ACUTA eNews October 1998, Vol.27, No. 10

Follow this and additional works at: http://digitalcommons.unl.edu/acutanews

Part of the Higher Education Commons, and the Operations Research, Systems Engineering and Industrial Engineering Commons

This Article is brought to you for free and open access by the ACUTA: Association for College and University Technology Advancement at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in ACUTA Newsletters by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
FCC Approves Two-Way Digital ITFS and MDS Communications

The FCC has issued an important decision for institutions who are Instructional Television Fixed Service (ITFS) and Multipoint Distribution Service (MDS) licensees. The long-awaited decision will permit ITFS licensees to use all or part of any of their 6 MHz channels for two-way service.

Following is taken from the Commission's press release about this decision. The full text of the Order should be available in the Mass Media Bureau section of the FCC's Web site (www.fcc.gov).

The Commission has cleared the way for Multipoint Distribution Service (MDS) and Instructional Television Fixed Service (ITFS) licensees to offer two-way digital services. As a result of [this] action, a new, competitive group of players may emerge for delivery of high speed two-way communications service to consumers. Both individual and business consumers will be able to use the high-speed and high-capacity data transmission and Internet service that will be available through the new systems. Consumers will be able to take advantage of new video-conferencing, distance learning, and continuing education offerings.

MDS typically provides video programming to subscribers and is often called wireless cable. ITFS licensees are typically educational institutions that use the service for distance learning. Both are currently one-way services, in which a transmitter sends a signal downstream to subscribers.

The changes adopted today further the mandate of Section 257 of the Telecommunications Act of 1996, which requires the Commission to identify and eliminate market entry barriers for entrepreneurs and other small businesses to promote diversity of media voices, vigorous economic competition, technological advancement, and promotion of the public interest.

The new rules permit licensees to use all or part of any of their 6 MHz channels for two-way service. Licensees will be able to use "response station hubs," which will serve as collection points for response station signals, and for which the operators will be issued blanket licenses and will not have to apply for each license individually.

The Order provides for flexibility in two-way system design by permitting licensees to combine multiple channels to accommodate wider bandwidth uses and the "subchannelizing" of 6 MHz channels for smaller bandwidth uses, and by allowing response stations and boosters to operate up to maximum permitted MDS and ITFS power levels.

ITFS licensees will have greater flexibility both in using their channels for educational purposes and for leasing excess channel capacity to wireless cable operators. This flexibility creates an opportunity for a business relationship between wireless cable operators and ITFS licensees.
President's Message

Continued from page 1

1. Know your business. Does your operation show continual growth?
2. How do you measure up to operations of like size?
3. Do you have a method of self-monitoring performance and continuing to improve service?
4. Are you developing new revenue opportunities?
5. Are your pricing policies competitive with industry practices?
6. Do you continue to study methods to decrease personnel costs?
7. Do you use technology to improve customer service and operations?
8. And finally do you have a strategic plan for your operation? And do you review and update it periodically?

Outsourcing can be good in some areas; personally, I prefer that our operations remain institutionally controlled. Let's not lose the personal touch we offer our student customers.

If you have to go through the exercise of potential outsourcing, I hope these thoughts will help you be prepared. Until next time, stay in touch!

ACUTA NEWS, Vol. 27, No. 10

BOARD OF DIRECTORS

President: Michael Bailey, Wake Forest Univ.
President-Elect: Anthony Morosky, Bradley Univ.
Secretary/Treasurer: Linda Bogden-Stubble, SUNY Health Sci. Ctr.
Immediate Past President: Margie Place, Kent State Univ.
Directors-at-Large: Anne Apicella, Univ. of New Mexico; Bill Brichta, Lehigh Univ.; Marianne Landfair, Indiana Univ.; Dawn Lott, Marquette Univ.; Maureen Trim, Stanford Univ.

COMMITTEE CHAIRS

Legislative/Regulatory: Anthony Tanz, RCDD, Brown Univ.
Marketing: Jan Weller, Univ. of Kansas
Membership: Frank Ferrara, Princeton Univ.
Program/Education: Jeanne Jansenius, Univ. of the South
Publications: Terry Robb, Univ. of Missouri, Columbia
Vendor Liaison: Patricia Sears, Cornell Univ.

