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## ACUTA eNews July 1992, Vol. 21, No. 7

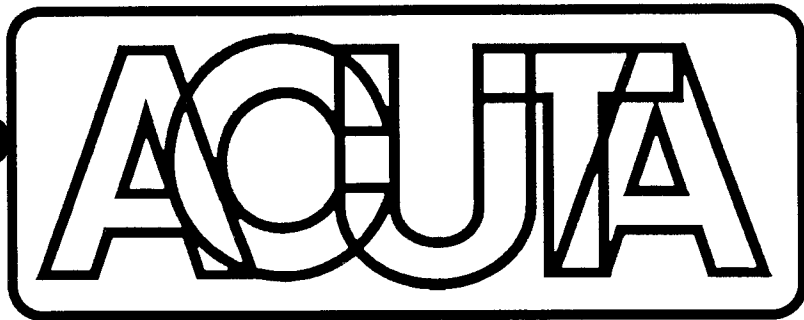
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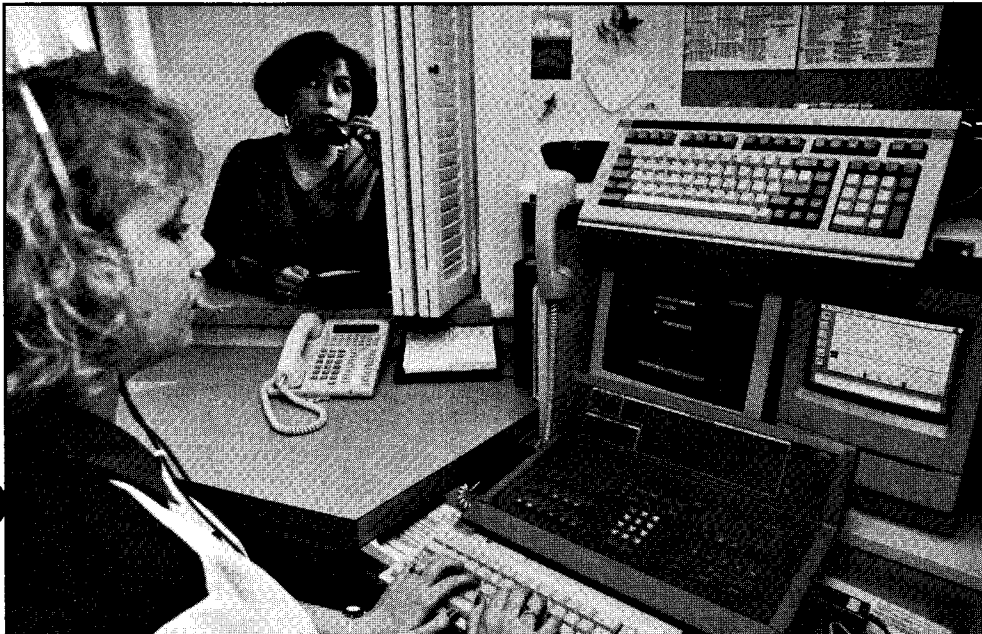
See you in San Francisco, July 26-30!

# NEWS

Association of College & University Telecommunications Administrators

THE VOICE OF TELECOMMUNICATIONS IN HIGHER EDUCATION

JULY 1992



*Westmont College operators Courtney Fetter (left) and Shannon Martinez provide long distance operator services for the 1,200 student campus community with equipment and support from three different vendors.*

## Westmont serving as its own OSP

Eight years after breakup of the Bell System, most U.S. colleges and universities have found it to their advantage to serve as their own telephone company.

This year, Westmont College became what may be the first institution of higher learning to provide its own long distance operator services.

By taking this novel step, Westmont hopes to make its telecom services completely self-supporting.

The goal, says Telecommunications Manager Steve Mathison-Turner, is to "make funds available for equipment upgrades and migration to new technologies."

Like other colleges and universi-

ties, financial and other constraints leave Westmont College (enrollment 1,200) precious little room for maneuver as it plans for its future.

Built as an enclave of a 120-acre wooded estate in Montecito, California, enlarging the campus to accommodate more students is not an option. With tuition already at \$17,000 a year, increasing student fees at the private, Christian, liberal arts college would not be realistic either.

One potential solution is to expand the college's outreach with distance learning technology.

According to Turner's projections,

*(Please turn to page 6)*

## Canada to get long distance competition

By Mal Reader

University of Calgary  
Region 5 (Canada)

Yesterday's coast-to-coast unifying force was the railroad; today, communication networks provide the essential linkages. Yet the Railway Act of 1906 remains the basis of all federal telecommunication regulation in Canada.

But just as the railroad itself is now no longer a monopoly – the scenic route between Calgary and Vancouver through the Rockies is now a private enterprise – neither is long distance service.

On July 1, 1992, Canada celebrated its 125th birthday. On June 12, celebrations were already underway at Unitel Communications Inc. and BCRL as an historic decision by the Canadian Radio-television and Telecommunications Commission (CRTC) opened the way for their entry into the \$7.5 billion Canadian long distance market. In one two-pronged, dramatic ruling, the federal agency broke the monopoly that Canada's 15 provincial and private telephone companies have enjoyed since telephone time began.

Canada has trodden cautiously on the issue of telecommunications competition over the last two

*(Please turn to page 7)*

# Toll fraud can strike anywhere, anytime

What should you do if toll fraud occurs?

The Tele-Communications Association recommends that you immediately contact your long distance carrier, who will have a security manager contact you.

You should also contact your account team and service personnel, who may be able to stop or slow the fraud by blocking certain NPAs from accessing 800 numbers.

In addition, contact your equipment vendor, who may be able to restrict the PBX trunks associated with remote access.

How can you recognize toll fraud?

Here are some clues that may indicate that toll fraud is occurring in your system.

