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The video highway on the electronic campus: Students like high tech options at NMSU

Mike Grudzinski
Northwest Missouri State University

Northwest Missouri State University's commitment to providing students the best in telecommunications dates back to 1960 when the first of two campus radio stations began "broadcasting" to the residence halls through transmitters set up in the basement of each residence hall; to 1980 when every residence hall room was wired for the Campus Cable System; through today when students have satellites, videodiscs, and the Internet all at their fingertips. Although many facets of this dynamic telecommunications system were created separately, Northwest has been able to link them together through a centralized computer system accessible to everyone on campus. This computer system is the backbone of the campus, and is Northwest's on-ramp to the Information Highway.

In 1986 Northwest created the first publicly funded electronic campus which placed a computer terminal in every residence hall room, professor's office, and staff office. Everyone is connected to a VAX mainframe computer and shares the same word processing and spreadsheet software, as well as many other on-line items including: campus newspaper; computer user's guide; student and faculty phone books; undergraduate catalog; class openings; class registration; upcoming campus events; student transcripts; student bills; Student Senate elections; a campus-wide polling mechanism; library holdings and encyclopedias; and a video jukebox, just to name a few. (Telephone and computer repair orders are also placed onto the VAX so repair personnel can check for new repairs at any time and a permanent record of repair calls is automatically created.)

The video jukebox was Northwest's first venture into linking people, computers, video, and cable television all together. The video jukebox is a laser disc player which is accessed through the VAX computer and played over a channel on "Meet-Me" audio conferencing expands distance learning at Mississippi State

Dr. Kathleen C. Olivieri
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With the decline in the number of traditional students in higher education, the increase in the number of "non-traditional" students, the competition for depleting resources, and the availability of new technologies, institutions are turning to distance learning to provide educational opportunities to students. Distance learning is a broad term that applies to a learning situation in which there is a physical separation between the learners and the teacher. By utilizing advanced technology, students can learn at a distance—away from the campus—with minimum disruption to career and family lifestyles. Distance learning also helps the educational institution expand course offerings, offer classes that traditionally have lower enrollments, enhance the ability to serve students in a cost-effective manner, and serve students who are not able to attend classes on campus.

Cutting edge technology offers a variety of delivery systems which include satellite, microwave, fiber optic networks, compressed video networks, videotape, audio conferencing, computer conferencing, print, or a combination of systems. The trend in distance learning is to utilize the high end (and high cost) video-based

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See "Meet-Me" audio conferencing at MSU... on page 5

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Board Report

ACUTA Board approves TAC reciprocal fee proposal

The ACUTA Board approved the Telecommunications Association Council (TAC) proposal that member associations offer reciprocal registration at events at member rates. If endorsed by all TAC member associations at their September meeting, the agreement will allow ACUTA members to attend events sponsored by other TAC associations at member rates. The following is a list of TAC association members:

- CBTA Canadian Business Telecomm. Alliance
- CMA Communications Managers Association
- ENTELEC Energy, Telecomm. & Electrical Assoc.
- ICA International Communications Assoc.
- INTUG International Telecomm. User Group
- MTC Mid-Western Telecomm. Conference
- PTC Pacific Telecommunications Council
- SETA Southeastern Telecomm. Association
- TCA Tele-Communications Association
- TMA Telecommunications Manager's Assoc.
- NASTD Natl. Assoc. of State Telecomm. Directors

Other items on the agenda included:
- Orlando Annual Conference planning
- 25th Anniversary Committee
- FY95-96 ACUTA budget development
- Institutional Excellence Award nominations
- Electronic access project update
- Nominations and elections
- Publication of Member Needs Assessment report
- Future ACUTA seminar sites and topics
- Annual Conference vendor track
- Strategic Plan update

Submitted by
Dr. James Cross, Michigan Tech
ACUTA Secretary/Treasurer

Host needed for Fall Seminars in Fort Worth

The Worthington Hotel in Fort Worth, Texas will be the site of ACUTA's Fall Seminars October 29–November 1. For several years area schools have participated as hosts, providing information to attendees about the area during the event.

This is an excellent opportunity for members to make a valuable contribution to the success of the event.

The primary responsibility of the host school is to familiarize attendees and their families or guests with the location of the event, providing information about the immediate area and local points of interest. To accomplish this, the host school provides staff at a table or booth at the Sunday evening reception and during coffee breaks at the Seminar. Some hosts have held drawings for mugs, T-shirts, and other campus-related items as prizes for those who come by the booth and register.

In addition to the duties during the Seminar, the host also works with the ACUTA staff to prepare two letters, one to be sent to potential attendees and a "welcome" letter for attendees.

The Board has authorized one complimentary registration to the event for which a school serves as a host.

If you are interested in serving as the host in Fort Worth, please contact Lisa Cheshire in the ACUTA office by June 28.
"Technology availability does not equal technology adoption."
—Dr. Michael Elasmar
Boston Univ.

Does that statement ring true on your campus? How many times has your campus focused on the technology itself rather than the application (or content) of the technology?

More and more, I've observed what is best described as a "race" for the Information Highway, with participants getting caught up in the installation of technology only for technology's sake. You've all seen the campus "champion" of some pet project, with eyes only on the marketability of being able to boast, "We've implemented (fill in the blank)." How many times can that champion brag about how the technology actually changed a process? I call this the "Big Splash" theory. And believe me, there is plenty of potential for leaving a lot of people all wet.

