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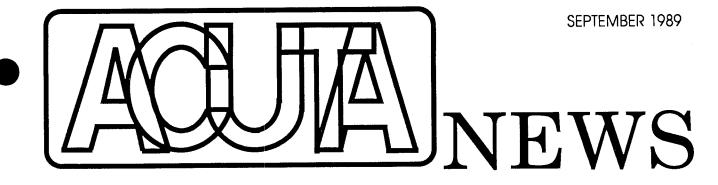
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### ACUTA eNews September 1989, Vol. 18, No. 9

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Association of College & University Telecommunications Administrators, Inc. THE VOICE OF TELECOMMUNICATIONS IN HIGHER EDUCATION

## In Memory of Bill D. Morris

CUTA members were stunned and saddened this month when Bill D. Morris, 1988-89 President, was struck by a fatal heart attack at his home in Florida. Only 60 years old, Bill was recovering from hip surgery when he died, and his sudden passing inspired an outpouring of grief and disbelief. Bill's funeral took place on September 7, and among the more than 100 people attending were ACUTA Executive Vice President Bill Orrick, Region 5 Director Dino Pezzutti and his wife Delores, and Administrative Director Del Combs. The many expressions of sorrow included ten flower baskets from ACUTA members alone. Bill is survived by his wife Irene and one son, James. He will be missed by countless ACUTA members throughout the United States and Canada.

Bill enjoyed a long and rewarding career in telecommunications. He earned his Bachelor's degree at Ohio University and his Master's degree at Rollins College. After two years as an intelligence officer in the Navy, he joined the Marietta Corporation for a year. He then took a position at the University of Central Florida, where he was Director of Operations Analysis when he died. Telecommunications was among his many responsibilities there, and through his university work he found an additional outlet for his considerable energy and skill: ACUTA.

This newsletter is dedicated to Bill and Irene, who have given so much of themselves to ACUTA.

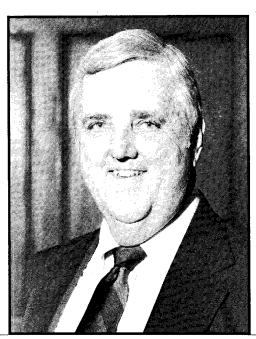
### Farewell to Bill Morris

Mike Grunder, President

Past President Bill Morris passed away unexpectedly on September 4th. As many of you may have known, Bill had hip replacement surgery a few weeks before and was at home recovering well. In fact, so well that he was scheduled to participate in an ACUTA conference call with the Constitution and Bylaws Committee, which he chaired.

Bill loved ACUTA and I guess the fact that he was charging back into the thick of it when he died shows that better than anything.

(continued on page 2)



#### Moments to Remember Del Combs, Administrative Director

As many of you know, Bill Morris suffered the last several years from arthritis in his hip, limiting his activities drastically. Yet you never heard him complain—even once. His dedicated companion, best friend and wife (a very rare and envied combination) was always at his side wherever he went. No two people in ACUTA—or probably any other organization—enjoyed their travel, partnership and life any more. They always looked forward with great anticipation to "It has been a year of fond remembrances...you ACUTA people, individually and as a group, are exceptional. You work hard, play hard, and are always willing to share and help. Thank you for giving me this opportunity." — *Bill D. Morris, on his year as ACUTA President* 

#### Farewell to Bill (from page 1)

Being an officer in an organization like ACUTA is tough work. For Bill it was a labor of love.

One doesn't become president of ACUTA merely by volunteering to do so. There are years of behind-thescenes effort that prepare one for the job. Bill served for two years as Treasurer, a year as Vice President, and another as Executive Vice President. He always gave tremendously of himself. He was always willing to listen, to debate, to reason, to research and to take on the extra responsibility when it was called for.

Those years for Bill culminated in his Presidency during one of the most significant periods in ACUTA's history, that being our transition to a professional staff and the establishment of a headquarters office in Lexington, Kentucky. As I noted in last month's President's Column, Bill's energy and steady hand guided us extremely well through a complex time and ACUTA will not soon forget that exemplary work. It set the stage for a bright and progressive future for our Association. ACUTA has lost a good and loyal friend. He will be missed mightily by all of us who knew him and had the pleasure of working with him. Our hearts go out to his family and especially to his wife Irene, who was a constant source of support and encouragement for Bill through all of the years.

Adios, amigo.

#### Moments (from page 1)

the ACUTA "family reunion" every summer. This summer was especially satisfying to Bill and Irene as it was "their year." Every past president looked forward to the conference that climaxed their term as president, and Bill was certainly no exception. I will always remember how relaxed yet spirited he was while enjoying the Larry Elgart Orchestra at the banquet.

Shortly after the conference, August 16th to be exact, Bill entered the hospital for his hip replacement—a decision that he had wrestled with for several years. His operation went well

#### Association of College and University Telecommunications Administrators - ACUTA NEWS, Volume 18, No. 7

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ADMINISTRATIVE DIRECTOR: Del Combs • PUBLICATIONS EDITOR: Nanci Unger STAFF & EVENTS COORDINATOR: Kellie Preston • STAFF ASSISTANT: Lisa McLemore

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Bill, despite the usual complaining about the hospital food, had not lost any strength. In fact, he said he had more upper body strength from using his walker, which he said he felt he did not really need—he felt that good! Of course while I was there, Bill did not fail to hand me a "little work" to take back to the office (it was his "regrets" for being unable to attend a NACUBO reception for their new president and his wife). My visit with Bill and Irene came to an end around 6:30 that evening. After saying goodbye to Bill and stealing a glance at their beautiful pool in the backyard, I walked to the front door with Irene.