- An increase in inbound 800 traffic, possibly causing blocking of legitimate inbound calls
- An increase in outbound traffic to any numbers - 700, 800, 900 or direct-dialed calls to domestic or international locations. Again, this could cause blocking of legitimate calls. Although the majority of unauthorized calls ultimately terminate in foreign countries, they may be routed

through several PBXs first.

- SMDR reports indicating multiple attempts to enter invalid authorization codes associated with a remote access feature
- An excessive number of hang-ups or "phantom calls"
- Unidentifiable voice mail messages
- High usage at odd hours

Because of the variety of ways telecommunications fraud may be carried out, any abnormality in traffic patterns should trigger investigation.

TCA suggest these precautions:

- Block remote access calling or use a separate non-published number during non-business hours.
- Delay the PBX answer to four or five rings, use a voice recording or a silent prompt rather than steady state tone.
- Restrict long distance calling capability and ensure 800 numbers are restricted to appropriate geographical bands.
- Individually assign random authorization codes on a "need to have" basis and educate users to protect security of codes.
- Deactivate all unassigned codes, routinely audit assigned

codes with log of assigned users. Frequently change password codes.

- Obtain and monitor call detail reports noting traffic patterns and invalid/short-duration call attempts.

- Discuss PBX defenses with vendor/supplier and know whom to contact when security problems are suspected.

- Use data "lock and key" systems to protect systems administration ports from unauthorized access and tampering.

- Authorization codes should contain maximum number of digits.

- Assign authorization codes, one code per person, on a "need to have" basis and maintain a protected/secure log of all authorized users.

- Review traffic reports on remote access functions for unusual volume or shifts in usage patterns.

The Federal Communications Commission (FCC) may help resolve billing disputes.

The FCC has authority to handle complaints that involve billing disputes that arise from acts of interstate or international toll fraud.

You should first call your local telephone company if the billing page in question was included with your local telephone bill or if the long distance company was identified on the billing page.

If you are unsuccessful in your attempts to resolve the complaint yourself, you can file a complaint with the FCC. A copy of the telephone bill or bills listing the disputed charges should be included with the complaint.

There is no special form to fill out.

The address is:

Complaints and Public Inquiries Branch, Enforcement Division, Common Carrier Bureau, Federal Communications Commission, 2025 M Street NW, Suite 6202, Washington, DC 20554. ↵

## Association of College and University Telecommunications Administrators - ACUTA NEWS, Volume 21, No. 7

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## MESSAGE FROM THE PRESIDENT

Paula Loendorf,  
University  
of Arizona

Recently the ACUTA office informed me that I had to write my farewell message.

"Farewell," I thought, seemed like a word of such finality, a word used dozens of times during the good-bye parties as I left the University of North Dakota. Thinking I might find a better word, I looked up "farewell" in the

thesaurus on my word processor. As a substitute for "farewell," it offered "adieu, adios, good-bye, departure, parting or valediction." With my move to a more southwestern abode, I guess the most appropriate might be "adios." But that also sounds rather irrevocable. So to put this message in a more cheerful tone, I shall use the antonym for "farewell," which is "welcome."

As I leave my role as president, I welcome Coley Burton, the incoming president of ACUTA. He is an accomplished leader who has demonstrated his ability through years of service to the Association. He has made significant contributions through his work as an officer and committee member but also by writing publications and teaching workshops and seminars.

I welcome the results of the Strategic Planning Committee, the first such effort in a decade. I believe that ACUTA members will be pleased with the committee's vision and the goals and strategies recommended to achieve that vision. The plan will be presented to the membership at the Annual Conference in San Francisco.

I welcome the results of each ACUTA committee and their contributions to improved member services. Recommendations from each group were incorporated, to the extent possible, into the strategic plan.

I welcome the new members of the Executive Committee and Board of Directors who will soon be elected. Serving in these roles is not only a privilege but an opportunity to do good things for

the Association and for your own professional development.

I welcome the recent reorganization of the ACUTA office, addition of new staff member Kevin Adkins as Telecom Resources Manager and the enhanced service to members this will allow.

I welcome the new members who have joined ACUTA during the past year. Although the membership drive was not as successful in terms of numbers as I had hoped it would be, I believe that those who did join will find the benefits of ACUTA worthwhile.

I welcome the improved dialogue that has taken place among members, Board members and the ACUTA office. Communication and shared information among various constituencies is important to the success of any organization. Responsiveness to member needs and concerns is a key element in membership retention and growth.

Finally, I want to thank Board and committee members and the ACUTA staff for their contributions to the Association and for the personal assistance they gave me in countless ways this year. Association leadership and governance require dedication, hard work and a huge time commitment from Board members – something often taken for granted by those less involved in the daily workings of an organization.

I want all of you to know that I appreciate what you have done for me and for ACUTA this year.

THANKS for making this a very special year for me! ☺

## Preview of the hot topics at San Francisco Conference

Preference cards submitted with Conference registrations forms up to June 24 give an indication of which sessions will be the most popular in San Francisco.

"Personal Communications and Cellular" and "Campus Network Strategies for the '90s and Beyond" look to be the top draws on Tuesday.

On Wednesday, 30 or more attendees have expressed interest in "Student Calling Cards," "Voice Processing Applications," "Regulatory Update" and "Strategic Long Range Planning." On Thursday, the most popular sessions are likely to be the presentation of "ACUTA's Strategic Long Range Plan" and the User Group meetings. See you in San Francisco! ☺

## Comprehensive, flexible system with service, guarantee

**By Howard Lowell**  
Colorado State University  
Region 4 (West)

We had an extensive checklist when we went shopping for a new communications system for Colorado State.

The underlying issues we had to face were no doubt similar to those on many ACUTA member campuses:

- Increasing enrollment,
- Supporting our institutional role as a public servant
- Avoiding switch obsolescence
- Maintaining built-in system reliability
- Budget limitations.

From these broader issues, we narrowed our focus to some more specific goals that went into our request for proposals (RFP).

