5-1993

ACUTA eNews May 1993, Vol. 22, No. 5
FCC Suspending Enforcement of HAC Requirements

Report No. DC-2386
Action in Docket Case
April 14, 1993

The Commission has suspended until further notice enforcement of portions of its rules that would have required establishments with twenty or more employees to make their telephones hearing aid compatible by May 1, 1993. The rules require all telephones in all areas of workplaces, as well as telephones in hotel and motel rooms, and all telephones in rooms in hospitals, residential health care facilities for senior citizens, convalescent homes, and prisons to be hearing aid compatible by May 1, 1993 for all establishments with twenty or more employees. Telephones in establishments with fewer than twenty employees would have to be hearing aid compatible by May 1, 1994.

The Commission's action will prevent entities that are affected by the Commission's hearing aid compatibility rules from having to comply with the May 1, 1993 deadline contained in the rules. The Commission's action does not, however, alter hearing aid compatibility requirements already in effect. Telephones in areas, such as workplace common areas, that may be occupied by persons with hearing impairments must already be hearing aid compatible in order to enable such persons to signal life-threatening or emergency situations. The requirement that these telephones be hearing aid compatible remains in effect.

The Commission acted in response to an emergency request for stay filed by Tele-Communications Association. The petition raised serious issues involving the costs of compliance with the Commission's rules and the feasibility of compliance by May 1, 1993. Due to the seriousness of these issues and the quantity of similar comments received by the Commission from interested parties, the Commission concluded that the public interest would be best served by suspending enforcement of these further hearing aid compatibility requirements until further notice.

Action by the Commission April 13, 1993, by Order (FCC 93-191).

"We realize many people have made large investments refitting their communications equipment to meet the May 1 FCC compliance date. Without question, that was a difficult obligation to meet on such short notice. Though the requirement has been postponed until further notice, the FCC...has suspended enforcement of the rule—not eliminated it. Those who have already retrofitted may be just one step ahead of the game."

—Ed Spievack
President, NATA
Nominations Sought for Three ACUTA Offices

By Paula Loendorf
University of Arizona

ACUTA Immediate Past President

At the 1993 Annual Conference in Nashville, all primary representatives of member institutions with dues currently paid will be eligible to vote on a slate of officers to serve on the ACUTA Board of Directors for the coming year. There will be three "automatic" changes of responsibilities, as provided in the ACUTA Bylaws, with elections for three positions.

AUTOMATIC

Coley Burton, University of Missouri, the incumbent President, will become the Immediate Past President and will assume all the duties and responsibilities of that office.

Patricia Searles, Cornell University, the incumbent Executive Vice President, will become President, assuming all duties and responsibilities associated with chairing the ACUTA Board of Directors and the Executive Committee.

Randy Collett, Central Missouri State University, the incumbent Vice President, will accede to Executive Vice President, assuming the duties of that office, and continue the succession process by becoming President in 1994.

SUBJECT TO BALLOT

Vice President - to be elected from a slate of nominees assembled by the Nominating Committee and finalized with any nominations that may be received prior to the Nashville business meeting.

Secretary - The incumbent Secretary, David O'Neill, has served two terms in that office and, according to the Bylaws, cannot be elected to a third consecutive term. Accordingly, a new Secretary will be elected from a slate of nominees assembled by the Nominating Committee and finalized with any nominations received prior to the Nashville business meeting.

Treasurer - Robert Aylward, University of Wyoming, has served one term as Treasurer. The Bylaws allow a maximum of two consecutive years in that office, but a second year is not mandatory. Therefore, nominations will be accepted for Treasurer.

NOMINATIONS

All ACUTA members may submit nominations for the offices of Vice President, Secretary, and Treasurer. Before placing a name in nomination, however, please be reasonably sure that the person you are nominating is willing to accept the responsibilities that accompany the office.

The individual should be aware of the considerable commitment, particularly in terms of the time required to carry out the responsibilities of the office.

The individual's institution also should be prepared to support such a commitment.

Upon receipt of each nomination, I will contact the nominee personally in this regard to confirm the nominator's findings. All nominations must be received by 5 p.m. EDT July 2, 1993, so that the nominating committee can confirm the nominees' commitment to serve.

Because there will not be enough time to confirm a nominee's commitment to a responsibility, nominations cannot be accepted from the floor at the business meeting.

Please send all nominations to:
Paula Loendorf, Chair
ACUTA Nominating Committee
Director, Univ. Telecommunications
University of Arizona
Ctr. for Computing/Info Tech
Tucson, AZ 85721
FAX: (602) 621-9222

"In the world in which we are living, the average young person will change the nature of work seven or eight times in a lifetime...We must learn to merge the work world and the learning world much better."

