ACUTA Newsletters

ACUTA: Association for College and University
Technology Advancement

2-1984

ACUTA eNews February 1984, Vol. 13, No. 2

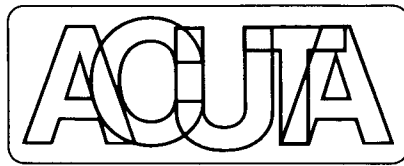"ACUTA eNews February 1984, Vol. 13, No. 2" (1984). *ACUTA Newsletters*. 344.
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President's Message

...by Michael A. Toner

I thought we should have a little update on the upcoming Spring seminar to be held in Orlando on March 27-30, 1984.

By this time everyone should have received their seminar brochure and registration form in the mail. Thanks to a lot of organized planning by our seminar host, Bill Morris, all the arrangements for this meeting are falling nicely into place.

As advertised, the Orlando program will deal with a "Comparison of Switches and Concepts" presented by Joe Massey of JTM Associates. In addition to this challenging program, we have recently made arrangements with Ralph Sandridge, the chief communications designer at Vista-United Telecommunications, to lead off the seminar with a short session on the history, the present service offering and future telecommunications plans of their company.

For those of you who have never heard of Vista-United Telecommunications, they are better known by the people in the Orlando area as the Walt Disney Telephone Company. This telephone company is owned and operated by Walt Disney Productions and whose primary function is to serve the Magic Kingdom, Epcot Center, and all the hotels, shops, and other attractions on the Disney World property (all 28,000 acres!) in Lake Buena Vista, Florida.

Bill Morris and I visited with Ralph Sandridge in January and were treated to a very educational and interesting presentation and tour of their operation. We shortly discovered that the most interesting and obvious thing about the communications office, the various telecommunications needs and the layout of the buildings served by Vista was the similarity with what might be found on most college campuses. However, unlike most of the equipment serving our campuses, and since this telephone company was basically built from scratch starting about nine years ago, it utilizes modern electronic switching equipment, and is involved heavily in fiber optics and satellite communications.

Bits & Pieces

...by Ruth A. Michalecki

Before I forget my manners, **thanks** to **TELEPHONE ANGLES** for reprinting the ACUTA News article on Joe Massey's presentation of "The New LATA Structure."

I would wager a pretty penny on what the hottest topic of the last two weeks has been among fellow ACUTA members. My bet would be on **CALC** charges and the impact on those with **CENTREX** services.

As it now stands, the access charges will be levied far more on the interexchange carriers than on end-users, at least until June, 1985, when the FCC has scheduled its "final" program to start. Until that time, there will be no flat rate end-user charges on residential and single-line business customers. Most of the revenue needed to cover interstate costs of non-traffic sensitive subscribers "loop" plant will come from carrier common line charges, with the OCC's paying 45% for "unequal access" of what AT&T pays for "equal access." Private line customers will pay $25 per line special surcharge if their lines are hooked up so they "leak" into the public telephone system.

CENTREX users--and suppliers and regulators--were the **BIG LOSERS** at the FCC hearings; they elected to stick by previous rulings, that `grandfathered' CENTREX systems in place or on order prior to July 31, 1983, will pay the planned residential access charges of $2 per Centrex line during a transition period. The $2 rate will apply during 1984-85, and up to $3 in 1985-86. After that is uncertain because the issue will be revisited.

The FCC said it "did not find that the same kind of deferral of end-user charges afforded residential and single-line business customers was necessary for CENTREX users." They went on to say that the transition for `grandfathered' systems should "also allow the states time to address any CENTREX price distortions in intra-state tariffs, and the federal/state joint board time to address any concerns regarding stranded investments."

President's Message (Continued):

Vista-United definitely is no Mickey Mouse operation. It is first class all the way! I think Ralph's presentation will lend itself quite well to our overall program and we are eagerly looking forward to having Vista-United participate in our seminar.

