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Association of College & University Telecommunication Administrators

VOLUME 14, NUMBER 8

SEPTEMBER, 1985

RUTH A. MICHALECKI, EDITOR

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President's Message

--John W. Sleasman, Case Western Reserve

Once again, the Annual Conference has ended and the routine (?) of the daily job is upon us. I think that I can speak for all of us who were at Banff when I extend thanks to everyone at the University of Calgary for perhaps the best ACUTA Conference yet. Now, let's see...Mal Reader hosted the 1975 Conference in Toronto, 1985 in Banff...where are you going to be working in 1995, Mal?

As your new president, I'm looking forward to an exciting year. We do have two new board members, who I'd like to introduce. Howard Lowell from Colorado State University (Fort Collins) is our new Region Four Director, replacing Dave Metz. Dave has gone back to New York to go into consulting. With Del Combs' election as Secretary, Pat Paul from Cornell is replacing him as membership Chairman (and helping to slightly correct the male/female imbalance on the Board).

We have a busy schedule ahead of us, with seminars in Burlington, Vermont in October; Phoenix, Arizona in January; Seattle, Washington in April; and the annual conference in Norfolk, Virginia (near both Virginia Beach and Williamsburg) at the end of June. In addition, Steve Merrill and Ruth Michalecki are completing course material for the whole series of sessions that comprise our basic telecommunications course. There will be several opportunities during the year for exposure to these novice sessions. I was particularly happy to see very positive reaction to the presentation of some of this material that Ruth and Steve made in Banff, so I would urge anyone who could use some solid background in "the basics" to attend a session when we do get to your area. These sessions will be coordinated through the region directors, so if you want to volunteer to host a group, get in touch with the appropriate director.

At the Banff business meeting, I mentioned the need for some "new blood" on the working committees of the Association, as well as support for the various regional directors. Some of you have volunteered, and I have passed names along to the appropriate people. If you haven't heard, it's because of vacations, not intent. We do need more help, so get involved.

Just in case you don't have an ACUTA directory, please call me - 216-368-4396 - with comments, problems, or solutions (I could use a lot of the latter).

ACUTA FALL SEMINAR

BURLINGTON, VERMONT

October 13th thru October 16th, 1985

PARTY LINE

--Ruth Michalecki, Nebraska

Activity is certainly on the increase in the long distance arena. Our area is scheduled for equal-access sometime during the first half of next year and already the in-fighting is reaching a frenzied state. I could write a book on the activity in the residence halls, although the residence hall students are served by our office for total telephone service and even though we were all told emphatically by MCI's Carol Herod; GTE/Sprint's William deKay and ATT-COM's Rich Burk at the ACUTA Conference in Banff that the residence hall students would not be contacted directly on equal access. In response to a direct question from me on the issues of student telephone services, we were told they would respect the office of telecommunications on each campus and any contact their organization made or attempted to make on the campus would be made with the telecommunications office. What a shame they neglected to tell their representatives. I, for one, asked the question to learn what was going to happen in this area so we could all be prepared. If they were going to have their representatives make direct contact with the residence hall students, even though I might not agree with the policy, I would have appreciated hearing what was really going to be their corporate policy.

I would be interested in hearing from our fellow members about your experiences in this arena. For instance, maybe MCI doesn't know what their field reps are doing---maybe the field reps don't know the residence halls are part of the university community. Let me know so I can let the above named persons know what is really going down. It certainly won't change the way we are doing business in the residence halls, it just adds another item we have to handle in our already far too busy agenda....and on our campus we are not dealing with only one or two MCI representatives, we are dealing with literally hundreds of them. I was really shocked to discover MCI is being represented by AMWAY dealers, and I believe there is one of them in every home---that is unless they are on this campus.

Speaking of the alternatives to ATT-COM in the long distance arena, did you see the August, 1985 issue of **Telephone Management Strategist**? There is an interesting and brief article on the IBM/MCI/SBS deal that states the so-called big deal might not be such a big deal after all for the end users. They predict almost no direct effect in the near future; the potential indirect effects for the end users include: 1) Make ATT and MCI/SBS the clear leaders with no close competition; 2) potentially cause a shakeout among smaller suppliers which could result in a series of mergers or acquisitions; 3) a surge in MCI sales to large businesses through its alliance with the IBM name; 4) a possible speed-up in the merger of voice/data technologies, although close scrutiny

PARTY LINE, Continued:

reveals missing elements, namely experience with multiplexers and other such related equipment; and 5) with the entrance of IBM, one of the most powerful, largest and fast-growing companies in the world, into the long distance arena, the FCC might decide to remove all the remaining regulatory shackles it has placed on ATT and the seven RBOCs. Imagine, if you will, an ATT-Communications that is free to structure and adjust its prices at will. Imagine the RBOC's being allowed to enter long-distance businesses in competition with ATT-COM and MCI. Interesting thought!

The article went on with a comparison of long distance rates, using rates in effect as of June 1, 1985. They asked if you remembered the "good old days" when MCI and the OCCs all promised to save you between 15 and 40 percent over ATT-COM rates? No matter, for those days are gone forever, according to TMS, with savings of 15 percent essentially limited to only calls that last one minute or less! Summarized below are six key findings TMS derived from their straightforward comparison of direct-dial interstate rates.

(1) MCI saves you the most in the **first minute**. After that, minute-by-minute savings are measured in tenths of pennies.

(2) Allnet, like many resellers, has some real rate bargains and some real rate "dogs"---smart shoppers will find the bargains and use more than one long distance supplier in order to get the best prices in all cases.

(3) The longer the distance covered by a call, the less the available savings from the OCCs.

(4) The longer the duration of a call, the less available savings from the OCCs.

(5) Despite the fact that ATT-COM and MCI are marketing powers that will probably dominate telecommunications in the near-term, other smaller suppliers can actually provide better rates in many cases.

(6) Presubscription---the act of signing up with OCCs prior to the arrival of Equal Access in your area---is probably not a good idea if you have to pay for a local call to access the service. The cost of the local call will generally be enough to make the overall cost of using OCC service in non-Equal Access areas more expensive than using ATT-COMMUNICATIONS.

For your information, I have reproduced the rate chart from TMS. The rates do not take into account the 2 to 9 percent volume discount offered by MCI or the value of the business version of ATT-COM's Opportunity Calling discount coupon program. Complete article---read **Telephone Management Strategist**, August-85.

The June, 1985 issue of **TELECONNECT** has a Disconnect Dictionary that provided me a few laughs and I would like to share a few of the definitions with you. Once again, we are indebted to Harry Newton and to authors Duffy Mich and Steve Petermann for giving us some comic relief in our hectic days.....

ACCEPTANCE: Any document presented for the customer to sign after cutover but before acceptable switch performance.