Yes, we all care about technology and the potential it holds for our society. Why? Because of the productivity gains, and the enhanced competitive position it affords us. At one time or another, haven't we all repeated the mantra of how implementing (pick one) long distance, voice mail, or local area network connections for students keeps our campus competitive?

Let me suggest, however, that real productivity gains don't come from just overlaying technology onto the way things are done now. Real productivity gains occur when we utilize technology to do business differently.

I have this reinforced occasionally when I hear, "The technology is the easy part!" While on the surface that remark may offend my sense of reality (at least as a technology professional), it also contains more than a grain of truth.

Want proof? How many college/university upper level administrators (yes, I mean Presidents, Provosts, and Deans) are comfortable using a PC—let alone surfing the Internet, or using a voice mail distribution list? How many Colleges of Education are preparing our future teachers with instruction in multimedia, or making them comfortable in front of a camera? How many professional educators have embraced technology to the point of bringing it into their classroom?

Maybe what I've done is merely magnify some weaknesses in implementation; specifically training. Nevertheless, I'm convinced that technologically we're far beyond where we need to be sociologically. Worse, the technology is advancing at such a rapid pace that even catching up will prove to be problematic.

Which of the old "push/pull" forces is at work on your campus? Without totally reprising Marketing 101, are you implementing technology to create demand for your educational services? Or is demand for your educational services creating the need to implement technology? (HINT: There is no "right" answer!)

However, I am convinced that if implementation of technology is meeting some demand, then there is a predisposition by the user to embrace the enabling technology. Hence, the gap between technological and sociological factors is narrowed. I keep hearing the Anyone...Anywhere...Anytime theory of access to the services our campuses offer. While I believe this is a worthwhile objective, I also believe that we need to be pragmatic about overcoming the gap between technological and sociological factors. It's that gap (and how wide it is) that will ultimately decide our success.

P.S. By the time you read this, many of you will have already made your reservations for ACUTA's 24th Annual Conference. It's been a revelation to me just how many decisions there are to be made when planning this event. Evaluating responses to the "Call for Presentations" is just the tip of the iceberg. Jan Weller and the Program Committee have worked really hard to put together a top-notch program. We've also tried to include plenty of time for the informal networking that is ACUTA's trademark. You might even be able to engage in more philosophical responses to the above discussion.

If you haven't already, I encourage you to take a long hard look at the Conference materials, and make a concerted effort to join us in Orlando. I know you won't be disappointed.

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Charles Co. Community College’s telecommuting project aims to recolonize community

Michelle Brosco
Public Relations Officer
Charles County Community College

Cheryl Ruf, a computer specialist for the U.S. Department of Agriculture, is like many of her neighbors in Charles County, Maryland. She is a road warrior. Each workday she joins two of every three Charles County workers struggling north toward jobs in and around Washington, D.C. Ruf’s 35-mile morning commute is at least a 90-minute adventure. And it’s worse coming home in the afternoon.

Last April, Ruf managed to reduce her trip to 10 minutes each way. Every Monday and Thursday she works at the Waldorf InTeleWorkCenter, a learning laboratory on telecommuting centers operated by Charles County Community College.

The project, funded by the U.S. Congress, seeks to develop prototype components that will help produce successful telework centers. These components include innovative orientation and training packages, a business plan that looks at the economic implications of distance work, and an analysis of emerging technologies. The program includes the Waldorf center and two others to be opened in the near future in neighboring Calvert and St. Mary’s Counties. The three jurisdictions make up the fastest growing region in Maryland.

“Telecommuting centers have to work,” CCCC President John Sine says. “The cost in time and money of getting our citizens to their work is becoming too great. And the cost of having a large portion of our populace not be able to be a part of their community might be even greater.”

Telecommuting centers are an opportunity to “recolonize” our communities, Sine says. “Too many of our citizens merely sleep here. They are at work or on the road 12 or more hours a day. They have little chance to visit their child’s school, the public library, or their local community college. They live in Southern Maryland because of its promise of a better life. But that promise is being lost on the road to work. And with growing population, it is getting worse. Something’s got to give.”

Telecommuting in effect attempts to bring work to workers rather than our historic pattern of bringing workers to the work. As the Industrial Age ends and new information tools are becoming available, there is no longer a need to centralize work. In fact, there are some compelling reasons to decentralize it.

Proponents of telecommuting point to a long list of potential benefits. Improved air quality and transportation capacity are obvious benefits. Others point to reductions in workplace costs. Some emphasize worker benefits and family-friendly impacts. Others cite local economic development benefits.

While all these are valid, Sine says that no single benefit is powerful enough to win the day. “But if you care about all of these things, and you care about the well-being and effectiveness of the worker, about enhancing a workforce, then telecommuting centers become very compelling for the community they serve. We see this primarily as a community development project,” he said. “Yes, telework centers can make small steps at improving traffic and reducing workspace costs. But they can take giant steps toward redefining how a community works, learns, and interacts.”

Getting started

In 1992, Congress heard testimony that presented three truths: telecommuting centers held great promise for benefiting the nation; telecommuting centers were particularly well suited to the federal government; and telecommuting centers unfortunately had enjoyed limited success.

Discussion between Sine and Rep. Steny Royer and others led to a Congressional appropriation of $6 million to set up a demonstration project of six telecommuting centers around Washington, D.C. including the three Southern Maryland sites. CCCC, which has campuses in all three southern Maryland counties, would operate centers in each and would develop the training and business planning that were seen as keys to overcoming success barriers.

