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The Impact of Mobility on Higher Education

As society pushes the need to become more connected, the need to be in constant communication will continue to expand. Cell phones, PDAs, mobile computers, and PC tablets provide faculty, staff, and students greater flexibility. With this easily accessible medium, we can bring specialized information to a broader audience in a more timely manner, resulting in new ways of thinking and acting. Mobile/wireless technology has already found its way to most of our campuses and is slowly changing the nature of how we work and how students conduct themselves in the classroom. Wireless access provides more freedom of choice within the instructional environment and at the same time makes us more dependent upon our infrastructures.

Wireless connections will allow professors and students to easily rearrange classrooms as class can convene anywhere. How does the shift from a brick-and-mortar classroom to a virtual learning environment impact social roles? How does this need for mobility challenge established pedagogical practices? In a typical classroom, students sit at a desk, take out a textbook, notebook, and pen, and look toward the podium for further direction or information. The mobile environment means moving from a passive reception of content to an active process of engagement, which leads to interaction and problem solving. “Learning activities are complex systems of interactions, and the benefits of ubiquity and mobility [of wireless technology] can easily be lost if that complexity is not appreciated and understood.” (G. Gay, M. Stefanone, M. Grace-Martin, & H. Hembrooke, "The effects of wireless computing in collaborative learning environments," International Journal of Human-Computer Interaction, 13(2), 2001, pp. 257-276.

Innovation often brings about new social norms or reorders older ones in new ways. As society becomes more mobile and students gain easier access to Internet resources, opportunities extend for encouraging collaboration and creative scholarship. There will be some downsides of establishing mobile teaching environments. Classroom distractions are not new, but mobile technologies can be disruptive if

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President's Message
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not placed in a planned environment. Passing notes in class just became easier... students may be reading and sending e-mail during class time instead of taking notes. This opens up a new environment where it becomes necessary to establish new classroom policies. At this point, who is controlling the classroom? When is it appropriate to use these devices?

Academia has always paved the way in developing pedagogical methods in collaborative or project-based learning environments, and I predict this will be the same with the new mobile tools. As providers of essential services, it is important for each of us to explore the potential and pitfalls of technologies such as wireless and mobile networking, personal digital assistants, collaborative commerce, and Web services.

Michael Zastrocky, Ed.D., vice president and research director at Gartner Research, will be addressing **New Technologies in Higher Education** at the 2003 ACUTA Winter Seminars, January 12-15, 2003, in Tempe, Arizona. Don't miss this opportunity to learn more about the impact of mobility on higher education.

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### Awareness—The First Step to Safety

by Diane Santerelli
www.wireville.com

Today, cable installers receive little or no training on the proper and safe methods of handling some hazardous materials contained in the cabling. The typical communications cable installer is uneducated to the high level of LEAD (5-10%) in the jackets of most cables. Are your methods of cable installation and/or removal meeting the intent of the EPA and OSHA safety guidelines?

Obviously, material selection will affect safety. It will also affect durability, performance, indoor air/environmental quality, fire hazard reduction and sustainability, and public health risks related to disposal considerations.

For example, the most commonly used material in CAT 5, CAT 5e, and CAT 6 CMP (plenum rated) 4 pr UTP cables is FRPVC (Fire Resistant PVC). In most cases, during the past 10-15 years, the FRPVC contained lead, phthalates, brominated fire retardants, and dioxins (when burned). PVC is not a highly stable material, and it breaks down with aging, temperature, and humidity. As this material breaks down, it may release the various compounds described above. When it comes to fuel load, PVC ranks right up there with gasoline. Lead (Pb) is a major potential public health risk. We must protect our staff and our students.

When the cabling association, BICSI, expanded their training to include courses for the installers, they overlooked the full safety message. We should include a safety focus on all aspects of the cable installers' job:

- **Fire Safety**
- **Indoor Air Quality and Safety**
- Safe handling for installation/removal
- Safe methods of waste disposal
- Numerous other areas of the installers' job functions

Today, lead-free cables are available in all categories for plenum and non-plenum (i.e., Mohawk/CDT). Also, the new LCC-limited combustible cables are lead-free and PVC-free and 100% recyclable.

For more information on cabling, visit: http://www.wireville.com.

*Environmental Impacts of Polyvinyl Chloride (PVC) Building Materials* can be viewed at http://www.healthybuilding.net/PVC/ThorntonPVCComplete.html.
This month we’re going to talk about honeypots. First, we want to say that we need more warm, fuzzy names like this in our too-often coldly technical industry. "Honeypot" just sounds like something you’d call your sweetie. You know, "Honeypot, would you take out the trash?" or "Honeypot, would you wash my lucky shirt for tomorrow's meeting?"

