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Follow-Up to Aggregator/Hearing Aid Compatibility Ruling

By Randy Collett
Chairman, ACUTA Legislative/Regulatory Affairs Committee

In the March ACUTA News, we reprinted the report we had just received regarding the FCC’s denial of the petition filed by ACUTA, ACE and NACUBO. That petition sought a ruling that colleges and universities are “aggregators” for the purposes of the FCC’s Operator Service Provider rules only with respect to payphones on their campuses, but not with respect to telephones located in dormitory rooms.

As a follow-up, it is important that we revisit just what is now required of colleges and universities (subject to further action).

The FCC order of July 10, 1992 lifted the temporary stay issued in March of the same year that delayed implementation of the unblocking schedule (originally specified in docket 91-35, August 9, 1991). That schedule is as follows:

- August 10, 1992: Aggregators whose equipment can, without modification, selectively block 10XXX-1 calls while allowing 10XXX-0 calls.
- March 16, 1993: Aggregators whose equipment can be modified to provide selective 10XXX processing for no more than $15 per line.
- April 17, 1997: Aggregators whose equipment will require modification or replacement at a cost of more than $15 per line. (This deadline is set at five years after the date by which all equipment manufactured or imported must be capable of processing 10XXX.)

In a change from the 1991 order, however, the FCC decided to require Local Exchange Companies (LECs) to provide blocking and screening services in order to reduce aggregators’ exposure to fraud. Under the ruling, LECs must offer these services within 6 months (January, 1993). The report stated:

Because we believe it necessary that aggregators be able to take full advantage of the fraud prevention capabilities of the LEC services we are requiring, we will make the unblocking schedule dependent upon the actual implementation date of the mandatory LEC services. If the mandatory LEC services are now available, aggregators...shall be required to unblock 10XXX dialing sequences within 30 days of the release of this Order. We believe this 30-day period sufficient because aggregators will already have had six months since our rules became effective to plan for unblocking. If the mandatory LEC services are not now available but become available before the six-month deadline for their deployment, aggregators...shall be required to unblock within 30 days of the deployment of the services. In all other cases, aggregators...shall unblock 10XXX dialing sequences no later than six months from the release of this Order, by which time all mandatory LEC services must be deployed.

ACUTA members should be actively seeking the assistance of their LEC representatives in order to determine the...
Total Quality Management Works at University of Kansas

By Carol Spencer, Elizabeth Pesek-Shields and Sue Houston
Telecom Specialists, Univ. of Kansas

The Telecommunications Department at the University of Kansas maintains its own PBX, an AT&T System 85, and employs its own staff for all maintenance, programming and billing. The department consists of 3 areas: Customer Services—the first point of contact for customers, writes Telephone Work Orders; Technical Operations—installs and maintains service; Business Services—orders and maintains equipment and supplies, bills for installation and service.

This year, the department had the opportunity to apply Total Quality Management techniques to the improvement of the telephone work order process. We found that by employing the TQM philosophy—coordinating all departmental areas and drawing on the insights and talents of all staff—we were able to isolate problems and create effective solutions. The result of this process is a new telephone work order form, more comprehensive and efficient, that eliminates needless delays between the customer’s request and work completion.

How We Got Started
A seminar held on the KU campus introduced our department to TQM. One of the first departments on this campus to attempt to employ this technique, we bit off more than we could chew by making a department-wide flowchart of the entire telephone work order process and by attempting to make changes throughout. We found ourselves overwhelmed by details and pulled in many directions by areas we considered potentially problematic. As a result of this initial, painful process, the whole department gained increased awareness of what everyone did and where work was being duplicated and delayed. The first attempt at TQM, however, eventually was put on hold.

After more education about the process, we returned to our task with increased organization and focus. A group of people within the department was selected, weekly meeting times were scheduled, and the group decided to concentrate on one segment of the Telephone Work Order process: the Telephone Work Order request form completed by customers (describing the desired work) and the form subsequently completed by customer service reps and then passed to technical operations (ordering the work to be done).

Internal Customer Survey
All staff completed a survey to determine what was wrong with the work order form, what was right about it, and what they would like to see happen with it in the future. The results of the survey follow.

What was wrong:
• Insufficient information: missing extensions and intercom station numbers, room numbers, account numbers; inadequate description of work requested.
• Delays and holding patterns requiring contact with customer: incomplete information; lack of clarity; customer changes after submission of order; special handling.