While in Orlando, the Board of Directors will meet for two days prior to the seminar. At the time we will be addressing, among other things, the progress on the development of the Association data base, a committee report and discussion on the ACUTA five year plan, programs and meeting sites for the next year, the recent membership drive, a report on membership certification, the annual budget, and the details of the upcoming conference this summer in Boston.

If you have any business items, general problems, or concerns you wish to bring to our attention for discussion at that meeting, I urge you to either contact me or your Regional Director prior to the meeting so we can include them on our meeting agenda.

For anyone who has not yet received the seminar information and does wish to attend the meeting, contact Bill Morris at (305) 275-2113. In the meantime, I'm looking forward to seeing everyone in Orlando on March 27th. ☏

Bits   Pieces (Continued):

What are each of you doing about CALC? Please let your editor know so we can share potential solutions to our common plight...

FX users experienced a small victory when the FCC ruled that FX customers will pay access rates at the open end on a usage-sensitive basis, but at a level charged to OCCs. The open end access will be charged on a per minute basis at a rate which reflects a dirrential of 55% from the per-minute rate AT&T pays when it is providing MTS/WATS. This treatment differs from that afforded OCCs, who will be charged on a flat per-line basis according to a formula which will be set forth in the final decision.

The FCC restated it's belief in principle of directly allocating the costs of the closed end of WATS as the most rational economic method of allocating costs. However, they recognized a need for further study.

Quoting from the FCC release: "In order for access cost recovery to continue to track the separations process while this further study continues, WATS access lines will be treated the same as other common lines. Minutes of use at the closed end of interstate WATS lines will be counted in calculating and assessing the carrier common line charge; the business end user charge will apply to all WATS access lines; and no surcharge will be assessed for the WATS closed end."

Bits & Pieces (Continued):

It is expected that WATS rates will increase slightly, but not dramatically at this time.

Heard from **Business Communications Review** (BCR) about some new offerings. One is their exciting BCR Computerized Learning Series. The first course in the series is "A First Course in Traffic Engineering." Future courses will be on Financial Analysis for Telecommunications Equipment Acquisition and another one for Telecommunications Equipment Inventory & Cabling Plan.

BCR has a new book. It is a composite of all of **Harry Newton's** articles in BCR over the years. I have sent for a copy and don't recall the exact price, but it was around $7.50 I believe. At any rate, you could call BCR at 312-986-1432 to see how to order and get the correct price. I am looking forward to reading all of Harry's articles again. Always one of my favorites...

Speaking of BCR, read Victor Toth's article--**Washington Perspective,** the January-February issue of BCR. Couple of eye-openers for those with a lot of the old 1A2 key systems and for those still being served by CENTREX CU with vehicles like the 701 PBX. These systems were transferred to AT&T, which does not plan to stay in the Centrex CU business.

The January issue of **TELEPHONE ANGLES** really had some interesting articles and also had another one of their helpful accounting forms. The articles were "Tools for Analyzing PBX Performance," written by Phillip C. Richards. It is the third in a series of articles designed to help you plan for adequate performance of your PBX System. The second article was "How to Choose the Right Telephone System" and the author is James Holland.

The form is called a Telecom Accounting Sheet and is really very basic. Designed to help you keep track of vendor payments. You use one sheet per vendor and because the form allows you to break the payment into columns per cost section, you can quickly detect and define costs that deviate from the norm. We have adapted the sheet to accomodate our specific needs and my billing person responsible for paying the many vendors really likes it.

I know I have said this before, but if you don't subscribe to **TELEPHONE ANGLES,** you should seriously consider it. I find it to be very helpful, easy to read, and full of good practical ideas.

See all of you in Orlando, Florida in March--I hope! What a great seminar Bill Morris has lined up for us.

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Corporation Managers Of Telecommunication Find Job Gets Tougher

...by Virginia Inman, Staff Reporter of the "Wall Street Journal."

A few years ago a company's telecommunications managers, if it had any, weren't so vital. They mostly checked phone bills and ordered whatever the Bell salesman recommended.

