments, in turn, will no longer have to pay administrative fees in addition to the Pacific Bell charges. Instead, the Pacific Bell bill will be sent directly to the department. MBL adds, moves, and changes will be handled directly between the department and Pacific Bell. The Pacific Bell contact for service is Sharon Greathouse, 811-6279.

Another Billing Change

Develnet charges are moving to the telephone bill. Departments no longer will be getting that charge on the Computing Services Budget Charge Notice.

Online Timesheets

The payroll timesheet system will provide departments with the ability to electronically edit and generate timesheet data for input to the payroll system. This new process, developed by the School of Veterinary Medicine and Information Resources, will replace the paper-based method of processing timesheet data. Technical contact is Ray Reveles, 757-8794, rreveles@ucdavis.edu. Start-up contact is Tim Ortez, 757-8542, tjortez@ucdavis.edu.

Touchtone Registration

Information Technology and the Registrar's Office worked collectively to bring touchtone registration (RSVP) to the Davis campus. According to Bob Strobel, associate director, over 90 percent of UCD

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continuing students and 100 percent of UCD law students have registered using this system.

Digitizing Slides and Audio Tapes

Information Resources is converting many slides and audio tapes into digital format in the Media Distribution Lab, 1101 Hart Hall. By fall quarter, users will be able to view select slide sets in this pilot multimedia project from computers in the lab. The goal of the project is to increase the limited accessibility of traditional media on reserve. For more information, contact Catherine Olvera at 752-9625.

DCAS Mission Statement on the CWIS

Interested parties now can obtain an electronic copy of the mission statement for the IT Distributed Computing Analysis and Support Group. It is located on the Campuswide Information System (CWIS) in The Campus/Using Computers on Campus - Information Technology/Distributed Computing Analysis and Support/Organization.

Groupware Package Evaluated

Information Resources personnel attended an IBM-sponsored demonstration in Palo Alto recently. The topic was Team Focus, a "groupware" software package and facilitation process to make meetings more effective using interactive PCs. The product has quite a bit to offer both IT and the rest of the campus, though startup costs, site, and resources for facilitator training are issues that must be considered. For more information, contact Kent Kuo of Information Resources at 757-8732.

BANNER SIS Reporting Tool Selected

Team Brio Technologies' DataPrism has been selected to be the enduser reporting tool for the BANNER Student Information System. DataPrism allows access to the database without the need for programming. The Registrar's Office and Admissions Office are piloting the use of this graphical query tool. Pricing, training, and ordering will be announced once the pilot is completed.

IT-Managed Academic Systems Changes

VMS — Information Resources (IR) will be replacing the current VAX 8600s with a DEC AXP Server running Open VMS. This server uses the new Alpha RISC processor.

UNIX — IR is evaluating software and hardware to replace the current backup system on the academic UNIX platforms. The new system will increase backup capacity and more fully automate the backup and restore functions.

Elected Post

John Keller of Technology Resources has been elected to the board of the Sacramento Chapter of the Society Of Motion Picture and Television Engineers. In September 1993, he hosted a section meeting of the chapter at UC Davis, providing its members with a tour of the Center for Advanced Information Technology, the Olson Hall Control Room, the Hart Hall multimedia classrooms, and other IT facilities.

IT-Managed Lab Servers Being Upgraded

Information Resources will be upgrading the file servers in the microcomputer classrooms as well as the method of access to lab services. The following is a tentative schedule:

Fall Quarter, 1993	Install new file servers
Winter Quarter, 1993	Require usercodes and passwords for access to lab servers.
Fall Quarter, 1994	Begin cost recovery system to ensure that printing services continue to be available.

Cynthia Pickens, Robert Ralston, Catherine Olvera, Zack O'Donnell, Laura Townsley, Ray Reveles, Eric Myrehn, Laurie Bunten, Kent Kuo, Johnson Lai, Dana Drennan, Joyce Johnstone, Joan Gargano, and Ivars Balkits contributed to "Inside IT."

CWIS Lately? offers a quick rundown of the "Gopher" servers and other information resources that have most recently signed onto the UC Davis Campuswide Information System (CWIS). Each issue, the column also spotlights a specific service. In this issue, the focus is on the Gopher server at the UC Office of the President "UCOPInfo." Future entries to the column will also focus on the technical nuances of the UCD CWIS.

CWIS Administrator Appointed

Cynthia Pickens of the Information Technology Campus Access Point now maintains the UCD Campuswide Information System (CWIS), coordinating the placement of new and existing information and working closely with campus departments who wish to post information to the CWIS. To find out more about posting to the CWIS, call Cynthia at 752-2548 or email her at cepickens@ucdavis.edu.

From the CWIS Administrator: Gopher (Go for) the CWIS!

The University of California at Davis has a Campuswide Information System (CWIS) to provide electronic access to many sources on campus and in the world. The CWIS is based on a client/server model, developed by a team at the University of Minnesota, known as "Gopher," a term that describes the client software's ability to "burrow" easily through the Internet worldwide network.

How Do I Access the CWIS Using Gopher?

You can connect to the Gopher server that resides at the UC Davis by using the client program on the IT-managed UNIX systems.

To connect by modem, first dial 752-7900. At the "Request" prompt, enter the name of one of the IT-managed UNIX machines (othello, hamlet, bullwinkle, rocky, chip, or dale). Then, login using the usercode and password assigned to you, and at the % or $ system prompt, type:

gopher<Return>

Gopher clients also have been developed for various desktop platforms, including Macintoshes, DOS-based computers, X-terminals, etc. To UCD-affiliated persons, the IT Campus Access Point (1400 Surge II, 752-2548) distributes Mac Turbo Gopher and PC Gopher. For information on other sources, refer to "Obtaining Copies of Gopher" in the Winter 1993 IT Times, Volume 1, Number 3, page 4.

Who May Access the CWIS?

Individuals with UCD computing accounts and those at other directly-linked institutions may access the UCD Campuswide Information System. To obtain an IT account, bring proof of UCD-affiliation to the IT Campus Access Point, 1400 Surge II.

Who May Place Information on the CWIS?

Academic departments, colleges, and institutes and administrative units directly affiliated with UC Davis may provide information on the Campuswide Information System. The group must designate a person to contact on matters related to the information being provided.

What Kind of Information Belongs on the CWIS?

In general, anything that is acceptable for mass mailing through campus mail may be posted to the CWIS. Providers should be aware that the information can and probably will be read by people outside of UC Davis as well as on campus.

