ACUTA eNews April 1983, Vol. 12, No. 4
Our Special Feature this month is an interview between your editor and James E. Geist, Executive Vice-President of the Lincoln Telephone Company and Past President of USITA. The focus of our interview is the fate and attitude of the Independent Telephone Companies subsequent to the mandated break-up of the Bell Companies. ACUTA News wishes to thank Jim Geist for his time and his candor.

Q: January 1, 83 finally came and went and I find this new world of regulated/non-regulated companies very confusing. Now has all of this affected the Independent Telephone Companies?

A: I must say, it's very confusing to us too. We feel like we have 5 or 6 balls in the air all the time--trying to keep them all up and still adjust to the different things that are happening. I guess the most pronounced thing that happened on 1-1-83 would be the deregulation of terminal equipment. What that really meant to the telephone companies was that terminal equipment would no longer be part of the rate base as far as 'separation from settlements' were concerned and you can add nothing to that base.

Over, and I think it is a five-year period, you remove the terminal equipment from the rate base and anything new installed must go in on an unregulated basis. Not all the Public Service Commissions have gone along, but as far as interstate separation from settlements are concerned, it doesn't make any difference. That burden is being removed from the long distance revenue stream on interstate. Now what that means to the operating companies is that as you remove terminal equipment from the rate base for separation of settlements purposes, your total revenues could diminish, depending on your share. Technically that really happened about two years ago and we've been expensing certain things like station connections for separations purposes; and there is a diminishing stream of revenues because of it.

The equipment we had in inventory as of 1-1-83 is grandfathered. As long as it is in service or in our inventory, we can continue to offer it to the public under regulation. However, we also have the opportunity to sell it or get rid of it in some other way, and it still remains in the rate-base calculations (to be amortized out) over a five-year period.

If you have noticed, a lot of companies are very aggressively trying to get rid of that equipment. It doesn't make any difference as far as 'separation from settlements' are concerned, and it provides a revenue stream from the sale plus getting rid of it at the same time. We haven't taken that position yet, although I think we probably will in some areas.

For good or bad, and maybe I'm not a good businessman, I still feel we must take care of our customers and not treat them in a manner where they have no options. To say to them, this is it, you do it this way or not at all, is not a good business practice in the long run. I know in some areas the customer will get 30 days to decide if they want to buy what they are leasing or if they want to sign a 5 to 7 year contract to continue the lease. That isn't happening in our area. I guess I am looking at the longer term---those business customers have been and are going to be our customers for a long time and I don't see any reason to give them a problem at this time just because of some action taken by the FCC. Our best interest is still what is in the best interest of our customers.

I don't know if I have answered your question, but 1-1-83 was the deregulation of the terminal equipment. In reality, we've had competition in that area for a long time. The customer has been able to choose what they wanted in terminal equipment and buy it from anyone for many years.

Q: What, if any, action was mandated by either the courts or the FCC of the Independent Telephone Companies?

A: Basically, it was the deregulation of terminal equipment. As far as Computer II went, it was a requirement to set up a separate subsidiary to handle enhanced services and to sell or lease terminal equipment. That requirement was not put on the Independents, it was put on the Bell Systems.

We chose to set up a separate entity to handle our business systems and we made that decision for several reasons. One reason is the accounting practices we are required to follow as a regulated business. And even though the FCC says they are going to change it, you know how slow they can act in an area like that. Some of our other reasons were: to relieve some of the overhead, establish incentive programs for our sales persons, and if you will---hopefuly develop a leaner and meaner organization. Quite frankly, there's some big inefficiencies built into our union contract and we might get rid of some of them through establishing a separate entity. You can see this all around our country and it's not just the 'wage-give-backs' the unions are being pressured into, it's the work rules. These work rules have grown over the years through both the fault of management and a general attitude that
prevailed in our nation. We were doing very well during the 50's, 60's and early 70's and there wasn't any pressure put on either party to do a better job of negotiating at the contract table. We gave away a lot of things we shouldn't have. Now everyone is scrambling to get them back.

