University of No. Carolina enhances E911 access

Steve Harward
Telecommunications Manager
Univ. of North Carolina

A partnership consisting of the University of North Carolina, Southern Bell, and Northern Telecom has resulted in an enhancement to E911 service access that will benefit most Centrex customers served from DMS 100 central offices. The planned enhancement will permit the dialing of 911 from DMS Centrex stations without requiring an initial 9 for local exchange access. Emergency calls dialed in this manner will be completed without call setup delays. Call completion times, according to Northern Telecom, will be comparable to E911 calls placed from POTS lines.

In addition, calls may still be completed by dialing 9+911.

The E911 enhancement will be available in a software release (NA003) projected for the second quarter of 1995. Centrex customers served by a DMS who are interested in this capability should contact their local exchange provider.

The UNC Telecommunications Office had been exploring alternatives for the implementation of this “transparent” dialing of 911 for nearly two years. Initial simulations of this capability by Southern Bell network personnel in the Chapel Hill DMS 100 (BCS 32) in 1992 resulted in call set up delays of up to 17 seconds after dialing 911. Recognizing that a 17-second delay would be unacceptable for a 911 emergency (or any other) call, hopes for an acceptable transparent dialing solution faded. Other alternatives, such as freeing level 9 access of all other local exchange dialing except 911 or using an alternative emergency service access number were also deemed unacceptable by the University.

Recently, the University took steps to establish its University Police Department as a PSAP

See "E911..." on page 5

ACUTA salutes entries for 1994 Institutional Excellence in Telecommunications Awards

James Cross
Michigan Technological University
Chair, Institutional Excellence Awards Committee

The ACUTA Institutional Excellence in Telecommunications Award recognizes innovative and exemplary telecommunications endeavors at member institutions that are providing significant advantage to the institution, faculty, staff, and students. The primary goal of the award is to recognize campuses that have enhanced productivity, efficiency, excellence, and professionalism by successfully exploiting the potential of telecommunications.

Winners for 1994 were Brigham Young University and Fairfield University, whose projects were detailed in the November ACUTA News.

• In the highest enrollment category (more than 5,000 full-time students), Brigham Young University was selected the winner. Brigham Young's project involved a campus-wide packet-based ethernet network, campus cable plant, and new telephone system which standardized networking on campus and provided access in every office.
• Winner in the middle enrollment category (1,001-5,000 full-time students) was Fairfield University. Fairfield installed a new phone system, voice mail system, and fiber optic voice, data, and video campus infrastructure in support of the institution's goal to create a virtual community among its students, faculty, and staff.

ACUTA also salutes the following member

See "Award entries..." on page 6
Board Report

ACUTA Board initiates planning for 25th Anniversary celebration in 1996

Formation of a 25th Anniversary planning committee was a major topic of discussion during the October ACUTA Board meeting in Richmond. The committee of past ACUTA presidents will work closely with the Board and the membership in planning celebration activities which will culminate at the 1996 Annual Conference in Chicago.

Other items on the agenda included:
- Richmond Seminar registrations and update
- Committee chairs conference call update
- Policy & Procedures Manual revision action plan
- Electronic access project status
- Lexington office software project
- Computer services position recruitment
- Maui seminar planning
- FCC regulatory issues
- Vendor Liaison Committee meeting agenda
- Lexington office 1995 holidays

Submitted by
Dr. James Cross, Michigan Tech
ACUTA Secretary/Treasurer

9th Monograph published

ACUTA members received the latest in the monograph series in November: Data Communications for Voice Professionals by Francis Speck, Computer Center Director at Saint Mary's College of Minnesota.

Delaware launches effort to become leader in educational technology

Henry J. Decker, Computer Services Director for Delaware Tech, has been named chairman of a commission to make Delaware the "First State in Education Technology." Delaware Tech was the recipient of ACUTA's 1993 Excellence in Telecommunications Award for a statewide network they installed. State of Delaware colleges and public libraries are also included in the committee's purview for coordination with efforts in K-12.

With the naming of the committee, Gov. Thomas R. Carper charged the group with addressing the infusion of technology into the K-12 system. These efforts are expected to lead to the wholesale incorporation of telecommunications throughout the elementary and secondary system.

The committee, comprised of teachers, administrators, school board members, public agencies, colleges, and private individuals, is to present a plan by February, 1995, for acquisition and implementation of technological capabilities in Delaware's schools. One of the committee's first tasks will be to consider wiring every classroom in the state, linking schools to each other and the Internet. Delivery of voice, video, and data as well as interactive video classrooms will also be considered.

Other topics the committee will take up are teacher training, technical support, coordination with curriculum, educational tariff issues, equity issues, supplementary equipment, delivery modes for communication and computer technology, and organizational support and operations.

Association of College and University Telecommunications Administrators

ACUTA NEWS, Volume 23, No. 12

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If you’re like me, this is a time of year that certainly stretches the definition of “attention deficit disorder.” The holiday hubbub, the extra stress of holiday shopping (and the associated crowds), anticipation of housefuls of company (inlaws and outlaws); none of these are particularly conducive to extraordinary achievement levels of work.