These included:

- Providing for continued growth in station-line requirements

- Providing for additional traffic capacity
- Voice processing/voice mail as an optional offering
- Student 1+ long distance as an option
  - Access for selected station users to the FTS2000 network
  - Full participation in county-based 911 system
  - Real-time access to long distance records by polling from the management system
  - Reuse of in-place cable plant, station terminal equipment, tie-line interface equipment and, if possible, the existing battery plant
  - Capability of implementing, at minimum cost, on-campus and public-network-based ISDN services as the need arises
  - Full feature-transparency between remote and main-campus PBXs.

- Switching system life expectancy of at least 10 years
- Dialed number identification
- "800" number service.

The general contract went to US West Communications Services which tailored their proposal to our rather specific requests. Their response included a Meridian SuperNode switch from Northern Telecom and a voice mail system from Octel. A training program that would enable the university to manage and administer the systems according to its changing needs was also included.

The Meridian SuperNode is a member of the industry-standard, Northern Telecom DMS, family of central office switching systems. These switches incorporate a modular hardware and software design which allows for flexibility in system application.

The modular design also permits incremental application of software and hardware features without requiring major system configurations. It can physically terminate and process in real time up to 60,000 lines. It interfaces with voice mail applications, such as Octel's, via the Simplified Message Desk Interface (SMDI), another industry standard.

In addition, a variety of long distance, toll and ISDN (integrated digital services network) software packages provide control and access to the Federal FTS 2000 and public long distance.

To meet the university's concern for product life expectancy, Northern Telecom guarantees the availability of support for the Meridian SuperNode for at least 10 years after date of purchase.

Colorado State is confident that it has a viable, long-term communications system that has a history of growth and continued enhancement behind it. In addition, we're assured of working with vendors who will support the university and its endeavors well into the next century.

## Pulse-to-tone converter means more happy customers at Brock University

**By Bruce McCormack**  
Brock University  
Region 5 (Canada)

Like most institutions, Brock University was faced with a dilemma when it installed an automated attendant and voice mail facility on its old PBX. What do you do about those individuals with old rotary or pulse dial phones? You don't want to deny them

access to DTMF-based features.

The solution for us was to install a pulse-to-tone converter on all incoming trunks. The type we chose comes in either a four- or eight-trunk configuration and is stackable. After a great deal of trial and error in selecting parameters, including tone duration, minimum pulse rates and flash durations, a hit rate of 91 percent was achieved.

Since installation eight months ago, self-directed calls have risen from 56 percent to 82 percent. Another positive effect has been the extra assistance our switchboard operators have been able to give callers now that call flow has been reduced.

In general, the Telecom Department has received only positive feedback since installation of the converter.

How often does that occur in a service department? ☺

### Bell Atlantic gets Duke contract

Duke University has signed a contract with Bell Atlantic for maintenance surveillance of its central office switch, a 5ESS that serves more than 21,500 lines. ☺

### Lebanon Valley goes with Nat'l Tel

Lebanon Valley College of Annville, PA, reports that National Telephone Exchange of Harrisburg, PA, became its long distance carrier, effective June 30. The contract includes year-round calling card use by staff and students with commission. ☺

# Bayliff, Aylward elected to regional directorships

Balloting by ACUTA members in Regions 2 and 4 has elected one newcomer and returned one incumbent to the Board of Directors.

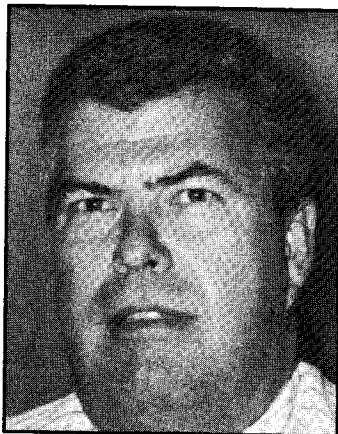
Buck Bayliff, Director of Communication Services at Wake Forest University, will join the Board representing Region 2 (South-east).

Robert Aylward, Assoc. Director of Information Technology at the University of Wyoming, will continue to represent Region 4 (West).

Their two-year terms will begin at the close of the Annual Conference in San Francisco, July 30.

"I look forward to serving the membership in the region, and I will work hard for ACUTA," said Bayliff. "It is important to ask what we can do to strengthen our organization. If we all make the effort, ACUTA has a lot to offer at some level to each of us."

Bayliff established student services at both Wake Forest and Elon College, where he worked



**Buck Bayliff**



**Robert Aylward**

prior to joining Wake Forest. He has gone through three switch cutovers – one analog, two digital. In 1988, he coordinated communications for the Bush-Dukakis Presidential Debate at Wake Forest.

Aylward, who had served a special one-year term created when ACUTA initiated direct election of Region Directors last year, said the "opportunity to serve the membership has been a rewarding experience. ACUTA is in an exciting time of transition.

We have the opportunity to move ACUTA forward to become a world-class organization."

During the past year, Aylward has also served on the Strategic Planning Committee. "I have tried to represent the values and needs of the membership in this crucial role," he said. "My goal is to support activities to strengthen member benefits, especially peer networking and educa-

tional programs."

Jim Dronsfield, Director of Telecommunications at Duke University, the incumbent, was the other candidate for Region 2. Ferrell Mallory, Director of Communications Systems at Brigham Young University, was also on the ballot for Region 4.

Ballots were mailed to the ACUTA office where they were counted by the ACUTA staff. President Paula Loendorf notified the candidates who then had five days to request a recount or audit. ↵

## CD-ROM brings directory assistance in-house

Switchboard operators at Hofstra University handle 90 percent of the campus calls for directory assistance by using Fast Track, a CD-ROM service provided by Nynex, according to Cathy Alzapiedi, Manager of Telecommunications.

After investing \$9,500 in hardware and then paying subscription fees, the university still realizes a savings of at least \$8,000 a month, Alzapiedi reports.