A separate entity should make for a cleaner accounting operation and remove the pressure from our people to keep costs and revenues separated so we are not accused of the consumer subsidizing competitive activity. We could have operated as both a regulated/unregulated company without setting up a separate entity, but we elected to take that route.

Q: The Justice Department settlement assumes that the local regulated operating company will have a natural monopoly on local exchange and exchange access facilities/services forever, thus assuring them of a continual rate base. This assumption, I believe, led to the action that prevents the operating company from engaging in any activity that could lead to subsidization and/or seemingly unfair competitive practices.

However, long range, it appears this natural monopoly simply isn't there...new technologies are opening up a whole range of alternatives to the local exchange and long-distance access facilities. What will be the end result of this?

A: I don't have any better crystal ball than you have Ruth, but from my perspective I still think the whole decision was wrong. I don't know where it's going to lead, but it seems to me we have lost sight of the public interest and the almighty dollar has gotten in the way of what's good for the nation. This is not just any business, but an industry that is absolutely vital to everyone, from national defense right down to the individual in their home; everyone depends on communications.

And of course, you are absolutely right---we might have a monopoly at this point in time, but every day brings new opportunities for people to get around the local exchange. Cox Cable in Omaha is just one example.

At first it will only be the big customer that can select another route. They will be the only ones with enough traffic in voice and data to make it attractive. I would visualize a private-type network, more or less, at first, but pretty soon it will become a shared network and as that activity siphons revenues away from the local operating company, they will have no alternative but to increase their costs to the smaller user. After all, siphoning off part of the revenue base doesn't remove the costs to operate the local exchange. Critical to the survival of the telecommunications system in our country will be the cost and quality of local service and exchange access.

You know, in a way, it was "sharing" switching facilities across the country that brought low-cost, efficient communications to this nation and we tried to tell the FCC, Congress and anybody else we thought would listen to us, but nobody seemed to find it important.

Q: Recently Mark Fowler, Chairman of the FCC, was quoted as saying: "We're heading ultimately toward a regulation-free telecommunications market, a world where competitors offer an abundance of facilities and services constrained only by the imagination and the capital market...."

Mr. Geist, would you agree with that statement, and how does the Independent Telco survive in that environment?

A: Yes, I think that is where we are headed, and we will pay for it in the end. And yes, we will survive just like anyone else.

What Mr. Fowler doesn't recognize is that pure competition says you have the opportunity to enter a market without barriers and you also have the opportunity to exit that market. Look at this map of our state---see that little town of about 25 people, surrounded by similar little towns of like size, but 15-20 miles apart. I'm not sure anyone would be willing to serve them if you have true competition. That's the fear I have, who serves those markets....

Q: It has been said that regulation limits private incentive towards innovation. For example, what incentive exists for a regulated entity to invest in and develop new switching technology that might make the existing base obsolete? Will you abandon hundreds of miles of buried copper wire and develop optic fiber technology or satellite, or some other unknown transmission media?

A: I don't think regulation itself could or did detour rapid replacement of plant. That was caused in part, by political motives of the regulators. The regulators would stretch out depreciation schedules over long periods of time, causing cash-flow problems for companies needing capital to reinvest. However, it didn't slow down progress as much as the critics would like you to believe. We haven't had electronic switching technology around that long, especially if you look at how long we had STEP technology. We had STEP in 1903, when we first started this company and I believe it was in the late 1960's that we installed our first electronic switch. We have been on a very aggressive schedule to replace all our STEP equipment ever since. Now I am not a scientist or an engineer, but I believe that digital technology in some form or other, will be the switch that will remain in place for quite a while.