I’ve often heard it said that the holidays are more for children than adults. Well, that must be so, because I know at our house most holiday planning certainly revolves around the two littlest ones. I never (well, almost never!) tire of watching those two wind tighter and tighter as the number of days before the big day dwindles. Oh, to be that energetic and excited about a singular event!

They’re never worried about shopping, meal planning, travel arrangements, weather, or budgeting to finance the whole works! Instead, they’re all caught up in the excitement and anticipation of the singular day. Is there something we can learn by their example that is applicable to our professional lives?

This industry of ours is ready made for information overload. Couple the logarithmic changes in our industry with increasing expectations and demands of our patrons, our employees, and our employers, and suddenly we have a difficult time making any time for ourselves. Joe Calloway had an important message for us at our Annual Conference. All of his stage schtick aside, his message was not to take ourselves so seriously. How many of us listened?

As we move to the end of the calendar year and reflect back on 1994, what’s your evaluation about you? Do you have an outlet (besides the absolutely unbelievable stories from the students) that offers you an opportunity for fun and the ability to laugh? I suggest that if you don’t, you’re not being fair to yourself, your family, or your employer. We all need time to re-charge, and more importantly, to get away from the clutches of technology once in a while.

Maybe the holidays afford you the opportunity to do something for you. I sincerely hope so. If not, don’t forget about you as you begin 1995.

From the staff at Central Missouri State University and the Collett house, here’s wishing you a safe, meaningful, and joyous Holiday season!

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Winter Seminar Campus Networks: Beyond the Walls

A tacit assumption: Higher education must expand beyond the traditional campus in order to meet the needs of an ever-changing student population.

How should colleges and universities respond to these competitive pressures? How will technology serve as a tool to expand the campus beyond city, state, and national boundaries?

What are the implications and challenges of an international network—the new infrastructure?

This seminar will explore networks and their strategic role in extending the campus beyond the traditional “halls of ivy.”

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Maui, Hawaii
January 17–21, 1995
Inter-Continental Resort

SAVE $50
Early Registration Discount!
Register by December 16
Call Kellie Bowman for details
(606) 278-3338

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President’s Message

ACUTA President

Randy Collett
George Mason University becomes "virtual campus"

George Mason University has contracted with Bell Atlantic to develop one of the first comprehensive university communications networks linking voice, data, and video to its three campuses, classrooms, dormitories, and administrative office.

Targeted for completion by summer 1996, this advanced network will include distance learning facilities, an interactive classroom, and a presentation classroom, which will enable instructors and students to communicate or access information through voice, data, interactive multimedia, and cable TV from George Mason campuses, dormitories, and off-campus locations around the Washington D.C. area.

“Our goal is to become the intellectual and cultural center for the entire Northern Virginia region,” explained Dr. George Johnson, president of George Mason University. “We recognized that the only way we could do this is through multimedia technologies. This communications infrastructure will allow us to link our campuses with local companies and government agencies with which we’re involved, and other remote locations.”

The high-tech project will identify George Mason as a state-of-the-art university with the following services:

- **ATM pilot network** which will be installed to provide multimedia applications throughout the campus. Initially, two ATM switches and Ethernet-to-ATM multiplexors will be installed throughout the Fairfax campus.

- **Campus-area high speed network** which utilizes SynOptics 5000 concentrators and high speed 10 megabit Ethernet switches twenty times faster than traditional Ethernet networks. This network also provides virtual LAN capabilities by utilizing SynOptics’ Optivity Network Management software with the switched Ethernet backbone. The virtual LAN will eliminate the need to change the physical cabling when performing network moves, additions, and changes, cutting personnel costs and minimizing downtime.

- **The wide area network (WAN), which is configured for switched multimegabit data services (SMDS), will provide remote campus and off-campus users access to the Fairfax campus resources, such as Internet connectivity and electronic mail. This network utilizes ATM-ready DSUs, which will provide the necessary translation of LAN-based frames to the 53 octet cells, which is used in both SMDS and ATM transmissions. This configuration will allow George Mason University to migrate easily to an ATM WAN in the future.**

- **Interbuilding Structured Communications System**, which connects all buildings on the Fairfax campus with 55 miles of fiber optic cable, and 30,000 copper pairs as well as coaxial cabling to support all data, voice, and cable TV requirements.

- **Intrabuilding Cabling System**, which consists of rewiring 90 percent of the Fairfax campus buildings with fiber optic and high capacity copper cabling (unshielded twisted pair) that will support the current and future high speed data and voice requirements.

- **Video Distribution System**, which distributes 30 cable TV entertainment channels and 10 additional George Mason University channels to all dorm rooms and all buildings on the Fairfax campus, enabling the broadcasting of classes over the campus cable TV network.

- **Distance learning/Electronic Classrooms at the Fairfax and Prince William campuses** that will allow instructors to deliver multimedia presentations over the cable TV network, the pilot ATM network, or the data network.