—President Bill Clinton
MESSAGE FROM THE PRESIDENT

Coley Burton, University of Missouri

"Like getting into a bleeding competition with a blood bank."
Richard Branson, Chairman, Virgin Atlantic Airlines

On competing with British Airways

It is a cold, cruel world out there, and probably is going to get colder and crueler. By now I imagine that everyone has read or heard that ACUTA was unsuccessful in our attempt to have the Federal Communications Commission "declassify" colleges and universities as call aggregators. Additionally, as reported in the March 1993 ACUTA Newsletter, the FCC originally decreed that all telephones in the workplace must be hearing aid compatible by May 1, 1993, a ruling which, though recently suspended, could ultimately have significant financial implications for a number of our members. In general, the regulatory arena has been hard on higher education telecommunications during the first few months of the year.

The call aggregator designation exposes ACUTA members to two potential financial liabilities. The first of these is the requirement to unblock the 10-XXX-0+ equal access sequence for all lines considered to be aggregators. In the extreme case, this can mean that existing campus telephone systems will have to be replaced, based upon a schedule laid out by the FCC. The other exposure is fraudulent calls, especially international calls using the 011 dialing sequence. The FCC has ordered local exchange carriers to provide call screening, for a price, to protect against such fraud. From what I have heard, which is mostly hearsay, such screening procedures are not, at least as of now, 100% foolproof.

From my perspective here in middle Missouri, a major factor contributing to the failure of ACUTA's request before the FCC was competition in the telecommunications marketplace. AT&T filed comments in opposition to ACUTA's position. The reason for their filing is obvious: AT&T has placed a major emphasis on the 10XXX equal access sequence in their marketing strategy. While other carriers have a long history of using either 950 or 800 access, AT&T has avoided that form of access in all ways possible. If I were a disinterested observer, I would certainly agree with AT&T's position, for they would have been at a considerable competitive disadvantage if students living in dormitories were unable to reach AT&T using the 10288 equal access sequence.

My purpose is not to castigate AT&T for their position, but to point out that we in higher education telecommunications are working in a highly competitive environment, and that often our best interests are not going to be in line with those of major players in the marketplace. While we ascribe altruistic motives to education in general, those motives don't count for much when we get caught in the middle of a competitive struggle, especially between eight-hundred pound gorillas. As the pace of change quickens, I have to believe that attempts to preserve or extend competitive advantage through legal and regulatory processes will also accelerate and expand.

Again, not to single out AT&T or judge their actions, some of their current activities tend to substantiate my hypothesis. AT&T is currently suing MCI, alleging that MCI is illegally using the database concept developed by AT&T for processing 800 calls. AT&T has patented an ISDN process for using ANI (automatic number identification) to provide secure access for dial-in connections to computer systems. If I were an AT&T employee or shareholder, I would fully expect AT&T to vigorously protect that patent in the courts if any competitor attempted to use the process without executing the necessary licensing agreements.

One needs only to read the trade and popular press and pay a modicum of attention to the electronic media to realize that many areas of telecommunications are heating up. In addition to the technological/competitive cat fighting, the approach of the new administration in Washington initially appears to be one of more government intervention/control in telecommunications futures—a rather disturbing fact given the parochial special interests orientation of the Congress and the ponderous bureaucracy of the FCC. The recent "re-regulation" of the cable television industry, done by the FCC at the direction of the Congress is a good case in point.

Consider some of the "hot" areas where I fully expect to see some pitched battles in the next few years for competitive supremacy: cable television versus the local exchange carrier in providing "fiber to the home" for communication and entertainment services; wireless carriers versus wireline carriers for control of local exchange services; and the U.S. government versus almost everyv---See "President's Message" on page 10
Midwestern States Prepare to Save with Virtual Private Network

By Ken Johnson
Director of Telecommunications
Central Michigan University

Seven states in the Midwest—Illinois, Kansas, Michigan, Minnesota, Missouri, Nebraska, and Ohio—are meeting the goal of the Midwestern Higher Education Commission (MHEC) to expand higher education opportunities and services through interstate cooperation and resource sharing. MHEC recently announced a three-year endorsement of Sprint Communications as provider of a customized telecommunications program for all MHEC members. The program will make a major contribution to the reduction of telecommunications costs in the seven MHEC states.

The backbone of the program is a virtual private network that will reduce costs to member states and institutions for the transmission of voice, data, and video. The virtual private network will also make possible the use of the existing switched public network for the transmission of low-cost dial-up digitally compressed two-way interactive video.

How We Got Here from There

In 1987, after an unsuccessful attempt to negotiate lower long distance rates for Central Michigan University (CMU), I realized that we needed to bargain from a much stronger position than we had. I organized a meeting with several other colleges and universities who were members of an informal organization that had been meeting for several years. The group called itself the Michigan Collegiate Telecommunications Association (MiCTA), but it had no legal standing. MiCTA told me to go ahead and negotiate on their behalf.

