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Who's going to pull the plug on telabuse?

In a letter dated June 15, 1994, Gregory A. Weiss, Acting Chief, Enforcement Division of the Federal Communications Commission, assured then Executive Vice President Randy Collett that, "Presubscribed information services cannot be properly billed by systems that assess charges to a subscriber to an originating line without confirming that that individual has affirmatively chosen to receive information services through a presubscription arrangement. The Pay-Per-Call Report and Order clearly states that when a subscriber disputes charges for allegedly presubscribed information services, the IP bears the burden of demonstrating the existence of a valid presubscription arrangement."

In spite of those assurances, both the incidence and dollar volume of toll fraud have increased on campuses across the country. As security measures tighten, unfortunately, unscrupulous pornographers, psychics, and other providers of "services" just get more creative in the methods they use to allow callers to charge their calls to numbers that are not their own.

Consider the following new scam described by Kay Barbee at the University of Missouri, Columbia: Students (and others) have discovered they can use the phones in the Student Lounge to dial the AT&T Alliance Teleconferencing Center. They request a conference call be set up, telling the Teleconference Specialist how many ports will be needed for how long. The AT&T operator, knowing these phones are restricted to sent paid calls, then calls the number back to verify this information. The caller, knowing the operator will be making this call, just waits by the phone and confirms that he/she has the authority to arrange a conference call.

University of Missouri (now facing some $8,000 in charges resulting from this scenario) questions the effectiveness of this kind of screening. Of course, names given to the

College of William and Mary conducts toll fraud survey

Katherine L. Green
Director, Telecommunications
College of William and Mary

Customer premise toll fraud has become an area of serious concern to the telecommunications industry and especially to institutions of higher education where the student population has access to campus networks. The College of William and Mary recently performed a risk analysis to determine the exposures its telecommunications system had to toll fraud and the potential harm. In order to determine the most prevalent methods of toll fraud, as well as the conditional consequences of each threat, a survey was sent to 100 institutions, chosen at random, belonging to ACUTA.

Fifty-six surveys were returned, from 25 different states, indicating a fairly diverse sampling. For the purposes of the survey, an episode of toll fraud was defined to include all calls that the rater considered somehow related to a particular hacking scam and for which the aggregate cost to the institution was greater than $100. Nearly all respondents, 88%, indicated that their institution was very concerned about toll fraud, rating either a 4 or a 5 on a scale of 1 to 5.

To establish the prevalence of some well-known security systems, survey respondents were asked to identify their present means of protection against toll fraud. Nine methods were identified as presently in place:

- 88% Block 900 numbers
- 55% Monitor traffic daily
- 54% Disable DISA feature
- 45% Block individual 800 numbers

See "Pull the plug..." on page 9

See "Toll fraud survey..." on page 7
Tell the FCC about toll fraud

If you’ve been hit by unauthorized long-distance charges, contact your telco and try to have the charges removed.

Then file a complaint with the FCC. Send a copy of your bill and a letter describing what you have done to resolve the problem. Address it to:

Informal Complaints Branch
Federal Communications Commission
2025 M St., NW, Rm. 6202
Washington, DC 20554

If you have questions on a specific pay-per-call billing problem, contact the FCC Enforcement Division at (202) 632-4887.

Who ‘ya gonna call?

If you discover unauthorized long distance charges on your bill, you may need to reach one of the following billing companies who appear frequently in cases reported to the ACUTA office. We’re providing the phone and fax numbers for your convenience.

Billing Companies

Equal Access
ph. (800) 955-8262 fax (310) 445-5180

Integretel, Inc.
ph. (800) 736-7500 fax (408) 244-8533

Dial Long Distance Corp.
ph. (800) 460-0398 fax (210) 979-6761

Info Access, Inc.
ph. (800) 645-8830 fax (212) 922-9773

International Telemadia Assoc.
ph. (800) 866-8889 fax (404) 956-1142

Long Distance Billing Co., Inc.
ph. (800) 748-4309 fax (702) 873-1892

Board Report

ACUTA Board finalizes budget

Finalizing the fiscal year ’94–’95 operating budget was the top priority of the ACUTA Board after the Annual Conference in Anaheim in early August. The objective of the Finance Committee and Board was to finalize the budget by September 15. The various discussions focused on projected income from membership dues, sponsorships, exhibitors, seminars and the annual conference; and projected expenditures such as payroll, printing/publications, communications, travel, capital, depreciation, building mortgage, seminars, annual conference, etc. The process entailed (1) a detailed analysis and review of actual operating expense by line item for the last two fiscal years (FY93-94 and FY92-93); (2) a review and analysis of proposed new projects and plans; (3) development of recommendations for expense reduction opportunities; and (4) development of recommendations for new income.

