

## AT&TEAL



### Major Gift from AT&T Creates Environmental Analysis Lab

In response to a proposal made by UC Davis faculty, AT&T recently agreed to make a major corporate gift to the campus. Geoffrey Wandesforde-Smith, of the Department of Political Science and the Division of Environmental Studies, and Kathleen Dixon, of the Campus Writing Center, asked for the resources to create a model teaching lab and classroom at Davis for wide-area networking.

AT&T made the award from its University Equipment Donation Program, which is designed to support the best applications of AT&T technology in higher education. The equipment and services that establish the facility, to be known as the AT&T Environmental Analysis Lab (AT&TEAL), have a fair market value of more than \$200,000.

The new lab, to be managed by IT Information Resources, will feature the following donated equipment:

- 20 AT&T 3232 Energy Efficient PCs. These are powerful workstations running at 66MHz with 8Mb of RAM and a 170Mb hard disk apiece.
- 1 AT&T 3410 PC that comes with 16Mb of RAM and a 535Mb hard disk. This server machine includes a 525Mb tape backup unit and an AT&T Paradyne modem.
- 2 StarLAN 10 Smart Hubs.
- 1 laser printer, and Ethernet LAN cards, sound cards, double-speed CD-ROM for each of the 20 workstations.

Donated software for the lab includes MSDOS, MS-Windows, UNIX System V Release 4 OS, StarGROUP LAN Manager, and the TCP/IP application suite (Telnet, FTP, etc.).

The AT&TEAL will be located in the new Social Sciences building currently under construction and slated to open in fall 1994. It will be open to the general public in non-prime hours, but will serve primarily as a national demonstration and testbed teaching facility for the use of wide-area communications technology in higher education.

In its first year, the new lab will especially benefit three undergraduate courses that use distributed network resources for environmental analysis: Political Science 107, Environmental Politics and Administration; Environmental Studies 161, Environmental Law; and Political Science 122, International Law, which emphasizes international environmental law.

"This award is the first of its kind at Davis," according to Wandesforde-Smith, "and is a major vote of confidence in the steps the faculty and the administration are starting to take, together, to make this campus a national center of excellence for classroom-based applications of computers and networks. It's a big feather in the cap of IT, and a tribute to the foresight and leadership of those in the Department and the College who have supported us along the way. We look forward to a sustained partnership with AT&T and with other corporate donors."



## 1994 IT Annual Report

Associate Vice Chancellor - Information Technology Dr. Carole Barone submitted the following annual report to the Information Technology Administrative Advisory Committee on June 10, 1994. (Also, see "IT Chair Comments on IT Annual Report," page 2.)

### Mission

The mission of Information Technology (IT) is to support, facilitate, and empower local access to, and use of, information technologies in support of the University's mission of instruction, research, and public service.

### Identity

The size of the Information Technology division increased by approximately one third on January 1, 1994 with the merger of Repro Graphics (campus printing services) and Illustration Services (medical illustration) into the organization. This report will high-

## IT Staff Assisted Faculty Who Received Teaching Awards



Richard Walters

As noted in a recent Dateline UC Davis article,\* the work for which four Davis faculty received the Distinguished Teaching Award had a strong information technology component this year.

The 1994 recipients of this annual award from the campus division of the Academic Senate were professors Dwight Hirsh of Veterinary Microbiology, Thomas Sallee of Mathematics, Richard Walters of Computer Science, and Geoffrey Wandesforde-Smith of Political Science and Environmental Studies.

Two of the faculty, Walters and Wandesforde-Smith, have worked especially closely with the Division of Information Technology and done much to demonstrate that information technology can be an ingredient of good teaching at UC Davis. Among IT staff who have been acknowledged as contributing to their success have been: Carole Barone, Joan Gargano, Vicki Suter, Ken Weiss, Paula King, Steve Faith, Ivars Balkits, Katie Stevens, and Dick Kaye.



Geoffrey  
Wandesforde-Smith

Both Walters and Wandesforde-Smith mentioned IT in their acceptance remarks at the awards ceremony held June 7, 1994.

\*"Computer Use a Common Thread for Teaching Winners," by Patricia Bailey. Dateline UC Davis, Vol. 7, No. 18, June 17, 1994, page 1.

light the work of these two new units along with that of the others that comprise the IT division:

- Advanced Networking and Scientific Applications (supercomputing, GIS, database and new technologies support);
- Communications Resources (voice and data networking and support);
- Distributed Computing Analysis and Support (distributed architecture design and services, security, campuswide information system);
- Information Resources (instructional support, administrative information systems, operations);
- Planning, Strategy and Administration (internal IT administration); and
- Technology Resources (equipment purchase, maintenance and repair).

### Accomplishments

In spite of the struggle with budget cuts and the aftermath of a restructuring to align the organization structure with the goals articulated in the recommendations of the Information Tech-

nology Strategic Planning Committee (ITSPC), which issued its final report in December 1992, the IT division has produced significant accomplishments. These are presented here in summary form. A more comprehensive report is available through the Office of the Associate Vice Chancellor - Information Technology, 1480 Chem Annex, cabarone@ucdavis.edu, 752-8899.

**Information Technology Strategic Plan:** The Information Technology Strategic Planning Committee Report was accepted by the Academic Senate in November 1993. The IT organization is working with the campus community to implement the action steps recommended in the report. Since the work of the planning committee is now nearly two years old, it is time to begin discussions of criteria for evaluating progress toward attainment of the goals and methods of updating those goals.

All of the accomplishments that follow are tied directly to recommendations found in the ITSPC report.

("Annual Report" Continues on Page 6)

## 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.

## Real Life Netiquette

*Much social behavior on the Internet is self-policing and self-regulating. This article, comprised essentially of excerpted user postings on the Internet, represents, in the truest sense, the info tech culture that has developed over the years on the wide area networks — and especially attitudes toward what has become appropriate and inappropriate in this environment.*

[Editor's Note: All items are reprinted here by permission of the authors (or of email list moderators when authors were not traceable in archives and/or credited in the original posts).]

### Doing Research Before Querying a Discussion Group

Last year a hot debate erupted when a graduate teaching assistant at a major, dare I say, top 10, Eastern university, assigned a class of undergraduates to use Internet to seek information on research paper topics. The TA did not instruct the students to use the library first and then pose well formulated questions to the net. BIOSPH-L was flooded with questions on basic environmental science.

Both the TA and the students were outraged by the complaints they received from list readers who objected to being asked fundamental questions that ought to be dealt with by the students themselves. The root cause appears to be that neither the TA nor the students had any idea who was at the other end of the line. All they saw was a computer that should be giving them answers.

What was said to them repeatedly is this. The courtesy issue is that traffic on BIOSPH-L is voluntary. If you want people to take the time to answer your questions, indicate you have done some legwork on your own and have a genuine problem looking for additional information. Otherwise, you are soaking up volunteer resources which could be better used to meet needs not answered elsewhere.

Dan Yurman (1994). Electronic message to RISKS-LIST, February 18. (Reprinted in RISKS-FORUM Digest, Tuesday, 22 February 1994, Volume 15 : Issue 57.)

### Conserving Network Resources: Miscellany

I'm finding the online-news list extremely useful, but I wonder if you might post a message further elaborating some guidelines for everyone.

The main things I see happening are:

1. People clicking "reply" or typing "r" and including a long message (often 100 lines or more) and typing a one-line reply at the end.
2. People replying to a post by annotating it extensively, where their annotation isn't that useful (usually these are long posts, too).
3. People posting short items that are simply bon mots ("Yes, I agree to," followed by a 10-line signature).
4. People replying with ad hominem attacks or with messages that should have gone to email rather than the whole list.

5. The off-topic issue, which you just addressed (why is the Journalist Ph.D. discussion going on here...), but also people posting totally random news items.

I don't think any of these are "make or break" problems for the list, but they certainly make many more items "cullable." I read through the online items I get, and delete about 2/3 without saving them (at least) because of these above items.

Untraceable source (1994). Electronic message to online-news@marketplace.com, March 2.

### Considering Limited Capabilities of Some Systems on Internet

Many systems don't like articles over 1,000 lines or 32K (this includes the headers), so if you have a *really* long piece you may want to break it up. It's usually good etiquette to put "(LONG)" at the end of the "Subject:" line if you post something more than a few pages long. Oh, and I think it's generally preferred that things not be double-spaced or right-justified.

Reminder for everyone: Be sure there is exactly one blank line between the headers and the article, and *don't indent* the first line of the article! (Some machines have a line-eater that munches the start of your posting if it's indented.)

James "Kibo" Parry (1992). Usenet article to art.prose.d, April 30.

