PRESIDENT'S MESSAGE

There are a number of items on which I would like to comment in this month's message, the first of which is probably the most controversial.

New Dues Structure

The Board of Director's decision to increase dues so drastically undoubtedly took most members by surprise. It was obvious from the start of our deliberations that some measure of increase was inevitable, but it was only after the Finance Chairman had put together a proposed operating budget from individual officer's submissions that the magnitude of the discrepancy between anticipated income and expenditures was fully comprehended. Two proposals were formulated during one of our Executive Conference Calls in early April: one of them would have made ACUTA approximately 75% self-sufficient, the other 100%. Each Board Member (I.e. executive Officers and Region Directors) was then asked to vote on these proposals and, for good measure, an opinion was solicited from each of the Chairmen (I say "opinion" because technically they do not have a vote on the Board of Directors).

The outcome of the ballot, and the consensus of the Chairman was that membership dues for 1979/80 should be increased to $50.00 for Full and Associate Members and to $75.00 for Industry Members. Early indications from our Treasurer are that we can probably expect to lose approximately 10% of our existing members because of the dues increase, but I am confident that our membership drive will more than make up for this. Indeed I remain hopeful that Membership Chairman Mike Grunder's efforts will bring our numbers up over the three hundred mark this year.

Conference Exhibits

Invitations to exhibit at the Atlanta Conference were extended to approximately one hundred vendors and these were later followed-up on a personal-contact basis by a team involving certain Board Members, the Conference Host and Industry Chairman Dick Werner. As of May 22nd only five vendors had made a commitment to exhibit in Atlanta, one or two more were still undecided, and the remainder had definitely declined the invitation.

The Executive Officers in conjunction with the Conference Host have therefore decided that it would be in the best interests of all concerned if we did not have exhibits at the Atlanta Conference. The vendors who had signed-up with us have instead been asked to sponsor social events on the program.

President's Message, continued:

Although a variety of reasons were given by vendors for not wanting to exhibit in Atlanta (other commitments, tight budgets, insufficient lead-time etc.) the Board feels that the facts are quite simply that we can no longer command exhibitor support because we are a relatively small organization. Vendors feel that in a tight fiscal climate the limited amount of money available for exhibiting would yield a greater return if invested in one or two of the larger trade-shows each year. The indicators have been there from the past several conferences, and obviously if we can not obtain solid exhibitor response in a great convention city like Atlanta we simply have to consider the alternatives. Please bring your own ideas in this regard to the Business Meeting in Atlanta. If you are unable to attend the Conference please drop me a line to let me know your opinions so that I may enter your input into the discussions.

Elections

This year it will be necessary to elect a new Executive Vice-President, Vice-President and Secretary. In addition there will be one or two Chairperson vacancies to be filled and at least one Region Director position. Please let me have as quickly as possible volunteers for the President-appointed positions, and forward your suggestions for the three Executive positions to our Immediate Past President, Doug Brumwell who is chairman of the nominating committee.

Changes to the ACUTA Constitution

Just a reminder here that proposals to change any part of our Constitution and By-Laws are subject to the conditions outlines in ARTICLE X - AMENDMENTS, viz: "Amendments to the Constitution may be proposed in writing by any member of the Association to the Board of Directors. Such proposed amendment shall be presented to the members in writing no less than fifteen (15) days prior to the annual meeting. The proposed change shall require a two-thirds vote of the voting members in attendance at the annual meeting."

If any member plans to introduce a proposal to amend the Constitution, therefore, he/she should contact our Secretary, Elwyn Hull at the very earliest opportunity so that he can take all necessary measures to advise the membership in writing before the July 23rd, 1979 deadline.

Future Conference Sites

The location of the 1981 and 82 ACUTA Conference will be determined in Atlanta. Virginia Penikis, University of California, Berkeley, will give a presentation aimed at enticing you to San Francisco, and Peter Wrike of University of Maryland will present his proposals for a Maryland/Washington Conference.
the user's choice

several hundred in operation

PACX (Private Automatic Computer eXchange) is a sophisticated high speed data switching and port contention system designed to optimise the allocation and use of your resources.

PACX continuously scans all terminal channels. When a service request is received, the user is connected to an appropriate port in less than one second.

Plug-in port and terminal modules (some with integral short haul data sets) offer system expansion or reconfiguration without high cost or delay. As many as 510 terminals can contend for service from up to 254 ports.