Other items on the agenda included:

• New Board members and standing committee chairs orientation
• Finalization of committee membership
• Richmond seminar planning
• Finalization of the Membership Directory
• Australia and New Zealand membership campaign cost benefit analysis
• Electronic Access project
• Seminar topics for Maui, Kansas City, Fort Worth, and Phoenix.

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

Association of College and University Telecommunications Administrators

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President's Message

Though a few years have passed since my undergraduate days, it hasn't been so long that I've forgotten about the weird little guy who lived in our fraternity house. Fancying himself to be an electronics wizard, he was always messing around with the payphone or the old 1A2 key system that served our house. Oddly enough, he seemed to be busiest late at night. He was always telling me about this little blue box he had, and though I never observed him actually doing anything with it, I was told that he was somehow using this box to make calls all over the world.

Only after I started working in this industry did I come to realize that this was my first exposure to telephone fraud.

Now, it seems like one of the biggest roles I (and many of you) fulfill is telephone policeman, protecting my campus from that weird little guy down the hall. More importantly, now I'm the financially responsible victim.

As customers, college students provide some interesting challenges to service providers, whether they be telecommunications related or not! Former FCC Commissioner Ervin Dugan once described for me one of the more troubling traits as “mischief married to intellectual curiosity.” For any of you who have experienced adult entertainment services, this is more than an apt description.

With students as customers, we have to be constantly vigilant in policing the seemingly endless scams. It seems that every time we get one loophole closed, another opens. This newsletter highlights at least two new situations that require your immediate attention. (See pages 1 and 4.) I emphasize immediate, because I'm amazed at how quickly the word about these scams gets through the campus grapevine.

Who do we blame for this continuing saga? In some respects, I suppose we could blame deregulation and the competition that now exists in the long distance marketplace. We could probably also blame any number of overzealous providers of certain types of services. Maybe we should blame the entrepreneurs who have managed to come up with all these ideas. Or maybe we should just blame the students.

Spending much time attempting to assign blame is time that is not particularly well spent. Regardless of who's to blame (and believe me, there's enough to go around), one thing is certain: Once we sign on as the responsible party for campus telecommunications, it becomes our responsibility to protect the financial resources of our institution. Even though the role of telephone policeman is not a role that any of us relishes, it nevertheless is inherent in our job description. With all of the available services, coupled with students as customers, this may be the most important function we have. It's nice to know we have an association that helps us on the "beat."

See ya next month.

Winter Seminar
Campus Networks—Beyond the Walls

A tacit assumption: Higher education must expand beyond the traditional campus in order to meet the needs of an ever-changing student population.

How should colleges and universities respond to these competitive pressures? How will technology serve as a tool to expand the campus beyond city, state, and national boundaries? What are the implications and challenges of an international network—the new infrastructure?

This seminar will explore networks and their strategic role in extending the campus beyond the traditional "halls of ivy."

Maui, Hawaii
January 17–21, 1995
Inter-Continental Resort

Save $50 Register by December 16 • Call Helkie Bowman for details (606) 278-3338
New 900 scam calls students

Randy Wanciak  
Manager, Central Campus Telecommunications  
Yale University

A new chapter in 900 scams being perpetrated against Yale students has come to a close. The story bears repeating.

- A Yale student (seemed to be a random selection) received a phone call from a computer-generated device that said, essentially: If you want to talk to someone real sexy, enter a credit card number now. If you want to call us back later, call 1-800-580-SEXY.
- Dialing the 800 number connected the caller with a recording stating that the number had changed to 1-900-230-7399, and that a $3.50/minute charge applied. Further, it informed the caller, “if your phone has a 900 block on it, you can get around that by dialing 106580-416-277-6999. International charges apply.”

Our investigation revealed the 106580 access number belongs to WilTel. The 416-277-6999 is in Ontario, Canada, hence the “international charges apply” statement. The 1-800-580-SEXY and the 1-900-230-7399 are registered, through MCI, and belong to “American Telnet,” located in Miami, Florida.

The next step involved making a number of calls to American Telnet and to other potential sources of the problem they furnished to us. We have some theories about who the actual people involved probably are. However, our only intention from the beginning was to have the 900 solicitation calls to Yale students stopped, and not to try singlehandedly to end this particular operation. Since my last conversation with American Telnet, the calls have stopped on our campus.

If a scam of this type invades your campus, we suggest you try to identify the real source of the problem, the “owner” of the 900 number. As soon as this owner is identified, call them and use your most persuasive arguments (including a reminder that some of the students are randomly soliciting are under the age of 18) to convince them to stop harassing your campus. And remember, this is not a battle you have to fight alone. The FCC and the major long distance companies are changing the rules to help prevent this kind of abuse.