What was right:
• When the work order was received from Technical Services as a completed order, there was very little lacking. There might have been an occasional question about notes made by the techs concerning incorrect cable plant information or about a change made in the field due to: (1) a customer request to change a work order already submitted, (2) a work order not reflecting the customer’s actual wishes, or (3) a technical problem with the working order as written.
• Assets: The data on which we base orders—cable plant records, files on departmental phone systems, and customer service documents listing PBX programming—have been maintained in our office and are essentially correct. The commitment to accurate maintenance of these files aids the work order process and should continue.
Incentives for rural communities to establish city, county or regional libraries to overcome their information access isolation prior to the widespread development of the electronic mass media. Information and telecommunications technologies are the railroads, interstate highways and print libraries of the information age and Community Telecommunications Centers will be a community's connection to the world.

This activity further supports two of my favorite themes: that the telecommunications professional must be a major player in supporting an institution's primary missions; and that all areas of information technology—voice, data, video, image, text, etc.—must cooperate and collaborate in order to realize the maximum potential of the technology. I am a bit embarrassed to admit that the Community Telecommunications Center idea didn't originate with the University of Missouri. Rather, the idea was originally put forward by the State of Missouri's Office of Economic Development. A member of our Board of Curators (the University is governed by a nine-member Board of Curators, appointed by the Governor) is also on the Missouri Economic Development Infrastructure Board. The University's involvement in the project is due to this Board member's interest; needless to say, when a member of your governing board is interested in a project, so are you!

A Community Telecommunications Center will contain two-way, interactive video facilities and a local area network of microcomputers connected to a statewide wide area network, which in turn is connected to the Internet. An information specialist, probably from Cooperative Extension, will act as the liaison between the community and the myriad of resources available. Some of the major uses for the center will be continuing education (credit and non-credit) advanced placement courses for secondary schools, and regional and statewide town meetings.

We are fortunate at the University of Missouri in that we have been using interactive video since 1987 and have been active in the development of the Missouri Research and Education Network (MOREnet), the statewide network connecting most higher education institutions to each other and the Internet. Many of the functions and services envisioned for the Community Telecommunications Center are already in place and all we need to do is extend the technology to the areas to be served.

Last December, the University conducted a forum on doing business in Japan. We interconnected our four campuses and Tokyo, Japan with interactive video, and additional sites in the Midwest via satellite to provide a forum for business people in Missouri to ask questions of a faculty member from Sophia University in Tokyo, on the ins and outs of trading and doing business with Japan. In March of this year the University sponsored a teleconference on rural health care. We interconnected our four campuses with a clinic in Hays, Kansas, where remote medical consultation is done by interactive video with physicians at the University of Kansas Medical Center. (A session on rural health care using remote consultation, presented by the University of Kansas, is scheduled for the summer conference in Nashville.)

These programs and more like them are closely aligned with the needs and interests of the communities we envision as being appropriate locations for a Community Telecommunications Center.

My reason for discussing these activities is not so much to brag about the University of Missouri, but rather to demonstrate the range of interests and activities that a telecommunications professional can become involved in. The ACUTA Futures Report that was distributed to all members last fall made several points worth revisiting. We are dealing in a closer, more personal way with the world, and our University must be at the heart of this effort.
Kent State Meets ADA Requirements

By Margie Milone
Manager,
Telephone Communications
Kent State University

Interpreting the ADA regulations and applying reasonable accommodation directives to our campus environment has been a joint effort with Ohio Bell Public Communications account executive Jennifer Kral and Kent State University. Complying with public coin telephone regulations was the easy part; Ohio Bell took the initiative and we agreed! With 113 main campus installations, Kral surveyed each site, recommending removal of 18 low revenue, non-productive locations, and lowering 39 sites to 48" for front access to wheelchair users or 54" for side access determined by site limitations in each building.

Touchtone, volume control and 29" handset cords were provided for remaining sites as needed. This achieved the 25% parameter for measuring complacency on existing installations for each floor of every building on campus. Kent State University staff painted and repaired walls, completing the project in about 60 days.

Our campus was also the first university in the Ohio Bell territory to purchase and install a text telephone device for use with a public coin telephone. A new coin telephone installation was planned, with Ohio Bell providing a special shelf and interfacing the device with the coin telephone. Ultratec's Pay Phone TDD was selected as most suitable for our Kent Student Center location, a hub for many student and public activities. The device is housed in a drawer which will open and activate only when connection is established with a text telephone device working on the called telephone number. The drawer closes securely when this type of call is disconnected. During usual coin telephone activity, the drawer remains securely closed.

We installed text telephone devices in the administrative offices at each of the seven regional branch campuses, in addition to the existing devices at Kent campus in offices for Disabled Student Services, Campus Bus, Campus Police Department E911 dispatch, and the Special Education area in the College of Education. Information and brochures detailing user instructions on the Ohio Relay Service, operated by Ohio Bell, have also been provided to all campus departments and regional campuses. This service connects any calling party to another through an Ohio Bell communications assistant operating a text telephone device and relaying the messages confidentially between both parties.