Regardless of system loading, all channels remain completely transparent to speed, code and data format up to 9600 bps asynchronous or 19.2 Kbps synchronous. Ports on both local and remotely located computers can be assigned up to 64 different class designations, accessible on request from the terminal keyboard. Reallocation of resources, at any time, is achieved by reassigning port classes via the control panel. Complete system status is seen at a glance. Data suitable for statistical analysis is continuously generated. PACX puts control over data communications back where it belongs.

Shown here is Dual-PACX (up to 510 terminals and 254 ports). Standard PACX (up to 254 terminals and 126 ports). Mini-PACX (up to 48 terminals and 32 ports). Complete data is available upon request.

Gandalf
Gandalf Data, Inc. 1019 S. Noel, Wheeling, Illinois 60090 (312) 541-6060
Canada: Gandalf Data Communications Ltd., Gandalf Plaza, 9 Stack Road, Ottawa Ontario, Canada K2G 0B7 (613) 225-0565
U.K.: Gandalf Digital Communications Ltd., 4 Cranford Court, Hardwick Grange, Cheshire, England
President's Message, continued:

Future Seminar Sites
So far we have not been exactly inundated with offers to host a Regional Seminar and I would like to take this opportunity to re-iterate my earlier request for you all to think seriously about volunteering your services in this most essential sphere of ACUTA activity.

Newsletter/Trade Journals
Once again an appeal for more articles for the ACUTA NEWS and the trade journals. If we are to develop as an Association of professionals it is imperative that we constantly project a knowledgable and professional image. Please take the time to submit your article to Connie Gentry, Emory University, Atlanta.

ACUTA's Tenth Anniversary
Another reminder that 1981-82 will be our TENTH ANNIVERSARY YEAR and that we need your suggestions as to how we should plan to celebrate this important milestone in our history.

That's it for now. Next month I will be reporting on my visit to our ACUTA NEWS editor and 1980 Conference Host, Ruth Michalecki in Lincoln, Nebraska. Goodbye until then, and please, in the meantime put pen to paper and respond to some of the issues I have addressed today concerning your Association.

Sincerely,

Mal Reader

---------------------------------------------

BITS & PIECES

Attended a special showing of "Slow-Scan" Video for use with Teleconferencing. The vendor was the Colorado Video System and our host was our local telephone company, Lincoln Telephone. It was exciting for me, I can see a lot of potential in slow-scan video and I would like to know if anyone in ACUTA has used it, what experiences they have had, etc. Please send your letters to the ACUTA News and I will share your experiences with everyone in ACUTA.

Connie Gentry (our conference host) has sent information as to weather, road info, general info on Atlanta, etc. We have inserted it in this month's newsletter. It should help a lot in planning our conference trip.

Will be covering the Midwestern State Telecommunications Director's meeting held in May at Rapid City, South Dakota. It was an interesting meeting and thanks to the short-hand ability of Dorothy Heinke, we do have some good notes to share with you. It was great to share a few days with Dorothy and Bob Devenish. We had unusual weather, but it added to the sights when we went to Mt Rushmore. We actually had a lot of snow, forcing the deer down from the mountains to the areas along the highway. Our bus driver said he couldn't remember ever seeing so many deer at one time. Many of the State Directors indicated they were interested in learning more about ACUTA, and we have sent literature to them. We might get a chance to meet some in Atlanta, at least a few members said they would attend.

PARTY LINE

"TRAFFIC ENGINEERING"

---by Elwyn N. Hull
University of Utah

In January of 1976, here at the University of Utah, we started to use Mountain Bell's ESS Flexible Route Selection service on our Centrex II-CO System. The FRS systems were designed to overflow all calls to the DDD network when all private facilities were busy.

After attending several telecommunications management courses, reading several articles and listening to my colleagues who've installed WATSboxes, Infoswitches, and the like, we decided that the "DDD" grade of service was too good—we estimated that we could save anywhere from $30,000 to $100,000 per year if we decreased the grade of service we were providing our users.

Last June, we changed our routing to block all calls if all private facilities were busy. Of course, we realized that certain users on our campus needed priority treatment in having their calls completed therefore we provided the ability for them to bypass the FRS and go directly to the DDD network to insure that these calls really were urgent, we double-billed all calls placed in this manner.

Now, we've decided that our grade of service is still too good and we've decided to reduce the grade of service on a trial and error basis. As we attempt to change our grade of service, however, we find ourselves in a perplexing situation. What is a good grade of service?

While I realize the grade of service that is acceptable to one institution may not be acceptable to another, we'd be interested in knowing what other ACUTA members have established as an acceptable grade of service.

