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Northwest Missouri State Shares
Long Distance Resources with Students

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(Region 4)

The decision to share long distance resources with the students at Northwest Missouri State University was an easy one to make. Sharing long distance resources was the last segment of the Electronic Campus Project started a few years ago.

History of the Project. Following is a short description of the planning and implementation involved in wiring 13 residence halls and 14 academic/administrative buildings. The results of this effort were 3,200 data workstations and 2,300 voice stations.

Phase I: In fall 1986 a new underground conduit system was installed, connecting all of the academic/administrative buildings and residence halls to two locations on campus. The two locations were the Telecommunication Office, which is the D-mark for all voice communication cables on campus, and the Computer Center, the location of the data PBX switch and the mainframe. This project took approximately 40 days at a cost of $147,000.

Phase II: In spring 1987 the students endured inconvenience while the residence halls were being wired. This project took eight weeks at a cost of $205,000.

Phase III: With all residence halls and most academic/administrative buildings wired and a duct system connecting them, we were able to proceed with installation of our data network using 28-pair 22-gauge D-shielded cable. We built a backbone network across campus, linking all

(continued on page 2)
Our goal is to provide the best possible service to students at a low cost. After our first year of sharing long distance with the students, we will have a better idea of future enhancements. This has been fun, educational, profitable.—David Sherry

NW Missouri State (from page 1)
academic/administrative buildings and residence halls to the data PBX switches in the Computer Center. After the data multiplexers were in place and working, 1,400 terminals were installed in the residence halls.

Upon arriving at the university in fall 1987, each student found something new in his/her room: the ability to access computing services which prior to that were found only in labs around campus. Now a new world offering everything from electronic mail to an on-line encyclopedia was at their fingertips. The students did not have phones in their rooms, however. Filling this need was our next step.

Phase IV: The installation of an outside plant for voice took place in fall 1987. In a matter of weeks $60,000 worth of cable was pulled, spliced and protected.

All the pieces were in place to provide service to the students, but the PBX being used was not large enough to serve both the student and academic/administrative sectors. The university made arrangements with the local vendor to provide voluntary service to students in residence halls. This service was used for two years.

In fall 1988 our local central office cut-over to a DMS-100 and our local vendor made a Centrex proposal. This started the roller coaster ride of PBX, Centrex, PBX, Centrex. At times it seemed like the decision changed daily. In January 1989 the final decision was made to accept the Centrex proposal, and on May 22 the university made the conversion to Advanced Business Connections Service (ABC), a special offering of Centrex.

Planning for student services, billing, implementation, credit limits, collections, staffing, etc. had begun in early January. From the start, billing was the most important issue. We hoped a feature called Station Specific Authorization Code would eliminate the possibility of fraud. A student is given a unique seven-digit authorization code that allows network access only from the directory number assigned to his/her room.

The ability to receive (near real-time) SMDR from the DMS-100 was a major factor in the development of the billing procedures for student sharing. We hoped to capture this SMDR in the PC-based billing program already in place and used with the PBX system. After months of runaround from the vendor, it became apparent that the cost to convert to this billing system was too expensive. Adding insult to injury, at this point our local vendor informed us that an additional piece of equipment—a DNC-50—was needed to provide this all-important (near real-time) SMDR. Not provisioned in the existing contract, the use of this equipment would be provided at additional expense.

On May 22 we cut the academic/administrative service to the first of two groups of partitioned Centrex. The cut-over as a whole went extremely well, with the conversion of approximately 640 lines of PBX dial tone to Centrex dial tone in a matter of minutes. After a few days of feature and network access problems and education of the end-user, the cutover to Centrex was a success.

Our vendor gave us an installation date of June 26 for the DNC-50 to be up and transmitting SMDR. By mid-July we were still unable to write the billing program due to the inability to receive a clean bit-stream from the DNC-50. The resolution of the problem was found in the setup of the modems provided by the local vendor. With less than thirty days until the start of the fall semester, we finally began writing the billing software.

The next step, providing dial tone to 1,500 rooms in the residence halls, was delayed by equal access being provided through our central office and...
the installation of a new cable from Northwest to the central office. Access to the 1,500 lines needed was not available until the last week of July.

