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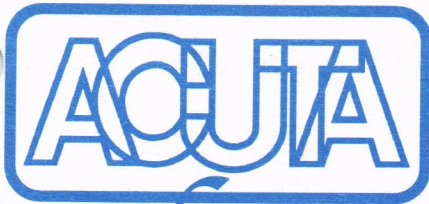
ACUTA eNews December 1996, Vol. 25, No. 12

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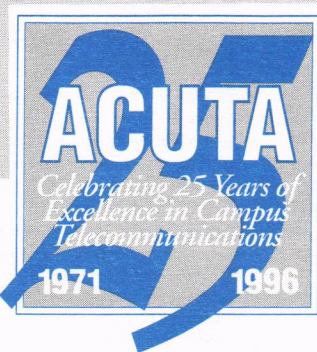
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News

December 1996

Association of College & University
Telecommunications Administrators



THE VOICE OF
TELECOMMUNICATIONS
IN HIGHER EDUCATION

Fifth Annual Institutional Excellence Awards Competition

Dave O'Neill

*Eastern Washington University
Chair, Institutional Excellence Awards Comm.*

At the 26th Annual Conference in Atlanta this July, ACUTA will present its most prestigious award, the Institutional Excellence Award, to member institutions. This award recognizes innovative and exemplary telecommunications endeavors at member institutions that are providing significant advantages to the institution, faculty, staff, and students. The primary goal of the award is to give recognition to campuses that have enhanced productivity, efficiency, excellence, and professionalism by successfully exploiting the potential of telecommunications.

The committee will be completing revision of the application/nomination process in the next few weeks, and information will be mailed to all members. Our twofold objective is to streamline the process and to identify and reach out to those who we know have undertaken exciting, forward-thinking projects during the past year. We know many

of our members have been involved in projects that go beyond the necessary day-to-day responsibilities of this job. We want to recognize those who represent the best in campus telecommunications.

Members will be invited to submit applications based on work they have done on their own campus, or to nominate someone else who deserves recognition.

Awards may be presented in three categories—small, medium, and large—based on the full-time enrollment at the institution.

Winners from years past include:

- 1993 Delaware Technical & Community College
- 1994 Brigham Young University
- 1994 Fairfield University
- 1995 Connecticut State University System
- 1995 University of Texas Medical Branch at Galveston

In 1996, honorable mentions were given to the University of Colorado at Boulder and Laramie County Community College.

ACUTA News will have a new look

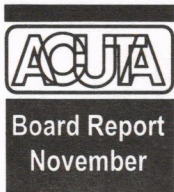
Beginning with the January issue, the *ACUTA News* will have a new look. After several years as a 12-page newsletter, the format will change to six pages. The emphasis in the newsletter will be on ACUTA business and time-sensitive issues of importance to members. We will continue to include the President's and Executive Director's columns, as well as DC at a Glance, the Legislative and Regulatory Affairs Committee column written by Whitney Johnson, in the newsletter. Short articles from member institutions will also be presented in the newsletter, as well as position ads.

Longer articles, summaries of conference or seminar presentations, and a variety of in-depth feature articles—an approach for which we have not had a vehicle previously—will now be included in the quarterly *ACUTA Journal of Telecommunications in Higher Education*. The first issue of the

Journal, a 48-page publication, will be mailed on or about March 1.

The newsletter has proven to be a valuable member benefit over the years, and should continue to provide useful information in an easy-to-read format. While the newsletter has been available on the ACUTA homepage for several months, we recently added a search engine which enables members to enter a key word or phrase and locate articles in any issue dating back to July 1995 pertaining to that subject. The newsletter is available on the homepage about a week before it arrives in the campus mail. ACUTA's Web address is <http://www.acuta.org>.

Members are encouraged to comment on the new look of the newsletter as well as to submit articles for both the newsletter and the Journal. For more information, contact Pat Scott, Communications Manager, at 606/278-3338 or e-mail pscott@acuta.org.



Annual Conference Planning Underway

The Board of Directors met in Alexandria on October 26 and approved a number of plans for the 26th Annual Conference to be held July 13-17 in Atlanta, including the theme: *Connecting Education to the Future*.

Six tracks for the Conference program were also approved: Management, Professional Development, Networks and Infrastructure, New Technologies, Corporate presentations, and Leadership Institute (Senior Management Track).

Other items discussed included:

- New strategic planning effort for ACUTA
- Student papers competition
- Committee members and terms
- Approval of candidates for the Editorial Board
- Duties of Directors-at-Large
- Rules for complimentary registrations

Respectfully submitted,

Buck Bayliff

Buck Bayliff
Wake Forest University
ACUTA Secretary/Treasurer

Virus warning

There are rumors of two new computer viruses being sent across the Internet. If you receive an e-mail message with the subject line "Irina" or "Deeyenda," do not read the message—it may erase your hard drive. As a precaution, delete it immediately in case this is not a hoax.

Welcome New Members

November, 1996

Emeritus Member

- Robert Devenish (retired from Univ. of Wisconsin-Madison), Sun Prairie, WI. 608/837-3004

Corporate Affiliate

COPPER LEVEL

- DuPont Company—Fluoroproducts, Wilmington, DE. Dan Kennefick, 302/999-3330
- ERICO, Incorporated, Solon, OH. Bill DesRosiers, 303/660-1419
- Orchard Telecom, Los Angeles, CA. Jim Greenwood, 310/201-4350

Block that call!

As reported in the November issue of *Telecom & Network Security Review*, pay-per-call scams are proliferating throughout the Caribbean, and more area codes are being designated to handle increased calling traffic. ACUTA has been encouraging members to block the 809 area code to cut down on fraud and abuse, but it is no longer enough.

Below is a list of the current area codes for all islands in the Caribbean. More area code splits are coming, but for now you should block calling to all of these unless you do business on a regular basis with any of these islands:

Anguilla	809
Antigua	268
Bahamas	242
Barbados	246
Bermuda	441
British Virgin Islands	809
Cayman Islands	345
Dominica	809
Grenada	809
Jamaica	809
Montserrat	664
Puerto Rico	787
St. Kitts & Nevis	869
St. Vincent & Grenadines	809
Trinidad & Tobago	809

Association of College and University Telecommunications Administrators

ACUTA NEWS, Vol. 25, No. 12

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Michigan Technological Univ.