"People didn't plan telecommunications," says Robert Jirout, the Chicago Board of Trade's vice president for information services. "AT&T and the Bell System did all that for them."

Those days are gone. Now, neglecting the phone system can mean throwing away big money and ignoring chances to raise productivity and expand business.

Why the change?

For one thing, technological advances, particularly links between computers and telephones, have made careful planning more important.

For another, deregulation of the communications industry has spawned hundreds of companies that sell telephone equipment and long-distance service. One-stop shopping is gone forever, and with the Bell System breaking up, will never return.

Brave New World

In this brave new world of multiple vendors, just keeping a phone system working can be difficult. When things go wrong, suppliers--and a big customer commonly uses services and equipment from more than one supplier--tend to pass the buck. That is just one or more reason that good telecommunications managers are in great demand.

They are also in short supply. Those companies that recognize their importance hire them away from one another. Companies that aren't able to hire people with the right qualifications often turn to consultants.

What are the qualifications? Despite modern hone systems that use computerized equipment and transmit data between computers, telecommunications managers have to be more than computer experts. They must understand their company's business and how the business will be affected by their decisions. They must be articulate enough to sell their ideas to higher management and to soothe angry executives when something goes wrong.

The job can be hectic. "I had a week or two when my beeper was going off 10 times a day," says Susan Jarrett, a telecommunications manager at Bankers Trust Co. in New York. "I was ready to throw it out the window." The beeper once got her out of bed to spend three sweltering hours baby-sitting a roomful of sensitive switches threatened by rogue air conditioners blowing tons of hot air.

Automatic Selection

Bankers Trust has its own long-distance network comprising a variety of long-distance services from both American Telephone & Telegraph Co. and some of its competitors. Computerized equipment selects the least expensive route for each call. Miss Jarrett and three other managers team up periodically to analyze computer printouts of the traffic on each line and to design the route selector's programs. (The bank also owns 85 microwave circuits that beam calls from its midtown Manhattan headquarters to its office in the financial district.)

Every morning, Miss Jarrett checks whether any telephone circuits at Bankers Trust have gone down. If a circuit is out for more than four hours, the bank can get money from the telephone company. "We're always looking for money," Miss Jarrett says.

Later in the day, she may slip a couple of circuit boards into her tote bag and zip across town to a branch office that wants to add some phone lines. She may visit a bank executive who doesn't like the way his phone is set up. Whenever Bankers Trust people run into a problem that can't be solved routinely, Miss Jarrett gets a call. At times she talks on both her office phones at once, holding one at each ear.

Busy at Raytheon

Leonard Dorrian has been just as busy at Raytheon Co., the defense contractor and appliance maker based in Lexington, Mass. When Mr. Dorrian arrived a year ago, Raytheon's biggest communications problem was its huge phone bills. The company had an AT&T-designed long-distance network that cost an average of 32 cents a minute to use, hardly better than ordinary long-distance service.

To reduce costs, Mr. Dorrian slashed the number of long-distance lines in the system and substituted alternative carriers for AT&T on some circuits. He restructured the way Raytheon divisions were billed for phone service, so as to encourage local managers to use as few long-distance lines as feasible. Raytheon's average long-distance cost dropped to about 23 cents a minute.

The new system requires more attention. Mr. Dorrian and his staff do their own analysis and network design. They do some of their own troubleshooting, too, and there have been some hair-raising moments. Once a switch in MCI Communications Corp.'s long-distance network stopped functioning. Since Raytheon's MCI calls all fed into that switch, about 16,000 calls were blocked that day. It took a week to get back to normal.

Raytheon first found Mr. Dorrian on a Coast Guard cutter chasing drug smugglers. With eight years still to go before retirement, the Coast Guard's former top communications officer was merely honing his job-hunting skills when he answered a Raytheon ad. But after Raytheon agreed to wait for him as long as eight months if necessary, he gave up command of his ship and took early retirement to join the company.