Not only is honeypot a really cute name, but it represents a concept very close to the heart of any network administrator, which is combating hackers. We don't like hackers, never have, and we don't think you do either, unless maybe they're our CIA hackers getting into terrorist computers. In that case, it's OK. Otherwise, they're bad guys and you don't want them in your organization's network.

So how is a honeypot a weapon? It works by setting up a decoy server that is designed to attract hackers who are tricked into thinking they have gotten to your real server. The honeypot (think "sticky" and "gooey" here) is a dead end that keeps hackers involved by feeding them false information and keeping them away from the real server. Diversion is only one of the honeypot's roles, because it can gather information that can help track down the hacker and also aid anti-hackers in better understanding how hackers work.

The concept actually gets more involved, with the next step being "honeynets," which are elaborate decoy networks that take fooling hackers to a new level. This type of operation is probably better suited for Dungeons & Dragons devotees or Fantasy Football fans, because it gets pretty complicated and involves a lot of hands-on management.

The honeynet is a full-fledged phony network, running simulated traffic among host computers on a local area net. The idea is to convince unwelcome visitors for as long as possible that they have arrived at a real network. For the sleuth, this allows even more time to study the mind and tools of the hacker, and for the practical manager, it’s a simple fact that the more time a hacker is on the decoy network, the less he can bother your real one.

The management issue arises because your decoy network has to generate realistic traffic, or the hacker will catch on. As a result, you have to spend time maintaining a network that no one uses and be extremely careful that you don’t lose track of what’s real in your network from what is merely a facade.

You can find more information about honeynets at The Honeynet Project Web site, http://www.project.honeynet.org. There are a couple of books available on the subject, one being a collaborative work by The Honeynet Project, titled "Know Your Enemy." Another is "Honeypots: Tracking Hackers" by Marcus Ranum. Both should be available at Amazon.com.

As always, if there are specific topics you would like to see covered in this space, please let me know via e-mail at kevin@duxpr.com.
ACUTA LEGISLATIVE & REGULATORY AFFAIRS COMMITTEE

DC Update

Whitney Johnson
Northern Michigan University (Retired)

For More In-Depth Coverage of Legislative & Regulatory Issues:
- 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/relation/
- DownloadFile.cfm?docNum=309

Adelstein Confirmed as New FCC Commissioner

The Senate has confirmed Jonathan Adelstein to the open seat on the FCC. As of this writing, he hasn’t been sworn in and put to work, but he will have a lot to do to get up-to-date on the things that are going on at the Commission. Although he has been furnished with some FCC briefing materials, under federal law he cannot receive nonpublic materials until he is sworn in. (Telecommunications Reports (TR) 11/1/02).

Political Donors

A list of the top 100 companies that have donated to political causes during the last 14 years was tabulated by a political watchdog group, Center for Responsive Politics (CRP), and the list includes some from the telecom industry. AT&T ended up second, behind Philip Morris. Three of the Bell companies also figured prominently, ranking seventh, eighth, and ninth among corporate donors. The AT&T donation was $17.5 million, Bell South gave $10.8 million, SBC Communications gave $10.7 million, and Verizon Communications gave $10.3 million. These dollars went to both parties but most to the Republicans respectively as 54%, 54%, 56%, and 60%. It was also interesting to note that some of the donations were in the form of "soft money" with these percentages respectively 44%, 27%, 40%, and 41%. (TR 11/1/02)

Mobile Phone Health Lawsuit

A U. S. District Court judge in Maryland has dismissed a health-related lawsuit against the wireless industry in the wake of her decision to disqualify the scientific witness for the plaintiffs. Judge Catherine C. Blake signed an order Oct. 31 granting summary judgment in the case, which involves a Maryland doctor who claims that the use of a mobile telephone has caused a brain tumor. His attorney plans to appeal the dismissal of the case. Six other lawsuits have been filed in other states, and the judge has been asked to help get them dismissed also. (TR 11/15/02)

Internet Gambling

President Bush and the White House have asked some of the Senate leaders to join with the House and pass Internet gambling legislation before adjourning for the year. According to Telecommunications Reports (11/15/02), Lawrence Lindsey, assistant to the President for economic policy, wrote Senate Majority Leader Tom Daschle (D, SD) on behalf of President Bush: "The lure [of Internet gambling] has proven irresistible to the most vulnerable in our society—our youth and problem gamblers. ...I urge you to consider this legislation before the year is out and put an end to this criminal enterprise." A bill on Internet gambling passed the House on Oct. 1 by a voice vote.