We went back to the vendors and told them we wanted to negotiate rates on behalf of MiCTA. Our biggest problem was convincing the vendors that MiCTA was a viable organization that could influence vendor choice for individual member institutions. We began steps to organize MiCTA formally, and received our charter from the State of Michigan in early 1989. During the negotiations with the vendors, we offered an endorsement by MiCTA for the chosen vendor. MiCTA would encourage its members to purchase service from the endorsed vendor.

The results of the negotiations were startling. The proposals by the vendors cut existing rates by over 50% to Michigan colleges and universities. MiCTA members have been saving in excess of 15 million dollars annually on outgoing 1+ calls alone as a result of this process.

Benefits Found in Organization

In March, 1991 MHEC was established through a compact of the seven states with a goal of expanding higher education opportunities and services through interstate cooperation and resource sharing. In February, 1992 MHEC formed a telecommunications committee for the purpose of developing telecommunications initiatives on behalf of the commission. This committee took MiCTA's basic concept, refined and improved it, and expanded its scope to the seven MHEC member states. The committee presented a concept paper to the major IXCs in March, 1992 in the form of a Request for Proposal. Proposals were received from LCI, MCI, and Sprint.

The committee analyzed the proposals and in August, 1992 chose to endorse the Sprint program. Highlights of the program include:

- Significant discounts on incoming 800 services
- Significant discounts on international services
- Reduced cost T-1 access charges
- No initial setup or installation charges
- No contract to sign (30 days and out)

The rates on Sprint's program are available to colleges and universities of any size. While some of the largest institutions could negotiate similar rates on their own, the majority of institutions would never be able to get comparable rates. The biggest advantage to the largest institutions will come as a result of the majority of schools and many state agencies all being on the same virtual private network, thereby increasing the volume of on-net traffic, which is priced at very low rates.

For example, CMU's composite rate on the MHEC/Sprint program is 6.2 cents per minute with no on-net traffic. However, with the majority of MiCTA members on-net, the composite rate falls to 5.6 cents per minute. So even if the largest schools are able to negotiate similar, or even slightly lower rates on their own, their composite rate will likely be lower with the MHEC program as a result of increased on-net traffic. The amount of on-net traffic in Michigan has been a pleasant surprise. We have found that well over 20% of our student traffic at CMU is on-net, apparently as a result of the students calling friends at other Michigan colleges and universities.

Where We Are Today

The MHEC Telecommunications Committee has entered the second phase of the virtual private network project. On March 22, they issued a Request for Information.
ACUTA Board of Directors Meets

By David O'Neill
ACUTA Secretary

The ACUTA Board of Directors met in Kansas City, Missouri, March 18–21 with a substantial agenda of far-reaching impact.

As a result of the strategic plan, Randy Collett, ACUTA Vice President, introduced a marketing study intended to be an initial examination of ACUTA's marketing opportunities, a brief competitive analysis, and some thoughts regarding ACUTA's strengths and weaknesses, intended to provide a framework for further study. Collett and Margie Milone, Membership Director, will work with the Lexington staff to complete the study proposal for further Board review.

Dave O'Neill, ACUTA Secretary, proposed formal training sessions for the Board of Directors. Such training will provide background and procedural guidance to new Board members within 30 to 45 days of their election.

Mike Grunder, Publications Committee Chair, requested guidance from the Board regarding how best to encourage submission of articles to the ACUTA News. It was suggested that those institutions who publish an internal newsletter add the Lexington office to their mailing lists, providing a potentially rich source of information.

Del Combs, Executive Director, shared with the Board financial statements and the accompanying Independent Auditor's Report for the past year. This material is included in ACUTA's Annual Report.

In further action, Pat Searles submitted to the Board for review and action a series of motions restructuring ACUTA dues. The new structure provides for four separate tiers based on enrollments, as well as for additional mailings. Robert Aylward, ACUTA Treasurer, will present to the membership a more detailed description of the newly adopted dues structure (see related article below). The Board also, as a result of the strategic planning process, began a comprehensive examination of the current ACUTA governance structure and will continue further discussions and examinations over the next few months. The Board will update the membership on this study in the months to come.

ACUTA Adopts 4-Tier Dues Structure

At the ACUTA Board of Directors meeting in Kansas City, Missouri, in March, the decision was made to restructure the membership dues for the association.

The new structure will provide for the assessment of dues based on the enrollment of each institution:

<table>
<thead>
<tr>
<th>Tier</th>
<th>Enrollment</th>
<th>Dues</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Up to 2,499</td>
<td>$125</td>
</tr>
<tr>
<td>2</td>
<td>2,500–5,999</td>
<td>$185</td>
</tr>
<tr>
<td>3</td>
<td>6,000–11,999</td>
<td>$245</td>
</tr>
<tr>
<td>4</td>
<td>12,000 and up</td>
<td>$305</td>
</tr>
</tbody>
</table>

Enrollment is based on the number listed in the Higher Education Directory or the Directory of Canadian Universities, also used by other higher education associations.

