

Volume 6, No. 2 • Information Technology News of the University of California, Davis • October 1997

# The Arbor

### Support for Technology in Teaching

#### by Aviva Luria

ar • bor (är 'bər) n. A shady resting place in a garden or park, often made of rustic work or latticework on which plants, such as climbing shrubs or vines, are grown. [The American Heritage Dictionary of the English Language]

The Arbor is not your typical computing facility. With six computers, arm chairs, artwork, and a conference table that dominates the room, the place seems to bear little resemblance to the sites usually associated with the teaching and learning of technologies. At its official opening on the evening of September 30, the room was decorated with pots of flowers, and conversations were accompanied by a musician playing the lute.

Conceived as an extension of the Teaching Resource Center's Summer Institute for Technology in Teaching, the Arbor's purpose is to foster student learning by working with faculty to promote excellence in the uses of technology in teaching. Created by faculty for faculty, it will serve as a consulting rather than a production facility, offering guidance and training free of charge to any campus instructor, whether teaching assistant, lecturer, tenuretrack professor, or dean.

What is served up at the Arbor also is not your usual technical fare. Drop-in visitors will receive guidance tailored to their specific needs, from an introduction to email to instruction on incorporating animation into a Web page. For projects requiring ongoing guidance, a project team will be formed and a plan of action determined. Workshops and informational sessions, special-interest group meetings on specific issues or applications, seminars, and guest speakers are some of the events being planned. But perhaps

most important, the Arbor will be a place for collaboration, where faculty can gather to exchange ideas, work out technical, philosophical and pedagogical issues, and learn from each other about the most appropriate and effective uses of technology.

Information Resources' Faculty Support Program, which manages and staffs the Arbor, has been putting many of these principles into practice for some time. Computer consultants Maureen Coulson and Joseph Coulombe have already assisted faculty members

See "Arbor" on page 4



#### I.T. Training

Whether you're a student, faculty, or staff member, the Information Technology (I.T.) Training Group invites you to participate in its computer classes. I.T. Training provides quality instruction on a variety of software programs and emerging information technologies, including Internet applications, database design, and World-Wide Web publishing. Classes for staff are co-sponsored by Staff Development and Professional Services.

To keep up with current technology issues, try I.T. Training's Technology Intensive Seminars (formerly Brown Bags) or Self-Paced Training materials. The self-paced workstations are located in the Media Distribution Lab at 1101 Hart Hall and are designed for people with busy schedules who may not be able to attend a class. Faculty and staff may check materials out overnight.

I.T. Training aims to provide courses to the campus community that are timely, concise, informative, interesting, and fun. For a list of classes, see page 4, check out the I.T. Training Web site, or contact the training group.

Contact Information:

Phone: 754-8091 E-mail: *learnit@ucdavis.edu* Web: http://it-training.ucdavis.edu



Photo by Jim von Rummelhoff



## **Maximizing Network Access**

Preliminary Usage Patterns

The graph shows that the majority of calls to the modem pool during the first ten weekdays of the quarter occurred between 3 p.m. and 1 a.m. Between 9 a.m. and 4 p.m., 50% to 70% of the modems were in service. Clearly, the quietest period was from 2 a.m. to 8 a.m., when the modem pool was utilized at less than half its capacity. On the busiest 24-hour time period, approximately 25,000 calls were made. Yet the modem pool did not reach full capacity, peaking at slightly over 80% of capacity between 8 p.m. and 12 a.m., when more than 400 dial-in users were logged on simultaneously.

## WWW. ON OUR WEB SITE

View our "online exclusives" at http:// it.ucdavis.edu/it.times/ to learn more about:

- This month's statistics: Computer room and modem usage (9/25/97 - 10/20/97)
- Events: Internet 2 Colloquium.
- Area code change: This is almost upon us!
- **Computer Fest**: A student perspective.
- **Publication**: Recommended Solutions for remote access.

The beginning of Fall Quarter saw the arrival of record numbers of enrolled students on our campus— 24,450 to be precise. These large numbers are likely to generate more traffic, both in the campus computer rooms and on the UC Davis modem pool. The data available for the first ten weekdays of the quarter (9/25 through 10/9/97) and depicted in the graph (see page 2) provide a basis for helping you find the best times to utilize the campus modems and computer rooms.