Please share your thoughts in the ACUTA News so all ACUTA members may benefit from your experiences.

Party Line column was written by Elwyn Hull this month. Please share your experiences with the "grade of service" question by sending your answers to ACUTA News, University of Nebraska; 211 Nebraska Hall, Lincoln, Nebraska 68588.

Thanks Elwyn, for a thought-provoking column...
"It's a flash, star, push-button telephone world"..... Mastering the telephones... became a March challenge, as RGH employees and medical staff learned the new Rolm CBX (Computerized Branch Exchange) telephone system. Half the hospital made the change with the completion of the hospital addition in July, 1977; now Rolm is installed throughout the hospital, and doctor's office building. The Rolm System, which includes about 1700 individual phones, is owned by the hospital.

Communications Manager Victor Mason estimates the telephone changeover will save Rochester General Hospital approximately 2.2 million dollars over a 10 year period.

The decision to change to the CBX System was made at the time of the new construction, because, in addition to the considerable cost-savings factor, the Rolm phones can handle both incoming, outgoing and overhead paging calls within a department, eliminating a need for a separate intercom system.

Cost-wise, the phone bill has been cut from $35,000 a month to $10,000 with the complete conversion. Outgoing phone calls cost 8.4¢ each.

The Rolm CBX systems are a family of stored program telephone switches, which make use of Pulse Code Modulations (PCM) and Time Division Multiplexing (TDM) technology to control voice and data transmission. The systems control incoming and outgoing calls, as well as calls completed within the local installation. Like all PABX's (Private Automatic Branch Exchanges), the Rolm CBX acts as a concentrator for various types of telephone lines, external trunks from the telephone network, and local loops.

The Rolm CBX exists only inside the hospital proper; from the doors out Rochester Telephone trunk lines are in operation.

Employees received training sessions on how to use the new phone system, and Mason reported the phones have been quite well accepted. Admittedly, there were some bugs to be worked out, especially with the dial/intercom groups.

Mason described the entire 2 year CBX installation as a tough period, especially for the switchboard operators who had to learn the new computer consoles, and put up with all the changeover bugs. "They really came through" he said. He remembers two other critical moments: once when he sent out a memo telling the entire hospital to stop using the old 8 prefix number and then the test equipment being flown from California got lost in a Chicago snowstorm and ended up in Florida. Four days later it was found. The next weekend, eight hours after the switchover, a water leak caused problems with the phones in the Medical Intensive Care Unit. There was a scramble to discover whether it was the new phone equipment or the water leak. The crisis evaporated....drying up the area solved the problem.....
You will find that the closer I come to August 6th, the shorter this column will get. That will be good news to those of you who wish it would disappear altogether!

Mike Grunder and I were talking this morning about the ACUTA News. We can't understand why more ACUTA members don't take the time to write a short article or their communications set-up or even forward a clipping from another publication. Surely you must have some problems, complaints, gripes or comments you would like to share. How do you feel about the increase in ACUTA dues? What are you doing to help cut costs and stave off the ravages of inflation at your school or business? What are your communication goals for the next five years? What are your professional goals? How do you feel about ACUTA as a professional organization? The whole point is to get you involved...to get you to contribute something, besides your dues, to the organization and to the Newsletter.

And I absolutely DARE anyone to tell me they don't have time to do it. We always seem to find the time to do the things WE WANT to do. It's not a matter of time, it's a matter of doing it instead of talking about it. Doesn't anybody out there, besides the officers, give a damn??

Several months ago, Emory was assigned a new account executive from Southern Bell. We began his association with Emory by going over all the little nuances inherent in the operation of the university and it's telecommunications systems. Here's what impressed me, though. He wanted to know what my telecommunications goals were, how I saw the development of total information management at Emory and what I wanted him to do to help me reach those goals. After I managed to pick myself up off the floor and get a whiff of smelling salts, I told him I thought I'd better go have my hearing checked. I also asked him, in very hushed tones, if Bell knew what he was doing. Not only did they know, they were encouraging him. Another whiff of the salts was called for!! "You wouldn't be doing this," I said shrewdly, "just because you know we have been in serious discussion about going interconnect?" "Not entirely," he said, "but we are definitely concerned". I almost fainted again...an honest answer from a Bell Account Executive. I was beginning to think this was a Bell plot to drive me over the edge.....