All too often, telecommuting centers have fatal flaws. They are misplaced, mismarketed, or under-resourced. Centers around Los Angeles received a lot of publicity as they responded to the earthquake. Unfortunately, when the roads reopened, the centers reportedly emptied out.

Today 55 federal workers share 14 workstations in Waldorf, the population center of Charles County. Plans call for an expansion to 24 seats. More than 50 seats are anticipated in Calvert and St. Mary’s counties, which means that more than 200 southern Maryland workers could be participating. The U.S. General Services Administration is operating centers in Hagerstown, MD, and in Winchester and Fredericksburg, VA. The demonstration is scheduled to end September 30, 1996.

Making government work better and cost less

Ultimately, successful telecommuting centers are expected to be a major component of the reinvention of the federal government that Vice
Audio conferencing at MSU

Continued from page 1

delivery such as satellite, fiber optics, and compressed video networks. But if the cutting edge has been applied to your budget, high technology may be beyond your reach.

Audio conferencing (low end and low cost) is a viable option for many distance learning situations, and has become the forgotten voice among distance learning technologies. While two-way interactive video is thrilling, audio conferencing meets a real need of the students and is inexpensive. Many applications do not need the glitz and glamour that two-way video offers. Audio conferencing should be recognized not only as an excellent solution to distance learning needs, but also as a source of revenue for telecommunication departments.

A lesson learned

Mississippi State University (MSU) has been involved with distance learning since 1989 offering credit courses and professional development workshops by satellite, Mississippi Fibernet 2000 (a two-way audio and video fiber optic network connecting high schools and resource centers), the Community College Network (a two-way audio and video compressed video network connecting community colleges, the University Medical Center, and MSU), videotape, Internet, audio tape, and print. However, MSU was not fully utilizing an exciting studio technology on campus.

This spring, MSU delivered by satellite and a one-way video network an 11-week human resource management class to BellSouth employees at 16 locations in eight states. The instructor wanted students to be able to talk with each other at the same time, but were not certain how to accomplish that cost effectively. When MSU’s Telecommunication Department was contacted about setting up a 1-800 number for student calls, they suggested we utilize the Meet-Me Conferencing system. Although we were aware of the Meet-Me Conferences, we had never thought of combining it with other technologies in a distance learning environment. The Meet-Me Conferencing system became an important ingredient to the class and also taught me a lesson: Know the resources on your campus and be creative with their applications.

Educational uses of audio conferencing

If there are two-way interactive networks and satellite technology available for distance learning, why should audio conferencing be considered? Don’t students and teachers prefer a more visual medium? When designing a distance learning program, the delivery medium is dictated by the instructional format, course level, course content, and the location and demographics of the students. Audio conference based classes are well suited to facilitate interaction with lecture, seminar, and roundtable discussion formats. Students usually adapt well to audio conferencing because of simplicity of the system and the availability of telephone technology.

Audio conferencing is also attractive because it is portable, low in cost, easy to use, dependable and flexible, easily integrated with other media, highly interactive, and cost effective for rural students in locations not served by interactive network sites and satellite downlinks. Remember, technology does not dictate the content; rather it dictates the technology.

Internal marketing

Telecommunication departments have a marvelous product that is becoming the best kept secret on campus: audio conferencing. Many telecommunication departments are making the mistake of not informing key personnel who work with distance learning about the advantages of utilizing audio conferencing with other delivery media or by itself. When a new system or piece of equipment is installed, send a brochure or hold a workshop describing the system and how it can assist faculty, staff, and students. Most colleges with effective audio conference programs have done an expert job of internal marketing. Key distance learning personnel must stay informed of the viability and effectiveness of audio conferencing technology.

Conclusion

The net effect of distance learning is tremendous growth in higher education. Once an overlooked technology, audio conferencing is now considered a viable option. However, telecommunication departments must not rely on the status quo for delivering services to their clients. Audio conferencing must be marketed by telecommunication departments so it may be embraced by distance learning professionals. In the end, the true beneficiary of audio conferencing will be the students who are receiving credit courses or workshops that otherwise would not be available. Telecommunications is an essential component of distance learning, and key distance learning personnel rely on telecommunication departments for creative solutions in delivering quality programming to students at a distance.

What’s a “Meet-Me” conference?

A meet-me conference is an audio conference arrangement in which conference participants dial a pre-assigned conference directory number to join other conferrees. Long distance toll charges are normally paid by each conference participant. The use of a toll-free (800) number as a meet-me conference directory number allows the conferrees to dial into the conference on a toll-free basis and usually results in lower call charges to the party(ies) financially responsible for the conference.

—Mike Lane
Director, Telecommunications
Mississippi State University
The changing face of Brock's campus ID card

Bruce McCormack
Brock University

ID cards have evolved from a Polaroid in a pouch with a punched picture to a digitally stored and produced image. While the cards were used initially at Brock for student identification at exams and for library privileges, technology has made them increasingly universal.

Card technology meets many needs

Today's technological convenience has had a price. With the advent of the microcomputer chip and microcomputers on campus, the need for security became a significant issue. Labs located on the perimeters of campus buildings allowed people to walk out with equipment easily and quickly. When the small, attractive computers in labs became the objects of petty pilfering, we had to implement some form of security. We considered employing a technical assistant, which might mean labs would not be open when students needed them; physically tying down the equipment with some type of locking device; and controlling access with a device that would leave an audit trail.

Several departments opted for the security card. Systems using magnetic stripe and Wiegand technology were not overly expensive to install. However, those systems became increasingly expensive to maintain with the cost of replacement cards and keys skyrocketing.