When on-campus callers dial 411 or 0 at Hofstra during the day or evening, they don't get the local exchange company. They are connected to campus operators who can search for names, numbers or addresses from the Nynex-supplied data base.

"Our operators were already on-line with the campus directory," Alzapiedi explains. "Now they can instantly call up the Nynex data base, containing 'white page' directories from throughout the northeast, on their console screens."

"Hofstra's operators are on the leading edge of a quiet revolution" that will ultimately transform the \$1.8 billion directory assistance business of local exchange companies. *The Wall Street Journal* predicts.

Described as the biggest innovation since computer voices began intoning phone numbers a decade ago, telephone companies and their competitors are assisting large users with setting up their own directory assistance services. This will free telephone company operators to assist customers with more complex services, the newspaper said.

To appeal to customers who need nationwide rather than regional service, Nynex is teaming with Metromail to obtain national coverage. US West is planning a similar service with PhoneDisc, the Journal added. The Brigham Young University library has subscribed to PhoneDisc since August 1990.

According to Reference Librarian Haybrom Adams, the CD-ROM attracts three main kinds of users: genealogists, former students looking for information about classmates and lawyers trying to locate people who have ducked out on financial obligations.

There was no word on whether student loan officials have used the service to track delinquents or if alumni associations have had success finding those "lost alumni" who are potential donors. ↵

# Westmont College providing own operator services

(Continued from page 1)

100 students enrolled in a distance learning program – paying only 75 percent of the tuition paid by on-campus students – would generate \$1.27 million in revenue annually. If telecom can be made a revenue producer, instead of a revenue consumer, the college may be able to invest in distance learning technology and begin testing the viability of off-campus programs.

But, back to the more prosaic project of giving campus telecom a positive cash flow by providing its own operator services.

In February of this year Westmont installed a Hospitality Operator System (HOS) from SwitchLink Systems of Portland, Oregon. It sits lineside and interfaces with the college's NEAX 2400 PBX (as with virtually all PBXs on the market today) to handle operator-assisted calls from 1,500 lines serving students and the administration.

Routing and billing information for 0+ calls is captured and sent to the central office as 1+ calls, eliminating costly backhauling to an OSP. As a client of MCI Vnet, Westmont pays only 8.5 cents a

minute plus validation for each 1+ call. But the college can sell the service at a margin – 22 cents a minute plus a 70 cent surcharge, the AT&T rate.

Turner projects that this arrangement will allow Westmont to realize an annual return on operator-assisted calls of \$50,000 to \$60,000. Previously the return had ranged from \$12,000 to \$20,000. The \$40,000 yearly gain will cover payments on the HOS, the fees to connect it to the switch, a new PBX board and directory assistant PC for the second operator station added to field both 0+ and switchboard calls during peak times.

"Acceptance of the new system by faculty and students has been positive after an initial training period," Turner reports. "We saw a slight increase in dial-around by callers using 800, 950 and 10-XXX access when we first introduced the menu-driven, automated system. Dial-around has leveled off to where we are processing three-fourths of the calls that had been going to outside OSPs."

Calls are validated in batch by Zero Plus Dialing Inc., the clearing house that sends Westmont's

calls to the local exchange carrier (LEC) for billing and collection. Soon, however, the HOS will offer real-time validation, which will minimize exposure to fraudulent calling card use.

Although Westmont's switch is capable of processing 10-XXX access-dialing, the HOS can successfully screen 10-XXX calls for switches that need modification to perform this function required by the Operator Services Act of 1990.

Other requirements of the Operator Services legislation and FCC rules, such as informational and rate tariffs, that apply to OSPs and aggregators of 0+ traffic are handled for the college by SwitchLink systems. "This service was essential to our foray into the 0+ market, since it is impossible for me to be an expert in every technology and every facet of the industry," explains Turner.

"There are risks in providing operator services," he is quick to add, "such as the risks of regulatory compliance and the risk of assuming responsibility for placing calls. But with higher risk comes the opportunity of greater reward."

From his past experience as part owner of a California long distance service – Call America – Turner is oriented toward new technology and opportunities to put it to practical use. "I came to Westmont College four years ago with that mindset," he says. "Telecom then consumed \$200,000 of the college's budget. This year, I hope we may be self-sufficient. In three years, I hope to have a fiber backbone in place, and in five to have interactive video for distance learning." ☺

## ComNet set for San Francisco week prior to ACUTA Conf.

The week prior to ACUTA's annual conference – July 20-23 – the second annual ComNet San Francisco Conference will be held at Moscone Center. ☺

## ACUTA Calendar

• Fall Seminar •  
Hilton Head, SC  
Nov. 1-4, 1992

HOTEL: Hyatt Regency  
TOPICS: "Disaster Planning"  
"Technologies Update"

• Spring Seminar •  
Vancouver, BC  
April 18-21, 1993

HOTEL: Hyatt Regency  
TOPICS: "Strategic Planning for Telecom"  
"High Performance Wire  
and Wireless/Cellular"

• Winter Seminar •  
Tampa, FL  
Jan. 10-13, 1993

HOTEL: Hyatt Regency West Shore  
TOPICS: "Practical LANs and Internet"  
"Voice Response, Case Studies"

• 22nd Annual Conference •  
Nashville, TN  
July 18-22, 1993

HOTEL: Opryland Hotel  
TOPICS: Management, Regulatory  
Issues; Professional Growth, Voice,  
Data and Video, User Groups,  
Regional Meetings

Seminars scheduled for 1993 and the remainder of 1992 will each have two topics on separate tracks.

# Long distance competition coming to Canada

(Continued from page 1)

decades. As recently as 1985, the CRTC rejected an application similar to the one that it approved on June 12.