ACCESS CHARGE: A rate-making mechanism created by the FCC to allow telephone companies to gain faster access to a user's wallet.

LIAR: See Long Distance Salesman.

BATTERY BACKUP: The local electric utility company.

DIAL TONE: "Historical". Now largely extinct, especially in Southern California and New York City.

RESPONSE TIME: The time between system failure and the arrival of an ill-trained, ill-tempered, ill-equipped individual who tells you he needs to go back to his office to get more parts and more people, it's not his company's fault and you're going to get charged for the call.

COST JUSTIFICATION: An economic analysis with all the lies summarized and on an "Executive Summary" page.

DIVESTITURE: Casting off good rules and commonsense.

I read where ATT-COM's proposed Software Defined Network will serve more as a substitute for private line services than reducing use of regular and WATS services. They told the FCC the offering will not encourage customers to bypass the local telco facilities and will have only a slight negative impact on the companies revenue from access charges. FCC has suspended the tariff for six months (after first putting off the effective date of the tariff until June, 85) to gather more information about ATT's economic justification for the service.

SDN service relies on the ability of digital switches to program the public switched network to route traffic along patterns that differ from customer to customer. The service replicates a dedicated network in that it provides a customer with needed capacity on demand, even though it uses ATT's shared public transmission facilities. ATT-COM predicted users will place about 12 million minutes of traffic over SDN in 1985 and 886.8 million minutes in 1987.

A few news items about ACUTA members. Steve Carnilla at **Loyola** in New Orleans is busy as ever; only this time he is directing and implementing the installation of his new NEAX switch. **James Madison University** in Harrisonburg, Virginia selected the NEAX 2400 IMS through Universal Communication Systems, Inc. The installation will be cutover during first quarter 1986, will use some of the existing plant facilities requiring only a partial recabling job. They will start with a 4100 line system with expansion to 6000 lines within a few years. James Madison plans include resell of long distance services to the students; a parallel broadband coaxial network for voice, data and video, and voice-mail. **Ohio University** in Athens selected a voice,data,video communications system based around Honeywell's Delta-Plex 2000 PBX. Selected because of it's flexibility and distributed architecture, the first cutover will be a 300-line test case created in a dormitory. The installation should be complete in June 86 for 3200 lines, wired in groups of 800 per quarter. If the first phase is successful, the university plans to have Honeywell wire all 109 buildings and 6500 dormitory rooms on the main campus and connect Ohio University's five outlying campuses via microwave and fiber-optic links.

TELECONNECT, the September issue has an excellent article on "Understanding Equal Access". The article is done in a question and answer mode and I believe you should read it. It covers about everything on the subject, including the difficult to understand LATA situation.

The September/October issue of **BUSINESS COMMUNICATIONS REVIEW** has an excellent article by Victor Toth covering "ATT-COM New Private Line Tariffs". The article covers Part 1 - Tariff Structure. Also in this issue of BCR are several very good articles on T-1; ISDN and Network Management. We have reprinted a story in **Consultant's Corner** by Richard Kuehn entitled Trendy Centrex Still Has Problems, from this same BCR issue in this newsletter.

Well no one but our good friend Connie Gentry would think of asking the school's chaplain to say a special prayer for the cutover of her new SL-100 Northern Telecom switch at **Emory University**. Connie says everything went very well, and when they experienced a wild electrical storm in Atlanta right after the cutover, she was thankful she had the foresight to enlist the help of the chaplain. She sent the special prayer to me so it could be shared with all of you. Thanks Connie---I'm sure a few of the cuts could have used it!

At the Inauguration of a New
Telecommunications System

a prayer by

Donald G. Shockley

Emory University Chaplain

O Lord our Creator: on this important occasion in the life of our university, we pause to express our gratitude to you. We are thankful that our lives are lived in daily interaction with others, where we have the opportunity to help and support each other in the achievement of common goals. We are thankful for advances in technology which extend our capacity to serve the human welfare. We are thankful to be associated with Emory University which means so much to so many people.

Now we ask your blessing as we inaugurate an entirely new telecommunications system for the campus. We ask your blessing on all of those who have played a part in planning and installing the system, and upon those who will be directly involved in its operation and maintenance. We pray that the system will be able to fulfill its potential to enhance our communication with each other. May our being linked together in a new way through this system remind us of those often-forgotten spiritual bonds which unite us as children of one Creator.

Give to us all the patience and understanding we need in coping with anything that is new or different. Strengthen and encourage all of those who will lead us through these early days of change in customary routines. Through your blessing and continual help, may our university continue to grow in its capacity to service humanity. Amen.

August 16, 1985

Don't forget the seminar at Burlington, Vermont. It will be especially important for those planning to install a premise switch or in the early feasibility-study stage of switch purchase. For those owning your own premise switch or telephone equipment, the issue of how to handle the maintenance should be a major concern. Along with the TMC group who will conduct the seminar, we will have a select panel of ACUTA members sharing their own experiences with plant design and maintenance. Looking forward to seeing some of you in Burlington, Vermont---a beautiful place to be in the Fall.



Inevitable result of breakup of AT&T is reduction of jobs

American Telephone Telegraph Company's decision to eliminate approximately 24,000 jobs was one inevitable result of the company's forced breakup in 1984, per industry analysts.

"They always threw staff at problems, because they were assured of a profit. But now some of that staff has become redundant because of the many changes that have come with divestiture," said Maria F. Sbrilli, an analyst at the investment firm Smith Barney, Harris Upham.

Having spun off 22 local Bell System operating companies and lost its long-distance telephone monopoly, today's ATT has more freedom to enter new markets--such as computer--but it also must compete for customers. And it is providing different services for customers who have different needs than before.

AMID ALL THIS, analysts said, the company's announcement that it would eliminate a fifth of the jobs in its 117,000-employee communication equipment group was not surprising.

"There was a great deal of redundancy in the way ATT was structured," Sbrilli said. "Now they are moving toward a leaner organization."

Under the divestiture agreement with the federal government, ATT inherited all the telephone equipment in businesses and homes that people had previously leased--an asset, Sbrilli said, that "is wasting away by at least 20 percent a year."

As people turn the phones in and buy their own, ATT has an increasingly smaller need for service, maintenance and installation personnel. "That's overhead that can be eliminated," she said.

The investment firm L. F. Rothschild, Underberg, Towbin estimates that leased equipment provides 20 percent to 25 percent of ATT's earnings, but says that is declining as customers buy their own equipment or opt to rent more complex equipment that provides a lower profit margin.

ATT ALSO is fighting to win back its market share in business telephone equipment systems.

This slipped in the post-deregulation competition and because "they were late in new products," Sbrilli said.