Look at all the innovations and advances that have come about because of Bell Labs---here again, I don't think that criticism of regulation is fair. You know, technology changes are sort of a compounding type of thing---you have to reach a certain point where you jump. Regardless of regulation, it would have changed rapidly. I don't buy the criticism that regulation held down innovation, especially in plant technology. Now, with terminal equipment, it might have. You can do almost anything with the phone set today, some of it window-dressing and some of it very functional. So what if you have a calculator on your phone, or a clock---is that such a big deal?

Q: Jerry Goldstone of BCR recently conducted a very informal survey of 15 large users concerning the newly formed American Bell. The results indicated monumental confusion on the user's part and implied that this was placed as selling large sophisticated systems such as their new System 85, but no one was paying attention to the day-to-day needs of the users. What is happening to service?

A: Hopefully, we won't fall into that trap ourselves, but it could very well happen to our separate business entity, LINTEL Systems. When you set up what is basically a marketing/sales organization, they are going to do and sell the things that means dollars for them. They will
Service is just as important—selling takes a lot of time and service/maintenance costs are high. It might come down to letting the customer decide what kind of maintenance/service they want. For example, providing service 24 hours a day might cost so much. Then you could have a range of service standards, response time and comparative costs—let the customer choose. We have always prided ourselves on responding to our business customers within 1 or 2 hours, anytime they call. But as we get more and more caught up in this competitive environment, it might not be feasible and customer service will suffer.

A lot of things are going to change and hopefully somehow, through the transition, we'll not lose sight of what we are about. Remember though, we are still a publicly-owned corporation. Our stockholders are concerned with our integrity and our growth. They have invested their money to make money through—that's the bottom line.

Q. Do you believe the new game (de-regulation) will ultimately strengthen or weaken the Independent Telephone Companies?

A. That's difficult to answer. A lot will depend on the management of those companies; their aggressiveness and how well they do their job of planning and developing their own strategies for survival. The Independent Telephone Companies cover a big field, ranging from General Telephone with thousands of employees to very small telco's with only one or two employees. How the little company with less than 100 stations will survive is somewhat questionable in my mind, but I have confidence that before this thing gets completely out of hand, someone will recognize the problem and make changes to assure service to the small community as these little companies serve. And, I suspect though that on the smaller number of service to the small independent company itself.....

Q. Unless my memory of past history fails me, I seem to recall that the original founder of the Lincoln Telephone & Telegraph Company, Frank H. Woods, Sr., was a leader in the early discussions and settlements with the Bell Companies. These discussions led to the signing of the Kingsbury Agreement in 1912, and paved the way for a working relationship between the Independents and the Bell Companies. Now, it seems we are back where it all started, competing against one another, duplicating services, etc. Speculate with me Jim—how would Mr. Woods react today?

A. That's hard to say because Mr. Woods was an entrepreneur, and the motivation in those days was a bit different. But I suspect his attitude would depend on what period in his life we were talking about. I am sure by the time we got into the 1940's, Mr. Woods was a true telephone man, and a very valuable one. The telephone company, independent customer and service were all vital to him. But if you go back to 1903, he might have an entirely different attitude. I wouldn't go so far as to say he was a gambler, but he certainly was aggressive and he had the rare ability to spot opportunities and was willing to take the risks to go after them. You know, it would be fun to see.
Q: Most of our ACUTA members are responsible for very large complicated systems, and a large number of us are currently being served by a Centrex System. We have heard for years that Centrex is obsolete--yet for the most part it is a central exchange offering. Does it make sense to you that the operating companies would allow their central exchange to become obsolete?

A: No---in fact, just the opposite is true. We are installing new digital switches in our central offices at a very fast pace. If we want to survive and be competitive and provide enhanced services on a network, the equipment must be the latest technology. We are not going to sit on our hands—we will be looking for ways to continue providing you with enhanced services.

Q: Jim, as you know, the University of Nebraska-Lincoln has been a long time customer of Lincoln Telephone Company. We have always been impressed with your flexibility, your service philosophy, and your willingness to look for new ways to serve us. We have almost become a part of your overall strategy in sharing your Packet Switching Network, and some other things currently in the planning stages. This has always seemed like such a natural to us, why doesn't this happen in other places?