### Letter Bombing (and Rumors) Not Appreciated on Net

[Editor's Note: The TAP (Taxpayer Assets Project) letter, signed by Jamie Love, referred to in this message was sent to multiple addresses on the Internet. It asked recipients to send a form letter to Steve Wolf of the National Science Foundation protesting reports that "metered pricing on the Internet" might replace the current practice of charging a flat rate. In a note to the Cornell University community, M. Stuart Lynn pointed out that the TAP letter was ill-conceived and showed a poor understanding of how costs are accrued and charged on the Internet. He went on to say the following about letter-bombing.]

This TAP letter is an example of the danger of participating in letter-bombing and why such is considered poor netiquette. It results in clogging up peoples' mailboxes with unwanted letters (I should probably include this one in that category), and causes a lot of unproductive time to be spent in cleaning up the aftermath.

In this electronic network age, it is too easy to launch a thousand e-ships (or more) at the press of a single key-stroke. I personally will not participate in such an endeavor. And I always assume a request to forward a form letter is a hoax, unless and until I have reasonable evidence to the contrary. Whereas the TAP letter is not a hoax (it is based on sincerely-held misunderstandings), I cannot believe that Jamie Love would have sent it had he understood the facts.

M. Stuart Lynn (1994). Posted to taskforce@ivory.educom.edu by Mike Roberts

## Apple and Bookstore Partnership Provides Additional Campus Computing Resources

In September 1993, the UCD Bookstore Computer Shop began to participate in the Apple Computer Incorporated's Academic Partnership Program. This equipment donation program helps the University reinvest in its campus technology plan with earned credits from purchases of Apple products through the Computer Shop.

As part of the new program, Apple tracks University purchases through the Bookstore Computer Shop for each six-month period and awards points for each system sold. For the first redemption period, the UCD Bookstore Computer Shop's efforts resulted in approximately \$20,000 worth of Apple equipment donated to UC Davis.

Information Technology used the accumulated points to select seven newly-released high-end Power Macintosh 7100/66 systems. The Craft Center will receive one system, which will provide students with access to the latest CD ROM, multimedia, and authoring tools. Five Apple systems will be used by students in the Media labs to access the latest campus-developed multimedia resources and coursework. Information Technology will install the final system in their Information Resources department in order to review all of the technology and software related to the PowerPC and to facilitate the rapid integration of the new technology on campus.

Apple Computer, Information Technology and the UCD Bookstore anticipate a continued expansion of the biannual Academic Partnership Program for UC Davis. Information Technology has been asked to assist in the distribution process and is creating a proposal mechanism to ensure that the donated equipment will provide the greatest overall benefit to the campus. Future information will be posted on an electronic mail list, and interested parties can subscribe to apple\_donation@ucdavis.edu.



Apple Account Executive Arne Gallagher (left) presents Vice Chancellor of Student Affairs Frank Rincon (center) with a "check" representing the \$20,000 donation to the Davis campus. Offering support (right) is Johnson Lai, Manager of IR Academic Computing Systems Management.

photograph by Ivors Baillie

## ITAAC Chair Comments on IT Annual Report

[Editor's note: The 1994 IT Annual Report on page 1 of this issue.]

Beyond question, Information Technology has assumed a new strategic position in the life of UC Davis in the last year. Associate Vice Chancellor Barone's annual report speaks to the developments that have contributed to this outcome, across a broad front. From a campuswide perspective, two or three things stand out.

First, after some delay attributable to a very thorough review, triggered by the Academic Senate, there is a decision to move ahead with Network 21. This project, first approved by the Regents in November 1993, will bring fiber-optic cable to every place on the Davis campus where the cable can be used and be useful. This new infrastructure will replace the slower and more limited "hard wire" access to the network we now have. Network 21 will, thus, put in place the tools UC Davis needs to transform itself as a place of higher learning.

Second, as a result of several decisions by both the Academic Senate and the campus administration, IT gets a new oversight structure, starting in fall 1994. The old Senate Committee on Computing, which died at the start of 1994, and the Chancellor's Information Technology Administrative Advisory Committee (ITAAC)

will effectively be merged into a new Campus Committee on Information Technology. This is more than just a cosmetic reshuffle. The new joint committee offers a model for a fresh approach to University governance. If this new enterprise breeds trust, and if it can move beyond mere oversight to planning and policy development, then it will provide some effective joint leadership. The benefits of this could extend beyond the case of IT, and I would not be surprised to see that happen.

Third, a variety of important initiatives are moving the people who are the IT division, as well as computer and networking technology itself, closer and closer to the heart of teaching, research, and service. This increasing interdependence between people of IT and people in other academic and administrative units brings with it stresses and strains, and new challenges. It isn't clear how everyone is going to adapt. We have not seen the end, yet, of the pain associated with reorganization and rethinking of how we do our work.

The word is out, however, to our students, to our colleagues at other universities, and to the public and private sponsors of our work that UC Davis is moving ahead. A year or two years ago, we could not have said that. We can look back, then, to a year of substantial accomplishment, and forward to what I think is going to be a very bright future.

Geoffrey Wandesforde-Smith  
Chairman-designate, The UC Davis  
Campus Committee on Information  
Technology

# GIS Incorporated into UCD Curriculum

by Bonnie Johnston, Planning, Strategy & Administration

What is a GIS? It's a Geographic Information System, which allows you to enter, store, manipulate, analyze, and display spatial information. Although GIS was first made popular by geographers and land management planners, it is now used by biologists, ecologists, hydrologists, sociologists, and other researchers who work with data that can be expressed spatially. "I began using spatial analysis techniques in graduate school, and they continue to be indispensable in my hydrology research," says Wes Wallender of Hydrologic Science and Biological and Agricultural Engineering.

The three problems listed to the right under the title of this article are projects that students in UCD's new GIS class (Introduction to Geographic Information Systems, EBS/HYD 198, team-taught by Wallender and Paul Grant of Information Technology), were able to solve by creatively applying GIS's spatial analysis techniques. Assisted by Tim Allis of IT (who also helped teach the lab portion of the class), students used Arc/Info Software in Information Technology's workstation-based Visualization laboratory. While Grant has been teaching short courses in GIS use for the past two and a half years, this is the first time that GIS has been incorporated into UCD curriculum as an academic class. He feels that the class was very successful, and Wallender agrees: "Students performed better than anticipated — their projects were thoughtful and more ambitious than originally intended."

Grant feels that both the short course and the full-length academic class serve a particular need on campus: while many of the people come into the short class for an overview of the system and an understanding of how GIS works, the full class gives students an opportunity to apply the information they've learned to a real-world problem. The class is split into two sections — during the first half of the quarter, students learn how to use Arc/Info's many functions; during the second half, they must apply what they've learned to a project of their choice.

Students Eric Sanderson and John Dale chose to apply spatial analysis techniques to track the evolution of Sacramento property boundaries as social constructs. Examining the years shortly before the Squatters' Riot in 1850, Eric and John compared property boundaries as defined by speculators (who bought large lots of land and then resold them piece-by-piece for large profits) and squatters (who defined property boundaries by usage rather than by deed of ownership). GIS allowed them to transform huge amounts of historical data into several graphical representations, which could then be subjected to further analysis.