A panel of interconnect proponents and federal government regulators debated the issues at the 1975 ACUTA Conference in Toronto. The regulators made it clear that they intended to study and learn from the U.S. experience before affording Canadian consumers freedom of choice in the areas of system selection. Interconnect duly arrived in the early '80s and has flourished. So have the phone companies, whose monopolies over local pay-phone and long distance services allowed them to adjust to the new, competitive PBX and terminal instrument environment.

Although 80 percent of Canada's population lies within 100 miles of the U.S. border, no region of this vast country is without reliable, affordable communications. The telephone monopoly has seen to that.

The telcos were mandated and obligated to service the entire population, not just those whom it was convenient to serve. Revenue from long distance has been used to keep local service affordable. Coast-to-coast systems in Canada are second to none, and the benefits of standardization and cooperation among the carriers – motivated in part by their share of considerable long distance revenues – are apparent.

Now that competition in long distance is to become a reality, the familiar issue of cross-subsidization will again be the subject of much debate.

"Canadians want us to be vigilant in maintaining affordable local service." CRTC Chairman Keith Spicer told a press conference audience. "This is *not* de-regulation." To ensure that local rates will not rise significantly as a result of

## Decision Highlights

- Unitel and BCRL allowed to provide competitive long distance services
- CRTC is predisposed to approve future applications for additional long distance competitors
- Resellers allowed to resell WATS
- Resale opened up in Atlantic provinces
- Expectation that competitors will achieve 30 percent market share in 10 years
- Unitel, BCRL and resellers to divert portion of long distance revenue to subsidize local telephone rates
- Subsidy payments to be discounted in early years to offset the competitive disadvantages of new entrants
- CRTC's tariff approval process to be made simpler and faster for all long distance service providers
- Competitors allowed to interconnect via CCS-7 gateways where available
- 800 and 900 number portability approved
- No significant impact foreseen for local rate levels

competitors eating into the telcos' long distance profits, each of the new long distance players must pay a subsidy to the telcos for the next 15 years.

Bell Canada's president immediately discounted the notion that the subsidies would be sufficient. According to *The Wall Street Journal*, Bell Canada, the country's largest telephone company, with operations in Ontario, Quebec and the northern regions, led the fight against long-distance competition, claiming that it would raise overall phone bills for nine out of 10 Canadians.

The Canadian Consumer's Association and the Canadian Business Telecommunications Alliance (CBTA) were less skeptical. CBTA President George Horhota predicted that "over the next few years, business users can look forward to long distance rate reductions, introduction of new services and greater responsiveness by all long distance suppliers."

Unitel Communications Inc. of Toronto was formed two years ago when Canadian National/Canadian Pacific Telecommunications, with a strong customer base in Telex and data transport service, merged with

Rogers Cable Ltd.

The ruling will allow Unitel to continue building its own networks (it presently provides telefacsimile and private-line telephone service) provide access into other carriers' networks and provide long distance services in all provinces except Alberta, Saskatchewan and Manitoba.

The company intends to ask the CRTC for permission to tap the Alberta market in the near future. Alberta was still under its Public Utility Board's jurisdiction when the application was made. But when Alberta Government Telephones became

privatized under the Telus Corporation banner earlier this year, it changed from PUB to CRTC jurisdiction.

Saskatchewan Government Telephones and Manitoba Telephone System, both still Crown corporations, will not be subject to CRTC regulation until the new Telecommunications Act is issued in Parliament.

A draft of the Act, introduced in Parliament on Feb. 27, 1992, is expected to be debated and revised over the next several months.

BCRL, a joint venture of BC Rail, Call-Net Telecommunications Ltd., and Lightel, a fiber optic company, will now be allowed to compete in the Ontario, Quebec and British Columbia long distance markets. In approving BCRL's application along with Unitel's, CRTC Vice Chairman Bud Sherman predicted that "moving from a monopoly to a competitive marketplace will offer Canadian consumers greater benefits, such as lower long distance rates, new services and products as well as improvements in the overall competitiveness of Canadian business."

The Canadian Business Telecommunications Alliance (CBTA), which

(Please continue on page 10)





## PARTY LINE

Ruth Michalecki

*Univ. of Nebraska, Lincoln*

### ICA Expo Review

One of the hottest items at the ICA Expo this year was AT&T's emphasis on its Interspan Services, specifically the Interspan Locator Service. It was especially interesting to me since one of the finalists in the "ICA Student Paper Competition," graduate level, had submitted a paper on using "950" numbers on a much broader scale than they are being used today.

Lucy Vento, a student at the University of Colorado-Boulder, expects to receive her master's degree in telecommunications this year. According to her research, "950" numbers can provide faster, less costly and more efficient access to informational data bases or for short voice-type informational messages. The most effective use involves transaction and/or voice calls with a usage pattern of about one-minute's duration.

As everyone knows, 950 numbers are Feature Group B Service in an equal-access, central telephone office. Normally one associates 950 prefixes with local access numbers to resellers and interexchange carriers. However, more and more businesses are taking advantage of this unique service by replacing their 800 numbers with 950 numbers.

Feature Group B is a trunk-side switching connection, usually provided by common transport through an access tandem. But in many electronic end offices, it can be provided through dedicated transport in both directions. 950 numbers are nationwide in the following Bellcore format: 950-XXXX, with the X representing a one or zero; the Ys represent the

three-digit Carrier Identification Code (CIC).

When the caller dials the 950 number, the local telco end-office recognizes the prefix and sends the call to an access tandem or end office where the number is translated and sent to the designated carrier. Service is cheaper than Feature Group D, and it provides answer-back supervision as well as ANI.

Domino's Pizza uses AT&T's Interspan Locator Service in its network. A customer calls 950-1430, a nationwide number for Domino's. To the customer, however, it appears to be a local number, and the call is free to the caller. The local exchange carrier routes the call to the AT&T POP, where the call is then sent to a network at the Domino's Transaction Center. The network consists of a series of computers containing the Domino's database and a specially built Bell Labs unit called a Digital Link Splicer.