#### Modem Pool

The UC Davis modem pool is split into SLIP/PPP modems and regular modems. Commonly used for browsing the Web and for performing large data file transfers, SLIP/PPP connections are accessed by dialing 752-7925. With 70% of the total number of modems available, this pool is the busiest: it receives the most calls daily (approximately 79%) and the average call lasts longer (approximately 45 minutes). Busy signals are typically associated with dial-ins to this pool.

The other pool, available by dialing 752-7900, provides a more general level of service. It is typically used for accessing e-mail and newsgroups. Consequently, the average call is much shorter and lasts only about 18 minutes. This pool may prove easier to access if you do not need to browse the Web.

The volume of calls is expected to rise throughout the quarter as

See "Access" on page 2



Q. I just received an offensive and obscene e-mail message. I've also received other unsolicited messages that are less blatently obscene but still very offensive. What is the proper procedure for reporting such messages?

Name withheld by request

**A**. Electronic mail (e-mail) is a powerful communications tool, used by most in positive ways. Unfortunately, it has the potential to be used in annoying, offensive, and sometimes threatening ways.

Most universities have developed policies that define appropriate and responsible use of e-mail. The interim University of California Electronic Mail Policy states that University electronic mail services should be used in compliance with state and federal laws and with "normal standards of professional and personal courtesy and conduct." The UC Davis Acceptable Use Policy on Computing also condemns inappropriate uses of e-mail, including chain letters, mass mailings and messages meant to harass or threaten others.

The procedure for reporting unwanted, offensive e-mail messages is simple. First, open the message in your "in box." Then turn on the full headers. In Pine, this is accomplished by typing ^h. In Eudora, you need to turn on the "BLAH, BLAH, BLAH" feature at the top left corner of the message. (This is an important step since it is difficult to trace the actual origin of the message if the full headers are not displayed.) Then forward the e-mail message to *postmaster@ucdavis.edu* with a brief explanation of your complaint.

The origin of the offensive message will determine what course of action to take. If the message was sent from a UC Davis computer account, that account will be suspended, and the case will be reviewed with the owner of the account. If, as in your case, the offending message originated off campus, a formal complaint will be forwarded to the Postmaster of that site. If we do not obtain a response, the problem is elevated to a higher management level for review and further action. In general, postmasters take complaints about abuse of services very seriously.



by Kevin Roddy

The Arbor is a location, Room 174 AOB IV to be exact, but more precisely it is a notable experiment in the role that technology can play in instruction. And like all experiments, it runs a risk of failure.

#### A Real Challenge

Similar facilities have been developed at institutions all over the country, and each has had to resolve a number of difficult issues relating to technology and teaching. Technology offers many solutions to instruction that seem to undermine the very personal and very human approach that exemplifies the best teaching. Since teaching is also difficult to evaluate objectively, the addition of a technological component further complicates the process. Some students' responses may be skewed to the positive simply because the experience has been new and different. Others may feel that technology mechanizes their classroom environment. Another difficulty is the role of teaching at a major research university.

No matter how extensive the local efforts are (and the University of California, Davis, is reckoned one of the best teaching universities in the country) there is a pronounced emphasis on research, which must necessarily limit the resources dedicated to teaching. No wonder, then, that a number of institutions have already had to scale back on their plans for such facilities.

Faculty Oversight Committee

#### strengths at UC Davis, and at the same time avoid — or at least lessen – these difficulties. While Information Technology supports the Arbor, it is directed entirely by a Faculty Oversight Committee. The twelve faculty who have been selected and have volunteered for this committee are some of the best instructors UC Davis has to offer: among them are winners of the Excellence in Teaching Award in the Academic Federation, and the Academic Senate's Distinguished Teaching Award; they all have spent an enormous share of their lives engaged in innovative teaching, solid research, and public service. They became accomplished in teaching and technology precisely because they have been dedicated to improving their own instruction. Moreover, they have volunteered in their departments, divisions, and colleges to help others learn these skills. Most participate in the successful Summer Institute on Technology in Teaching, a fouryear-old venture created by the Teaching Resources Center and by Information Technology to provide a week-long intensive experience of technology in and beyond the classroom. By any reckoning, the Arbor's Oversight Committee represents as powerful an array of talent, experience, and commitment as exists on this campus. But there is still a risk, arising from the uncertainty associated with technology itself: there are too many variables, too many changes occurring too rapidly, too much hype, too many false leads,

planned to take advantage of the

#### Addressing Challenges

**Computer Rooms** 

The Arbor Oversight Commit-

When the campus computer

rooms are not used for class, they

are available on a drop-in basis and

fill up quickly in the daytime. As de-

picted on the graph, the best time to

find a computer for drop-in use is in

the evening. The number of avai-

lable computers increases sharply

after 5 p.m. when fewer labs are re-

and too much early obsolescence.