“The network is one of the most advanced and comprehensive of its kind because of the pilot ATM, LAN, Virtual LAN, and wide area capabilities we are implementing,” said Kevin DeNuccio, president and chief executive officer of Bell Atlantic Network Integration. “The design we developed is scalable and cost-effective because it uses switched Ethernet rather than a shared technology, providing dedicated data connections with consistently high availability, up to 200 megabits per second per connection.”

The immediate result will include specially-equipped distance learning facilities at Prince William and Fairfax campuses, an interactive classroom with 20–25 high performance student workstations linked to the instructors, a presentation classroom with the instructor station linked to the university library, 10 campus cable channels and 30 commercial cable channels, and direct links to student dorms. Cable TV programming services will be provided by an outside cable company. The plan is to add up to 15 electronic classrooms with a few years.

Bell Atlantic-Virginia currently provides George Mason University with telecommunications services, including Centrex and premises-based voice mail and integrated voice response (IVR) systems. The new infrastructure calls for Bell Atlantic Meridian Systems to provide Northern Telecom PBX technology to handle voice communications for the University’s Fairfax campus, student dormitories, and selected remote campus locations.

*Source for this information is Bell Atlantic press release dated October 25, 1994. Ann Genovese is Manager, Telecom Administration, at George Mason University.*
E911...
Continued from page 1

(Public Service Answering Position). The University Police wanted to be the first responder to campus emergencies and to be able to dispatch other fire and emergency personnel as needed. Traditionally, all emergency services, including the University Police, were dispatched by the Orange County Central 911 dispatcher.

Once again efforts were revitalized to resolve the 911 dialing issue. The University’s Southern Bell and Northern Telecom account representatives agreed to give high priority to aggressively pursuing a resolution to this matter within their respective companies. The University insisted that any solution not be a single central-office solution, but be available for implementation in any DMS 100 central office.

After months of seemingly no progress, the University requested a project status meeting with representatives of both Southern Bell and Northern Telecom. This meeting was attended by Bell Northern Research (BNR) staff who had direct product line responsibility for the development of the DMS software. The meeting proved invaluable as an open forum to discuss all the practical, legal, and technical issues relating to the 911 dialing issue and to challenge the people directly responsible for DMS Centrex product development to provide Centrex customers 911 service equal to that enjoyed by other POTS customers.

At a follow-up meeting six weeks later, the BNR representatives offered only 50/50 odds that they would be able to resolve the 911 dial access problem. Subsequently, however, a software solution was developed and successfully tested in a lab environment. Today the planned software release is in trial and is scheduled for general availability in the second quarter of ’95.

The successful resolution of this 911 saga is attributed to the good intentions and efforts of the University’s Southern Bell and Northern Telecom representatives. More importantly, however, this outcome could not have happened without open communications among Bell, Northern Telecom, BNR, and the customer. Direct discussions involving all parties not only enabled the University to convey its message to the product developers, but also provided instant feedback that is not generally available through traditional special assembly processes. This two-way exchange of information was clearly welcomed by the University and the BNR product developers.

The Telecom Office has also taken the lead in investigating alternatives for redirecting 911 calls from the Orange County 911 Center to the University Police Dispatcher and to equip the University Police as a PSAP. Through the development of special applications software by University data processing personnel which utilized SMDI data from the DMS, the University Police Dispatcher already had calling line and location identification for calls coming to the department’s listed directory number from other University departments. This capability also allows the creation of unique profile data for selected telephones such as emergency call boxes and elevator telephones.

Efforts are currently underway to develop software and identify hardware needed to permit the University Police to function as a PSAP using the automatic number identification delivered over conventional E911 trunking while maintaining current capabilities to display calling line, location, and profile data of calls placed to the listed directory number. The target date for completion of all phases of UNC’s 911 project is August, 1995.

“We are moving very rapidly... to a knowledge-based economy in which what you earn depends on what you can learn. Not only what you know today, but what you are capable of learning tomorrow.”

President Bill Clinton
(Quoted in a speech by Thomas Carper, Governor of Delaware)

TELETOONS
BY FRANK AND TROISE

Network Manager’s Handbook:
RULE 84:
Before relying on a standby server system be sure you’ve tested it under normal working conditions.

Okay... now as soon as I spill the coffee on it, you swing the broom and knock it off the shelf.
Award entries...

Continued from page 1

Institutions who submitted their success stories for evaluation by the committee in 1994. Competing admirably for top honors were:

- **Miami University**: Deployment of a Fiber Distributed Data Interface backbone supporting over 4,000 Ethernet interfaces, 3,000 token ring interfaces, 30 FDDI interfaces, and other legacy subnets located throughout the Coral Gables campus. The objective was to provide a flexible internetworking environment with the ability to bridge and/or route a wide variety of protocols, regardless of the physical transport medium.

- **College of the Desert**: Deployment of a videoconferencing system to support distance learning, resource sharing, and a reduction of the number of commuter trips between the college's various campus sites and centers—thereby reducing mobile source emissions.

- **Duke University**: Deployment of a campus cable TV system, movie channel, and new data, telephony, and video cable plant infrastructure in approximately 3,200 residence hall rooms to expand and enhance electronic services to students.