Potpourri continued:

In any case, I haven't yet gone over the edge nor have I lost my healthy suspicion and wariness of ANY marketing people, regardless of what company. However, for the first time in a very long time, I feel that the help and support I need and should have from Bell is readily available. We are currently involved in a study of the Emory Campus to identify, define and anticipate telecommunications needs, not just telephone needs, TELECOMMUNICATIONS NEEDS. I want to make the Emory Administration, Faculty, and Staff aware of telecommunications as a management tool and now, thanks to a cooperative and concerned Bell marketing department, I am much closer to realizing that goal.

My 78 year old granny has shown a lot of interest in the, as she calls it, "SCOOTER" Conference. She told me the other day that instead of fooling around taking you to Stone Mountain or Six Flags I ought to: "Bring them SCOOTER folks out here (Tallapoosa, Ga., pop. 3000) and I'll cook 'em up a mess of turnip greens, poke salad, corn bread and fried chicken, and we'll give 'em a good dose of southern livin'". Sorry friends, I wish I could do that, but once you found out about that good southern living, you'd never want to go home!

See you in Atlanta.....
THE CHANGING ROLE OF THE TELECOMMUNICATIONS MANAGER

We are in the midst of a revolution in the field of Telecommunications. Technology has changed more in the past five years than in the preceding twenty and there is every sign that these changes will continue... and accelerate, in the coming years.

James Martin, in his book The Wired Society, has stated: "Whatever the limits to growth in other fields, there are no limits near in Telecommunications and Electronic Technology. There are no limits near the consumption of information... communications media will be the cornerstone of the culture of our time."

As the field of telecommunications grows and changes, so must we. Our roles as telecommunications professionals must expand and evolve to meet the more sophisticated and increasing demands of our various colleges and universities.

This evolution... this revolution means that the way we think, the way we work, the way we live, will never be the same again.

This then, is the objective of the Eighth Annual ACUTA Conference... to help you, the Telecommunications Manager, recognize, define, and meet the challenge ahead.

...let's meet in Atlanta....

ELECTRONIC MAIL FROM THE USER'S PERSPECTIVE:

J. R. "Dick" Cavanaugh, Director Mailgram - Western Union

What Electronic Mail is, and isn't: What form it takes, recent developments in equipment and services, examples of applications from first time users to high volume users, what's in the future....

DIGITAL COMMUNICATIONS IN HIGHER EDUCATION:

Barry Harbaugh, Staff Manager Education - Southern Bell

What you know about computers and data processing would not fill a thimble??? Or, perhaps your knowledge of the subject is immense??? Either way, there will be something for you in this session. You'll get a comprehensive overview covering the historical growth, description of design elements of current data communications and processing systems, integration of voice and data and current and future data/graphics applications in higher education.....

WORD PROCESSING:

Gerald A. Baugh, Marketing Administrator Lanier Business Products, Inc.

What is Word Processing, How does it work??? What does word processing have to do with telecommunications??? The answers will be found here.....

Atlanta's multimillion dollar Sports Stadium, home of the Atlanta Braves, & Falcons.....
UNDERSTANDING TARIFFS, REGULATORY TRENDS AND DEVELOPMENTS:

...Joseph T. Massey, President
JTM Associates

How to really read and understand tariffs, review of the history of regulation in telecommunications, problems with regulation and how they affect the telcos, users and regulators...

NETWORKING AND ENGINEERING:

...Saleem Tawil, Communications Engineer
The University of Texas at Austin

Everything you need to know about basic networks and switching; management of networks and network transmission systems.....

VOICE AND DATA - BRINGING IT ALL TOGETHER:

...Deidre S. Searles, Marketing Communication Manager, Datapoint Corp.

What convergence means to the communications manager, technology, applications, strategy, the management revolution, controlling the technology, systems approach and total information management.....

BASIC TELEPHONY FOR THE NOVICE MANAGER:

...Elwyn Hull, Manager-Telecommunications
The University of Utah

If telecommunications management is not your prime responsibility, or if you're brand new in the field, this session will give you a sound footing in the fundamentals.....