Editor’s note: ACUTA will furnish members with a list of 800/900 numbers reported to us by members who have chosen to block them from their systems due to fraudulent charges. Call Kevin Adkins (606) 278-3338 or e-mail ladjki@ukcc.uky.edu.

Shepherd College gets tough on toll fraud

Sandy Collier  
Telecom Coordinator  
Shepherd College

Telecom fraud—800 pay-per-calls...What can you do? “I just don’t pay the bills!” is the response most of us make.

We can—and should—do more.

Fraud calls can cause a telephone bill to double in size and amount due. Auditing, billing, and collecting can be very time consuming and require additional staff. What can you do to ensure that students, staff, and faculty are not using the institution’s telephone lines for their “adult entertainment”?

Unfortunately, there is no surefire method (short of shutting down the phone system) to completely stop this activity. Here are a few suggestions guaranteed to deter the user and to let your local telco know that you will not tolerate their involvement with dial-a-porn services:

1. Refuse to pay the 800 pay-per-call charges and send a letter to your local telco requesting they not include the charges on your monthly telephone bill.
2. Send a letter of complaint to the FCC. (See pg. 2.)
3. Request a list of current 800 pay-per-call numbers from Kevin Adkins at ACUTA and block access to those 800 numbers.
4. Contact the billing service companies (Integretel, American TelNet, Telamerica, and others) and request they block your telephone numbers from access to the 800 pay-per-call services for which they are billing. FYI: Integretel bills for over 250 services with more 800 numbers being added daily!
5. Track all 800 calls to identify the users for a few months. Let them know that you know. These actions will take time; but you will know that you’ve done everything possible to discourage users from dialing those 800 numbers.

Telefraud is everywhere. No school is exempt from the problem. For more details about what we have done at Shepherd College, call me (304) 876-5363 or e-mail scollie@svax.wvnet.edu.

Block these numbers!

Valerie Turner, Northern Michigan University, has discovered three 800 numbers you will definitely want to block. These provide access to international calls that will appear on your bill: 746-1697, 746-1698, 746-1699.
What's Affordable: Watching the Yard or Guarding the Gate?

L. Kevin Adkins
ACUTA Telecom Resources Manager

Let’s consider a toll fraud analogy. Your PBX is the “yard” where students and administration work and play, and the “gate” is your trunk lines. When someone leaves the yard, it’s your job to make sure they go where they are allowed and not off limits where you’ll have to pick up the tab later. If they are bent on the latter, you can stop them in the yard (PBX blocking), and they can be stopped at one of the gates, usually by LEC (Local Exchange Carrier) blocking or OSP (Operator Service Provider) service restrictions. This arrangement proves effective most of the time, but once subscribers leave the yard, you often can’t stop them from finding an unguarded gate (which are increasing).

Depending on your PBX, it may or may not be possible or practical (cost-wise) to monitor and block access to all the unguarded gates out there. ACUTA currently has a database of nearly 600 fraudulent charge-back numbers, most of them 800 numbers. Memory upgrades to hold a deepening flood of these numbers may be cost prohibitive, depending on the age and make of your PBX. If this is your situation, you may wish to consider the option of adding your own privately controlled “gate”. These outboard systems interface between your PBX and the LEC and multiple 1+ and 0+ access providers.

Under their mild-mannered PC cabinet appearance, these systems are full blown digital signal processors (DSP’s) with a dialed-digit analysis algorithm that can analyze digit streams of virtually any length. This allows you, for instance, to pull the plug on improper secondary dial tone calls. Originally designed as protocol/number converters for the North American Numbering Plan (NANP), these systems have been adapted to include toll fraud monitoring. They can deny access regardless of the method attempted to place the call: Direct Dial, Credit Card, Return of Dial Tone, or DISA (Direct Inward System Access). Calls in process will even be discontinued once fraudulent dialing is detected. Users may define as many levels of toll restriction as desired, supporting authorization codes, account codes, and class of service designations. DISA access uses callback security procedures, requiring the caller to enter an authorization code. After validating the code, the system affects a positive disconnect and calls the user back at the pre-defined telephone location.

Administration is usually accomplished with a Graphical User Interface (GUI), which utilizes intuitive mouse, hot-key, or pull-down menu input for operation. The next generation (some scheduled 2QTR95) of software will include voice recognition technology to thwart operator-assisted toll fraud and international toll control. The system will “listen” and discern whether the requested telephone number meets the established allowed calling pattern.