The new tiered structure allows a more equitable distribution of costs based on usage of ACUTA membership. A survey of about 30 members of CHEMA (Council of Higher Education Management Associations) revealed that only ACUTA and one other association did not have a tiered dues structure. ACUTA dues were also among the lowest of the groups surveyed.

According to the Board, the new dues structure will strengthen our association and ultimately provide each member with more resources. Along with other benefits, the new structure is designed to reduce the unpredictable dependence on vendor support.

"One of the goals of the new strategic plan is to improve visibility of the association and the professional image of the representatives," says Pat Searles, Director of Telecommunications at Cornell University and ACUTA Executive Vice President. "Increasing the distribution of the newsletter and other mailings both on campus and among our vendors will help us achieve that goal."

"In focus groups held with members and consultants, members indicated they want more non-event benefits—things they don't have to leave the campus, get on a plane, and be gone for several days for," continues Searles. "In an attempt to satisfy that need, the strategic plan calls for additional copies of the newsletter for each campus, an enhanced monograph series, and a white and blue paper series."

Searles also comments that the new cost-based financial structure means members will feel more comfortable that they are paying for the services they actually use.

According to ACUTA Treasurer Robert Aylward, Associate Director of Information Technology at the University of Wyoming, the lowest tier does not reflect an increase in dues for the smallest range of institutions. "Institutions with enrollments of less than 2,500 have not experienced an increase in dues for the past three years, in spite of rising costs in postage and other areas that have a direct impact on our publications," Aylward notes.

Invoices for dues were mailed in early May. If you have a question about what your dues are, call the ACUTA office at (606) 252-2882.
Toll Fraud Takes Aim Across the Country

Incidents of toll fraud continue to increase in frequency and creativity, if the cases reported to the ACUTA office are any indication. In the past week, we've learned of three new ones:

The University of New Mexico was the target of toll fraud originating in correctional facilities in Illinois, according to Anne Apicella, Telecommunications Manager. Inmates were placing collect calls to direct inward dial numbers on campus via AT&T operators. When the UNM employee answered and was asked by the operator if he/she would accept the call, the prisoner was answering the operator affirmatively. The AT&T operator would quickly release from the call.

The caller, using various excuses, then attempted to have the UNM employee transfer him back out to an AT&T operator so he could (presumably) use stolen calling card numbers to place calls. The whole point, of course, was to have the fraud appear to have originated on UNM's trunks.

UNM quickly got word out around campus about the scam and asked employees to attempt to get the originating telephone number(s) from the AT&T operator on all "collect" calls. From this information, UNM was able to identify the two prisons where these calls were originating. The information was provided to AT&T security. AT&T has agreed to fully credit UNM for the "collect" calls.

Meanwhile, up north, Jan Seppa at Northern Michigan University reports discovering a phone fraud scheme involving the use of 1-800-436-3660. Calls made to this number are ultimately billed back to the originating trunk. She advises ACUTA members to check phone bills closely for outbound calls made through this number.

And in the March issue of Mizzou Telecom Connections, we see that an MU faculty member received a call on the department's Sprint 800 number from someone identifying himself as a Sprint fraud monitor specialist (telephone cop). Saying that someone had used the 800 number to make fraudulent calls to Africa and other overseas locations, he wanted the faculty member to reveal his calling card number so he could investigate. When the faculty member balked, the caller stated his badge number, the name of his supervisor, and an 800 number at which he could be reached.

The faculty member immediately reported this call to the Office of Telecommunications, who quickly verified that no one could make a fraudulent call to Africa or anywhere else using an 800 number. A call to the 800 number given by the "telephone cop" was answered by AT&T's pay phone division. They had already heard from other victims about this phony cop.

The moral to this unending story is simply that we must all be alert. The criminal mind obviously is capable of being very creative.

ACUTA recommends Toll Fraud & Telabuse from which we have been reprinting checklists in the ACUTA News. (See March and April issues and page 8 of this issue.) If you suspect toll fraud on your own campus—or, perhaps, especially if you don't, read through these checklists and evaluate your security.

Register before June 18 and receive $50 discount! Call ACUTA at (606) 252-2882.

For hotel reservations, call Opryland Hotel at (615) 889-1000 before June 16, 1993.

22nd Annual Conference
Nashville, Tennessee
July 18-22, 1993

Topics
- Management
- Regulatory Issues
- Professional Growth
- Voice, Data & Video

Plus
- User Groups
- Regional Meetings
Legislation Takes One Step Closer to Infrastructure

This story reprinted by permission from First! An information service of Individual, Inc.