SBC and Computer Viruses

SBC Communications has created a subsidiary of one of its subsections in Austin, Texas. The new group will be called Internet Assurance and Security Center (IASC). This group will target security technologies that could be applied across larger telecom networks. A company representative has said that the group will help SBC find ways to battle computer viruses such as the recent detected Bugbear worm, 2002’s worst virus so far.

SBC also said, "While the majority of current security efforts, such as firewalls, place the primary burden of security on end users, IASC research will support a holistic approach that encompasses all elements of the network." (TR 11/15/02)

Wouldn’t it be great if all of the e-mail going over the phone line, TV cable, or whatever other connection material that was in use could be scanned and protected from viruses and whatever other bad thing that may come along some day before it gets to the end user’s computer?

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Wireless Antenna Sitings

Bills have been introduced in both the House and the Senate by lawmakers from Vermont that may make it more difficult for wireless carriers to site their antenna towers. HR 5631 and S 3103 would amend the Communications Act of 1934 by clarifying and reaffirming state and local authority to regulate the placement, construction, and modification of broadcast transmission facilities, and for other purposes.

Senator Leahy, from Vermont, indicated that the Telecommunication Act of 1996 contained a provision that allowed the FCC to preempt the decisions of local authorities. He also noted, "Over the past five years, a small loophole in the 1996 Act has spurred David v. Goliath battles across the country. Small communities that pride themselves in deciding what their towns will look like now have few options when they try to stop or even negotiate a different site for broadcast or cellular towers." (TR 11/1/02)

In another article in the same issue TR indicated that the wireless industry and officials of local government agree that there is a need for better collaboration to facilitate the siting of antennas. Both sides also say that industry representatives need to better educate the public and local officials about the importance of siting new antennas in the build-out of wireless networks.

There was considerable discussion on both sides of this issue at a seminar on Oct. 23 conducted by the Personal Communications Industry Association (PCIA). Some of the opposition came from residents who are worried not only about their health but also about the effect antennas will have on neighborhood appearance and property values. An AT&T Wireless representative expressed frustration that many consumers and even local government officials pressed wireless carriers to improve their service at the same time they opposed new antennas. She was quoted as saying, "I don't think a lot of people understand that without the infrastructure, you can't have the service." (TR 11/1/02)

The antenna location concerns will continue to be an issue for the wireless industry since much of the service requires a direct, unobstructed line between the cell phone and the tower to ensure good quality of sound and service. This is not easy to provide in many areas of the country without a lot more wireless towers than are installed today.

Wireless Service

Wireless carriers are having other problems in addition to the antennas. From Massachusetts to California state regulators and consumer advocates are pressing wireless carriers to improve their service quality and customer service and address what they call questionable advertising and billing practices. They say consumers are growing increasingly irritated with dropped calls, deceptive ads, confusing bills and service plan agreements, and poor customer service." (TR 11/1/02)

During the second quarter of 2002 the FCC saw 2,805 complaints filed concerning wireless service, and 59% of them were related to problems with billing and rates. Other complaints were about marketing and advertising, early termination of contracts, and quality of service. A working group of 26 attorneys general is probing the billing, advertising, and marketing practices of some wireless carriers. Last year the states asked for information regarding those practices from Verizon Wireless, Sprint PCS, and Cingular Wireless LLC.

The FCC has removed the requirement that the wireless carrier provide coverage maps to subscribers. Some of the carriers plan to keep the maps and make them available to customers. As I have looked at maps from a couple of carriers here in the very rural area of the Michigan Upper Peninsula, I have noted that they do not try to indicate where within the map area coverage would be very bad or even not there at all. These areas are called dead zones, and they are common in rural areas. An assistant attorney general, in a comment regarding advertising, said many ads deceptively tout nationwide, coast-to-coast, or universal coverage. These ads allow consumers to think that their wireless phone will replace their wire-line phone when that just isn’t so.
Donate-a-Phone Program Is a Win-Win for Recycling

On November 15 the Wireless Foundation's Donate-a-Phone program joined the Office of the Federal Environmental Executive (OFEE) and the Washington, D.C. city government on the National Mall for "America Recycles Day... A Capital Idea" to collect used wireless phones and other electronics for recycling. The OFEE is the White House task force on environmental issues.

"Collecting used wireless phones not only keeps them out of landfills, but it also can provide phones and funding for any number of charitable causes. The phones we collect today will be used to help victims of domestic violence via the Foundation's CALL to PROTECT program," said David Diggs, Executive Director of the Wireless Foundation.