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**ADSL:
Asymmetric Digital Subscriber Line**

Just when we finally grasped the idea of what was meant by ISDN, another notion is foisted upon us. Just what is ADSL? How does it differ from ISDN? How does it work? What applications are well suited for the service? What equipment is required? Should ADSL be used in place of ISDN or in conjunction with ISDN? What products and services are currently available? These are some of the many questions being asked about ADSL, a transmission technology that provides reliable transport of data, video, voice and POTS signaling over a single copper facility.

ADSL is a revolutionary transmission technology that has specifically been designed to provide a two-way data transmission environment simultaneously with voice over a single POTS copper twisted pair. Data transfer rates range from 1.5 Mbps to 9 Mbps downstream to the subscriber and from 16 Kbps to 640 Kbps upstream to the subscriber, depending on the line distance. ADSL enables interactive multimedia high-speed applications to be accessed by anyone with a telephone in their home or business. From a subscriber's perspective, ADSL provides a completely transparent modem-like digital transmission service that operates very much like a typical analog modem. The primary difference is ADSL transmits data asymmetrically at high speed to match the asymmetric nature of interactive multimedia applications. ADSL technologies can provide wideband and variable bandwidth connectivity over existing copper lines for nearly ubiquitous offering of high speed access.

With ADSL local exchange carriers can now provide access to high-speed interactive services such as movies-on-demand, home shopping, home banking, and Internet service over the same copper twisted pair that supports conventional telephone service. The technology will enable telcos and organizations to maximize their existing copper network investments by offering a variety of new services without installing fiber. ADSL may very well become the transport technology of choice in areas that are not

heavily populated, as fiber is only cost effective when there are large numbers of customers in close proximity. ADSL is economical in that it provides a high speed data link together with regular telephone service.

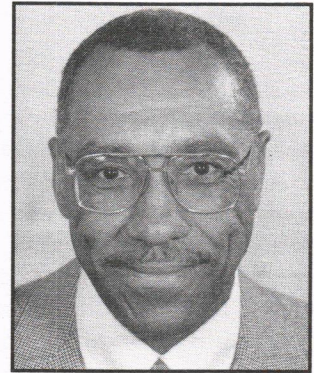
The technology is being deployed by a number of the RBOCs as costs and time to deploy fiber have exceeded the estimates of even the most optimistic and aggressive local exchange carriers. Current estimates for total fiber implementation in the local loop are projected to be 25 to 30 years away by many.

One vendor states "ADSL services will begin rolling out the door in early 97 to deliver voice and data services at T-1 speeds to businesses and homes. We're still laying fiber but only in concentrated areas. We believe we can still leverage the huge copper wire infrastructure for high-speed networking. High capacity access options such as ADSL are especially important in California and other high density population centers with large numbers of Internet users and telecommuters."

Other vendors believe ADSL will provide an immediate competitive advantage. It can be deployed faster allowing users to implement bandwidth-hungry applications sooner, thereby competing with other offerings such as cable, direct satellite TV, etc. It can also serve as a complimentary technology to other services such as fiber and multi-point multi-channel distribution services. It uses the existing copper infrastructure thus requiring no outside plant construction costs or delays. Since it is dedicated for each subscriber, it provides built-in security which is critical to home banking and electronic commerce transactions. Its portability enables it to be used to compliment the implementation of fiber strategy over time.

Other than a 10 Base-T Ethernet card for each workstation, there are no special hardware or software requirements needed to use ADSL service. ADSL may well be a technology that truly brings the information superhighway to the masses. There are hundreds of educational, residential, business, and government applications that can be served effectively by ADSL using existing cop-

President's Message



Dr. James S. Cross

A stylized, handwritten signature in black ink.

Michigan Technological
University

ACUTA President
1996-1997

per infrastructure. A few of the many applications made affordable by ADSL are high-speed Internet access, distance learning, video-conferencing, remote LAN access, movies on demand, electronic commerce, pay-per-view, shop-at-home, home healthcare, etc. Each of these applications is characterized by the client-server model where the majority of information is sent downstream toward the client rather than upstream to the server.

In addressing the emerging high-speed access market, ADSL technology is primary advantage appears to be threefold: deployment cost; the fact it does not rely on the presence of voice switching networks; and it can be connected directly to internetworking equipment such as routers, bridges, and high-speed ethernet, frame, and cell switches. While

See President's Message... on page 8

Emergency Phones Provide Security

Does your job require you to make life and death decisions? Before you say no, think about your emergency phone service. Ideally, it's something that will never be used. Realistically, it's often needed when it isn't available.

"More than ever, the campus is a twenty-four-hours-a-day world," says Linda Bogden-Stubbs of SUNY Health Science Center in Syracuse, New York. "We have staff positions that are required to work around the clock. And, even though personal safety issues get a lot of attention nationwide, students still stay out too late, take shortcuts through poorly lit areas, and in other ways put themselves at risk. The university can repeatedly issue warnings of potential dangers, but we have to assume a certain amount of responsibility for everyone's safety. Providing easy access to emergency phones is, bottom line, an important part of our job."

Location, location, location

Anticipating where emergencies may happen is one of the first considerations for planning placement of phones. Scattered strategically across the campus—including lobbies of buildings, outside dorms, in elevators, and in parking lots—these phones must be situated wherever safety and security could be compromised. (Keene State's Beth Williams reports phones outside the dorms on her campus are called pizza phones: "Since the dorms are always locked, the phones are used by students visiting someone in the dorm, residents calling someone because they forgot their key, or the pizza delivery man.")

According to Tim Mahoney of Integrated Communication Networks, a supplier of emergency phone systems and emergency video systems, "It would be impossible to recommend a minimum emergency phone system, because every campus is unique. And if an attack takes place and you have a thousand phones but you don't have a phone there, you'll feel like you don't have enough. But certain patterns emerge that help us make better decisions as we try to formulate a cost-effective plan: Is

the campus rural or inner-city? High-rise or multi-acre? Resident or commuter? The layout is important, but so are demographics and, of course, budget." Mahoney says ICN's focus on reliable service at reasonable cost has been the reason for the success of their basic unit with alarm, lighting, and video options.