From the outset, the Arbor was

from page 1

Access

e-mail and Web usage are incorporated into classes. The general trend should remain similar to what the graph depicts: more calls in the evening and late night time frame, and fewer calls in the early morning and regular daytime hours. the computers available between 10 and 11 a.m.

If your schedule does not allow you to remain on campus during the evening, you might be able to find an open computer during the day if you plan ahead. One of the best options is to check out the new open access lab in TB 114 where no classes are taught. If there are no open computers at the computer room you wish to use, the Site Attendant can direct you to one where machines are available. Or you can check the Web page developed by the Lab Management team to increase your chances of finding a computer when you need one. The Web page features frequent updates on seat availability and identifies which rooms are available for dropin use each hour. You can access this information at http://lm.ucdavis.edu/ rooms/available/.

### The Arbor A Notable Experiment

these challenges. The use of a faculty board is in itself uncommon, though not unprecedented at Davis. A committee of peers means that we can come to a consensus that is far more persuasive and efficient than a single all-encompassing directive might be. The Arbor staff and faculty are fully prepared to advise against the use of technology in any particular instance, working from an assumption that technology should be appropriate in order to be effective. To address the challenge of evaluation, the Arbor has hired Susan O'Hara, a graduate student in the Division of Education, to work and consult with faculty on questions of teaching evaluations as well as on assessment of the use of technology in instruction. The Arbor is a sign of hope in a struggle to encourage the thoughtful and innovative use of techno-

tee and staff have worked to meet

logy in teaching. It is immersed in the dynamics of challenge, seeking to reproduce and extend the achievement of the Summer Institute by relying on master and mentor teachers. The Arbor must accomplish this year-round, in a sustainable and dependable way. It must adapt and yet not be caught in unreliable technology. It must commit itself to that most difficult of institutional endeavors, consistent communication without constant noise, information without hyperbole. The Arbor must above all be dedicated to serving as ably as possible all the faculty of the University.

Kevin Roddy is the director of the Arbor and a lecturer in Medieval Studies.

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Complaints sent to the Postmaster are handled confidentially and on a case-by-case basis.

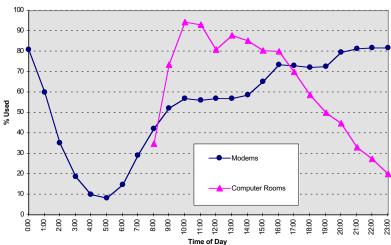
#### References

UC E-Mail Policy: http://www.ucop. edu/ucophome/policies/email UC Davis Acceptable Use Policy on Computing: http://it.ucdavis.edu/ AUP.html

- UC Davis Postmaster

Do you have a technology-related question? E-mail it to ithelp@ucdavis.edu. Regular modem usage statistics and network status information are available on the Web at http:// netstat.ucdavis.edu/ served for class use. The computer rooms are used at less than half their capacity from 7 p.m. until they close. On the other hand, mornings are very busy with less than 10% of

Computer Room & Modem Usage 9/25/97 to 10/9/97



— Report submitted by Matthew Matuszak (Communications Resources) with contributions by Dave K. Wong (Communications Resources) and Tim Leamy (Lab Management).

#### **PROJECT UPDATES**

## Network 21

#### **ResNet Nears Completion**

Thoreau, Segundo, Tercero/ Leach, Regan, and Orchard Park are now connected to the fiber-optic backbone. The remaining two residence halls, Castilian and Solano Park will be connected by mid- and late November, respectively. When complete, approximately 3,750 residence hall NAMs (Network Access Modules, or wall jacks) will have been connected.

#### Six Weeks Early!

All unconnected users in Network 21 buildings, together with DaFIS users and designated "problem LANs," were cut over to the fiber-optic backbone as of Friday, October 3, one and a half months prior to the projected completion date. A total of 4,000 NAMs were connected during this phase.