For the past eight years, only hearing-aid compatible handsets have been installed, as well as following the 48" or 54" high guideline for all wall phones. We reviewed 95 Kent campus indoor and outdoor courtesy telephones, including 30 residential services sites, for verification. From discussions with our Disabled Student Services department, four existing campus wall phones were lowered to 48" and replaced with "hands-free" speaker units with push button programmed to 911, increasing accessibility and ease of operation. We will continue to provide site modifications as needed and, when feasible, reasonably accommodate our students and campus guests.

...Executive Director
(Continued from page 3)

global society and higher education must prepare its students and itself to meet that challenge. As telecommunications professionals, we must be looking for new ways of doing things, rather than just applying new technology to the old ways of doing things.

I won't be so bold as to suggest that the University of Missouri's Community Telecommunications Center project meets the demands laid out for the telecommunications function of the future in the Futures report. However, the project is an example of working outside the lines of the classical telecommunications department and represents activities that will become the norm rather the exception in the future. If higher education is going to meet the challenges of the 21st century, we are going to have to pay attention to Groucho and start before 6:30.

AT&T Says, "Call home!"

Student service providers, take note: AT&T has targeted college-bound students, sending to 5,000 high schools kits including posters, calling-card applications, postcards for more information, and instructions for teachers for writing exercises. AT&T believes this will help establish a long-term relationship with students and help them deal with new responsibilities away from home.
ICA Presses FCC on Hearing Aid Compatibility Issue

The telecommunications users community is pressing the FCC for a major postponement of the May 1, 1993 requirement that all workplace telephones be retrofitted with hearing aid compatible telephones, according to a story in Washington Telecom Week. These groups are filing this month in support of a petition for waiver of the requirements filed by Goodwill Industries February 22.

Now the International Communications Association (ICA), in a March filing in the Goodwill case, contends that it “is quite clear from the feedback that the ICA has received from its members, that ICA members still have thousands of non-hearing aid compatible telephones on average per company.” ICA is the largest telecommunications user group represented at the commission with over 720 members who each spend more than $1-million annually on telecommunication services.

ICA is pressing the commission to extend the compliance date for another three years to allow for attrition to reduce the retrofitting problem, and sources say this position is being supported in the user community. In addition, sources say, the number of waiver requests is steadily increasing.

...FCC Ruling
(Continued from page 1)

availability of blocking and screening services from their Central Office.

The committee's reaction to the FCC decision is disappointment and frustration. Colleges and universities are not hotels. Including colleges and universities within the FCC definition of aggregator is a mistake. There were only two filings opposing our view (AT&T and the Missouri Public Service Commission). Yet, the FCC did not see fit to grant our request.

We are extremely frustrated by a political process that allows mistakes like this to be made, yet does not allow them to be easily corrected. Colleges and universities do not have the financial resources to wage a long term lobbying effort in Washington, D.C. Therefore, future actions being considered by our committee involve a stronger grass roots effort.

Since this kind of effort is less time sensitive, a recommendation will be forthcoming from the committee to the Board of Directors within the next 30-60 days.

Hearing Aid Compatible Handsets

Once again a subtle change in wording has ACUTA asking the FCC for relief. In FCC Docket 87-124, requirements were delineated for Hearing Aid Compatible (HAC) telephone handsets. The requirements of that order basically stated that any telephone manufactured or imported in/to the United States after August 1989 be hearing aid compatible. Additionally, it detailed that telephones in common areas or phones to be utilized as “emergency” phones be HAC equipped by May 1, 1991.

Then, in a report and order adopted May 14, 1992, the FCC delayed the implementation date for places of business with more than 20 employees until May 1, 1993. BUT (and here's the rub) the wording was changed to ALL telephones in all areas of the workplace. This information was presented to ACUTA members as part of a Regulatory Update at both the Annual Conference in San Francisco and at the Fall seminar in Hilton Head.

Frankly, none of this really raised the importance of this issue until some of our members received a letter from ROLM offering HAC handsets for $29 each. Some of the larger ROLM users with large quantities of ROLM telephones (many of which required the replacement of the entire molded plastic handset) became alarmed when they discovered that to become compliant with the FCC rules they would have to spend several hundred thousand dollars.

Upon inquiring with the FCC, members discovered a "Request for Waiver" filed by Goodwill Industries of Seattle, WA, and further, discovered that ACUTA could file comments supporting that waiver and requesting one of our own. Since this appeared to be an issue where action could be taken without the assistance of a Washington law firm, the Regulatory and Legislative Affairs Committee drafted a waiver request and submitted it to the FCC on March 5, 1993. This request cited three universities' costs for compliance, and asked that our exposure be limited to "public" telephones that would normally be situated in common areas.