STAFF

Executive Director: Jeri A. Silver, CAE
Business Manager: Eleanor Smith
Communications Manager: Pat Scott
Computer Services Manager: Aaron Fleshner
Manager, Corp. Relations/Marketing: L. Kevin Atkins, RCDD
Manager of Professional Development: Donna Hall
Marketing Assistant: Amy Conard
Meetings Manager: Lisa Chesnok, CMP
Membership Development Manager: Kevin Bowman

The opinions expressed in this publication are those of the writers and are not necessarily the opinions of their institution or company. ACUTA as an association does not express an opinion on endorse products or services. ACUTA News is published 12 times per year by the Association for Telecommunications Professionals in Higher Education, a nonprofit association. Subscriptions: $45 per year, $4 per issue. Send material for ACUTA News to Pat Scott, ACUTA, 152 W. Zandalee Dr., Ste. 200, Lexington, KY 40503-2486; ph: (606) 278-3338, fax: (606) 278-3338, E-mail: pscott@acuta.org. Copyright © 1998 ACUTA.

Visit our homepage: http://www.acuta.org

Q & A

(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 606/278-3338. E-mail pscott@acuta.org.

Q: What features/electrical characteristics are important when evaluating cables with regard to the types of networks they will support? What are the advantages of using shielded or screened cable over UTP (unshielded twisted pair)?

A: In answer to your first questions, the current trend for high speed networks has created a movement within the cable industry to develop products that will support these new technologies. A major result of this is the migration to new standards beyond category 5 (these include category 5E and category 6).

What makes these cables different, and what one should be looking at, are several key electrical parameters. Among these is Power Sum Crosstalk. Simply put, crosstalk is the unwanted shifting of signal from one pair to another. Category 5 cable measures pair-to-pair NEXT (near end crosstalk). This measurement only evaluates 2 pairs at one time. Power Sum crosstalk measures one pair against all others simultaneously giving an indication of a “fully energized” cable. This becomes important when deploying high speed networks. 10/100BT only utilizes two pairs of the cable—one for send, the other for receive. However, gigabit ethernet utilizes all four pairs simultaneously for both send and receive (full duplex).

In addition, higher performing cables are tested to frequencies beyond 100 MHz, the upper limit for cat 5. Many companies are testing cables to 350 MHz and beyond. By testing cables to these frequencies, they can determine the cable’s ability to support faster speed technologies in the future. Not only will these cables support tomorrow’s networks, but the innovation employed to maintain this high level performance will benefit networks operating at lesser speeds. This is evident by the increased bandwidth provided by these cables—often times 2-3 times greater than cat 5.

Regarding your second question, the most widely accepted advantage for shielded cables is protection from EMI (electromagnetic interference) and RFI (radio frequency interference). Historically, environments considered to be high sources of EMI and RFI included factories, utility plants, airports and military bases. However, with the advent of cellular phones, PCS, palm pilots and wireless services in general, just about any office or campus environment could have potential EMI problems. For example, many hospitals now ban the use of cellular phones within the hospital building.

In addition to providing protection against potentially disruptive EMI signals, shielded cables can provide improved performance over UTP cables. In the same way the shield keeps signals out, it also helps to keep signals in. In many instances, you can install shielded cables to extended distances (beyond 100 meters) and maintain data integrity.

Hardware technology for shielded cables has been greatly improved over the past few years making termination comparable to UTP products. Although there is still a slight cost premium, many network managers are willing to forego this in light of the network performance and data integrity they are assured of getting with a shielded cable solution.

For this answer, our thanks to: Jack Nee, Champlain Cable, Colchester, VT. Reach Jack at 802-654-4253.

Spotlight

Welcome to one of the newest Corporate Affiliate members:

Atlantic Telecom is a leading authorized Lucent dealer for the Partner and Legend communications system. Atlantic Telecom purchases and sells refurbished and new Lucent and Nortel telecommunications systems and parts. We supply the equipment that makes your business succeed. Robert Platner, 800/418-9199
Recognizing Our Best

Among the many benefits of ACUTA membership for institutions, the awards program often results in some very tangible personal rewards as well. Recognition from a professional organization typically gains an individual respect as well as visibility among his or her peers and superiors, and may, in some cases, have provided the edge at promotion time or in a job interview.

ACUTA depends on volunteers for many of the functions of the association. Our Board of Directors is composed of volunteers. Volunteers chair and serve on committees. Volunteers make a majority of the presentations at ACUTA events. Volunteers write approximately 60% of the articles in the journal and the newsletter. It is highly appropriate for ACUTA to honor these volunteers and provide recognition for those of you who go beyond what is required on a day-to-day basis.