Mary Powell at Drexel University in Philadelphia says: "We have installed, in several locations, analog wall phones that are restricted to on-campus and 911 calls only. Anyone can use these phone in case of an emergency and they are located in very obvious areas." She recommends "installing one on each floor of a building that is pretty busy at night. Otherwise, installing them in break areas, or main entranceways might be a good idea."

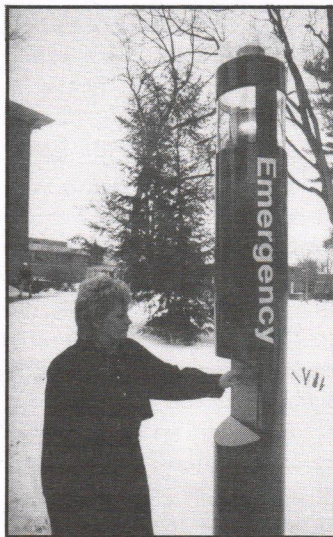


Photo courtesy of Code Blue

What do they look like and where do they dial?

At McGill University in Montreal, Gary Bernstein's outside emergency telephones, elevator phones, and lobby phones are used "to dial various 'canned' numbers (the bus for handicapped students, or Security, for example). All these phones have large palm buttons used to autodial Security. All operate totally hands-free, with speaker and mike enclosed behind a stainless steel panel, just about vandalproof. All phones except the ones in the elevators

have key pads. All phones are connected to our PBX. We take advantage of Calling Number and Calling Name ID by displaying these on the terminating telephones at Security. We program most of these phones so that they are restricted to dialing other campus locations (four-, five-, or six-digit numbers) but cannot dial 7-digit numbers."

Anne Apicella of the University of New Mexico says her campus phones "ring down to Campus Police and the hospital phones ring down (for now) to the hospital operator, both 24-hour operations trained to handle emergencies. We are planning to route these phones via our on-campus E911 system so the dispatcher will have ANI and ALI instead of just the calling extension number on a digital phone display."

Planning must include ADA compliance, including mounting at the right height, push-to-activate capability, with instructions on the faceplate (both printed and in Braille). A light which activates when the call is answered allows the hearing impaired to know the call has been answered. Ken Soper of George Washington University says, "We have replaced our elevator emergency handsets with a one-piece 'touch and talk' with direct ring down circuit to Campus Police. We found that with the one-piece unit our repair and theft have been reduced to nearly zero."

Beth Williams at Keene State comments: "The elevator phones are there only to be used if you're stuck in the elevator or need emergency help from Campus Safety. Personally, I wouldn't recommend setting them up for any other purpose. All of our security phones on campus have no dial pad. They hot dial to Security. Those with dial pads (entry phones on dorms, etc.) can only dial on campus. We don't want to encourage students to make personal calls."

At the University of Southern Mississippi Don Schneider reports, "We place a red phone, which is handicap accessible, in the main lobby of each building. This phone is set up as a PLAR (Private Line Automatic Ringdown) line which cannot dial any extension manually but auto-

matically rings in the Campus Police dispatcher's office. This restricts usage to emergencies only."

According to Susan Warcup, SUNY Institute of Technology at Rome installed courtesy phones which allow on-campus dialing and 911; however, adjunct faculty are assigned authorization codes at the beginning of each semester which allows off-campus dialing from any one of the courtesy stations.

Where do I send the bill?

Of course, providing emergency phone service—from purchase to installation to maintenance—comes with a price tag. Different campuses have devised creative ways of sharing the cost of this essential service. According to Bill Tusken, Central Washington University, "We share responsibility for maintenance and repair with the Physical Plant people; they handle electrical repairs and telecom does the phone repairs. All outages are given highest priority for restoration, which means that we keep at least two complete units on the shelf at all times.... Our objective is to restore service within two hours."

From Curtin University in Australia, Mike Tkacz reports, "We now have over 225 'Foyer Phones' around campus in most common areas, and in all lecture theaters. The phones are all analog, wall-mounts but with campus calls only. We encourage our students to use them as well to contact staff, leave voicemail messages, etc. As for funding them, I include the cost of all the Foyer Phones in my annual Service and Equipment Charge which means that all extensions fund the provision of the Foyer Phones."

Gary Bernstein, McGill University, says, "We charge back for all dial tone. In the case of emergency phones, we allowed Security to pay for the phones, with the agreement that they also purchase 10% spare stock which we retain on their behalf for repair and maintenance purposes. We charge them only for the cost of the line and when there are problems with the actual phones, we do the replacement of the phone at no cost. The defective phone is returned to the manufacturer. Security has their patrolmen

make test calls on all the phones every evening. When there are problems with other parts of the assembly (blue lights, for example) we repair and charge back on a time and material basis."

Tom Walsh reports that Miami University has "about 20 units that autodial public safety on pushing the button. All are situated outdoors in a pedestal walkup. Costs for these are funded by the Vice President for Finance and University Services through an account to which we charge the standard telephone charges. This account covers all safety related telephones that really do not belong to a specific department (elevator phones, lobby/courtesy phones, etc.) in state buildings. If a department, however, needs a safety type phone because of the nature of what is in the area (chemicals, etc.), then the department is expected to fund the phone as necessary to the operation of the lab or equipment. The outdoor emergency phones are identified to public safety on their display phones by a special number sequence which tells them immediately that it's an outdoor phone and where it is. This has been in place for five or six years and has worked fine with only normal attention (one or two a year might need repairing)."

John Miller, Indiana University of Pennsylvania, says he "bills back this type of phone also. It is billed to the Campus Security office. It is the Campus Security office that ultimately decides the number of and location of emergency phones. Their budget is used to purchase, install, and maintain the emergency phones. The Security Office also tests each phone at least once a week and reports any problems to my department for repair."