Corporation Managers (Continued):

United Airlines hasn't been so lucky. It has screened more than 200 resumes since mid-August and still hasn't found a communications-planning manager.

United's communications costs have doubled since 1980, when AT&T discontinued a special program that provided lower rates for airlines. That cost increase, along with technological and regulatory changes, led United to put communications planning on a par with other types of strategic planning.

"The communications networks of the information age are like the railroads and highways of the industrial age," says Mark Teflian, the manager of systems, architecture and planning in United's computer operations. A company's communications, he says, should be viewed as a major asset that must be managed to keep costs low and efficiency high.

In seeking a communications planner, United has been advertising for an electrical engineer, but it also wants someone with enough management experience. Says Deborah Shultz, a senior employment representative: "Our problem has been that we get very technical people but they don't possess the necessary management skills."

Major Difficulties

She suggests one of the prime problems: Very few applicants for these positions, like most people who already hold the title of telecommunications manager, have ever really managed a telecommunications system.

Another major difficulty in finding a good telecommunications manager is that there aren't many places to learn to be one. The University of Colorado developed the first master's degree in telecommunications in 1971 and a few other schools have followed suit, but such education is still scarce. The Bell System has traditionally been the biggest training ground for communications managers. Others come from independent phone companies, equipment manufacturers or AT&T's long-distance competitors. Some have worked as telecommunications consultants. Others have computer backgrounds.

Miss Jarrett was a schoolteacher before she took her first telecommunications job five years ago. In January 1983, she left a consulting post at the Peat Marwick accounting firm to join Bankers Trust. She was in her new job only a week when a headhunter called to see whether she would consider a job with another company. She gets a similar call about every two weeks, and that isn't unusual. "There's a lot of body snatching going on," says Jay Borden, an analyst with the Yankee Group, a high-technology consulting firm.

Unsatisfactory Applicants

For example, the telecommunications director of the Chicago Board of Trade resigned several months ago to take another job at almost twice his previous salary. Since then Mr. Jirout, the vice president for information services, has read 130 applications. No one has filled the bill, so Mr. Jirout says he will probably have to hire an executive-search firm "to go out and steal one for us."

Although he advertised for an electrical engineer with a master's degree in business administration, he got many resumes from technicians without a college education. Most of the other applicants, about half the pool, were Bell System marketing people with little management experience and with no experience running a communications system. These people, says Mr. Jirout, are "very frightened by the new world (after divestiture) and they're trying to get out."

("Corporation Managers of Telecommunication Find Job Gets Tougher," is reprinted from the WALL STREET JOURNAL.)

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It's Rush Hour For "Telecommuting"

Not too long ago, people who "telecommuted"--worked at home but "commuted" to the office via computer--were lonely pioneers on the frontiers of information processing. But now their success, coupled with rapid gains in technology, has kicked off a dramatic surge in the number of U.S. companies employing telecommuters.

More companies than ever are launching telecommuting programs, taking advantage of the latest in personal computers, communications devices, facsimile transmitters, and other gear that now make home-to-office links easier and less expensive to establish. "These technologies didn't even exist two years ago," says Michael D. Jones, manager of consumer products at New York Telephone Co. and a part-time telecommuter. Already some 200 U.S. companies are experimenting with some form of telecommuting, and more than 30 of them have formal telecommuting programs.

Besides avoiding rush-hour traffic, telecommuters are discovering significant benefits in their unorthodox new working arrangements. Telecommuting can substantially boost employee productivity, according to Gil E. Gordon, research director for Electronic Services Unlimited, a New York consulting firm that has just completed a study of telecommuters. "Gains in the neighborhood of 40% to 50% are not unrealistic."

LIFTING PRODUCTIVITY

Blue Cross & Blue Shield of South Carolina finds, for example, that 16 home-based clerical employees are 50% more productive than office workers in keying insurance claims into the computer and coding material. Similarly, 48 participants--mainly computer programmers--in Control Data Corp.'s alternate work site program report average productivity gains of 35%.