A: Well, I simply don't know. I suspect part of it is because we are both located in a small community and we are an Independent, but I am sure there has to be many other schools in that same situation. Probably it is because we have always had a close relationship with the University and not only in the area of communications. It is also a matter of personalities. We have always been able to tell you our problems and you listen and we have always been willing to listen and try to understand yours. We understand each other and work together towards common goals.

Of course, we look upon the University as one of our primary customers and one of our best customers. The University is very complex and if you are going to serve it properly, you simply must pay attention to it. We have followed this route for years and plan to continue...

Q: Is Lincoln Telephone looking at any of the newer advancements in cellular radio, fiber optics, videotext, management info systems and so on?

A: The answer is yes---we are looking at all of these, through both our regulated and unregulated divisions. Our primary mission on the regulated side is networking, be that packet switching, data services, or whatever. However, sometimes in building a network, hardware is just part of the whole thing and we would probably address it through the regulated entity, wherever it fits.

Cellular Radio technology is merely an enhancement to mobile radio and we have had it around for years. You know, it just might prove to be the technology to more economically serve the smaller communities. We are installing Optical Fiber right now, and looking at this for use by the University. We are also looking at other ways to enhance your system and will continue to look for improvements to serve our users. 1983 will be a challenge—but I am sure our founders faced many challenges in 1903. We will survive, grow and serve our customers.....

---Ralph Waldo Emerson

BITS & PIECES

—Ruth Michalecki, Nebraska

One of the nicest things about being the Editor of ACUTA News is the opportunity to interview people for our newsletter. I enjoyed very much the time I spent with Jim Geist, Executive Vice-President of the Lincoln Telephone Company. We heard so many things and read so much about the Bell Companies and American Bell---I couldn't help but wonder where the many Independents found themselves during this transition. During all the years I have known Jim Geist, I have always found him to be very honest and candid---he didn't disappoint me during our interview. I hope our fellow members enjoy this special feature as much as I enjoyed conducting the interview.

* * * * * * * * *

A recent article in MIS-Week covered the decision of the University of Delaware to tear up a preliminary contract it had made with ABI for a Dimension PBX System in favor of retaining their Centrex Service.

The University of Delaware concluded it would effect "considerable savings" by staying with Centrex. Going to on-premise PBX's would have involved heavy cabling. Apparently the BOC's are prepared to do battle with ABI to retain as much of this revenue as possible. If the FCC permits the BOC's to install 50-B consoles on customer premises to enhance or supplement Centrex, and they continue to offer their rate stabilization plan (3 years with options to 5 years at a discounted rate), plus advertising to let the users know what's happening---they might be tough competition....If you read Focus Magazine, you learned that Bell of Pennsylvania now can handle 36,000 bits of switched digital information per second, and also offers private customers data speeds up to 90 megabits.

Although ATT tried in vain to woo users away from Centrex over the past few years(they well-known migration strategy), Centrex lines have remained constant, with losses offset by gains in subscribers. "Pennsylvania Bell is earning an annual revenue (not including usage) from Centrex of $80 million, representing approximately one-fourth of the $320-million business billing," to quote the article in MIS-Week.

******************************************

For those of you who read my small bit about the future access surcharges to recover the costs of local exchange facilities used for accessing inter-state long distance WATS and Message Toll Services, you absolutely must read the current issue of Business Communication Review, March/April,83, the article written by Victor Toth "Washington Perspective".

To quote Mr. Toth: "The on-again off-again future of Centrex is now clouded by the probability that the FCC-prescribed $4 a month minimum per line access charge will apply to every Centrex Station line capable of connecting to the inter-state, inter-LATA, switched services of ATTIX or the IXCs (i.e., toll-restricted stations would be excluded)." "For the ordinary large user of Centrex, this will impact tremendously the economics of Centrex Service."

