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ACUTA Adopts New Logo and Tag Line

At the 31st Annual Conference in Reno, ACUTA unveiled its new logo and tag line. The changes were made as part of ACUTA's strategic plan to move the organization forward as the professional roles of many ACUTA members are changing.

What was once known as "The Association for Telecommunications Professionals in Higher Education" shall now be known as "The Association for Communications Technology Professionals in Higher Education."

"This change is meant to communicate the expanding roles of ACUTA members as our jobs have changed to include broader responsibilities for communications and data networks," said ACUTA president Maureen Trimm as she introduced the new tag line.

You can view the new and improved ACUTA logo in the top left-hand corner of this page. Like the tag line, the logo was changed in order to reflect ACUTA's progressive outlook. The new logo has a more contemporary look compared to the original ACUTA logo that had represented the association for 31 years.

The ACUTA acronym is still the base of the design, just as it was in the older logo, giving the logo a measure of continuity.

"ACUTA is still immediately recognizable and identifiable," states Jeri Semer, Executive Director. "The design has visual boldness but also incorporates a graphic element that reflects the technology aspect of the ACUTA member's job."

These external changes are a sign of ACUTA's commitment to move forward as the world of communications technology advances.
ACUTA's Strengths

From the President
Jeanne Jansenius
University of the South

As I sat down at my computer to write my first article for the newsletter, I began thinking about the reasons why ACUTA has been so important during my technology career span and what has kept me coming back. I concluded that it is the ACUTA community.

For 31 years ACUTA has been growing and maturing so that today it is uniquely positioned not just to respond to the needs of the campus communications technology professional but to anticipate those needs as well. Why is ACUTA as strong as it is today? I suggest three reasons.

1. ACUTA strives to stay on the cutting edge of technology and management strategies. Over the years the association has developed and expanded its interpersonal networking and educational tools. Some of these tools are face-to-face opportunities like the seminars and the annual conference, and others—such as interactive audio conferences, Web seminars, audio/video streaming, and the ongoing just-in-time entries on the listserve—are the product of ever-changing technology advancements. They are all educational opportunities, whether formal or informal, and they all contribute to our ability to make wise decisions on our campuses.

We all face tremendous challenges and must make wise investments on our campuses. Top management is looking to their communications experts to help them plan robust, yet secure, networks that can be continually expanded to meet the mission of the institution.

At the recent conference, the ACUTA Forum for Strategic Leadership focused on Planning for Change: Strategies for Technology Investment. Some of the questions considered were: How do we address critical network issues? What emerging applications must we prepare for? What is considered "hype," and how do we know which technologies to embrace? According to Jerry Stead, former head of AT&T Global Information Solutions, "Technology is no longer just an aid to the strategy—it is the heart of the strategy."

2. ACUTA maintains a flexible posture in order to react to a crisis or any other circumstance that could impact campus communications. ACUTA has a solid strategic plan in place that will provide direction for the years ahead, but, at the same time, recognizes the ever-changing environment that may require action on any campus at any time.

For example, ACUTA reacted immediately to the announcement of WorldCom's difficulties by making two reports available online: "Now That Every Carrier's in Trouble, What's a User to Do?" and TechCaliber Bulletin re: WorldCom.

Also in the works is an audio seminar in early August to address the unsettled conditions in the telecom industry and how colleges and universities can best position themselves in this market.

3. ACUTA is committed to making the best information available in the most accessible fashion so that members are well informed. The Web portal committee and ACUTA staff continually update and enhance the ACUTA Web site in order to provide easier access to valuable and timely information. Items such as late-breaking news of the industry, streaming audio/video of past ACUTA events, and enhanced search by subject and keywords of listserve archives, publications and resource library are just a few of the enhancements.

As we move forward and plan for change, ACUTA members and top campus administrators will look to ACUTA as the experts and expect timely information. Jim Cross, former ACUTA president, stated in August, 1996, "Telecommunications has become a creative agent for making things happen on our campuses. It has become an integral part of the landscape and sky, the cutting edge...[L]ittle happens on our campus that does not involve the use of technology."

