Faculty Envision the Future
How will emerging technologies impact education?

Editor’s Note: More information on the conference on Distance Education and Intercampus Programs can be found on the World Wide Web at http://education.ucdavis.edu/

by Nan Lorenzen,
Division of Education

More than 80 representatives from various UC campuses envisioned the future at a conference on “Distance Education and Intercampus Programs” held at UC Davis in December. The event gave faculty from a variety of disciplines an opportunity to share and evaluate their experiences in using emerging new technologies in teaching.

A major aim of the conference was to explore how faculty can accelerate changes in their own teaching and delivery of distance education as well as initiate and participate in campus and systemwide changes.

A panel, keynote speakers, and work groups discussed the use of multimedia, interactive video courses, course contents on the World Wide Web, and e-mail. Faculty members from several campuses told of experiences in distance teaching. Moderator was Maureen McMahon, Division of Education, UC Davis, selected because she specializes in how multimedia and computers affect cognitive processes of learners.

“As learning on demand be... Continued on Page 3

Network 21: Let the Trenching Begin!

Weather permitting, construction will begin this month on the installation of Network 21’s high-speed fiber optic cable that will interconnect over 200 buildings on campus.

Digital Equipment Corporation has been awarded the contract to perform the detailed design and installation of the fiber optic cable and electronic cabinets for Network 21.

Once in place, Network 21 will allow many campus users to connect directly to the campus network. The new fiber optic cable will support the tremendous demand being placed on the campus network by the popularity of the World Wide Web, e-mail, and other network applications.

Digital has networked more than 13 million users for a wide variety of industrial, financial, and educational institutions, using all types of network technologies. A recent example is Digital’s design and implementation of a high-speed fiber optic backbone for Memorial University, St. John’s, Newfoundland. The implementation included the integration of over 4600 multivendor PCs into a completely redesigned communications infrastructure. Digital has provided similar network services to companies like Bank of America, Oracle, Microsoft, and Lotus as well as the State of California.

Information Technology will be coordinating a partnership meeting with representatives from each of the Deans’ and Vice Chancellors’ offices, Digital, and the Network 21 Implementation Team.

The contract between UC Davis and Digital calls for work to be performed in eight phases, spanning a period of 528 calendar days.

TSP Helps Build Personal Networks

Ask someone what they like about participating in the Technology Support Program, and they’ll probably start telling you about the people they meet.

First, there is the Information Technology Representative. Every participant has one representative. One phone number. One person. Call the same number and get the same person. You know them, and they know you — and your problems, at least the technical ones.

“It’s a single point of contact within I.T.” says Matt Van Zandt, the system and network administrator for the Center for Neuroscience. “Sometimes I’ll run into a brick wall, but I can always call Tim (Lehman),” says Van Zandt, who works with PCs, Macs, and Unix machines.

Then there are the other program participants — Technology Support Coordinators, TSCs for short. You can meet them at TSP classes, on the help list, or through your I.T. representative.

“There are some really sophisticated users who have some really sophisticated setups,” says Rick Harris, who manages the electron and microscopy lab for Molecular and Cellular Biology. “It’s tough for I.T. to meet the needs of all the people, but through the program you can learn from others on campus as well,” says Harris.

Rick Harris and Matt Van Zandt are just two of more than 100 departmental representatives participating in Technology Support Program. New orientations are held quarterly. If you would like to join, send e-mail to tsp@ucdavis.edu. More information is on the World Wide Web at http://tsp.ucdavis.edu/

Davis Community Network Is Topic of Discussion

On Wednesday, Feb. 14, you are invited to a Brown Bag presentation on the Davis Community Network (DCN). Vicki Suter and Joan Gargano, both of Information Technology, have been instrumental in making the DCN vision a reality. They will discuss how the network serves both the campus community and the Davis community at large. The presentation will begin at Noon in the Silva Cabaret Room. Please come with questions.

TSCs Receive Gartner Group Publications

Information and advice on establishing and managing complex systems is found in documents published by the Gartner Group, a leading international advisor to professionals making information technology decisions. Gartner Group publications are available to all participants in the Technology Support Program. If you are interested in joining the program and becoming a Technology Support Coordinator (TSP), send an e-mail to tsp@ucdavis.edu.

Two More Solutions Published

Information Technology has published two new Recommended Solutions documents — Purchasing a Modern and Student Computer Purchase. The documents are available at Information Express on the first floor of Shields Library and on the World Wide Web at http://www.ucdavis.edu/IT/Solutions/.

You also can obtain a copy by sending e-mail to tsp@ucdavis.edu.

Faculty Guide on the Web

The Information Technology Faculty Services Guide is available on the World Wide Web. The guide includes a list of campus classrooms with network access. Go to http://www.ucdavis.edu/IT/Publications/.