******************************************

"Things refuse to be mismanaged long....."

---Ralph Waldo Emerson
Studies have indicated that the market for store-and-forward voice systems (SFVS) will approach over $1 billion by the end of the decade. Recognizing this potential, participants have increased from one, VMX (formerly ECS Telecommunications), in 1980, to at least eight, including such heavyweights as IBM, AT&T, Wang, Rolm and GTE. Additional vendors, including Datapoint and Northern Telecom, are expected to introduce their own SFVS products in the near future.

With all this boasting however, the industry has not exploded as predicted. sluggish sales have characterized the market causing concern among vendors and potential buyers alike. Already two early entrants, Delphi Communications, and Exxon subsidiary, and Voice and Data Systems have discontinued operations while a third, Wang Laboratories, has reduced its prices hoping to stimulate activity.

This clouded environment has spurred inquiries regarding the present and future climate of the SFVS market. Based on the findings of a soon to be released report entitled "The Report on Voice and Electronic Mail" we have compiled a list of the most frequently asked questions concerning the SFVS marketplace. Based on interviews with end users and manufacturers plus an intense study of the industry, we have put together some answers.

WHAT IS SFVS? SFVS is a computer-based system for recording, storing, transmitting and retrieving digitized voice messages. The message is spoken using a standard pushbutton telephone and stored in digital form in the recipient's "mailbox" for later retrieval. Since approximately 50 percent of all telephone calls transfer information one way, its strength lies in its ability to eliminate telephone tag and supplement required telephone conversations.

WHAT ARE THE BENEFITS TO A SFVS USER? There are six primary benefits users derived from SFVS. It provides: guaranteed communication by eliminating needless interruptions of the work routine; 24-hour communications by eliminating time-zone constraints, a decrease in paperwork by eliminating memo writing; reliable communications by eliminating message-taking errors, mispronunciations, misspellings and omissions; and access to the system using existing equipment familiar to everyone.

WHAT ARE THE APPLICATIONS FOR SFVS IN THE BUSINESS COMMUNITY? Eastern Management Group research indicates that the most widely used application of SFVS is communicating administrative memos to multiple recipients (See Figure 1). This is followed by field sales orders and reports, customer service requests and administrative reports. Other prime applications include after-hour messaging, production reports. Other prime applications include after-hour messaging, production reports, dictation, appointment confirmation and paging.

WHAT FACTORS WILL DRIVE THE SFVS MARKETPLACE? Four factors should stimulate the SFVS industry: the entrance of industry leaders into the market; functional integration with the PBX; reduction in end-user price; and the establishment of service bureaus for the low user market.

Until recently, IBM and Wang were the only industry leaders to introduce a SFVS product. Many potential users postponed their decisions on SFVS until the other major vendors announced SFVS offerings. With the addition of AT&T and Rolm, the picture of the industry's future has become somewhat clearer to end users. Once the remaining heavyweights make their intentions known, end users enthusiasm should increase.

FUNCTIONAL INTEGRATION

With the recent announcement by Rolm, functional integration with the PBX has firmly caught the attention of end users. Our research indicates that a major concern of potential users was the inability of a stand-alone SFVS to function within a PBX environment. The greatest utility of a SFVS is derived when used in conjunction with a PBX. In these situations, SFVS benefits from the PBX's ability to manage telephone communications. Additional PBX vendors including Datapoint and Northern Telecom are expected to introduce systems of their own design, or provide integration capabilities to existing stand-alone systems.

One by-product of PBX and SFVS integration is reduced cost for the end user. Many operational functions of a PBX and SFVS are identical and must be duplicated in a stand-alone environment. However, by combining the two technologies the redundant functions can be eliminated, thereby decreasing costs. Since the average cost per port on a stand-alone SFVS is approximately $35, a cost reduction would be looked favorably upon by the industry.