- **Harding University**: Deployment of a new telephone system, voice mail system, and the resale of electronic services to students in residence halls to enhance electronic services and operating efficiencies.

- **Shippensburg University**: Implementation of student long distance resale and toll fraud reduction telecommunications project to enhance electronic services in the residence hall and generate new revenue sources.

The Institutional Excellence in Telecommunications Award is ACUTA's most prestigious award. Winners are announced at the banquet at the Annual Conference, and receive an exquisite Stuben crystal trophy. In addition, winners receive two paid registrations to the Annual conference and are highlighted in an ACUTA newsletter article.

To apply, institutions must submit documentation specifically describing a telecommunications endeavor, product, or service which demonstrates excellence and professionalism. Applications are evaluated on the basis of: scope and complexity of the endeavor; technological leadership; benefit to the institution; and demonstration of excellence. Three awards may be given annually, one to a member institution in the following enrollment categories: 1,000 students or less; 1,001–5,000 students; and more than 5,000 students.

Each ACUTA member institution is encouraged to apply for the 1995 awards. Applications must be postmarked by March 15, 1995. A flyer is enclosed in this newsletter with details. If you have more questions, contact Lisa Cheshire at (606) 278-3338.

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**Is telecom reform on the GOP agenda?**

Does the Republican victory in Congress spell a new agenda for telecommunications reform? Might that agenda include such actions as repeal of portions of the 1992 Cable Act, speedy entry for cable and telephone companies into each other's businesses, and relaxation of broadcast ownership restrictions?

Republicans have been vocal about the "liberal bias" of the media and sex and violence on television, according to *Broadcasting & Cable* (11/14/94). Will the move toward business deregulation mean increased interest in content regulation?

Predicting that Congress will pass telecom reform legislation as early as next Labor Day, U.S. Telephone Association President and Chief Executive Officer was quoted by *Telecommunications Reports* as saying that the incoming Republican Congress likely will not "embrace all the views of local telephone companies." Nor will a GOP-controlled Congress necessarily make the legislative debate over telecom reform any easier "because the battle lines will still be there."

The National Information Infrastructure movement may also suffer a setback as a result of the recent elections. The program has been strongly identified with the White House, and may, for that political tie, be rejected by the new Republican majority, suggests *Telecommunications Policy Review* (11/13/94).

Republican control of both chambers will make the legislative process easier, Neel suggested to reporters last month. Congress "will be less partisan" on telecom issues, and "we would expect a much more rational legislative process in the Senate. Senator Larry Pressler (R., S.D.) who is expected to be the committee's new Chairman, already has said he wants to move quickly on telecom legislation.

ACUTA strongly recommends that members get acquainted with state and federal legislators so that college and university interests will have a voice in the law-making process.

**The Noah Principle**

“No more prizes for predicting rain...Prizes only for building arks.”

Louis V. Gerstner Jr.
Former Chair and CEO, RJR Nabisco Inc.
Quoted by Gary Audin at ACUTA Seminar in Richmond
Phone Fraud at Salve Regina

Jeanne K. Spinosa
Director, Telecommunications
Salve Regina University

Schools which offer telephone service to their resident students put themselves in a vulnerable position by opening the door to possible telephone fraud. At Salve Regina University, the combination of several pieces of technology recently resulted in a costly case of abuse. The pieces of technology which combined to create our dilemma were:

- An 800 number which is answered directly in the Admissions Office during the day and goes to the Admissions voice mailbox after hours
- A Northern Telecom SL-1 XT switch and Meridian Telecom voicemail system
- 4-digit extensions appearing on telephones in resident student dormitories

The Meridian Mail system has an inherent feature which allows a caller to dial "0" + another 4-digit extension number once they reach a voice mailbox to get out of the mailbox and dial another extension number. There is no way to eliminate this feature.

Review of the bill over a period of months showed a huge increase in the number of night and weekend calls. It appeared that the Salve Regina students had taught their friends to call the Admissions 800 number after hours, wait to get into the voice mailbox, and then dial "0" plus the friend's 4-digit extension number to get to talk to their Salve friends for free. Salve ended up being responsible for this fraud, since there are no laws forbidding people from dialing an 800 number.

One option for correcting this situation is to have AT&T (our long-distance carrier) put an intercept message on the 800 number based on the time of day and day of the week. Anyone calling the Salve Admissions 800 number after 5:00 p.m. weekdays and anytime during the weekend would hear a recorded announcement stating the business hours and requesting that the caller call back within those time frames. This option would cost approximately $100 per month and has the possibility of saving Salve $13,000 per year in abuse costs.

Another option is to convert the Admissions extension to analog and attach an answering machine. This allows the caller to leave a name, telephone number, and other information. At the same time, it thwarts fraud by preventing callers from dialing out of the voice mailbox and over to another extension.

Other institutions should be alert to the potential for this form of fraud. Please contact me if you have questions or need further explanation.

E-mail privacy: Whose right?