Do you want to be a part of this? Want to share your ideas? Would you like to share a white paper you have written on a higher education technology issue? I urge you to contact a board member, committee member, or ACUTA staff member and volunteer your time and talents. Since this is a volunteer organization, it is you that will build an even better ACUTA for tomorrow.

I look forward to this year as your ACUTA president and urge you to stay involved. Keep in touch...
The quality of a voice call has been getting better every year. With the exception of cellular calls, the average caller expects a network to perform well, delivering a consistent voice quality. Placing a call over an IP network involved using a network optimized for data. Also, the IP network introduces problems that do not exist on a phone network. The gateway and VoIP phones also add new difficulties for the voice call.

The problems encountered in the VoIP network comprise three elements: the entry devices, gateway, VoIP phone, etc.; the IP network, made up of routers and carrier transmission facilities; and the exiting devices.

The entry gateway or VoIP phone introduces distortion when the voice is digitized and compressed using standards like G.711, G.729, and G.723.1. The lower the bit rate after digitization, the greater the distortion. Delay is introduced by the protocol processing and compression software and this delay significantly increases as the compressed bit rate decreases. G.729 (8Kbps) adds a 12ms delay while G.723.1 (5.3Kbps) adds a 35ms to 40ms delay before the compressed voice packet enters the IP network. Jitter, or delay variance, can be introduced if a softphone program is used. The softphone software in a PC must compete with other resident programs for the PC's resources. To observe this conflict firsthand, try talking through a softphone when a PC is printing a PDF file. If a gateway that is dedicated to VoIP is used, virtually no jitter will be produced. The gateway and VoIP phones do not introduce any errors. No loss will occur unless the bandwidth between the gateway and router is saturated, which is highly unlikely.

Problems increase once the voice packet enters the IP network. Router processing takes 1ms to 5ms per router and traffic congestion can account for another 1ms to 100ms per router, causing the IP network to produce considerable delay. Jitter occurs at each router because the voice packet must wait until the exiting router port can support the traffic. Jitter is also related to congestion, so increased congestion will equal increased jitter. Each router can introduce 1ms to 50ms of jitter.

Transmission errors are almost always introduced by the carrier transmission facilities. Their error rate is so low that it can be ignored for voice transmission. Packet loss is also caused by congestion. Greater congestion equals greater loss, though in most intranet designs packet loss is usually limited to 1% to 5%. The Internet can produce loss rates as high as 30%. Packets can take different paths through a network of routers. When traffic conditions are stable and/or the traffic is light, then the same physical path will be used to carry all the packets. When a heavy traffic load varies rapidly and the routers are using a link state protocol, such as Open Shortest Path First, to exchange routing tables frequently, then out-of-sequence packet delivery can occur.

The most important factor in IP network performance is congestion management. IP networks are well designed and robust. The network can reroute traffic around congestion points and network element failures. However, rerouting does not mean the same performance will be delivered over the new path. In 1999, four OC-192 cables of the Internet were accidentally cut. Traffic was rerouted for some users from the east coast to the west coast through Sweden, producing a one-way delay in excess of two seconds. If the PSTN encountered such a cable cut, there would be an increase in network busy signals but the voice quality of the calls would not degrade. There are also far more backup facilities for the PSTN than for the IP networks when you view all the voice carriers combined.

The destination or exiting devices, gateway, and VoIP phone also introduce problems when converting digitized voice packets back into analog voice. More distortion is created when decompressing the digitized voice back into an analog signal. This distortion increases if the vendors of the decompression software use different programs. This can be a problem even if the same standard is used for compression and decompression. At last count, there were at least 11 different vendors offering G.723.1 compression software. Not all of these different programs can interoperate.

continued on page 4

eNews: ACUTA Newsletter August 2002 3
Correcting the jitter involves using a jitter buffer to slow down the early arriving voice packets until the delayed packets catch up. Jitter buffers in some products are designed to compensate for as much as 200ms difference in packet arrival times. Packet loss requires further processing which adds to the delay. A missing packet can be simulated by viewing the previous voice packets and creating a filler packet based on analysis of the previous packet combined with a knowledge of voice patterns.