The task of cross-connecting and testing 1,500 extensions made for some long days. The loading and testing of the 3,000 randomly generated authorization codes was delayed due to a software load that could not take place until August 9, just four days before students would be arriving on campus.

After months of careful planning we arrived at an implementation procedure we hoped would gain high subscribership with small uncentralized lines. During the residence hall check in procedure students were given the opportunity to procure one or both services (telephone and/or computer access) at no charge. This procedure allowed us to sign up 98.5 percent of the residence hall population with very few problems. Approximately 1,200 long distance calls were placed the first night.

Although there are some restrictions, we at Northwest feel we give the student a little more attention and a few more benefits than they may receive from a local telephone company. Each student receives a credit limit of $100 per billing cycle. If a student exceeds this enforced limit, his/her long distance services are disconnected until payment of $50 is received. Students at Northwest have the ability to query details of their bills on a daily basis from the terminals in their rooms. A feature that students will have in the future is the ability to cost a call before the call is actually made.

The students cannot make or accept collect calls or make credit card calls from their rooms. This type of service is still available, but only from the payphones in the residence hall lobbies. This restriction was justified by the low price charged to students for local service and the discounted rates for long distance calls. Each student pays only $12.50 per semester for local service and receives network access at no charge. Also, the student is charged only 90 percent of DDD on network calls. We rely upon the returns from the student long distance services to supplement the program, because the cost of the system exceeds the $12.50 per student charged by the Housing Office.

Our goal is to provide the best possible service to students at a low cost. Along with the administration, am enthusiastic about the potential of this kind of service. After our first year of sharing long distance with the students we will have a better idea of future enhancements, policies, procedures and other considerations.

This has been a fun, profitable and educational endeavor for Northwest Missouri State University. It is strongly recommended that any institution considering this type of service proceed boldly, but not carelessly. Although it takes time and money, with careful planning the project can be a success.
ACUTA's Monograph Program: Your Chance to Be Published!

Do you have special knowledge of a telecommunications topic that you would like to share with the ACUTA membership? If so, ACUTA wants to hear from you! We will be publishing selected monographs for distribution to our members, to help share telecommunication knowledge and experiences. Our first monograph was titled "Major Project Management: The Yale Telecommunications Project" written by Michael Grunert, Telecommunications Director at Yale. Following is information on how you can participate.

EDITORIAL ADVISORY BOARD:
Consists of the Publications Editor, Administrative Director, President, Secretary, the Regional Director from the author's region and others as deemed appropriate. This group will select works to be published with these guidelines.

ELIGIBILITY: The Monograph Program is open to all paid ACUTA members who wish to participate. Monographs, however, will be "product neutral," i.e. they cannot be advertisements for specific products or give the impression of recommending or supporting any product. The Editorial Advisory Board will hold final authority on this issue.

TOPICS: Each monograph will focus on a telecommunications topic deemed by the Editorial Advisory Board to be of general interest and usefulness to the membership. Ultimately a wide variety of topics and titles is desirable, so caution will be exercised in publishing repeat topics.

LENGTH: Approximately 5,000 to 10,000 words (approximately 8 to 17 pages based on approximately 600 words per page). More than 25 pages is discouraged.

QUALITY: All submissions must be "readable" and deemed high in quality of content. The Editorial Advisory Board will make decisions on quality and related issues.

AUTHORIZATION: If an author arranges with ACUTA to write a monograph, that authorization to proceed does not guarantee that ACUTA will ultimately publish the work. ACUTA, not the author, has sole authority to publish or not. The author has the right to withdraw prior to printing. ACUTA has final editing authority, although the final edited version will be reviewed by the author prior to printing.

TIMING: Selected items will be published and distributed at ACUTA's discretion and schedule. A reasonable submission deadline should be established with the author by the Publications Editor in conjunction with the Administrative Director so adequate scheduling can be ensured.