As of this writing, we have not had a reply from the FCC.

One of the most frequently asked questions is, "How can I tell if my handset is HAC or not?" Some manufacturers use an "H" molded into the handset, next to the labeling. Another good way to tell is to unscrew the earpiece, and check the receiver. If it is metallic, it is not hearing aid compatible. HAC receivers are ceramic, and do not cause the high pitched "squeal" of the metallic receiver when placed close to a hearing aid. Molded plastic handsets (which require complete replacement) are obviously much more expensive to retrofit than are the traditional 500 or 2500 type handset. Retrofitting these sets can be accomplished by purchasing only HAC replacement receivers and providing the labor to accomplish the changeout. To be completely sure, you should check with the manufacturer of your telephone instruments. Remember, anything manufactured in or imported to the United States after August, 1989 is required to be HAC.

Since the compliance deadline is May 1, 1993, ACUTA hopes to hear soon about our request. We will keep you informed.
What? You’re Not Planning to Attend
ACUTA’s 22nd Annual Conference?

By Mal Reader
ACUTA Program Director
University of Calgary

If you’re not planning to attend the annual conference, read on!
For the 22nd Annual ACUTA Conference and Exposition, the Program Committee will present an outstanding program designed to give top value for your institution’s educational dollar.

If any of the following are your reasons for not planning to attend, hopefully we can change your mind!

“We don’t have the money in the budget!” There are several ways you might secure travel funds. 1. Ask for a special appropriation, and present a well-balanced case for attending: to improve your job performance, for professional growth, to be able to contribute more to your department and institution. 2. Find the money somewhere in your operating budget: Shift discretionary funds around to where payoff is greatest; leave a position unfilled for several weeks to cover the cost. Offer to pay part of the expense yourself to demonstrate how serious you are about attending. If time itself is the issue, offer to attend as part of your vacation.

“My institution doesn’t believe in the value of seminars and conferences.” Some institutions, either through policy or a failure to understand the value of professional development opportunities, really do react this way. 1. Propose that one of the policy members accompany you to the Conference. Misconceptions will be dissipated if you persuade them to come along. 2. Offer to write a report on what you learn at the event, and to share the information with other staff and management. In this way, your attendance has added value.

“I can’t be away from the office that long!” If you think you’re indispensable, you may not be allowing your staff to develop by giving them opportunities to act independently. Leaving others responsible will build their self-confidence and help them understand and appreciate the pressures that come with your job. Managers who don’t take time for professional growth often stagnate into early retirement and wonder what happened.

“It’s too long to be away from my family.” Bring them along! Combine a family vacation with the Conference and take advantage of low room rates. Nashville offers great family entertainment!

“I wouldn’t know anyone there.” ACUTA is a friendly group, and at the Conference you’ll meet your counterparts from other campuses. No one is a newcomer for long.

“It’s our busy time of year.” No time of the year is ever ideal to be away. With careful planning and the help of well-motivated and developed staff, you can leave your day-to-day worries behind!

“I probably wouldn’t learn anything.” A wide array of topics and speakers are stimulating, educational and often entertaining. You’ll learn at these gatherings through the instruction, discussion and general interaction with the people around you—who all came for the same reasons you did! (If you learn just one thing that prevents a costly mistake, you could justify the cost of the whole trip!)

So, will we see you there? I hope you’ll make plans right away!

Register before June 18 and receive $50 discount! Call ACUTA at (606) 252-2882.
For hotel reservations, call Opryland Hotel at (800) 233-1234 before June 16, 1993.
Dorothy Heinecke: 1917–1993

By Mal Reader
Manager, Campus Services
University of Calgary

I first met Dorothy Heinecke in July, 1972 at the Association's inaugural conference in Chicago. She and other members of the infamous "dedicated group of university telecommunications administrators" who founded the Association—Laurence Alchin (Michigan State Univ.), Robert Devenish (Univ. of Wisconsin), Gerald Johnson (Univer. of Chicago), Luther Robb (Penn State) and William Turner (Univ. of Michigan)—had met seven months earlier and decided that telecommunications issues at colleges and universities could be better addressed if everyone compared notes and shared experiences.

This, of course, was prior to deregulation and divestiture, and years ahead of the technological explosion of the late '70s, yet they still had the vision to appreciate the value of a "network of people" sharing experiences, facing change, and learning whatever there might be to learn, together.

My invitation to become a Charter Member, for a fee of $10, arrived on my desk at York University in Toronto sometime in March, 1972. The first ACUTA Conference was set for July, with a program that featured such topics as Interconnection & Data Communications, Telecommunications Security, and Obtaining & Using the Resources of the Telephone Company, and a keynote address by none other than Charles Brown, then President of Illinois Bell.