Documents should be in ASCII text format. These may be submitted on a floppy disk or placed in a directory on the UNIX machine Dale, to be "mirrored" to the CWIS on a regular (weekly, monthly, quarterly, or yearly) cycle.

How Will the CWIS Administrator Assist You?

The CWIS Administrator will help you design your document so that it is compatible with your needs. She will post the material directly if submitted on disk or work with you to have your directory on Dale "mirrored" to the CWIS.

If you are interested in becoming a provider to the Campuswide Information System, please contact the CWIS Administrator Cynthia Pickens by email at cepickens@ucdavis.edu or phone her at 752-8799.

Spotlight On: UCOPInfo, Gopher Server for UC-Wide Information

Take an online trip to the UC Office of the President! UCOP staff have set up a Gopher server that abounds with information of Universitywide concern, including:

- contact information for personnel at UCOP and at UC campuses that have placed electronic campus directories on the Internet;
- policy and procedure manuals and other documents pertaining to Universitywide business administration, including contracts and grants, personnel, facilities management and construction, and other issues;
- statistical data (on Universitywide enrollment, for example) provided by the UCOP Information Management Unit;
- minutes from the most recent meetings of the UC Board of Regents;
- news stories, with especial emphasis on research by UC faculty, provided by UC NewsWire, the University's Fresno-based news and information service;
- current entries to Office of the President Employment Opportunities Bulletin;
- computing news ("EDB Entry/Update Pilot Review Issues Lists," for example, a report on the New Payroll/Personnel Project);
- recent issues of newsletters (Protocol and Connections) put out by UCOP Information Systems and Administrative Services;
- and much more of interest to the UC community.

You can find this information on the CWIS following the directory path Other Gophers/University of California - Office of the President/ UC Systemwide Information Services. You can also access the UCOPInfo server directly by pointing your Gopher client at gopher.ucop.edu.

Hard News Supplement to IT Times Available Online

Between publication dates of the IT Times, you may want to take a look periodically at IT_online. Posted to the UCD Campuswide Information System at gopher.ucdavis.edu 70 (port 70), this electronic publication serves as an alternate source of news, facts, and lore about information technology to the Davis campus.

Located under The Campus/Using Computers on Campus; Information Technology, IT_online features several subdirectories of information on areas of interest in computing, communications, and media. Topics include: Instructional Technology, Networking, Site Licenses, Viruses, Software Updates, Technical Updates, and IT Services.

A special directory called Events contains announcements on conferences, seminars, workshops, and meetings related to information technology. Another very important directory is labeled 00-Hard_News. Here you will find time-bound information and "hard news" about events and conditions that happen too late or too early to be included in IT Times.

Look at these two directories regularly (IT_online is updated weekly) for the very latest on information technology happenings on campus and worldwide. Browse also through the other directories; you are likely to find matters of great interest and of great help to you in your work.

To comment or to contribute material to IT_online (or to IT Times), contact Ivars Balkits, Editor, IT-Planning, Strategy & Administration; phone: (916) 757-3263; email: isbalkits@ucdavis.edu.

Unacceptable...

that are consuming large amounts of disk space, with or without prior notification. Total space allocated to an account on IT machines is currently one megabyte (allocation may vary on machines administered by other departments). The sum of all files stored on disk may not exceed this amount without prior approval of authorized IT staff.

- Masking the identity of an account or machine. This prohibition includes sending mail anonymously.

- Using your account for any activity that is commercial in nature, i.e., paid for by non-University funds. Commercial activities include, but are not limited to, consulting, typing services, and developing software for sale.

- Posting materials that violate existing laws or the University's codes of conduct on electronic bulletin boards.

- Posting information that may be slanderous or defamatory in nature on Internet services. This proscription includes posting of said type of material on Usenet News.

- Displaying sexually explicit, graphically disturbing, or sexually harassing images or text in a public computer facility or other location that can potentially be in view of other individuals.

- Attempting to monitor or tamper with another user's electronic communications, or reading, copying, changing, or deleting another user's files or software without the explicit agreement of the owner. Files owned by individual users are to be considered private property, whether or not they are accessible by other users.

Activities will not be considered misuse when authorized in writing by appropriate University officials for security or performance testing.
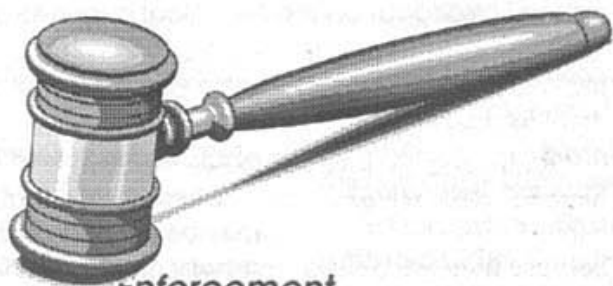
Enforcement

Penalties may be imposed under one or more of the following: University of California regulations, UC Davis regulations, California law, the laws of the United States.

Minor infractions of this policy, such as poorly chosen passwords, overloading systems, excessive disk space consumption, and so on are typically handled internally to IT in an informal manner by electronic mail or in-person discussions. More serious infractions are handled via formal procedures.

Infractions such as sharing accounts or passwords, harassment, or repeated minor infractions may result in the temporary or permanent loss or modification of IT access privileges. Additionally, notification will be made to a student's academic advisor and/or Student Judicial Affairs, or the department chairperson in the case of staff or faculty.

More serious infractions, such as unauthorized use, attempts to steal passwords or data, unauthorized use or copying of licensed software, violations of University policies, or repeated violations as described in the above paragraph may result in the temporary or permanent loss of IT access privileges. In all cases, the offender's associated school or department will be notified of the infraction. If the offender is a student at the University, the case will also be referred to the Student Judicial Board for appropriate action.

Offenses which are in violation of local, state or federal laws will result in the immediate loss of all IT computing privileges, and will be reported to the appropriate University and law enforcement authorities.

Summary of Services Offered at IT Technology Resources

by Laurie Bunten, Technology Resources

Technology Resources (TR) is a department within Information Technology. There is some confusion on campus as to what repairs and other services its technicians perform. The following information should clarify most issues, but if you have questions or concerns requiring a more detailed response, please call us at 752-7762.

Computer Systems

Technology Resources provides both warranty and non-warranty service on Apple computer systems and peripherals. Through TR, you can purchase the extended warranty program, Apple Care, for your Macintosh, Centris, or Quadra system. Alternately, TR repairs Apple products on a time-and-materials basis. Robert Ralston heads this shop. Contact him directly at 752-5139.