I have always felt especially close to Bill and Irene, and it was most gratifying to see them both in such good spirits and humor. With Bill's recovery they were eagerly planning more activities that they could enjoy. Irene and I said goodbye in the typical tradition of the "ACUTA family," not knowing that 15 hours later she would be frantically trying to contact me at the local hotel. I had left two hours earlier for Kentucky.

ACUTA's accomplishments under Bill's leadership are best described with superlatives. Without a doubt he had full support and inspiration from Irene. Let's return that support and inspiration to Irene—she is still and always will be part of the ACUTA family and welcomes your cards and calls.

# Reflections on Bill Morris

It is an excruciating task to try to put into words our thoughts on the passing of our colleague and very dear friend Bill Morris. Bill's efforts on the behalf of and dedication to ACUTA will stand our organization in good stead for many years to come. Those of us who will follow Bill have a firm foundation to build from and, hopefully, we will be able to provide a sense of direction for ACUTA of which Bill would have approved. Bill cared very deeply about ACUTA, the

direction it was taking, and whether ACUTA was providing the information and programs that the members needed. All of us will be hard pressed to match Bill's caring and dedication.

On a personal note, Bill was a dear friend and it is hard to conceive of attending an ACUTA event without Bill being there. We shall always remember Bill's love of life, his interest in the many places to which he and Irene traveled and the things they saw and did. The passing of a friend is always a heart wrenching time; our loss of Bill is doubly so, for he had just reached the point where he could enjoy some of the pleasures he had so justly earned and so richly deserved. - Nancy and Coley Burton (Coleman Burton is ACUTA Treasurer, University of Missouri)

ACUTA has lost a leader and a friend — Bill D. Morris was both. He was a strong leader—willing and able to make the tough decisions. Meticulous with detail, to a fault it sometimes seemed, Bill utilized these talents in demonstrating powerful organizational skills. His keen financial understanding guided ACUTA to wise, sound investments and financial tracking.

But first and foremost, Bill cared for the membership. He listened and directed efforts to strengthen our knowledge of the industry for the advancement of our institutions. As I continue with ACUTA and my university, if I draw from what I have observed and learned from Bill, both ACUTA and I will be better for that. For all of this, I say "Thank you, Bill — I'll miss you." — F. William Orrick, ACUTA Executive Vice President, Washington University in St. Louis

I'll always remember Bill for his wisdom in guiding ACUTA, his warm friendliness, his sense of humor, and his ability to make any newcomer to ACUTA feel welcome. — *Paula Loendorf, ACUTA Vice President, University of North Dakota* 

To my ACUTA family, Your prayers — just calling to tell me you care — and your love have surrounded and sustained me. So many of the happiest memories Bill and I have were shared with you. My love to you all.

Irene Morris

ACUTA meant a lot to Bill and Bill meant a lot to ACUTA. His presence will be felt for years to come because of his dedication to the ACUTA organization and his association with his ACUTA colleagues across the United States and Canada. I'll always remember the special brand of Florida sunshine Bill and his wife Irene brought to each ACUTA event. Bill will be missed, but the spirit, guidance and vigor he brought to the organization will endure, keeping ACUTA vital and his memory alive in all of us who served on the Board with him. — Patricia Paul, ACUTA Secretary, Cornell University Over the past seven years I was fortunate to know Bill as a colleague and a friend. It always amazed me how organized and efficient he was. I recall faxing Bill a proposed schedule of events for the Columbus Fall '88 Workshop and getting the return copy with comments in less than thirty minutes! Anyone who had the opportunity to work with Bill experienced this kind of response. He was a dedicated friend of ACUTA. His involvement in estab-

> lishing the national office in Lexington is testimony to his commitment and loyalty to the Association. Bill's wife Irene is a special lady. The example of friendship and camaraderie she has brought to ACUTA gatherings is one we hope will continue in the future. I feel privileged to have known Bill personally and count my association with him as one of the big pluses of my membership in ACUTA. He will be missed by all of us. — Dino G. Pezzutti, Region 5 Director, Ohio State University

> Rarely does an organization command the dedication and concern that ACUTA enjoyed from Bill Morris. As president he put in place plans and programs that will carry our association to an even more successful future. Bill has left his mark on us and will be sorely

missed by all those who knew and worked with him. Our sympathies and prayers are with Irene as she faces this difficult time. — Howard Lowell, Region 7 Director, Colorado State University

Bill's dedication to ACUTA was obvious throughout his ACUTA membership and his year as president. He, and all ACUTA members, looked with pride at the many accomplishments which took place during his term. Bill really brought ACUTA into the future by establishing the home office and the full-time staffing. He and his lovely wife Irene epitomize ACUTA's warmth and camaraderie. He will be much missed. I will personally miss him and his encourage-



ards, flowers, and other expressions of sympathy may be sent to Irene Morris at 1695 Kingston Road, Longwood, Florida 32750. If you would like to call Irene, please contact ACUTA Headquarters at (606) 252-2882 to request her telephone number.