#### Phase 3 Electronics

Over the next two months, technical specifications will be developed for the Network 21 ATM (Asynchronous Transfer Mode) routers and switches. Vendor selection will begin in November, narrowing the bids to two or three top candidates. Vendors will be required to show that their equipment has been operating successfully on a similar network. They will also be required to prove that the switches and routers will be interoperable (i.e., will work together) and will work effectively on a large-scale network such as Network 21.

ATM will bring increased network performance, VLAN capability, and the ability to interface with Internet 2 as quality of service features are developed. The star/ring design of the network reduces the likelihood that a break in any one cable will impact service to the rest of the network.

Approximately 700 switches across the network and the remainder of NAMs in Network 21 designated buildings will be cut over to the new ATM network backbone by the end of 1998.

#### Network 21 Billing

Department business offices

will be contacted within the next two to three months to designate the accounts to which NAM fees should be charged. Charges will appear on telephone bills beginning in January, with billing retroactive to July 1, 1997. Subsequently, departments will be charged on a monthly basis. Instruction and Research (I&R) eligible departments will be charged \$4.00 per month per NAM designated for Phase 3 cutover (or per device if the building contains no 10BASE-T facilities). Others will be charged 50% of the operation and maintenance costs (\$11.87 per connection per month) for the first year. Any questions regarding billing should be addressed to Communications Resources at 752-4603 or cr-service@ucdavis.edu.

#### NAM Status Database

To access the new online NAM database and the floor plans indicating the location of Network 21 NAMs, go to http://cr.ucdavis.edu/ and click on "NAM Maps and Status." The database is still under development. E-mail questions, comments, and suggestions to mjbenoit@ucdavis.edu.

## Year 2000

Meet Nancy Thompson, a fictional Management Services Officer (MSO) in the Department of Foresight and Planning Ahead. To familiarize herself with the Year 2000 problem, Nancy has decided to research what is known about her own machine and the software she runs on it so she can plan ahead and implement a course of action for Year 2000 compliance.

#### Starting an Inventory of Assets

Nancy uses a Power Macintosh with Mac OS version 7.6. The list she made of her system's essential elements includes Microsoft Excel 5.0 and Word 6.0, Claris FileMaker Pro 3.0, and Adobe PageMaker 6.0. In her daily operations, Nancy accesses DaFIS, the Student Information System (Banner), and the Employee Database (EDB).

With the click of a button, Nancy goes to the UC Office of the President Web site, where a page has been created to foster sharing of relevant Year 2000 information within the University and to reference other Year 2000 documents and sites. The UC Davis Y2K site also includes direct links to vendors' Web sites, where Nancy finds reports on the compliance status of various products she uses. There she reads compliance statements by

• Apple: "The Mac OS and Apple Macintosh computers do not have problems with the Year 2000." A MacWeek article further states that "even the oldest Macs. . . handle the year 2000 with aplomb; the only known systemwide data issue is that current versions of Apple's Date and Time control panel don't accept dates beyond 2019. That issue is expected to be fixed in a forthcoming Mac OS upgrade."

• Adobe: The current versions "should be unaffected by the change to the year 2000, and will accurately represent date information within the constraints of the operating systems." Claris: Nancy looks up File-Maker Pro 3.0 and learns that it will "correctly display both manually entered and calculated dates through the year 3000." Earlier versions are more problematic.

compliant, a number of problems could still arise. Nancy was quick to note the broad generalities and various qualifying statements vendors make about their products' readiness. The core issue lies in the format used by the operating system and applications to store dates, or how the data were entered into each of the applications in her system. For example, Nancy knows that birthdates of retired employees have already been entered into an Excel document. If she updates to a Year 2000 compliant version of Excel, it will interpret these dates, which fall between 1900 and 1929, to years between 2000 and 2029. By researching both her applications and the form in which her data has been entered, Nancy is able to head off problems before they occur. Before upgrading to the Y2K compliant Excel, Nancy will need to convert the years in this database from 2digit to 4-digit fields.

By conducting this preliminary research, Nancy has started to follow the Year 2000 5-stage plan recommended by the Gartner Group. (An in-depth description of all the stages is available on the UCD Year 2000 Web site.) In future I.T. Times articles, we will join Nancy as she and her TSC address similar scenarios involving IBM PC compatibles, UNIX systems, and applications developed by local programmers.