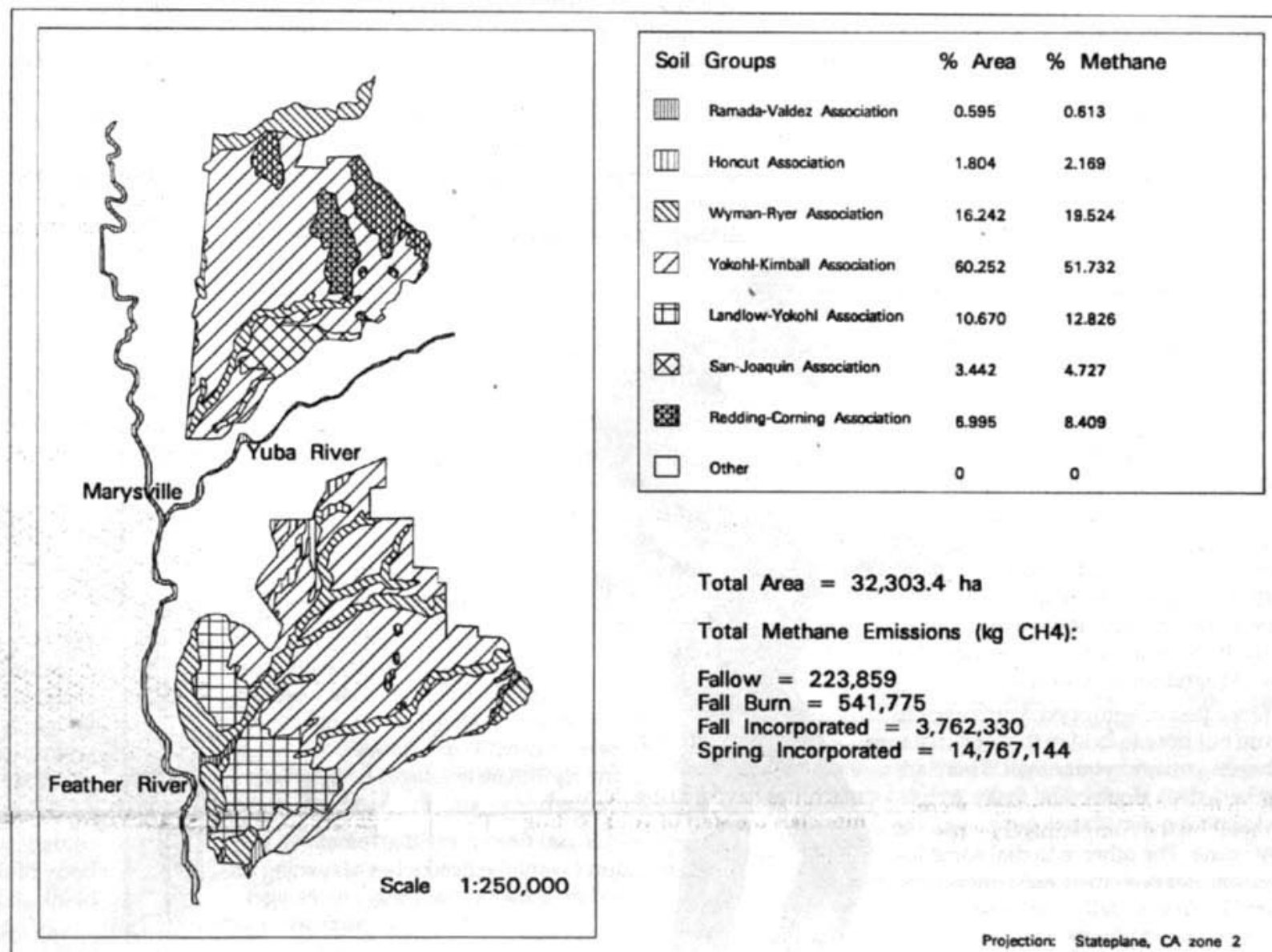
Glen Fitzgerald, an Agricultural Ecology student, found a very different use for GIS analysis. Looking at data on rice paddies in Yuba County, he focused on the link between land management methods in rice production and methane emission from rice fields. Since rice production contributes ap-

*Problem:* Trace the history of property ownership in Sacramento shortly before the Squatters' Riot of 1850.

*Problem:* Determine whether legislation regulating the disposal of rice straw is causing an increase of methane release into the atmosphere.

*Problem:* Select highway and freeway lanes in Sacramento that are suitable for conversion to carpool lanes.

*Solution:* GIS.



Agricultural Ecology student Glen Fitzgerald used GIS to create this map illustrating the connection between soil groups and methane production.

proximately 25% of the world's methane emission (one of the contributing factors to the greenhouse effect), Glen wanted to determine whether new legislation regarding methods of rice straw disposal would increase or decrease methane emission from rice paddies. He used GIS analysis to create topological representations of fields using both the old method of disposal (burning the rice straw) and the new method (incorporating the rice straw back into the soil). Glen found a significant increase in methane emission in fields where rice straw is incorporated back into the soil, indicating that the impact of this legislation should be studied in greater detail.

Illustrating one of the more traditional uses of GIS, John Gard and Raghu Kowshik were able to select ideal sites for conversion of traditional highway lanes into HOV (carpool) lanes, considering such diverse factors as traffic flow, peak driving hours, and support for an increase in carpool lanes among both local residents and freeway users.

Other students found equally creative applications for GIS. Lindsey Swope examined the causes of deforestation in the areas surrounding four Chinese villages. James Juenger and Kayleen Keller were able to locate optimal areas for a new wildlife preserve in Costa Rica. Pauline Low and Tracy Pon examined the correlation between urban development and water quality in the Lake Tahoe area. One very enterprising student, Eric Jarvi, far exceeded the original assignment, creating a graphical interface for the GIS system.

To demonstrate the power of his interface, he used data from the Housing Viewpoint's annual survey to create overlays which a user can combine to find the apartment complex which most closely matched their preferences: the user chooses the features that they want in an apartment, and the system displays a map of Davis, highlighting all the apartment complexes which offer these features.

Hoping to increase the prominence of GIS on campus, Grant and Wallender are already working to improve the class for next year. "For the next offering, we will increase the lecture/discussion from one to two hours per week to allow for more discussion of concepts, and to have campus and off-campus GIS users share their experiences," says Wallender. "Paul will as-

sign additional computer homework exercises that go beyond the tutorial. Finally, students will continue working individually or in teams of two, but will choose from two or three projects we design. ...Next year, a follow-up course in GIS will be taught using the visualization laboratory; ... we will have a two-course sequence. This sequence will be the capstone of a Minor in GIS and Spatial Analysis, [which] the Campus GIS Committee is preparing."

For more information about GIS, you can call Wes Wallender at 752-0688 (electronic mail address: [wwwallender@ucdavis.edu](mailto:wwwallender@ucdavis.edu)) or Paul Grant at 752-8266 (electronic mail address: [pwgrant@ucdavis.edu](mailto:pwgrant@ucdavis.edu)). If you are interested in IT's short course on Arc/Info, you can call Paul Gutierrez at 752-0141.

## Free Solano Internet Access Coming

Solano County residents may soon have direct access to Internet electronic mail services without cost. This deployment of the information superhighway in Solano County will be made possible through a regional alliance of computer bulletin board system administrators in both public and private sectors. Access InfoSystems, based in Fairfield, CA, plans to dedicate a portion of its public data network to provide the backbone and hub services for that purpose. For more information, contact: Access InfoSystems, Waterman Professional Center, 2801 Waterman Blvd., Suite 107, Fairfield, CA 94533; phone: (707) 422-1034; email: [jeff@solano.community.net](mailto:jeff@solano.community.net).

# Jack Kerouac Never had to Worry about Email

by Joel Snyder, Opus One

[Editor's Note: The following article originally appeared in Internet World, June/July/August 1993, Vol. 4, No. 5. It is reprinted here with permission of author Joel Snyder and editor of Internet World Daniel Dern.]

Getting access to your Internet email when on the road is a common problem, especially for those of us who travel semi-frequently and to different locations each time. Fortunately, there are inexpensive solutions that let you keep in touch without breaking the bank.

No matter which of the techniques you use, make sure you get all the information before leaving town. You'll need phone numbers, modem settings and speeds, and possibly special keywords, passwords, and procedures. A practice session before you leave is also a very good idea. You'll want to make sure everything works while you can still get local help.

For the infrequent traveler, a laptop and modem are all that's needed to make you self-sufficient. It's possible to borrow or rent a computer on the road, but you'll have the greatest chance of success if you bring along a system and software you're familiar with. This doesn't have to be expensive: low tech, low weight, low speed laptops such as the Toshiba T1100 can be found for \$400 or less.

Once you're equipped, you've got to figure out how to bridge the long distance between you and your email. There are two basic techniques. The first is to use the telephone network to get you all the way home. The other is to dial some local computer system or network access point (for free, usually), and use the data networks to get you the rest of the way.

Dialing back to the office using normal long distance is one of the most expensive ways of stay connected, but it has simplicity on its side. No prior arrangements, no funny software, and no monthly fees. To save money, don't call direct. Most hotels see long distance as a profit center, and charge exorbitant rates. A one-minute call from a hotel in Atlanta to Arizona last month cost \$5.64! Instead, use a telephone credit card to place the call and avoid most hotel charges. To get help placing a call, try 800-321-0288 for AT&T or 800-877-8000 for Sprint.

A common alternative is to try and get a guest account at an Internet site where you're traveling. This usually works, if you've got the time to track down local postmasters and beg for accounts. But there are no guarantees, and the effort can be substantial.

As your time on the road increases, 800-style service can be an alternative. The costs for this service have dropped dramatically over the past decade, with monthly fees and per-minute charges quite reasonable.

One plan from MCI will map a local dial-in modem to a toll-free 800 number for \$5 a month, with per-minute charges of \$.26. This means you can dial, for example, 1-800-JANS-VAX, and the call will ring on your normal, local dial-in modem number. Other plans increase the monthly charge and reduce the per-minute charges to less than \$.20. Most of the larger long distance companies are now offering this kind of service. Try calling AT&T (800/222-0400) and asking about their Starterline and Readyline services, or MCI (800/444-2222) for their Private 800 or 800 Business services. MCI's Private 800 is especially interesting to dial-in users, because it requires a 4-digit password before the call will go through. This helps screen out nuisance calls and hackers before the charges add up.