FEES: $100 honorarium to the author upon publication. This is the one and only payment to the author (or authors). ACUTA has sole authority to set prices for the finished document and receives any other income that may be generated as a result of sales. Cost for additional copies is $5 for ACUTA members, $10 for non-members. Changes to this fee structure are subject to Board approval.

DISTRIBUTION: One copy to all paid members sent via bulk rate, postage paid by ACUTA. Others will be sold at ACUTA events, and by mail order at advertised cost plus $3 for handling and postage. The author receives up to 10 free copies.

OWNERSHIP: Monographs will be copyrighted and copies allowed only with the written consent of ACUTA and the author. Ownership of the work stays with the author and he/she can do with it as they please after publication. This does not give the author the right to stop distribution by ACUTA after the work has been printed.

LOGISTICS: All planning, coordination, negotiations, printing and distribution will be the responsibility of the ACUTA Lexington Office and the Administrative Director.

Interested? If so, submit your monograph to ACUTA, Suite 1810, Lexington Financial Center, Lexington, KY 40507.
MESSAGE FROM THE PRESIDENT

Mike Grunder, Yale University

Adventures in traveling. I'm supposed to be on my way to Orlando for a site visit to firm up all the details for our annual conference. As luck would again have it, New Haven is fogged in and I'm about to be rerouted through Hartford on a different, later flight. It's interesting to stand in a slow moving line, watching how people respond to the stress that creeps over them while they wait to learn their travel fate. Nervous friendliness, agitation, muffled anger, outrage. "WHAT'S THAT IDIOT DOING UP THERE, MORTGAGING HIS BLEEPING HOUSE?"

Last month I cast a few negative comments on Yale's basketball prowess and modest (and slightly unsavory) athletic facilities. Well, I'm here now with my hat in my hand, a much changed man. Shortly after writing those discouraging words I had the opportunity to attend a Yale basketball game. You know what? The Amphitheatre doesn't smell like a gym anymore. And these guys played some kind of basketball. Exciting? Whew. I went back for more the next night. Fifteen-hundred people in the Amphitheatre sound like 30,000 anywhere else. And Yale capped off its best season in 40 years against Harvard that second night. Good stuff, but no NCAA or NIT. But still real good stuff.

Speaking of good stuff, the Orlando conference is shaping up nicely. Mal Reader, our Program Chair, and a few of his friends are doing their usual first-rate job. They're finalizing the selection of the keynote speaker and have a couple of other teaching slots to fill. Then they'll be done. It looks as though we'll end up with one of the broadest and all-encompassing programs in our history. The brochure and registration information will be at the printer shortly, and in your hands soon after. Keep an eye out for it and register early.

Given the program, the location and the hotel facilities, this is stacking up as our most popular event ever.

As I write, our Understanding Telecommunications workshop is in progress at Millersville, PA. Tony Mordosky of Millersville University is our host, and Ruth Michalecki (University of Nebraska) and Joseph Mantione (Region One Director, University of Buffalo) are the instructors. At last count we had more than 30 people registered for the event.

Keep in mind that we have other Understanding Telecommunications workshops scheduled for this spring in Michigan, North Carolina and Ontario. This is a great and inexpensive way to get some first-rate telecommunications training if you are now in the business or have some new people on your staff. For more information, simply call the Lexington Office (606/252-2882) or send a Bitnet message (ACUTA@UKCC).

On a less positive note, Don Hoover has submitted his resignation as Director of Region Two. Don worked extremely hard for ACUTA and his good efforts over the last several years are greatly appreciated by all of us.

By the time you read this, the Las Vegas seminar will either be in progress or will be history. It looks as though I may be seeing as many as 200 of you there. That's good news, indeed. For those who don't make it, I'll fill you in next time on what you missed.
Del Combs, 
Administrative 
Director

News from ACUTA Headquarters

I am pleased to announce in this issue two new members of the ACUTA staff.

Eleanor Smith became our first Business Manager on April 1 (No it’s not an April Fool’s joke), filling a new position in the Lexington office. She will be responsible for all the business matters currently attended to by the Treasurer and Finance Chair on the ACUTA board as well as the financial duties currently shared by several people on the Lexington office staff.