Bringing uniform telecommunications services to rural areas through a state-of-the-art network that uses a common set of standards and protocols is the goal of legislation introduced by Rep. Boucher (D-VA), chairman of the House Subcommittee on Science and Technology.

The measure is one of 3 prongs of a plan designed to address board networking needs into the 21st Century, Boucher said. In March, he introduced the first bill to create economic incentives to deploy broadband technology into homes, businesses, and research centers by allowing telcos to offer cable service. It was referred to the House Energy and Commerce Committee. The second measure to provide an advanced telephone network by permitting joint network planning and infrastructure sharing by telcos was referred to the House Judiciary Committee.

The new bill, called the High-Performance Computing and High Speed Networking Applications Act of 1993, would provide research funds for a wide range of core projects, including connections that would route medical information to hospitals and other users at high speeds, develop network-accessible digital libraries, link schools for distance learning, and disseminate innovative curricular materials. The measure, which would be an amendment to the High-Performance Computing Act of 1991, also would set up an infrastructure for the release of vast stores of government information now available only in paper form.

The bill would have six goals over a period of five years:

(1) Network access: National Science Foundation (NSF) would be given $310-million to assist educational institutions at all levels, as well as libraries and local governments, in establishing local networks that can connect to Internet.

(2) Research in support of applications: Specific research activities would be identified that would make possible enhanced networking, provide network security and privacy, and develop user-friendly interface through a $150-million, 5-year authorization.

(3) Education applications: NSF would receive $364-million to demonstrate educational uses of Internet, develop teacher training hardware and software, and provide connections for local regions.

(4) Health care applications: Department of Health and Human Services would receive $364-million to develop clinical information systems (means of disseminating health information to the public) and to develop health delivery systems.

(5) Library applications: NSF and NASA would receive $245-million to digitalize and store electronic information that can be searched in digital libraries. A prototype digital library, linked to Internet, would be set up.

(6) Government information applications: Authorization of $118-million would be used to find ways to connect depository libraries to Internet and establish a locator system for a wide range of federal, state, and local government information.

"We hope to hasten the day when a student in his living room can browse through the electronic index of the Library of Congress, retrieve a specific document, and have it printed on his laser printer, within the space of minutes," Boucher said. Rep. Boehlert (R-NY), ranking minority member of the Subcommittee and co-sponsor of the bill, said developing the information superhighway "would effectively lower information costs, making our economy more competitive and enhancing the productivity of our workers."

Industry quickly supported the initiative. Ex-Rep. Tom Tauke (R-IA), now Nynex Vice President of Government Affairs, said the bill "makes significant progress toward developing a forward-looking infrastructure policy by optimizing government's role and by taking advantage of private sector capital and communications expertise." According to Ex-Rep. Terry Bruce (D-IL), now Ameritech Vice President of Federal Relations, "Ameritech agrees that an advanced infrastructure of information highways should be deployed to enhance job creation, economic development, education, health care, and overall quality of life."

This legislation was introduced as the Clinton Administration released more information on its $1-billion proposal for high-performance computing and communications, one of six major research and development initiatives in the fiscal year 1994 budget submission to Congress. A report from the Office of Science and Technology Policy details the government's commitment to funding NSF and National Institute of Science and Technology (NIST) to provide underpinning for the information highway development. NSF would be charged with "deploying networking information services, increasing network connections, and expanding gigabit research and development."

"We hope to hasten the day when a student in his living room can browse through the electronic index of the Library of Congress, retrieve a specific document, and have it printed on his laser printer, within the space of minutes," Boucher said. Rep. Boehlert (R-NY), ranking minority member of the Subcommittee and co-sponsor of the bill, said developing the information superhighway "would effectively lower information costs, making our economy more competitive and enhancing the productivity of our workers."
The following are excerpts from *Toll Fraud and Telabuse* by Telecommunications Advisors, Inc., a two-volume work available to ACUTA members at a $50 discount. Contact the ACUTA office for details.

This is the third month that ACUTA News has reprinted a toll fraud checklist from this publication. In the coming months, other checklists will cover fraud prevention for operators, voice mail, call diverters, and more. Implementing these suggestions will significantly reduce your toll-fraud risk.

**Operator Toll Fraud**

Operator Toll Fraud is characterized by long-distance thieves using deceit in the form of ruses to obtain operator assistance in placing long distance calls. The thieves enter a company's system either through a local access number or 800 service. After being connected to an extension they ask to be transferred back to the operator. Often, they will note the person's name who answered at the extension, engage them in a brief conversation, apologize for having reached the wrong number, then ask to be transferred back to the operator, pretending to be the person they talked to.

When the call is transferred back to the switchboard operator, it appears to the operator as an internal call. Posing as employees, they then explain to the operator that they are having difficulty dialing out and request operator assistance in obtaining an outside line. The thieves then place long distance calls billable back to the company.