"EIGHTH ANNUAL CONFERENCE -- ACUTA"
AUGUST 6 - 10, 1979
ATLANTA, GEORGIA
EMORY UNIVERSITY

MARK THESE VIP DATES:

MONDAY, AUGUST 6th:
1pm - 5pm registration
6pm - 8pm cocktail party

TUESDAY, AUGUST 7th:
9am -10am keynote address

WEDNESDAY, AUGUST 8th:
7pm - cocktail party
8pm - ACUTA banquet

FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

CONNIE GENTRY
PHYSICAL PLANT DEPARTMENT
EMORY UNIVERSITY
ATLANTA, GEORGIA 30322
404-329-4320

"Our thanks to Ed Giles of Atlanta for the beautiful photos of Atlanta used on these pages!"
"MOUTH OF THE SOUTH"

Y'all's old roving reporter was about to put some real deep thoughts upon you this month when a copy of "Telecommunications (April'79)" came across his desk. Sure enough right before his eyes on page 35, Dr. James E. Jewett, of Vanderbilt University (that's old Bruce Hawley's hangover) has written an excellent article entitled "How to Win At Telecommunications With Top Management".

I would recommend this article to each member of ACUTA. I will try to give you the major thrust of what I have trouble finding the complete article, drop the old "Mouth of the South" a post card and we will be happy to mail you a facsimile.

Dr. "J", like all good educators, has broken down his advise into three main points. His first point is that role of Telecommunications is changing again. (Seems to me we had a conference on this theme some time back). Dr. "J" points out that the 1970's were "cost control" or "cost management" years in the life of a telecommunications manager. The 1980's will be the era of "stressing organizational productivity; measuring real return on telecommunication investments in terms of organizational productivity and performance". Dr. "J" asks each one of us to look at ourselves. Do our users look upon us as an obstacle to performing a job? Are we just another department with lots of rules that begin with the word "NO"? Do we spend sufficient time with our customers to truly understand their needs? Can we then translate these needs into workable solutions?

Dr. "J"s second point deals with how to win; how to get things accomplished within your organization. He stipulates that in order to take the offense, there are three considerations: (1) developing organizational strategy that uses the political reality of dealing with top management. (2) building credibility not only with top management, but with your peers and constituencies in your organization. (3) translating specific ideas to top management.

I will not go into details on Dr. "J"s second major point (as I truly want you to read the entire article). However, he illustrates his point by giving us an example about a telecommunications manager who was imaginative enough to announce to top management in his presentation, "Gentlemen, from a cost-effective point of view, this is the best choice for our organization. However, if you go with my proposal, the first thing I want you to understand is how the vendors work in this industry. The vendors are going to hit you on the golf course, on the squash court, in the locker room, at church, in the country club, and tell you that I am incompetent and behind the times, etc., etc. You must make your choice now. Can you stand the heat?"

(How many of us have ever put our necks out this far? Are you willing to consider this option in the future?)

Dr. "J"s final point is somewhat humorous and on the surface seems to be opposite of his other two minor points. His third point is "How to protect yourself by stealing those things which you don't want done". He calls this Vanderbilt's "Principles of Bureaucracy". I'm sure all ACUTA members know this principle all to well.

However, as a routine, it appears to me that Mouth of the South Editor (notice how I quickly elevated myself), knowing when to apply this principle is the key to success. This action should be prudently and wisely. There are occasions when such action is truly the best course of action. To illustrate, let me give you a personal example.

It seems that each spring—just before spring break, the editors of our student newspaper run out of things to write about. Usually, they turn their cub reporters out by the dozens to find stories to fill empty space. In their quest to achieve a Pulitzer Prize they want to dig into all financial matters of Tel-Com. By utilizing Dr. "J"s last principle of "Bureaucracy", I stall them until the day or two before spring break. They usually rush their story to press (often with many obvious errors) and by the time the paper hits the street, three-quarters of the student body have left for Ft. Lauderdale and the remainder could care less.

A week later when they return, the story is completely forgotten. To do otherwise would have resulted in letters to the editors and follow up inquiries that would often drag on for months.

Many thanks to Dr. James E. Jewett for his keen observations. I highly recommend his article to you and it is up to you to put it in practice.

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

BITS & PIECES, CONTINUED:

From our Region Three Director, Jackie Pollock, comes an interesting reply to an informative letter Jackie sends to new ACUTA members in her region. She tells them about ACUTA and invites them to get involved. This reply came from Maryann K. Roulier, Director of Communications at the University of Cincinnati.

..."I was delighted to receive your letter welcoming me to membership in ACUTA. Being reasonably new in university communications I was delighted to hear of the organization and of your willingness to provide contacts and information.

Specifically, we have launched into a study which we hope will result in the design of an electronic telephone system for the university. Presently we are restricted somewhat by the limitations of a step-by-step Centrex. Should you know of any other ACUTA members who are similarly involved, I would certainly appreciate knowing of them so that we may establish an information sharing process.