This position will provide stability and give a central focus to our budget and financial operations.

Eleanor’s previous position was financial manager of the Kentucky Library Network Association.

Additionally, we have a new publications editor.

Nanci Unger left ACUTA for another position last week. We wish her the best of luck and appreciate her efforts during the past year.

We are fortunate to have Bill Robinson join us on April 16 as publications editor. Prior to joining ACUTA, Bill was director of publications at Berea College in Berea, Ky., about 40 miles from Lexington. At Berea, Bill was editor of the college’s alumni magazine and newsletters.

ORLANDO CONFERENCE
For the past several years ACUTA members have had the privilege of bringing spouses to conference social activities, such as dinners, banquets, receptions, etc., at no extra cost. Having spouses accompany members to conferences is good for the morale of attendees, contributing much to the positive atmosphere and success of our conferences. For that reason, the board felt justified in covering the extra expense as an incentive for members to bring spouses along.

This policy was successful. Too successful, I’m afraid. As long as only a small number of spouses took advantage of this policy, conference budgets, supported by members’ fees and vendor support, could meet the cost. But as more and more spouses have attended, the strain on conference budgets has become just too great.

Beginning with the Orlando Conference in July, the board has decided, however reluctantly, that each spouse/guest attending an evening social function will have to have his or her own ticket. The Orlando pre-conference brochure that you will receive in a few weeks will have cost and registration information.

As anyone who has attended an ACUTA conference knows, these gatherings are an occasion for a lot of fun in addition to being a forum for learning about advances in the industry, exchanging ideas and sharing professional experiences.

We do our best to select conference locations and facilities that are most conducive to all our objectives. Even if ACUTA cannot cover costs for spouses, I think conference sites are enjoyable enough that spouses will want to come along and I hope members will plan to bring spouses with them.

ACUTA CALENDAR OF EVENTS

UNDERSTANDING TELECOMMUNICATIONS REGIONAL WORKSHOPS

- REGION 5 WORKSHOP • IN KALAMAZOO, MI • APRIL 30 - MAY 2, 1990
  HOTEL: Holiday Inn
  HOST: Western Michigan University

- REGION 6 WORKSHOP • IN GUELPH, ONTARIO, CANADA "MAY 14-16, 1990
  HOTEL: College Inn
  HOST: University of Guelph

- REGION 3 WORKSHOP • IN GREENSBORO, NC • JUNE 4-6, 1990
  HOTEL: Holiday Inn - Four Seasons Town Center
  HOSTS: Duke University and Wake Forest University

SEMINARS AND CONFERENCES

- SUMMER CONFERENCE • IN ORLANDO, FL • JULY 15-19, 1990
  HOTEL: Buena Vista Palace
  TOPICS: Management, Regulatory Issues, Professional Growth, Voice, Data and Video
  SPEAKERS: Variety of professionals, including consultants, managers, lawyers, ACUTA members

- FALL SEMINAR • IN PORTLAND, OR • OCTOBER 14-17, 1990
  HOTEL: Red Lion Inn Lloyd Center
  TOPIC: Case Studies on Telecommunications Management Information Systems
  SPEAKER: To be announced
PARTY LINE

Ruth Michalecki
Director of Telecommunications
University of Nebraska

We first entered the Voice Mail business about seven or eight years ago. We had purchased a system called EVXTRA from a company called CommTerm. It was capable of handling around 5,000 mailboxes, and for the first few years it was satisfactory. Then it started developing a few small problems which quickly developed into major ones. The system ended up being "down" more than it was "up" and our customers started leaving the system faster than you could count. However, even with the bad experience, we could see that voice mail, voice messaging and enhanced call processing had a definite place in our operation—-we had to find a system that provided all the features we wanted and one that had a reputation for reliability.

When we moved to the Northern Telecom DMS-100 Centrex Switch in October 1987, we started looking at voice processing systems. We made our selection (Octel's Aspen Maxum with SMDI) and went to work wooing back our former customer base (not an easy task). Our marketing efforts and persistence paid off, however, and we now have a large number of users on the system and it is growing daily.