Technology Resources also provides VMS and UNIX support for DEC and SUN systems, and other UNIX systems depending on the circumstances. Both warranty and non-warranty service of DEC and SUN workstations and servers is provided. TR offers pre-purchase consulting and facilitates departmental purchases of these individual systems. Call TR at 752-7762 to be directed to the appropriate support person.

Note that Technology Resources does not provide repair of DOS- based PCs and associated dot-matrix printers. These repairs are outsourced to Innovative Solutions Incorporated (ISI), a Sacramento computer sales and service company. The first step in requesting service in this area is to contact the IT Campus Access Point (1400 Surge II) at 752-2548.

Other Equipment

Technology Resources provides repair and service of laser printers and plotters; select audio/visual equipment, such as TVs, VCRs, and overhead projectors; various technical workstations; and large computer systems. It also provides sale, installation, and management support of departmental local area networks (LANs) from the wall connection to the desktop (contact Communications Resources at 752-7546 for initial design and connection to the campus network), and offers computing parts, accessories, and supplies at competitive prices.

TR services are available to UCD and UCDMC departments, faculty, staff, and students, including field stations and other entities associated with the University such as the Bodega Bay Marine Lab. During working hours, one can request service in person at TR's main office at the Art Annex or by calling 752- 7762.

Satan Bug Virus Threatens DOS Computers

Multiple sites nationally have reported infection of DOS computers by the Satan Bug virus. This rogue code, which is very difficult to remove, infects all .COM, .EXE, .SYS, and .OVL files on MS-DOS and PC-DOS computers. The virus also damages network drivers, so that an infected machine cannot connect to use network services. McAfee's SCANV 106 and above can detect the Satan Bug virus. You can obtain all McAfee anti-virus utilities via anonymous ftp from ftp.mcafee.com; cd (change directory) to pub/antivirus. For more information, you may wish to contact the Computer Incident Advisory Capability group at (510) 422-8193 or ciac@llnl.gov.

New Ordering Procedures for 16mm Films and Off-campus Media Programs

by Doug Decker, Information Resources

Last year, when UCD faculty wanted to show a 16mm film to a class, they would call the Media Desk at the IT Campus Access Point (IT-CAP). The same held true if they wanted a program from an off-campus rental source, or information on the purchasing or licensing of new media programs.

During fall 1993, the IT-CAP is phasing out the Media Help Desk. An in-depth study of the service has revealed that IT can no longer provide this service in a cost-effective manner and that service changes are in order. New procedures have been developed, and though the campus still can access IT program resources, some tasks have

been changed to "self-service."

The new procedures are:

1. To schedule a 16mm film from the film library, call Equipment Loan at 752-3553. Their staff will arrange for the film and equipment to be delivered to your location and will provide an operator at your request.

2. To have a videotape from the UCD collection played to your group, call the Video Playback Center at 752-9539, as before. Their staff will schedule your tape to be played over the campus cable system to
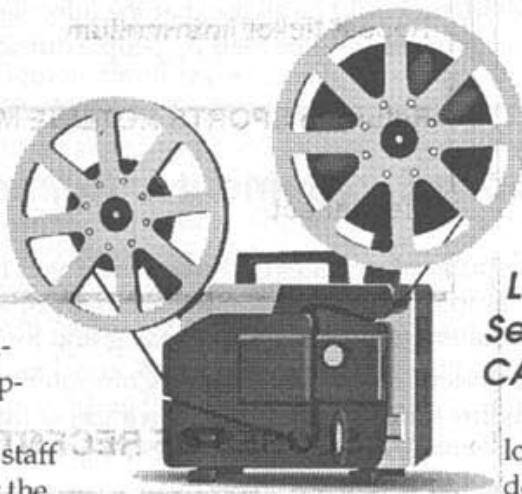
your viewing room. If the room is not connected to the system, they will arrange to have the display equipment delivered.

3. To rent film or videotape programs from an off-campus source, order and pay for the items from within your department. Then, depending on whether it's a 16mm film or a video tape, follow procedure 1 or 2.

New Media Location Self-Service Area in IT-CAP

Though IT staff no longer will find and order media items for campus customers, a new area has been set up in the IT-CAP for self-service. The Media Location area features an extensive collection of supplier catalogs and references to help you locate titles not in the UCD film/tape collection.

This area also provides access to a very user-friendly computer program

called FOLIO. This program can be used to obtain a list of the offerings in the UCD film/tape library or to search by subject through the approximately 11,000 entries in the database.

IT-CAP plans to make the FOLIO database accessible on the Campuswide Information System (CWIS) in the near future. Summaries of announcements that appear in vendor bulletins promoting educational and documentary releases on film, videotape, public TV, and satellite broadcast are also planned to be posted on the CWIS.

Ordering Procedures Handout

More information on the new procedures is at the IT-CAP in a handout titled "How to Order Media Programs from Off-campus Sources." Upon request, IT-CAP will also provide vendors' phone numbers to assist ordering of previously-ordered rental programs.

IT-CAP will answer any question you may have about the service changes or other IT-related issues. Please call us at 752-2548, send electronic mail to ithelp@ucdavis.edu, or come in to 1400 Surge II.

Sports Information Office Uses Computers to Stay Ahead of the Game

by Catherine Curran, Planning, Strategy & Administration

IN THE BLEACHERS — *It's inning number nine. The Aggies are up against Sonoma State for the Northern California Athletic Conference baseball championship . The Aggie shortstop fields a ground ball and throws to first base for the final out.*

As the team pours out of the dugout to celebrate a league title and a trip to the NCAA playoffs, Doug Dull enters the final play into his laptop computer. Before the celebration has ended, he has a complete boxscore of the game available for the media and his printer is cranking out up-to-the-minute statistics of the Aggies' championship season.

In a field that thrives on statistics, schedules, and post-game wrap-ups, UCD's Sports Information Office maintains its competitive edge through creative computing.

"In the 1980s, this office made a commitment to go electronic, and that commitment has paid off," says Doug Dull, who as assistant athletic director heads up UCD's sports information program.

Once entered into the computer, batting averages, games scores, and the like are easily updated and shaped into team rosters, press releases, and other publications used to promote Aggie athletics.

Fax, voice mail, and modems are frequently used to deliver the information to the desired destination.

"Using available technology has enabled us to streamline functions and have information travel more quickly to the people who want and need it," says Dull.