One cost-saving option some campuses consider is a phone that does not do autodialing or make lights blink. "Emergency phones are usually connected to a line running to the PBX or Centrex," says Miller. "You can program the PBX or order your LEC to configure the Centrex line so that as soon as the emergency phones goes 'off hook,' the PBX or Centrex switch dials the appropriate

number. The PBX or Centrex is generally more reliable than the individual emergency phones. If you configure emergency phones in this way, you are not forced to program your phones and you need not be concerned about the battery in the phone. In short, use the 'brains' built into the PBX or Centrex switch."

What are the challenges?

While weather, vandalism, and accessibility typically present challenges for emergency phones, power inadequacies are also becoming increasingly common. According to Mitch Winden at Code Blue, phone-line powered phones are most common today. But with line power, the distance to many locations can be a problem. At increased distances, phone-line powered phones may malfunction due to inadequate power (low current supply). This is due largely to increased power requirements for today's micro-processor based phones. "For reliability reasons," says Winden, "we're going to an emergency phone that's supplied from a low voltage AC power base as its main source, with emergency backup in the event of a power outage. Since most effective security solutions have a number of components that require AC power—constant-on lighting, strobe, and CCTV—they have a reliable power source for the phone built in." Code Blue has recently introduced a pan-tilt camera option that rests on top of the emergency pedestal, providing the dispatcher full range video as well as audio. "This 'Integrated Security Product,'" says Winden, "takes *emergency phone* to a whole new level."

Providing emergency phones is more than a matter of convenience. Campus security is increasingly a factor in recruitment of employees as well as new students on campuses everywhere. As ICN's Mahoney put it, "In a very real sense, emergency phones are a matter of life and death. We have the technology to provide a much higher level of security on today's campus than a generation ago. You have to consider it more than just an expense; it's an investment in your campus community."

DC at a glance

Whitney Johnson

(Retired)

Northern Michigan University

Whitney L. Johnson

Carrier Interconnection Order

When will local phone monopolies be open to competition? It's coming—even eventually. As FCC Chairman Reed Hundt expected, the U. S. Supreme Court has denied the Commission's request to overturn the Appeals Court's stay, putting the FCC Common Carrier Docket 96-98 interconnection order in the hands of the U. S. Court of Appeals for the 8th Circuit Court in St. Louis. One of the major points of contention with docket 96-98 has been the order's pricing provisions proposed as guidelines for the states in arbitrating deadlocks between the Local Exchange Carriers (LECs) and those who want to offer competitive Local Exchange Carrier services (CLECs) on resale discounts. What's next? The Circuit Court will begin hearings in January to determine the FCC's authority to recommend discounts for resale within states.

FCC on Detariffing

On October 31 the FCC released Common Carrier docket 96-61 that will go into effect 30 days after publication in the Federal Register. Publication usually takes about two weeks so this order most likely takes effect mid December.

A White Paper is being prepared by ACUTA office and the Legislative/Regulatory Affairs Committee. If this order does not end up in court, as some predict it may, within nine months of the effective date of the order all interstate tariffs will be eliminated. In the meantime, carriers are free to negotiate contracts at will, and these will not be bound by any tariffs on file. Existing contracts may need to be renegotiated due to the fact that they often refer to and are based on tariffs that will not exist beyond August 1997, or may not exist today. Member institutions negotiating new agreements with carriers should try to get a clause in the agreement requiring the carrier to let you know of any changes in the prices and conditions it is offering others that may in some way effect your service.

In the 11/4 issue of 411 this action is referred to as a "landmark" FCC detariffing decision. The document released by the FCC is 80+ pages including appendices. There will be some discussion of this hot topic at the ACUTA Winter Seminar. Some sates have already detariffed intrastate long distance.

FCC on Universal Service

The Federal-State Joint Board on Universal Service continues to meet and look at various funding proposals. One group that opposed the idea that the full cost of Internet access by schools and libraries be provided by the universal service fund has indicated that to do so would cost as much as \$40 billion. The Joint Board is favoring \$2.5 billion for the Education Fund. TR (11/11) indicates that the \$2.5 billion would be about \$1.83 per month per household with a phone or \$21.96 per year. The bigger number would mean about \$350 per year for every such household. We must keep in mind that the Education Fund is only one part of the total Universal Services package that the Board is

considering. We must also recognize that we, the telephone user, will have to pay for this service and it does not look like it will be cheap. The cost likely will be hidden within the rate structures of the LEC and Inter Exchange Carrier (IXC).

Congress

Several of the Senators and Representatives who were very active in developing and passing the Telecommunications Act of 1996 will not be there next year, including Rep. Fields, Sen. Hatfield and Sen. Pressler.

Mergers

TR (11/11) noted that the two proposed mergers of Regional Bell Holding Companies (RBOCs) are moving ahead. The Department of Justice has cleared the SBC-Pacific Telesis merger plan noting that the proposed transaction "did not violate the antitrust laws." Shareholders of both NYNEX and Bell Atlantic have recently voted "overwhelmingly to support the companies' proposed merger." Over 75% of the shares voted and over 95% of the votes were in favor of the merger in both companies.

Clip-on fraud

Another interesting way to beat the system was noted in the October issue of *Telecom & Network Security Review* (TNSR). In this case the person committing the fraud finds a place where he can "clip on" to a wire circuit that belongs to someone like the University. This "clip on" may be at the LEC's connection on the street or wherever he can find the proper wire. Then he has that line for free use.

Scam Alert

From 411 (10/21) comes an interesting scam. A delivery man comes into your office with a package and he can't find the person it's addressed to, so he asks to use your phone. The call he makes is to a number that he has set up where the calling line gets billed for \$25 or MORE. He used this trick to make several calls during the day and gets paid for each call. The moral of the story is: dial the number for the man, and if it looks at all odd, nail him down.

Fiber Optic Video Systems for Campus Networking

Robert Beaury

President & CEO, BNI

The great majority of our country's universities, corporate campuses, and military facilities are wired to distribute video programming. Most of these private cable TV systems reflect a design approach and technology that was first introduced in the early 1980s, and can be defined by the following characteristics:

- One-way transmission for broadcast services only
- Limited channel capacity—40 or less
- Coaxial cable used throughout for the wiring infrastructure
- RF amplifiers used to distribute signals from building to building

In the early 1990s the cable TV industry adopted a new approach to designing and building systems based upon the use of single mode fiber optic electronics. Now known as "Hybrid Fiber Coax Networks," this approach virtually eliminates the use of RF amplifiers and can be defined by the following characteristics:

- Two-way transmission for both broadcast and interactive services
- 80 to 110 channels
- Single mode fiber optic cable in a star architecture between buildings
- No active devices between buildings

The result is a system that can deliver more services and is inherently more reliable to operate and maintain.