Another card system was introduced in 1990, when Brock initiated a parking system using card access for a small number of faculty and staff. This system was controlled by the vendor, and any changes were initiated at that level.

At the same time, residential students were using ID cards for their meal plans in the cafeterias at Brock. This card was punched to indicate meals obtained by the student.

One card, many functions

Looking at the need for a more versatile student ID card, Communications Services was charged with finding a suitable alternative. The logical move was to collapse all the different cards and systems on campus into one multipurpose card facility, operated and maintained by Communications Services for the University community.

There were four mandates for the new card: It must be fast and inexpensive to produce. It must be difficult to counterfeit. And it must use open standards. (We decided to use the American Bankers Association track 2 standard which defines the size and shape of the card and the number and position of tracks and location on the card. This standard is used on all credit cards and encoding equipment was readily available.)

At Brock, ID cards have been the responsibility of Communications since 1971 when the original card cost approximately $2. As the evolution of the card on campus progressed, a three-part laminate with a cutout photograph was used. In keeping with the open system philosophy (which meant we weren't locked into any one manufacturer), we opted for the ISO standard for credit cards as a guideline for the physical dimensions and magnetic stripe. The plastic blanks with the University logo cost approximately 40¢ each, which met the first of our objectives.

With a student base of 10,000 and only a three-day fall registration period, it was imperative that a single card be produced in under 30 seconds. Three methods of printing and image storage were considered: laser, dot matrix color and dot matrix black and white. The first method of production was fast enough, but achieving optimum performance required printing six IDs at a time and three-part lamination. Of the other two methods, dot matrix black and white required a third less time to produce and required less than a third of the storage capacity.

In the past, counterfeiting had been a problem with some of the high school students producing a good facsimile of the University ID card. To this end, only blanks with the University logo were stored and any new cards for students were produced when required. The magnetic stripe is unique to the card and not to a specific student or student number. Software for the mag number was readily available as a shareware package, which enabled encoding of the stripe to take place as the student image and information was printed and stored.

After consultation with potential card users and vendors, a system was purchased in the summer of 1992 with an implementation date of fall 1992. All the information in each area served—library, parking, meals, etc.—would reside on a central server. As this particular system had never been networked before, the first challenge was to network two systems consisting of two 486 PCs with video compression cards connected to a 486 server via 10BaseT ethernet lines. Networking was important as the ID production took place in a number of areas on campus.

During the first registration it became apparent that due to the size of the database and the type of ethernet card, ID production was too slow. (Beware of demonstrations with just one machine and small databases.) Everyone concerned during that first year experienced a certain amount of frustration with speed of processing and card wear.

While increasing production speed was a matter of fine tuning the hardware and software, wear...
Telecom legislation is now under consideration in both the Senate and House. Senate bill S652 had not been on the floor for a Senate vote as of May 15, but some expected it to be before Memorial Day. The House bill, H1555, was introduced early in May by the Commerce Committee Chairman Bliley, Telecommunications Subcommittee Chairman Fields, and ranking Democrat Dingell. This House bill is referred to as the Communications Act of 1995, and is just getting started through the committee process. It seems that the Justice Department is not very happy with H1555 since it relies on the FCC, and not the Justice Department, to determine when the telephone companies can enter into business ventures that they are not allowed in today.

Then there was another bill introduced one day ahead of H1555 by Rep. Hyde, which is the proposed Antitrust Consent Decree Reform Act of 1995, H1528. This bill favors Justice ruling of RHC market entry. If this is not confusing enough, remember that early in this Congressional session Reps. Dingell, Markey, and Conyers introduced H411 which is similar to the bill that was passed by the House last session. An interesting note from the Congressional Budget Office indicates that if enacted, S652 would cost industry an additional $7.1 billion over the next five years to comply with the bill’s universal service requirements. Only time will tell where things go from here. There will be a lot of discussion and changes made in both chambers before a bill finally goes to the President. (Source for this information was Telecommunications Reports, 5/1, 5/8, and 5/15.)

The FCC’s Hearing Aid Compatibility Negotiated Rulemaking Committee (HAC Committee) has been formed and the ACUTA nominee was not selected as a committee member. There are 19 organizations represented on the committee. They have been meeting weekly since mid April and are scheduled to continue until June 13. ACUTA’s interests have been noted by the FCC and the Reg/Leg committee is in contact with at least one of the organizations on the committee to try to get our needs considered.

E911 is still under consideration. One of the items under discussion is the need to identify the actual location of the cellular phone used to call to E911. The technology is here! Ford Motor Company’s Lincoln-Mercury Division will offer a cellular phone type option in some 1996 Lincolns. By the push of the proper button on the console, service, including medical aid if needed, will be sent to the actual location of the automobile. (TR, 5/1)

A special clinical epidemiology protocol has been approved to study whether cellular telephones interfere with cardiac pacemakers. Clinical sites for testing include the Mayo Clinic, Mt. Sinai Hospital in Miami, and the George Washington Medical Center in Washington. The digital cellular phones are considered to cause more interference than analog phones. Both types are to be studied.

The May issue of Telecom & Network Security Review (TNSR) mentions a long call problem. They indicate that often the cause is an old modem that is plugged up with dirt, dust, and grime. The long call can also be caused by hackers who have taken over the trunk. An article in the April issue of TNSR recommends that telephone system users like ACUTA members make sure that the IXC’s security department has a current list of names and phone numbers of the key telecom staff member(s) at your university to contact in case toll fraud and/or abuse is discovered involving your trunks.

Brock’s campus ID card...