Here are some examples of Dull's electronic office at work:

Doug Dull

Laptop Computers: "We're one of the leaders in the West Coast in this area," says Dull, whose staff abandoned score-books and pencils in favor of laptop computers and printers that go to everything from football games to gymnastic meets.

"We use computers to keep statistics on all 20 intercollegiate sports, and we are courtside with the computer at 10 of the 20 sports," says Dull, explaining how statistics are entered into the laptop and printed on the spot, providing coaches and the media with immediate feedback.

"Radio and TV love it because they have full data at every time out in the game," says Dull. "The coaches love it because they can review first-half statistics before they talk to their teams at half-time."

Voice Mail: This, says Dull, is a feature the Sports Information Office couldn't live without as it keeps the lines of communication open even when Dull and his staff are out covering a game.

"We've got to be accessible to the public," says Dull, whose work keeps his office busy days, nights, and weekends. With voice mail, Dull can call to leave and retrieve messages at any time from any place. Likewise, callers can leave a messages even when the office is closed.

"It's not unusual for me to receive voice mail messages from people on the East Coast stamped with a 6 a.m. delivery time," says Dull.

Automated Attendant: The most up to date game scores, schedules and ticket information are readily available on the Aggie Sports Hotline (a voice mail automated attendant). Fans dial 752-1700 to reach the hotline where they are greeted by a menu of options. The voice says press one for games schedules, two for ticket information and three for scores of recent games. To hear the menu repeated, callers simply press four.

"What the hotline does is give us an efficient way to deliver frequently asked for information to literally hundreds of Aggie fans," says Dull. "The fans like it because they can quickly and easily get the information they want. They don't encounter busy signals, and they don't have to endure the misery of being put on hold while the receptionist responds to other callers."

The automated hotline also helps the office run more smoothly. From an information standpoint, it guarantees that the callers will have the most up to date information since Dull and his staff can update the hotline by calling from any touch tone telephone.

"No matter where our teams play, whether our staff members are in Southern California or Oklahoma, fans and the media can get updates. It takes us less than 3 minutes to update the information each day." says Dull.

From an administrative point of view, the hotline promotes efficiency by freeing staff from the telephone to perform vital office functions.

Fax/Modem: Dull says more than half of his communications are sent via fax/modem.

"They've got it in 45 seconds," says Dull, emphasizing the benefits of electronic transmission.

The Sports Information Office is set up to send stories via modem to 13 different local media outlets, and also uses modem transmission to exchange team rosters with competitors who have also gone electronic.
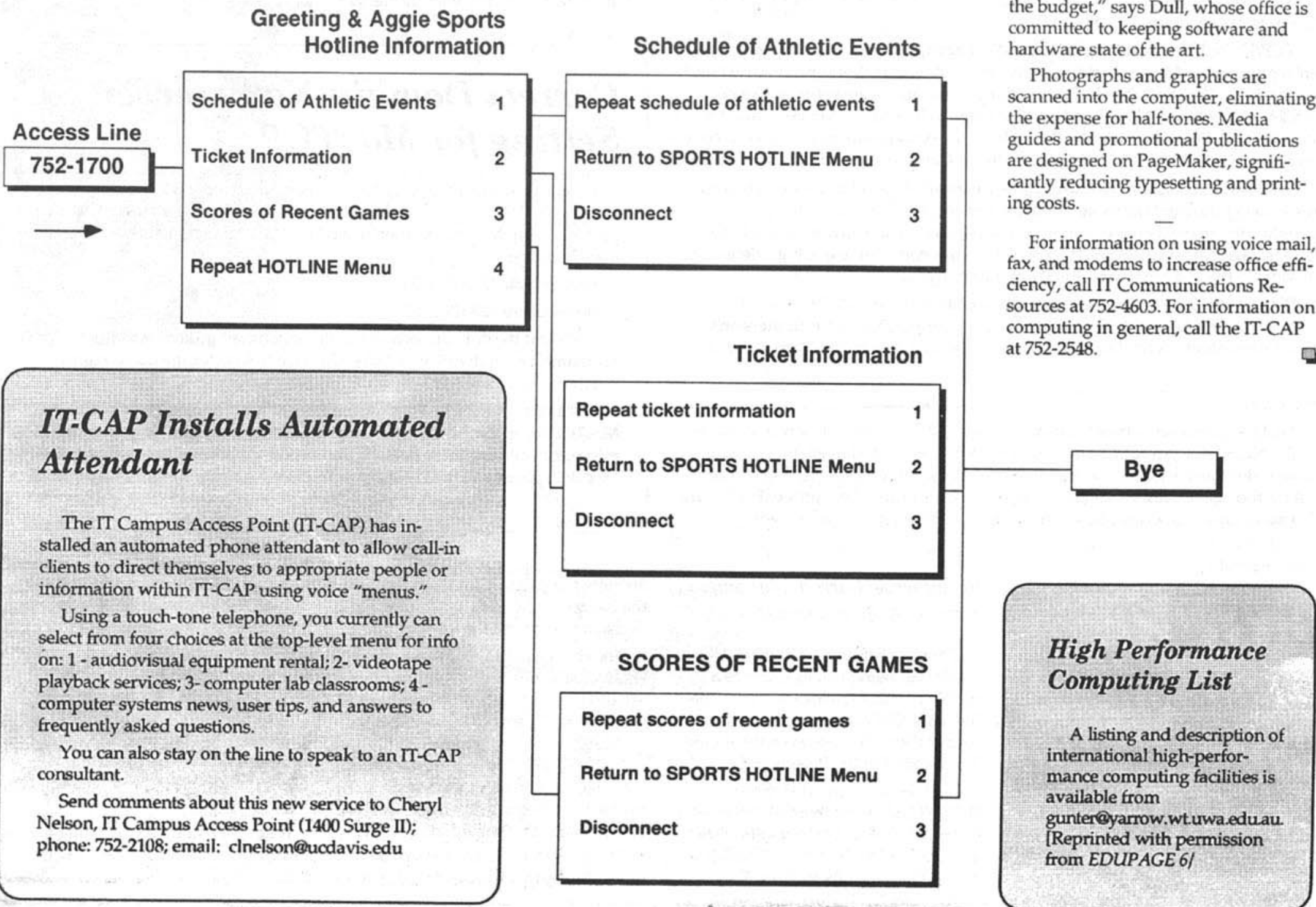
If a recipient is not set up to receive information directly into the computer, Dull and his information gurus turn to the fax machine for quick and easy delivery. Dull sends weekly reports to several national outlets, including *Baseball America* and the NCAA. He also has numbers for 200 regular recipients programmed into the office Fax machine.