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Submissions are welcome; please send them by e-mail to itpubs@ucdavis.edu.

#### ResNet

#### http://resnet.ucdavis.edu/

This fall has seen the debut of ResNet, the new campus program to wire student residence halls with Internet connections. This Web page is a good first step in researching any questions you may have about ResNet. Frequently asked questions, a good outline of support services, and "quick links" to technical information are some of the helpful resources on this page.

#### **R4 Recycling Program**

http://www-oes.ucdavis.edu/r4/ index.html

Do you know where you stand in the "enviro-conscious continuum"? If you're "environmentally aware" or an "earth sage," you probably already know what the 4 R's are, but if you're still a "fledgling," you can learn about this and a lot more by visiting this page from the Office of Environmental Services. Even earth sages might be surprised at the wide range of materials now handled by the campus recycling program, and they will certainly enjoy learning how to start or expand recycling programs in their departments. Hint: You can also reach this page by clicking on the small recycling logo on the UC Davis Home Page (http:// www.ucdavis.edu/).

#### Office of the Vice Chancellor for Research

#### http://ovcr.ucdavis.edu/

Research is one of UC Davis' major missions, and various campus resources and policies pertaining to research fall under the administrative umbrella of the Office of the Vice Chancellor for Research. Important and timely information can be found here, from funding sources to policies and procedures. (Did you know that the University of California has a new patent policy, effective October 1, 1997?) Also available here are downloadable forms required for research administration-both campus forms and links to some Federal agency forms.

#### **Conducting Research**

After discussing the Year 2000 problem with her department's **Technology Support Coordinator** (TSC), Nancy learns that various Web sites have already been set up precisely to help her research the problem. The UC Davis Year 2000 Web site (http://y2k.ucdavis.edu), currently under construction, features articles, reference materials, and a searchable vendor compliance database with information about products commonly used on campus. Status reports on the central administrative systems indicate that DaFIS and EDB applications are compliant, and that the Banner SIS application is expected to be ready by the end of 1998.

• Microsoft: Most of Microsoft's current products (including the Office 97 suite) are set up to convert two-digit date codes between "00" and "29" to post-2000 dates.

#### An Important Word of Caution

Although Nancy's Mac and operating system are said to be

#### References

All vendors' Web sites referenced in this article can be accessed from the UC Davis Year 2000 Web site at http://y2k.ucdavis.edu.

#### **Quick Resource Guide** for Advising Students

http://stuaff.ucdavis.edu/QRGA/ facguide.html

Advising students is an important faculty function, and this page can help. Academic and career advising are covered, and faculty advisors will find information about research and internship opportunities as well as advice and policies regarding various difficult situations which may arise.

#### I.T. CALENDAR

### **OCTOBER/NOVEMBER 1997**

S	Μ	Т	W	Т	F	S
October	20	21	22	23 Using	24	25
		Melvyl Web	Fundamentals of Netscape	FileMaker Pro	Melvyl Web	
26	27	28	29	30	31	1
	Excel Functions	PageMaker Fundamentals	Beyond Melvyl	Large Word Documents	Line-Mode Melvyl	November
2	3	4	5	6	7	8
	PowerPoint Fundamentals	Mac OS Basics	Intro to Eudora	Access DB Design		
9	10	11	12	13	14	15
		Line-Mode Melvyl	Melvyl Web	Word Basics	Resources on Web	
16	17	18	19	20	21	22
	Advanced Melvyl Web		Bibliographic Citation		Beyond Melvyl	

#### October

21 St Electronic Mailing List Administration: 8:30 - 11:30 a.m., TB 134.

> U Web Interface to Melvyl -Advanced Class (prerequisite: basic class or experience using Web version of Melvyl): 3:10 - 4 p.m., Carlson Health Sciences Library.

- 22 ♦ Working in the Windows 95 Environment: 8 a.m. - Noon, TB 135.
  - ◆ Fundamentals of Netscape: 1:30 -4:30 p.m., TB 134.

□ Library and Internet Services on the Web: 11 - 11:50 a.m., Shields Instruction Room, 2nd Floor.

□ Congressional and Legislative Information on the Internet: 4:10 - 5 p.m., Shields Microcomputer Room (Rm. 163).