Continued from page 6 was one problem we had not anticipated. With some cards used 10 to 15 times a day, the plastic simply wore out. The remedy was to place an adhesive clear plastic layer on the face of the card. Since this remedy was instituted, very few ID cards have been returned.

The success of the project can be judged by the number of new areas in which the card is used. These included security, parking, meal plans, and access control. The departments have expanded from one to eight, and all faculty/staff and students use the card on an almost daily basis. Another indicator of success: Food service revenue has increased almost 40% in the two years since we implemented the card.

Any reluctance to buy into the new system due to skepticism or feelings of territoriality on the part of a department has been overcome by the reliability of the system.

There is no limit to future use for campus ID cards. For example, we are considering such areas as the bookstore, employee benefit programs, and telephone debit card.

Now that we have a handle on the keys to success—speed of production, durability, and convenience—card technology is proving to be one realistic resolution for the dilemma of doing more with less.
the campus cable system. Students and faculty may request videos to play, but student requests are played on a first-come, first-served basis while faculty may schedule a video to play at a certain time on a certain day (which supersedes student requests). This is not a closed-circuit playback system; everyone who is watching the jukebox channel on the campus cable system will see the selected videodisc being played. Although jukebox usage remains high and several new videodiscs are added each year, Northwest wanted to give their students an even more dynamic selection of video learning resources.

In January, 1994, four 12-foot steerable C/Ku satellite dishes were installed. Three channels were added to the campus cable system from three of the dishes (leaving one to record programs for which it was not permissible to broadcast the signal over a campus cable system). Northwest also wired more than 70 classrooms on campus for cable. This allows faculty and students to watch satellite programming live in the classroom, or students may watch the programming from their residence hall rooms. When the satellites are not being used to bring in teleconferences, they “default” to academically stimulating channels: SCOLA (news from around the world in its native language); Mind Extension University (America’s electronic campus); and NASA Select (NASA programming).

Three additional satellite dishes have already been installed in anticipation of digital satellite reception. One General Instruments DSR-2200 was also purchased and Northwest is currently receiving digital PBS feeds. Northwest is also researching the new 18' satellite dishes and is experimenting with connecting multiple receivers to one dish.

Northwest also currently has several other telecommunications projects under development. The first is Video Access via telephone and television. Northwest recently purchased three telephone remote controls for three additional VCRs, and three additional channels will be added to the campus cable system as well. This will give faculty “control” over a cable channel as they will dial a special telephone number and then be able to play, rewind, or fast forward a previously loaded videotape. The VCR is controlled by touching corresponding numbers on a touch-tone phone (e.g., 7 [P] is used to play a tape, etc.).

Another project under development is a wireless desktop videoconferencing system which utilizes a spread spectrum signal. The pilot project includes linking Northwest to the local technical high school (about one mile away), and to a local manufacturing plant (about two miles away). Successful tests were also completed with sites five miles away.

Closely tied into Northwest’s telecommunications system is a recently developed faculty multimedia program. This program, coupled with the years of experience Northwest has in providing computing services, puts Northwest on the cutting edge of joining the video information highway. This multimedia effort includes giving Macintosh PowerBook computers (loaded with Aldus Persuasion software) and In-Focus Lite Pro LCD projectors to eight professors on campus to use for classroom multimedia presentations. Support is provided by the Coordinator for Satellite Video who has a Macintosh Quadra 800 which has a Video Spigot for digitizing QuickTime™ Movies (short video clips which are saved as a file on the hard drive), and a color scanner for capturing still images. The CFSV also creates multimedia presentations for non-project faculty and staff who are presenting at conferences, and has a checkout PowerBook and LCD projector available for them.

While in only its second year, this multimedia program is quite popular with both students and faculty. Students like the fact that note taking has been made easier (no more trying to decipher professors’ handwriting); multiple-sectioned classes now all get the same notes; and professors tend to be more organized. Faculty like it for the software is very easy to use; it is easier to teach a multiple-sectioned class because you know the same material is covered in each; and once a lecture is created and saved it may be used again the next semester with only slight modifications. This program will most definitely be expanded to include substantially more faculty in the near future.

In the 35 years since those first transmitters were installed in the Northwest residence halls, the telecommunications revolution has changed the way we all deal with and feel about information. What will the next 35 years bring? No one can even guess, but with this kind of advanced thinking, NMSU will be leading the charge to get their students licensed for the Video Highway.

Editor’s note: This material is a summary of the presentation given by Mike Grudzinski, Dave Sherry, and Rich Slaten at the ACUTA Spring Seminar in Kansas City.

Blocking exits on the Internet

SurfWatch Software Inc. has developed a software program which allows Internet users to block sexually explicit material and other objectionable content, such as bomb-making manuals and anti-democracy propaganda. SurfWatch is one of several firms developing tools to filter electronic files, trying to keep the desktop in the office out of the dark alleys on the Internet.
the campus cable system. Students and faculty may request videos to play, but student requests are played on a first-come, first-served basis while faculty may schedule a video to play at a certain time on a certain day (which supersedes student requests). This is a not a closed-circuit playback system; everyone who is watching the jukebox channel on the campus cable system will see the selected videodisc being played. Although jukebox usage remains high and several new videodiscs are added each year, Northwest wanted to give their students an even more dynamic selection of video learning resources.

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Under development is a wireless teleconferencing system which utilizes an ISM frequency. The pilot project involves connecting Northwest to the local technical college, which is only one mile away, and to a local Friday Night Football game (about two miles away), and to the ACUTA Spring Seminar in Kansas City.