An online service such as the CompuServe Information Service (800/848-8990) or MCI Mail (800/444-6245) can act as an email access point

when on the road. For \$9 a month, CompuServe Information Service offers unlimited connect time and a \$9 email usage credit. That means you can send or receive about 60 Internet messages a month without additional fees (but note that CompuServe charges you for email in both directions). If you forward your email to your CompuServe account before leaving, you can read and respond while on the road at little or no charge.

CompuServe's advantage is that they have local dial-in service to most cities in the US, which means no long distance charges. Unfortunately, there is no way to directly access the Internet from CompuServe (although there is an Internet-to-CompuServe gateway).

MCI Mail doesn't offer the non-email services CompuServe does, but it has a lower charge if all you do is read mail: \$35/year, with toll-free 800 numbers, and no charges for access or reading mail. Sending an MCI Mail message is much more expensive, though, with charges starting at \$0.50, and going up from there.

Both MCI Mail and CompuServe have alternative pricing plans which may make sense, depending on how much mail you get and how frequently you travel.

A warning if you take this approach: forwarding mail unselectively can be dangerous. A malicious sender can fill up your mailbox, keeping legitimate messages from getting through.

If you need more than email, or don't want the headaches of turning on and off email forwarding, you can get public access Internet accounts from many different vendors. If you do this, write down your site's numeric IP address as well as the normal DNS address. Most have no surcharge for access from their home city, which may be a free or inexpensive call, depending on where you're staying. A few services

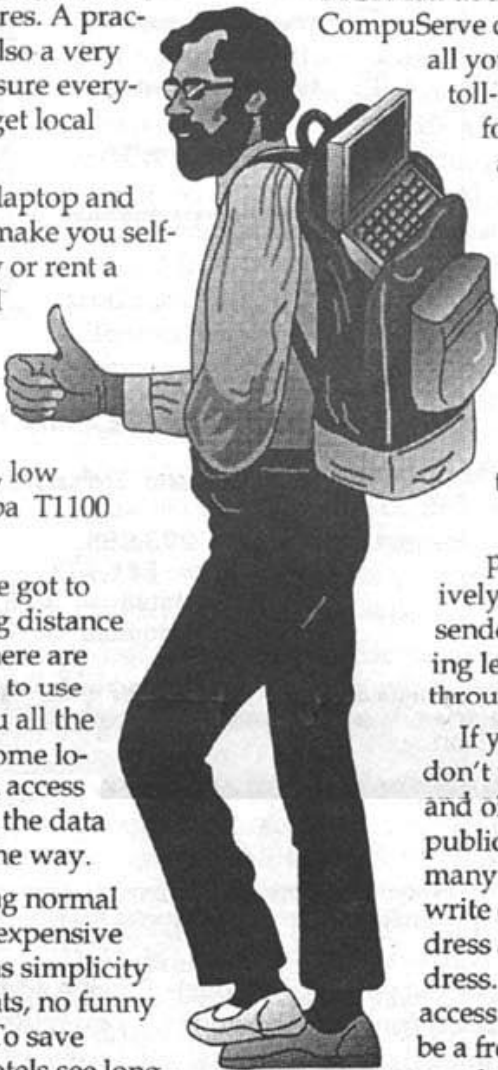
also have inexpensive access via 800 numbers or through a connection to a network such as Sprintnet (formerly Telenet), BT Tymnet, or CompuServe.

CompuServe, SprintNet, and BT Tymnet all have access numbers in most major and many smaller cities in North America. When you're on the road, call CompuServe at 800/848-8990, SprintNet at 800/877-5045 (press 5), and Tymnet at 800/336-0149 to find the closest phone number.

The monthly minimums are usually pretty high, but one low-cost contender is Holonet (510/704-0160), in Berkeley, California. Since Holonet is on the Internet, you can telnet from there back to your home email system. Holonet charges a low minimum of \$6/month, with hourly rates of \$2 and \$4 (off-peak and peak hours). Holonet is connected to two different public networks, which cover most US cities. Hourly surcharges range from a low of \$0.95 (off-peak) to a high of about \$7.50 (peak), depending on the city you're calling from. For example, calling from Boston would cost a total of \$2.95/hour in the evening, while Tucson would be \$5.75/hour. Holonet also can make arrangements for local access in many international locations.

Holonet isn't the only company offering this service. PSI (800/827-7482) has World Dial, with a monthly minimum of \$9 and hourly charges starting at \$1.25/hour (but covers a very small set of cities); Delphi (800/544-4005) doesn't charge for night-time access via Sprintnet or BT Tymnet, but does have a minimum monthly charge of \$13; Portal (408/973-9111) has a \$20/month charge, but offers very low off-peak rates through Sprintnet and BT Tymnet of \$2.50/hour; and WELL (415/332-4335) charges \$15/month with a \$6/hour fee for access through CompuServe's network.

("Kerouac" Continues on Page 5)



## Inside

### Information Resources Facilitates Distance Learning

Tim Leehane of IR Instruction Services has been helping Assistant Professor Patrick Brown of Pomology communicate electronically with twelve students for several months now from Perth, Australia. Leehane developed a script for students and instructor to share materials submitted electronically and showed Brown how to set up a public directory. Leehane also taught the students a one-hour course on how to use the Fetch program to pick up and drop off mail, how to compress and decompress files, and how to put in a shortcut list in Fetch to automate the process. Both Leehane and Brown have been monitoring the success of the training and this electronic solution to distance learning.

### Information Resources Helps Aggie Kids Compute

Information Resources participates again in the annual Aggie Kids Computer Camp. This year 450-500 students aged 6-12 are expected to enroll for the two-week long sessions. Classes last approximately two hours and meet twice a week: Tuesdays and Thursdays from 1:00-3:15 pm. From late June through late August, the students are going to be exposed to a variety of computing environments. This year IR instructors introduce them to the ISH (Information Super Highway).

For more information, contact Peter Peterson at ppeterson@ucdavis.edu or 752-2131.

### Listserv for Computer Training Information

Information Resources has started an electronic mailing list for announcing new class offerings, course schedules, and other Information Technology computer training information. This mailing list is called it-instruction@ucdavis.edu.

To subscribe, send email to listproc@ucdavis.edu, containing the following one-line command in the body of the email message (leaving the "Subject" line blank and rest of the message blank):

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subscribe it-instruction@ucdavis.edu <firstname>
<lastname>
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(Substitute your last and first names for <firstname> <lastname>.) For more info, send email to learnit@ucdavis.edu or call 752-2131 or 752-2906.

### IT Units are National Prize Winners

A combined effort by Illustration Services and Repro Graphics and the UCD Sports Information Office resulted in several award winners in this year's national publications contest sponsored by the College Sports Information Directors of America.

At the Division II level, the Aggie women's softball poster captured second place in the nation. The poster was photographed by Markus Pfitzner and designed by assistant athletic director Doug Dull.

At the Division I level, first place in the western district went to a poster highlighting the Aggie women's gymnastics program, with design by Dino Gay and concept/photography by Steve Stevenson.

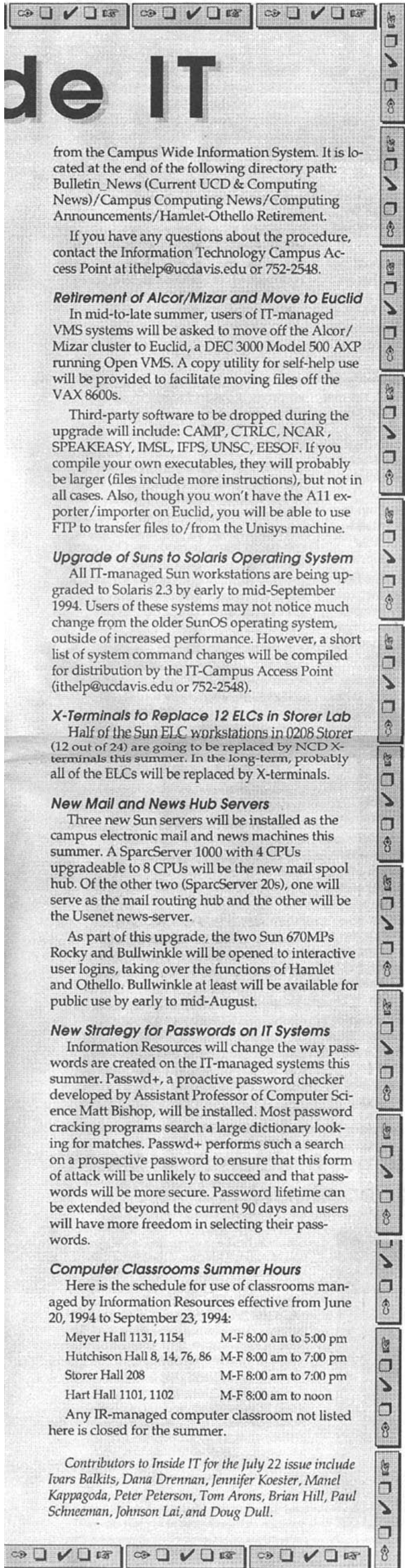
Other posters earning consideration were:

- football, which placed 7th in the nation in Division II, with design by Rick Hayes and concept and photography by Steve Stevenson;
- basketball, which placed eighth in the nation in Division II, with design by Rick Hayes, concept by Debra Wilson, and photography by Jim von Rummelhoff; and
- baseball, which placed ninth in the nation in Division II, with design and concept by Doug Dull and photography by Jim von Rummelhoff.