Many of telecommuting's boosters believe such productivity gains practically guarantee its acceptance. "The way we work in this society is going to be transformed," predicts Marcia M. Kelly, president of Electronics Services. She projects that within a decade about 18% of the work force, or 18 million people, will be telecommuting. "Over the next 10 to 20 years," Kelly says, "most people in all levels of business will work at home at least two to three days a week."

Most of the pioneering telecommuters are still enthusiastic. Freed from long travel, they have more time to get things done. Notes Frank C. Knight Jr., manager for telecommuting at New York Telephone: "You're not into office distractions. I can put a letter or memo together in half an hour that would previously take half a day." Along with such productivity gains, Knight says, his company's program may also save on real estate expenses. Now looking for office

space for his department, which is made up of telecommuters, he finds he can halve the area that would be needed if everyone worked full-time in the office.

FRESH LABOR SOURCES

Telecommuting also allows companies to tap into new labor pools, creating employment opportunities for groups often unable to hold office jobs, such as the handicapped and mothers with young children. Joseph L. Wynn, a 30-year-old paraplegic who does word processing for American Express Co.'s Project Homebound in New York, now earns $1,100 a month--in contrast to the $312 a month he received from Social Security--and says his work "brightens a lot of the day."

But not all of this new labor pool is in the home. When Best Western Hotels in Phoenix had trouble finding booking agents who could be called on at will to work during peak times, it turned to a more readily available work force--residents of the Arizona Center for Women, a minimum-security prison. There it set up a booking office, complete with telephones and computer terminals, that has employed as many as 53 inmates.

Despite all its advantages, however, telecommuting must still overcome substantial resistance before it becomes a mass phenomenon. Managers are often uncomfortable about overseeing stay-at-home employees, and workers also have misgivings. For example, enrollment in Control Data's alternate work site program has dropped from 60 to 48 computer programmers in the past two years, despite tangible productivity improvements and positive feedback. Most of these employees were afraid they would "stagnate" at home, losing touch with the office grapevine and missing out on promotions, according to Robert J. Muhl Jr., director of systems for Control Data's Commercial Credit Co. and manager of a number of these telecommuters.

Companies starting telecommuting programs may also encounter technical obstacles. Chicago's Continental Illinois National Bank & Trust Co. discontinued its much-publicized program, started in 1978, because of problems it had relaying documents to and from its word processors in homes. But the bank has not given up on the concept. The program is simply in a "research phase," says Elizabeth M. Carlson, second vice-president for personnel, who was closely involved in the bank's experimental program.