For what kinds of activities are some people singled out for special recognition? The Achievement Award winners who were announced at the Annual Conference are all good examples of telecom professionals at their finest:

- **Jack Canaveri** from St. Louis Community College faced a campus emergency when a water line broke and his facilities flooded. Not only did Jack handle this disaster successfully, he took the time to document his strategy on the listserv and provided a written account for the newsletter and the journal. Sharing his responses turned a catastrophe into a learning experience for everyone.

- **Tony Tanzi**, Brown University, has done an outstanding job as chair of ACUTA's Legislative and Regulatory Affairs Committee for the past year, leading the committee in developing and implementing new approaches to monitoring and reporting vital information. Tony has also served on the Board of Directors and regularly assists with planning the Local Event in the Northeast.

- **Mike Tkacz**, from Curtin University in Australia, doesn't let distance get in the way of his participation in ACUTA. Mike is recognized for providing frequent contributions to the listserv which are always informative, well stated, and practical. He goes out of his way to share information, not just online but by presenting at events as well. Mike also serves on ACUTA's Editorial Review Board for the journal.

If you would like to add an ACUTA Achievement Award to your personal resume, you might want to get acquainted with any of these people. They represent the finest in the field of telecommunications, and ACUTA is proud to commend them for their professionalism and their contributions to the association.

### Board Report

September

A special meeting of the Board of Directors, Committee Chairs, and ACUTA staff was held on September 18-19, in Lexington. Highlights include:

- An overview of our long term investments was given by David Jones, V.P. Morgan Stanley Dean Witter, ACUTA's investment consultants. ACUTA's three long term investment accounts are doing very well.

- Jeri Seem gave an overview of the mission and goals of the Higher Education Advisory Panel and presented a list of proposed members. The Board approved the list which represented communication vendors and executives from higher education. Jeri will contact these individuals to see if they would be willing to serve.

- The Board approved the following recommendations for committee membership: Membership—Paula Loendorf, Duke Univ.; Randy Wanciak, Yale Univ.; Howard Meadows, Univ. of Southern Calif.; Marketing—Fred Dorsey, Bell Atlantic, and Gary Corbett, Northwestern Univ.; Publications—David O'Neill, Eastern Washington Univ.

- Jeri reported the Journal came in $12,000 over budget for the year to date for generated income.

- Final changes to the Member Needs Assessments are being made. A condensed version will be going out to the membership in the near future, when the review process is finished.

The majority of the meeting was spent reviewing the Strategic Plan to determine the status of our current action items and modifying the objectives and developing new action items to implement the goals and objectives. The revised Strategic Plan will be posted on the web when all changes and modifications have been approved.

Respectfully submitted,

Linda Bogden-Stubbs
SUNY Health Science Center
ACUTA Secretary/Treasurer
Occasionally, I like to use this column to highlight some of the information available through ACUTA's Web site. For some who use the Web site regularly, this may be repetitious. However, since the information changes almost daily, it's to your advantage to check the Web site frequently.

Some of the most valuable information on the Web site is supplied by you, our members, when you respond to the Facilities and Services survey. This survey provides a veritable gold mine of information that can save you endless hours of research—not to mention considerable dollars that can be saved by having good information before making a major purchase.

This is the survey that asks, among other things, the type of telecom equipment and services on your campus, budget information, demographics, and a wealth of other information that members can use to benchmark and compare services. Say, for example, you were considering a major purchase, and you wanted to know which ACUTA members had installed the same type of equipment. This data would help you connect with others comparable to your institution and learn about their experiences.

Members who have been around for a while will remember the thick yellow book that the ACUTA office formerly produced, containing hundreds of pages of listings of institution's responses to that survey. The information was very useful, but it was complicated to interpret and was out of date soon after it was published.

In today's electronic age, instant access to information—on your schedule and at your convenience—is now available on the Web. And it is updated whenever we receive a response.

This database is in a members-only section of the ACUTA Web site, because we believe this is a valuable benefit of membership. So, you will need a password to view it. In order to provide a measure of security but make it easy for members to access the information, the password is the same for all members and is changed annually after dues renewal time (on or about October 1).

You can get to the database from the ACUTA home page at www.acuta.org. Click on the Membership Database, use the pulldown menu for School Membership Database, select the 1997 Facilities and Services Database, click on "go" and enter your password. From there you can access the survey responses of hundreds of ACUTA member schools regarding type of installed phone system, primary toll carrier, interactive voice response system, voice processing system, and primary installed MIS system.

The data contains links to the ACUTA member representatives at schools that have responded to the survey. In addition, information and graphs are available on such topics as student data connections, student resale income, and departmental salary ranges. The information is being expanded to include even more data.