These outboard systems may or may not be right for your toll fraud program in terms of cost or functionality, but they certainly merit a look. Our current information on availability of these systems is limited, so if you have information to share or need what little information we have, please call me at the ACUTA office.

Program Committee seeks topic, speaker, and exhibitor suggestions

ACUTA’s Program Committee is constantly striving to provide educational programs to meet the needs of our members in a rapidly changing environment. In order to accomplish this goal, we need your suggestions for up-to-the-minute topics and outstanding speakers to help facilitate an excellent learning experience at ACUTA events.

ACUTA sponsors four major educational events per year—three Seminars offering in-depth coverage of one or two specific topics, and the Annual Conference, which includes a broad range of educational programming. Our programs focus on the future of telecommunications management as it is evolving in higher education, and the cutting-edge competencies that will be necessary for you to succeed in an increasingly complex world.

In order to ensure that we are bringing you the programs you need, we need to hear from you! If there is a subject that you (or your staff) would benefit from learning more about, please let us know. If you hear an outstanding speaker whom you feel would be a stimulating addition to an ACUTA program, please forward his or her name to us.

Since learning takes place in the exhibit halls as well as the lecture halls, we are always seeking new companies to display their voice, data, and video communications products and services. If you come into contact with a vendor you think would be of interest to fellow ACUTA members, we urge you to tell them about ACUTA, and forward their name and phone number to us for follow-up.

Program Committee members are working hard to provide the best possible quality of education for your benefit—please help us by providing the feedback we need to stay in touch with your needs.

Please call or forward your ideas to Jeri Semer, Executive Director, at the ACUTA office, or email to jasem00@ukcc.uky.edu.
Kent State IVR answers questions around the clock

Greg Seibert
Kent State University

During the past spring semester, the Department of Telephone Communications assumed the duties of handling calls to the Info 3000 line and answering the various questions that are generated. These range from questions about upcoming school events to whether or not classes have been canceled to requests for the phone numbers of either University departments or students in the residence halls.

After monitoring the pattern and type of calls for the last half of spring semester, department manager Margie Milone began planning how to expand and improve the service. After a review of various alternatives, it was decided to use the Vocom 40 unit and expand it to handle additional duties.

The Vocom 40, by Perception Technologies, is the device that currently provides for telephone registration. It utilizes interactive voice response or IVR, and can be used by anyone who has access to a touchtone telephone.

An additional sixteen telephone lines and ports have been added to handle the Info 3000 duties. Computer Services prepared the necessary database interfaces and other technical changes that were required. With these updates and the IVR technology, Info 3000 has become a 'round-the-clock resource for those calling from touchtone phones.

Beginning fall semester, callers to Info 3000 have been greeted by a digitized voice that welcomes them to the service and asks them to enter a “1” if they have a touchtone phone. Callers from rotary phones are requested to remain on the line so that their calls can be directed to the University operator for assistance. University operators are on duty every business day from 8:00 a.m. until 5:00 p.m.

After the greeting, Info 3000 callers are provided with a menu of services from which to select. The first is Hotline Info which includes information about school closings, campus emergencies, and other urgent announcements. Selections are also available so that callers can obtain the telephone number of students in residence halls, University faculty and staff, and University departments.

After making a selection, callers are asked to enter the first five letters of the name of the student, faculty/staff, or department of their choice followed by the # sign. The system will then search for the phone number in the appropriate database. If a match is found, the system repeats the matched name or names, states the residence hall or department, lists the phone number, and then connects the caller to the requested party. If no information is available, the system directs the caller to contact either Residence Services or the University operator during regular business hours, or the University Police for after-hours emergencies.

The last selection is a bulletin board of current campus events such as films and other entertainment, athletic events, and more.

Since the system is automated, it is able to handle sixteen simultaneous callers on a 24-hour basis. Information is updated every day. Improvements in service should be noticeable to all users—especially when the first snow of winter brings an avalanche of callers hoping that classes have been canceled for the day!

“Our operators were handling 1,200–1,800 calls per day,” says Milone. “With more than 4,900 students living in residence halls on campus, a great number of these calls were requests for student phone numbers. After the automated Info 3000 directory system was implemented, our call volume dropped to a more manageable 800–1,200 calls per day. The system reports indicate callers are using the system 24 hours every day.”

The system was designed by Tim McHugh of Quotient Systems, Inc. of Lansing, Michigan, specifically for Kent State University and includes student names directory, campus staff, campus departments, and hotline/bulletin board with remote dial-up access to change messages.

Crime bill takes aim at hackers

One of the real stars of the recent crime bill may be the Computer Abuse Amendments Act of 1994. These amendments, designed primarily to close loopholes, significantly broaden the potential for anti-hacker prosecution.