Although the voice mail function is a high-usage operation, the one that excites us most is the enhanced call processing capabilities of the system. We have found so many applications for this technology, we can't keep up with the design requirements so we can implement them. Let me share some of the many uses we have found for enhanced call processing.

As most of you know, we have a large student telephone services operation, and one of the problems we had was how do we keep our ever-changing student population aware of all the features and opportunities available to them on the phone system. For some unknown reason, written materials either disappear from the student rooms, or they must be unreadable, because our operators were always fielding calls from the students asking "how to" questions on the phone service.

My assistant director of telecom, Dennis Fouty, suggested we put together a "Student Telecommunications Tutorial" in which we would briefly describe the various services, phone features, long distance services (billing schedule, dialing tips, etc.), emergency assistance and repair services. Access to this information, available only from the student side of the switch would be #88. At anytime during the brief review of the services, the student can touch "0" and reach the individual responsible for that part of the operation. For instance, during the review of long distance services, touching "0" would connect the student to the staff handling contracts, billing and collections for student long distance. Students are really using this service. Our statistics show that more than 2,500 calls were made to #88 during a one-month period, with most of them listening to feature access and to billing schedules. It has certainly made a difference in the volume of calls handled by our operators. We made it easy for the student to use the system by placing a sticker on students' phones that includes emergency numbers plus the tutorial number #88.

Another application that has made quite an impression on the callers involved is the Reference Desk at our main library. For years we had a telephone bottleneck at this desk, and it was creating a negative service image for the library. Because the desk was staffed with professional librarians, they had inadequate staff to handle both the telephone inquiries and the walk-up traffic at the same time. The walk-up traffic received priority over the telephone. They had invested in an automatic answering unit that simply advised the caller that they were too busy to handle the call and suggested a call back later—not very satisfactory to the caller.

We did a traffic study on their call volume and actually monitored their calls for several days. It wasn't too surprising to discover that 75 percent of all calls answered by the librarian asked the same question: "What are the hours of the library?" Another 10 percent or so wanted information on overdue book policy and a further significant number of callers had reached the wrong desk simply because they misunderstood what services were available from the Reference Desk.

With all that information, we designed an enhanced call processing function to serve the Reference Desk. Now callers receive a pleasant "Thank you for calling the Reference Desk. The hours of the library are __". If you desire information regarding the overdue book fine, please touch "1." If you would like to know more about the services provided by the Reference Desk, please touch "2." If you wish to speak to the Reference Desk librarian, please touch "0."

The system answered more than 2,800 calls during February, 1990. Of these, 1,500 listened to the hours and hung up. The overdue book policy fielded about 350 of the calls. What caught us by surprise was the number of callers who listened to the short tutorial about the services of the Reference Desk. The Reference Desk librarian actually handled fewer than 200 calls during this period. Would you agree that we have dramatically improved the productivity of the librarian and have provided immediate answers to callers, thus greatly improving the service image of this operation?

We are using this technology to handle transcript requests. By combining it with the order-system software, we can make certain the caller leaves all the Information required to order a transcript. The department maintains we have literally given them the services of a full-time clerical posi-
The real excitement over voice processing is the current interest in integrating voice mail technology with electronic mail and facsimile. If you do your homework carefully, installing a voice processing system at your institution will make you a real winner!

Calling, not someone else. This is especially true if your system identifies the voice mail box owner by recording their name. The caller hears "Tom Jones" in Tom's voice, and then a strange voice advising them to leave a message at the sound of the tone. Not satisfactory and certainly not very considerate of the caller.

Our major use of the system, however, is the message processing capability. Thanks to our very innovative Dennis Fouty, this entire department uses messaging on a regular basis. We disseminate all types of information to the staff, and every staff member does the same. We are always aware of what is going on in each others' areas, thanks to this communications tool. If something happens that we should all know about, we no longer need to call a meeting or write a memo, we simply use the messaging process. Hardly a day goes by when the message-waiting light fails to signal a message, and it is usually from someone within the department sharing a bit of information. Since we are a Centrex customer of the local telephone company, we are seeing more and more that we have a need to include a few of the key players working for the telephone company in our internal messaging process. We will be asking permission to assign a mailbox to the telephone company's plant foreman and the accounting clerk responsible for our account. We believe it will vastly improve communications and avoid all the telephone tag games we play today.