### Retirement of Hamlet and Othello

After July 31, 1994, users of IT-managed UNIX systems no longer will be able to login to Hamlet and Othello interactively. One of these systems, however, will remain up through October 1994 for copying files.

Information Resources has put a utility in place for people to move files off the decommissioned DEC 5500s to the IT-managed Sun servers Chip and Dale. You obtain instructions on using this utility



# de IT

from the Campus Wide Information System. It is located at the end of the following directory path: Bulletin News (Current UCD & Computing News)/Campus Computing News/Computing Announcements/Hamlet-Othello Retirement.

If you have any questions about the procedure, contact the Information Technology Campus Access Point at [ithelp@ucdavis.edu](mailto:ithelp@ucdavis.edu) or 752-2548.

### Retirement of Alcor/Mizar and Move to Euclid

In mid-to-late summer, users of IT-managed VMS systems will be asked to move off the Alcor/Mizar cluster to Euclid, a DEC 3000 Model 500 AXP running Open VMS. A copy utility for self-help use will be provided to facilitate moving files off the VAX 8600s.

Third-party software to be dropped during the upgrade will include: CAMP, CTRLC, NCAR, SPEAKEASY, IMSL, IFPS, UNSC, EESOF. If you compile your own executables, they will probably be larger (files include more instructions), but not in all cases. Also, though you won't have the A11 exporter/importer on Euclid, you will be able to use FTP to transfer files to/from the Unisys machine.

### Upgrade of Suns to Solaris Operating System

All IT-managed Sun workstations are being upgraded to Solaris 2.3 by early to mid-September 1994. Users of these systems may not notice much change from the older SunOS operating system, outside of increased performance. However, a short list of system command changes will be compiled for distribution by the IT-Campus Access Point ([ithelp@ucdavis.edu](mailto:ithelp@ucdavis.edu) or 752-2548).

### X-Terminals to Replace 12 ELCs in Storer Lab

Half of the Sun ELC workstations in 0208 Storer (12 out of 24) are going to be replaced by NCD X-terminals this summer. In the long-term, probably all of the ELCs will be replaced by X-terminals.

### New Mail and News Hub Servers

Three new Sun servers will be installed as the campus electronic mail and news machines this summer. A SparcServer 1000 with 4 CPUs upgradeable to 8 CPUs will be the new mail spool hub. Of the other two (SparcServer 20s), one will serve as the mail routing hub and the other will be the Usenet news-server.

As part of this upgrade, the two Sun 670MPs Rocky and Bullwinkle will be opened to interactive user logins, taking over the functions of Hamlet and Othello. Bullwinkle at least will be available for public use by early to mid-August.

### New Strategy for Passwords on IT Systems

Information Resources will change the way passwords are created on the IT-managed systems this summer. Passwd+, a proactive password checker developed by Assistant Professor of Computer Science Matt Bishop, will be installed. Most password cracking programs search a large dictionary looking for matches. Passwd+ performs such a search on a prospective password to ensure that this form of attack will be unlikely to succeed and that passwords will be more secure. Password lifetime can be extended beyond the current 90 days and users will have more freedom in selecting their passwords.

### Computer Classrooms Summer Hours

Here is the schedule for use of classrooms managed by Information Resources effective from June 20, 1994 to September 23, 1994:

Meyer Hall 1131, 1154	M-F 8:00 am to 5:00 pm
Hutchison Hall 8, 14, 76, 86	M-F 8:00 am to 7:00 pm
Storer Hall 208	M-F 8:00 am to 7:00 pm
Hart Hall 1101, 1102	M-F 8:00 am to noon

Any IR-managed computer classroom not listed here is closed for the summer.

Contributors to Inside IT for the July 22 issue include Ivars Balkits, Dana Drennan, Jennifer Koester, Manel Kappagoda, Peter Peterson, Tom Arons, Brian Hill, Paul Schmeeman, Johnson Lai, and Doug Dull.

## IT-CAP & Illustration Services Relocate



photograph by Ivars Balkits

The IT Information Campus Access Point (IT-CAP) has moved out of Surge II. The walk-in help desk services are located now on the first floor of Shields library in the Copy Center's space. The phone-in services and offices are located on the fifth floor of the Chemistry Annex and will be moving again at the end of the summer to Academic Surge.

Illustration Services has moved temporarily out of Surge II as well. Until early fall 1994, it will be located in the Surge I Annex.

### Other IT Moves

Information Resources' subunit Instruction Services has moved in its entirety to the fifth floor of the Chemistry Annex, also, as has the entire Advanced Networked & Scientific Applications (ANSA) unit for summer 1994 only. The Visualization Lab maintained by ANSA continues operation in 301B Surge IV.

Telephone numbers and email addresses for IT-CAP and the personnel in all these groups remain as they were.

## Computer Security Working Groups Active

Actively working on issues surrounding campus systems security (including password security) are the Campus Computer Security Working Groups coordinated by Tom Arons of Distributed Computing Analysis & Support.

Immediate goals for the groups include:

- evaluate and deploy systems to secure network access to Zeus (the server for BANNER and the Student Information System);
- generate and disseminate mailing lists and sublists of network administrators on campus;
- evaluate password policy and implications of various system access policies;
- examine legal issues surrounding acceptable use policies, privacy standards, and system administration standards;
- investigate possible campus standards for file encryption and privacy-enhanced mail; and
- develop procedures for reporting and handling security threats, both proactively and reactively.

For more information, contact Tom Arons at [arons@ece.ucdavis.edu](mailto:arons@ece.ucdavis.edu) or 752-1750.

## BARRNet Under New Ownership

Bolt Beranek and Newman Inc. (BBN) has signed a letter of intent to acquire the Bay Area Regional Research Network (BARRNet) from Stanford University.

Over 200 area businesses and research, university, and medical facilities use BARRNet to access the Internet, including the UC campuses at Berkeley, Davis, Santa Cruz, and San Francisco. BBN, headquartered in Cambridge, MA, is a leader in the fields of communications, acoustics, and computer-based technologies.

This agreement would allow BBN to merge BARRNet with the New England Area Regional Network (NEARNet), which it also owns and operates.

"The pending merger," says Rodger Hess, UCDNet Network Manager of IT Communications Resources, "is very encouraging in terms of the quality of service we can expect here at UC Davis. NEARNet has a deeper expansion capital, and BBN was among the founders of the ARPANET [Internet predecessor] and a leader in developing Internet protocols. The short and sweet of it: it's a good situation getting better."

[Editor's Note: This item is adapted partially from "Business Wire," The International Press Relations Wire Service, posted 6-22-94 5:04 AM.]

## Kerouac...

(Continued from Page 4.)

All these options add up to one answer: yes, you can stay connected while on the road. Choose whatever service fits your budget and style, and you can stay in touch, from Moscow, Russia or Moscow, Idaho.

Joel Snyder is a senior analyst with Opus One, in Tucson, Arizona, specializing in international networking and information systems. Opus One is working with the California State Legislature to bring direct email access to Senators and Assemblymen. Joel can be reached at (602) 324-0494 or via email to [jms@Opus1.COM](mailto:jms@Opus1.COM).

## Obtain List of Internet Access Providers by Email

You can now obtain a free list of commercial Internet-access providers by electronic mail. This list provides information on 38 US and 40 international providers, with contact information and descriptions of voice, email, and FTP access at each site. To obtain the list, send email to [dlist@ora.com](mailto:dlist@ora.com). Ask for the DLIST.

## In Memoriam, John Keller

Information Technology employee John Keller died May 17, 1994 in Sacramento.

Mr. Keller was born February 26, 1944 in Woodland, CA.

His military service included four years in the US Air Force. He graduated from Woodland High School and attended various technical schools.

Mr. Keller joined the University of California in 1967 as a television technician with Instructional Media. After the Information Technology reorganization, he was assigned to Technology Resources and worked as a senior television engineer.

Mr. Keller is survived by his wife Carol, daughter Kathy, and son Shawn, as well as many friends at the University from his 25 years of service at UC Davis.