The call is held in the Splicer while the processor strips the ANI from the call and searches the database for the Domino's nearest the incoming caller's home address. Once the nearest store location is identified, the caller's phone number is sent to the Splicer. The Splicer dials the nearest store's number, splices the incoming call, and the customer is talking directly to the store's clerk who will take the order.

Although it sounds fairly complicated, the entire process takes about seven seconds for the call to start ringing at the pizza store nearest the caller's home.

Other business applications include credit card validation, transaction processing service bureaus, hotel reservations, etc. Most of these applications do not involve the very complex system required by Domino's Store Finder. The average time required for routing and connecting these calls is about 3.5 seconds.

There are some concerns with the service. One is a shortage of 950 number availability. Another

involves a form of bypass. According to a report in *Network World*:

"Using a mixture of Feature Group B and Measured Business Service tariffs, a reseller could sell these under-one-minute calls at a substantial markup and still be competitive with the local telephone company's measured business service. While not a physical bypass, the maneuver is in fact a tariff bypass and is likely to raise the ire of the local telephone company."

What potential applications can we find in higher education? Touchtone registration immediately comes to mind, although normally this requires a longer holding time for completion than what is considered cost-effective for 950 numbers. Other potential applications include ticket reservation/sales; access to "How-To" informational databases such as tips on growing roses, lawn care, canning, cooking, etc. If your university includes a medical center, the service could be used for processing medical forms.

We are going to look at how we are using 800 lines for access, and if we have applications with short holding times, we will look at the economics of serving them with 950 numbers.

### Network Management/SMDS

Network Management Systems and Switched Megabit Data Services (SMDS) were the other hot-ticket items at the ICA Expo. BellSouth had a great display incorporating SMDS, video, frame relay, interactive voice technologies and other "Star Trek" kinds of stuff.

An interesting part of this exhibit was its use of video and computer graphics to portray facilities for the 1996 Summer Olympic Games to be held in Atlanta as if they were already in use. Some existing facilities will be remodeled and others are yet to be built. There is an old Chinese curse that goes something like: "May you live in exciting times." They must have had those of us involved in managing telecommunications in mind! ♪

# Personal networking begins with ACUTA workshop contacts

By Ruth Michalecki  
Univ. of Nebraska

Workshop attendees are an active group to say the least. It was interesting to watch the change in attitude of the 28 attendees as the Understanding Telecommunications Workshop in Millersville, PA, March 30-April 1, progressed.

On the first morning, attendees were divided into small groups, talking mostly to their co-workers from the same school or to those from schools near to them. After lunch, however, they started asking questions during class, and by the close of the first full day, they were learning from each other, making friends and forming network contacts.

In my opinion, the biggest benefit one receives from attending workshops, seminars and conferences is the personal contacts you make. It really helps to put a face with a name, and know who you can call when you have a problem and need some advice on how to handle it.

The attendees at Millersville started their personal ACUTA networks by making those contacts.

Throughout the workshop, Pennsylvania State Coordinator Tony Mordosky of Millersville and Region 1 Director Don Hoover of Villanova and I fielded questions and discussed applications for various technologies. As usual, the section on student services generated the most interest. Close seconds were voice processing, billing systems and long distance services.

Education and training is critical to success in telecommunications. Most of the time the work load at our campuses is overwhelming, and it's difficult to let an employee go to a workshop that takes them away from the office for several days. However, when you do send an employee to a workshop, especially one geared to managing telecom at a college or university, they will come back with renewed interest and added knowledge. That adds up to improved morale, which



Lively workshop discussion continues at the dinner table.

almost always means increased productivity.

I'd like to say thanks and commend telecom directors like Pat Searles of Cornell, Jeff Kuhn of Penn State and Jan Weller of Kansas who continue to send their new employees to Understanding Telecom Workshop. All three have very successful programs, and I am sure their staff appreciate the training and networking opportunities they receive.

Meals and classes were held in Millersville University's Gordinier Conference Center. Transportation was provided from the hotel, about 15 miles from campus. When Millersville razed its Old Main Hall, the eight-foot-tall stained glass windows from the chapel were removed and restored. Now some of them grace the conference center.

My thanks to Northeast Region Director Don Hoover of Villanova University and Tony Mordosky of host Millersville University, who is also State Coordinator for Pennsylvania for their help with the arrangements. On the last day of the workshop, we gave a standing ovation to John Roscoe and the food service staff in appreciation for all the special effort and care shown us during the workshop. John employs student servers, and they are very well trained. ↪

## Southern Methodist installs InteCom switch

Southern Methodist University has replaced its 10-year-old Dimension 2000 PBX with an 8,000-line InteCom IBX S/80 that serves as a platform for delivering enhanced services all over campus.

Digital telephones and asynchronous data are provided for student housing, faculty and administration. A high-speed local area network is part of the system.

"The most significant benefit is that this is a *communications net-*

*work*, not just a telephone system," says Barbara Wolfe, Director of Computing and Information Services for SMU. "We saw the opportunity to implement a fully digital campus-wide communications system via a fiber backbone."

The university can now "participate fully in the networked information environment developing throughout the world," says Wolfe. "SMU can accelerate development of modern applications of information technology."

The university plans extensive use of InteCom's Open Application Interface (OAI) in areas such as campus security, data security and network management. With OAI, the telemanagement system will be integrated into the IBX database for moves, adds and changes. Other system features include voice mail, automated attendant and interactive voice response for registration, ticket sales and other uses. ↪

# Regional meeting in Northeast draws 102 attendees

With budget constraints limiting their travel opportunities, 102 attendees from Region 1 (Northeast) took advantage of the two-day regional meeting held in Syracuse, NY, June 8-9.

Sessions began at noon the first day and ended at noon on the second, allowing many attendees enough "drive time" to avoid spending an extra night "on the road."

Location and scheduling were especially helpful for representatives of state institutions in New York, many of whom cannot get approval for out-of-state travel.