May an employer monitor its employee's electronic mail messages? While no court has had the opportunity to address this question, the answer is probably "yes." The basic question on this issue, like most other employee privacy issues, is whether or not there is an expectation of privacy.

As a general proposition, there should be no such expectation with respect to e-mail, since an employer has the right to review the appropriate use of all of its computer resources, and that should include electronic mail.

Still, it would be wise to adopt a policy, to be included in the organization's employment manual, to ensure that there is no expectation of privacy. Such a policy might read as follows:

"E-mail should not be used for personal, non-business related communication. Employees should be aware that all e-mail will be subject to review by the organization. The organization has retained a copy of all computer passwords. Employees are prohibited from using personal passwords that have not been approved by the company."

If an employer wishes to take a less rigid stance but still protect itself, an alternative policy might read as follows:

"Electronic mail is intended for authorized business use only. It is widely recognized that authorized company personnel must have unrestricted access to information stored on the electronic mail system. This may include retrieving business information, trouble-shooting hardware and software problems, preventing system misuse, assuring compliance with software distribution policies, and complying with legal and regulatory requests or information. Given these business requirements, the company cannot guarantee the privacy of documents and messages stored in company-owned files, desks, storage areas, or electronic media."

In the future it is certainly possible that Congress may adopt some statute providing employees with defined privacy rights. Until then, employers can protect themselves from invasion of privacy suits with well-written policies.

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James Madison University begins "Universal Network Initiative"

Tom Bonadeo
Director of Telecommunications
James Madison University

The Departments of Telecommunications and Technical Services in JMU's Office of Information Technology (IT) have begun work to connect all departmental computers and shared printers to the campus network by the Fall of 1995.

The "Universal Network Initiative" resulted from recognition by JMU's administration that networked desktop data must be a basic service just as telephone service is.

The "Universal Network Initiative" resulted from recognition by JMU's administration that networked desktop data must be a basic service just as telephone service is.

between and within buildings. Fiber carries video, data, and voice between and within buildings. Benefits of this medium mixture are service flexibility and transmission path redundancy. Most importantly, the mixture is transparent to our users.

For installation and maintenance, JMU divides network responsibility using the open systems interconnection (OSI) model. Telecommunications provides elements for layers one, two, and sometimes three; i.e. physical wire, hubs, and bridges. Technical Services provides elements for layers three, four, some five, and some six; i.e. PC network cards, routers, and hub and bridge software/programming. Systems Development provides elements for layer six and some of layer five; i.e. network services software interface. Layer seven is the actual user's application, which is their own responsibility. This approach of divided responsibility creates a system of checks and balances for network evolution, and builds a spirit of cooperation within IT.

Network connection installation requires three steps. First, Telecommunications wires the entire building from cable entrance to work stations. Second, Technical Services installs PC network cards and routers, then programs software for network cards, hubs, bridges, and routers. Third, Technical Services completes a Needs Analysis and Network Training for the targeted area.

The Universal Network Initiative will provide the following advantages to JMU:

- Add 1,249 network connections for faculty and administrative PCs and shared printers
- Bring all university buildings up to "future standards" with media for voice, video, data, and image services
- Raise a portion of the network backbone to 100Mb or above
- Connect at least 100 stations at 100Mb to the desktop in the Math Modelling Center, the Computer Science Department, and the Multi-media Center.

The Initiative is scheduled for completion by September 1, 1995 at a cost of less than $1.5 million.
Univ. of Delaware: Electronic community citizenship exam

The University of Delaware has instituted an Electronic Community Citizenship Exam (ECCE) in response to a pervasive lack of student awareness of responsible computing policies and standards. The acronym means "pay attention!" in Latin, and the test was designed to alert students to their privileges and responsibilities on the Internet. In a procedure modeled after that for getting a driver's license, new students are given a manual, "Responsible Computing," and then must pass a 10-question test before they can use the University's central computing resources. A similar program for staff members is under development. Contact: Susan Allmendinger, assistant director for systems security and access, susan@strauss.udel.edu.

ACUTA representative at University of Delaware is Donna Borden.

James Madison University: Media Resources coordinating classroom design

Media Resources at James Madison University now heads a team to coordinate, design, and upgrade classrooms with technology that enables instructors to use multimedia effectively. The team draws on expertise from telecommunications, physical plant, the multimedia center, computing support, and network services. With a goal of making equipment as user friendly as possible, projects include upgrading labs and, a new target, 12 multimedia classrooms which will be equipped with similar movable console technology cabinets. Contact: Jeff Clark, director of media resources, fac_jclark@vax1.acs.jmu.edu.

Tom Bonadeo represents James Madison Univ. at ACUTA events. See also Tom's article on page 8.

University of Alaska: Campus-wide Information System

The University of Alaska at Anchorage has introduced its campus-wide information system, Camai. This collaborative effort between The Consortium Library and Computing and Technology Services uses World Wide Web with hypertext links. Camai's unique features include the capability to talk to the chancellor, renew library books electronically, and get online assistance from reference librarians. Contact: John Summerhill, anjrs@orion.alaska.edu.

ACUTA contact at University of Alaska is Edie Lynch.