The most memorable of the speakers in terms of Dorothy's contribution to the Association was luncheon speaker Bruce Howat, publisher of Communications News magazine. His motivational phrase, "If it is to be, it is up to me," was something that she truly believed in, and something that inspired her to new levels of achievement for ACUTA.

As the first Secretary of ACUTA, Dorothy had a stabilizing effect on the rest of the Board, who were as diverse in their opinions as they were in their telecommunications management backgrounds. She was quiet and unassuming, yet intuitive and persuasive; forceful when she needed to be, but always with a sense of decorum. She took on more than her share of tasks just to get the job done.

She lived Bruce Howat's words, and she inspired others to do the same.

The "If you build it, they will come" philosophy was very much the focus of the early ACUTA vision, one which Dorothy championed and actively promoted by example. It was a vision that an association formed by members for members would enhance and enrich their abilities to deal with the complexities and changes associated with the administration of telecommunications services in a college and university environment. Her commitment to the vision and its ideals, and the example which she set for other members makes her contribution to ACUTA a model of volunteer participation and leadership.

Dorothy had a wonderful sense of humor, and when she was confined to the nursing home, we indulged ourselves on several occasions in light-hearted reminiscences of the "early days," her term as President (1975-76), her being the first woman to be President, and how ACUTA has responded to change over the years.

With her "network of people" still in place, and with longtime friendships providing her much needed comfort, Dorothy Heinecke passed away peacefully. She was one of the nicest people I've ever known, and one of the most capable. For those of us who knew her, she will remain an inspiration.

ACUTA Dues Notices To Be Mailed in Early May

Notices for 1993-94 dues will be mailed around May 1, 1993. Payment is due by July 1, 1993. If needed, a second notice will be mailed around Aug. 1, due Sept. 1. Members whose 1993-94 dues have not been received by Sept. 1 will be marked inactive.

Inactive members will not receive the newsletter or directory and will have to pay non-member rates to attend ACUTA-sponsored events. The roster of members will be printed from the active member list as of September 1, 1993. An information update sheet will be included with your dues notice. If any of the information in the membership roster is incorrect, please return the information sheet with the corrected information; otherwise, please do not return the sheet.

Finally, for those institutions and companies which use purchase orders: If your check could be sent with the purchase order, it would save ACUTA both time and expense, and it would reduce the chance of someone being marked inactive due to a late payment.
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 second 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, automated attendants and CPE. Implementing these suggestions will significantly reduce your toll fraud risk.

**Interference with a Creative Atmosphere**

Some owners and managers have argued...that imposing restraints on wasteful practices involving the telephone would interfere with the "open and creative" atmosphere they strive to achieve in the workplace. They earnestly believe that the placement of constraints and limits on Telabuse is destructive to a creative atmosphere. They further assert that it implies mistrust.

These are legitimate and perhaps even laudable concerns. If the decision is made to allow unfettered Telabuse to exist for these reasons, at least the employer has made a reasoned decision. All too frequently, it appears that users simply ignore the issue. An informed decision is not made. Instead, users who have done nothing come up with excuses after the fact, designed to justify the prior inaction. Approaches can be taken which are neither offensive nor intrusive.

We think the major reason why Telabuse constitutes such a significant problem is that user management has simply not given the subject sufficient thought or attention. The same users who would not hesitate to terminate a staff member who stole hundreds of dollars worth of company equipment do not realize...that Telabuse now averages somewhere between $150 to $450 per employee per month.

**Annual Cost of Telabuse**

We estimate that Telabuse exceeds $5 billion per year. *Teleconnect* magazine states that Telabuse is the fastest growing item in the office budget today. *Profit Building Strategies* agrees, calling Telabuse the "biggest uncontrolled cost in American offices." *Business Week* magazine estimates that Telabuse accounts for one third of the Federal Government's telephone bill.

**CPE Toll Fraud Operational Indicator Checklist**

**PBX Toll Fraud**

- Staff difficulties in obtaining open long distance lines or even local access lines.
- Customer complaints that "lines are busy," particularly 800 lines. Can even impact local inward dial lines.
- Operators complain about frequent "hangups" or of callers expecting "long distance service.*
- Operators note or complain about frequent calls from individuals with foreign accents or unable to speak English well.

- Any indication that any of the lines are being used by strangers to converse in a foreign language.
- Attempts by outsiders to obtain sensitive information regarding the telecommunications system or calls from individuals posing as employees when they clearly are not.
- Any sign that the outgoing or inbound systems are "clogged" or overloaded.

**Operator Toll Fraud:**

- Significant increase in frequency of "wrong number" hangups.
- Significant increase in "internal" requests for operator assistance in making outbound calls, particularly international ones.