Alternately the first packet following the lost packet can be used to simulate the missing packet. In either case, this is a skilled guess of the missing packet contents and adds a little more distortion on the voice call. If packets arrive out of sequence, further delay is incurred during the reorganizing process.

As usual, all of these problems can be reduced by the judicious use of money. There are also many solutions which depend on the products chosen, bandwidth allocated, network redesign, and the adoption of new router technologies.

Recent events in the telecommunications industry, including accounting irregularities at WorldCom and possibly other carriers, and general economic uncertainties in the telecom/IT industry, have raised numerous questions for colleges and universities regarding their telecommunications carriers, ISPs, and other communications technology vendors.

On Thursday, August 8, 2002, from 1:30-3:30 p.m. EDT, ACUTA will be offering an audio seminar entitled, "Economic Conditions in the Telecommunications Industry." This seminar will provide information and insight into how colleges and universities can best position themselves in this difficult environment. The seminar will be jointly presented by attorney Hank Levine, a partner in the law firm of Levine, Blaszak, Block and Boothby, LLP, and David Rohde of TechCaliber, LLC.

Some of the issues to cover include:

- The facts about the WorldCom situation and other carriers and how their financial status may affect large customers. What other carriers/vendors are likely to be in real trouble over the short and longer term?
- How can you build a strategy to insulate your institution from the effects of a carrier’s bankruptcy or other financial difficulties?
- What contract provisions can you negotiate that will protect or even benefit your institution? How will customer service be affected?

Via conference call technology, you will be able to listen to the presenters, ask questions, and interact with ACUTA members at participating sites. All you need is a phone. An unlimited number of colleagues at your institution may listen via speakerphone at no extra charge.

The registration fee is $69 for ACUTA members and $109 for nonmembers. Questions regarding registration should be directed to Amy Burton, aburton@acuta.org, or 859/278-3338. The deadline for registration is Monday, August 5, 2002.
ACUTA members may read about the latest developments in telecommunications- and Internet-related issues in the most recent Legislative and Regulatory Update, an electronic newsletter prepared monthly by Wiley, Rein & Fielding. Access this newsletter at http://www.acuta.org/rela tionship/DownloadFile.cfm?docNum=309

Thanks to Randy Hayes, Chair of ACUTA's Legislative and Regulatory Affairs Committee, for the information provided for DC Update this month in Whitney Johnson's continued absence.

FTC Says It Should Regulate Telecom Marketing

On July 17, the FTC testified before the Commerce, Science and Transportation Committee of the Senate, asking for more oversight authority regarding consumer issues in telecommunications.

As noted earlier by its Chairman, Timothy Muris, the FTC would like to end the exception to its own rules that exempts telecommunications carriers from being subject to FTC consumer protection rules. The FCC currently has the oversight responsibilities for consumer protection activities involving telecommunications carriers, but its recent activities in this regard have been called into question by some. According to Telecom Reports-Daily, Senator Byron Dorgan (D., N.D.) stated the FTC exemption was "put in the Federal Trade Commission Act when there was only one federally registered telephone company." Dorgan continued explaining that the increase in telecom entities and increase in the variety of telecom/non-telecom services billed by these providers has caused many to believe an agency such as the FTC should indeed play a part in policing the industry.

According to the Washington Post, while the FTC and a number of consumer groups favor the added oversight of the carriers, telecom industry groups and marketing associations are strongly opposed to the measure. As noted at the annual conference, ACUTA supported the concept of more involvement by the FTC in such matters in its response to an FTC inquiry regarding a national "Do Not Call" list.

FCC Extends Wireless LNP Deadline by One Year

In mid-July, the FCC adopted a Memorandum Opinion and Order (MO&O) extending the deadline for carriers to implement wireless Local Number Portability (LNP) for one year, until November 24, 2003.

In its ruling, the FCC determined LNP would "preserve consumer choice and enhance competition among Commercial Mobile Radio Service (CMRS) carriers and between the wireless and wireline industries." However, the FCC also determined that there are certain LNP implementation issues that have yet to be worked out, and that the FCC does not want LNP implementation to interfere with the implementation of thousands-block number pooling, whose deadline is November 24, 2002. Interestingly, in its ruling the FCC denied a petition from Verizon Wireless that called for a permanent ban on wireless LNP.