Advocates of telecommuting insist that inexpensive new technology is already available to remedy many of the difficulties that these early pilot programs suffered. New York Telephone's Jones believes that a facsimile transmitter or a soon-to-be-released Professional Image Computer system from Wang Laboratories Inc., which can send images as well as text from one computer to another, might have solved Continental's data transmission problems. And the cost of such solutions--$1,500 to $2,000 each for facsimile machines--should come down further, Jones believes. "In the next three to four years the technology is going to evolve fabulously," he says.
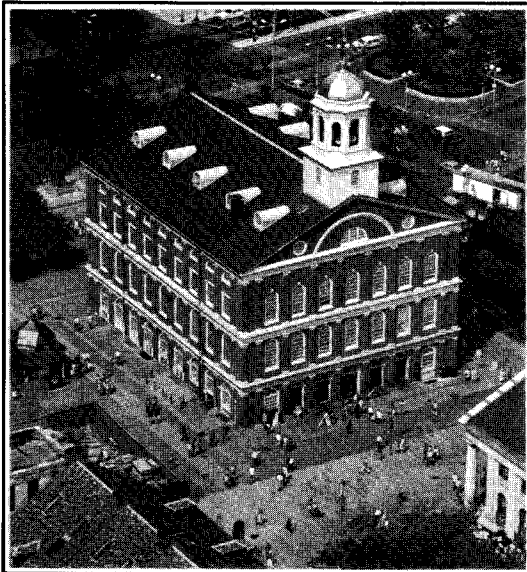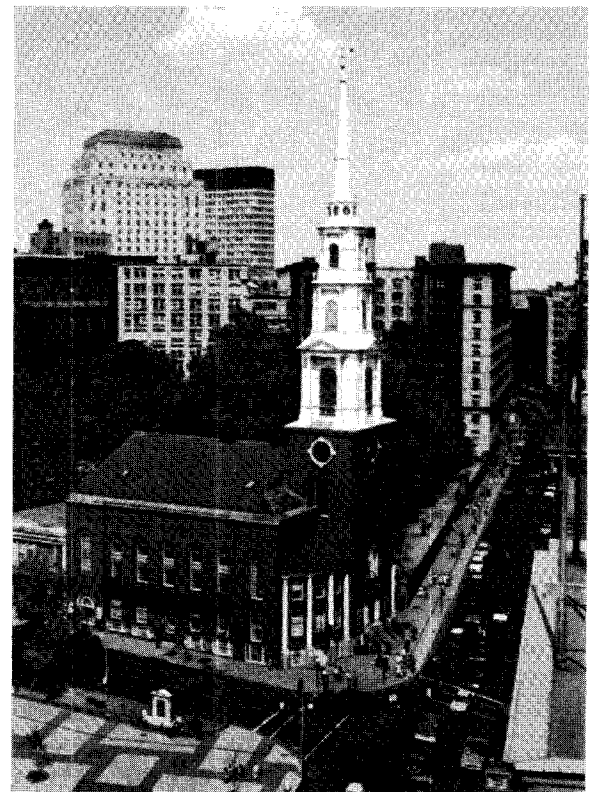
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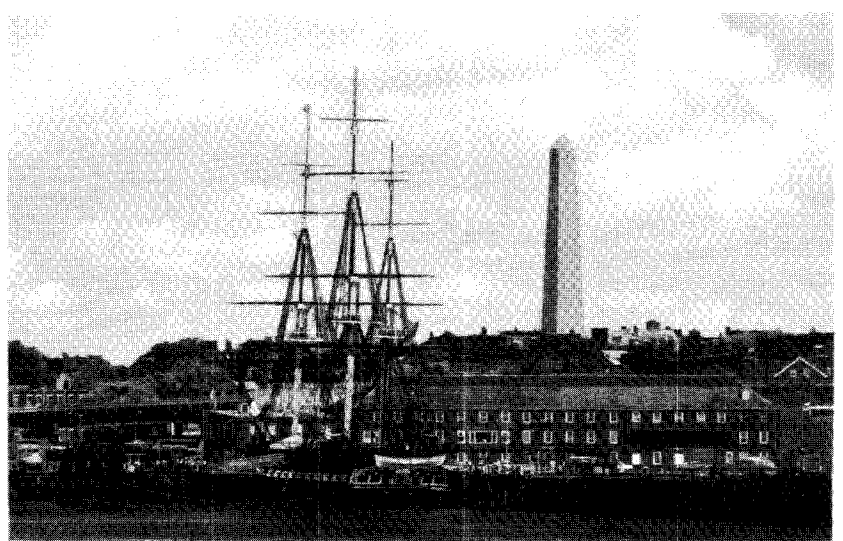
U.S.S. Constitution and the Bunker Hill Monument

BOSTON

1984
ACUTA
THIRTEENTH
ANNUAL
CONFERENCE

Beacon Hill and "Sailing on the Charles"

Park Street Church, "The Brimstone Corner", Boston

DATES: August 5-9, 1984

HOST: Jim Shea, Boston University
(617) 353-2097

LOCATION: Boston Marriot Hotel-Long
Wharf
Boston, Massachusetts, 02109
(617) 227-0800

Once again the program for the Annual Conference will include an update on Regulatory & Technology advancements and an examination of their impact on the college and university campus environment.