Desktop Publishing: "With new leaps and bounds in desktop publishing, we will be able to cut 20 percent off the budget," says Dull, whose office is committed to keeping software and hardware state of the art.

Photographs and graphics are scanned into the computer, eliminating the expense for half-tones. Media guides and promotional publications are designed on PageMaker, significantly reducing typesetting and printing costs.

—

For information on using voice mail, fax, and modems to increase office efficiency, call IT Communications Resources at 752-4603. For information on computing in general, call the IT-CAP at 752-2548.

INTERCOLLEGIATE ATHLETICS AGGIE SPORTS HOTLINE
Automated Attendant

Access Line
752-1700

Greeting & Aggie Sports Hotline Information

Schedule of Athletic Events	1
Ticket Information	2
Scores of Recent Games	3
Repeat HOTLINE Menu	4

Schedule of Athletic Events

Repeat schedule of athletic events	1
Return to SPORTS HOTLINE Menu	2
Disconnect	3

Ticket Information

Repeat ticket information	1
Return to SPORTS HOTLINE Menu	2
Disconnect	3

Bye

SCORES OF RECENT GAMES

Repeat scores of recent games	1
Return to SPORTS HOTLINE Menu	2
Disconnect	3

IT-CAP Installs Automated Attendant

The IT Campus Access Point (IT-CAP) has installed an automated phone attendant to allow call-in clients to direct themselves to appropriate people or information within IT-CAP using voice "menus."

Using a touch-tone telephone, you currently can select from four choices at the top-level menu for info on: 1 - audiovisual equipment rental; 2- videotape playback services; 3- computer lab classrooms; 4 - computer systems news, user tips, and answers to frequently asked questions.

You can also stay on the line to speak to an IT-CAP consultant.

Send comments about this new service to Cheryl Nelson, IT Campus Access Point (1400 Surge II); phone: 752-2108; email: clnelson@ucdavis.edu

High Performance Computing List

A listing and description of international high-performance computing facilities is available from gunter@yarrow.wt.uwa.edu.au [Reprinted with permission from *EDUPAGE 6*]

Software Sitings

Designed to keep you abreast of the latest computer applications, Software Sitings is a regular column of *IT Times*. The column previews various software programs that may be site licensed at UC Davis, and reports on maintenance release updates to software available through the IT-CAP and other on-campus sources.

Site Licenses

Lifetime License for Mac TCP 1.1.1 — UC Davis has a lifetime site license for Apple's Mac TCP 1.1.1, and UC systemwide is looking into a site license for version 2.0 (due out soon). Version 1.1.1 works well, and Information Technology continues to distribute this version to campus users free of charge. For copies of Mac TCP 1.1.1, contact the IT Campus Access Point, 1400 Surge II (752-2548).

UC-wide Sybase Email Group — An online forum has been created for the discussion of Sybase software issues and for announcements about the University-wide Sybase discount program. For more information, contact Jane Schoenfeld, by email at jane.schoenfeld@ucop.edu or by phone at (510) 987-0683. To subscribe, send the following command in the body of an electronic mail message to listserv@uccvma.bitnet: sub ucsybase your name (substitute your name).

Mathematica License Update — The media and materials are here now for implementing UC Davis' software site license agreement for Mathematica. The license allows unlimited copies for any number of microcomputers and workstations without limitations as to platform. The workstation version (for DEC/RISC, Sun/Sparc, SGI, HP, IBM/RISC) costs $125/year; the microcomputer version (for Macintosh, DOS, Windows) costs $75/year. For more information, contact Paul Schneeman, Advanced Networked & Scientific Applications (phone 752-5954); email prschneeman@ucdavis.edu.

SAS for OS/2 — SAS for the OS/2 operating system has been added to the campus site license for SAS products. It is offered at the same price as SAS for Windows (which arrived in mid-July) — $75/year. For more information, contact the IT Campus Access Point, 1400 Surge II (752-2548).

Software Updates

Mail V3.1a for the Macintosh at IT-CAP — Version 3.1a contains several enhancements and fixes to Microsoft Mail, including a new feature built into the administration program called *Move User*. With *Move User*, you can extract users from data files (with folders and Personal Address Books intact) and move them to new servers. To obtain a copy of this update, bring proof of purchase of MS Mail 3.1 and four 3.5" double-density diskettes to the IT CAP, 1400 Surge II.

Microsoft Works V3.0a for Macintosh at the IT-CAP — This update includes Updater, an application that lets you open version 2.0 files from the Desktop and update them to 3.0 in bulk. To obtain a copy of version 3.0a, bring proof of purchase of Microsoft Works V3.0 and five 3.5" double-density diskettes to the IT Campus Access Point, 1400 Surge II.

TCP/IP for Microsoft Windows for Workgroups 1.0 — This software enables enterprise networking and connectivity on Windows for Workgroups-based desktop systems. Version 1.0 includes the ability to communicate between like networks (e.g., between Novell and LAN Manager). TCP/IP for MS Windows for Workgroups 1.0 is free to licensed Windows for Workgroup users. For your copy, bring four high-density 3.5" diskettes to the IT Campus Access Point, 1400 Surge II.

Microsoft Access for Windows 1.1 — Microsoft Access lets users share data easily using different database products. Version 1.1 allows users to operate openly with an even greater variety of data sources. This software is available free to registered Microsoft Access 1.0 users. For your copy, bring one high-density 3.5" diskette to the IT Campus Access Point, 1400 Surge II.

[Editor's Note: For more descriptive accounts of these updates look in the Campuswide Information System under The Campus/Using Computers on Campus; Information Technology/IT_online/Software-Updates/00-Hard_News.]

Special Offer

NCD X-Terminal Server Software — Need NCD X-terminal server software? NCD (Network Computing Devices) told Department of Mathematics System Administrator Patrick Lawrence that if he bought the server software it would be legal for the whole campus to use it. Anybody on campus who wants to borrow the CD may contact Lawrence by electronic mail at pjlawrence@ucdavis.edu.

Scenarios...

Vienna. Disabling the voice recognition system temporarily, C authorized the payment by keying in a digital signature assigned to her.

Next, C had the tenor read a bulletin forwarded from a national computer virus alert group by her departmental net administrator. The message concerned recent wide-spread attacks on anonymous FTP servers connected to the Internet. Speaking the message into mail, C agreed with the net administrator that, to thwart criminal hackers, the departmental servers should be reconfigured according to the guidelines in the bulletin.