Reflections (continued from page 3)

#### ment and support. — Donna Powell, Region 8 Director, California State University

I first met Bill in 1980 at the ACUTA conference in Lincoln, Nebraska, and have since collected many memories of him. He and his wife Irene brought so much warmth to ACUTA. I'll never forget the Palm Springs seminar, and how thrilled he was at meeting Gene Autry - he was soundly impressed! Throughout his presidency he encouraged comments from ACUTA members; he told me, "Don't forget to put my picture with my column in the newsletter - people recognize me and walk up to talk with me at meetings." He was absolutely dedicated to making ACUTA a professional organization, and he was perhaps the strongest supporter of the "Understanding Telecommunications" workshops. Bill was a really good friend. I for one will miss him. - Ruth Michalecki, ACUTA News Columnist, former Editor, and former ACUTA President, University of Nebraska

I have known Bill for many years, and worked closely with him on many projects. He always impressed me with his tirelessness and dedication, and with the way he was always thinking of ACUTA's best interests. He was fun, he was a nice guy, he was a respected colleague and a special friend. Our hearts go out to Bill's loving and lovely wife Irene, and to the Morris family, at their sad loss. They will miss Bill dearly, and so will we. — Mal Reader, ACUTA Program Chair and former ACUTA President, University of Calgary

ACUTA has lost a sincere friend, an unwavering leader and a staunch supporter of its programs and future growth. We will sorely miss Bill's presence and wisdom in the coming years. Appropriately, we should all take this time to rededicate our efforts to continue along the path that Bill pioneered during his year of presidency. -- Del Combs, Administrative Director



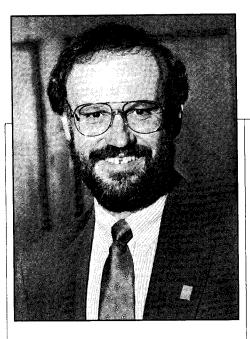
1988-89 ACUTA President Bill Morris as he officially welcomed ACUTA members to the annual conference in Philadelphia this past July.

"We all remember the Scottish castle in Banff, the beautiful mountains, the waterfall, the golf course, Lake Louise, the elk on the road. Then there were the tall ships of Norfolk and the bay with 1,000 sailboats outside our windows in San Diego. Fond memories." --Bill D. Morris, reminiscing about past

ACUTA conferences

### Bill's Inimitable BitNet Style

All of the officers use BitNet extensively in our ACUTA work, and everyone develops a style after a while. Bill's was cryptic and to the point and always in small letters—no capitals. During Bill's surgery he arranged for a nice person in his office to pass information back and forth to the other officers (no rest for old BDM!). After Bill was home from the hospital my wife and I sent him a get well card that said on the front "Your doctor made me send you this card." On the inside it said, "I wanted to send champagne and dancing girls." Bill's response was sent by his office, and it reached me the day after he died. In true BMD BitNet style it said, "champagne ok, girls no use on one leg." — Mike Grunder, ACUTA President, Yale University



### MESSAGE FROM THE PRESIDENT

### Mike Grunder, Yale University

Another extremely successful conference is behind us and another exciting year is underway. I mentioned in last month's ACUTA News my desire to share with you some of my ideas and goals for our association. So here goes.

Generally speaking, I want to see several things develop. First, an expanded membership is very desirable. Too many colleges and universities out there do not belong to ACUTA. To be a healthy, dynamic and progressive organization we need continued growth and expansion. Perhaps even more important than this, programming and member services must continue to develop and keep pace with the fast moving and constantly changing telecommunications business.

Additionally, expanded member participation and improved communications throughout the membership are extremely important to the vitality of the Association. The membership should not only participate, they should also have a good understanding of the organization and what it's all about; a sense of belonging, if you will.

The transition to a professionally staffed and run organization continues. The relationship of our professional staff to the volunteer Board of Directors will continue to develop and be refined in a positive sense. The entire Board must continue to work hard to improve the way our Association is managed.

Our membership goal for the year is to expand by 50 percent. It is an aggressive goal but I believe it can be accomplished. To do so, the responsibilities of the Regional Directors have been increased to include a more direct role for them on the Membership Committee. To assist them in these and other efforts, a state/province coordinator program is being created. This will give each Regional Director an assistant in each state and province, and this should greatly enhance communications and understanding of ACUTA's mission and goals.

The state and province coordinators will also assist the Regional Directors in developing input to the newsletter and will assist in the development and logistics associated with putting on ACUTA events. We will continue both our Seminar/Conference program format and our highly successful "Understanding Telecommunications" program. It is my hope that we will be able to develop a new program, similar to the introduction course, that will enhance and expand our educational offerings. (Your suggestions on a topic would be appreciated.) Additionally, regional meetings will be further developed where and when they are deemed to be of value.

The ACUTA News will expand through increased member contributions, vendor articles of interest and relevant, timely reprints from other industry publications. (You should all make a contribution to the newsletter this year! Don't wait to hear from your Regional Director.) We will also be looking to develop other, less regular publications. One idea being considered is the publication of monographs. That is, single subject articles of significance by ACUTA members -- articles that deserve a wide distribution but are too extensive for the newsletter.

Allofthis, of course, takes money, so paying close attention to "the books" will continue to be a top priority. Expenses must be closely monitored and controlled. The goal will be to stay financially healthy without undue increases in any of our fee structures. We must continue to provide a top rate product at a reasonable price.

It's an exciting year ahead for all of us and I'm extremely confident that with your support ACUTA will continue to expand and flourish.

### Administrative Director's Office

Del Combs, Administrative Director

The Philadelphia conference not only was the gathering point for ACUTA's annual "family reunion," but also the climax of another successful and eventful year of our growing organization. Through the leadership exerted by the late Bill Morris, our President for 1988-89, Board committees became much more active and played a major role in shaping the molds for ACUTA to build its future. Mike Grunder, our new president, has continued those actions and additionally has laid the groundwork for more active participation by all Board members.