Phones collected through Donate-a-Phone that cannot be reused or refurbished are recycled safely, in accordance with U.S. environmental laws. Since its launch in 1999, the Donate-a-Phone program has collected over 1.4 million wireless phones.

The collection, held at the Washington Monument on the National Mall, was designed to raise awareness that many used electronics, including computers and wireless phones, can be recycled in environmentally friendly ways.

*From a press release by CTIA, the international association for the wireless telecommunications industry, representing carriers, manufacturers and wireless Internet providers. [http://www.wow-com.com](http://www.wow-com.com)*

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It's Legit: Download Fee-Based Movies

How are students using your bandwidth these days? Entertainment, of course. According to the *Wall Street Journal* (11/11/02 [http://online.wsj.com/article/0,,SB1036963204998126188,00.html](http://online.wsj.com/article/0,,SB1036963204998126188,00.html)) five major movie studios have launched a new service for downloading recent movies called Movielink. Each studio sets its own prices for movies, which will cost between $1.99 and $4.99 each to download. Users can keep the movies for 24 hours after they are activated.

In an effort to prevent the proliferation of video piracy, the studios hope that despite the fee, many users will be attracted to the service because of reliable technology and fast download times compared to free, peer-to-peer networks. Customer service, a feature not found on file-swapping networks, may also attract users to Movielink.

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**ACUTA EVENTS**

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ACUTA members with responsibility for setting or implementing copyright compliance policies on their campuses should become familiar with the new TEACH Act, a Federal law that was signed by President Bush on November 2, 2002. ACUTA members or their staffs who are responsible for instructional technology support, security, and regulatory compliance will need to be especially familiar with the new law.

The acronym "TEACH" stands for the "Technology, Education and Copyright Harmonization Act," and the effect of this law is to give nonprofit accredited educational institutions more flexibility in using copyrighted materials in distance education.

The higher education community had supported this law as a necessary clarification of copyright law as it applies to distance education.

Previously, Federal law permitted the use of copyrighted materials, including "performances" and "displays" in face-to-face classroom conditions under certain guidelines set forth in the Copyright Act. However, the use of such materials in distance education was not clearly addressed in the law.

The new law will permit distance education courses to include performances of non-dramatic literary and musical works and limited portions of dramatic or audiovisual works, "in an amount comparable to that which is typically displayed in the course of a live classroom session." This will be of interest to many instructors, who may wish to use portions of musical performances, films, and other audiovisual materials in their distance education courses.

According to higher education attorney Kenneth Salomon, the TEACH Act permits the display and performance of virtually all types of works during online instruction without the consent of the copyright owner, with certain strict requirements:

- An instructor must mediate the online instruction
- Students must be officially enrolled in the course
- The institution must take measures to prevent retention of the work for longer than the class session
- The institution must take measures to prevent students from retaining or redistributing the materials
- Institutions must have copyright policies in place, and must provide in formation on copyright law to faculty, students, and staff
- Institutions must inform students that course materials may be subject to copyright law

This is a long and complex law, and I would encourage ACUTA members to familiarize themselves with it. Many of the provisions will affect communications and IT policies and operations, and our members will be involved in compliance activities.

The TEACH Act was passed as part of the Department of Justice Appropriations Act, a very long, multifaceted bill. The TEACH Act language is available on the U.S. Congress Web site at http://thomas.loc.gov/cgi-bin/query/F?c107:3:./temp/-c107WehWgM:e484010.

The American Library Association has a detailed, excellent analysis of the TEACH Act, available at www.ala.org/washoff/teach.html.

Within approximately 180 days, the Undersecretary of Commerce for Intellectual Property must produce a report describing technological protection systems to protect digitized copyrighted works and prevent infringement. ACUTA will continue to monitor developments and forward information as it becomes available.
Welcome New Members

Institutional Members

Eastern New Mexico University, Roswell, Roswell, NM
Arthur P. Lieble, 505/624-7327. T2 .................... www.roswell.enmu.edu

Gordon-Conwell Theological Seminary, South Hamilton, MA
Richard Jordan, 978/468-7111. T1 ......................... www.gcts.edu

New Jersey City University, Jersey City, NJ
Phyllis Szani, 201/200-3350. T2 .......................... www.njcu.edu

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The following companies have sponsored 1 or more events in the past year. Please thank them as you have occasion!

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2 Events: 1 Nation Technology
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Happy Holidays from the ACUTA Staff!