University of Houston: 21st Century instruction room

Gretchen McCord Hoffmann, coordinator of library instruction for the University of Houston Libraries, is putting together a proposal for a 21st century instruction room: multimedia, hands-on, with flexible equipment. If you have suggestions on what should be included or avoided, please send comments to her at gmhoffmann@uh.edu.

University of Houston's ACUTA representative is Lee Bentsch.

Carnegie Mellon: Computer store offers fax-based information service

The computer store at Carnegie Mellon now offers an automated Fax-Back service to provide convenient store information. The 24-hour touch-tone system allows callers to press codes requesting either a comprehensive index of documents or specific documents by number. Inquirers can call from their own fax machine or have the fax sent to a different location by entering the appropriate fax number at a prompt. A Fax-Back Requisition Form, sent with each cover sheet, allows departments to fax in their purchase requests.

Carnegie Mellon's primary ACUTA representative is Mary Pretz-Lawson.

Thanks to CAUSE's new electronically delivered Campuswatch for information on this page.

Welcome New Members
October 24–November 29, 1994

Institutional Member
• SUNY Institute of Technology, Utica, NY. Susan F. Warcup, phone (315) 792-7370

Corporate Affiliate
COPPER LEVEL
• Raychem Corporation, Dallas, TX. Ken Hamen, phone (214) 484-9600

Search for New Members continues!
Tell a friend about ACUTA
Booster shot for telemedicine

The Miami Herald (11/14/94) reports a new Miami company has set up a telemedical link between doctors in Venezuela and South Miami Hospital. Cardiologists, dermatologists, oncologists, and other specialists will send high-quality images via satellite to specialists in Miami who will assist in diagnosis. Other Latin American countries are considering signing on, and the service could prove a shot in the arm for the fledgling telemedical field. Fewer than 1,000 electronic consultations were performed in the U.S. last year, in part because U.S. insurance companies often don’t pay doctors for seeing patients on a telemedical network.

Virtually together — University of Washington and Fujitsu

Scientists at the University of Washington’s Human Interface Laboratory have a virtual hook-up to the Fujitsu Research Institute in Tokyo, and the two teams are using the technology to perform tasks such as jointly herding small electronic creatures across a simulated conference table. “This is the most ambitious effort to date,” says U S West’s executive director of technology development in an article for the Wall Street Journal (11/16/94). “This is the way humans really interact. They don’t talk through a glass screen on a computer. People have talked about cyberspace for a long time. Here it is.”

PC in your pocket

Bill Gates’ vision of the future, according to a story in the Atlanta Journal-Constitution (11/15/94), includes a Wallet PC that could exchange computerized money with others’ devices, provide directions via navigational satellites, receive messages, keep track of schedules, and electronically pay for goods such as concert or airline tickets.

Democracy goes on-line

As we read in Computerworld (10/31/94), politics may never be the same. For last month’s state-wide elections in California, tens of thousands of voters were able to access a World-Wide Web server containing poll reports culled every five minutes from the state’s Election Web Server. California’s Internet server is just one of many public and private projects around the country to take advantage of the Internet for voter education and as a pipeline to elected officials.

New Technology U?

According to the Chronicle of Higher Education (10/26/94), a committee at Carnegie Mellon has urged the university to get aggressive in demonstrating how information technology can enhance academic productivity. To accomplish this, all major academic units would participate in identifying and evaluating technological applications, so that by 2001 many courses could be taught almost completely “remote in space and time.” Comments the dean of the College of Engineering, “We see lots of experiments in a class, or a couple of classes or departments, but we haven’t detected wide-scale, university-wide penetration and experimentation with new technology.”

Rx for higher ed

From Educom Review (Nov./Dec.’94) “Higher education is suffering from a cost disease today, with costs increasing for the last 25 years at rates of 3 to 5 percent higher than inflation. Only through intelligent utilization of interactive multimedia technology can we make higher education simultaneously more productive and more efficient,” says software entrepreneur Bernard Gifford.

Hate to read the manual?

If you cringe at the thought of actually having to read a computer manual, Pacific Animated Imaging has a solution for you: They create custom software, accessed by touching the screen, that produces animated graphics to explain how the machine operates, according to a story in the Wall Street Journal (10/27/94).

View your room on the Net

Travelers in the know can now shop for hotel rooms on Internet’s Travel Web and at several World Wide Web sites. Users can even view sample rooms and get information on local attractions and nearby restaurants. By year’s end, users should be able to book their own rooms as well, according to USA Today (11/1/94).

Free computers for schools

MCI, BASF, Duracell, Circuit City, Sunoco, and Marshalls are just a few of the corporations participating in the “A+ America Technology for Schools Program.” Customers earn coupons that can be redeemed for computers, software, and more by participating schools. Any public or private school can call 800-557-2466 for info.
The reminders are everywhere—we no longer live and work in a world where university walls, state lines, or national borders place limits on the academic missions of our colleges and universities. As managers of telecommunications technology, ACUTA members are playing a major role in the “globalization” of higher education. All indicators point to the expansion of this role over the next few years. Just a few examples:

- A state university in Missouri has six “sister” institutions outside the United States. How can the telecommunications department effectively support and strengthen those relationships?
- The Director of Information Technology at a Midwestern university is directed to produce an international, multi-site video conference before the end of the year. How can he accomplish this most cost-effectively, with the excellent quality that will be expected?
- College and university telecommunications directors in Australia and New Zealand are seeking an association to support their professional development needs and help them form international connections with peers, and they ask ACUTA to expand into their region.