23 Desktop Publishing Design **Concepts:** 9 - 11:30 a.m., 1113 Academic Surge.

> • Using a FileMaker Pro Database: 1:30 - 3:30 p.m., TB 134.

**%** Web Publishing: Working with Tables: 5 - 8 p.m., TB 134.

U Web Interface to Melvyl - Basic Commands and Features: 3:10 - 4 p.m., Shields Microcomputer Room (Rm. 163).

- 24 🖵 Web Interface to Melvyl Basic Commands and Features: 11 - 11:50 a.m., Shields Microcomputer Room (Rm. 163)
- 27 Fundamentals of Word: 8 a.m. -Noon, TB 134.
  - Working with Excel Functions: 1:30 - 4:30 p.m., TB 134.

**#** Fundamentals of Web Publishing: two-day course offered Oct. 27 & 29, 1:30 - 4:30 p.m., TB 135.

**Beyond Melvyl** - Journal Article CD-ROM Databases via the Web: 3:10 4 p.m., Shields Instruction Room 2nd Floor.

**28** • Fundamentals of PageMaker: 8 a.m. - Noon, TB 134. 8 Web Publishing: Simple Image Manipulation: 1:30 - 4:30 p.m., TB

> 134.**D** Beyond Melvyl - Journal Article CD-ROM Databases via the Web: 11

- 11:50 a.m., Carlson Health Sciences Library. Beyond Melvyl - Journal Article
- 29 Databases via Old-Terminal Melvyl: 2:10 - 3 p.m., Shields Instruction Room, 2nd Floor.
- ◆ Creating and Managing Large 30 Documents Using Word: 1:30 - 4:30 p.m., TB 134.
- □ The Melvyl System's Line-Mode 31 (TERM/Telnet) Interface - Basic searching: 11 - 11:50 a.m., Shields Microcomputer Room (Rm. 163).

#### November

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- 3  $\bigcirc$  Hot Topics in Computer Graphics, Animation, and Video: 11 a.m. - Noon, Cabernet Room, Silo.
  - Fundamentals of PowerPoint: 1:30 - 4:30 p.m., TB 135.
  - ☆ Basics of Windows 95: 6 8 p.m., TB 135.
- ♦ Maximizing the Microsoft Office 4 Suite: 9:30 - 11:30 a.m., 1113 Academic Surge.
  - ◆ Fundamentals of Excel: 1 5 p.m., TB 134.
  - ☆ Basics of MacOS: 6 8 p.m., TB 134.
  - ♦ Fundamentals of Word: 8 a.m. -Noon, TB 134.
  - ☆ Introduction to Eudora: 6 8 p.m., TB 134.
  - Designing an Access Database: 9 a.m. - Noon and 1:30 - 4:30 p.m., TB 135.

#### Key to Classes & Seminars

- **% Information Provider Series:** Staff Development & Professional Services. Faculty and student registration: learnit@ucdavis.edu or 754-8091.
- Library Instruction Programs: LibraryClass@ucdavis.edu or 752-4381.
- Staff Development & Professional Services (SDPS): Applications are available in the SDPS catalog or by calling 752-1766.
- **Technology Intensive Seminars:** Ο no registration required; call 752-1766 for more information.
- Student/Faculty Series: Informa-☆ tion Technology; call 754-8091 or e-mail learnit@ucdavis.edu.

☆ Introduction to Netscape Navigator: 5 - 8 p.m., TB 134.

Dependent Melvyl - Journal Article CD-ROM Databases via the Web: 3:10 - 4 p.m., Shields Instruction Room, 2nd Floor.

- 11 **The Melvyl System's Line-Mode** (TERM/Telnet) Interface - Basic searching: 11 - 11:50 a.m., Carlson Health Sciences Library.
- 12 U Web Interface to Melvyl Basic Commands and Features: 11 - 11:50 a.m., Shields Microcomputer Room (Rm. 163).
- Creating Newsletters and Flyers 13 Using PageMaker: 9:30 - 11:30 a.m., TB 134.

☆ Basics of Microsoft Word: 1 - 3 p.m., TB 134.

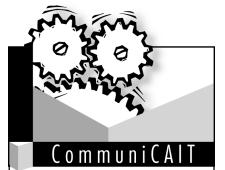
☆ Intermediate Eudora: 6 - 8 p.m., TB 134.