Technological improvements will also reduce per port cost. A key component of SFVS is disk storage. Typically, it takes from 32 kb/s to 64 kb/s to store good quality reproduction of the human voice. If 100 people generate ten 20-second messages each day, it would take 80 megabytes to store just one day's message content. With such mammoth memory requirements, the plunging cost of bulk storage should reduce prices to the end user.

Increased competition will be a third contributor in driving costs downward. Presently, participants are entering the industry at a quickening pace. (Continued on page 6)
The fourth factor stimulating SFVS activity is the growth of the reseller market or, as it is more commonly known, service bureaus. Besides providing technology evaluation by potential purchasers, service bureaus provide the distribution channel to the low end business and resident markets where vendors could not penetrate.

**WHY HAS THE SFVS MARKET ATTRACTED THE BIG NAMES IN THE COMMUNICATIONS INDUSTRY?** Simply stated, because the target market for SFVS is extremely large. Everyone who uses a telephone, whether business or residence, is a SFVS prospect. Pushbutton telephones, or potential SFVS terminals, are installed in almost every office hotel room, residence and street corner today.

**WHO ARE THE LEADING SFVS VENDORS?** VMX is easily the largest supplier of SFVS. Introducing its product, Voice Message System, in 1980, the company has already captured 65 percent of total US revenues. Companies presently using the VMX system include 3M, Hoffman LaRoche, Hercules and American Express.

IBM and Wang are the closest competitors of VMX, together accounting for 28 percent of the market. IBM’s customer base includes AT&T, Procter and Gamble, and Chase Manhattan Bank, while Equitable Life Insurance has installed the DVX from Wang.

**DID I HEAR YOU CORRECTLY, AT&T IS AN IBM CUSTOMER?** Yes indeed. AT&T is offering, through its American Bell subsidiary, SFVS switching capability for its Dimension PBX’s using the Series 1 computer-based system developed and marketed by IBM. However, AT&T has improved on the technology, offering SFVS on a limited integrated basis with the Dimension. The messages entered into the SFVS activates, via the PBX, a message-waiting lamp on the recipient’s telephone set. The lamp provides notification to the recipient that messages have been entered in his mailbox for convenient retrieval.

**LARGE USERS DOMINATE**

**WHAT MARKET SEGMENTS WILL DRIVE THE SFVS INDUSTRY?** As might be expected, it is the Fortune-type companies that will initially be the dominant users of SFVS. Eastern Management Group research indicates that 82 percent of all businesses with over 50,000 employees are now considering SFVS (see Figure 2). This percentage tapers down with the number of employees to 66 percent for companies with between 25,000 and 50,000 employees, 45 percent between 10,000 and 25,000 employees, 39 percent between 1,000 and 10,000 employees and 36 percent for companies with less than 1,000 employees.

Analyzing the use of store-and-forward voice from another perspective, our research indicates that as of 1983, 36 percent of companies in the distribution segment are considering SFVS. Looking at other industry groups, 33 percent of companies in manufacturing and 27 percent in the insurance/financial community are evaluating SFVS.

**HOW WILL USER EMPHASIS IN SFVS COMMUNICATIONS VARY OVER THE NEXT FIVE YEARS?** SFVS is finding its primary application in an intracompany environment. Some 88 percent of SFVS communications involves users of the same company. Only 12 percent involve communications on an intercompany basis.

By 1987, however, this ratio will have changed to reflect the growing use of SFVS throughout the business world. Intracompany communications will account for 65 percent, while 35 percent of total communications will be intercompany basis.

Breaking these figures down further, 55 percent of intracompany communications will involve intraoffice traffic while 33 percent will be interoffice. But by 1987 the percentage of SFVS intraoffice communication will have decreased to 45 percent with the remaining 20 percent accounted for by interoffice traffic.

**WHAT DOES THE FUTURE HOLD FOR SFVS?** During the next five years, the SFVS market will experience a total transformation. Systems providing full integration with the PBX will account for over 80 percent of total US revenues by 1987. Vendors marketing stand-alone systems will provide interfaces to popular PBXs or have entered agreements with PBX vendors.