The wide scale adoption by the cable industry has driven down the cost of these systems so that it is now common for campus cable operators to use a Hybrid Fiber Coax design. The fiber portion of the design is being used for the building-to-building connections and the coax is being used for in-building wiring.

Purdue University Calumet wanted to deliver cable TV programming to eight individual buildings, most of which were on-campus housing units. Single mode fiber was available through the existing wiring infrastructure. Though constrained by funding limitations, Jim Gurcheck, AV Supervisor from Purdue, knew that the system would have to expand in the future both in terms of the number of sites and the number of channels.

Gurcheck says fiber met their needs: "We selected a fiber based video network because of the flexibility fiber offers. We needed a communications media that could handle the bandwidth demands of the future."

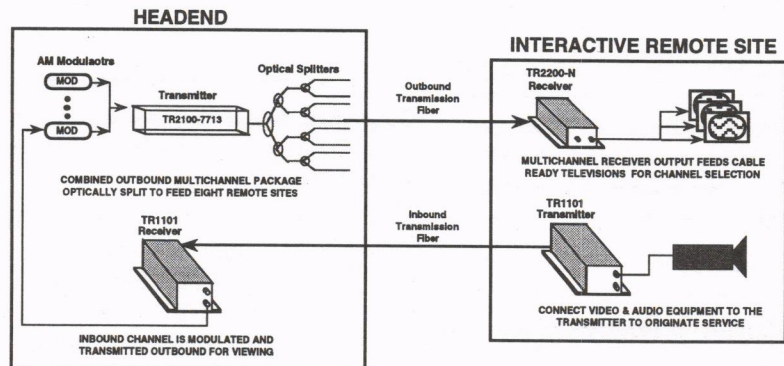
Working with Broadband Networks, Inc. (BNI) of State College, PA, a design approach was developed that allowed for a 40-channel system that could be expanded to 80 channels later. In addition, a single channel fiber optic link packaged in a rugged housing was included as part of the bill of material. This two-way module link is being used to transmit video and audio from a remote building for interactive service and is moved from one remote site to another based upon the particular schedule of events on campus. (See illustration.)

video services, that translated into a network that was configured on day one to deliver 80 channels to twenty-nine individual buildings on campus from a central Headend. The transmission electronics used provided 750 MHz of usable bandwidth so that the system can someday be expanded to deliver 110 channels.

For the inbound portion of the system each building was configured with a fiber optic link based upon the envisioned needs of that location. Many of the buildings used a single channel video and audio link, but some of the buildings used four-channel or eight-channel links.

Finally, all of the transmission electronics were configured so that they could carry data, up to 10 MB Ethernet, along with the video and audio services. Though this was not a requirement of the net-

Campus System Design



This simple, modest network significantly improved the service capability of the existing network and cost the university approximately \$6,000 per building for the transmission electronics.

A large college in the South required a complete upgrade of their telecommunications infrastructure, including video, voice and data services. New fiber optic and coax cabling were required. Because of the complexity of this type of network, the college went through a formal RFP process and selected Bell Atlantic Network Integration to provide the complete network solution.

The college wanted a "state-of-the-art" communications network. In terms of

work initially, the college felt this was an extremely cost-effective means of assuring that the network they purchased would meet their needs for many years.

Fiber optic video distribution systems for campus applications are becoming commonplace. These networks are cost competitive with traditional coax solutions, can deliver more services, are extremely reliable, and are simple to maintain. All that's required is single mode fiber cable and a vision of what you want to deliver both initially and in the future.

For more information, contact Sandra Howe of Broadband Networks at 814/237-4073 or bni@bnisolutions.com.

Can you help?

Kellie Bowman

ACUTA Membership Development Mgr.

One of the benefits of ACUTA membership is access to our Resource Library. We maintain a variety of documents—most of which have been contributed by our members—that will show you how others have done what you need to do. From RFPs to directory samples to policies and procedures, our collection can save you considerable time and energy.

Recently we've shared information about scams which lure unsuspecting victims to call an 809 number for which they are then billed at exorbitant international rates. **We need your help to update our list of fraudulent charge numbers to include 809 or the new Caribbean Island area codes that should be blocked.** In addition, information on 900 look-alike phone numbers has slowed significantly. If you'd like to share information about toll fraud with other members, please e-mail me at kbowman@acuta.org or fax 606/278-3268 or phone 606/278-3338.

Another popular request is for job descriptions. Currently, what we offer is limited and dated. I'm looking especially for **job descriptions** of supporting roles such as Operator, Technician, Clerk, etc. Thanks in advance for your contributions. Please contact me with questions or if we can be of assistance.

President's Message...

Continued from page 3

traditional dial up modem will continue to be the largest ISP access link for the next decade, ADSL will put a major damper on the growth of ISDN and cable modem services. ADSL is forecast to grow to more than 8.0 million connections in the next ten years edging out cable modem as the second most popular Internet access option. ISDN is forecast to be a distant fourth behind cable modems.

The ACUTA Board and Program Committee will continue to monitor the deployment of ADSL and related digital subscriber line technologies. We welcome feedback from you as the merits of these technologies are considered and deployed on your campus.

More position ads on page 12

2 Positions Available

Univ. of California, Davis

1. Network Operations Center Manager

Responsibilities: Manage newly created unit responsible for operation & maintenance of expanding 20,000 node ATM campus network, Student Housing cable TV infrastructure, 800 MHz radio system & emerging wireless networks. Establish campus network policies & standards, perform capacity planning, develop campus-wide network training programs, provide financial mgmt., work closely with R&D staff on integrating new voice, data & video technologies into daily operations, perform hands-on network mgmt. programming.