For fellow ACUTA members looking at implementing this voice technology at your institution, I would encourage you to understand the benefits for your school; develop a planning partnership with the major players at your school, for you will need their support; develop a training program for using this technology that does more than address the "how-to" access of the system, but places a real focus on the responsibility of the incoming caller, to provide service to the caller. Be sure to tailor the solutions to fit each unique application — this is not your "one size fits all" technology. The real excitement over voice processing is the current interest in integrating voice mail technology with electronic mail and with facsimile.

If you do your homework carefully, installing a voice processing system at your institution will make you a real winner!

Next month, I will try to cover some of the interesting things all of you are doing around the country. I have been moving around lately, doing workshops for ACUTA and for NACAS. It is always fun to get together with fellow telecom managers working in the same environment — and having the same problems. My recent travels have taken me to Washington, D.C.; Los Angeles; Springfield, MA; Denver, CO; and Milwaukuee, PA. I was fortunate to have Mark Miller from Andy Pearson's University of California-San Francisco staff attend the Los Angeles workshop. Mark took me on a tour of the LA area, including the beach where I watched the surfers have a ball. Thanks, Mark — it was great!

See you next month!
THE BUENA VISTA PALACE is the location for ACUTA's Orlando conference. This elegant resort offers nine restaurants and lounges, three swimming pools, golf, tennis, 24-hour room service, and complimentary transportation to the Magic Kingdom, EPCOT Center and Walt Disney World Shopping Village. Watch your mailbox for the pre-conference brochure!

ORLANDO
SUMMER FUN TO COME!

The famous EPCOT Center is just one of the many attractions in beautiful Orlando.

Lovable Pluto hugs a friend at Walt Disney World.

Disney's World Showcase offers exploration of 11 countries and their cultures.

Dolphins at play at Orlando's Sea World.
To Lan or Not To Lan: Local Area Networks, Part 2

This is the final portion of a two-part article titled "To LAN or Not To LAN" which ran in last month's issue of ACUTA News. Part Two focuses on the final three phases essential for a successful LAN project.

Dr. Martin B. Solomon
Vice President for Computing, Communications and Information Technology
University of South Carolina (Region 3)

Large investments in equipment and personnel are inevitable when purchasing a LAN, and seven phases are essential for a successful LAN project: 1) needs analysis; 2) hardware and software specifications; 3) installation specifications; 4) purchasing hardware and software; 5) training departmental systems administrators; 6) training end-users of the network; and 7) providing ongoing LAN support.

• Training Departmental Systems Administrators

There should probably be a three-level support organization within your company or organization. Level one is the manufacturer of the hardware and software components; level two is the central data processing organization within your company; and level three is support within your department. Level three support will require a person within your department to become quite familiar with the administration of LAN operations and the accomplishment of routine tasks.

For example, caution dictates that someone regularly backup the files on the server. Someone needs to add new users to the system, provide read/write access privileges, establish authority classes and allocate disk space among users. The departmental LAN administrator also needs to be able to instruct departmental staff on how to install LAN software on each PC, how to connect to the network, how to use the network functions and how to diagnose problems when they occur.

The departmental administrator then communicates with the central data processing support staff when a new question arises. The central data processing staff then communicates with the vendors of the hardware or software when it cannot answer questions.

One departmental administrator is not enough. You need about three. Each may or may not spend full time at this task, but one person, no matter how good or hard working, is not enough because that person will be absent some of the time and will leave your employ sooner or later. Therefore, a backup person is necessary.

Prudent folks assign two backup people because the first backup and principal administrator may both become indisposed from time to time.

• Training End-Users of the Network

After training the departmental administrators, the end-users must be trained. In addition to the tasks outlined above for the administrators, the end-users need to be trained on how their applications operate differently in a network environment. Since some aspects of the programs will now run in a shared mode, differences in the way that word processors, data base systems or spreadsheets operate will need explanation.