Odessey Begins in May

Interactive, inventive, inspiring, invoking, and innovative. All these words can be used to describe the Odyssey. It’s coming in May. Look for more details in the March I.T. Times or send e-mail to odyssey@ucdavis.edu.

Quoteables

"Every discussion in America must be connected to the information superhighway, with computers, good software and well-trained teachers."

— President Clinton

Courtesy of Enlarge
Developing Web Strategies

Need help figuring out how to get information on the World Wide Web? James Lee is the person to talk to. Lee, of U.T.'s Distributed Computing Analysis and Support (DCAS), helps departments develop making pictures and information available online. If you decide to set up a Web server, for example, Lee will help you determine the best hardware and software to use. If you want to build a WWW server, he can help you organize the information and figure out innovative ways to present it.

As part of the campus Technology Support Program, Lee also serves as the U.T. contact for the National Institute for Global Information change, providing 100 percent technical support for the NIGIC national and regional offices located at UCD, as well as all six NIGIC centers around the country. Says Lee, "I function as their Swiss army knife support person." In that capacity he is automating NIGIC's internal and financial data and coordinating network installation to bring together all of the groups e-mail, internal database, and WWW information.

Soon he will be also working with the Center for Biosystematics to bring up a Unix system that will function as a WWW and database server.

For more information about DCAS projects and staff, see the WWW at:
http://www.ucdavis.edu/IT/DCAS/

Video Program Garners Prestigious Film Award

The video program "Bred for Fury: Draft Animals," produced by U.T. Creative Communications Service, won a first-place award at the Charleston International Film Festival.

Casey and Sarasen captured a first-place award at the Charleston International Film Festival.

University of Davis hosted the New Media Institutes Center board meeting on campus in January. Devoted to bringing multimedia capabilities into the classroom, UC Davis is one of 30 institutions nationwide chosen to participate in the New Media Centers Program. Carolee A. Barone, Associate Director for Information Technology Services, is a member of the board, which consists of corporate and academic representatives.

Bob Thornton of Plant Biology demonstrated some of the multimedia materials he has developed for classroom lectures. William Benware of Linguistics presented the courseware he has developed to help students with German pronunciation, and Larry Coleman of Physics told the board members about his efforts to publish a textbook on the World Wide Web.

Individuals interested in learning more about the work of the U.C. Davis New Media Center may subscribe to the same discussion list. To subscribe send e-mail to listproc@ucdavis.edu. Leave the subject line blank. In the body of the message type:

subscribe mmc [your first name] [your last name]. Information also is available on the World Wide Web at http://ln.ucdavis.edu/PMC/

Project Draws on I.T.'s Technical Expertise

Information Technology is working with Accounting and Financial Services, and American Management System (AMS) to develop the new Financial Information System (UCDAFS) for UC Davis.

The business relationship between Accounting and Financial Services and I.T., differs from past system development efforts in that Accounting and Financial Services is directing the project while Information Technology is providing technical-consulting, programming, database, and systems administration services. Deborah Launjo and Karen Munoz of I.T. Information Resources are responsible for coordination and delivery of these services.

Work on the UCDAFS project began in August 1995, and the new system is expected to go online in July 1997. A basic hardware and software infrastructure is in place to support development efforts. This hardware layer uses a client-server architecture, which includes a multiprocessor Compaq Proliant Pentium NT server, two Hewlett Packard K200 Unix servers, and Pentium workstations. The primary software infrastructure consists of a database engine (Oracle), and a client-server development tool that has a graphical user interface (Uniface).

When the system moves into production, additional hardware, primarily Unix servers, will be acquired to accommodate full deployment. Literally thousands of I.T. staff hours have been devoted to this project. The size, complexity, and critical nature of this application, coupled with the demands of campuswide implementation, require I.T. staff to enhance their technical skills and increase their knowledge on a continual basis. Information Technology believes the investment in education and training will reap benefits far beyond the bounds of UCDAFS.

At Home on the Web

Purchasing
http://www.storehouse.ucdavis.edu/purch.htm

The Material Management/Purchasing Guide, a list of U.C. Davis' DMV agreements, Travel Agreement summaries (car rental, hotel, and airline), and e-mail addresses for purchasing personnel. This page also contains links to the UC Office of the President home page, Storehouse, Fisher Scientific, Life Technologies, Apple Computer Information, Beckman Instruments, and Federal Express.

Art Department
http://docs.ucdavis.edu/art/

Need to find your way around the Art Department? This page includes faculty listing, class and major requirements, descriptions of graduate-level art programs, admission, registration, and financial aid information, and class schedules, organized by quarter.