**Operator Toll Fraud Prevention Checklist**

To avoid or reduce toll fraud through operator deceit, we suggest you:

- Educate all employees regarding operator deceit Toll Fraud. At a minimum, carefully educate all operators, and repeat training each quarter.
- Utilize company security education and awareness programs.
- Develop and implement specific switchboard operator procedures to avoid this type of fraud.
- Switchboard operators should properly identify callers.
- Use operator-call-back procedures.
- Use verbal password procedures.
- Use control number system.
- Verify and validate all long distance calls.

**Automated Attendant Toll Fraud**

An automated attendant is a device which can be incorporated into either a PBX or a VMS. It answers the phones for the company, welcomes the customer and asks the caller to press the number of the desired extension. It usually advises the caller to press zero to obtain operator assistance if the extension number is not known.

Long distance thieves enter the automated attendant function through a local telephone line or 800 service. When asked to enter the desired extension, they enter 91XX or 9011. The automated attendant attempts to transfer to that extension, which to many PBXs and VMSs (without dial-out capabilities) signifies an outgoing long distance call. Once the automated attendant has dialed the numbers requested, the intruders dial the balance of the digits necessary to place the long distance calls.

**Automated Attendant Toll Fraud Prevention Checklist**

To avoid or reduce the risk of automated attendant toll fraud, we suggest you:

- Restrict or block access to long distance trunks and local dial capabilities.
- Automated Attendant/PBX configuration:
  - Block 9XXX and possibly 8XXX fields in the automated attendant, “verify extension field capability” if possible.
  - If possible, toll restrict access lines between the automated attendant and PBX, using PBX facility restriction levels. Includes 1+, 0+, and 0-numbers.
- Automated attendant/VMS configuration (with VMS connected to PBX):
  - Remove all out-dial applications within the VMS.
  - Block 9XXX and possibly 8XXX fields in the automated attendant, “verify extension field capability” (if possible).
  - If local out-dial capability is required, block the 91XXX, 90XXX, and possibly 8XXX fields in the automated attendant, verify extension field capability (if possible).
  - If possible, toll restrict access lines between VMS and PBX using PBX facility restriction levels. Includes 1+, 0+, and 0-numbers.
- In cases where full out-dial applications must be used, assign PBX alternate facility restriction levels for use during non-business hours (if possible). Includes 1+, 0+, and 0-numbers.
- Automated attendant/VMS configuration (stand-alone):
  - Remove all “out-dial” capabilities within the VMS.
  - If available, obtain toll restriction and billed number screening from LEC. Include 1+, 0+, and 0-numbers.
  - If local out-dial capability is required, block 1+, 0+, and 0-within VMS, if possible.
  - In cases where full out-dial capability is required, attempt to obtain toll restriction and billed number screening from LEC during non-business hours.
  - If possible, restrict 10XXX casual dialing during non-business hours.
  - Restrict outbound 800 access during non-business hours.
By Ron Galik
Director of Telecommunications
Keene State College

Many of us are concerned by the recent 20/20, 60 Minutes, and newspaper stories regarding the David Reynard suit against NEC America and GTE MobilNet of Tampa, FL alleging his wife died of a brain tumor caused by the antenna of her cellular phone. Mrs. Reynard frequently spent as much as two hours at a time on her cellular phone. The radio frequency (RF) radiation transmitted from her phone’s antenna through her brain is alleged to have caused or aggravated her brain tumor. Her one-piece, hand-held cellular phone’s antenna was within centimeters of or actually in contact with the side of her head during normal operation.

People who work all day in close proximity to leaky microwave ovens, children who sit inches away from color TVs all day, and pregnant women who sit all day at some types of video display terminals (VDTs) all say these RF radiation emitting devices have caused cancer or other problems in humans.

Like a child’s CB walkie-talkie, your cellular phone is a two-way radio. It receives a radio signal (RF radiation) from a radio transmitter tower (antenna) on a nearby hilltop, and it transmits its own signal (RF radiation) back to the radio tower, which in turn, sends your signal to another cellular phone. Cellular phones and CB walkie-talkies transmit RF radiation at about the same power level, but at different frequencies. Also, a walkie-talkie usually has a press-to-talk switch you press to transmit; a cellular phone doesn’t. Cellular phones generally transmit all the time you’re engaged in a conversation.

Let’s look at some RF radiation facts. Ionizing radiation such as alpha, beta, and gamma radiation resulting from the detonation of a thermonuclear device (a hydrogen bomb) or X-rays almost always cause tissue damage in humans. RF radiation, on the other hand, a non-ionizing radiation, can also cause problems in humans, depending upon several factors: duration, proximity, frequency, and intensity or power level.