It was also gratifying to hear of the interest that our membership had in discussing the association's business during the annual business meeting in Philadelphia. I believe that the general membership will see expanded opportunities to get involved with ACUTA in the future. This is healthy and necessary for ACUTA to be able to know, understand and serve its members' needs, which is our primary purpose of existence.

Through the support of the ACUTA Board we have expanded the staff in Lexington to assume more of the "staff type" responsibilities currently accomplished by the volunteer Board members and to offer more and better services to the members. This is not an overnight process and we will continue to look for ways to meet your needs in the most economical manner. I recently returned from the American Society of Association Executives conference in Boston. Their conference is much like ours with exhibits by the cities, hotels, suppliers, etc., and educational sessions on association matters. I hope to implement some of these "lessons learned" as one of the processes to serve you better.

A special thanks goes to the sponsors and exhibitors in Philadelphia. Their presence and support will continue to be of vital concern to ACUTA. In order for the



New ACUTA Membership Chair is Bonnie Johnson

ACUTA's new Membership Chair is Bonnie Johnson (shown above, on far left, at the conference in Philadelphia). An active ACUTA member for many years, Bonnie is Manager of Communications Operations at the University of Kentucky. As coordinator of ACUTA membership activities, she reports that "We're off and running with the membership drive. Remember the three Rs: Retain, Revitalize, and Recruit!" Bonnie steps into the position formerly held by Pat Paul of Cornell University, who is ACUTA's newly-elected Secretary.

managers and directors of the college and university telecommunications staffs to be effective in their position they need to stay abreast of technology, and that's the reason our exhibitors participate in our events. I received several constructive criticisms after Philadelphia concerning exhibit times and the responsibility of the exhibitors to the attendees. Some of the comments were from the exhibitors themselves on how they can assist/inform the attendees without intimidation.

I would also like to take this opportunity to welcome Bonnie Johnson, University of Kentucky, to the ACUTA Board as the new membership chair. She will undertake one of Mike Grunder's major goals this year - a 50 percent increase in the college and university membership. Let's all get behind her and ACUTA for another big year.



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Due to a computer text-entry error, portions of the following paragraph were inadvertently omitted in the "Philadelphia Board Meeting" article in the August *ACUTA News*. The paragraph is reprinted below in its entirety:

Because of the necessary emphasis on budget challenges, two major decisions were made which affect ACUTA members and finances. Throughout the past few years, the Board has seen and discussed indications that our dues are quite low in relationship to similar organizations. After extensive discussion, the Board approved increasing the annual dues for college and university members from \$75 to \$100 and increasing the dues for industry members from \$150 to \$200. The increase will go into effect in January, 1990.

#### **E WELCOME CONTRIBUTIONS...**



The deadline for articles and information submitted to *ACUTA News* is the 20th of the month prior to the month of publication. Please contribute to your monthly newsletter! Send material to Nanci Unger, ACUTA, Suite 1810, Lexington Financial Center, 250 West Main Street, Lexington, KY 40507.



### PARTY LINE

Ruth Michalecki, University of Nebraska

What a great time I had in Philadelphia at the annual ACUTA conference. Was good to see so many friends again—the ACUTA Conference is almost like a family reunion every year.

I am grateful to the ACUTA Board members for selecting me as the recipient of the Board of Directors Award. It specifically recognized me for the nine workshops conducted during the past year in which I was one of the presenters. Isn't it interesting that we often receive awards for doing something we enjoy so much, the privilege of doing it is an award all by itself. That is how I feel about the workshops.

Absolutely no one gets more out of them than I do, in terms of learning, professional growth and fun. It is a great experience to meet the participants and learn what they are doing on their campus. It has always been a special plus for me when someone comes up to me several months later at an ACUTA function and tells me how they tried something I suggested in the workshop and how successful they were. A prime example is Portia Goodman from Rockefeller University and her significant refunds from various vendors because she learned how to interpret and audit her bills during one of our workshops. In addition to hefty refunds, she has received professional recognition from her top management and her peers for her efforts.

I could tell like-stories about many of our ACUTA workshop graduates; they are enthusiastic about the program, participate in class and stay put for two and one-half long days. The workshops will be offered in several of the regions next year (dates and locations to be announced later).

In the August 14th issue of Communications Week is an article on the ISDN-Net test at the University of Arizona. The test involved researchers at the university transmitting huge volumes of cancer-research data over the university's telephone network using ISDN. The new network replaces the former "under-arm" network used by the researchers, in which the data files were loaded on a 30-megabyte hard disk, hand carried across the campus and rebooted onto another computer. The new system is expected to save researchers up to four hours a week in research time. In the demo of ISDN capabilities of the telephone system, diagnostic evaluations of cancerous tissue that were input via a high-density laser scanner were sent from one computer on the campus to another. The university plans to use the service from now on.

According to US West Communications, the telephone system will allow transmission of 40 million bytes of information over the phone lines each week. The system, part of the university's Telecommunications Improvement Program (TIP), will use a new AT&T 5ESS switch in a nearby central office to support a campus-wide fiber optic data network and an integrated voice/ data network using almost 15,000 lines. In the actual demo, the 5ESS switch in a downtown central office was used.