Attendees gave the overall event a rating of 8.2 on a scale of 10. Location and facilities were well-rated, but some attendees from New England said they would like to have a meeting even closer to their campuses.

Some representative comments: "I've only attended a couple of

ACUTA conferences, but I have attended many telecom gatherings. This was one of the best, because of the location, information obtained and the speakers."

"Regional Meetings are very necessary. Even though they are not topic-specific or as intense as the workshops, seminars and conferences, they do cover basics and give examples for the newer telecom people. Also many of us in the state systems do not have budgets which allow us to attend the larger conferences which require greater travel distances."

"Excellent meeting; let's do it again!"

"This was enlightening for my first ACUTA meeting."

"This was a good start. I look forward to the next meeting."

Attendees heard presentations on:

- *Campus Conduit* by Tony Mordosky of Millersville University

and Don Hoover of Villanova, Region 1 Director.

- *Long Distance and Local Service Cost Containment* by Nancy Gallagher of Saint Anselm College

- *Distance Learning via the New York Network* by Lenore Foster of SUNY-Oneonta

- *Update on the Americans with Disabilities Act* by Galt Griesbauer and Janice McGuigon of Bell Atlantic.

- *Education/Telecom Usage for the Multi-Impaired Student* by Patricia Kirk of Perkins School for the Blind

- *Fiber Optics: Uses, Types, Installation, Costs* by Chuck Klein-Schmidt and Patrick McAlloran of AT&T.

ACUTA Vice President Pat Searles of Cornell University gave attendees an update of regulatory issues and future ACUTA events. ↷

## LD competition coming to Canada

(Continued from page 7)

invested enormous amounts of time, effort and financial resources in lobbying for this decision – mainly through regional hearings held by the CRTC last spring – applauded "the CRTC's leadership and vision in making a decision that will benefit Canadians for generations." The Alliance represents the interests of public and private sector telecommunications users and customers. Many of the Canadian members of ACUTA belong to CBTA.

The impact of the decision on business should become evident within three months as tariffs are filed allowing vendors to resell telco WATS services, which were restructured in most areas of Canada this spring. Also, Atlantic Canada (the east coast provinces) will be afforded its first taste of the reseller market immediately. Unitel and BCRL will likely enter the market quickly by allowing access methods similar to those used by the resellers. Properly structured access to networks, however, will likely take 6-12 months to put in place.

In their "Vision 2000" document in 1991, Canadian industry and government combined to envision that by the year 2000 the world will undergo profound changes resulting from:

- Explosive technical growth, incorporating communications and computer-based technologies (software and hardware) into all economic and social activities,

- Intense competition on a global front, which will only accelerate with improved communications;

- Shifts in the international division of labor in the structure of national economies, in demographics, and in the relationship between government and the private sectors. They concluded that these changes will create requirements for communications systems, products and services that are custom-tailored to the needs of individual users and that give them control of their communications environment."

The argument of most proponents of long distance competition has been that monopoly control – albeit federally regulated – is counter to such visionary thinking, and that opening up the long distance market to competition would greatly assist Canadian business in its effort to remain competitive in the global trade economy. Interesting times lie ahead.

It remains to be seen if the June 12 decision will:

- Survive political scrutiny
- Allow users to benefit fully from competition
- Enhance LD services and provide for growth, flexibility and choice
- Measure up favorably against the trend in other industrialized countries and put Canada on an equal footing with its trading partners and competitors
- Provide for direct user contribution on a much larger scale, into the restructuring of the country's telecommunications market place – with the old players and the new working with customers to determine needs, formulate direction and plan together for the future. ↷



## From ACUTA Headquarters

Del Combs  
Executive Director

### Effects of Economy on ACUTA Seminar and Conferences; How You – the Member – Can Help

Needless to say, the difficult economic times affect everyone in one capacity or another and, in many cases, have a cascading effect.

Beginning with the St. Louis Conference in 1991 and continuing through the San Francisco conference – and at least the first half of 1993 – the economy will most likely continue to place limitations on ACUTA members and affiliates. As noted in the recent annual report, ACUTA has frozen – for 1993 – the registration fees and exhibit/sponsorship fees for seminars and the conference.

Since this is YOUR Association and YOUR money, I want to share with you some of the concerns and issues that the ACUTA staff must come to grips with and suggest some of the ways that you could help minimize the effects that the sluggish economy is

passing on to higher education and our Association's activities.

#### Hotel Commitments

ACUTA must make commitments five to six years out, because of the number of rooms, meeting space and exhibit space required. Tentative requirements must be submitted to the hotel 12 months prior to the event and specific requirements six months out. Some flexibility can be negotiated with regard to the sleeping room block and other guarantees for various time frames during the year prior to the event. However, thrown into the equation is the percentage of rooms actually taken during the conference. If you fail to pick up a previously agreed upon quantity of rooms, the result is usually reflected in a higher cost for meeting room space.

#### How You Can Help

Make your room reservations as soon as you have tentative plans to attend. You can always cancel without penalty several days out. We can usually project a fairly accurate final number based on past events. Also, if you complete and return the card indicating which sessions you will probably attend, we may be able to release some meeting space that the hotel could use for other activities. But the earlier we have information, the quicker we can "adjust" our requirements with the hotel.

#### Program/Speakers

Of course, this is the heart of the events, and we strive to provide quality programs at all times. We have been fortunate to have quality speakers from industry and the consulting community. Your – institutional members' – participation in programs helps us cut our costs. It also provides a great service to other members who are looking for ways to "do things better."

#### How You Can Help

Volunteer to be part of a program when the opportunity arises. When you hear an exceptionally good speaker at an ACUTA event, thank him or her personally for contributing to the meeting. Pass

along to us the name of any excellent speakers that you personally have heard.