**Voice Mail Toll Fraud:**

- Staff or customer complaints of inability to enter system.
- Any indication that system is "clogged" or overloaded.

- Messages not being received.
- Unexplained problems related to being "locked out" of system or PIN changes.
- Altered greetings.
- Obscene messages.
- Unusual increases in data storage volume.

**Call Diverter Toll Fraud:**

- Sudden increase in calls that claim to have "misdialed."
- Sudden increase in numbers of "dead" or "open" lines.
- Sudden increases in usage and activity.

**CPE Port Toll Fraud:**

- Sudden, unexplained inability to access specific administrative functions.
- Inability to retrieve calling data.
- Unusual increase in PBX or VMS memory usage.
- Unexplained changes in system software parameters.
- Any unusual maintenance or administrative port activities.
- Any indications that there have been unauthorized access authorization code assignments.

**Distribution System Toll Fraud:**

- Unexplained physical indication of potential problems, such as cable splice casings broken or open, conduits penetrated, doors unlocked or broken into.
- Unexplained disruption of service.
- Finding cables cut or jumpers disconnected.
- Unauthorized alterations or manipulations of distribution systems, such as cable jumpers moved or added, equipment modified, new equipment installed, unexplained recorders, computers or modems.
- Unexplained disappearance or modification of cable plant documentation and/or equipment and service tagging or marking.
- Unauthorized individuals loitering around distribution system or telecommunications equipment areas.

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Mass Retrofitting of PBXs Is Not the Answer to Problems in Emergency 911 Service, NATA Tells FCC

Problems in the enhanced 911 emergency service are not due to any defect in customer premises equipment (CPE) such as PBXs and should not be addressed by mandating mass retrofitting of CPE, the North American Telecommunications Association (NATA) said. The FCC should seek improvements in emergency service capabilities but should avoid regulatory requirements such as modifications to CPE and subscription to dedicated enhanced (E911) trunks that unreasonably burden CPE owners and their suppliers.

These statements were included in NATA reply comments filed February 12, 1993, with respect to an FCC public notice in response to a petition filed by Adcomm Engineering Company, an engineering consulting firm. The petition seeks to improve the availability of accurate location information for E911 service by requiring PBXs to interconnect with dedicated E911 service trunks.

911 service is an emergency reporting system whereby a caller can dial a common number for all emergency services, i.e., fire, police, ambulance. The E911 system works by having automatic number identification (ANI) information transmitted from the telephone network and matched up to a billing address database, so that emergency services can respond even when the victim is unable to talk clearly.

The introduction of E911 service has tended to create an expectation on the part of emergency personnel that the precise location of an emergency can be pinpointed in every case.

However, with the current configuration of the service, the location information available to the emergency answering point can be only as precise as the telephone number information that is transmitted to that point from the local exchange telephone network. The result is that current E911 technology does not by itself necessarily provide a reliable indicator of location of an emergency in those cases where more than one address is serviced by the same local exchange line(s).

NATA has serious concerns about Adcomm's approach to improving the availability of accurate location information for E911 service. The service being contemplated, a dedicated trunk from the customer premises to the E911 answering point, is likely to be offered at a very substantial charge to the end user, NATA explained. If required to subscribe to such a service, and to pay the charges themselves, most PBX customers would face a very burdensome increase in their telecommunications costs.

NATA believes the FCC should lead an industry effort to improve E911 service. However, the thrust of Adcomm's petition appears to require PBXs to be compatible with E911 emergency service trunks. The problem Adcomm seeks to address "is not exclusively, or even primarily, a 'CPE' problem," NATA said. Local exchange carriers (LECs) have not offered providers of PBXs or other CPE the type of interconnection on switched services that would enable CPE systems to transmit station identification in a format that would be accepted and processed by the telephone network, NATA added. "Treating this as a 'compatibility' problem suggests there is a relatively simple CPE 'fix.' There is not. Thousands of customers are affected, and the costs of 'fixing' both CPE and network services appear to be very high."

If solutions are adopted at a national, industrywide level, the FCC should ensure that telephone companies develop and make available the least costly practicable form of E911 interconnection to all users, and that the costs of such interconnection are fairly distributed, NATA said.

NATA is a national trade association representing manufacturers and distributors of businesses and public communications.

Achievement Award Nominations

The ACUTA Achievement Award, an annual award presented for the first time in 1992, will go to a member, associate member or corporate affiliate for contributions to ACUTA, higher education and the telecommunications profession.

Selection of recipients will be made by a committee of at least three Past Presidents, with the Immediate Past President serving as chair. Multiple awards may be presented in any one year. An ACUTA member may receive the Achievement Award no more than once every three years.