ACUTA is asked to participate in “The Americas Telecommunications Congress,” a summit meeting of executives and government officials from Northern, Central, and South America—exploring the future of telecommunications in Latin America.

International collaboration among educational, scientific and research institutions is a natural outgrowth of the breaking down of barriers to communications, and effective telecommunications management is vital to the success of these efforts. For this reason, ACUTA is expanding its focus to provide information and networking opportunities to members with international interests.

The Winter Seminar, scheduled for January 17-21 in Maui, will be an excellent opportunity to explore these issues. Our main presenters, Ray Horak and Lillian Goleniewski, are widely known as experts in international networking and telecommunications issues. They will explore ways in which the new technology can serve as a tool to expand the campus beyond city, state, and national boundaries. We will examine as a group the implications and challenges of the internationalization of higher education. We will also have the opportunity to learn from attendees representing institutions from the U.S., Canada, Australia, and New Zealand.

In academia, as well as in business, the successful institutions of the future will be those that expand to serve an international market. ACUTA is committed to anticipating trends in telecommunications and higher education, and helping our members plan for the future. As more and more members are confronted with the challenges of international communications, ACUTA will be at the forefront of these global concerns.

**ACUTA Events Calendar**

- **Winter Seminar**
  - **Maui, Hawaii**
  - **Jan. 17-21, 1995**
  - Inter-Continental Resort
  - **TOPIC**
    - Campus Networks—Beyond the Walls

- **Spring Seminar**
  - **Kansas City, Missouri**
  - **April 9-12, 1995**
  - Hyatt Regency
  - **TOPIC**
    - The Video Highway: Can We Get There from Here?

- **Fall Seminar**
  - **Fort Worth, Texas**
  - **Oct. 29-Nov. 1, 1995**
  - The Worthington Hotel
  - **TOPIC**
    - Strategic Planning & Budgeting for Telecom Infrastructure
    - The Telecomm Dept: Rx for Change

- **24th ANNUAL CONFERENCE**
  - **Orlando, Florida**
  - **July 16-20, 1995**
  - Stouffer Resort
  - **TOPIC**
    - Feature Speakers
    - Breakout Sessions
    - User Groups • Exhibits
### Position Available

**Senior Telecommunications Specialist**  
**Switch Engineer**  
**The Ohio State University**

**Responsibilities:** Maintains Northern Tel SL100 Supernode Central Office & Meridian 1 PBX switches, regional campus network & voice mail/IVR systems; facilitates growth & enhancement of systems and related network equipment such as trunk facilities, IXC & LEC access facilities, tape & disk drives, X.25 poller, DS3/OC3 multiplexers, AC/DC power units, voice messaging systems. Supervises technical personnel.

**Requirements:** B.S. in engineering, telecom, communications, or related field; 3 yrs. exp. in managing/maintaining telecom facility; extensive experience & knowledge of telecommunication and voice, data, & video eqpt. & systems; knowledge of PUC of Ohio and FCC tariff regulations required.

**To Apply:** Send copy of this ad, cover letter, 2 copies of resume to The Ohio State University Employment Service, Lobby-Anchor House, 2130 Neil Ave., Columbus, OH 43210

### Position Available

**Data Services Engineer**  
**Eastern Kentucky University**

**Responsibilities:** Touchtone registration, voice response, and LAN applications.

**Requirements:** B.S. in Electrical Engineering preferred. Experience with PCs, Macs, UNIX, LANs, and PBX systems required.

**To Apply:** Send letter of application to Personnel Services, EKU, Richmond, KY 40475-3101.

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**Editor's Notes...**

Two pretty exciting new services offered on the Internet: The White House now has an interactive, multimedia, electronic citizens' handbook, including a virtual tour of the White House, detailed information about Cabinet-level and independent agencies, a subject-searchable index of federal information and publications, and a map of Washington, D.C. The URL is: [http://www.whitehouse.gov](http://www.whitehouse.gov)  
And, Purdue University has a new Online Writing Lab (OWL) offering access to more than 100 documents on writing resumes, business memos, research papers, etc., as well as the ability to contact tutors for help with specific questions. Tutors will respond to e-mail messages within 48 hours and can be reached at owl@sage.cc.purdue.edu. OWL is available by gopher or FTP at owl.trc.purdue.edu, and the URL is [http://owl.trc.purdue.edu/](http://owl.trc.purdue.edu/). What's happening on your campus? Contact Pat Scott, ACUTA (606) 278-3338 or e-mail pscot00@ukcc.uky.edu.