UC Library System
http://www.lib.ucdavis.edu/

Listings of library classes, library services available via e-mail, and a calendar of special events — these are just a few of the offerings available on the UC Library home page. This page also allows you to access NELNET, the old and new CD-ROM networks, and a number of electronic reference materials. Other useful information: a guide to using library resources, Library newsletters, directory of library e-mail accounts, library hours, telephone listings, and information about Library Associates book sales.

Animal Science
http://pubweb.ucdavis.edu/docu-
ments/au/hompage.html

The Animal Science home page includes a description of the Animal Science Extension program, admission information, course listings, faculty lists (including each faculty member's research interests), and a description of the Embryo Transfer Lab. You can also find information about computer software for animal care and management, undergraduate and graduate programs, and student services.

UCD Bookstore
http://www.bookstore.ucdavis.edu/ In addition to general information, such as bookstore hours and phone numbers, the UCD Bookstore home page often maps, directions, parking information, a list of what's new, information about their general, technical, and test book departments, a clothing and gift order form, and links to the UCDCN Bookstores, Health Sciences Bookstores, Life Science Bookstores, UDC Bookstore Computer Shop, and the National Association of College Bookstores.
How Will Emerging Technologies Impact Education?

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comes more commonplace within education, we will be challenged to research and understand the needs of learners," McMahon said. "Distance learning can provide for active unique learning communities if we allow our vision to transcend the understandings of how we currently teach and structure courses. A new teaching-learning paradigm must be developed to maximize the characteristics of the distance education tools we have at our disposal.

Conference co-conveners were Meera Bhatner, Applied Sciences, UC Davis and Lawrence Livermore National Laboratory (LLNL), and Naomi Jarowicz, Religious Studies, UC Davis, who both have received Internships Academics Program Incentive Fund (IAPIF) grants from the UC Office of the President for pilot programs in distance education.

Funds for the workshop came from IAPIF, LLNL, National Science Foundation, the Religious Studies Program, and the Teaching Resources Center, which coordinated the conference.

Key advantages of new technology in education emerging from the conference included the following:

- Fast moving technical areas can gear up quickly by drawing instructors from many sites.
- The University would not have to duplicate faculty hires in every area to ensure breadth and depth of the curriculum.
- Students would no longer have to transfer to other campuses to take specialized courses.
- Networked databases and digital libraries can provide access to vast stores of multimedia information for classrooms or student projects.

Financing new technologies, recruiting adequate technical and professional support to develop course materials, and finding ways to recognize and reward faculty who use technology in teaching were three of the challenges identified by conference participants.

You may receive a copy of the workshop report by sending email to blatner@lbl.gov.

PROJECT UPDATE

Network 21

Digital's Campus Headquarters

Digital Equipment Corporation, which has been awarded the contract to install the fiber optic backbone for Network 21, will be spending a lot of time on campus during the next 18 months. (See Story on Page 1.) Digital has established its campus headquarters in the West Yard, west of the university airport on Snake Run. Digital's campus headquarters have been wired for voice, data, and modem lines, enabling Digital employees assigned to Network 21 to communicate with their Sacramento office. Members of Digital's Network 21 team also are using laptop computers equipped with wireless communication (RoamAbout), so they can connect to the network server without a hardwire connection.

Selection of Cabling Designer

Selection of the firm that will design the horizontal wiring for Network 21 is underway. The company chosen will develop the bid specifications and drawings that outline the placement of wire from the IDF (Intermediate Distribution Frame, or "closet") to the new wall jack (NAM), mapping the path of the new campus network to the desktop. The list of prospective firms has been narrowed down to six. The firms will be interviewed this month, and it is expected that the design contract will be awarded in early March. Actual installation of the horizontal wiring is scheduled to begin in October 1996.

Computer Lab Design

Campus computer labs will become more flexible and responsive to user needs due to lab cabinet redesign. Digital is to be done in conjunction with Network 21. This projectdesignates 79 computer labs, having ten or more computer connections, as candidates for cabinet redesign. A small bundle of fiber will be pulled from the Network 21 closet, terminating at the hub inside the room's cabinet and providing the labs with a patch panel for computers to plug into.

Closed Renovation Continues

Progress continues to be made on Phase One of the Network 21 project, the communication closet renovation. Electrical capacity and ventilation in campus communications closets are being upgraded to conform to Network 21 standards. Closet renovation began on July 31, 1995. Area 3, the first area to be renovated, is now 95% complete.

If you have questions about Network 21, send e-mail to Network21-info@ucdavis.edu.

Compiled by Ariva Luria
Editor's Note: If you wish to enroll in a class offered by Staff Development & Professional Services, you must complete an Application for Enrollment. Applications appear on Page 95 of the Staff Development Catalog. To request an application, call 752-1766.