Now, a challenge. Only about 35% of the 800 ACUTA member institutions have responded to this survey. It is, admittedly, a four-page survey that will take more than a couple of minutes to complete. However, every response makes the data so much more valuable. By taking 15 minutes out of your busy day to respond, you will be helping your fellow members and increasing the relevancy of this important benchmarking data for your institution.

In case you haven't yet responded, we've made it easy by putting the survey on the Web. From the ACUTA home page, look in the left column and click on Facilities and Services Survey Form (PDF). It will take you to the URL for the survey (http://www.acuta.org/html/pdfdown.html). If you need help or don't have Adobe Acrobat software to download the form, just call Kellie Bowman at 606-278-3338, or e-mail at kbowman@acuta.org and she'll fax you a copy.

Even if you aren't considering a major purchase right now, this data provides an interesting chance to compare your institution with others in the ACUTA membership. If you have questions about the survey results, call Kellie Bowman for more information. And feel free to give us suggestions about how we can make the survey more relevant to your information needs.

Check Screening/ Blocking Arrangements

Diane Winkler, Union College, recommends checking screening and blocking arrangements on your trunks periodically to be sure they are still in place. "Several months ago, all of our coding on our trunks got dropped, which meant students could access an operator and have her/him place the call, no questions asked." Diane called Bell Atlantic right away.

The discovery process revealed the following explanation, in a nutshell: The original code for Union's trunks was a generic trunking code which did not reflect their true functionality, although they were receiving the screening blocking service requested. When work was done on the trunks, they were put back in service with the generic code originally designated.

According to Marcy Irons at Bell Atlantic, "As a result of this situation, the trunk coding has now been updated to reflect the additional functionality. Although this was an isolated incident, it demonstrates that errors can occur. So, if you ever notice an unrequested change in your service, please call your service manager, service center, or account team immediately."
Y2K
Have you begun testing your systems for problems related to the year 2000? If not, start now and get commitments from vendors for any failure noted.

FCC Offices Are Moving
Various offices of the FCC will move to the new Portals office complex between now and next March. The biggest problem the FCC has to deal with concerning the move is the increase in rent. Both houses of Congress have passed appropriations bills that do not allow the extra rent. Some members of Congress feel that the move should not begin until a subcommittee completes their investigation. Some political and financial transactions are being scrutinized. (Telecommunications Reports 9/14)

E-stamps
The U. S. Postal Service has approved for market testing a product that provides electronic certification of postage fees online. This will enable Internet users to buy and print electronic postage certification directly onto envelopes, labels, or other documents using ordinary laser or ink jet printers connected to personal computers.

FCC...
Continued from page 1
... by allowing wireless cable operators greater access to lease spectrum in a digital environment, while at the same time enabling educators to derive greater revenues or other benefits from such lease arrangements. The Order retains the existing 20-hour per-channel per-week requirement for educational usage of ITFS channels, but relaxes content restrictions by allowing for fulfillment of these requirements through data, voice, or video transmissions, and by requiring only that the usage be in furtherance of the educational mission of an accredited institution offering formal educational courses.

The Order also requires that ITFS licensees operating digital systems retain at least five percent of the capacity of their licensed spectrum for educational usage. In light of increasing use of digital compression techniques, the Commission assumes that this will be adequate to allow ITFS licensees both to meet their educational usage obligations and to have capacity for future educational usage. Of course, ITFS licensees may retain more than five percent of their spectrum capacity for educational usage, and may opt not to lease any of their capacity. Furthermore, all ITFS licensees will be accorded interference protection on the basis of a 35-mile radius protected service area, in addition to the registered receive-site protection that they currently enjoy, which will enhance their ability to expand their systems on an interference-free basis. ITFS licensees will receive additional interference protection through rules requiring prior notification of the activation of a response station transmitter located within 1960 feet of a registered ITFS receive site, prompt remedy of any interference caused to an ITFS user, and immediate shut down of any transmitter causing interference that is not remedied promptly.

Because contiguous channels may need to be devoted to response transmissions for purposes of spectrum efficiency, the Order permits ITFS licensees to swap channels and to satisfy some or all of their educational usage requirements on other channels in the wireless cable system of which their stations are part. In addition, the Order increases permissible lease term limits from 10 to 15 years, enhancing certainty for ITFS licensees, and placing wireless cable operators on a more equal footing with other services with comparable franchise periods.

