ACUTA eNews April 1998, Vol.27, No. 4
We clearly are on the down side of winter....finally. Last week's snow was an unpleasant reminder that Mother Nature follows nobody's rules, in spite of my personal inclination to "manage" everything. Have you seen the bumper sticker that says "Resign from Managing the Universe"? That's a message directed to me personally!

Whether at work, at home, at ACUTA, or while walking the dog, I am constantly thinking about things that need doing and how I can manage to get them done. Sometimes my brain becomes totally overloaded and I'm momentarily unable to complete the simplest project. It's definitely time for me to at least reduce the size of the universe I'm trying to manage! Perhaps you will benefit from some of the do's and don'ts I've identified recently while right sizing my work days:

1. **Delegate:** Becoming less of a micro-manager by delegating more tasks is one of my New Year's resolutions. This will also improve cross training of staff in our department. Timing is perfect right now since our department is in the process of interviewing for an operator and a clerical position. This allows

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**Achievement Award Nominations**

James S. Cross
**ACUTA Immediate Past President**
**Michigan Technological University**

The Awards Committee is pleased to announce that nominations are now open for ACUTA's 1998 Achievement Awards. Traditionally, ACUTA has honored 4-5 members in this way each year at the Conference in July, recognizing individuals for their contribution to ACUTA, higher education, and the telecommunications profession.

Has someone been especially helpful with a dilemma you faced? Do you know someone who found a unique solution to a perplexing situation? ACUTA Achievement Awards provide an opportunity to reward creative or innovative thinking or a willingness to serve others in the higher education telecommunications profession.

Past winners have included members, both school and company, who have gone out of their way to share their knowledge with other members; ACUTA committee chairs or members who have undertaken new projects beyond their normal workload; and members who have demonstrated their ability to effectively handle unexpected situations on their campuses.

In addition to the honor of recognition within the professional association, peer selection makes the Achievement Awards especially meaningful.

Simply submit your nomination(s) in writing, stating the name of the nominee and the reason for the nomination. Winners are selected by the ACUTA Awards Committee and announced at the Annual Conference in July.

Submit nominations via mail, fax, or e-mail by June 1 to: Lisa Cheshire, ACUTA Awards Ctte. Staff Liaison, 152 W. Zandale Dr., Ste. 200, Lexington, KY 40503 Fax 606/278-3268; e-mail: lcheshire@acuta.org.

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**Cornell to Host Local Event June 8 and 9**

Plans are underway for the ACUTA Mid-Atlantic and New England Area Local Event to be hosted by Cornell Univ. in Ithaca, New York, June 8-9.

Most of us are experiencing budget constraints on our campuses in regard to travel and seminars. The Local Event is designed to minimize expenses and time away from the office. Lunch on Monday and Tuesday, breakfast on Tuesday, breakfast, and a reception on Monday night are all included at no additional cost. This is an excellent way to attend an ACUTA event, obtain valuable infor-

Continued on page 5
Q: Do you have a question? Would you like to provide an answer? Questions related to campus telecommunications are invited. Answers will be provided by volunteers with expertise in a variety of technologies. (Please note that advice given in this column is the opinion of the author. ACUTA neither recommends nor endorses any company's products or services.) Send questions to Pat Scott at ACUTA, or phone 606/247-3638. E-mail pscott@cutr.org.

Q: At a recent conference someone advised users to avoid choosing a new PBX within the next three years because the technology is changing so quickly. Is this sound advice? —Mary L. Pretz-Lawson, Carnegie-Mellon Univ.

A: The answer, of course, is "No," but some caution is recommended.

History: Telephony is a connection-based technology. You dial a number, you get connected, and the connection is maintained until you hang up. This is very wasteful because only one of you is talking at any time, plus, during pauses nothing is transmitted.

Technology: The long distance segment has recognized these deficiencies during the last decade, and now most voice transmissions are packetized and sent over different routes between the users. This technology came about with the advent of fiber and the SONET (Synchronized Optical Network) standards. Packetizing of voice requires a very low latency or you will hear echoes and delays. Packetizing was proprietary for a long time until the ATM Forum was formed and global standards were developed. ATM is a cell structure. It allows any kind of packet, i.e., IP, Ethernet, T-1, variable bit rate traffic (like data), or constant bit rate traffic (like voice) to be globally transmitted on the long distance SONET network. This evolution of telephony is now entering the PBX industry and someday, maybe 20 years from now, all PBX equipment will be ATM compatible.

Implications: Recent large PBXs are frequently a mixture of analog and digital processing. What will happen in the next three years is the convergence to ATM cell-based technology. Somewhat self-serving to the industry, this trend makes it easier to interconnect in the long distance segment and it can also transport data.