Qualifications: Excellent managerial & team-building skills in addition to in-depth knowledge of networking architectures, technologies & protocols. Demonstrated experience with ATM, FDDI, Ethernet, video networking, voice networking, wireless communications, configuration & maintenance of routers, switches, hubs, Unix programming & HP Open View.

Apply to: Job #6-1107 (Address below.)

2. Network Backbone Supervisor

Responsibilities: Oversee operation & maintenance of large, complex WAN serving over 30,000 clients.

Qualifications: Extensive knowledge/skills of system hardware & configuration parameters of Digital MultiSwitches, Cisco Gateway/Routers, NAT Bridge/Routers, CSUs & modems; networking configuration parameters affecting successful network connectivity with various minicomputers (SUN, Sequent, DEC, etc.) & using personal computers, maintaining and repairing variety of systems hardware and applying systems software applications. FDDI, ATM & Ethernet experience a plus. Supervisory skills and excellent customer service skills in a 7/24 environment.

Salary: \$39,576-47,736

Apply to: Job #1875.

Send detailed resume to UC Davis Employment Office, TB 122, Davis, CA 95616. For additional information, see <http://hr.ucdavis.edu/emp/eob.htm> AA/EOE.

Position Available

Univ. of Mississippi

Assoc. Provost for Info. Technologies

Seeking applicants with strong planning, organizational, & communications skills, & who have a record of successfully progressive managerial exp. in information technology, pref. in higher ed. Reports to Provost, manages staff of 109, annual budget of \$7.9 million. Expected to be institution's advocate for info tech. He/she will lead University in envisioning & planning effective use of information technologies.

Qualifications: Exc. interpersonal & oral/written communication skills; exp. with, & commitment to, participatory mgmt.; proven record (5+ yrs) in planning/problem solving & managing complex technological resources, budgets, & diverse info tech staff; knowledge & exp. with information & telecom technology; & Master's Deg. in approp. discipline. Prefer earned doctorate in Comp. Sci./Eng., MIS or related; prof. exp. in higher ed setting; exp. with state/federal agencies; proven record of obtaining external gifts & grants and promoting innovative use of technology to support teaching/learning process; exp. with delivery of distance learning through technology; exp. in high performance computing & distributed, client/server admin. systems; knowledge & exp. with multimedia technology; record of academic achievement including publications & participation in prof. conferences & organizations; prior exp. in mgmt. of computing & telecom facility.

To apply: Submit resume, list of refs, & detailed statement of interest to Dr. Robert D. Sindelar, Chair & Prof. of Medicinal Chemistry, Rm. 417-A Faser Hall, University, MS 38677, (601) 232-5879, E-mail: mcrds@cotton.vislab.olemiss.edu. Review of apps begins 2/1/97, continues until position filled. See <http://www.olemiss.edu/itsearch>. AA/ADA/EOE.

Position Available

Ramapo College of New Jersey

Telecommunications Specialist

Responsibilities: Manages PBX & voice mail technology. Advises & supports users; participates in planning/implementation of new telecom svcs. Troubleshoots, repairs, modifies, installs complex equipmt./components.

Qualifications: BA/BS + 3 yrs. exp. in maintenance, repair, installation of electronic components of telephones/networks, including PBX exp. (Add'l exper. considered as substitute for degree.) Must have demonstrated operational management of PBX technology, cable plant maintenance, ISDN, & Category 5 wiring. Exp. in these systems a plus: Fujitsu 9600, Centigram & Orbitel Call Acct. Exc. state benefits: health ins., vac./pers. time, paid holidays, tuition, pension.

To apply and/or request accommodations, call 201/529-7498; fax 201/529-7508. EO/AAE

Higher education will become global education

Futurist Joseph Pelton of the International Space University in France sees a global trend leading to the replacement of traditional universities with cyberuniversities and warns that if existing universities do not reform quickly, they will rapidly decline into irrelevance. He predicts a future in which education is deregulated and left more competitive; learning is redefined to focus on critical thinking skills rather than specific subject matters; educational systems are reshaped into global systems; grades and credit hours are eliminated; academic research is reinvented; experiential learning is emphasized; and education adapts to "the coming era of the Global Brain — in which the possibilities of reaching the billions of people who are now dramatically underserved by effective educational systems have become brighter than ever." (Joseph N. Pelton, "Cyberlearning Vs. The University," *The Futurist* Nov/Dec 96 p17)

Computer leasing gains in popularity

As colleges and universities attempt to cope with the short life-span of "state-of-the-art" technology before it's ruled hopelessly obsolete by students and professors, some are turning to computer leasing as a way to stay current while being flexible with respect to changing technology needs. "Institutions are realizing that technology changes so fast that leasing may be a tool to manage that change," says a computer administrator at UNC-Chapel Hill. While businesses have exploited the advantages of operating leases for years, enabling them to write off the payments as business expenses, many educational institutions prefer "capital leases," where the equipment is financed at much lower interest rates and then acquired at the end for practically nothing. (*Chronicle of Higher Education* 11/8/96 A23)

NYU expands learning opportunities

New York University has teamed up with IBM to boost the number of online course offerings from four to 30 by next year. The partnership focuses on classes geared toward information systems professionals, as part of a "global virtual college" program. "The goal is to allow computer professionals to sharpen their IT skills or obtain graduate degrees without entering a classroom," says the director of NYU's IT continuing education program. (*Information Week* 11/11/96 p136)

St. Edwards University offers faculty technology institute

Last summer St. Edward's University in Texas involved a fifth of their faculty in a summer technology institute to learn how to develop multimedia instructional materials. The 60-hour sessions—on instructional design, graphic design, World Wide Web development, and authorware—were developed by the Instructional Technology department and the Center for Teaching Excellence. Sample projects and information are at http://www.stedwards.edu/it_dept/instcom/summer/sti.htm.