In the decision-making process, it appears both the FCC and the wireless industry misinterpreted statistics regarding customer "churn" (changing providers) and the desire for LNP. Apparently, because the statistics indicated almost a third of U.S. wireless customers change providers each year, these entities concluded customers do not care whether they can take their numbers with them as they change providers. They failed to realize fully the desire of customers to have both the choice of provider and the ability to port their cellular number as they make such a change. Unfortunately, this is the message the wireless industry sent to Congress, and in turn, the message some in Congress then sent to the FCC in letters prompted by the wireless industry.

FCC Adopts Rules on Sharing Customer Information

On July 16, the FCC adopted rules regarding the dissemination of customer proprietary network information (CPNI) of customers of telecommunications carriers. As noted by the FCC, CPNI includes

continued on page 6
virtually all individually identifiable information regarding customers’ telephone usage, including call traffic and individual call information.

The FCC had implemented regulations regarding the use of CPNI, but they were vacated by the U.S. Court of Appeals for the Tenth Circuit in 1999, due to concerns the carriers’ First Amendment rights would be violated. In the latest rules, the FCC believes it has carefully balanced the interests of consumer privacy with the Court’s interpretation of carriers’ First Amendment Rights involving their communication with customers.

According to the FCC press release, the new approach is as follows:

- **Opt-Out** Use of CPNI by carriers or disclosure to their affiliated entities providing communications-related services, as well as third-party agents and joint venture partners providing communications-related services, requires a customers’ knowing consent in the form of notice and opt-out approval. Carriers have the choice to use either opt-in or opt-out in this context.

- **Opt-In** Disclosure of CPNI to unrelated third parties or to carrier affiliates that do not provide communications-related services require express customer consent, or opt-in approval.

In adopting this Order, the FCC also clarified A) how customer notification of CPNI rights would be disseminated; B) that the Order regarding customer consent does not apply to PIC-freeze activity; C) that the word “information” in section 272 of the Telecom Act does not include CPNI, which instead is governed by section 222 of the Telecom Act; and D) that the Court decision only vacated the previous FCC rules regarding opting-in, leaving the remainder of the FCC rules intact.

**Adelstein Nomination Moving Swiftly**

After a series of politically motivated delays, the nomination of Jonathan Adelstein as FCC Commissioner is moving swiftly and almost uneventfully to what should be an easy confirmation. Jonathan Adelstein is currently a senior advisor and telecommunications policy advisor to Senate Majority Leader Tom Daschle (D., S.D.).

Initially scheduled to be nominated in November 2001 to replace Commissioner Gloria Tristani, Mr. Adelstein’s nomination was held up over issues involving the nomination and confirmation of a judge. However, in a deal worked out in June and early July, Republicans indicated they would allow the nomination of Mr. Adelstein for a number of judges’ confirmations. This deal has been delayed somewhat by Senator McCain’s (R., AZ) insistence that his choice for a recess appointment to the Federal Election Commission be approved. However, Senator Daschle is currently using procedural measures to work around Senator McCain’s tactics.

According to *Telecom Reports-Daily*, Mr. Adelstein’s July 17th confirmation hearing in the Senate proceeded well. With Mr. Adelstein being considered a noncontroversial figure, Senators asked the candidate relatively simple questions. Mr. Adelstein’s responses were well-thought and noncontroversial as well. If all proceeds as planned, Adelstein could be confirmed by the time this article goes to print.

**Industry Group Promotes Alternate Plan for Non-Initialized Cellphones**

On July 19, the Alliance for Telecommunications Industry Solutions (ATIS) asked the FCC to consider implementing its proposal for identifying E911 calls from non-initialized cellphones rather than using the FCC’s proposal.