In reverse, the University of Cincinnati has installed an Infoswitch to manage our long distance calling. It has now been operating for a full-year and, during that time, we have upgraded the system and expanded it to include our Medical Center, giving us in excess of 3000 users. I would be more than happy to share what we have learned in the process with ACUTA members looking for similar capabilities..."
"Moving and Other Trivia"

I'm a firm believer that we all need a vacation every now and then. I also believe we should fulfill our obligations. So here I sit with pen-light in hand while the wife guides the family bucket of bolts north toward Syracuse. How's that for dedication?

It's been a good week. Moved into our new office the other day; not the Ritz mind you, but much better than the broom closet we used to inhabit.

I don't know about you folks, but the communications business is booming here in Southwest Virginia. Seems like every day brings either something new or more of the same old thing. We're experiencing a very severe space shortage here, and as a result, orders for additions and changes to departmental telephone systems are up 25% over last year. This type of business used to peak and valley. Now it just peaks, there are no more valleys. Makes it kind of tough to do some of the longer range things that need doing.

I was able to hire a half-time clerk-typist recently in an effort to keep my head above water. Got a real jewel, too. Until the other day when we moved, her desk was two boxes of Roanoke telephone directories stacked on top of one another. In our new digs, we went first class and replaced the directories with an oak desk. Now, with a reasonable amount of space, she's not sure how to act.

Except for the dust you inhale, moving is almost as good for you as vacations. We got rid of reams of computer printouts, not to mention buckets full of old finished business. One sure way to keep the computer generated information under control is to have it all out once in a while.

Found an old ACUTA information pamphlet from back in the day when dues were ten bucks. What a deal! Now it's five times that and still a great deal. I'd say welcome to the 1980's but with coffee at 40c a cup, ACUTA turns out to be one of the great inflation fighters around, even at $50.00 a head.....

Had an interesting experience getting my telephones moved. People here tend to gasp when I tell them what it costs to install a couple of telephones. For my $100.00, I got three days work from C&P--and some of that was overtime. Seems that one entire wing of the building had to be re-wired (I think they use heavier gauge wire for the real big time gas bags!).

There I sat with no phones and people telling me I ought to call the communications office for help. Real cute! If they knew how pleasant it was without phones, I'd probably start getting requests for planned downtime. (Now there's a custom calling feature that just might have merit. I'll check with Brother Long and see if it's tariffed!).

We are getting into Northern Pennsylvania now. Interstate 81 resembles a semi-paved cow pasture in spots. Guess they don't want us falling asleep or writing newsletter articles. More next time!....

Another side of Mal Reader, this time as coach of the winning (11 year olds) Soccer Team.....
Canadian Medical Center
Upgrades Paging System

KENNETH STANLEY
McMaster University
Hamilton, Ontario, Canada

A unique computer paging terminal has recently been added to the McMaster University Medical Centre and Health Sciences complex's radio paging system, thus insuring that this vital communications link will continue to provide the latest state-of-the-paging-art technology to the center's staff, physicians, and patients. Effective, personal communication is a key ingredient in the efficient operation of the center. The new paging terminal is the first of its kind in Canada.

Since the center opened in 1972, the radio paging system has been expanded and upgraded until it is now one of the most extensive and sophisticated systems serving the medical field. Major features of the system include city-wide paging of physicians, direct access to the paging system from any telephone within the center without going through an operator, synthesized voice messages which are computer-generated and which provide exceptional clarity, and an answering service for McMaster physicians.

The system has been funded by the Regional Medical Associates, to which all McMaster physicians belong. With savings in battery life, air time, and operational time, it is anticipated that the cost will be recovered within a two-year period.

The new computer paging terminal incorporates a microprocessor operated by a stored control program and featuring digital-voice synthesized messages. Delays due to heavy traffic have been reduced when calls are processed, and the involvement of the paging operators has been minimized.

Upon the center's opening seven years ago, a paging system supplied by Multitone Electronics, Ltd., was installed with approximately 130 paging receivers used within the center to contact physicians, nurses, technicians, and others who were frequently on the move. It soon became apparent that there was also a need to contact physicians in the greater Hamilton area, and another 125 wide-area receivers were added to the system.

Due to the different range requirements, separate transmitters and operational frequencies are used. The internal receivers operate on a low-band frequency, receiving their signal from four antennas located on each corner of the medical center's roof. The wide-area receivers operate on a high-band frequency, and their signals are received from antennas located at the center, St. Joseph's Hospital, and Henderson General Hospital. Both systems operate from a common dispatch console located in the McMaster switchboard area, and both types of receivers operate equally well within the medical center.