Nominations, detailing the nominee's qualifications, should be submitted in writing to: ACUTA Awards Committee, Attn: Lisa M. Cheshire, Lexington Financial Center, Suite 2420, Lexington, KY 40507-1739. Nominations must be received by June 1, 1993.
...TQM at KU
(Continued from page 2)

What we needed to do:
• Reduce the amount of handwriting
  Customer Services staff had to do.
  Stroking some fields, filling in
  some variables and adding notes
  in a comments section where
  needed could reduce order gen-
  eration time.
• Reduce turnaround time for
  writing orders. Providing custom-
  ers with information about what
  should be included on the work
  order would speed the process.
• Reduce the number of follow-up
  calls made by Customer Service to
  customers who had not written
  complete or clear work orders.
  Approximately 76% of work orders
  required clarification from the
  customer.

Initial Revision of the Work
Order Form
Based on the weaknesses
revealed by TQM analysis,
Telecom staff worked together to
revise the work order form. A
clarer, more comprehensive set
of questions was assembled and
laid out in a format meant to
facilitate easy and accurate
completion, with explanations of
the questions printed on the back.

External Customer Survey
In the TQM spirit of total in-
volvement, the initial revision of
the work order form then was
distributed to external users for
their input. Customer Services
selected 18 University depart-
ments for an opinion poll. A mix of
departments was selected, some
with key systems, some with
single line configurations, large
and small departments, those that
submit work orders frequently
and those that submit only one or
two a year.

All of the 18 sample work orders
were returned. Half volunteered
general comments that the new
form was good or improved, four
found the form "somewhat confusing,"
and two indicated they didn't
like the "jargon."

Further Revisions
Based on the feedback given by
the 18 departments, the Telecom
TQM team further revised the
form in weekly meetings, with all
members participating. The team
faced several challenges along the
way, but ultimately experienced
several benefits from the TQM
process.

TQM Process: Pain and Gain
Our Challenges
1. To make sure we always relied
on group insights rather than on
individual talent. The important
thing is that the revisionsulti-
mately were the result of collabora-
tion and group thinking, not of
the vision of one individual.
2. To develop a policy for dealing
with attendance concerns. In a
team effort, unplanned absences
can affect the group dynamics and
ultimately the quality of the
product. Team members were
required to bring absence re-
quests before the team, who then
voted whether to allow the mem-
ber to miss the meeting. This
process helped us set priorities
and keep the group dynamics
strong.
3. To maintain steady progress in
our revision of our work order
form. Originally, we would discuss
changes to the form, enter them
after the meeting, and then wait a
week before reviewing the printed
results. To reduce frustration and
maintain direction, we began
entering changes to the form on-
line during the meetings. That
way we could see immediately the
results of our revisions.

The Benefits
The most obvious benefit from
our TQM process is the new work
order. It replaces two earlier, less
successful forms and is streamlin-
ing our work order process,
reducing the number of calls to
customers by 62%.

Another benefit is a greater
sense of teamwork, as each area
within our department communi-
cated and worked with others.
Through TQM, Telecommunica-
tions staff gained a greater under-
standing of our department and
an increased appreciation of how
we can pool our abilities to im-
prove the way we do business.

In addition, the decision making
process was placed on the level of
the users of the form—both
internal and external. Outside
customers were able to provide
valuable information leading to
the redesign of the work order.

Where Do We Go from Here?
A goal for the future is to de-
velop work orders on-line. The
cable plant record involved copy-
ing information from a printout of
a database that already exists.
There must be a way to download
a portion of this database easily
and print it out to attach to a
work order (this step should also
be able to update the database to
reflect the upcoming change).
From ACUTA Headquarters

Del Combs
Executive Director

According to the experts and respondents to PCMA's (Professional Convention Management Association) Second Annual Meeting Market Survey¹, over half of the associations predict an attendance increase at their largest 1993 event. And 40 percent of the group (500 associations were surveyed) expect the gains to be 10 percent or more. By contrast, only 6 percent forecast a decline in attendance. So, look to see more of your peers in Nashville this summer.

PCMA put integrity into their survey results by having a like number (1,000) of surveys mailed to non-member associations. A cross reference revealed the PCMA membership (includes ACUTA) to be representative of the entire association community.

I want to share with you some comparisons of PCMA findings with ACUTA figures regarding the ranges and averages of important functions. In most cases there is no significant implication, but the information will let you know how we compare with other associations.

I will start with the two primary exceptions that are a concern of Board members. The two exceptions—income from dues and income from conferences and exhibits—are sort of reciprocals of each other. The percentage of the surveyed associations' incomes that is generated by conventions/exhibits/meetings is shown in Figure 1 above.

By contrast, ACUTA's income from conferences, seminars, exhibits and sponsorship was 73 percent of its total income in 1990-91 and 76 percent in 1991-92.