Competitive Influences: The data network industry is also becoming ATM compatible and, since this means that voice can be carried on the data network, will promote computer telephony in the near future. Some products already use a 25.6 ATM card in an ATM-compatible switch to "unPBX" and connect the phone through a NIC card in the computer.

Reality: Most telephone sets are powered from a central location. The computer telephone is powered through the computer. If you turn it off, the ringer goes silent. The PBX switch will change to a totally ATM-compatible configuration, but will use the copper cables that you put in 5 years ago for a long time. The telephone instrument may also go to ATM cell transmission. The connectivity to the outside world will be ATM.

And better still, by going ATM in the WAN you can save money. A T-1 leased line is much more expensive than the shared "low speed" T-1 ATM connectivity that is already being offered.

Conclusion: There is no reason to stop purchasing PBX equipment as long as your RFP is explicit on the migration path to ATM. A large switch may be configured in a presently proprietary technology that prevents an economic migration to ATM based technology. On the other hand, the vendor wants to keep you in his installed base. Make him work for it. Make him give you assurances that his equipment can migrate economically to ATM-based technology, one segment at a time and one group of telephones at one time. Go, purchase, whenever you have to.

Thanks for this answer to Ernest Tunmann of TE Consulting. Reach Ernest at 508-877-6494 or e-mail etunmann@worldnet.att.net

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Board Report

ACUTA's Board of Directors held its monthly conference call March 5. The Board discussed and approved the Strategic Plan, noting that a few action items still require an input of a specific percentage.

In other actions, the Board:
- Discussed and approved the Needs Assessment survey with changes. The Board requested that the staff go back to Charles Feltzer to request that Board-suggested changes be implemented wherever feasible.
- Discussed and approved the Desired Qualifications for Candidates for ACUTA Board of Directors and Officers.
- Officially welcomed Maureen Trim.
- Approved the Billing Inquiries document, indicating they felt the document represented a well-structured set of questions/paragraphs that could assist institutions in drafting institutional specific requests for clarification of billing charges related to the USF implementation.
- Approved a list of actions proposed by the Executive Director to establish links between ACUTA and regional consortia such as WICHE and MHEC.

Executive Director Jeri Semer reported on potential themes for the Senior Leadership Forum.
Using Digital Imagery to Enhance Design Efforts

Tad Deriso, Senior Consultant 

Engineering Associates, Inc.

For the '90s, we suggest replacing the old familiar "Garbage In, Garbage Out" with a new, more appropriate phrase, "Technology In, Value Out." While perhaps not as catchy, this phrase has special meaning for a design project we recently completed.

Traditional engineering firms rely heavily on CAD/CAM, Microstation, and other applications to meet the design needs of their clients. While these applications still meet an important need in the overall design process, certain tasks can be completed more efficiently. The increased awareness and relative affordability of new technology requires both engineering firms and facility managers to rethink the ways in which design documents and existing records are stored and maintained.

New technologies such as digital photography, color scanning, and graphical software programs have created efficient ways to complete ordinarily arduous and time-consuming tasks.

A recent project in which we used this new technology involved the design of a new fiber optic network for a major mid-western university. The scope of this project was to add single mode fiber to 125 buildings, increase the fiber optic backbone capacity between major node buildings, and record the existing and proposed outside plant records (single and multi mode fiber, copper, and manhole details) on AutoCAD landbase maps.

As part of the design effort, main distribution facility (MDF) details were needed for each building which would show the contractor where to place new optical interface units (OID), where to place new equipment racks, and which items needed to be removed, such as old coax amps and coax cabling.

The traditional engineering design approach of showing MDF locations would have been to draw a sketch of the floor plan and closet location, as well as sketch an elevation detail of the MDF closet to show existing and proposed equipment locations. Traditionally, this process would require several hours per building to draw these details, with a significant chance for error during the CAD process.

In this project, we took photographs of each closet elevation to show existing equipment and identify where the new OID equipment should be placed. We then created bitmap files of the photographs through a color scanner at a resolution of 150 dpi. Our client provided us with existing AutoCAD drawings of the floor plans of each building. Using a CAD viewing program, we were able to locate the MDF and cable entrance facility from the AutoCAD floor plans, and copy blocks of the areas which were needed.

Using a popular presentation package, we inserted the picture of the MDF closet detail, as well as the hatched AutoCAD floor plan. We added details such as construction notes, cable identification, and linear footage, which showed exactly where equipment should be placed, and work items that would be the contractor's responsibility.