Closely tied into Northwest’s telecommunications system is a recently developed faculty multimedia program. This program, coupled with the years of experience Northwest has in providing computing services, puts Northwest on the cutting edge of joining the video information highway. This multimedia effort includes providing Macintosh PowerBook computers (loaded with Aldus Persuasion software) and In-Focus Lite Pro LCD projectors to eight professors on campus to use for classroom multimedia presentations. Support is provided by the Coordinator for Satellite Video who has a Macintosh Quadra 800 which has a Video Spiogt for digitizing QuickTime™ Movies (short video clips which are saved as a file on the hard drive), and a color scanner for capturing still images. The CFV also creates multimedia presentations for non-project faculty and staff who are presenting at conferences, and has a checkout PowerBook and LCD projector available for them.

While in only its second year, this multimedia program is quite popular with both students and faculty. Students like the fact that note taking has been made easier (no more trying to decipher professors’ handwriting); multiple-sectioned classes now all get the same notes; and professors tend to be more organized. Faculty like it for the software is very easy to use; it is easier to teach a multiple-sectioned class because you know the same material is covered in each; and once a lecture is created and saved it may be used again the next semester with only slight modifications. This program will most definitely be expanded to include substantially more faculty in the near future.

In the 35 years since those first transmitters were installed in the Northwest residence halls, the telecommunications revolution has changed the way we all deal with and feel about information. What will the next 35 years bring? No one can even guess, but with this kind of advanced thinking, NMSU will be leading the charge to get their students licensed for the Video Highway.

Editor’s note: This material is a summary of the presentation given by Mike Grudzinski, Dave Sherry, and Rich Sluten at the ACUTA Spring Seminar in Kansas City.

Blocking exits on the Internet

SurfWatch Software Inc. has developed a software program which allows Internet users to block sexually explicit material and other objectionable content, such as bomb-making manuals and anti-democracy propaganda. SurfWatch is one of several firms developing tools to filter electronic files, trying to keep the desktop in the office out of the dark alleys on the Internet.
Michigan coalition to reinvent information education

The University of Michigan’s School of Information and Library Studies (SILS), with the W.K. Kellogg Foundation, has formed the Kellogg Coalition on Reinventing Information Science, Technology, and Library Education (CRISTAL-ED). Under the five-year project, SILS hopes to radically change its instructional program, using an international, multidisciplinary consortium of schools to define new professional specializations focusing on information access and use. SILS has started a moderated listserv on the subject; subscribe by sending e-mail to majordomo@sil.s.umn.edu with the message: subscribe cristal-ed. Web home page: http://sils.umn.edu/publications/ CRISTAL-ED/Kellogg-HomePage.html

Univ. of Michigan is represented at ACUTA events by C. Stephen Mayo.

Marquette University identifies Web guidelines

Marquette University employees are working on developing the official University home page and guidelines for other home pages to link to it. Certain base expectations have already been identified: assure accuracy of all information, maintain currency of the information, guarantee availability on a 7/24 basis, determine continuing support of the server, and develop the page content to support the University’s mission. Use of the Marquette logo or text using the University name requires prior approval and constitutes a publication under current definitions. [MarqConnections, March 1995]

ACUTA rep at Marquette is Dawn Lotz.

USC developing multimedia database for LA community

A 12-member University of Southern California team has initiated a unique community resource: the first database dedicated exclusively to the history, geography, geography, economics, sociology, and culture of a single city. The Information System for Los Angeles (ISLA) will plot a collection of images and information on a revolutionary grid system which allows researchers to connect historic resources for the city with the sites they describe. A World Wide Web-based demonstration version should be available next month. Contact: Meg Sullivan, meg_sullivan@skymir.usc.edu

Alvin Hopkins is USC’s ACUTA rep.

Bucknell boosts help desk use through marketing

A Help Desk Improvement Team from Bucknell University’s Computer and Communication Services reports that the number of phone calls to the Help Desk almost doubled for comparable end-of-year time periods between 1993 and 1994, with calls from departments increasing fourfold. Publicity efforts included key chains distributed to first-year students with their room keys; brochures given to the Bucknell community at the beginning of the academic year; workshops; and customized screen savers, stickers, and mousepads which were distributed with new computers in offices. [Bucknell’s Insync, March, 1995]

ACUTA rep at Bucknell is Dan Malick.

Governors State Univ. offers students low-tech access

Governors State University in Illinois, where less than 30% of students own computers and less than 10% have modems, has developed a workable system for students to get and give information related to distance education courses via touch-tone phone. Students use an elaborate voice messaging/educational voiceware system that allows both verbal and digital input. A popular use for the system is for course assessment questionnaires. Contact: Suzanne Prescott, gspresco@uxa.ecn.bgu.edu

Governors State ACUTA rep is Charles Nebes.

Kent State Univ. activates sophisticated cable connections

Flashnet, Kent State University’s telecommunications system, was activated last month in all 29 residence halls and 230 apartment units, with cable-ready hookups in 3,600 rooms and residence hall lounges. The Campus TeleVideo system will allow phased in operations during the next five years, eventually supporting shared faculty and teaching across Kent’s eight-campus network, as well as full access to library services, electronic mail, and electronic transfer of homework assignments. [Kent State news release]

Margie Milone is Kent State’s ACUTA rep.