The FCC had issued an Order mandating the code “123-456-7890” be used for notification that an E911 call is being placed from a non-initialized cell phone (so the Public Safety Answering Point -PSAP, dispatcher would know that a callback is not possible, and that every effort should be made to get the location information from the caller). However, the telecommunications industry group, through its Emergency Services Interconnection Forum (ESIF), has supported a code of “911” and the last seven digits of a handset’s electronic serial number (ESN) or its international equivalent.

**Monopoly/Oligopoly Environment Ahead for Telecom?**

With the financial downturn of telecom companies and the debacle of WorldCom fresh on everyone’s minds at the ACUTA annual conference, discussion turned towards the potential for a literal re-monopolization of the telecom industry, or at the very least a return to an oligopoly.
In looking toward the future, it's important to review the past, particularly in a cyclical environment such as the telecommunications industry. From the anticompetitive nature of AT&T and interconnect disputes between 1899 and 1913 resulting in an antitrust case, the 1956 Consent Decree, the 1982 Modified Final Judgment, and other suits interspersed through the years, to the suits resulting from the Telecommunications Act of 1996, it appears to be the very nature of the industry for the players to expand and contract.

Recent articles and comments reflect the nature of the discussion involving the shake-out of companies in the telecommunications industry. When FCC Chairman Powell commented that a merger between WorldCom and a Bell Operating Company might be looked upon favorably by the FCC, a number of Congressmen expressed their concern. According to Telecom Reports-Daily, Senator Hollings (D., S.C.) stated, "We've got a terrible drive afoot to remonopolize telecommunications, and it's being assisted materially by the Federal Communications Commission, that has a distinguished chairman over there whose first reaction to WorldCom is to see who can buy them." Chairman Powell's response to all the hoopla was to say the FCC had not changed course, and he mentioned that he was "sort of surprised to the degree that people are paying attention to rhetoric and not record." Network World mentioned that the ACLU even weighed in, citing the potential for just a few large cable companies to control broadband access, stating "freedom of speech doesn't mean much if the forums where that speech takes place are not free."

While the comments above are reflective of the fear that a shake-out could hurt the industry, an article in the July 8 edition of the Washington Post looked at such an evolution to be more a continuation of the cyclical nature of the telecom industry as well as of other industries. Citing comments from several sources, the Post article wondered if the gargantuan nature of the industry as well as its seemingly ever-present appetite for "large sums of money" create an environment more conducive to a monopolistic environment, or at least of an oligopoly. The article used the railroad industry as an example, citing the great expansion of the railroad infrastructure in the late 1800s by a number of competing railroad companies, many of which ended up in bankruptcy due to the glut of providers. The expansion was necessary, but the cost of that expansion was the demise of many of the participants.

The board of directors met on July 13 and July 18, 2002, in conjunction with the annual conference in Reno/Tahoe, Nevada.

On July 13, the board reviewed the audit report for the fiscal year ended Sept. 30, 2001 that was prepared by Dean, Doron and Ford, ACUTA's outside auditors, in detail. The audit report for FY 2000-01 was accepted by the board. (A summary of the audit report was included in the ACUTA annual report, which is posted on the Web and distributed at the annual business meeting.)

The board also discussed and approved the action items in the new strategic plan. (A summary of the new strategic plan was presented to the members at the annual business meeting on July 18, and has been posted on the Web.) The board also received year-end reports from committees, and thanked the committee chairs for their efforts for the past year. The board also thanked outgoing board members Anthony Tanzi and Steve Harward and membership committee chair Frank Ferrara for their service, and thanked outgoing president Maureen Trimm for her outstanding leadership.

The board also discussed one of the "mega issues" from the new strategic plan, ACUTA membership, in depth. Several insights and recommendations were developed. The board plans to examine a mega issue at each of its in-person meetings going forward.

On July 18, the first meeting of the 2002-03 board was held. The board approved committee chair and committee member appointments, and President Jeanne Jansenius announced the appointment of liaisons to the standing committees. The board also approved the continuation of four ad hoc committees/task forces, including the data communications focus group, Web/portal advisory committee, Web site recognition task force, and higher education advisory panel.

Respectfully submitted,
John Bradley
Rensselaer Polytechnic Institute
ACUTA Secretary/Treasurer

eNews: ACUTA Newsletter August 2002 7
Winners, Winners, Winners!