**February**

5 Intermediate Microsoft Project Working Session: Staff Development, 1:30 - 4:30 p.m., 40 Mulk, 752-1766.

Journal Articles on the MeVyl Library System: Library Services, 3:10 - 4:30 p.m., Shields Library/Computer Room; registration by e-mail required: klliferstein@ucdavis.edu.

6 Introduction to Windows 3.11 (two-part class offered Feb. 6 & 8): Staff Development, 1:30 - 4:30 p.m., 40 Mulk, 752-1766.

Network 21 Update; Information Technology and Staff Development, 12 noon - 1 p.m., MCI 11.

Introduction to FileMaker Pro (two-part class offered Feb. 6 & 8): Staff Development, 8 a.m. - noon, 40 Mulk, 752-1766.

7 CD-ROM Databases: More Indexes to Journal Articles on UC Davis Library Services, 4:10 - 5 p.m., Shields Library/2nd Floor Instruction Room; registration by e-mail required: klliferstein@ucdavis.edu.

Voice Mail System Training; Managing Your Voice Mail Box: Communications Resources, 10:30 - noon, Communications Building, Tercero Hall Circle, 752-6988.

Introduction to Office 2000: Staff Development, 8 a.m. - noon, 40 Mulk, 752-1766.

12 Introduction to Internet/Netscape (two-part course offered Feb. 12 & 14) Information Technology, 1:30 - 4:30 p.m., 40 Mulk, 752-1766.

CD-ROM Databases: More Indexes to Journal Articles on UC Davis Library Services, 11 a.m. - 1 p.m., 40 Mulk, 752-1766.

13 Intermediate WordPerfect for Windows (two-part class offered Feb. 13 & 15): Staff Development, 1:30 - 4:30 p.m., 40 Mulk, 752-1766.

Introduction to PageMaker (two-part class offered Feb. 13 & 15): Staff Development, 8:30 - 1:30 p.m., 40 Mulk, 752-1766.


Telephone System Training; Managing Your Telephone: Communications Resources, 10:30 - noon (single-line source courses, 1:30 - 3 p.m., multi-line course), Communications Building, Tercero Hall Circle, 752-6988.

Voice Mail System Training; Managing Your Voice Mail Box: Communications Resources, 10:30 - noon, Communications Building, Tercero Hall Circle, 752-6988.

Modem Proposal Under Review

In an effort to provide a more responsive modem service to the campus, the Division of Information Technology is pursuing a campus recommendation to contract with a private vendor to provide modem service. A Request for Quotation was reviewed by the Joint Campus Committee on Information Technology (JCCIT) at its January meeting.

The Committee on Academic Planning and Budget Review (CAPBR) will review the financial feasibility of outsourcing modem services to the campus.

Included in the RFQ is the JCCIT recommendation to pursue an agreement which guarantees all campus users some free access per month.

The RFQ also outlines several different levels of service, to which users may subscribe. Rates will be based on the desired level of service.

Before soliciting bids from vendors, Information Technology will incorporate recommendations from JCCIT, CAPBR, and administrative offices that will be affected by the change to the RFQ.

The ever-increasing demand for network services continues to put a strain on the campus modem pool, and despite expansions, campus users still complain of busy signals. One hundred new modems were installed on Jan. 16, for instance, and since then the busy rates have grown to indicate a need for at least 32 more modems.

The cost associated with continuously expanding the modem pool has become prohibitive, and, as a result, IT will no longer be adding new modems to the pool — thus freezing the support at 500 modems.

Some departments may be entertaining the idea of purchasing their own modems, and Automation Technology advises that such a move would be less efficient and more costly over the long term. Those accessing a decentralized modem pool would still have to dial into the campus telephone system.

Consequently, if modems were decentralized, there would be no way to differentiate between voice calls and modem calls, and the modem traffic would result in more bus signals. Moreover, if bus signals were to occur, information technology would be forced to add more communication trunks to campus, and the cost would be passed on to campus departments in the form of a higher telephone rate.

In addition to providing 15 minutes of a free access to all users, the RFQ anticipated by Information Technology calls for:

- Toll free access within a 45-mile radius of campus.
- Toll free national access to some subscribers.
- Fewer busy signals. (The number of busy signals must be less than 1 in 100 for those who subscribe to something other than the baseline service.)
- Customer support, which depending on level of service selected, could be 24 hours a day, 7 days a week.
- Access to higher speed (28.8 bps) modems.

**Faculty at the CAIT**

Faucy sessions of the CAIT are continuing on Fridays from 3 - 5 p.m., through March 8. Sessions will focus on the creation and use of Web pages for teaching purposes. Participants should bring a floppy disk to store their work. The workshops are open to all faculty of the Tech, Resources Center and the CAIT, which is located on the first floor of Shields. Call 752-5711 for more information.

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