Turning from email (after scanning/responding to another 20-30 messages), C next signed onto the financial system to update departmental personnel information with pay rates received from the merit committees. She was able to perform this function directly on the personnel screen, which she knew would automatically distribute the change through all personnel and budget documents.

"Close accounting," said C, to which the opera tenor responded with the dying strains of the Leoncavallo's "Pagliacci."

"I just love this feature," thought C, and then said aloud: "Now where did I put that DCN report?"

"Please repeat that request." The MSO made a note to turn down the sensors for the voice recognition system someday.

For the past several months, the MSO had been serving as the chair of a committee to streamline the Davis Community Network's civil emergency warning system. This service had been set up to deal primarily with incidents such as the release of toxic materials in rail, truck, or industrial accidents. It also warned elderly persons and parents of young children whenever temperatures climbed above the 110 degree mark — a fairly common occurrence in the summers of the past decade.

Relative to that role, C was preparing a report to be presented to City and University officials at an FTF (face-to-face meeting) to be held later that week. To complete it, she need to attach portions of the Policy & Procedure manual. So she activated her StarGopher client, connected to the Campuswide Information System, conducted a keyword search of the online manual, and downloaded the sections she needed. Once imported into a word-processed document and formatted appropriately, those sections and the report were ready for distribution via the email alias for the committee.

A copy of that email message went over the Internet to be printed on the City Hall printer.

C looked up at the clock and noted that she had worked through lunch. But now it was time to connect to the Contracts and Grants videoconference from her PC. A full-motion video window appeared next to the whiteboard window. An additional text window displayed the agenda and auxiliary visuals for the meeting.

That activity took up the greater part of C's afternoon. A complete record of the videoconference was stored on the Contracts and Grants server for access and review at a later date through the campus network. All supplementary materials, document drafts, and minutes also were stored on the server as the official repository of record for this workgroup.

Correct Domain Nameserver Setting for MacTCP

Recently, several of us in IT have responded to reports of trouble regarding TCP/IP connections from Macintoshes. In all cases, there was a problem with the configuration of MacTCP. The domain nameservers setting should be as follows:

ucdavis.edu 128.120.1.250

ucdavis.edu 128.120.2.167

Note that the domain section should only have "ucdavis.edu," not a hostname, i.e., bullwinkle.ucdavis.edu. That field is for the domain only, not the name of a server.

It is also useful for LAN administrators to lock the configuration of MacTCP using the Admin TCP program. This will keep new users from mistakenly altering these fields. If you need further assistance with MacTCP, please call the IT-CAP at 752-2548.

BITNET Decision Will Net Big Savings

by Catherine Curran, Planning, Strategy & Administration

Effective September 30, 1993, UC Davis will relinquish its status as a BITNET host. All network mail carrying a BITNET address will now be routed through the University of California Office of the President (UCOP).

"All services provided through BITNET are on the Internet," says Joan Gargano, UCD's network administrator. "BITNET is decreasing in membership while use of the Internet has nearly doubled in the past year. There are now more than 1.7 million hosts on the Internet," she adds, explaining the decision to focus on the Internet.

The change in BITNET service will result in an estimated savings of $10,000 per year and will be virtually transparent to campus users. All email addresses will stay the same, and IT will convert all addresses registered on listservs to the Internet form so all BITNET mailing list subscriptions will be automatically forwarded.

However, those who correspond on BITNET should inform colleagues of the following:

• Email to UC Davis needs to come over the Internet with a ".edu" Internet address (e.g., itinfo@ucdavis.edu).

• Individuals at institutions with BITNET hosts may need to alter the way they send mail to correspond through the Internet. The email postmaster at such institutions should be able to provide this information.

If you have difficulty sending mail to a BITNET host, contact the UCD Postmaster at 752-5715 or postmaster@ucdavis.edu.

Opening a Free Computer Account at UC Davis

by Doug Decker, Information Resources

During fall 1993, the IT Campus Access Point (IT-CAP) urges all UCD students, faculty, and staff to activate the free computer accounts to which they are entitled. Reasons to open an account include:

1. It's your privilege as part of the UCD community.
2. Electronic mail lets you communicate anywhere in the world within seconds, without charge.
3. The Internet's vast resources are open to you through newsgroups, file transfer, remote login, etc.
4. The UCD Campuswide Information System provides you with in-depth campus news and information from around the world.

Opening a New Account

Staff, faculty, and students can now activate accounts using the "newaccount" program, without having to come to the IT-CAP. (In fact, considering the crowds in the first weeks of the quarter, you probably do not want to come to the IT-CAP!) In about five minutes, you can complete the process remotely, from an IT-managed computer lab, a networked departmental computer, or from home using your modem and personal computer.

To run newaccount, you first need to access the campus computer named "ucdavis."

Accessing "UCDAVIS"

From an IT-managed computer lab: Telnet to ucdavis (type **telnet ucdavis**).

From the IT-CAP: Self-serve computers are already connected to ucdavis, ready to login. (But, again, because of the crowds expected at the IT-CAP, all clients who feel confident enough to use alternative login sites are urged do so.)

From your department or home computer: Use your particular communications software to access the Develnet switch (752-7900 using a modem). At the "Request:" prompt, type **ucdavis**.

Running the Program

When the login prompt appears, type **newaccount** (one word, all lowercase letters). Be ready to give your student registration or staff number, your birth date, and your full name as these items appear on University records. When finished, you will have the login name and a password you need for access to campus computer systems.

IT-CAP Ready to Help

During regular IT-CAP hours (8:00 a.m. to 5:00 p.m., Monday through Friday), IT-CAP staff are glad to answer questions or provide assistance for new account candidates. Please call us at 752-2548, or come to 1400 Surge II.

The Copyright Quiz

[The following quiz on computer software copyright issues originally appeared in the September 1992 issue of *ONLINE* (Volume 21, Number 1), published by Computer Services of Memphis State University. It is reprinted with permission of editor Allecia Powell, and edited slightly to meet *IT Times* style conventions. The University of California does not guarantee the accuracy of the information provided below.]

Whether we are aware of it or not, each of us deals with copyright law on a daily basis, but how much do we really know about it? Take this quiz to determine how much you know about copyright law:

1. You go into your local grocery store and buy a copy of your favorite computer magazine. The magazine's feature story includes a listing for a great game called "Bubba, King of Nerd World," one of those programs that you must type into your computer yourself in order to run it. You get the game all typed in, and you play it for a while, and you begin to realize that "Bubba, King of the Nerd World" will revolutionize the world of computer games as we know it. You would like to share it with all your friends. Can you legally copy the program to diskettes and give copies to all your friends? After all, you did type the game into your computer yourself.