IP Telephony
ICG Communications is offering Internet protocol-based long distance voice and data services to small businesses and residential customers in about 31 cities in three states. They plan to cover 166 cities, including about 90% of the U. S. long-distance market, by the end of 1998. Rates are not high—initially 5.9 cents per minute during the week for calls beginning and ending in their system. A call originating on their system and ending somewhere else including some international points will be 8.9 cents per minute. (TR 8/31)

BellSouth (TR 9/7) has told IP telephony providers that they will have to pay access fees, referring to “the FCC’s April report to Congress on universal service as authorizing such charges...” However such a report does not provide a definitive answer on the matter according to one FCC representative. Clearly this is not a closed issue yet.

In an article entitled “Computer Telephony Still on the Bleeding Edge” (9/14) 411 points out that compatibility across vendors is an issue which will have to be worked out before the service will be very popular.

Wireless Number Portability
The FCC has granted a request from the Cellular Telecommunications Industry Association, delaying the requirement to provide wireless number portability to March 31, 2000.

Universal Services
Not long ago a bill was introduced in both the House and Senate that would reduce the 3% federal excise tax to 1% and that would fund the schools and libraries part of the Universal Services Fund. A new bill has been introduced in the house by Rep. Klink of Pa. that would keep the tax at 3% but give it all to fund all parts of Universal Services.

The National Taxpayer Union has announced that it will seek repeal of the e-rate telecom discount program for schools and libraries authorized by the Telecommunications Act of 1996. (TR 8/24) An NTU representative said “FCC has gone so far as to prevent phone companies from informing customers of the true nature of the Gore Tax, even though the taxation is passed along to them.”
Positions Available

For complete details of positions available, access 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 is filled.

- **Manager, Telecom Systems, Indiana Univ.-Purdue Univ. Indianapolis**
  Contact: Campus HRA, 620 Union Drive, UN1358, IUPUI, Indianapolis, IN 46202, ref # 234-98, Fax # 317/274-5481. For more information see our web site: http://www.indiana.edu/~uits/humres/IUPUIappointed.html.
- **Telecommunications Manager, State University of NY at Oneonta**
  Contact: Employment Opportunities, Office of Human Resources, Box T, 208 Netzer Administration Bldg, SUNY Oneonta, Oneonta, NY 13820-4015. AA/EOE
- **Asst. Director for Telecommunications, Texas A & M Univ.**
  Contact: Employment Office, Human Resources Dept., Texas A & M Univ., College Station Texas 77843-1475 Ph. 409/845-5154. Refer to Job #990124

Welcome New Members

**Institutional Members**

- Loma Linda University, Loma Linda, CA. Frank Kejmar, 909/558-4321. T2
- Middlesex County College, Edison, NJ. Neil Sachnoff, 732/906-2525. T3

**Corporate Affiliates**

**BRONZE LEVEL**
- Pae Tec Communications Inc., Fairport, NY. Brian Benjamin, 716/340-2500

**COPPER LEVEL**
- Communications Product Development, Vancouver, WA. Vincent Hill, 360/694-2977
- HSA Corp., Louisville, KY. David Wigglesworth, 502/515-3333

Technology for Tomorrow

- The push for power continues as new technologies such as speech software and voice e-mail demand more and more from our computers. Sources at Intel say we will soon need a gigahertz machine for multimedia, three-dimensional graphics, continuous speech input, visualization, video conferencing, and more. According to Financial Times (9/23/98), a researcher at IBM predicts, “By the millennium, 50 million people will be using speech software to control their computers. You will be able to ask your browser to find you things on penguins in Antarctica or dictate your e-mails, which will be multimedia, so instead of dictating the text you could record your voice and it would automatically arrive at either the recipient’s PC or telephone.”

- Have you heard about the new aircraft called High Altitude Long Operation-Proteus? It can circle for hours at altitudes up to 50,000 feet over major cities, carrying broadband wireless services, including high-speed Internet access and video-teleconferencing, much like a communications relay satellite does in space. So a designated region could receive 24-hour service from a fleet of three planes, each flown by two-man crews on eight-hour shifts, with each aircraft flying fixed patterns providing coverage to an area 75 miles in diameter. (San Jose Mercury News 9/23/98)

- According to the Toronto Star (8/26/98), Canada is planning a high-speed Internet backbone, capable of moving data at speeds 1.5 million times faster than is possible using an ordinary 28.8 Kbps modem. CA*net3, a $120-million project, is being touted as a showcase for domestic technology firms as well as companies building third-generation Internet infrastructure. Initially, only the most advanced computers will be able to handle the network’s speed and capacity, restricting its use to university researchers and certain government laboratories.