The annual conference can be a profitable experience, not just in terms of education and professional networking. All through the week, attendees have opportunities to win fantastic prizes. At the final presentation, everyone deposits their business card as they enter, and a virtual treasure chest of prizes is dispersed at the close of the session.

This year, the following people took home these great prizes which were donated by our corporate friends as indicated.

Barbara LeDuc, Weber State University
- Cherry wood golf ball collector's case with NEC Invitational Logo (NEC America)
- Colleague 2202 Telephone (Cortelco)
- $50 Olive Garden/Red Lobster Gift Certificate (Matsch Systems)

Kimberly Parker, College of Charleston
- Teledex B220 two-line speakerphone (Teledex)
- Kensington laptop bag (MicroWarehouse)
- 17" color monitor (Professional Computing Resources)

Mike Rosenstein, Kentucky State University
- Polycom soundpoint conference unit (ATL Enterprises)
- Portable CD player (Info Group)
- Colleague 2202 telephone (Cortelco)

Patrick Cronin, Bridgewater State College
- Computer bag/briefcase with accessories (NEC America)
- 900 Megahertz cordless phone (AMTELCO/1Call)
- UMAX AstraCam 1000 digital camera (INFONXX)

Thomas Walsh, Miami University
- Palm m130 handheld (MicroWarehouse)
- Leather portfolio (Compco)

Shirley Pettiford, Rutgers University-Campus at Newark
- 2001 Fliptop computer desk (Spectrum Industries)

Richard Haugerud, University of Nebraska - Lincoln
- One (1) complimentary registration - 2003 ACUTA Annual Conference, Hollywood, FL (ACUTA)

Look in next month's ACUTA e-News for a picture insert from the ACUTA Conference in Reno!
At the annual conference, we recognized the milestone 5-10-15-20-25-30 year memberships. It has become a tradition to list the names of those who celebrate these anniversaries in recognition of their contribution to ACUTA. Thanks to all of you who give so generously of your time and make ACUTA such a powerful voice for higher education communications technology.

20-Year Members
Darel D. Eschbach, Arizona State Univ.
Craig Kontry, Auraria Higher Ed Center
Claire McNicholas, Temple Univ.
David Metz, Compass Consulting Intl, Inc.

15-Year Members
Diane F. Blake, Univ. of CA - Los Angeles
Janice K. Brownlow, Texas Tech Univ.
Rodger Chisman, SE Missouri State Univ.
Paul Costello, Univ. of Miami
Mark Mabe, Missouri Western State College
Jean Richer, Williams College
Leta C. Rolen, West Texas A&M Univ.
Dick Rossi, CA State Univ., Sacramento
JoEllen Schulz, Gustavus Adolphus College
Rae Stevens, Wichita State Univ.

10-Year Members
William H. Baker III, The Univ. of Findlay
Robert A. Buswell, Bowdoin College
Jerome P. DeSanto, Univ. of Scranton
William Gison, College of Eastern Utah
Joseph Gong, Queens College
Thomas Gross, Bowling Green State Univ.
Debra Hedrick, Rogers State Univ.
Thomas L. Horne, UNC, Chapel Hill
Michael Keany, Kingsborough Comm. College
Walter Linne, IUPUI
Brian Loeb, Telesoft Corp.
Diane Metzger, Bucks Co. Comm. College
Duane F. Newton, Bitek, Inc.
Mark S. Norvel, Idaho State Univ.
Stephen Ornstein, Frostburg State Univ.
Marvin J. Peck, Emory Univ.
L.D. Phaup, Jr., Hampden-Sydney College
George Pyo, Saint Francis College
Terry Rockwell, Columbus State Community College
Joe Royer, Anderson Univ.
Walter L. Smith, Lebanon Valley College
Donald Stanze, Univ. of Kansas Med. Ctr
Marvin Taylor, Eastern Oregon Univ.
Dan Webb, Xavier Univ.