The company also has faced a tough fight to carve out a place in the computer business.

"They have been offering 20- to 50- percent better performance with between 20- to 50- percent cheaper prices, with no cost advantage in making those systems over IBM," she said. "So the fact that their costs were higher and they were charging less meant that they were under-earning."

"If they're going to continue in this market. . . they'll need to restrain costs or they'll have no money left for business," she said. "They've got to address the overhead problem, and that's what they've done."

Glenn Pafumi, an analyst at the Dean Witter investment firm, said the job cutbacks were an inevitable result of the divestment.

"AS YOU SHIFT to more electronics-oriented hardware, you don't need more people," he said, adding that the company had planned for some employment cutbacks even in the divestment agreement.

(Continued on Page 4)

THE SHAPE OF PHONE CALLS TO COME: DIAL 'M' FOR MUDDLE

By Mark Maremont; Reprinted from Business Week, August 26, 1985 issue.

Imagine for a moment that it's 1987 and you're at a party at a friend's house. You want to make a long-distance call and charge it to your phone credit card. Simple? Not exactly. To charge the call, you'll have to dial 0 plus the number you're calling, or double 0, or 1 plus 0 plus a three-digit code plus 0, or a seven-digit number beginning with 950, or maybe an 800 number.

Sound like a nightmare? It is. The growth of a competitive long-distance industry is giving people a lot more choices about their phone service. But it's also spawning a horror show of new procedures that callers must adjust to, particularly for special services, such as person-to-person, collect, and credit-card calls. The situation is so complex that not even the phone companies are sure what changes will be needed. "We're still working some of this out," says Donald C. Wilson, chief operating officer of Pacific Northwest Bell Telephone Co. "It's kind of a mess."

Part of the problem stems from the coming separation of local from long-distance operator services. American Telephone and Telegraph Co. still has almost all of the old Bell System operators. They perform local services, such as fielding emergency calls, under contract to the Bell companies. But during the next two years, many operators will become employees of the local phone companies. So the folks at Bell Communications Research Inc., the consortium that does joint projects for the seven Bell regionals, dreamed up a new system to distinguish between the two types of calls: Dial 0 to get a local operator, double 0 for the ATT operator.

To complicate matters further, by late 1986 about two-thirds of phone customers will have picked (or been assigned) a primary long-distance carrier. For direct calls, they will simply dial 1 plus the number. Special service calls, though, will require Byzantine procedures.



NUMEROLOGY. ATT customers will have it the easiest. They will dial 00 to get an operator, or 0, plus the phone number, plus their credit-card number for charge calls. MCI Communications Corp. and the other carriers don't offer operator service, so their customers will have to dial the ATT access code, 1-0-288 (288 spells ATT), plus 0 to reach an operator. To make a credit-card call away from home, non-ATT customers will continue to dial a local access number, which begins with 950, or a toll-free 800 number.

If that seems confusing, consider what it means for the hypothetical party at a friend's house. If you're both ATT customers, and your friend has a Touch-Tone phone, you can make your credit-card call by dialing 0, the phone number, and your charge number. If your friend has a rotary phone (which doesn't generate the tones the phone network needs to bill the call), you dial 00. But if your friend uses another carrier, you will have to dial 1-0-288-0 to reach ATT.

Then, of course, there's the matter of InterLATA vs. IntraLATA calls. As part of the breakup agreement, the U. S. was divided into 193 geographic areas, known as Local Access and Transport Areas. Some LATAs comprise the metropolitan area surrounding a big city, while others take in an entire state. In general, local phone companies handle all calls within a LATA, while long-distance carriers transmit calls between them.

RAY OF HOPE. Customers usually don't need to know whether a long-distance call is within a LATA or not; the phone network handles that automatically. But once the operator force is split up, they'll have to learn. For example, a collect call that goes 230 mi. from San Francisco (area code 415) to Eureka (707), Calif., is within a LATA, so a Pacific Bell operator must handle it. A call from San Francisco to Sacramento (916), although it travels only 90 mi., must be handled by the ATT operator, because it bridges two LATAs.

There is one ray of hope. Ameritech, the Midwest regional Bell Company, has asked the Justice Dept. for permission to provide operator services for the alternative carriers. If it gets the green light and the other Bell companies follow suit, non-ATT customers might one day be able to dial just plain 0 and get the same types of services now offered by ATT. Now, if somebody could just figure out whom to call if you get a wrong number on an IntraLATA long-distance call dialed from a privately owned pay phone that is programmed to call via MCI....

Breakup of AT&T, Continued:

On Wednesday, Robert E. Allen, chairman of ATT's Information Systems unit, said 15,000 jobs would be eliminated in staff and support areas. He said other cuts included 4,000 jobs in installation, maintenance and technical support, 3,000 jobs in product distribution and 2,000 jobs at factories.

About 30 percent of the affected jobs are management positions, the company said.

ATT said it hoped to eliminate some of the 24,000 jobs through attrition and early retirement, but said it could not estimate how many jobs would be eliminated that way.

ATT spokesman Mike Tarpey said severance pay and other costs related to the release of employees would amount to between \$800 million and \$900 million.

THAT MONEY will come from a \$5.5 billion reserve "to pay for one-time cost, factory closings, reorganizations for redundancies -- whatever happens" because of divestment.

"The divestment increased competition," Tarpey said.