The new telephone system should be fully operational in February, 1990. It will link 84 of the university's 117 buildings on campus with fiber optic rings in a star topology. The entire campus cabling system will be replaced. TIPS will connect campus mainframes, minicomputers and nearly 4,000 personal computers to the fiber optic network, linking the university's staff and faculty and providing high-speed access to national databases and research facilities. According to the article, the phone system takes up about \$17 million of TIPS' \$25 million budget.

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I was reading about the high-impact wiring system being installed at Case Western University in Cleveland, Ohio. They are installing a customized "composite" cable, with copper wire, multimode optical fiber, single-mode optical fiber and coaxial cable throughout their campus, including within the buildings. The copper will provide voice transmission, the multimode fiber will carry data, and the coax will handle video. The single-mode fiber will remain unused until affordable technology is available that will let the school combine voice, data and video signals over the single-mode fiber.

The new wiring system is being deployed in the residence halls, where 1,800 wall plates will link students to voice, data and video services. Eventually they plan to equip the campus with 10,000 of the multimedia plates, at a cost (including some electronics for data networking) of approximately \$13 million or \$1,400 per multimedia wall plate.

At the University of Maryland, the new voice/data network will have both a voice jack and a data jack connected to the network by separate 4-pair unshielded twisted copper wires. Multimode fiber is being extended to the wall plates, but will not be used right away. The voice and data networks will run independently of one another over the universal wiring system.

ISDN plays a big role in networking at MIT. They have some 5,000 ISDN Basic Rate Interface lines carrying integrated signals over a standard telephone line.

As you might guess, universities are each doing something a little different than others, depending on their needs or perceived needs. Fully voice/data/video integrated campus networks are not happening as expected because a decision was made by some universities to not exploit the data networking capabilities of the voice switches. Part of the reluctance to put data through the voice switch has to do with "turf battles" and part is due to the need for greater data speeds than possible on the voice switch. One of our longtime ACUTA friends, Geoffrey Tritsch, is often quoted as saying, "You can't provide an integrated solution into a non-integrated



ongratulations to Ruth Michalecki! She received the ACUTA Board of Directors Award at the annual conference held in Philadelphia in July. Ruth was honored for her generous service to ACUTA, particularly the "Understanding Telecommunications" workshops she so ably conducts. Here's to Ruth for a much-deserved award!

management environment."

While I was reading and thinking about how different schools handle networking, voice communications and data communications, I started to think about the ones where voice/data integration has been highly successful and of the ones who have failed. I don't really know what makes the difference, but I do know in the schools where integration has been successful, the voice side of the house is recognized for the complex technology it is and the manager of voice systems is placed on an equal level with the manager of computing services.

Then I ran across an article that discussed the problems encountered by AT&T and IBM as they tried (and are still trying) to enter each other's domain. The article, titled "Harmonic Convergence?" and written by David Coursey, was in *MIS Week* (August 14 issue) in a column called Hyperspace. David asks, "Are computers and communications really destined to become one and the same?" He refers to an article in *Financial Times* of London which made a good argument that the so-called convergence of computers and telecommunications is a mirage—at least from the vendors' point of view.

It is easy to believe, the *Financial Times* noted, that because the underlying technologies are almost identical, the computer and telecommunications businesses are ready to merge into a single information industry, just as customers are merging their separate departments into a unified MIS structure (see why this caught my eye.) However, they went on to point out that AT&T, after a six-year partnership with Olivetti which was recently ended, was no closer to being a big league computer company than IBM Corporation was to being a major player in telecommunications.

"Indeed, apart from technology, the computer and telecommunications industries have remarkably little in common, having developed historically along quite separate paths," the paper said.

In addition to AT&T-Olivetti and IBM-RoIm, there are many others who decided they

could master both markets, only to falter. What about WANG-Intecom and Datapoint Corp? And I am sure there are many others.

David Coursey sides with those in the industry who say computers and telecommunications are still different enough to require an almost totally different mindset if the business is going to be successful. That doesn't mean, he says, that AT&T won't become an important computer company, but it does require dropping the phone company way of doing business in its computer unit. He says convergence is possible, both on the vendors' part and on the customer side; however, he cautions us to take a third and fourth look at those who veer too far from what made them successful and reminds us that the farther you are from the center, the hazier the focus seems to be. Interesting thoughts...

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If any of you have ever attended a workshop session of mine, you will recall my great interest in SS7 (signaling system 7), a signaling network overlaid on the backbone transmission network. It allows the carrier to set up a communications path between the caller and the called number, a forwarded number or a recipient's mailbox, before the voice or data communication signals ever pass through the first end office switch. SS7 also associates and executes subscriber features within the call transaction. However, my major interest in SS7 is strictly personal—it will provide true answer-back supervision on long-distance calls. This is a blessed event I am waiting for with open arms. Anyone dealing in student telephone services has to feel the same way.

In order to be effective, SS7 must be deployed end-to-end across the network. The major IEX carriers have nearly completed SS7 implementation throughout their networks and while that has added value and flexibility to their networks, the most significant changes will not be possible until the LECs deploy SS7 down to their end offices. They have barely begun the process, and it promises to be an expensive one. The LECs are reluctant to proceed further without some indication that this technology will generate new service revenues adequate to cover their costs.

SS7 will provide the LECs with the capabilities to take over some of the processing functions that have been performed for them by AT&T since divestiture (the time table is 1991 when they must assume these responsibilities), including such things as LIDB (calling card validation) and intra-LATA 800 services.