5-Year Members
Venus Albanese, Suffolk Univ.
Donna R. Alexander, Univ. of Tampa
Al L. Baggaly, Mercer Univ.
Margaret Baker, Univ. of CA - Berkeley
Barry G. Baker, Delta College
Lloyd M. Ballinger, Gallaudet Univ.
John Barry, Univ. of Rhode Island
Larry Barton, Tex. A&M Univ., Corpus Christi
Paula Blacker, William Rainey Harper College
Beverly Blevins, Miami Univ.
Charles Boyles, Delta State Univ.
Michael Cagle, Tex. A&M Univ., Commerce
Twyla Campbell, Mt. Vernon Nazarene Univ.
Carol Cartwright, Trent Univ.
Marc Catto, San Jose State Univ.
Leo A. Chimo, Ohio Univ.
Dale Chinn, Walla Walla College
Morris Cole, Texas Tech Univ.
Sue Fletcher Comette, Univ. of Vermont 
& State Ag. College
Steve Corbin, Southwestern Oklahoma State Univ.
Jim C. Crain, Central Missouri State Univ.
Joan M. Cyr, MIT
Sandra Daniel, Mills College
Rick Day, Daycom Systems, Inc.
Anthony E. DeGreif, Ithaca College
Victor Diaz, Univ. of Puerto Rico, 
Mayaguez Campus
Joseph Digregorio, Georgia Inst. of Technology
Joseph Douglas, Univ. of Wisc., Milwaukee
Mary Doyle, Washington State Univ.
Kay Dreyer, College of DuPage
Debra Duncan, Texas A&M Univ.
Dan Ellington, Jefferson College
Lynn Engelke, Clark Univ.
Charles Fantroy, Univ. of Nev., Las Vegas
Lawrence T. Farmer, Drew Univ.
Paul Flynn, Boston College
Joe Flynt, Mohawk/CDT
Denise N. Foutz, Appalachian State Univ.
Michael O. Frazier, Denison Univ.
Jamie Gilson, Tarleton State Univ.
Norma Grijalva, New Mexico State Univ.
Connie S. Grimes, College of William and Mary

continued on page 10
Richard C. Hall, UNC, Chapel Hill
Eileen Hallums Broookover, BellSouth
Business Systems
Jeremiah Hanley, CA Polytechnic State Univ.
George H. Hayes, New York Law School
John Hays, Southwestern Okla. State Univ.
Brian Healy, Henkels & McCoy, Inc.
Matt Heinrich, Rockhurst College
Russell Helm, Central Missouri State Univ.
Jack Henderson, Queen's Univ.
Michael Heppner, Univ. of Memphis
John E. Herbert, Alfred State College
Thayne Higgins, Yavapai College
Matt Hoffman, Miami Univ.
Wayne Hunter, SUNY College at Brockport
Lynn Jentzen, Xavier Univ.
Tim Johnston, Portland State Univ.
Jim Jokl, Univ. of Virginia
Bill Klein, Univ. of Kansas
Linda Klosowski, Stony Brook Univ.
Ron Kuny, Univ. of Saskatchewan
George Kuzma, Manhattan College
Kevin Lambert, Intecom Inc.
Ann Marie Lancaster, WTC
Stephen G. Landry, Seton Hall Univ.
Ronald J. Langley, CSU, Bakersfield
Patrick Lepore, Univ. of the Sciences in Philadelphia
Kevin Lint, School of the Art Institute
Dorothy G. Lockard, Dietrick Lockard Group, Inc.
Judith K. Lynch, Univ. of Virginia
Barry Lyons, Morehead State Univ.
Sal Marotta, Univ. of Oklahoma Health Sciences Center
Marsha Maxwell, Bryant College
John McKeigue, Tufts Univ.
Linda S. Meadors, Lander Univ.
Martin Melendez, Univ. of Puerto Rico, Mayaguez Campus
Terry Meredith, Southern Illinois Univ., Edwardsville
Pauline Merrick, Providence College
Kathy Merritt, SUNY College at Oswego
Dan Metz, Indiana Wesleyan Univ.
Jeff Michie, Univ. of Northern Colorado
Marcia Moore, College of Charleston
Sarah Mosley, Delta State Univ.
John K. Mullin, Georgia Inst. of Technology
Karen Murdzak, Edinboro Univ. of Pennsylvania
Alexander A. Neris, Neris Telecommunications Group
Terry O'Callaghan, Univ. of Nebraska Medical Center
Carlos Olivencia-Vazquez, Univ. of Puerto Rico, Mayaguez Campus
Ken Orgill, West Virginia Univ.
Gary Ott, Wichita State Univ.
Terry Oxendine, UNC, Pembroke
Carol Parkhurst, Univ. of Nevada, Reno
Marlene Parks, Univ. of Nevada, Reno
Anthony Parra, New Mexico State Univ.
Linda K. Passauer, Slippery Rock Univ.
Ronald D. Pau, McGill Univ.
Jo Ann Pearson, UNC, Pembroke
Geri Phelan, San Jose State Univ.
Thomas Phillip, Concordia Univ. Wisconsin
Marinda M. Phillips, Mississippi State Univ.
Jeannene K. Plambeck, Metropolitan Community College
Larry Prelog, Andrews Univ.
Ivette Puga, Florida Atlantic Univ.
Samuel Pulelo, Indiana Univ. of Pennsylvania
Betsy Pursh, Carnegie-Mellon Univ.
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James T. Snyder, Stetson Univ.
Kenneth Splittgerber, Univ. of Wisconsin, Oshkosh
John V. Stevens, Shenandoah Univ.
James K. Straub, Univ. of Colorado, Denver
Brian S. Sutton, Univ. of Tampa
Richard Thompson, Univ. of Pittsburgh
Bernd Walter, Seton Hall Univ.
Michael Walters, Laramie Co. Community College
Mark R. Weisler, San Jose State Univ.
Pat Wilks-Simoneaux, Tulane Univ.
Jeff Williams, Georgia Southern Univ.
Michael Williamson, Springfield College
Gordon D. Wishon, Univ. of Notre Dame
Welcome New Members