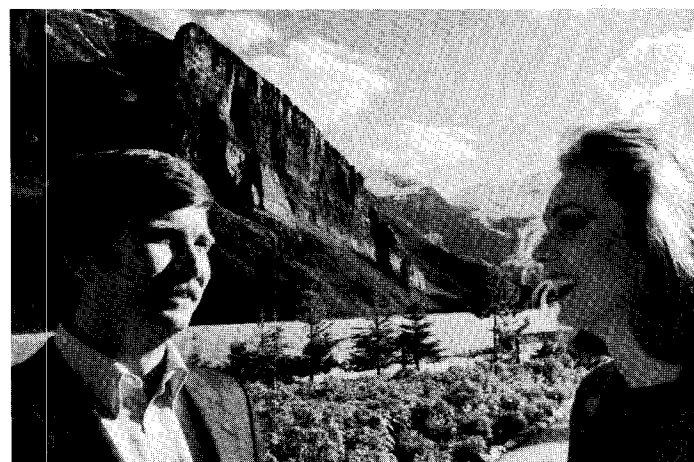
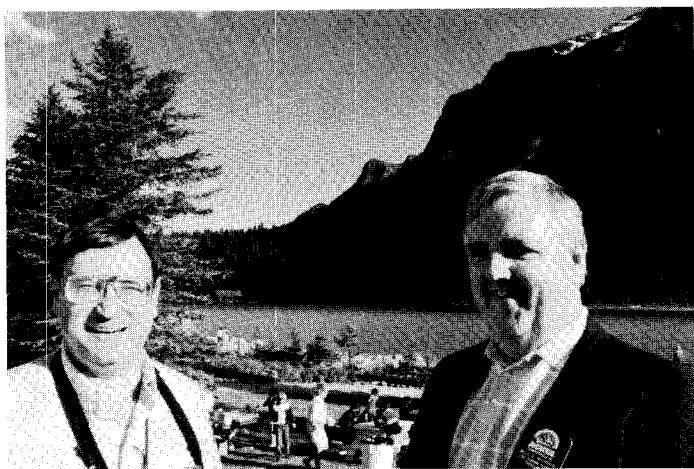
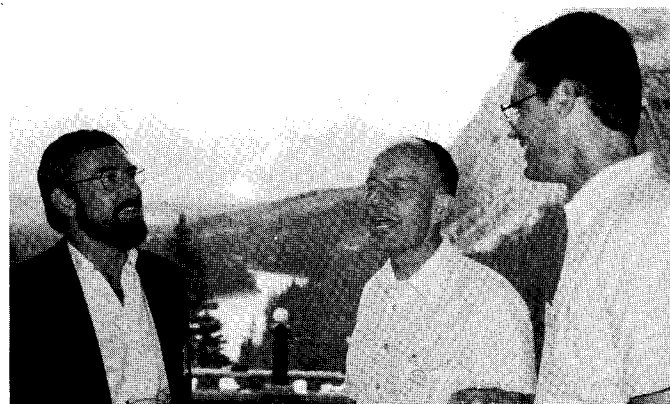
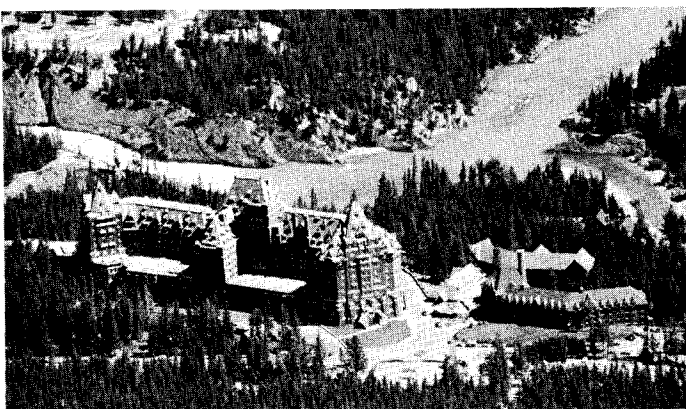
"Competition put pressure on prices and expenses. And it all seems to come together."

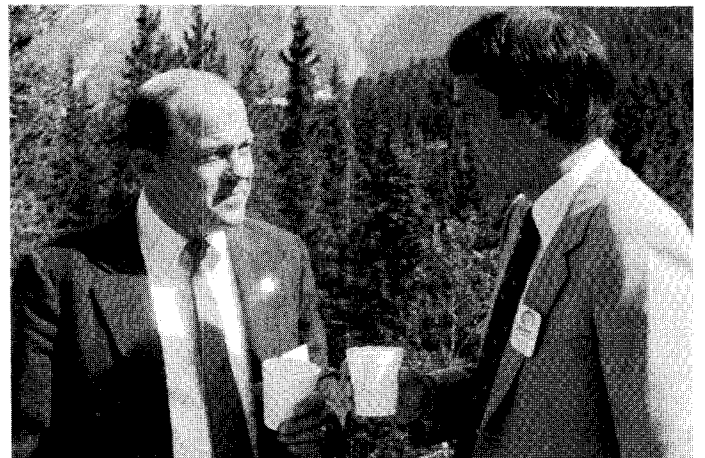
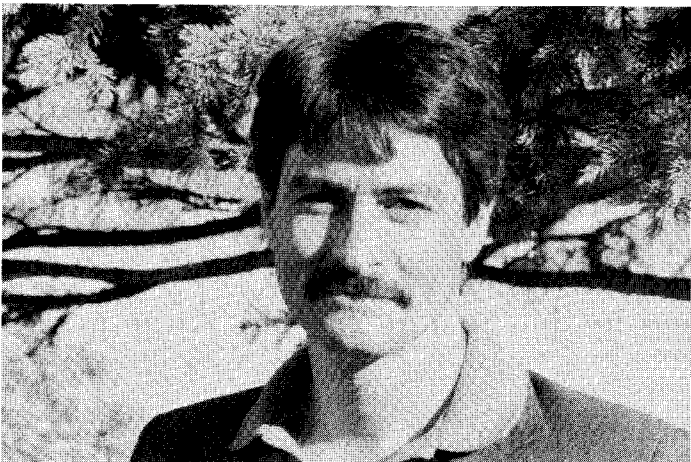
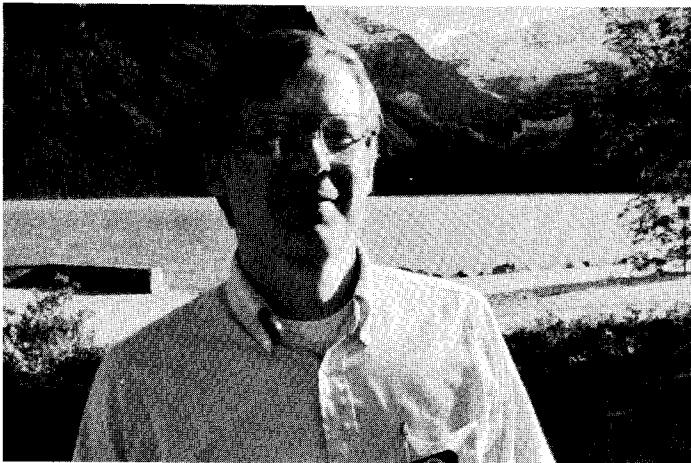
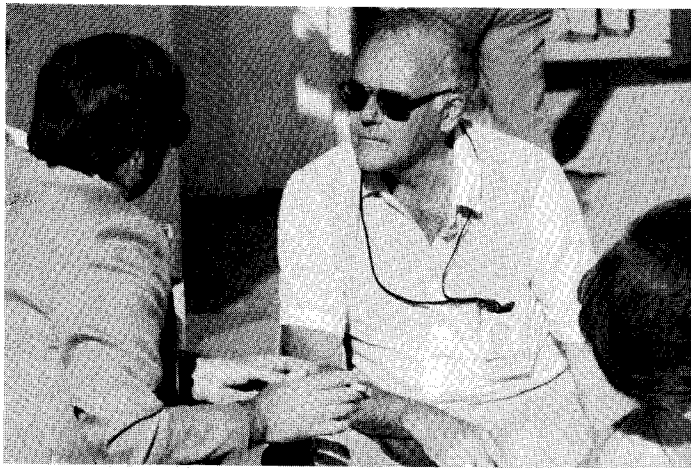
Note from editor: The above article appeared in August 23, 1985 issue of "The Lincoln Star" published in Lincoln, Nebraska.