Incoming 800 service is growing at a rate of about 20 percent per year and the growth is likely to increase in the future. This service was targeted as the first test of whether SS7 would allow the LECs to play a major role in this expanding market and recoup their investment in SS7 implementation.

Victor Toth, Business Communications Review, writes: "If the LECs could receive a small portion of the cost of each 800 call, it would improve the economic feasibility of riskier SS7 applications. In view of the FCC's recent compromise on Docket 86-10, the economics of the BOC's SS7 deployment plans have been substantially disrupted, as has SS7's potential service and technical benefits for end users and other IXCs."

Read Victor Toth's article in the May issue of *BCR* to fully understand this important issue. Then, if you wish, write to the FCC and express your opinion on the subject.

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In the last issue of ACUTA News, I told you how busy we have been with new building openings, changing phone systems, moving existing phones, training our users on the phone system, implementing all kinds of enhanced voice processing applications, etc.; well, the fall semester is almost upon us, and we are still just as busy! As I was driving to work this morning (it happens to be Saturday), I was impressed with the long line of cars entering the Devaney Sports Center where commence-



toast to Mal Reader of the University of Calgary, who was honored at the annual ACUTA conference in Philadelphia. Mal received the Board of Directors Award in recognition of his service as ACUTA Program Chair in 1988-89. Mal says, "There is nothing to compare with being recognized for what you do -- whether you get paid for it or not!" Congratulations, Mal!

ment exercises were being conducted. A few blocks further on, I was equally impressed with the traffic jam created by the students moving into the residence halls and Greek houses, getting ready for the new school year.

Every year I ask myself, how did we manage to get everything done? (and I am asking myself the same question this year). However, I know the answer—an excellent and highly dedicated (although small) group of people working in telecommunications doing an outstanding job!

An article in *BCR*, May issue, led me to think about the people I know in telecom offices at universities and colleges across the country, and especially in my own office. The article covers personnel-related issues, salary increases, and performance evaluations. They referenced Peter Keen's book **Competing in Time**, where he discusses how difficult it is to find good telecom staff.

Peter Keen says it is hard to find good staff who combine virtually contradictory skills, a "hybrid-manager" so to speak. A person with strong technical skills, operational experience, proven management talent, and a knowledge and appreciation for the business we are in: not the telecom business, but the business of the institution. He wonders where do technical staff get the lateral development and exposure to learn the business of their organization; where do we find people with operational experience that is current, not obsolete; and how do we locate people with technical skills who even have a small desire or ability to become skilled managers? Few people combine this mix of skills/talent; they are at a premium in the marketplace. And while an organization can go out into the marketplace and bid for someone with technical talent, organizational experience and management savvy has to be built, not bought.

That is our secret—we grow our own outstanding staff, and have for years. For the most part, we hire them as student workers and train them in our business while they go to school. We have been fortunate to keep most of them from the freshman year through graduation, and manage to convince many of them to get advanced degrees. As anyone knows, it is very hard to add full-time staff in a university, even if you can justify it seven ways from Sunday. We are strong advocates of providing talented students with an opportunity to learn about and work in telecommunications.

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Once again, it was fun to see so many ACUTA friends in Philadelphia. Our association gets bigger and more professional every year. The staff from Lexington is to be congratulated for another successful conference. It gets easier every year to register, find the sessions, enjoy the improved and larger exhibit areas, etc. None of this happens by accident—it takes work and planning by the ACUTA business staff and the board members.

See you next month!



• Winter Seminar in Scottsdale, Arizona January 14-17, 1990 Topic: Telecommunication Project Planning, Implementation and Impacts

#### Spring Seminar in Las Vegas

April 8-11, 1990 Topic: Voice, Data and Video Networks

 Summer Conference in Orlando, Florida July 15-19, 1990
 Sessions on Management Topics, Regulatory Issues, Professional Growth, Voice, Data, and Video Subjects and more

• Fall Seminar in Portland, Oregon October 14-17, 1990 Topic: Case Studies on Telecommunications Management Information Systems



Donna Powell, Region 8 Director California State University

With 45,000 people on campus, the University of Southern California in Los Angeles functions like a small city during a busy day. Like any other city, it must provide for the safety of its residents.

As a major research institution, USC knows the value of technology and has utilized telecommunications technology to enhance its internal security operations.

Recently USC installed 100 tamper-proof security telephones from Ameriphone throughout the grounds and parking lots on the campus. The phones are on a Centrex system from Pacific Bell with Uniform Call Distribution and Forwarded Call Information. In an emergency situation, the caller strikes the bar on the phone and a two-way speaker is activated. No dialing is needed, and no speaker can be torn off.

The emergency condition is not only reported by the caller, but also transmitted to a personal computer at the campus Security Department. A printer associated with the PC prints out the reporting phone's location. Whether the caller can verbalize the emergency or not, Security can hear the problem and immediately determine the location. Security can then quickly dispatch the appropriate emergency assistance. The speaker on the phone allows Security to hear for up to 75 feet around the phone.

Thanks to this innovative security system, the USC campus is now an even safer place for students, faculty, and administrators.



n ACUTA event in sun-drenched Scottsdale, Arizona—perfect for January! Speaker Phillip Beidelman will discuss "Telecommunications Planning, Implementation and Impacts" January 14-17, 1990. A concurrent "Understanding Telecommunications" workshop is planned as well. A brochure is being prepared — watch your mailbox, or call Lisa McLemore at ACUTA Headquarters at (606) 252-2882 for more information.