Thanks to CAUSE’s electronically delivered Campuswatch for articles on this page.
New switch at Northern Telecom

Northern Telecom scientists and designers are exploring next-generation optical technology capable of building switches with capacities of more than 1,000 gigabits per second (or one terabit per second). The design uses optical fiber to link several high-capacity ATM mode switching systems into one giant switch, capable of handling the hefty demands of multimedia networks. Nortel studies forecast that by the year 2000, local office switches may need a capacity of one terabit per second to handle the demands of 100,000 subscribers.

Monopoly on the Net

Beginning this September, taking a walk on the Boardwalk will never be the same. The Miami Herald (5/15/95) reports that Parker Brothers is going high-tech with a new CD-ROM version of Monopoly. Tokens that dance and fly around the game board are among the 800 animations and 3-D graphics. Ten computer opponents are ready to challenge you, or you may create your own opponent.

MCI upgrades business software

Investor's Business Daily (4/24/95) reports that MCI's networkMCI Business software package has been upgraded to allow users to share electronic documents among several PCs. That means businesses may now simultaneously conduct voice and electronic document conferences with as many as 24 sites over standard phone lines.

RBOCs may offer long distance wireless and PCS

According to a story in Investor's Business Daily (5/1/95), Federal Judge Harold H. Greene, who broke up the Bell system in 1984, has ruled that any of the seven RBOCs may now compete in the market for long distance wireless and personal communication services. However, Judge Greene says in his order, “Before the regional companies can enter a new market, they will have to show that there is no substantial possibility that they could use their bottleneck monopoly control to impede competition in that market.”

The Bell companies will also be restricted to offering wireless long-distance services only in areas where competitors are able to completely bypass Bell networks through other providers. The RBOCs must offer the long distance service through a subsidiary and will be limited to repackaging and reselling other long distance companies' services.

Charles Co. Comm. College

Continued from page 4

President Al Gore has championed. Gore sees telecommuting as a major tool in "making government work better and cost less."

Preliminary evaluation of InTeleWork project shows clear evidence of the potential of telecommuting centers to do just that throughout the work force. First, there is a universal experience of greatly enhanced productivity in the telework setting.

"I work in a very high energy office downtown," Ruf says. Meetings, phone calls, impromptu conferences, and other interruptions are the rule. "It is completely different at the InTeleWorkCenter. I have everything I need to do my job and to connect to my home office, but I don't have the constant interruptions."

Every workstation is partitioned and has a computer, advanced phone lines, and modems. Many InTeleWorkers have their calls forwarded to the Waldorf site so callers don't even realize they are not downtown. Many call into home agency networks or mainframe computers. Video-teleconferencing is available to bridge the gap between the telework office and the home office.

Agencies are being encouraged to allow teams of workers to use the centers. Significant cost savings kick in when workers can share both the center city office and the telework office. Rents in Waldorf are less than a third of downtown locations.

Welcome home

"From a community development standpoint, it is very exciting to realize that these InTeleWorkers have two days each week that are at least three hours longer," Sine says. "The question becomes what can they do with that extra time?"

InTeleWorkers are encouraged to visit the fitness club, the community college annex, or the University of Maryland annex that are within walking distance of the Waldorf center. The program hopes to encourage participation by users in their children's education, either through volunteering or through videoconferencing with teachers.

The college is preparing to deliver distance learning classes to the video-conferencing rooms at the telecenters. "A workforce is a great community resource," Sine says. "In the future, communities will be known by their ability to thrive using new tools in new settings. The community college needs to be a catalyst in making this happen."

Charles County Community College will report its findings to date to Congress by July 1. For more information on InTeleWorkCenters, contact Sine Eric Blum, acting project director, at (301) 934-2251.

Editor's Note: Thanks to Pat Billeter, CCC, for contributing this article.
Activity in the Lexington office is focusing on the Annual Conference in Orlando, and all indicators point to an enjoyable and successful event for everyone who attends.

Of course, the number one reason anyone attends the Annual Conference is for the education, and the Program Committee has developed an educational program that covers the broad spectrum of telecommunications responsibilities in higher education. Offerings in five tracks range from panel discussions about real-world solutions developed by your colleagues, to in-depth tutorials by recognized consultants and technical experts. The committee has worked diligently to include sessions appealing to experienced telecom professionals and those newer to the field, and to schools of all sizes.

A highlight of the Conference will be a demonstration of ACUTA's new electronic access program for members, followed by an opportunity for one-on-one discussion and demonstration of the system with the ACUTA staff.

As we all know, some of the most valuable learning at any educational conference takes place during informal exchanges with colleagues. The ACUTA conference includes many opportunities for this valuable networking, including "Birds of a Feather" tables at the Monday and Tuesday luncheons. You can share a common concern, discuss an issue, and find out how other ACUTA members have successfully dealt with a challenge you are facing.

Another great networking opportunity is the Show 'n' Tel-ecom "mini exhibit hall" where ACUTA members set up table-top displays describing a project or telecom activity on their campus, and share information with fellow attendees.

This year's exhibit hall will be packed with vendors offering the newest telecommunications technology and services, including voice, data, and video applications. You will notice several new vendors this year, as we have made a special effort to expand the exhibits into new technical areas.

No discussion of the Annual Conference would be complete without mentioning the special events we've planned to make your stay enjoyable as well as educational! The opening reception in the exhibit hall is an opportunity to renew friendships and catch up on activities of the last year, while enjoying the tasty refreshments ACUTA is known for! Our Monday night event at Church Street Station will include a hearty dinner, a special private sampling of the wide variety of entertainment available at this musical theme park, and entrance to any shows on Church Street! (Stay into the wee hours if you wish, but be back at the hotel Tuesday morning for sessions!)