A memorial service was held May 25, 1994 at the Harry A. Nauman & Son funeral home in Sacramento. Donations in memory of John Keller may be sent to Faith Community Church, 21704 West Golden Triangle Road #420, Santa Clarita, CA 91350.

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(continued from page 1)

**Network 21:** The project has been on hold since Executive Vice Chancellor and Provost Grey appointed a Network 21 Oversight Committee, Chaired by Vice Chancellor for Research Robert Shelton, to review the project plans. In the meantime, IT has taken the following actions to prepare the campus for a fully networked environment.

[NOTE: The situation has changed, and the project is back on track again. See "TTAAC Chair Comments on IT Annual Report," page 2.]

## Improvements in Current Network Operations and Services

• **Campus Modem Pool Expansion/Enhancements:** Replaced aging and obsolete modems with new state-of-the-art equipment, including the installation of communications servers which facilitate the monitoring, maintenance, and management of the pool. The size of the pool was increased from 72 to 224.

Thanks to the development of several statistical performance monitoring tools, the service being provided has been vastly improved. The volume of calls being answered has increased from an average of 2,600 to 8,300 per day. An IT workgroup has been established on a permanent basis to monitor progress and prescribe proactive steps to maintain service levels and meet increasing demand for remote network connectivity.

• **Campus Network Operations Center:** Installed a functional Network Operations Center (NOC) with expanded hours of operation that include the availability of technical support from 7:00 am to 11:00 pm daily. The center is equipped for trouble isolation and diagnostics, triage, and repair and restoration capabilities. In its current configuration it is a prototype of that which will operate in the Network 21 environment on a 24 hours/day, 7 days/week basis.

• **Interim Network 21:** Designed and implemented a project to furnish access to the campus broadband system, to accommodate the online Student Information System, for the Art Building, Wickson Hall, Sproul Hall, Hunt Hall, Kerr Hall, and Wellman Hall. A total of 32 departmental local area networks were installed and 9 separate Develnet connections effected through this one project. Access to network facilities from the classroom is an important by-product of this project.

• **Touchtone Registration Service:** In cooperation with the Information Resources unit of IT and the Office of the Registrar, installed a fully operational and responsive touchtone telephone student registration capability. Despite what have been exceptional demands on the system by students, the system has performed reliably.

• **Local Area Network Installations:** Across a broad spectrum of campus units, provided 140 work estimates and completed 118 installations. It is important to note that all installations incorporate the standards that have been established for Network 21.

• **Social Sciences Remote Switching Node:** We are in the final stages of implementing the plan to equip the new Social Sciences building with its

own remote telephone switching facility. By extending the latest in voice switching technology to an alternative site in the core area of the campus, and by exploiting the capabilities of optic fiber cable, we diversify the provisioning of service and preclude the need for the installation of additional quantities of twisted-pair cable and the inconvenience and costs that would entail.

## Expanded Computer Access

• **New Account Management System:** This new system is being designed to link access to electronic communication and resources to the process of joining the University as a student or employee. The goal is to provide a baseline level of service as soon as a student is registered or an employee hired. Over 8,000 accounts have been automatically created from administrative databases and activated online since September. Electrical Engineering and Computer Science is using the system to create accounts on over 200 machines in its department. Work is underway to link account creation for administrative systems, to consolidate 3 directory services under the account management system, and to migrate to account names that can be chosen by the client.

• **Instruction:** To provide incentive and education on the value and use of the networked information technology infrastructure, IT has, in addition to its publications, instituted an instructional program to prepare the campus for Network 21. Novice and advanced electronic communication classes were developed and are routinely taught. A broad range of computer-related classes were offered to staff, through a partnership with Staff Development, which resulted in training over 1,000 staff members at no charge to their departments. A variety of topics was covered in this initial effort with the direction toward "core competency" offerings. Some focused training was also provided to aid campus departments in the use of the new Student Information System. This included navigation training in Banner as well as end-user reporting tool training (Data Prism and Access). A dedicated staff computer lab was opened and is available for use by any department. Instruction in the use of various software packages was offered to students for a nominal fee. Faculty summer workshops will be offered this summer in collaboration with the Teaching Resources Center. Academic adjunct courses in support of instruction were redesigned to support the specific needs of the instructor.

## Campuswide Information System

• There are over 24,000 computer accounts on the central systems. Information is accessible in a consistent way via the Campuswide Information System. Several tip sheets in the "Quick Tips" series were designed to enable the campus community to learn quickly how to reach the CWIS and to search it for more in-depth help and information. Nearly 5,000 individuals have accessed the CWIS within the last three months.

• The use of Gopher is expanding and IT is encouraging departments to consider the use of the World Wide Web and to deploy their own servers. Two new servers have been purchased to

provide redundant, dedicated, CWIS service.

- World Wide Web is being used to:
  - Distribute security notices
  - Distribute site licensed software
  - Distribute forms
  - Provide class materials (in Political Science 102)
- The Registrar has agreed to make the catalog available through the Web.
- Electronic "help line" services have provided answers to nearly 3,000 inquiries about software, hardware, and IT services.

## Publications and Communications

• **Network 21 Planning Tips:** This series, coupled with the IT Times articles on networking and Network 21 topics, has done much to inform campus administrators and the general campus about the Project.

• **COMtips:** This series (patterned after the Network 21 Planning Tips), has met and continues to meet the Phase 3 recommendation that campus departments be informed of the ways they can cut telecommunications costs. Issue #2 is due out in June and will highlight voice mail as a productivity tool.

[NOTE: Issue #2 has been sent out to departments.] Future issues will address telecommuting and portable (wireless) communications options.

• **Payroll and Personnel Systems Fact Sheet:** This information piece met an urgent need to explain in lay person's terms the complex technical and organizational issues surrounding development of the UC-wide system.

• **IT Calendar:** The monthly calendar was launched in December 1993. It has kept the campus current, regarding info tech events, demos, seminars, workshops, etc. The people-networking required to put out this document has also facilitated cooperation and coordination across campus, in providing network and other info tech training opportunities to the UCD community.

• **Mining the Internet:** IT Publications & Public Relations continues to receive email requests for "Mining the Internet/Using the Internet" training materials, first produced in 1991 for the California Educational Computing Consortium conference at UC Davis. As a result of a notice describing them in the Internet Complete Reference and the Internet Yellow Pages, IT is receiving about 40 requests per month.

• **Quick Tips:** These tip sheets describe steps for "getting started" in more than a dozen uses of information technologies on campus. This series has been very popular with students and faculty, especially for use as class handouts.

## Instruction, Classrooms, Student Labs, and Operations

• Instructional technology support continued as a blend of traditional and emerging methods.

• Video services were provided to 140 faculty resulting in 21 productions, 106 videotaped courses, and 4 live teleconferences between UCD and the Washington Center. The productions included the entire lecture portion of Freshman Chemistry (Chem 9) as well as a self-paced learning series of 15 lectures and 9 lab demonstrations for Computer Science (ECS 15). Over-enrolled classes for Bio Sci 1C, Bio Sci 101, Chem 2A, and Chem 118 were offered by broadcast of the sessions to additional classrooms over the campus cable system.

• Graphics services were provided to 167 faculty resulting in 2,722 graphic images and 28,783 photographic images delivered in 188 productions. Major productions included Physical Education 101, 5 courses in Food Science and Technology, and 3 courses for the School of Law.

• Multimedia services (which include video and graphics specialties as well as multimedia authoring expertise) developed templates to convert traditional slide/tape presentations into self-paced learning modules. Dedicated Macintosh computers in 1101 Hart Hall provide simultaneous access for 30 students to material which was only accessible to one student at a time in the traditional format.

• A partnership with the Registrar's Office resulted in a new computer classroom. This facility in 241 Olson Hall is designed to facilitate lecture style instruction while providing every student with a computer. It is scheduled as a classroom, not a lab, by the Registrar.

• Improvements in the central UNIX systems included installation of communication hardware which removed network bottlenecks, upgraded processors, enhanced security procedures, automated tape backups, and more effective disk space management routines. Moreover, certain arguably entertainment-related activities like Multi User Dungeons (MUD) and Internet Relay Chat (IRC) have been restricted.

## Access to Administrative Data

• The online Student Information System (SIS/Banner) is in production mode following over 12,000 hours of developer effort this past year alone. IT established a formal development methodology and implemented strict project management procedures for this development effort. This process, plus the recognition of System Archi-

(Annual Report Continues on Page 8)

## Lois Unger Assumes Directorship of Media Collaboration Department



Lois Unger

Lois Unger, formerly Director of Repro Graphics, has been appointed to the position of Acting Director of the Media Collaboration department of Information Technology. Unger brings years of very successful management experience and a broad and deep understanding of media to this important position, which oversees the work of Repro Graphics, Illustration Services and Instructional Media.