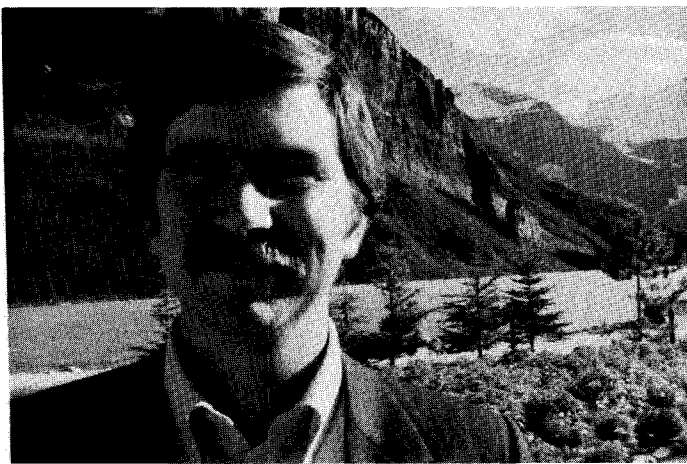
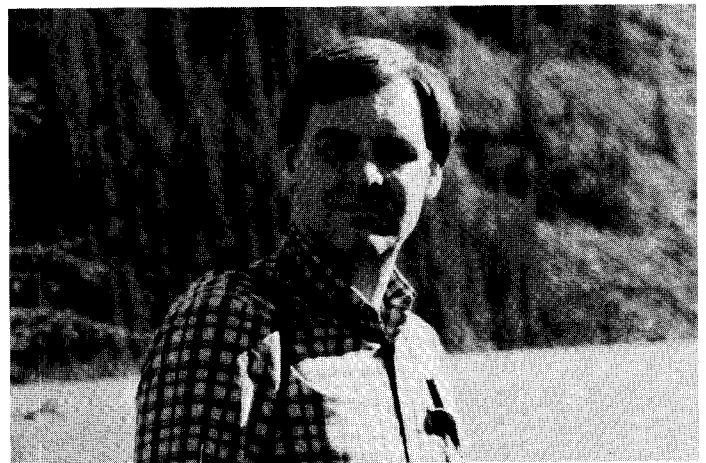


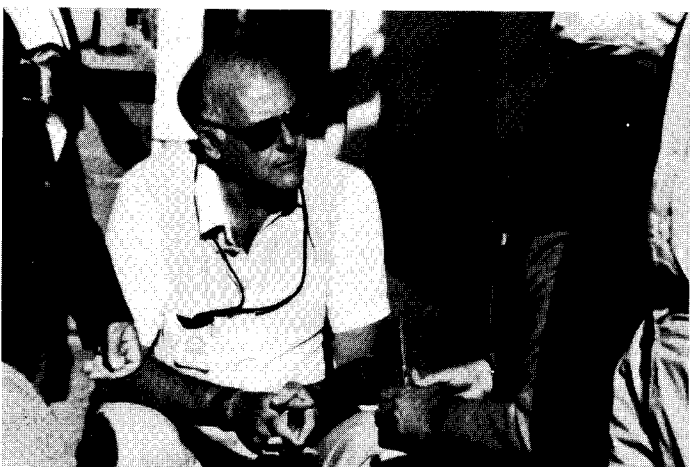
14th ANNUAL CONFERENCE

BANFF, ALBERTA, CANADA



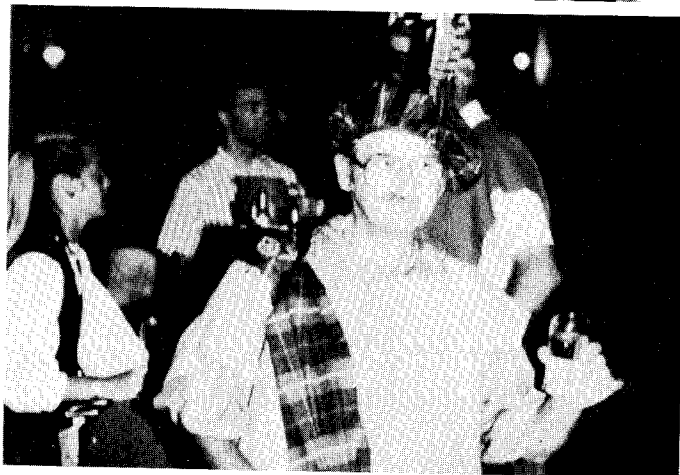




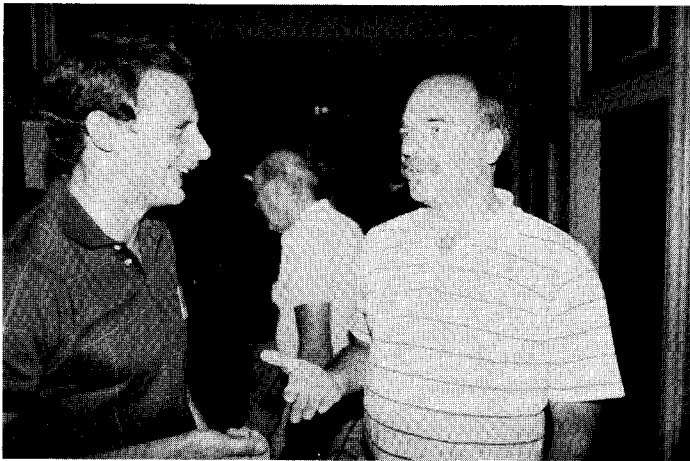


MEDIEVAL BANQUET









CONSULTANT'S CORNER



Richard A. Kuehn

Trendy Centrex Still Has Problems

Centrex certainly has its advantages. The elimination of channel charges in multi-location, single exchange environments, the reduction of space needed for housing on-premise switching equipment and the reduction in power operating requirements are the most well-known. Moreover, the perceived value of the Variable Term Payment Plans (VTPP), coupled with a corporate stop gap or interim decision, make it easy to keep "that old Centrex."

As a result, Centrex is doing well. The net number of Centrex lines installed increased. It is being referred to as "the flagship," "the awakening giant" and "the road to ISDN" in articles that fill the trade press and in conference and seminar brochures.

The trendiness of Centrex, however, does not mean that the marketplace factors in existence prior to 1-1-84 have disappeared. There were bona fide reasons why users were selecting PBXs over Centrex and many of those reasons remain valid today.