West Chester University tries Web-based distance ed

West Chester University has expanded its Web use into distance education with its new WebCourse Project. The first class was introduced this fall, with a Web version of the multimedia "Introduction to Mass Communication" course offered by the Communication Studies Department. The 15 students taking the WebCourse are in contact with the professor via e-mail and by voice through the Web. Contact: Adel Barimani, executive director of Information Technologies and Academic Computing, abarimani@wcupa.edu

Campus News Briefs

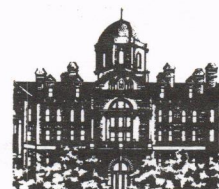


Illustration courtesy of MCI

Thanks to CAUSE's electronically delivered Campus Watch for the information on this page.

Industry Insights



High-Speed Access for Rural Health Care

Health care providers serving rural areas should have access to communications services at transmission speeds up to 1.54 megabits/second and at prices comparable to those available in urban areas, according to a report by the FCC's Telecommunications and Health Care Advisory Committee. The panel also recommends that funding should be available to develop communications infrastructure in rural areas. The report was submitted to the federal-state joint board on universal service, which was to make recommendations to the FCC on how best to implement section 254 (universal service) of the Telecommunications Act of 1996.

Clinton Administration Proposes E-rate

Education Week (10/16/96) reports a plan by the Clinton administration for a discounted "E-rate" for telecommunications services to educational institutions. Under the two-tiered pricing proposal, presented to the Federal-State Joint Board on Universal Service in November, schools and libraries would not be charged for first-tier services, including basic connectivity and Internet access at adequate transmission speeds. The second tier of services would be discounted. Further discounts would be available for schools and libraries in "high-cost or low-income areas."

"Information Furnace" will replace home PC?

Some computer manufacturers and industry analysts predict that a micro version of a client-server network will soon replace standalone desktop units in the home, with one central server computer connected to several clients. IBM's new line of Aptiva computers features a minitower that can be positioned separately from the compact console that houses the CD-ROM and floppy drives and their power controls. Compaq is working on a wireless network solution. And *Investor's Business Daily* (10/15/96) quotes a senior VP at Hewlett-Packard: "All of these devices will one day be interconnected using a high bandwidth home network... Many of the technologies needed to realize the vision of a home information furnace and its attendant network are available today."

Singapore—A City for Tomorrow

From *Fortune* (10/28/96): The government of Singapore, hoping to become the world's first "intelligent island" by the year 2000, has invested more than \$2 billion over the past five years in state-of-the-art technology infrastructure. The result is high-speed computer networks that provide the most advanced finance and government document-processing services in the world. Using multimedia kiosks sprinkled around the island, Singapore's 3 million citizens can purchase zoo tickets, settle parking fines, and pay insurance premiums. In addition, trading firms use a TradeNet computer network to submit import and export permits electronically, cutting the approval time to about 15 minutes. And LawNet allows legal firms to access legal code and court notices directly for their clients.

Low-cost alternative to satellites?

According to *Discover* (Nov. '96) engineers from Rockwell Corp., NASA, and UCLA are working together to develop a fleet of "unmanned air vehicles" (UAVs) that can remain aloft for months. Each craft has a 43-foot wingspan, with solar panels covering 90% of that area. On-board computers digest data from Global Positioning System satellites to direct the five UAVs as they fly in V formation at about 65,000 feet (high above any airliners and the turbulent jetstream). NASA plans to use the UAVs to monitor storms, clouds, and floods. The UAVs can also be used as low-cost hubs for cellular phone networks. With a cost of about one tenth the cost of a satellite, this is a fairly economical way to put up cellular phone-type systems.

Laptop Alarm

Innovative Security Products' Alarm Guard (\$50) should stop thieves who would snatch your laptop. A paging device in your pocket and another one on your laptop shriek until you deactivate the system if they get too far apart.

Spotlight

Welcome to two of ACUTA's most recent Corporate Affiliate members:

TEL-Vi Communications is a full service cabling contractor providing structured cabling systems for voice & data, audio/visual, and security requirements. TEL-Vi offers a staff of experienced professionals to design and build tomorrow's technology today! *Howard Theisman, 314/343-9977*

Mohawk/CDT engineers and produces high-performance network cables of copper, fiber optics, and composite cable constructions, for local area networks, multimedia, ATM applications. An ISO 9001 company dedicated to performance. *Bill Wright, 508/537-9961 or 800/422-9961*

CHEMA Proposes Exciting Initiatives

Twice per year, ACUTA officers have an opportunity to meet with the elected and chief staff officers of other higher education associations at the Council of Higher Education Management Associations (CHEMA). These meetings are always stimulating, as the discussion ranges from visionary ideas to nuts and bolts solutions to the challenges confronting higher education and associations.

The ACUTA Board has set a high priority on participation in CHEMA, in order to enhance the visibility of telecommunications professionals, and to increase our understanding of the concerns and issues being faced by our colleagues in other administrative areas.

The most recent CHEMA meetings were held November 23-26 in Tucson, AZ.

Benchmarking was a hot topic at the meeting of the National Benchmarking Council for Higher Education, held on Saturday with CHEMA members and others from academia invited. This was the second meeting of this group, which was formed to coordinate the benchmarking activities of various associations. An increasing number of legislators, governing boards, parents, alumni and students are seeking data which demonstrates cost effectiveness and efficiency in the management of higher education. The group reached a consensus that it is desirable for the associations to voluntarily coordinate their efforts to achieve consistency and provide a recognized, credible source of information.

The Council adopted a vision statement and statement of purpose, which will be finalized and circulated to all members. When it is available, we will share it with ACUTA members via this newsletter.

The NACUBO staff also shared their 1996 Benchmarking Project survey document with us, including the sections on Information Technology and Telecommunications. Through the results of this study, participating institutions receive confidential data that enables them

to measure and compare their own performance to that of other institutions.

CHEMA members also agreed to explore the feasibility of a joint "mega-conference" sometime around the year 2000, which would be a summit on the management of higher education. The conference would be designed to attract the members of CHEMA associations and their bosses at the Vice Presidential and higher levels. Its goal would be to foster communication among the various management disciplines, and a joint problem-solving approach to the issues facing higher education. A task force was formed to explore the possibilities.

We also learned about current and projected Federal legislative activity for the next session of Congress. Discussion was held on the Administration's proposed budget (education has fared well so far), college costs, distance learning, and technology issues (expected to be addressed in several education-related bills, rather than specific legislation). We also discussed IRS activity with colleges and universities (focusing mostly on HR, pension, and taxation issues next year), and affirmative action (which may be addressed in refinements of the Higher Education Act).