### Protect Your Call Records

John Meickle, Yale University

The issue of protecting and preserving long distance call records for bill back is a serious one. Loss of the ability to charge back calls to users may cause budget problems for the communications department of a company or it may have fatal financial effect on a company that resells service. A no-loss scenario is healthy for your career. Following are some of the precautions that we take at Yale to insure the survival of our call records. Some of the precautions are common sense and some are reactions to real loss of records and real dollar losses.

Long Distance Calling at Yale — The long distance network at Yale aggregates traffic from 16,000 telephone stations in New Haven, Connecticut, and passes them through a network that is a mixture of FX lines, MCI WATS and Prism, and DDD. The University's sole "product," education and information, relies heavily on the communication of ideas, so the network works overtime in facilitating that goal.

Yale currently processes 1.8 million minutes of network traffic per month. If 0+, 0and 800 calling times are added, a total of more than 2.4 million minutes of long distance calling is processed. About 400,000 calls are charged back per month. Because of student traffic and our rate schedule, Yale's busy hour is 11:00 p.m.

To protect ourselves and our operation, we've done everything we can think of to protect the toll processing system and PBXs. While your system may not be the same size as Yale's, you may find ideas that you can modify for use in your operation and help you "cover your assets." Following is an outline of the actions that we've taken.

**Physical Security** — The toll system and PBXs have a high degree of physical security, including locks and burglar alarms. We have also extended that security into environmental considerations.

**Power** — We use a primary and secondary AC power feed and an Uninterruptable Power Supply (UPS) system that draws DC power off the batteries that were installed with the PBX. Double check your maintenance and repair procedures on your power systems and make sure that any electrical breakers are clearly marked to prevent accidental shutdown.

Air Conditioning — Air conditioning is usually a vital system in any PBX installation. Being mechanical, it is usually a lot less reliable than the PBX. To compensate we have mounted room temperature alarms. Above or below a set temperature range, an alarm is sent to our 24-houra-day operator staff. If you do not have a 24-hour-a-day staff, you may wish to use the services of a local security firm who will monitor the alarm. If you have a burglar alarm that is equipped with zones, your alarm vendor can easily modify the alarm to support a temperature alarm, a water sensor or a smoke detector.

**Procedural Security** — An ASTRA or other data collection device is a computer, and procedural checks are well known but often forgotten in the comfort of day-today work. Here is a quick reminder of several points:

• Sign In: Even if only one person regularly works on the ASTRA, have all people who work on the system (such as maintenance people) log in and state what they are doing. If something goes wrong, it may save precious time. The key is not to find who is to blame, but to find what went wrong, when it went wrong and how to fix it.

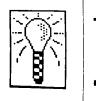
• Training: Everybody makes mistakes, but novices are supposed to make more mistakes than experts. Protect yourself by thoroughly training all who use the system.

• Disk Back-up: Ever hear a disk crash? It sounds a bit like a coffee grinder and is quickly followed by a sinking feeling in the pit of your stomach, as you realize there is a lot of data you will never see again. That is, unless you back up your disk(s). In a transaction environment like toll processing, a daily back-up is recommended.

• Archiving: It is a good idea to keep several months of back toll records. In a charge-back environment, which may use various internal accounting systems, a billing problem may not be recognized in your budget for several months. Having the tape handy permits the month in question to be reconstructed.

• Benchmarks: Usually, the volume and duration of long distance calling follows a predictable pattern for your company. By tracking traffic over several months you will begin to see consistencies. Select and write down various figures from your toll bills, toll system and charge-back or budget system. If you see an inconsistency it may be an early warning sign that something is wrong. It will allow you to react sooner and maybe catch a problem that might go undetected for several weeks.

• Documentation: Everyone hates to do it, but it is a godsend when you need it. At Yale, all managers and technicians have access to a painstakingly developed "On Call" book. It includes tips on diagnosing problems and, more importantly, who to call to get repairs started. It also includes an escalation list in case repairs do not get



ere's a bright idea...make your plans now to attend the ACUTA spring seminar in exciting Las Vegas! The seminar, titled "Voice, Data and Video Networks," will feature speaker Lynn DeNoia of Codex Corp. Mark April 8-11, 1990, on your

calendar and prepare for a learning experience (and lots of fun)!

started. While we work hard at documentation, we often find each problem has a unique element. To help others on the staff understand and learn, each person responding to a problem writes up a simple review of the problem and how it was solved. This helps the next person and provides a measure of continuity to your operation.

#### Data Security at Yale

• Second System: Yale's ASTRA 370 is backed up by an ASTRA 215 running in parallel. Each system is connected to separate RS232 ports on the NEAX 2400. If the 370 goes out of service, the 215 will capture call records for up to three days, When the 370 resumes operation, the call records are restored with floppy disks.

 Third System: In the very slim possibility that both ASTRAs are out of service, our toll system vendor (Tel Plus in Yale's case) can provide remote polling and will restore the call records after the system is operating again.

• RS232 Line Monitors: Each serial line has a monitor, called a SMDS Dispatcher. that looks for activity on the RS232 link. If it fails to see traffic after a specified period of time, it dials into a remote printer in our Console Room, where our operators have a set of instructions on how to respond. The monitors can be programmed to compensate for network traffic variations by time of day, day of week, and holiday. The length of time that the system will wait between messages before triggering an alarm can be set from minutes to hours.

 Buffering: The NEAX 2400 is capable of buffering call records. In fact, each of the serial ports dedicated to SMDR contains a buffer. In case the serial line is lost or if it must be deactivated for maintenance purposes, the switch will store calls. When the line is reactivated, it will ship the call records to the ASTRA. If the buffer reaches 80% capacity, it will trigger a switch alarm.