Institutional Members

Bowdoin College, Brunswick, ME
Charles Banks, 207/725-3785. T1 ....................... www.bowdoin.edu

Pacific Lutheran University, Tacoma, WA
David Moylan, 253/535-7525. T2 ....................... www.plu.edu

West Virginia Northern Community College, Wheeling, WV
Dr. John Jones, 304/233-5900. T1 ....................... www.northern.wvnet.edu

Corporate Affiliate Members

Copper Members

Formare Technica, Ltd., Tigard, OR
John Curalti, 503/345-9260 ......................... www.formare-technica.com

At Formare Technica, Ltd., we endeavor to be viewed by our peers within the construction and communication industries, as the global leader in advanced communication technology solutions in newly constructed or renovated space.

Glumac International, Sacramento, CA
Michael O'Neill, 916/362-9394 ......................... www.glumac.com
Glumac provides a comprehensive approach to telecom design with a complete array of electrical/mechanical services covering all aspects of building systems planning and design. Telecom service offerings provide a unique cost-effective approach to complete infrastructure planning and design.

PWR, LLC, Syracuse, NY
James Allen, 585/419-0052 ......................... www.pwrlc.com
PWR offers DC Power products, installation service, and engineering support. PWR provides years of expertise in consulting and project management for new builds, site audits, "hotworks," DC power installation, DC maintenance, and battery testing. PWR dedicates to each project a technical design person, project manager, and lead installer.

In the July e-News, we inadvertently listed incorrect information for two of our new corporate members.

- The correct telephone number for Dana Fisk at Desi Telephone Labels, Inc., is 800/814-3922.
- The correct URL for Technical Design Services’s Web site is www.tdsinc.biz.

We apologize to these corporate members and our readers.

Oops! We Goofed!

ACUTA EVENTS

Fall Seminars
Oct. 20-23, 2002
Denver, CO
Marriott City Center

Winter Seminars
January 12-15, 2003
Tempe, AZ
Wyndham Buttes Resort

Spring Seminars
April 27-30, 2003
Norfolk, VA
Sheraton Norfolk Waterside

32nd Annual Conference & Exhibition
Hollywood, Florida
Westin Diplomat Resort & Spa