Using the new process, it took approximately 20 minutes per building to identify work in each building. This not only saved an enormous amount of time, but ensured that the contractor would see what existed and what work needed to be completed, as well as eliminating guesses and possible change orders by the contractor.

This process was also helpful for our client because records of the MDF locations were current and accurate. A thorough and comprehensive design package also enabled the university to receive lower and more accurate bids for the work to be completed. The AutoCAD floor plan showed the exact raceway routes from the MDF closet to the cable entrance point, with linear footage as necessary.

Using this technology enabled us to enhance the services we provided our client, while reducing the overall design cost. Technology in...value out.

Tad Deriso is a Senior Consultant with Engineering Associates, Inc, a communications engineering and consulting firm located in Atlanta, Georgia. He assists college and university clients with planning communications infrastructure projects and developing efficient and cost effective network designs.
President's Message
Continued from page 1

for redistribution of tasks and duties to some extent without affecting the primary function for each position. (The "other duties as assigned" caveat!) I asked each staff person to list their primary duties, noting the tasks that are directly connected to achieving those duties. Then I asked them to list "other tasks" they normally perform and I added those items I needed to delegate. We compiled the "other" list and traded items around, assigning an assortment of these tasks to the new people. Staff appreciated having "choices," not changes.

2. Priority scheduling: As a morning person, I plan to do the detailed jobs as soon as I arrive, when I am most efficient. If possible, I schedule only one meeting per day, and I prefer 11 a.m. or 1 p.m., before or after the lunch hour, which doesn't break up the day so much. I schedule telephone appointments prior to a meeting to review the agenda, which sometimes eliminates the need for the meeting.

3. Organizing files: This is really hard for me to do. I have no problem with my electronic files; I ruthlessly click them into the "trash" or transfer them to an appropriate folder. I still rely heavily on "paper" however. The best policy for me is to put it somewhere specific or throw it away. This has eliminated the huge piles of stuff on and around my desk and saves all that time I spent hunting for something. Now I just have to remember the name of the file!

Every manager has his or her own style. But if you're like me and revert too easily to micromanagement, you might benefit from developing your personal list of do's and don'ts. Sometimes self-management is the biggest challenge—but it can pay a handsome reward!

As Spring temperatures are beginning to rise, Congressional activity is also heating up with respect to telecommunications and information technology issues.

This month, the FCC is due to present its report to Congress on the implementation of Universal Service. Federal law requires the Commission to submit a report to Congress no later than April 10, 1998, on provisions of the Telecommunications Act of 1996 related to Universal Service. The FCC has been holding a series of hearings, in which they have heard from experts on issues such as whether Internet Service Providers should be considered telecommunications carriers, and required to contribute to the Universal Service Fund. ACUTA is monitoring the results of the hearings, and will make the full Report to Congress available via the ACUTA Web site, along with a summary of the provisions that are relevant to higher education.

In addition, Senate and House bills have been introduced that are designed to shield minors from viewing indecent material on the Internet. A previous attempt (the so-called "Communications Decency Act") was enacted into law but was later declared unconstitutional.

These bills vary, in that some would place the burden on commercial distributors of indecent materials via the Internet to restrict minors from accessing the material, while some would require schools, libraries, and other facilities that might be used by minors to provide filtering software. One bill would make this a condition of receiving Universal Service Fund support.

These bills are sure to be amended and fought hard by interest groups that seek to preserve freedom of expression on the Internet, and even by school and library organizations that fear unreasonable and expensive burdens. We will continue to monitor developments, and advise members if any of these requirements eventually apply to higher education institutions.

There has also been controversy brewing between the FCC and interexchange carriers, with FCC Chairman William Kennard demanding, in a February 26 letter, information from carriers regarding how they are passing access charge reductions through to their customers. Some carriers are responding that they are in fact passing their savings along, and are actually earning less than before. However, these savings are reflected more in consumer promotions than any across-the-board pass-through of per-minute savings to business customers.

Regulatory issues continue to occupy a major amount of our time, and we are particularly fortunate to have a hard-working, vigilant watchdog on our side like Whitney Johnson, author of the monthly "DC at a Glance" column in the ACUTA News. Whitney and his fellow members of the Legislative/Regulatory Affairs Committee deserve a round of thanks from all ACUTA members.

I hope to see you in Cincinnati, the beautiful "Queen City" on the Ohio River, for the ACUTA Spring Seminar April 26 - 29. Outstanding presenters on "Technology Management Issues" and "Disaster Preparedness and Facilities Security" will be presenting information you can't afford to miss. And take it from someone who's spent more than a few weekends in Cinci, the chili dogs aren't bad, either!
Toll-Free Calling

According to 411 Newsletter (2/16/98), the FCC decided last October to make long distance carriers pay the public payphone owners 28.4¢ for each coinless toll-free or credit card phone call made from one of their payphones. These new charges are now being passed on to the company that receives the call.