The departmental training function is ongoing and never-ending. Each new employee will need training and each person acquiring new skills will require attention as well. It is not unusual to spend 10 or more hours with each end-user for initial training, setup of software and software differences.

• Providing Ongoing LAN Support

After the LAN is operational, end-users' questions will continue. Someone will need to diagnose faults when they occur, and to perform normal housekeeping chores on a daily basis. Fault correction might take the form of a maintenance contract where you pay either your central data process-
ing organization or an outside firm to
fix the system when it breaks. An
annual maintenance contract can
cover all parts and labor or a time-
and-materials approach pays for serv-
vice each time it is required.

• An Additional Concern

Some people believe that in order
to be modern and to take advantage
of the new technologies, they should
implement a LAN. Nothing could be
further from the truth. A LAN without
a meaningful payoff is nothing but a
liability, sapping equipment and staff
resources for no good purpose.

There is a terrible temptation to sub-
stitute a LAN for the commonly supplied
central data processing services. Central data pro-
cessing services are often costly, delays are sometimes great
and some central or-
ganizations exhibit high degrees of
bureaucracy. Many departments
would pay dearly to get out from under
the control of the central organiza-
tion. Some organizations install a LAN
to accomplish that end. This is not
wise. After the LAN installation, the
department begins to realize that
programming development still takes
a long time, requires costly new staff
and is very hard to understand and
manage. Significant executive time
deals with the new problems that
come with a LAN. Further, losing your
key staff person most familiar with the
administration of a LAN can leave
your department in dire straits.

Local Area Networks are not usually
cost effective for storing very large
amounts of data. Mainframe storage
space normally costs less than half
that of LAN storage. Some people
have a tendency to simply assume
that all new computer systems should
use a mainframe computer.

In spite of what some people say,
ACUTA WELCOMES NEW MEMBERS

We welcome the following new members who joined ACUTA between February 9 and March 8, 1990.

REGION 1
Etienne Aberth, City University of New York
Diana H. Agusto, Champlain College
George Elsbeck, Hobart and William Smith Colleges
Christopher V. Freitag, Western New England College
Andrew Hamichar, The College of St. Rose
Jerold Mariner, City University of New York
Ernest O'Dierno, City University of New York

REGION 2
Donald E. Crouthamel, Northern Telecom
Catharine W. Hume, Goldey-Beacon College
Pete Lele, PLAN Technologies
Jeane M. Naef, Widener University
Suzanne Spain, Bryn Mawr College

REGION 3
Thomas N. Macon, Jr., Salem Academy and College
Tom McCollum, Hinds Community College
Patricia Moore, University of Alabama in Huntsville
Robert Penland, State of Georgia
Gerald Stover, University of South Carolina

REGION 4
Charles T. Bader, Southwestern Bell Telephone Company
David Brooks, Oklahoma City University
Donald Haefner, Southern Arkansas University
Charles E. Lynn, Jr., AT&T

REGION 5
Patricia Ann Allen, GTE Telecom Marketing Corp.
Jerry Isaacs, Carroll College

REGION 7
Jim Andrews, Mt. Hood Community College
Richard W. Coyne, AG Communication Systems

REGION 8
Bob Hirata, Honolulu Community College
Steven H. Turner, Westmont College
David Watts, California State University, Bakersfield

Peggy A. Daniels, Front Range Community College
John M. Hutchinson, Montana University System
Karen Kollmann, Gustavus Adolphus College
Rob Robinson, Northwestern College
Carl W. Schefsky, University of Portland

POSITION ANNOUNCEMENT

DIRECTOR OF COMPUTING CENTER/TELECOMMUNICATIONS
TRINITY COLLEGE
DEERFIELD, ILLINOIS

Qualifications: Minimum of five years computer management experience in an academic setting; experience with relational database management systems (Informix preferred); strong communication and management skills.

The position will be available in the summer of 1990.

Send resume to:
Trinity Director of Personnel
Trinity College
2077 Half Day Road
Deerfield, IL 60015-1284

FOR DETAILS, CALL (708) 948-8980.