Of Interest to ASTRA Users: If the switch is downloading stored calls to the ASTRA, it is possible to "overload" the call record buffer in the ASTRA. Due to a quirk in the system, the ASTRA discards those calls. In this condition IT IS POSSIBLE TO LOSE CALL RECORDS. To minimize the effect of the quirk, the Yale staff, our switch vendor (SNET Systems) and our toll system vendor (Siemens Tel Plus) have implemented the following changes at Yale:

• No On-Line Call Costing: Changing call pricing to an end-of-day routine permits the ASTRA to process the calls faster and not risk filling the buffer.

 Lower the Line Speed: Because of the proximity of the switches to the ASTRA, we ran the RS232 links at 9600 bps. To give the ASTRA more time to digest the call records, we have lowered the line speed to 1200 bps. The Northern Telecom SL-1 that serves the medical center and hospital does not buffer calls, so an outboard buffering device is located next to the switch.

The Optical Alarm: Unfortunately, it took a hardware failure to bring it to our attention, but the ASTRA 370 does not have (nor do most other computers) a contact open/ contact close alarm output. We came in after a holiday weekend to find that the ASTRA was in alarm. Call records were being forwarded by the switch, and were being lost. (This was before we had the ASTRA 215 running in parallel - another lesson learned.) We lost call records and we lost revenue. Fortunately, the loss was slight because most of the students were away on holiday. If we could have scheduled a disaster, this would have been the time to schedule it.

That event brought out the need to

remotely alarm the ASTRA. We are fortunate enough to have the resources of the Yale Electronic Services Shop available.

Based on requirements we in Communications developed, the Electronics shop designed a great device. It has an optical sensor that monitors the status LED on the front of the ASTRA. If it senses light from the LED, it will trigger a contact open or close (our choice). In Yale Communication's penchant for redundancy, the optical alarm has a number of built-in features that make it unique. It has two channels for hot standby and each channel can be separately tested by pushing a test button. If both channels fail, it will automatically submit an alarm. The optical sensor can also be modified or replaced so it can be configured to monitor other items that may not have a contact-type alarm. We are presently considering several other applications for the device.

#### People - The Best Security

As much as you try to protect yourself from problems, it is guaranteed that you will experience them. The key to toll processing or even reliable operations of a PBX is the ability to have conscientious people on your staff and reliable vendors for your equipment. If you experience a problem, you need to catch it early and solve it quickly. Reliable staff and vendors will help.

If you have questions about Yale's toll processing system, please contact either Jeff Euben or John Meickle at (203) 432-2001 or via BitNet at JHEUBEN@YALEVM or MEICKLE@YALEVM. If you have questions about the optical alarm, please contact Walter Lund of The Center for Electronic Services at (203) 432-3350.

Editor's Note: Mike Grunder, ACUTA President and Yale Telecommunications Director, gave a presentation on "Life After Cutover: On-Call Procedures and Disaster Recovery" at the July 1989 ACUTA conference in Philadelphia.



## IMPORTANT NUMBERS FOR ACUTA HEADQUARTERS

Telephone: (606) 252-2882 • Fax: (606) 252-5673

(Keep 'em handy!)

### San Joaquin Delta College Goes to Touch Tone Registration

Donna Powell, Region 8 Director California State University

In July, 1987, San Joaquin Delta College initiated a project to determine the feasibility of installing a Touch Tone Registration System to serve as an additional method for the students to register for their classes. The goal of the project was to enhance the existing registration system, making it more convenient to the staff and the students.

Their Touch Tone Registration Network, or STAR (Student Telephone Assisted Registration), went online in 1988 during summer registration. In spite of minor glitches in the Voice Response system, on-campus PBX problems and student troubles using the new system, there was an initial 24 percent usage by the student population.

In the spring of 1989, after extensive testing and preparation, the PBX was still having major problems handling the expected increase in load. Then a 20-line Centrex was implemented.

After the Centrex installation, "Our Touch Tone Registration network hasn't missed a beat," said Lee Belarmino, Director of Computer Services. Spring registration showed an increase in use from 24 to 49 percent of the student body. San Joaquin Delta College is strongly behind Centrex as a foundation for their Touch Tone Registration Network. Reliability, compatibility, and prompt service are only a few of the benefits derived from this partnership.

### Are you an ACUTA member? If not, the time to join is now!

Join ACUTA and become part of a growing network of more than 1,000 telecommunications managers! Your ACUTA membership allows you to:

- Receive the monthly ACUTA News newsletter
  - Receive the annual Membership Roster
- Receive advance information on upcoming ACUTA events

 Receive a discount on registration fees for ACUTA conferences and seminars, where you will enjoy diverse professional sessions and exciting social events

- Attend seminars and workshops featuring informative presentations on current issues in telecommunications
- Share information with telecommunications administrators like yourself

Memberships are available to institutional and industry telecommunications administrators.

For a membership application, contact ACUTA at (606) 252-2882 (phone) or (606) 252-5673 (fax).

## Welcome Aboard, Joseph Mantione!

ACUTA extends a warm welcome to new Region 1 Director Joseph Mantione, Business Manager at the State University of New York at Buffalo. Joseph's region consists of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. He takes over for Jim Shea of Boston University, who resigned earlier this year. If you'd like to welcome Joseph personally, his telephone number is (716) 636-2751.