Associate Vice Chancellor - Information Technology Dr. Carole Barone states: "Lois Unger brings to her new appointment broad knowledge of the media represented in these units, a strong and well-articulated philosophy of service and quality, which she instills in her staff, and over thirty years of experience on the UC Davis campus. With this background, Lois is positioned to lead these units aggressively toward the realization of their potential to meet the requirements of a campus that is about to enter the 21st Century."

# From the User Perspective: Groupware Calendaring Programs

In November 1993, UCD Employee & Staff Affairs sent out a request for reviews of groupware calendaring programs to members of the Computer Consultant's Association. Division staff were seeking actual user response on software that would work in a mixed DOS, Windows, and Macintosh environment and that would work with departments within and outside the Division.

Here are several of the more-detailed responses to that query (updated to reflect changes in software versions and user impressions since November 1993).

## MeetingMaker

Paul Drobny, L&S Dean's Office

In the College of Letters and Science Dean's Office, the desktop computing is primarily Macintosh-based. We use Meeting Maker from On Technology to schedule the deans' and a majority of the staff's calendars.

Meeting Maker has served our purposes quite well, being especially strong for setting up quarterly schedules in a short period of time. It also is exceptionally strong for getting ad hoc meetings within the office scheduled quickly and easily. Meeting Maker also has facilities for scheduling shared space (conference rooms).

We have run into some problems with proxy notifications. That is, not all keep their own calendars, and it can be tricky getting access privileges and notifications to behave properly.

Since it is a client/server application, having all data in one place and accessible by all (configurable according to each user's desires), Meeting Maker helps our busy office members stay in touch with each other and eliminate waiting lines at office doors. Remote access is a useful feature particularly revered by the deans and management. Along with email, it's the heartbeat of the office.

Out-of-office (read "not included in the Dean's Office LAN") participants remain problematic. We are carefully watching the marketplace and other departments for developments in this area. Cross-campus scheduling or the ability to access other services would complete the functionality and eliminate hundreds of hours of phoning, contacting, and re-contacting.

We have since evaluated Meeting Maker XP and found it to be a step backward for the Mac users, though cross platform. We are still running Meeting Maker 1.5.

We are looking to future upgrades of Meeting Maker to allow us to use it for the counselors as well ... that is, scheduling students for the first available appointment with a number of counselors by a single glance on a condensed screen. Our counselors currently are using a package called "front desk," a legacy

Ivars Balkits						
July 94						
SUN	Mon	Tue	Wed	Thu	Fri	SAT
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

The monthly appointments calendar feature of Meeting Maker by ON Technology provides a quick view of what's coming in July 1994 for one UC Davis user.

system supported by Peachtree Software. There are some serious disadvantages to it, not the least of which is that there are no fixes or development on the horizon, and a continually ballooning data file.

## Schedule+

Peter J. Hunter, Student Housing

I have about 75 users in Student Housing running Schedule+ (version 1.0) under Windows for Workgroups (version 3.1) in conjunction with Microsoft LAN Manager (version 2.2).

We have found Schedule+ to be an extremely cost-effective calendaring solution since both MS Mail and Schedule+ were included in the upgrade from Windows to Windows' for Workgroups. (This solution, of course, assumes a department has Windows already, which Housing did.)

In addition to the workstation clients included with the WFW upgrade, we purchased the MS Mail Server Postoffice option (version 3.2). The Server Postoffice allows for the central storage of each user's calendar files, such that they are available even if an individual's workstation is powered off.

Schedule+ is used extensively by everyone in the department. Much of its usefulness stems from the fact that it is tightly integrated with MS Mail. All notifications for meeting requests, cancellations, etc. are received and replied to using MS Mail. If a user is sent a meeting request, s/he receives a mail message and can accept, decline, or tentatively accept the request with a click on a single button. If accepted, the meeting is auto-

matically booked. In any case, a reply is sent to the meeting originator.

Security on scheduling is highly flexible. Individuals can designate "no access," "view only," "read only," "read/create," "read/update," or "assistant" levels of security to any individual in the mail system. Schedule+ also allows resources such as rooms, projectors, vehicles, etc., to be easily scheduled.

The product also has a task/project manager built into it, as well as the ability to write and keep daily notes.

There are only a couple of shortcomings, and they are pretty minor. The current version of Schedule+ will not book recurring meetings for groups. This is an inconvenience, as members of a group must book recurring meetings for themselves.

Student Housing has been using Schedule+ for about 18 months and is extremely satisfied with it.

## WordPerfect Office

Gordon Nelder-Adams, Environmental Toxicology

If you're evaluating programs, I strongly and unreservedly recommend that you take a look at the WordPerfect Office 4.0, available for DOS, Windows, Macintosh, and UNIX.

The Office is a single program that performs email, calendaring, scheduling, and to-do lists. We've had the software installed on our network for a number of months now, and people like it a lot.

The program will soon be upgraded and renamed to WordPerfect Symmetry 4.1. (Though WordPerfect was the

first to use the name "Office," Microsoft Corporation has co-opted its meaning, and so WPCorp evidently thought it better to switch than fight.)

Symmetry will have even more client versions, including seven UNIX variants. The Mac and Windows clients will double as remote clients (so that if you have a PowerBook or Windows notebook, you will be able to hook up via LAN or modem to check your messages using only one version of the software).

Supposedly WPCorp will also further improve the program's speed.

One feature of the current program that is particularly well implemented is the ability to delegate responsibility for calendaring (as well as email and task management). This means that a secretary or receptionist can maintain (or at least view and add to) calendars for faculty or administrative staff who have delegated that authority. The security on this is very tight; without such delegation, people can only see when you are busy, not what you are doing while you are busy. You can also have several calendars open simultaneously (again, provided access has been granted).

We use the program to schedule our conference room, and anyone on the network can look and see when it's free without checking with the main office; you can also keep track of slide projectors, vehicles, or any other resources you want to define.

With the WordPerfect Customer Advantage Program (the campus site license) the cost of WordPerfect Office is ridiculously cheap. And there's an SMTP gateway to tie the Office/Symmetry in with the campus email system and the rest of Internet mail.

## OnTime for Windows

Tom Poage, Clinical Engineering, UCDCMC

Our department has been using a network version of OnTime over NFS via Sun's PC-NFS and FTP Software's PC/TCP. The OnTime Windows and DOS executables and calendars reside on a Sun file server, and are accessed as regular files. NFS file locking is enabled.

The package is supposed to work over multiple network implementations, and has built-in security features (network administration, etc.). Early on we had a few troubles with calendars becoming corrupted, but haven't had problems recently after some OnTime and SunOS upgrades. File locking seems to work as expected to prevent conflicting updates. Changes and alarms are appropriately propagated to all clients on the net.

At present we only have five client PCs, and use is within the department only. I don't know if this package is available for Macs and UNIX hosts. I have seen at least one other department here use the package, but I don't know if they use the network version or not.

## Meeting Maker

Keith R. Prior, Division of Education

In the Division of Education and the CRESS Center we have used Meeting Maker for several years. However, ours is an exclusively Macintosh network environment. Meeting Maker does come in cross-platform versions.

In my humble opinion, these utilities work very well if everyone signs on and maintains their personal calendar. They fall apart if a significant player doesn't get the picture and keep his or her calendar up-to-date. The only solution I have found for the negligent player is to have someone more compulsive manage their calendar as a proxy.

In all other respects, I find MeetingMaker to be a really nice resource scheduler and meeting planner.

## Network Scheduler

Bill Wagman, Graduate Studies

In Graduate Studies, we were using Network Scheduler, but we have now pretty much given up using it as the users weren't too happy with it.

I was not wowed by the product from the beginning. I encountered bugs and questions that the distributor's technical support people were not successfully able to resolve or answer. They didn't seem to have a connection with the programmers.

Network Scheduler also doesn't work on Macs. We are a PC environment with two Macs. I bought it based on the recommendation of others who are using it, but I'm not sure it was the best choice.

It didn't do a number of things our folks wanted it to do, but it's entirely possible that we also didn't spend enough time in learning the product.

## OPT Work Group to Recommend Campus Standards

The Office Productivity Tools Work Group (OPT) has been established to define campus standards for an office productivity tool set for the areas of scheduling, personal calendaring, document routing, and electronic mail.

Joyce Johnstone of IT Information Resources coordinates this project. The group includes representatives from Accounting and Finance, ADMAN, Agricultural & Environmental Sciences, Chancellor's Office, Mail Division, Personnel, Registrar's Office, Admissions Office, VM Diagnostics Lab, and several Information Technology units.