2. You are creating a booklet about page layout and design to be given out on campus. You're really fond of PageMaker's opening screen — the Latin phrases that appear on it would be just perfect for a college publication. You decide to copy the opening screen and use it on the cover of your booklet. Can you do this?

3. You are a Windows user, and you enjoy looking at the many different geometrical patterns created by the Mystify screen saver in Windows 3.1. One day as you are looking at it, an especially beautiful pattern is created. It's so beautiful that you decide to take a "snapshot" of it by pressing the print screen key and then saving the pattern to a file. You decide to use the design on a poster you are creating about computer graphics. Can you do this?

4. You are a computer programmer, and you are working on the program of your life, a program that will revolutionize the way that accountants and other business professionals do their work for all time. In order to have the peace and quiet you need to complete your program, you move to a remote island in the Pacific Ocean. You stay there the entire ten years it takes to complete the program, shut off completely from the outside. The result, unbeknownst you: a program that is absolutely identical to the most current version of a program called Lotus 1-2-3. You hurry back to the states to market and sell your new software product, expecting to make a big pile of cabbage from this new idea. After you sell about 10,000 copies of your new product, a deputy sheriff knocks on your door at 4.00 a.m. to deliver a summons to appear in court and answer allegations that you have illegally copied and distributed Lotus 1-2-3. Will Lotus Corporation win the lawsuit?

5. You own a successful software store. You have been noticing lately that quite a few of your customers have been needing certain software packages for only one specific project. When the project is finished, they no longer need the package but are stuck because they purchased it. Every time they come to your store, they complain about it, So you start thinking: why not rent copies of certain software packages to the customers instead of having them buy them? After all, video and audio tapes are rented all the time. Can you do this?

(See quiz answers page 12.)

BANNER System Update

by Libby Bullock, Information Resources

A beehive of activity is going on at Information Resources, Research Park. Phase II implementation of the BANNER Student Information System has begun! Ten staff members, assisted by ten temporary programmer/analysts, are working on projects that encompass many desperately needed add-ons for the BANNER System. Projects that will be completed by October/November 1993 include:

- Class Roster Download, which will allow authorized faculty to download their class rosters to their PCs or Macs, and
- Query Screens that will allow authorized users easy access to commonly-viewed data.

Information Resources is working with the Registrar's Office to prepare a packet that will include everything necessary to apply for BANNER System access. This packet will be handed out at the IT Campus Access Point, 1400 Surge II.

Information Resources is organizing its staff to respond more efficiently to the many questions (all good questions!) coming to us from BANNER users. We all are enjoying the challenge of helping our users learn a new system and hope we can even make their tasks a little easier than before.

Book Review: Managing Transitions

by Dr. Carole Barone, Associate Vice Chancellor - Information Technology

I am reviewing this book by William Bridges because my staff insisted that I read it — they even bought me a copy. Having now read the book, I think they wanted me to understand that we made a few mistakes as we muddled our way through a major transition in our organization.

In Managing Transitions, Bridges provides practical advice that really works. Too often, well-conceived strategic plans languish; they never seem to reach their full implementation. Bridges asserts that the reason is because managers underestimate the role of people in the change process. His insights and strategies come from fifteen years of experience in helping people and organizations manage transitions.

Changes in process rely on changes in people. However, we tend to focus on the process we want to change and then blame the people when the expected outcomes do not materialize. We usually fail to consider the process that has to occur inside these individuals. Discussion of this human side of the change process constitutes the core of the Bridges book.

Bridges points out that things may not go as expected even when we are careful to involve members of the organization. It is easy to confuse information dissemination efforts with real understanding on the parts of the recipients of the information. Moreover, our expectations of how thoroughly and how quickly people will adapt to changed circumstances may be quite unrealistic.

Bridges terms the transition through which individuals must pass from letting go of the old and finally "launching a new beginning" as the "neutral zone." While in the "neutral zone," people express their anxiety with the uncertainties of the situation by exhibiting a lack of motivation. Conditions seem, and probably are, chaotic; people feel overloaded and frustrated with the rapidity, or the slowness, of the change.

I recently engaged in a discussion with the members of a unit that was struggling with the transition to a new identity. The members were having difficulty making a graceful ending to the former identity. There were moments in that meeting when I was convinced that the participants were following a script that Bridges had written. The congruence was uncanny. Consequently, I followed his good advice and started selling the problem instead of the solution. I now believe that this unit and I, together, will make a successful transition.

Managing Transitions is brief (125 pages), entertaining, peppered with quotations from throughout history on the topic of change, and full of good and easy-to-follow advice. Even if you make some of the mistakes he admonishes you to avoid, the book helps you to diagnose the problem and act to solve it. After reading Managing Transitions, I feel better equipped to venture into future transitions.

Computer Fest '93 to Be Held October 28-30

by Sheri Canevari, UCD Bookstore

The UCD Bookstore Computer Shop is hosting "Computer Fest '93" on Thursday through Saturday, October 28-30, 1993. The event will offer the latest in computer hardware and software technology through vendor demonstrations and seminars.

A special feature on Thursday will be a presentation at noon by keynote speaker Kathleen Burke of Broderbund Software on "Carmen" Sandiego — The Inside Story." This presentation in the East Conference Room will be followed by light refreshment and a drawing for "Carmen" software.

Vendor seminars are scheduled that day for 9:00-11:30 a.m. and from 2:30-5:00 p.m. in the East Conference Room.

Friday is Information Technology Day in the East Conference Room from 9:00 a.m. to 5:00 p.m. Vendor presentations will be held inside the UCD Bookstore also from 9:00 a.m. to 5:00 p.m. that day and on Saturday from 11:00 a.m. to 4:00 p.m.

Everyone is welcome at the free event.

Quiz Answers
(from page 11)

Give yourself five points for each correct answer.

1. NO. Assuming that the magazine is copyrighted, all of the information in the magazine is copyrighted, including program listings. The publisher has given you permission only to type the program into your computer and to run the program. If the publisher gives readers explicit permission within the magazine to copy the program and give it away (many publishers do), you're in the clear.

2. NO. Computer screens can be copyrighted, and copyrighted screens are protected by the same laws as any copyrighted material.