Strategic Planning of Voice, Data and Image services, and the use of Micro Computers in Telecommunications Management will be two of the special feature sessions, and as usual the total program will be designed to satisfy all general interest and professional development appetites.

Cutting The Cord Of Office Bell Ringers

...by Larry Stessin

Scratch an executive, a manager or a department head and ask which employee foible makes blood boil, and chances are that his answer will revolve around the abuse of personal telephone calls. And when he has calmed down a bit he will sputter one example after another:

● A vice president calling from the airport to contact a colleague over some problem was put on "hold" by the secretary of the home-office executive until she finished her chitchat with a friend. Right. He missed his plane.

● A new employee who logged 10 personal calls a day and was taken to task by his supervisor, answered: "My professor at the community college said that a happy employee is a good employee. I am not happy unless I talk to my close friends every day."

● A personnel director interviewing an applicant was asked, "And what is the company's policy on personal telephone calls?"

Employee misuse of the company phone has always been around. But it has become an acutely serious problem within recent years. And it's easy to tick off the reasons. Our society has become more mobile, scattering friends, families and relatives; still, communications is only a dial away. Rising phone rates induce employees to make their calls in the office. The proliferation of WATS lines and the popularity of such services as "Dial-A-Joke," "Dial-A-Horoscope" and "free phone sex" have made the company telephone a fun-and-games instrument. Add to these the attitude that personal calls are a perk that any up-to-date outfit should provide to its personnel at all levels.

How to deal with chronic abusers has furrowed the brow of many an administrator. An eyeball-to-eyeball confrontation usually is resented by the employee as an invasion of privacy. Harsher measures have been considered out of tune with the wave of informality and permissiveness in business.

Yet management has not completely succumbed. In fact, there are signs that stern measures--the old-fashioned kind-are being used to cope with employee talkathons. Some examples:

● A company posted notices on its bulletin boards that personal phone calls were no longer allowed except in cases of emergency . One employee chose to violate the new policy and continued to use the horn at his every whim. He was fired-an action never before invoked by management for fear of losing face as a benevolent employer. The ex-employee applied for unemployment insurance benefits on the ground that he was discharged without good cause and therefore was eligible for unemployment benefits. The New York unemployment compensation board, in a departure from the usual standards, ruled that the claimant "provoked his discharge and was not entitled to jobless pay."

● A company marketing its products by phone devoted a section of its employee handbook to explaining that its very survival depended on its sales force soliciting orders by phone and that tying up the lines for nonbusiness purposes would be dealt with harshly. Three employees who paid no heed to the warnings were given the gate. They took their cases to arbitration and argued that though they did violate a rule, the punishment didn't fit the crime. The arbitrator--here, too, in an offbeat opinion--decided that the firings were justified because employees were told in advance that the penalities would be severe.

● One employee whose mother lived 1,000 miles away made more than 20 phone calls to her within a month's time and tried to cover up his misdirections by using a co-worker's unattended phone. He was fired for stealing. He took his hurt feelings to court, charging "infliction of emotional distress and defamation." The court ruled that the stamp of thief in the company's personnel file was justified and appropriate.

Discipline, however, isn't the only path to the correction of the abuse. You can make an arrangement with the telephone company to limit types of outgoing calls that can be made from certain telephones. Then there are rotary locks, and even push-button phones can be protected by locking devices. Or, if it's worth the cost, you can install a computerized system to check on phone-call abuse. Northwestern Mutual Life spent $2 million to install such a system.

As for simpler expedients:

● Have several employees share the same phone. Co-workers will crack down on the hogs who tie up the phones with personal chatter.

● Have employees use their own credit cards for long-distance calls when out of town and have them submit an itemized bill for reimbursement by the company for legitimate business.

Use the ploy of one company that installed pay phones on walls near the supervisor' desks. Each supervisor was given petty cash, and he had authority to hand out dimes or quarters to employees who wanted to make telephone calls.