The closing banquet, "A Night at Club Tropicana," will bring to mind an elegant return to the great night clubs of Miami Beach and Havana, with a fabulous meal and unforgettable musical entertainment.

The ACUTA Conference will offer something of interest to any higher education telecom professional, and I hope to see you there!

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<th>ACUTA Events Calendar</th>
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<tr>
<td>24th ANNUAL CONFERENCE</td>
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<tr>
<td>Orlando, Florida</td>
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<td>July 16–20, 1995</td>
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<td>Fall Seminar</td>
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<td>Fort Worth, Texas</td>
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<td>Oct. 29–Nov. 1, 1995</td>
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<td>Topics:</td>
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<tr>
<td>- Strategic Planning &amp; Budgeting for Telecom Infrastructure</td>
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<td>- The Telecom Department: R* for Change</td>
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<td>Winter Seminar</td>
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<td>Phoenix, Arizona</td>
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<td>Jan. 21–24, 1996</td>
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<td>Topic to Be Announced</td>
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The ACUTA staff has new e-mail addresses:

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Pat Scott .................. Publications Editor ............. pscott@acuta.org
Eleanor Smith .............. Business Manager ............... esmith@acuta.org
Editor's Notes...
While in San Antonio recently, I visited Trinity University and St. Mary's University. I met the new ACUTA rep at St. Mary's, Grace Cuevas, and talked with Trinity's Larry Barron, who will be retired by the time you read this. Welcome aboard, John Greene, who will be taking his place. Both campuses are lovely and I appreciated the opportunity to meet new faces. BellSouth has lowered rates to public schools in Georgia in a move to encourage the development and implementation of distance learning and other telecom technologies. Speaking of new technologies, The Smithsonian Institute recently unveiled its World Wide Web home page in the office of House Speaker Newt Gingrich. Legislators of both parties were available to watch as teachers from their home states accessed the system to show students the online exhibition complete with audio and video clips. The Smithsonian home page can be accessed at http://www.si.edu. Thanks to Gary Bernstein at McGill University in Montreal for the copies of their newsletter called Speak Easy. Great job!... Don't forget to make corrections for the directory information when you mail your dues to the ACUTA office. Keep in touch!... Pat Scott, (606) 278-3338; new e-mail pscott@acuta.org.

Can you help?
Murray Ryan at Johns Hopkins University is interested in hearing from anyone who has recent experience with bringing one-card onto campus. If you would like to share your experience, contact Murray by phone at (410) 516-7061 or e-mail ryan@jhuadig.admin.jhu.edu.

Welcome New Members

April 26 – May 30, 1995

Institutional Members
- Gaston College, Dallas, NC. Betsy Jones, ph. 704/922-6420; Tier 2
- Griffith University, Nathan, Australia. Mr. Laurie Barram, ph. 61-7-3875-5199; Tier 4
- Manchester College, No. Manchester, IN. Edwin Cable, ph. 219/982-5212; Tier 1
- Metropolitan Comm. College, Omaha, NE. Richard Johnson, ph. 402/449-0257; Tier 3
- Natnl. Coll. of Chiropractic, Lombard, IL. Alexandra Menzel, ph. 708/889-6552; Tier 1
- Stephens College, Columbia, MO. Jim Thomburg, ph. 314/876-7215; Tier 1
- Univ. of Medicine & Dentistry, Newark, NJ. Alberto Forestier, ph. 201/982-6248; Tier 1
- Vincennes University, Vincennes, IN. Carl Koenig, ph. 812/888-4332; Tier 3

Associate Members
- Northern Elementary School, Georgetown, KY. Jayne Pitts-Hibberd, ph. 502/868-5007

Corporate Affiliates
- Hitachi Telecom (USA), Norcross, GA. Ashok Kumar, ph. 404/242-1405
- Northern Telecom, Inc., Research Triangle Park, NC. Matt Everett, ph. 919/992-6548
- Institutional Network Communications, Norcross, GA. Timothy Nunn, ph. 404/448-5700

Directory Updates
- Pgs. 25, 29, 34, 40, 86: Paula Loendorf is now Director of Telecommunications, New Mexico State Univ., Box 30001, Dept. 3TEI, Las Cruces, NM 88003. ph. 505/646-6699, fax 505/646-6300. E-mail, loendorf@nmsu.edu.
- Pg. 118: New e-mail for Terri Zabrowski: tzabrows@uwspmai1.uwsp.edu
- Pgs. 31, 44, 94, 109: Univ. of North Texas needs new zip +4: 76203-6527. Also, in e-mail for UNT's Tom Newell & Rondel Stevens, change PRO to ASN.
- Pg. 55: Change e-mail for Linda Bogden-Stubbs to bogdenet@vax.cs.hscsyr.edu
- Pg. 82: Change John Kingland's e-mail address to johnk@iastate.edu.
- Pg. 69: Change Sue Fisher's fax to 203/486-0265.
- Pg. 110: Change Tony Tanzi's fax to 401/863-7329.

E-mail address please?
As we approach electronic access to the ACUTA office, we need to have our information as current as possible. If your e-mail address does not appear in the '94-'95 Directory, we don't have it in our database! Please take a moment to e-mail it to Shannon Campbell at scampbell@acuta.org.

New for Conference in July!
At the Annual Conference this year, four Corporate Affiliates will present educational sessions related to their own new products or services. Watch for announcements from these companies in your registration materials when you arrive in Orlando. It's a great opportunity to find out what's new and exciting, to interact with our suppliers, and to learn from each other!