- **Duration** If you bought an inexpensive microwave-oven leak detector, and it showed your microwave had a minor RF radiation leak, you might get away with quickly passing your hand in front of your leaky microwave, exposing it to the RF radiation for an instant. But, would you get away with repeatedly holding your hand there for two hours at a time? How about leaving your head there for two hours at a time?

- **Frequency** Frequency is the difference between an A flat and a high C, the difference between a foghorn and a dog whistle, National Public Radio at the low end of your FM radio dial and the rock music station at the upper end, the difference between the filtered light in the shady woods and the unseen ultraviolet (radiation) sunlight that causes a sunburn.

- **Power** Loud (high intensity) music from powerful (high power level) speakers can cause ear damage; hot (high intensity) ultraviolet (radiation) sunlight on a hot summer day can cause sunburn.

- **Proximity** If you walk away from the music (reduce the proximity) or go indoors out of the sun, you escape the harmful effects because you’ve reduced their intensity.

Ultraviolet sunlight is another form of non-ionizing radiation. You don’t get sunburned on a rainy day even though you may stay outside for the same length of time (duration) with the same ultraviolet (frequency) light (radiation) present because it isn’t at a sufficient intensity (power level). You already know you can avoid sunburn on a hot sunny day by reducing the time in the sun (duration) or by moving (proximity) to the shade to change the frequency or by putting on a tee shirt to reduce the intensity (power level).

The same common sense that prevents sunburns can prevent potential harm from RF radiation from a cellular phone or other RF radiation emitting device. While you have little control over frequency, you have almost complete control over proximity, duration, and intensity.

You can reduce the duration by limiting your conversations to minutes rather than hours. You can change the proximity and reduce the intensity by using a car roof-mounted antenna which (hopefully) doesn’t come in contact with your head and will not, therefore, damage your brain cells. Out of the car, you can use a portable “bag phone” with its external antenna away from your body.

You can use a high-tech microwave-oven leak detector to determine if your microwave oven is leaking RF radiation, or you can go low-tech (as I do) and always just assume it leaks! If you always remain at least a foot away from it while it is operating, you won’t need to worry about eye damage or other human tissue damage. Don’t press your nose against the door while the microwave is operating!

A regular cordless phone with its antenna sticking out the top is also a two-way radio that transmits RF radiation (and allows others to listen in on your conversation). A radar detector in your car can also tell you when you’re being bombarded by RF radiation. We should all keep the kids several feet away from the TV set and limit the time they spend watching TV. Folks, if you can get away from that VDT once in a while, do it!

Now that you know all this, what do you suppose your lap-top or notebook computer with its built-in modem transmitting through a built-in cellular phone with its antenna resting on your lap is doing to your future offspring?...
...MHEC (Continued from page 4)

(RFI) for interactive video to seek input into the design, implementation, and management of a multi-state, dial-up, compressed, video/distance education program to be carried through the MHEC/Sprint virtual private network. The RFI includes network designs and capabilities, equipment, and classroom/conference room designs.

The project is patterned after the MiICTA dial-up project for which an RFI in 1991 resulted in significant savings in hardware, design, and integration services.

The cost for transport of the interactive video is the MHEC/Sprint on-net rate of 3.35 cents per channel per minute during the day and 2.35 cents per channel per minute evening, night, and weekends. This equates to $24.12 per hour during peak time and $16.92 per hour off-peak for half T-1 dial-up video. All MiICTA schools have agreed to use half T-1 for distance education. The rate for dial-up 112kbps video for conferencing is $4.20 per hour peak and $2.82 per hour off-peak.

MiICTA began installing dial-up sites during August, 1992. There are already 25 sites up and running on the dial-up network. We expect another dozen or more by the end of 1993.

Vendor responses to MHEC’s RFI are due back May 3. MHEC expects to evaluate the responses and have a program available to institutions in MHEC states by this summer.

The power exercised by educational institutions joining together can greatly influence the development, cost, and quality of products and services available to us. The success of MiICTA in Michigan and the promised success of MHEC in the Midwest can serve as a launching pad for other organizations and larger areas.

Note: MHEC Telecommunications Committee members are: Ken Johnson, Chair, Central Michigan Univ.; Gregory Ashe, Ohio State Univ.; Coleman Burton, Univ. of Missouri, Columbia; Steven Cawley, Univ. of Minnesota, Twin Cities; Kla Malott, Southern Illinois Univ.; David Murphy, Midwestern Higher Education Commission; Ruth Michalecki, Univ. of Nebraska; Barbara Paschke, Kansas Board of Regents.

...President’s Message (Continued from page 3)

one else for development of the National Research and Education Network. The latter example may well be one of the most entertaining and frustrating of them all.

Recently, AT&T, Ameritech, Compcast Corporation, and McCaw Cellular testified before the House Energy and Commerce Committee. The premise of their testimony was that private industry should design, build, and, of course, operate the NREN. All private industry required from government was involvement, cooperation, and (I expect) a great deal of money.