Additional companies will enter the market with PBX systems. Vendors expected to announce SFVS include Northern Telecom, Datapoint, GTE, Intecom and Hitachi. Systems presently marketed will be enhanced to provide full PBX integration.

Small and medium-size companies will accept SFVS as a reliable business tool as prices drop and the amount of service bureaus increase. Telephone companies can be expected to increase SFVS-type offerings via their central offices in an attempt to gain market share at the low to medium end.

Systems integrated with text mail will be introduced by mid decade. Reportedly such systems are already under development by several data processing companies.

Finally, SFVS products will become increasingly standardized, offering the same features and capabilities. As vendors become more experienced with the technology, the systems will become increasingly user friendly.

WHY DATA TALKS AND VOICE WALKS

A NEW SURVEY SHOWS THAT YOUR SALARY INCREASES THE MORE YOU WORK WITH DATA.

There are few secrets in this electronics age, as all data communicators know. Celebrities appear regularly on television talk shows and blandly tell millions of strangers about their most intimate affairs. Lesser folk are no less candid, as any skilled interviewer knows. But there is one secret that few of us care to divulge, and that has to do with how much money we earn. What follows is an account of who makes what—and why—in the communications industry.

The more a telecommunications professional becomes involved with data, the higher his compensation level is likely to rise. In fact, for each additional 25 percent of effort expended in data rather than in voice communications, his annual salary and bonus package will go up $114.

So concludes the International Communications Association (ICA)—a professional group, with a historic base in the voice communications discipline—in its first comprehensive survey of telecommunications managers and professional staff members working for the nation's largest corporations. Conducted by the accounting firm of Coopers & Lybrand under the direction of the ICA Professional Standards Committee, the recent study is based on 1981 data.

Nationwide, some 237 organizations and 1,414 persons responded to ICA's questionnaires out of approximately 500 companies and institutions and more than 4,000 professionals contacted.

*HIGHEST.* The tendency of telecommunications professionals to get more money as their data communications responsibilities increase is particularly pronounced for the highest job level surveyed: vice president or director. The highest average compensation—$35,000—was achieved at this level in the "25 percent voice/75 percent data" category (see chart). Coopers & Lybrand found that overall annual compensation will rise by $362 for every additional 25 percent increment of work concentrated in data instead of voice.

For the moment, however, those whose job titles are "manager," "supervisor," "analyst," and "technician" fare best when their tasks are evenly divided between voice and data. Compensation for all of these job levels combined averages $43,000 in this category.

When all the respondent's salaries are averaged, the telecommunications professional can be said to have made $32,200 in 1981. He also received a bonus of $1,200 and a salary increase of 13.7 percent for the year.

Most respondents attended college, but less than half of them have a four-year or higher degree. Those with college educations tended to major in business administration, engineering, and subjects other than electronic data processing, liberal arts, or physics. Three-quarters of those surveyed received their professional training either on the job or with telephone companies. Surprisingly, "only three percent of the professionals with key responsibilities in an industry so vital to the future of their organizations have been college trained in the telecommunications discipline."

*VOICE.* The survey shows that "voice people" tend to have more formal education that "data people." While a higher proportion of "pure voice" professionals—17 percent—have never attended college, 46 percent of this category hold a formal college degree. Just 13 percent of the "pure data" professionals have not gone to college. Almost half attended college for some period of their lives, but only 38 percent hold a degree.

ICA discovered that the typical telecommunications professional is 38 years old. When age was correlated with work concentration in voice or data, however, the result was what Coopers & Lybrand termed "a dramatic bias" toward youth at the data end of the business. This proved particularly true for the senior job levels of vice president/director and manager. The study shows that for every additional 25 percent increment of data communications, the professional averages 40 years of age, his "pure data" counterpart averages only 36.