Additionally, the sources of the surveyed associations' income by percentages is shown in Figure 2 below.

By contrast, ACUTA's income from dues was 20 percent in 1990-91 and 17.3 percent in 1991-92.

So far, the trend begun two years ago (more dependent on meetings/exhibits income vs dues) is continuing in 1992-93.

Other areas of interest follow:

Ninety-one percent of the associations' staffs manage the organizations' meetings. ACUTA's meetings are managed by the ACUTA staff.

The average number of events with exhibits that associations manage each year is 2.43. ACUTA manages four meetings with exhibits each year. Only 11 percent of all associations manage five or more meetings/exhibits annually, and 74 percent only manage two or less per year. ACUTA falls in the upper 40th percentile of the square footage size of the largest exposition.

With respect to attendance at ACUTA's annual conference, there was an approximate increase (conference registration) of 18 percent in 1992 from 1991. PCMA's survey revealed that 37 percent had an increase, 30 percent no change and 26 percent a decrease. They received no response from 7 percent.

Knowing what other associations are doing helps us as we make decisions and plan for a successful future. I've shared this information with you because our association is strengthened by having an informed membership.

Editor's Notes

Speaking as one who (always a realistic child) found Buck Rogers just too farfetched, I'm awestruck at the technological marvels that are becoming not just possible but commonplace as we approach the 21st century. The kinds of things available to Buck and his galactic adversaries stretched my imagination: disintegrator rays, interplanetary rocket travel, infra-radar equipment. Then Dick Tracy with his wrist radio transmitter and other gadgets. Now I look at those fantasies fulfilled, and when Star Trek brings galaxies where no man has gone before into my living room, I pay close attention. Will that be my grandchildren's workplace?

Specifically, today anyway, I'm looking at two pieces of information that crossed my desk recently: US West's Voice Dialing Technology and United Telephone of Florida's TeleMap service.

US West has begun a four-month technical trial of voice-recognition technology in Golden, Colorado. About 100 small businesses and 350 residential customers are participating in the test which enables the phone user to store a directory of names or places and the associated phone numbers within the phone line. To place a call, the user simply picks up the phone and says the name. The call is automatically dialed by the voice recognition system. ("Captain to Commander Riker..." Can hailing frequencies be far behind?)

And then there's the problem of stopping for directions. Perhaps even that gender whose every member refuses to admit that he doesn't know the way to every destination from anywhere in the universe will enjoy United Telephone of Florida's TeleMap service. A year-long trial in Orange and Seminole counties will allow tourists to dial an 800 number, enter the numbers of the payphone they're using and their destination, then within 10 seconds receive a fax containing detailed route instructions. They're doing the same sort of thing with phones and video screens in Florida rental cars, too, I hear.

To borrow a phrase from the younger generation, "It's awesome." I'm impressed. But then, I'm an editor, not a technician, so maybe I just didn't see it coming. Will someone wake me before we get to the Gamma Quadrant?

Meanwhile, back in Bluegrass country, I'm always looking for ways to make this newsletter a more useful tool for you. In the piles of mail that I dig through to find information you can use, I haven't seen a single campus newsletter. It occurs to me that campus or departmental newsletters would be a good source for news and notes about what's happening in telecommunications across the country. If you or someone in your department publish such a newsletter and you'd be willing to share information about installations, applications, and more, I'd love to receive a copy, no matter how grand or humble it may be. Send news and notes to: Pat Scott, ACUTA, 250 W. Main, Ste. 2420, Lexington, KY 40507. Fax (606) 252-5673

Position Available

Telecomm. System Technician, Sr. (Central Office Technician)
The University of Arizona

Responsibilities: Operation, administration, and maintenance of the AT&T 5ESS telecommunications switch. Install and test voice and data equipment. Back up support to frame technician.

Qualifications: 4 years telecommunications systems implementation, operation, or maintenance experience including one year experience with high speed circuit or packet switched data networks. AT&T 5ESS switch formal training and experience is required.

Salary Range: $19,167 to $33,500

To apply: Resume must be received by May 3, 1993. Send to Paula Loendorf, Director, CCIT Telecommunications, Univ. of Arizona, Bldg. 73, Tucson, AZ 85721

Univ. of Arizona is an AA/EEO Employer.

ACUTA Welcomes New Members

The following institution joined ACUTA between Feb. 24 and March 10, 1993. Person listed is primary representative.

INSTITUTIONAL MEMBER

Region 1 (Northeast)

Wagner College (NY), Mark W. Sedutto

Personnel Change

The following change was submitted by a member institution between Feb. 24 and March 10, 1993.

Region 3 (Midwest)

College of Saint Catherine (MN), Elizabeth Eiler