On the surface, one would applaud the initiative of various segments of the telecommunications industry, coming together and cooperating on an issue that will have a significant impact on higher education well into the next century. Unfortunately, each of the companies involved not only argued for private control, but also asked that the design of the NREN be such that it would favor their competitors to the exclusion of their competitors, or asked for regulatory relief to enable them to obtain an advantage over their competitors. Ah, competition! It certainly brings out the best in everyone!

As I have said many times, I believe that telecommunications will be a major factor in the future success of colleges and universities. There will be times when our self interest will not be aligned with the self interests of the telecommunications providers, and may well be diametrically opposed. When that happens, we will be in for some rough times, as we have already observed. We need to continue to be vigilant in protecting our interests and we need to continue getting our story into the hands of those who can help us.
From ACUTA Headquarters
Del Combs
Executive Director

RELATIONSHIPS
Great for Single Partners!

No, this hasn’t turned into a “singles” column, although that might increase interest in the column. Maybe I got your attention—if just for a moment.

The relationships I’m referring to are partnerships formed by sometimes-adversaries in our telecommunications world. I’m speaking of: associations vs vendors; universities vs vendors; vendors vs vendors; association vs association; association vs vendor vs university.

In the past I’ve mentioned greater cooperation, involvement, and commitment. I’m speaking now with renewed interest in commitments and an objective observer should not be able to distinguish the user from the provider.

Compare that to a heterogeneous group of individuals each of whom, while working with the group, has his or her separate identity as provider or user. The issues and interests of each are easily distinguishable, and each has his/her own “bottom line.”

Obviously a homogeneous group must have a commitment from the organizations/corporations involved from the top down—truly a long-term relationship for the good of the technology. Working together in this manner, both (under the right leadership) can prosper. While I’m not necessarily advocating this approach by associations and industry at this time, it has merit. It would take several years to develop to a comfortable level for everyone involved.

In recent weeks I have listened to how the telecommunications industry has continued to thrive while the economy, overall, has been in a slump (at best) for the past 18 months or so. But this does not mean that all players are continually successful. Many of the old stalwarts have stumbled and face a serious and difficult recovery period—such as IBM.

In short, everyone involved in technology must continue to look for ways to work together. While the paychecks of players come from different sources, their efforts, concerns, and commitments to common objectives of the technology and its applications must be focused from a single viewpoint.

Resource Library Update
The request for on-line discussion lists brought good responses.
• From Paula Loendorf, Univ. of Arizona: VIDNET-L (Video/telecommunications in higher-ed). To subscribe send message to
LISTSERV@UGA (Bitnet) with the message "SUBSCRIBE VIDNET-L Your_full_name".
• MEDIA-L (Educational Communications/Technology). To subscribe, send message to
LISTSERV@BINGVMB for Bitnet users or to LISTSERV%BINGVM B,BITNET@MITVMA.MIT.EDU for Internet users with the message “SUBSCRIBE MEDIA-L Your_full_name”.
• From Bonnie Johnson, UK: TELECOM@delta.eecs.nwu.edu
• From John Sherwood, Dalhousie Univ.: CANUTEL-L (Geared toward Canadian telecom mgs., but all ACUTA members are welcome). To subscribe, send message to CANUTEL-L@snoopy.ucis.dal.ca. To post messages to the discussion list, send to CANUTEL-L@snoopy.ucis.dal.ca.

Please phone, fax, or mail any resource information to ACUTA, L. Kevin Adkins, Telecom. Resources Mgr., 250 W. Main St., Ste. 2420, Lexington, KY 40507; phone 606/252-2882, fax 606/252-5673, or e-mail ACUTA@UKCC (Bitnet) or ACUTA@UKCC.uky.edu (Internet).
ACUTA Welcomes New Members

The following joined ACUTA between March 11 and April 19, 1993.

BRONZE CORPORATE AFFILIATE Region 4 (West)
- Centigram Communications Corp. (CA)

COPPER CORPORATE AFFILIATES Region 2 (Southeast)
- Engineering Associates, Inc. (GA)
- TeleDraft, Inc. (KY)

Region 4 (West)
- The RMH Group, Inc. (CO)

Personnel Change
The following changes were submitted by members between March 11 and April 19, 1993.

Region 1 (Northeast)
- Swarthmore College (PA), Dick Templeton [Primary]

Region 2 (Southeast)
- AMP Incorporated (NC), Jack Norrie [Copper Representative]

Region 3 (Midwest)
- State of Missouri (MO), Gwen Fletcher [Associate]
- Ameritech/Indiana Bell (IN), Barb Gunn [Silver Representative]

Deadline for ACUTA News is the 5th of the month prior to the month of publication.

July deadline: June 5
However... We do stop the presses for late-breaking news!