When Coopers & Lybrand looked at the vice president/director job level, it found that the average age dropped from 49 for the "pure voice" professional to only 39 for his "pure data" contemporary. Yet despite this difference of 10 years, their compensation is almost equal.

(Continued on page 8)
WHY DATA TALKS AND VOICE WALKS (Continued):

● EXPERIENCE. Not surprisingly, as age increases in International Communications Association membership, more professionals have both voice and data experience. Coopers & Lybrand attribute this to exposure to both types of work during the course of a longer career. The average experience in telecommunications is 10 years, ranging from 17 years for the highest job level of director to five years for the technician.

Promotions to the next-higher job level occur about every three years, according to more than 90 percent of the survey participants. The study also shows that these professionals represent a fairly stable workforce; they are not job-hoppers. They have approximately eight years tenure with their present employer and only one other employer in their work history.

Sixty-one percent of the respondents work in the Great Lakes, Northeast, and Middle Atlantic regions of the United States. But although geography has a significant effect on earnings at the highest job level, the difference in average compensation for all job levels from region to region is surprisingly small. There is only a $2,000 (6 percent) difference in the salaries and bonuses of those working in the lowest-compensated region, the Southeast, and the highest-compensated region nationwide/international.

Compensation for vice presidents and directors varies greatly across the country, however. The difference in average annual compensation between the Southeast and the nationwide/international region is $12,800, or 45 percent.

● MANAGERS. The more a company spends on telecommunications, the more it is likely to spend on its employees who manage this resource. The survey found that for each additional $10 million spent by an employer for telecommunications, the manager tends to make $800 more per year. This trend is even more pronounced at the highest job levels: Top telecommunications executives can expect an average compensation increase of $1,444 for each additional $10 million spent by their employer in this area.

As a company's expenditures in telecommunications go up, its professionals in this field tend to stay longer. For example, professionals in organizations spending less than $10 million annually average seven years with their employers; this increases to 12 years in organizations spending $70-$80 million, and to 13 years when expenditures reach $100-$150 million. Interestingly, more than half of all the professionals who participated in this ICA survey are employed by organizations spending no more than $20 million each year on telecommunications goods and services.

Finally, the survey discovered that wide disparities exist between the average compensation at various job levels within certain industry groups. The greatest differences tend to occur at mid-career, when the employee is a supervisor. There is a $14,000 difference in average compensation, for example, for the supervisor employed in the utilities and transportation industries ($38,000) and the supervisor working in the trade industry, which includes department stores and retail general merchandise, grocery, and drug chains. The trade industry ranked lowest in compensation at every job level.

The ICA views the results of the survey as "a part of (its) efforts to enhance the professionalism of (its) members and other telecommunications employees," says William R. Bary of Aramco Services Companies, who is also chairman of the ICA Professional Standards Committee. Bary says that he expects the survey results to help the International Communications Association identify and certify professionals in the communications field.

Titled "Telecommunications Professionals and Their Environment," the survey is available from the International Communications Association at 12750 Merit Dr., Suite 828, Lock Box 89, Dallas, Texas, 75251. Cost: $25 for ICA members and $75 for nonmembers.

("Why Data Talks and Voice Walks," was reprinted from the January 1983 issue of DATA COMMUNICATIONS. Written by Edith Holmes, Data Communications.)

MANAGER OF TELECOMMUNICATIONS

Requires Bachelor's Degree in Business Management, Telecommunications, Engineering or Computer Science; two years experience in a major telecommunications system and network; and a minimum of five years total management experience. Duties: Manage the University's complete telecommunications system. Send résumé to Employment Office, P.O. Box 6163, University, Alabama 35486. An equal opportunity employer.

ACUTA

1983 SPRING SEMINAR
LEXINGTON, KENTUCKY
APRIL 26-29, 1983

TOPIC: "UNIVERSITY OWNED TELEPHONE SYSTEMS"

For information, contact: Del Combs,
University of Kentucky, Lexington, Ky, (606) 273-8086.

BE SURE TO ATTEND!!