● The coins were for the asking. But few employees took advantage of the company's largesse, particularly in view of the fact that the phones weren't enclosed and the employee's voice carried clearly to the supervisors' desks.

● Or put it more tenderly. Put a sign on each phone: "This telephone is for business only. Please keep personal calls to a minimum. Thank you."

● From Japan comes the rather impersonal solution that worked for Nippon Steel Co. Operators logged all personal calls that lasted more than three minutes. Staffers who

Telecommuting (Continued):

STRONG BACKING

The progress of telecommuting is being followed with keen interest by equipment makers, which see potentially large new markets, and telephone companies, which are looking to assess the impact of the growing number of at-home business users on their residential telephone services.

"If, because of telecommuting, more and more business calls start being made from the home, it's going to erase the distinction between business and consumer rates," explains Jones, one of three employees that New York Telephone loaned to the 12-person team conducting the Electronic Services study. "As a result, it will hasten the increase in consumer rates and exacerbate the pricing conflict between telephone companies and regulatory agencies"--a conflict that has worsened with the breakup of American Telephone & Telegraph Co.

The $200,000 study was based on interviews with nearly 1,000 people, including telecommuters, managers, and equipment suppliers, and had powerful support. Its 20 sponsors include such giants as Digital Equipment, Xerox, AT&T, New York Telephone, and Southern New England Telephone. And Citibank, J.C. Penny, and Equitable Life participated because they are considering telecommuting for their employees.

"This [telecommuting] is the way the world is going to work," declares George O. Caneda, information coordinator at New York's BEA Associates, one of the study sponsors, where a number of employees already telecommute. "The 9-to-5 era is over."

("It's Rush Hour For Telecommuting," is reprinted from the January 23, 1984 issue of BUSINESSWEEK.) ☎

Bell Ringers (Continued):

exceeded the limits received a small gift from the company--a three-minute egg timer. The recipients "got the message." ☎

ACUTA SPRING SEMINAR
ORLANDO HILTON HOTEL
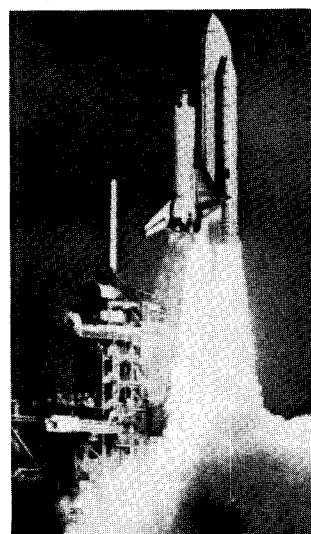### ORLANDO, FLORIDA
MARCH 27-30, 1984

THEME: A Comparison of Switches & Concepts

Increased competition in the telecommunications marketplace has greatly accelerated the rate at which new advances in technology are being incorporated into new products.

In order to select a new voice/data switch in today's multi-vendor environment it is now necessary to deal with a whole new series of design concepts and marketing perspectives, issues of compatibility with other devices or networks, and, of course, an ever-expanding array of new features.

Exactly how do these systems differ from each other and how should they be compared? How do we decide which system--indeed which technology--will be the best buy for our own campus.

Joe Massey is a highly skilled and respected telecommunications consultant with considerable experience in comparing system designs, features and vendor support concepts. In this seminar Joe will make his own comparisons of several large PBX systems presently being offered, based on his own experiences in the telecommunications marketplace and in the university, college and hospital environments. The particular systems chosen for this exercise are Dimension 2000/System 85, IBX S/80, Neax 2400, SL-1, and Rolm CBX II. This highly informative program will be supplemented by communication tours of the Kennedy Space Center and Walt Disney World's Epcot Center.

For more information, contact the following:

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Orlando, Florida 32816
Phone: 305-275-2113

For reservations at the Hilton Hotel, call:

In Florida: 305-351-4600
Outside Florida call toll-free: 1-800-327-1363