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**Can you help?**

Frank Kirstein, Asst. Director of Information Technology Services at Canisius College, writes the following: About 7 years ago, we installed a new switch and, at the same time, new outside emergency phones (enclosed units, one-button access, speaker in the box, no handsets). Within the last year or so, failures of these phones has been on the rise. Are there others who have experience with such failure? Any solutions—or is it really time these were wearing out? Contact Frank via e-mail: kirstein@loyola.canisius.edu or phone (716) 888-2440.

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**Information, please!**

The Assoc. of College & Univ. Housing Officers-International will be featuring articles related to telephone systems in the March issue of its newsletter. If you are aware of innovative uses of technology in campus housing operations (especially innovations that may entice residents into on-campus housing), please contact Don Whalen, ACUHO-I Publications Coordinator (515) 294-0650. E-mail dwhalen@iastate.edu. Telephone innovations which produce direct revenue are especially requested.

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**FYI**

As states become more active in regulating telecommunications, it is important to stay informed of proposed regulations in your area. ACUTA can provide a list of the state and provincial public utilities commissions in the U.S. and Canada. Contact Kevin Adkins, Telecom Resources Mgr., at the ACUTA office. Phone (606) 278-3338, fax (606) 278-3268, or e-mail ladki00@ukcc.uky.edu.
Recognizing Institutional Excellence in Telecommunications

What is the Award?
The award for Institutional Excellence in Telecommunications is ACUTA's most prestigious award, recognizing telecommunications excellence and professionalism. Winners are announced at the banquet at the Annual Conference, and each is presented with an exquisite piece of Steuben crystal. In addition, winners receive two paid registrations for the next Annual Conference.

How do I apply?
To apply, institutions must submit documentation specifically describing their telecommunications endeavors, products, or services which demonstrate excellence and professionalism as defined in the Evaluation Criteria.

A letter from the institution's President in support of the contribution of the department to the institution's mission is also required.

How are winners selected?
Winners are selected on the basis of the telecommunication department's contribution to and support of the mission of their institution. Applications are evaluated on the basis of: scope and complexity of the endeavor, technological leadership, benefit to the institution and key constituents, and demonstration of excellence and professionalism. The endeavor, product, or service should be innovative and exemplary, and provide significant advantage to the institution, faculty, staff, and/or students.

Up to three awards are given annually, to one institution in each of three enrollment categories: 1,000 students or less; 1,001-5,000 students; and more than 5,000 students.

Award Winners

1993 Delaware Technical and Community College .......... Henry Decker, Coordinator, CS & IS
1994 Brigham Young University ........................................ Ferrell Mallory, Director of Telecommunications Services
1994 Fairfield University ......................................................... Michael Cioffi, Director of Communications and Technical Services
Application Process

Schedule

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<td>March 15</td>
<td>Application deadline</td>
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<td>April/May</td>
<td>Application review and evaluation</td>
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<td>May 15</td>
<td>Selection of Award Winners</td>
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<td>Announcement of Winners at Awards Banquet at the 24th Annual Conference</td>
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Evaluation Criteria

I. Description of Endeavor, Product, or Service

Briefly describe what was done, where, when, and by whom; purpose; key goals and objectives. Indicate contact person, providing name, title, and address as well as telephone, fax, and electronic mail numbers.

II. Planning, Leadership, and Management Support

Briefly describe the scope, complexity, and nature of planning process required for approval and implementation of the endeavor. Key factors which should be highlighted are vision, strategies, goals, objectives, risks, exposures, organization dynamics, leadership skills, technical competencies, organization culture, and operating environment. How does the effort integrate with the institution’s vision, long range plans, business plans, and human resource programs?

What are specific examples of the level of commitment and involvement by top management? Describe resource commitments/allocation.

Describe the planning tools, data base, and integrity of historical and current data and information for telecommunications planning, decision making, control, and assessment of the endeavor.

III. Promotion of Technology and Maturity of Effort

What is the current state of the telecommunications and network services at the institution? What are the key benefits of the endeavors to the institution, its environment, or well being of its constituents? How does this endeavor integrate with other services and plans? What approaches were used to introduce and promote this technological development and idea to management and various user personnel?

When was the endeavor initiated? How was the effort conceived? Is the approach original, or was an existing approach tailored to fit the organization’s needs? How extensive is the effort within the institution? How does this endeavor compare to the current state of the art in the industry and other institutions of similar size and focus?

IV. Quality, Performance, and Productivity Measurements

What types of quality, performance, and productivity measures were used? How were they linked to the overall improvement effort? How were these measures communicated to the organization? What, specifically, is measured? How did you determine what to measure? What categories of information were collected? How do results compare to indicators established?

V. Cost, Benefit, and Risk Analysis

This section should outline the key components of direct and indirect cost, benefit quantification, risk/exposure quantification, and organizational impact.

VI. Customer Satisfaction and Results To Date

Describe key user involvement with the planning and implementation of the endeavor and related products and services. What has been the reaction of various users to the endeavor? What types of evaluation instruments were used to assess user satisfaction? How does this compare to original plans and expectations? What unanticipated challenges and problems were encountered and how were they resolved?