#### Social Events and Meal Planning

This is where the "networking," that intangible benefit for which ACUTA is so well known, takes place. We urge you to participate. However, if you are not able to be present for a meal, please let us know. (We usually inquire during an event session.) We cannot *lower* our guarantees during the 48 hours prior to the planned meal, but we can *raise* the guarantee right up to the last couple of hours in most cases.

#### How You Can Help

Plan ahead as much as possible, and keep us informed. You may be surprised to learn that the per person cost of a catered breakfast and lunch is approximately \$15 to \$20 and \$18 to \$30 respectively. In future years this is an area that could be addressed for cost containment. As an alternative, we could switch to continental breakfasts and cut back on the number of meals provided as part of the registration fee. At present, every meal during a conference or seminar – except the Tuesday evening meal – is covered by the registration fee. In the future, perhaps we could let attendees eat a couple of lunches on their own.

#### Vendor Support

For the past several years, our vendor support for exhibits and sponsorships has grown and been a big help in containing costs and keeping registration fees for attendees down. However, the current economy has impacted their participation as well. But they continue to offer quality speakers who help keep our total program costs at an acceptable level.

#### How You Can Help

Recently, some vendors have remarked that "lately, ACUTA attendance is down, and they don't seem to want to discuss business as much." You can help counter that impression in a number of ways.

*(Please continue on back page)*



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## ACUTA Welcomes New Members

### NEW MEMBERS

The following institutions joined ACUTA  
between May 21 and June 16.

#### Region 1 (Northeast)

Johnson & Wales Univ. (RI), Frank Conforti  
SUNY-Albany, Gary R. Pelton  
SUNY-Potsdam, Brenda S. Bennett

#### Region 2 (Southeast)

Stetson Univ. (FL), Herbert E. Bradshaw Jr.

#### Region 3 (Midwest)

Indiana Univ.-Purdue Univ. at Indianapolis,  
Fredrick Clock

Midland Lutheran College (NE),  
Letha L. Kibble

#### Region 4 (West)

Truckee Meadows Comm. College (NV),  
Larry Tuteur

#### Region 5 (Canada)

The Univ. of Lethbridge (Alberta),  
Laurence Hoye

The following changes were submitted by  
member institutions between May 21 and June 16.

#### Region 1 (Northeast)

Margaret R. Evans, Wheaton College (MA)

#### Region 2 (Southeast)

Gloria Jordan, Middle Tenn. State Univ.  
Evert R. Halbach, Nicholls State Univ. (LA)

#### Region 3 (Midwest)

Scott Randolph, Emporia State Univ. (KS)  
Robert M. Keith, Pittsburg State Univ. (KS)  
Gregory J. Ashe, Ohio State Univ.  
Chuck Cossin, Schoolcraft College (MI)

#### Region 4 (West)

Tammy Cormier, California Lutheran Univ.  
Lauren Dean, Univ. of Nevada, Las Vegas  
Mike Arts, Univ. of Portland (OR)

#### Region 5 (Canada)

Bruce McIntosh, Grant MacEwan Comm.  
College (Alberta)

## New Corporate Affiliates

COPPER

ADC Kentrox (MN)

Motorola (IL)

Pinnacle Software Corp. (NY)

## How You Can Help

*(Continued from previous page)*

First, make sure you let vendors – at home as well as at events – know of your interest in their products. And since you want to be sure you're spending your funds wisely, you are doing much more "value shopping" these days. Inspecting exhibits at ACUTA events and getting an overview from the representatives working the booths is a convenient and cost-effective way for both parties to accomplish that.

While the ACUTA staff accepts responsibility for making arrangements with corporations for their involvement in ACUTA events, you – the consumer of their products and services – have much more leverage than the staff.

Take a look at the list of vendors in the San Francisco brochure. If some of the vendors that you deal with are not there, give them a call.

Explain the value of their participation (the competition may be there) and your appreciation of their company's support, in general, for higher education.

Have your account rep pass these comments "up the line." If you would then pass the information along to us (give company, individual and phone number to Kevin Adkins, 606-252-2882), we will follow up. We must let the industry folks know that higher education is a major force in the marketplace. While our attendance may be small in numbers, compared to an ICA or TCA show, we are 100 percent serious decision-makers who influence many millions of purchasing dollars.

### Conclusion

The bottom line is: as economic times get tougher, we need more thorough analysis of what's available and how it lets us do our job more economically. Vendors and institutional members must spend their money wisely. That does not necessarily mean "stop spending."

Pick the right place and the right time to get a good return on your investment.

One of your considerations should be an ACUTA event(s) where there is a wealth of information from industry and your contemporaries. You can profit immeasurably by conferring with others who face the same challenges as you and others who have already met these challenges. ↘

## Positions Available

### PBX Manager

Middle Tenn. State Univ.

**Responsibilities:** Maintain, manage NEAX 2400 PBX, Astra computer system, micro-based auto attendant, outside cable plant. System supports over 3,100 lines

**Requirements:** Bachelor's degree in related technical field; 5 years progressively responsible, full-time work in telecom; advanced skills, knowledge of digital PBX principles, procedures; or equivalent combined education and experience.

**To apply:** Send cover letter specifying job title, resume and MTSU application for employment form (available by calling 615-898-2929) to: Personnel Office, Rm. 217, Cope Admin. Bldg. Middle Tenn. State Univ., Murfreesboro, TN 37123.

### Tech Services Director

Univ. of N. Carolina, Charlotte

**Responsibilities:** Work with faculty, staff to plan, execute new network designs, revisions to existing systems; manage development, acquisition, use of communications for university; survey, monitor work, job orders; prepare budgets; establish, conduct staff training programs.

**Requirements:** Bachelor's degree in elect. engineering, business admin. or related field; 3 years exp. in telephone systems evaluation, planning, implementation, management; or equivalent combination.

**To apply:** Submit NC state application form indicating interest in Position #13134 (call 704-547-2275 to obtain form) to: Personnel Services Office, UNCC, Hwy. 49N, Charlotte, NC 28223.