As the need for paging grew with the expansion of the center, additional receivers were added to the system. In 1974, the telephone answering service was established to provide telephone answering for McMaster physicians. The lines covered are located in various clinics throughout the Hamilton area. The service commenced with 10 lines and has grown to the present 40 lines, servicing approximately
60 McMaster physicians. As the calls are answered, the paging operator locates the physicians via the external receivers and relays the various messages received.

With this growth and increasing activity, it became necessary to add a second paging operator at the dispatch consoles during the normal business day. Delays at the paging desk and a backlog of messages caused by the length of time required to transmit each message were problem factors. In 1977, McMaster's Telecommunications Dept. carried out an extensive study of the system in an effort to overcome these situations. Following an in-depth analysis of equipment available, it was decided to install the new paging terminal known as an ACCESS 1800. This equipment, like the original system, is manufactured by Multitone Electronics. It is compatible with the existing transmitter and receiver, thus minimizing the cost while providing a radically improved service.

Two dramatic innovations are featured in the ACCESS 1800 system. Firstly, messages to call a telephone extension can be dialed directly from any telephone within the medical center. Secondly, the paging terminal reduces the amount of air time required to transmit each call by using a synthesized voice message stating the four-digit telephone extension number to be called. This number is repeated twice.

Routine paging calls may be originated from any internal telephone extension, with the caller gaining access to the system simply by dialing a single-digit access number. The system is then ready to accept the paging information. The caller dials the number of the pager being alerted, followed immediately by the number of the telephone extension to be called back. After receiving the last digit, the terminal disconnects the calling party and frees that line for another paging call.

The microprocessor also records, on a teleprinter, details of the transmission, including the time of the message, unit called, and telephone extension to be called. This permanent record of all messages can be used to verify transmissions and permit the analysis of system usage. Any system abuse or use by unauthorized persons can be quickly detected on the printout. Fortunately, no such problems have occurred.

A directory of all paging receiver numbers has been published and issued to all authorized personnel. The first digit of the receiver number indicates whether the receiver is a wide-area or an internal unit. The terminal recognizes this digit and routes the call through the correct transmitter.

Prior to the installation of the new terminal, the system handled an average of 800 paging calls per day, with delays of several minutes quite common during busy periods. The new terminal is now handling as many as 1,200 paging calls per day with over 65 percent of these being dialed directly. This increase in capacity is made possible by the use of synthesized voice messages, which dramatically cut actual transmission time per message, and by the microprocessor memory, which stores the dialed-in messages for rapid transmission in sequence. Thus, if a number of calls were received at the same time, the computer memory stores the messages and transmits them in order, with delays being only a matter of seconds.

Emergency and non-routine calls are placed into the system by the paging operator. An example of this type of message is "Group Alert", in which a group of predetermined receivers are paged, simultaneously. Group Alert teams comprise cardiac arrest teams, fire teams, etc., and Group Alert messages have priority in the system and override any calls that may be stored in the microprocessor awaiting transmission.

Another feature of the ACCESS 1800 terminal is the ability to reroute calls from disabled receivers to other preselected pagers. Any call number of a receiver can be interrogated with any other receiver's number. The receiver to which calls are being transferred in this manner also continues to receive its own paging calls.

Following the introduction of the ACCESS 1800, new, wide-area paging receivers were issued. These Multitone RA106 units feature the latest technology in paging receivers and replaced the wide-area receivers used previously. The improvability of these units provides better reception of messages and allows the user to control the volume of the paging call. The new receivers are also completely hands-free, automatically switching on and off as a message is received. Thus, it is not necessary to remove the receiver from the shirt pocket or belt clip to receive a message.

Battery life is expected to be increased to three or four months, depending on use, therefore eliminating the need for recharging the units every night. The electronic chassis of the receiver also floats freely in the case, supported by a spring structure which permits the unit to withstand increasingly rough handling and jarring.

With all these changes, the McMaster paging system is now operating at an extremely high level of performance and providing the necessary links in communication required by today's standards of health care.
Super Smart...Super Cheap

A Statistical Multiplexer for Only $1500

A four channel statistical multiplexer for only $1500, an eight channel unit for only $2500! Super prices with super performance—error-free data, double or better the throughput, down-line loading and built-in diagnostics.

Super smart Supermux 480’s replace up to eight transmission lines with just one. Bandwidth is assigned dynamically without wasting any on idle terminals—double or better the throughput of dumb TDM’s.