Some of the interexchange carriers (IXCs) raised their rates across the board about a year ago, and, in addition, increased the toll-free rates last summer. Citing billing, tracking, and other administrative costs, they say they hope to recover expenses.

411 makes another significant point: "The FCC order spent so much time in court that there have been significant time gaps in which pay-phone owners were not paid, and the Commission has yet to decide how it will be compensated for the lost time."

What will this mean to colleges and universities? One more item on the monthly bills that ACUTA members will have to watch very closely.

Calling Party Pays

The FCC has made no decision on this issue yet. At a February conference, FCC Commissioners and staff "proved much more willing to cheer on competition in the wireless industry than to endorse CTIA's pleas for regulatory relief," according to Telecommunications Reports (TR 3/2). One area of interest at the conference was the Cellular Telecommunications Industry Association's (CTIA) request for a favorable ruling on calling-party-pays (CPP) for calls to wireless phones.

Shortly after the conference, the FCC started a comment round on CTIA's recent petition for "expedited consideration of limited rule changes aimed at clearing the path for a transition to a CPP billing regime for wireless services." (TR 3/16) Comments are due by May 8 and replies by June 8. If there is a significant amount of wireless service on campus, this may become a problem in the future.

At the last meeting of ACUTA's Regulatory and Legislative Affairs Committee, the idea of a wireless campus was mentioned. A company in Wisconsin with about 150 employees has "become the first substantial U.S. corporation to shun wireline service and deploy a nearly all-wireless PCS (personal communications service) phone system." (TR 3/16)

LNP - Local Number Portability

Over a year ago the FCC ordered all local exchange carriers (LECs) to implement LNP by 3/31/98 in the 100 largest metropolitan statistical areas in the country. Few, if any, of these areas will have LNP available in April 1998, and some may not have it by April 1999 (TR 3/9). One of the major issues facing the LECs is cost recovery and the FCC has not specified a method by which the LECs can recover costs. (411 2/16).

The Member Needs Assessment Survey was mailed recently to primary members. If you received a copy, please complete and return it right away!
Positions Available

Only school/company names, position titles, and contact information now appear in the newsletter. Complete details are available on the ACUTA Web site. If you do not have Internet access, call Pat Scott at the ACUTA office (606/278-3338) to receive a printout of current listings. Please submit position-available information electronically to Aaron Fuehrer at afuehrer@acuta.org or to ACUTA's homepage: http://www.acuta.org. If you post a position, please notify Aaron when the position closes.

- **Manager, Distance Learning Technology, Delta College:** Contact Human Resource Office, A189A, Delta College, University Center, MI 48710 (Deadline 4/30/98)
- **Voice/DP Telecommunications Systems Technician:** Contact Mark Norviel, Idaho State University, Campus Box 8064, Pocatello, ID 83209

Welcome New Members

**Institutional Members**
- Austin Community College, Austin, TX. Charles Lavender, 512/223-7590. Tier 4
- Central Methodist College, Fayette, MO. Rod Koelker, 660/248-2631. Tier 1

**Corporate Affiliates**

*BRONZE LEVEL*
- Qwest Communications, Denver, CO. John Walker, 303/382-5889

*COPPER LEVEL*
- Cornerstone Communications, Inc., St. Louis, MO. Timothy DeWald, 888/963-9884
- GS Metals Corp., Pinckneyville, IL. Jay Gaumer, 800/851-9341
- Physical Optics Corp., Torrance, CA. Lonnie Lidsey, 310/530-1416
- VarTec Telecom, Inc., Lancaster, TX. Gary Luft, 254/399-6304

UMN Students Get Out of Line

The University of Minnesota has teamed with IBM to make students' lives more hassle free and free up some funds at the same time. Using a variety of Internet and Web applets, UMN students can use the Web browser to register for classes, calculate tuition and book costs, apply for admission, order transcripts, calculate GPAs, determine weekly budgets, and more. UMN hopes several hundred thousand dollars currently being used to cover administrative costs will be reinvested in technology. For more information, see Web sites at www.umn.edu or www.ibm.com

Virtual University Is a Reality

Several of the campuses participating in the California Virtual University have created online tours of their virtual courses to help prospective students become acquainted with the technology behind online and distance education. The UCLA Extension offers a tour site, operated by their technology partner The Home Education Network, that demonstrates how UCLA's courses are conducted online. Take the tour for yourself at http://www.california.edu/tour.html.

ACUTA 1998 Events

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