ACUTA will be asked to supply speakers for several CHEMA association conferences and workshops during the coming year. This is a great opportunity for visibility for telecom and member campuses, and we will be asking members to assist in this effort. We will also take every opportunity to include speakers from other disciplines in ACUTA events, when it is relevant to the topic and helpful to our membership.

CHEMA members also participate in a joint international initiative, to distribute copies of the *ACUTA News*, our new Journal, other CHEMA association publications, meeting dates, electronic services, and other information on higher education management to institutions outside the U.S. and Canada.

From ACUTA Headquarters



Jeri A. Semer, CAE

ACUTA
Executive Director



The partnerships that ACUTA develops through participation in CHEMA benefit the Association and you as a member. We gain ideas from other higher education professional staff, and insights into trends and challenges. We have a lot in common, and we all benefit from communication and cooperation.

Have a wonderful holiday season, and we hope to see you at the Winter Seminar in Florida!

Position Available Univ. of Kansas

Assoc. Vice Chancellor for Info. Tech. Svcs

Provide visionary leadership & sound management for info technology on Lawrence campus of Univ. of Kansas (KU), consistent with University's mission. Administrative responsibility for budget of \$16.7 million+ & lead 4 operating units: Academic Computing Svcs, Computing Svcs [principally admin. computing], Networking & Telecomm Svcs, & Printing Svcs, with staff of 198 FTE, aided by corps of student employees equivalent to 33 FTE. Must work closely KU's campus community (27,000 students & 1,000 faculty), KU Med Center campus, others in State of Kansas, & leaders across the nation.

Responsibilities: Develop plan for info technology that empowers progressive, service-oriented division to meet needs of faculty, students, staff, & admin.; manage resources & personnel effectively; contrib. to development of instit. policies related to info. tech.; work with Vice Chancellor & others to seek external funding to support technology initiatives.

Qualifications: Ability to plan for & manage info. tech. at a Carnegie I Research Univ. Current prof. knowledge necessary to lead staff in info. tech., incl. work with client/server systems (Internet/intranets) & knowledge of developments in telecom/networking. Exc. oral & written communication skills, demon. ability to work successfully with diverse constituencies. Master's deg. from accredited instit.; additional graduate or prof. deg. desirable.

Contact: Letters of nomination & applications due by 1/2/97. Review of apps will begin 1/15/97 & continue until selection is made. Send letters of app., curriculum vitae, & names, addresses, & phone numbers of 5 refs to: Dean Michael Hoeflich, Office of Vice Chancellor for Info. Svcs., 132 Strong Hall, Univ. of Kansas, Lawrence, KS 66045-2850. See also: <http://www.cc.ukans.edu/~position/>
EO/AA Univ. policies prohibit discrimination.

Position Available Arizona State University Internet Network Engineer

The Arizona Tri-University Network (ATUNET), is seeking a highly motivated individual with strong organizational & leadership skills to provide technical assistance to the Tri-University Telecommunication Services staffs in designing, implementing, & operating the statewide TCP/IP network. Position will act as liaison with 3 Universities' Network Operations Centers relative to WAN issues only. Position is not responsible for LAN issues within individual universities. For application & deadline info, connect to: <http://www.asu.edu/it/fyi/ATUNET/>

2 Positions Available Univ. of Pennsylvania

1. Senior Telecommunications Specialist

Responsibilities: Manage the implementation and support of voice processing and related telephony technologies (IVR, fax, etc.) for faculty, staff and students.

Qualifications: BA/BA or equivalent experience, several years telephony, voice processing experience and computer literacy required; supervisory experience desired; related computing and network experience helpful; excellent verbal and written communications skills necessary. (Exempt position)

2. Telecommunications Service Asst.

Responsibilities: Provide customer support and implementation assistance for telephony and voice processing products and services.

Qualifications: HS diploma and some college or equivalent experience required; experience in telephony and/or voice processing required, computer literacy, strong verbal and written communications necessary. (non-exempt position)

Contact: Laurie Cousart, Director, Telecommunications, Suite 449A, 3401 Walnut St, Philadelphia, PA 19104-6228
cousart@pobox.upenn.edu 215-898-2290
215-573-2200 fax.

Competitive salaries & excellent benefits.

Position Available Duke University Communications Center Manager

Responsibilities: Direct the operations of a large complex call center including daily operations, policy decisions, personnel management, traffic data analysis and assure provision of high quality services to entire university, hospital and medical center.

Qualifications: AA/AS in Communications with six years switchboard operator or related experience incl. two years in supervisory capacity. Prefer medical center and/or hospital background, budget projection, & word processing software experience.

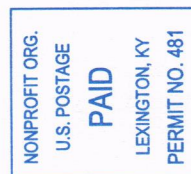
Contact: Submit resume to: Communication Center Search, Duke University, Box 90210, Durham, NC 27708. EO/AAE

2 Positions Available Capital University ProgrammerAnalysts

Responsibilities: Maintain, update & create automated information systems serving (Position 1) Financial Aid, Finance (student account), Registrar & Student Affairs/Housing offices; (Position 2) Admissions, incl. Law & Adult Degree Programs, Cash Receipts, General Ledger, & Human Resources modules of the Colleague admin. mgmt. system. Successful candidates will work closely with client offices, supporting their operations & will maintain & enhance existing systems to meet current needs & conform to changing policy.

Qualifications: BA/BS Comp. Sci. or related with min. 2 years in data proc./systems analysis exp. Competence in BASIC programming lang. & exposure to Case tools. Training with DATATEL Version 12 & above in Unix/Unidata environment pref. Commitment to cust. svc., strong communication & interpersonal skills necessary. Knowledge of business apps in complex univ. environment a plus.

To Apply: Applications accepted until positions filled. Anticipated starting date Jan. 97. Send resume or requests for info to: Dr. Robert Paterson, Director, Information Technology, Capital Univ., 2199 E. Main St., Columbus OH 43209 rpaterso@capital.edu EOE



Association of College & University
Telecommunications Administrators
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