Many enhanced features, including customer administration and digital switching, are only available in central offices which have the ATT 5 ESS or Northern Telecom's DMS-100. Since these switches are not available in many locations it is difficult to find out how much they will cost the user. Many BOCs still don't know what it will cost them.

With regard to the much ballyhooed ISDN, it will be 1987 before any standard becomes officially adopted. While the present digital switch format is following the direction of the ISDN Standards Committee, there is no guarantee as to what standard will actually emerge. And there is no guarantee that once a standard is adopted, ATT and the U. S. telephone service providers will adhere to it. In 1979 the CCITT approved an international standard for videotex transmission; within 12 months ATT had adopted a different "North American" alpha-geometric standard.

Any current or potential customer of Centrex needs to consider the issue of exposure on two fronts: access charges and key telephone sets.

Regarding access charges, the FCC originally intended access line charges to be \$8.00 per line per month. The \$2.00 per line rate on installed base Centrex was to allow a Centrex user to determine if there was a viable alternative. With the National Exchange Carrier Association (NECA) pressing for ever more revenue, the \$8.00 ceiling looms as a threat.

Moreover, state Public Utilities Commissions (PUCs) are political bodies. For now, Centrex is enjoying the shelter of "trunk equivalency" to reduce rates and offset access charge effects, while the VTPP protects against Centrex rate increases "initiated by the telephone company." But as residential service costs increase, and as telcos continue their pressure for rate hikes, a question arises as to how long the PUCs can hold Centrex harmless. The PUCs will face pressure to reexamine Centrex vs. access charge trade-offs. And Centrex becomes virtually impossible to justify to management when it carries a \$6.00 per line access charge.

Then there is the issue of key telephone sets. In analyzing the costs of Centrex under a Variable Term

Payment Plan, it is almost always economically viable to purchase the telephone station equipment -- either as ATTIS embedded base or as new stand-alone equipment. In most cases the economics of Centrex, with its relatively high line rate and comparatively low instrument rate, dictate a concentration of Centrex lines through key telephone instruments. The presence of multi-line or key instruments in Centrex installations is relatively heavy.

But purchasing embedded base 1A2 key equipment carries a risk -- the rising cost of labor for moves, changes, rearrangements and service. The electromechanical equipment is highly labor-intensive and therefore its life cycle cost is high. ATTIS recognizes this fact

and offers purchase prices that can yield 30 percent range returns over two years. As service costs increase and the discontinued status of much of the equipment causes problems, these 1A2 key systems will undoubtedly be replaced on a one-by-one basis.

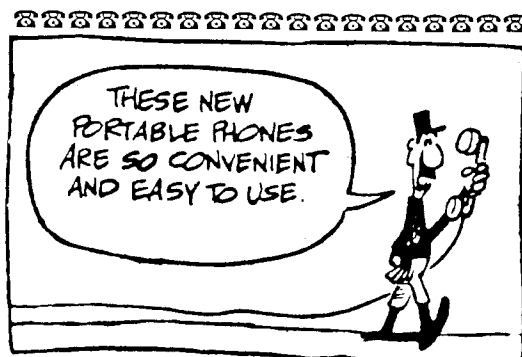
If a decision is made to purchase all new telephone instruments, they will probably be electronic -- the cost of which is usually comparable to an on-premise PBX. In such a situation the Centrex fan has to work hard to answer the question: "For the same money why shouldn't I just buy the entire telephone system?"

The purchase of electronic key sets to sit on a Centrex has a danger of its own -- how to upgrade and integrate the electronic set into a future PBX? Going to management with a cost-justification based upon owning electronic key systems that cannot be fully depreciated and on the assumption of a reduced Centrex station line monthly rental is not likely to be an experience for the faint of heart.

The decision to keep Centrex "on an interim basis" can thus turn into a deep pit from which it is difficult to emerge. I know that the decision to retain Centrex is often taken to support short term financial goals. The question is, do those decisions support the long term interests of the corporation?

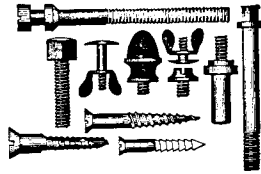
Note from Editor:

The above article is from Business Communications Review, September, 1985, issue. Richard A. Kuehn is president of RAK Associated in Cleveland, OH.



Top 17 Installation Screw-Ups

This was reprinted from **TELECONNECT**, May, 1983 issue. ACUTA thanks Harry Newton and author, Richard Jennings for this excellent article.



1. We underestimate outside plant needs. Interconnect companies hooking up two buildings with underground cable always underestimate how much they'll need for the initial installation. More and more of this two-, three- and four-building networking is happening. Interconnect companies don't have the same experience phone companies do with outside plant.

2. We install too little outside plant. Underground cable is expensive to lay. But laying twice as much at the beginning is not expensive. Having to go back, dig up the ground or fish cables through conduit, and put in more cable -- because your customer grew out of capacity -- is very expensive.

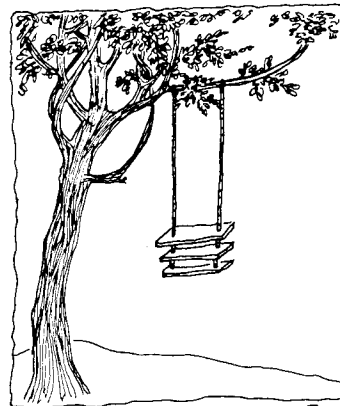
3. We send crews in before the site is properly surveyed. Unless you know precisely where each phone is to go, you don't know how much cable. Yet interconnect company installations teams will often completely cable a floor, or even a building and then discover -- surprise, surprise -- that they had forgotten the five phones in the special X room.

4. We lack experienced supervision. Try this one: The salesman figures the new cabling to run in existing conduit. The existing conduit is O.K....until they run into a problem. All work ceases, while the crew debates the solution. Says Jennings: "An experienced supervisor is always two steps ahead of everyone else, anticipating problems before they occur and figuring the solution before the work grinds to a halt."

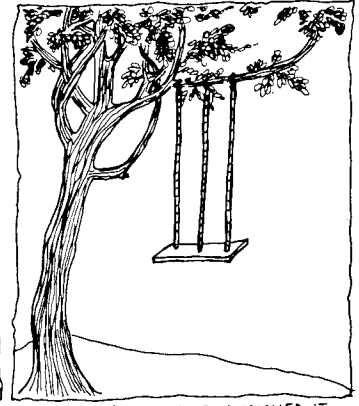
5. We lack sufficient and proper tools. Says Jennings: "How many times have you seen a crew of 12 guys sent out to pull cable through ceilings and only have one ladder? What about the crew that's sent out to drill through concrete floors without drills or without the correct drill bits?"