3. YES. Randomly-generated computer graphics cannot be copyrighted. Caution: the law does make a distinction between randomly-generated computer graphics and computer-generated animations. For instance, if you decide to capture After Dark's "Flying Toasters," a computer-generated animation created by human beings, you would be breaking the law.

4. YES. The law does not take into consideration the intentions of or the ignorance of the infringer. Even if you had no idea that you were creating an exact duplicate of Lotus 1-2-3, you would still be held accountable. It is your responsibility to research the products that you wish to market to make sure they are not currently copyrighted. The same rule holds true if you make illegal copies of copyrighted software — if you are caught you will be prosecuted, even if you had no idea at the time you made the copies that it was wrong to do so.

5. NO. A law passed in 1990 states that no one can rent, lease, or lend an original copy of copyrighted software to another person without the permission of the copyright holder. This law was passed because software pirates would rent copies of copyrighted software packages once, make copies of them, and then never rent the software again. Or, worse, they would make numerous copies of the software and then distribute the copies for their own gain.

(see "Scoring" next column)

Scoring

0-10 points — Justice is blind, but that doesn't mean that you should be as well. When it comes to a copyright lawsuit, ignorance of the law is no excuse. To protect yourself, you may wish to read some of the many books at the library that discuss copyright law.

15-20 points — You have a fairly good grasp of copyright law. However, you have probably learned that copyright law can have some very strange twists and turns.

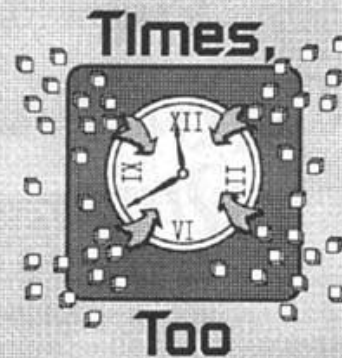25 points — No fair peeking at the answers! Either that or you must be a lawyer.

RISC? MVS? NREN? EPS? Grrr... — The University College in Cork, Ireland, maintains a repository of acronyms common to information technologies. You can query the database by sending electronic mail to freetext@iruccvax.ucc.ie containing a single word in the body of the message. "HELP" is a good word; it delivers a file to you, by email, of instructions on how to narrow or expand your requests. The Acronym Server works slowly (responding usually days later) but generally seems reliable.

Call for Proposals: Computers, Freedom & Privacy '94 — The organizers of the fourth "Computers, Freedom, and Privacy" conference are seeking presenters for topics in technology, policy analysis, or law relevant to the annual conference theme. CFP'94 will be held on March 23-26, 1994 in Chicago, IL. For more information, contact: CFP'94, The John Marshall Law School, 315 S. Plymouth Ct., Chicago, IL 60604-3907; phone: (312) 987-1419; fax: (312) 427-8307; email: CFP94@jmls.edu)

Student Papers: Computers, Freedom & Privacy '94 — CFP'94 also sponsors a student paper competition on topics of freedom and privacy in today's "information society." For more information, contact: Prof. Eugene Spafford, Department of Computer Science, Purdue University, West Lafayette, IN 47907-2004; phone: (317) 494-7825; email: spaf@cs.purdue.edu.

Assistive Technology Document — The Institute for Academic Technology in North Carolina provides a document over the Internet called "Assistive Technology for the Disabled Computer User." This paper discusses technology that can help a physically disabled person use computers, providing information on products and prices and agencies that work with the disabled in this area. To get a copy, connect to ftp gandalf.iat.unc.edu using anonymous FTP, cd to "guides," and type the following command to retrieve the file: get irg-20.txt

Health Plan Announcements Online — An electronic mailing list has been set up on the Internet to serve as a conduit for health-reform announcements issued by the White House. To subscribe, first place the following one-line command in the "Subject" header of an email message to SFREEDKIN@IGC.APC.ORG: SUBSCRIBE LIST.HEALTHPLAN. In the body of the message, include the following information (devoting one line per piece of information): ADD: your_electronic_address (your real name in parentheses); Your real name; Your postal address (optional); City, State; Your profession; Your professional interest in health care (if any) and institutional affiliation (if relevant).

Med Online Forum at UC Davis — To deal with the exponential growth of medically-related information, health care professionals are having to become computer-literate. To that end, Dr. Art Huntley and others at the UCD School of Medicine have established an email discussion group on the use of computers in the curriculum. Referred to by its members as "Reticulum," but more officially known as the Medical Informatics Committee, this forum is open to new voices with experience and expertise in the software and systems useful to medical students. If interested, contact Dr. Huntley at achuntley@ucdavis.edu or 734-6795.

Metacenter Gophers — The four NSF-sponsored national supercomputer centers have installed Gopher servers on the Internet to provide facilities and services information, including directory information, a high-performance computing community calendar, allocations information, newsletters, documentation, and research papers. The electronic addresses are as follows: National Center for Supercomputing Applications (gopher.ncsa.uiuc.edu); Pittsburgh Supercomputing Center (gopher.psc.edu); Cornell National Supercomputing Facility (gopher.tc.cornell.edu); and San Diego Supercomputer Center (gopher.sdsc.edu).

Computer Etiquette for Kids — Gale Warshawsky and Lonnie Moore of the Lawrence Livermore National Laboratory have designed and implemented a nationally-acclaimed educational program to instill computer-security and ethics awareness in children in grades K-3. The Computer Security Outreach Program is a 35-minute multimedia presentation, featuring puppets, stories, creative dramatics, transparencies, four short videos, and a sing-a-long. Stars of the videos are Chip, a puppet computer, and Gooseberry and Dirty Dan, two puppet computer users who make computer-ethical mistakes. For further information, contact Gale Warshawsky at Lawrence Livermore National Laboratory, PO Box 808 L-321, Livermore, CA 94551.

Email Forum for Donor Prospect Research — An international electronic mail group has been set up for discussion on prospect research issues, resources, techniques, ethics, job announcements, and related topics. Prospect research identifies individuals and organizations that are potential donors to universities, hospitals, and other nonprofit organizations. To subscribe send the following one-line command in the body of an email message to LISTSERV@UCI.EDU: SUBSCRIBE PRSPCT-L

Survey of Desktop Computing — In October, 1993, the Center for Scholarly Technology at the University of Southern California will conduct a national survey of college and university faculty to develop a profile of the use of information technology resources in teaching, learning, and scholarship in the nation's two- and four-year colleges and universities. Participating campuses will receive a complete report of the results. For information, contact kcgreen@usc.edu. [Reprinted with permission from *EDUPAGE* 7/93.]