Transmission errors are eliminated too! Data is buffered, checked and, if necessary, retransmitted, all completely transparent to existing terminals and software. With Supermux, not a bit of data is lost, even with outages lasting ten seconds or more on a fully loaded 9600 bps line.

Microprocessor-controlled Supermux 480’s mix dial-up and dedicated asynchronous inputs at speeds up to 9600 bps. Super features—built-in diagnostics, system status reporting, as well as reconfiguration of remote, unattended units—all standard. Super Smart... Super Cheap... Supermux 480.

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Infotron Systems
First in Performance and Reliability
ATLANTA INFORMATION

(With many thanks to the Atlanta Convention and Visitor's Bureau)

POPULATION - The Metropolitan Atlanta area (15 counties) has a population approaching 1.9 million people, while the City of Atlanta numbers some 435,000 residents. Atlanta ranks 18th in the nation in terms of population.

WEATHER - Normal temperatures for August range from 87°F to 70°F. Average precipitation for the month is 3.6 inches. Atlanta, for the most part, enjoys a temperate climate. Highs and lows, no matter what season or month, can vary by 15 to 20 degrees, sometimes more. This may be accounted for, in part, by the fact that Atlanta lies at only 1,050 feet above sea level.

GETTING TO ATLANTA -

Atlanta is the transportation hub of the entire southeastern U.S. One old joke says that when a person dies before he/she can go to Heaven or Hell they have to change planes in Atlanta. Hartsfield International Airport is the second busiest airport in the world, and the largest transfer hub in the world. It is approximately 8 miles south of the city.

Fourteen scheduled carriers and commuter airlines give Atlanta non-stop service to 110 cities nationally.

Airport Limo Service and Taxi are the most practical way of getting from the airport to downtown. Limo service is $3.50 per person or $6.50 round trip. Taxis, which are licensed by the City of Atlanta and metered, are plentiful. Basic rate is 60¢ plus 10¢ each additional 1/6 mile, and cabs, by law are required to collect 4% state and city sales tax. There is a 25¢ charge for each additional passenger. Approximate fare from the airport to downtown is $7-$8. A special fare of $3 per person pertains for three or more people in a cab going to the same destination within a certain radius.

Atlanta is served by Greyhound and Trailways bus lines. AMTRAK's Southern Crescent provides the only regularly scheduled passenger train service through Atlanta. One train daily plies the rails, in both directions, between Atlanta and Washington, D.C./Philadelphia, New York City and intermediary points. Also, there is one train daily between Atlanta and New Orleans and intermediary points.

ATLANTA TRAFFIC -

If you are driving to Atlanta be sure to check out the map provided elsewhere in this issue of ACUTA News. You also need to know that Atlanta's rush hours are BIG LEAGUE. The morning rush goes from 6:30 AM to 9:30 AM, in the afternoon its from 3:30 PM to about 7:00 PM. Atlanta's street system has been described as more of a "happening" than a system. Atlanta's streets are not laid out in grids. When Atlanta was getting started as a rail junction, tracks came in from various directions along curving high ground. railroad workers and shop keepers laid out streets more or less parallel and perpendicular to the tracks, but these minigrids join at odd angles. Just remember, if you can get on to Peachtree Street you can find just about everything and every place you want to go.
If you are flying into Atlanta International Airport you may take the Airport Limo to the Omni Hotel for $6.50 round trip, or you may take a taxi which will cost about $7.50 - $8.50 depending on how big a tipper you are. By the way, the cost for the taxi is for a one way trip. You may also arrange to rent a car at the airport.

If you will be driving, please refer to the handy little map which should be in close proximity to these instructions. Either from the North or South, I-75 and I-85 merge into one system coming through the city. Exit at International Boulevard. Continue straight ahead and when you reach the fourth traffic light you should be at Spring Street. Turn left onto Spring Street and continue straight ahead until you come to Marietta Street. Turn right onto Marietta Street and you will see the Omni Hotel on your left. Omni guests may park at the hotel for $4.75 per day.

If you are coming into the city from East or West on I-20, you must exit onto I-75/85 North or what we call the Chattanooga exit. Then continue to International Blvd and follow directions.

Should you choose to enter the city by some obscure route (other than interstate hwy.) get yourself onto Peachtree Street and follow it till you reach International Blvd.

Atlanta is a very easy city in which to drive. Once you get onto Peachtree, north or south, if you can't find what you need, from churches to massage parlors, shopping centers, discos, restaurants, etc., you don't really need it!