6. We go into an existing job site and assume all cable conduits and ducts are free and unobstructed. Yet we find that some conduits are only stubbed out. Some conduits don't run where they're supposed to. Some are collapsed. Some are obstructed. We can't go back to the customer to charge more. The customer will say, "It was your responsibility to correctly survey the job and determine how much of the existing ducts and conduits you could use."

7. Interconnect installers sometimes damage customers' premises. Often excessively. Some installers tear out "permanent" lock-in ceiling tiles. You can take out permanent ceiling tiles -- if you know how. But you may need an expert permanent-ceiling-tile-remover. Once the phone system is installed, the onus is on the interconnect company to put the customers' premises back together again. Says Jennings: "I have seen installations completed and the interconnect company presented with a bill for \$30,000 for repair of the customer's ceiling!!! A bill of that size can quickly gobble up your profits on the job."



AS THE CUSTOMER REQUESTED IT.



AS THE PBX ENGINEER DESIGNED IT.

8. We delay procuring materials in a timely manner. "The number of times I've seen interconnect companies trying to airfreight in cable would stagger you. You know what PANIC costs?" questions Jennings. "Plenty!"

9. Interconnect companies often don't order sufficient cable. "Cable is the item interconnect companies most frequently run out of. Most interconnect companies are on a tight installation budget. As a result, they often gamble with getting away with the minimum. For some reason, we always seem to underestimate cable needs."

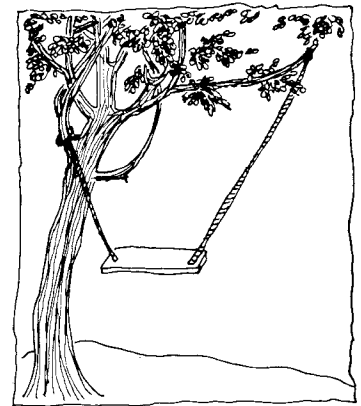
10. We often calculate our manpower needs incorrectly. This one's wierd. If you underestimate your manpower needs, you'll end up with heavy overtime. If you overestimate your manpower needs you won't save money. If THEY know the cut date is three months hence, THEY will make the pace of their work match the cut-date. "It's human nature," says Jennings.

11. We have insufficient records and documentation. Most people simply don't keep good records. The urgency is to get the system installed, not to set up good records. The installer knows the cable runs from A to B. That's fine. Except when the next guy comes on the scene. And he/she has to start searching where the cables go. Reinventing the wheel. This can eat time like nothing else.

12. We lack sufficient floor plans and station key running sheets. The documentation in point 11 above tells what we installed. The documentation in this point 12 tells what we should be installing. The floor plans tell where each phone is to go. The station key running sheets instruct the installer as to what to put on each phone -- lines, features, lights, buzzers, etc.



AS THE INSTALLATION DRAWING DEFINED IT.



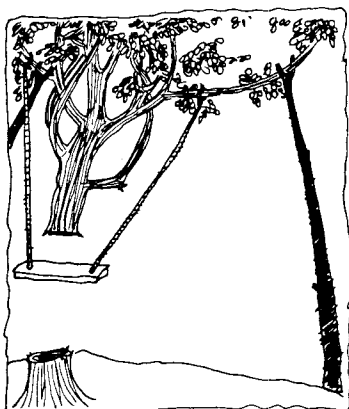
AS THE SUB-CONTRACTOR FABRICATED IT.

INSTALLATION SCREW-UPS, Continued:

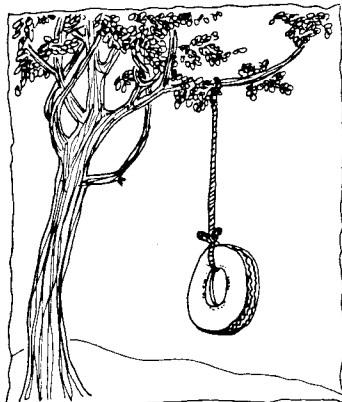
13. Sometimes we install phones with insufficient electrical power and/or insufficient airconditioning. Many times, according to Jennings, the problems don't surface until after cut-over. That's when there can be real problems.

The customer is traditionally responsible for providing the power, the air conditioning and the room. But the interconnect company is responsible for telling the customer what will be needed. "If you tell the customer you will need 20,000 BTUs of air conditioning and it turns out when you've installed the switch that you really need 40,000 BTUs, the customer is not going to be happy. He won't be pleased about ripping out his new air conditioning system just to install a bigger, more expensive system. The customer is likely to tell you in not very polite terms what you can do with your air conditioning system," says Jennings.

14. We often don't have proper test procedures established well in advance of cut-over. You must have a definite gameplan as to who is going to do what. How the process of testing is going on. When tests are to take place. How they are to be coordinated with the customer. For example, if you send a bunch of guys around with specific instructions to test each phone, then you had better make sure all the offices with phones in them are unlocked. Otherwise you can be sure Murphy's Law will prevail and the phones you don't test are the ones that won't be working.



AS THE CONTRACTOR INSTALLED IT.



WHAT THE USER REALLY WANTED.

15. We don't consult building codes, or we consult them too late. Air plenum return ceilings require teflon cabling. This can make a real difference. A standard three-pair phone cable costs four cents a foot; a teflon three-pair cable can cost 23 cents a foot. Some codes say you're not allowed to lay cabling on top of lift-out ceiling; the cabling must be suspended. This can be expensive. Most codes say you can't tie cables off sprinkler pipes. Does the code say you have to have sprinklers in the switch room? Some building codes say you're not allowed to drill through floors.

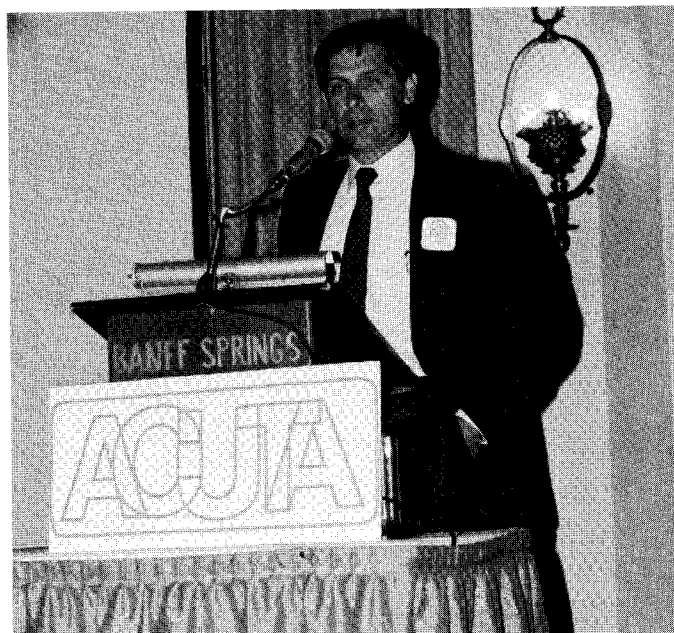
16. Our salesmen often quote and sell jobs without figuring in the cost of installing phones in unusual locations. The problem occurs because the Operations side of the interconnect company often doesn't see the job until it is quoted, sold, the contract signed and a deposit accepted. Says Jennings, "What marketing has sold can't be put in, or will cost a hell of a lot of money to install....If Operations had been involved in the early stages of quoting the job, these problems would have been eliminated."