□ Finding Resources on the World-Wide Web: 3:10 - 4 p.m., Shields Microcomputer Room (Rm. 163).

- □ Finding Resources on the World-14 Wide Web: 11 - 11:50 a.m., Carlson Health Sciences Library.
- 17 D Web Interface to Melvyl Advanced Class (prerequisite: basic class or experience using Web version of Melvyl): 3:10 - 4 p.m., Shields Microcomputer Room (Rm. 163).
- □ Bibliographic Citation for Your 19 Term/Research Papers: 3:10 - 4 p.m., Shields Microcomputer Room (Rm. 163).
- 20 🛛 Bibliographic Citation for Your Term/Research Papers: 11 - 11:50 a.m., Carlson Health Sciences Library.
- □ Beyond Melvyl Journal Article 21 Databases via Old-Terminal Melvyl: 2:10 - 3 p.m., Carlson Health Sciences Library.
- **%** Web Publishing: Creating Effective 24 Web Pages: 9:30 - 11:30 a.m., Founders' Board Room, Alumni Center.

• Working with Word Mail Merge: 1:30 - 3:30 p.m., TB 134.

□ Finding Resources on the World-Wide Web: 3:10 - 4 p.m., Carlson



Are you familiar with the term "Total Cost of Ownership" or TCO? If the term isn't familiar, the concept probably is. A car that you bought for \$15,000, for example, might cost you \$10,000 in additional expenses over the period of your ownership. The same concept applies to computers: The cost of the PC you buy, plus all the associated expenses (replacement of failed hardware, end user support and training, computer downtime) generated over the course of the computer's life all contribute to TCO.

According to the Gartner Group, a Windows 95 machine with an initial hardware/software investment of \$6,000 has a Total Cost of Ownership of \$35,000 over three years.

Several companies are addressing the issue. Microsoft's Zero Administration Kit for Windows NT aims to reduce the time an administrator needs to spend with each machine. With network computers by companies such as Sun, Neoware, and WYSE, applications and files can be stored on a server, downloads of new applications and operating systems can be standardized, and machines can be reset to their original configurations in seconds.

You can also reduce TCO within your department in other ways. Interpose Inc. has developed a TCO model based on three factors: people (skills, training, and motivation), processes (best practices and policies), and technology (products and architectures). TCO can be reduced at each level by implementing appropriate end-user and support staff training, setting up a help desk, streamlining purchasing methods, creating team-oriented planning methodologies, or standardizing desktop configurations. Upfront investments in the right systems, virus protection, backups, disaster contingency plans, and fault tolerant systems can also reduce technologyrelated costs.

Stay tuned for future CAIT presentations on network computers and TCO. Subscribe to it-cait@ucdavis.edu to receive e-mail notifications on these and

Health Sciences Library.

#### other CAIT events.



The I.T. Times is published by the Division of Information Technology, University of California, Davis, to inform the campus community and others of information technology services, facilities, and activities at UC Davis. It is distributed free of charge to members of the user community and to other universities to inempers of the user community and to other universities. Use of trade or corporation names in this publication does not constitute endorsement by the University of California, Davis. I.T. Times articles may be reprinted as long as the source is accurately quoted and credited.

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### Arbor

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with various projects relating to research and teaching. Some of the highly technical projects, such as Dick Walters' RTA (Remote Teaching Assistant) project, have been demonstrated at Odyssey and elsewhere. But like the Summer Institute, the Faculty Support Program also helps instructors incorporate technology into their classes for the first time.

Emily Albu, assistant professor in Classics, obtained help from the Faculty Support staff last year, when putting together resources for her

course on film and the classical world. It was her first time teaching a film course, and Albu, whose technical background was fairly limited, received instruction on film acquisition and editing, as well as Web page creation and design.

"As the course started and throughout the quarter I was incessantly over there. They were lending me equipment and giving me technical advice," Albu said. She accomplished much of the production work herself.

"Where I taught before they had very few resources for helping faculty prepare courses and few technical resources. This is an incredible thing," Albu said at the opening of the Arbor.

Just as an arbor provides structure and support for things to grow, the Arbor at UC Davis will provide faculty with training and guidance for their own innovations. Visit the Arbor at 174 AOB IV between 10 a.m. and 4 p.m. Monday through Friday.

#### **Contact Information**

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