The OPT Work Group's final report proposing campus standards for an integrated office productivity tool set and recommendation of a tool set will be ready in mid-September, 1994. Later evaluations will include forms design, imaging, telephony, text retrieval, videoconferencing, and workflow applications. For more information, call Joyce Johnstone at 757-8799 or send email to jmjohnstone@ucdavis.edu.

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(continued from page 6)

fect and Quality Assurance/Quality Control roles, will benefit all future application development projects.

- Touchtone Registration and grade access were implemented this past year.
- Online payroll timesheet reporting is now available for DOS clients. Macintosh access is in development.
- A data warehouse version of the SIS database is available for inquiry. Data Prism was determined by representative clients as the desktop reporting tool of choice. Instruction is available.
- Plans for implementation of the online Payroll/Personnel System are underway, including training and local data warehouse components to facilitate ad hoc reporting.

• One of the Unisys mainframes was retired following the implementation of SIS on the UNIX-based Sequent. The Sequent has undergone the final planned upgrade. It currently is configured to support 500 concurrent users with 3 second or less response time. Various system and database management efforts have occurred to insure security of data and minimize downtime for users. This year there were no unplanned outages of this system resulting from system or database crashes.

• Printers are now available in some client offices to provide immediate access to hardcopy output. Both Enrollment Services and Accounting now have major print jobs routed directly to their offices. Work is underway to transfer information electronically to the high-speed laser printer in Repro Graphics. This will eliminate manual tape handling and expedite receipt of large reports. e.g., the General Ledger.

#### Campus Access Point (CAP) and the Center for Advanced Information Technology (CAIT)

• The CAP handles over 6,000 contacts per month. After conducting an in-depth evaluation at the end of its first year of operation, the CAP has taken steps to focus its efforts on ease of access and client self-sufficiency. At the end of June, the CAP walk-in service relocated to the first floor of the Library. The CAP works in cooperation with the Library staff and Repro Graphics to coordinate information services and to facilitate access to networked information resources.

• The CAIT continued to showcase new and emerging technologies offering over 375 demonstrations this past year as well as regular presentations by major vendors such as IBM and DEC. The evaluations have focused on the expressed interests of the clients, e.g., groupware and imaging tools. There have been over 50 tours of this facility by outside organizations. With the relocation of the CAP and a Repro Graphics satellite operation to the same first floor Library wing as the CAIT, next year will see an aggressive effort to coordinate the activities of these units and to link them with the Library.

#### Distributed Support Program

IT, in collaboration with other departments on campus, is developing a campuswide program for focused technical support on information technology issues for "Distributed Support Representatives" (DSRs). Training sessions will be provided to coordinate technical strategic planning campuswide. A sub-program is in the implementation stages specifically for local area network administrators. The

Network Administrator Resource Program (NAR) (see the CWIS for details) has initial goals of compiling a comprehensive list of campus network administrators and creating a catalog of IT services for them to access by the end of the summer. Technology Resources has developed a new service to assist departments who do not have technical staff in the maintenance and operation of their local area networks.

#### New Communication Options

• Advances in digital imaging offer new communications options. The ability to image from disk to the Cannon Color Copier has made low-volume color printing affordable for poster presentations, reports, and grant proposals. Slide imaging from disk continued to expand in volume. The recent addition of network access to the film recorders via a network server allows access from remote locations and the transfer of large image files.

• There is continued interest in using video for presenting research findings and new techniques to large audiences. We have developed protocols to streamline both poster and slide creation, offering our clients freedom of choice in PC platforms and programs for long-roll digitized posters, a technique that allows the creation of posters of any length and the incorporation of photographs, charts, and text in a single laminated roll.

#### Geographical Information Systems (GIS), Databases and Supercomputing

• With the addition of eight X-terminals to the Visualization Lab, two faculty members were able to teach GIS classes as part of their regular curriculum. This is in addition to 100+ people that have attended the GIS classes taught by the IT staff. UC Davis hosted the "GIS and Special Data Analysis Colloquium," which was attended by 65+ people from all UC campuses.

• There are currently over 400 people on campus using the genetic information in the databases maintained by the staff.

• The IT staff has also continued support of super computing through the use of the San Diego Supercomputer Center (SDSC), Pittsburgh Supercomputer Center (PSC), the Cornell Smart Node and other sites. While SDSC has been UC Davis' primary site with 150+ users, the PSC Campus Workshop was well attend by 200+ people.

#### Printing and Library Copy Services

• On October 1, Repro Graphics assumed responsibility for Library Copy Services, began providing copying services in Shields Library, reorganized existing services to operate more efficiently, and expanded service capacity by adding additional equipment.

- Installed Xerox 1090 copier
- Updated fax to plain paper
- Installed Melvyl printing services

#### Erratum:

The article "How to Get Where You Want to Go and How to Do What You Want to Do" in the last issue of the IT Times (Vol. 2, No. 3, page 8) included an incorrect URL (Universal Resource Locator) or address for the local WorldWideWeb server.

To get to home page of the UC Davis server (using Mosaic or other WWW browser software) enter the following address all on one line:

<http://www.ucdavis.edu:80/homepage.html>

- Updated equipment Xerox 5042 book copier
- Increased hours service is available
- Upgraded microfiche and film reader printers

• Since initial Library operations began, Repro Graphics improved and added services, increased the effectiveness of the operation, and has begun to coordinate with the Campus Access Point and the Center for Advanced Information Technology.

• Repro Graphics processed over 60,000 requests for printing and related services with a 5 percent decrease in staff. That is a formidable task considering the present and continuing economic condition of the campus.

#### Contracts and Grants

• AT&T: IT staff worked with faculty members Geoffrey Wandesforde-Smith and Kathy Dixon on the submission of a proposal to AT&T that resulted in a grant of approximately \$200,000 worth of equipment for a student lab in the new Social Sciences building.

• Cal Trans: IT submitted a proposal for a \$400,000 contract that was funded by Cal Trans. Several IT staff members are working on the contract, which includes a close collaboration with a broad-based community constituency to create the Davis Community Network (DCN). Sun has donated a Sparcstation to support the Davis Freenet. This machine is up and running. Qualcomm has agreed to extend their lowest price for Eudora to the first 100 Davis users, and Tetherless Access, Ltd. has offered to donate several wireless T-1 devices to support mobile computing requirements. Finally, this consortium, with the very active involvement of members of the IT staff, has submitted several large grant proposals to the NSF and the Department of Commerce for the support of DCN applications.

• IBM: IT staff worked with members of the departments of Art and Nematology to obtain an equipment grant of \$32,000 to digitize the images stored in these departments' slide collections and to retrieve them by image content, e.g., shape, texture, and density. The May 30, 1994 issue of *InfoWorld* mentions this very successful project.

• Others: IT collaborated with faculty members from several departments on the preparation of grant proposals. We are awaiting the results which should be forthcoming this summer.

#### Relationships

To attain the goals set forth in the ITSPC Report, IT staff members must work closely and collaboratively with faculty members from a broad range of disciplines. During the past year, members of the IT staff have forged a variety of such relationships, a number of which are cited in this report.

#### Faculty Support Center

The IT staff, in collaboration with the Teaching Resources Center, is well on its way toward establishing a facility in Meyer Hall for faculty to use and obtain assistance in using information technologies to develop courseware.

#### Kudos!

Two faculty members with whom IT has worked closely in the past year, Geoffrey Wandesforde-Smith and Dick Walters, received Distinguished Teaching awards at the June 7, 1994 meeting of the Representative Assembly of the Academic Senate. IT is pleased for them and is gratified to learn that their work with information technologies has been recognized as an important and valuable ingredient in good teaching.

#### Awards

Posters designed and produced by the Illustration Services and Repro Graphics units, working in collaboration with the Athletics Program, won

first and second place in a national publications contest conducted by the College Sports Information Directors of America.

#### Goals and Ongoing Projects

Creating a New Information Technology Reality: The ITSPC Report called for the creation of a new information technology reality for the campus. Chancellor Vanderhoef has called upon the campus to engage in a process of self-renewal. The IT staff will work in the coming year to build an information technology reality that will enable campus self-renewal by:

- completing the Network 21 Project (provided the project receives authorization to proceed)
- expanding its support of individuals responsible for information technologies in distributed units
- expanding the scope of its support for instructional technologies
- collaborating with the Library to improve access to networked information resources
- designing and implementing a campuswide systems security system
- designing and supporting a robust distributed computing environment
- improving support for site licenses
- prototyping the use of new development technologies for administrative applications
- focusing on continuous improvement in the systems and services offered to the campus community

Through these efforts the Information Technology organization hopes to:

1. create an informed and self-reliant community of users of technology
2. build realistic expectations of the role of information technologies in the activities of the campus, and
3. provide the campus with an accessible and usable information technology environment.

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