17. We often ignore our public relations and commit the awful sin of ignoring the person who's paying for it all, namely the

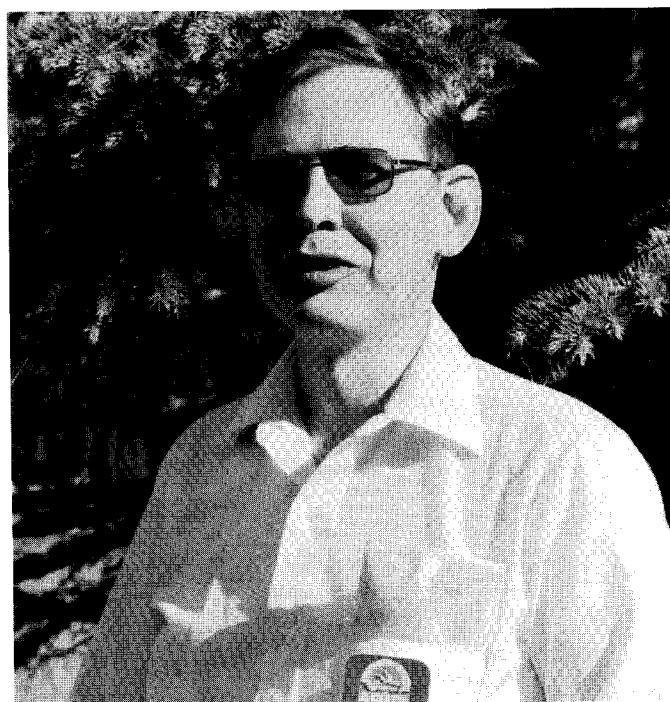
customer." It's the customer's offices. He expects you to have dress correctly, maintain a suitable professional appearance and a pleasant attitude. Above all, the customer expects to be informed. Says Jennings, "It is obviously better P. R. for the customer to know about potential problems before he discovers them and complains."

Summing up, Jennings says: "All these 17 problems are not overwhelming. They all could be solved with experienced supervision."

"An ounce of work at the front end planning is worth thousands of dollars wasted at the back end."



"Victor Toth, Keynote Speaker for the 14th Annual ACUTA Conference in Banff Alberta, Canada."



"John Sleasman, Case Western Reserve University 1985-1986 ACUTA President."

Insults work wonders in ATT war

By Mike Royko of The Chicago Tribune

Although I haven't made as much progress as I'd like, my vendetta with ATT goes on.

As I've mentioned before, I'm plagued by phone calls from Chicago people who want service from ATT.

That's because the phone company has a 1-800 number that is the same as my office number. So if somebody neglects to dial 1-800 first, they get me.

ATT has suggested that I change my number. But since I had the number first, it would seem fair for them to change theirs. They could even use the home number of one of their executives. Let him go goofy.

Naturally, they refuse. So I have to resort to various guerrilla tactics aimed at shaking customer confidence in ATT.

For a while, I tried to give the impression that ATT was demented.

When people called to complain about a defective phone -- thinking they were talking to ATT -- I would give them technical advice, such as throwing the faulty phone out of the window, praying over it, or chanting a mantra.

But the effect of this approach was limited because it would have an impact only on those people who called. What I needed was a strategy that would have impact on large numbers of people.

AND NOW I have developed such a strategy.

It began with a call from a young man who said:

"Where's the phone center around Ford City?"

I said: "What is your ethnic background?"

"What'dya want to know that for?"

"Please, sir, just answer the question.

What is your ethnic background?"

"Irish. So what?"

"Well, I'm afraid we won't be able to help you."

"Why not?"

"We are discontinuing all service to people of Irish ancestry."

"What? Why?"

"Look, you just don't pay your bills. We don't know if you spend it all on beer or what, but you can't be trusted."

He burst into a string of appropriate swear words.

"And you are also crude," I added. "Goodbye."

Seconds later, he called back and demanded an explanation.

"I told you, we are no longer servicing the Irish. We will be cutting off your service shortly. Goodbye."

I assume he has since told all of his friends and relatives of the anti-Irish bigotry he encountered and they are as outraged at ATT as he is. Or else he has learned to dial 1-800.

Then there was the woman who called from the Jefferson Park neighborhood.

I asked her name, then said: "Isn't that a Polish name?"

"Yes, it is," she said.

"Ah, then I'm very sorry. We can't help you if you are Polish."

"What are you talking about?"

"We don't like the Polish."

"That's the most terrible thing I've ever heard. Why are you saying that?"

"Corporate policy, I guess."

"You have a corporate policy that you don't like the Polish?"

"That's right. I'll tell you what, why don't you have your name changed to something that sounds American. Try Smith or Jones."

"How dare you."

"We dare, madam, because we are big and powerful. And you ain't. Goodbye."

Later, there was the man of Italian ancestry who was struck speechless when I told him that we were refusing service to Italians because our technicians didn't like working on phones that were garlicky.

AND I'VE MANAGED to alienate, on ATT's behalf, many blacks. A conversation with one black man went something like this:

"Tell me, are you of the black persuasion?"

"Yeah, what about it?"

"We are discontinuing service to all blacks."

"Say what?"

"Yes. You people use all that jivey language and, frankly, you laugh too much. And that causes a confusion in the electronic equipment. Our equipment is designed to handle traditional American speech."

"I don't believe this."

"Well, that's the way it is. If I might offer a suggestion, you try to become a white suburbanite. G'bye."

I don't know how much ATT spends on public relations. I'm sure it's a considerable sum. But in the face of my campaign, it's going to be a big waste.

So, wise up, ATT, and get a new number. Why, I haven't even gotten around to the Hispanics, the Chinese, the Lithuanians, the....

The above article appeared in the September 10, 1985, issue of THE LINCOLN STAR, published in Lincoln, Nebraska.

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"Jim Strand, Executive Vice President-Lincoln Telephone Company; Ruth Michalecki at the Medieval Banquet, Banff."



"Mal Reader, Ruth Michalecki and John Sleasman at the Medieval Banquet at Banff... What a party!"