Previously, laws protected only federal interest computers, such as machines belonging to a government agency or financial services firm. But the new rules cover computers used in interstate commerce, which could mean a PC hooked up to the Internet.

In addition, the old standard for prosecution, intent, has been replaced with reckless disregard, which should make prosecution easier.
Toll fraud survey...

Continued from page 1

43% Disable trunk-to-trunk access
39% Block individual area codes
23% Call back modems
5% Encryption or voice recognition
4% Insurance

The survey results allowed for the analysis of the cost of customer premises toll fraud in several ways. First, the average annual loss per institution resulting from customer premises toll fraud was $2,853. This number was calculated considering all institutions that reported a dollar amount for toll fraud loss, including those reporting no occurrences.

The average cost per incident of fraud was calculated by considering only those respondents who experienced toll fraud and detailed the cost of occurrence at their institution. Sixty-three percent of the respondents reported that their institution had been subject to confirmed toll fraud in the last 5 years. However, 54% of those reporting fraud did not fill out the questions describing the fraud episode (some indicated that the information was confidential). Others wrote that they experienced so much fraud from the student body that they were only considering cases of external fraud. For the 46% of those reporting toll fraud who did detail their episodes, the average loss per episode was $10,688.79. However, there was a large standard deviation of $22,825.46.

We also calculated the average cost per incident considering the recurrence of customer premises toll fraud. Many institutions reported experiencing several episodes of fraud over a five-year period. The table below shows the relationship between cost per episode and recurrence of customer premises toll fraud.

<table>
<thead>
<tr>
<th>Episode of</th>
<th>Percent of</th>
<th>Average cost per episode</th>
</tr>
</thead>
<tbody>
<tr>
<td>toll fraud</td>
<td>respondents</td>
<td></td>
</tr>
<tr>
<td>1st</td>
<td>29%</td>
<td>$14,784</td>
</tr>
<tr>
<td>2nd</td>
<td>11%</td>
<td>$14,398</td>
</tr>
<tr>
<td>3rd</td>
<td>11%</td>
<td>$1,776</td>
</tr>
<tr>
<td>4th</td>
<td>9%</td>
<td>$328</td>
</tr>
</tbody>
</table>

The total average loss for the institutions experiencing more than one episode of toll fraud would be calculated by adding the costs associated for each episode of toll fraud. For example, the 11% of the respondents who experienced three episodes of toll fraud in the last five years would have lost an average of $30,958.

A cross tabulation analysis was performed between each institutional characteristic and the variable, “confirmed toll fraud,” to determine if there were any correlation. The analysis did not find any relationships between the variables. Thus, the likelihood of toll fraud occurring is not dependent on the size of either the institution or the telecomm staff, whether the institution is publicly or privately funded, or any other institutional characteristic measured by the survey.

The graph below shows clearly that the most often perpetrated method of toll fraud as reported in this survey was 800-number calls which generate 900-number charges.

<table>
<thead>
<tr>
<th>Method of Perpetration</th>
<th>Average Cost Per Episode</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unauthorized use of authorization codes</td>
<td>$5,267</td>
<td>$7,199</td>
</tr>
<tr>
<td>Calls to 800 numbers which generate 900 number charges</td>
<td>$8,822</td>
<td>$21,309</td>
</tr>
<tr>
<td>Unauthorized use of DISA feature</td>
<td>$6,000</td>
<td>-0-</td>
</tr>
<tr>
<td>Transferring through Voice Mail</td>
<td>$42,250</td>
<td>$42,501</td>
</tr>
<tr>
<td>Unauthorized Operator-Assisted Calls</td>
<td>$7,325</td>
<td>$6,493</td>
</tr>
</tbody>
</table>

Conclusions

Customer premises toll fraud is prevalent in the college and university environment, with sixty-three percent of the survey respondents reporting that their institutions had been subject to toll fraud. None of the institutional characteristics measured in this survey showed any correlation with the occurrence of toll fraud. Therefore, it seems likely that any institution has just as much potential as another to fall victim to toll fraud.

The cost of an occurrence of toll fraud was high: approximately $11,000 per episode. Hacking through the voice mail system has the greatest average cost of incident at $42,000.
Human error creates the greatest opportunity for fraud to occur. Yet, even the hackers have stated that fraud can be stopped by currently available techniques.

PBX security violation
Violation of PBX security occurs from many sources and not just from hackers. We know illegal hacking starts and ends with dial tone... yours and someone else’s. The fastest growing segment of unauthorized remote access, and the most blatant, is now originating in other countries. Foreign governments may reward hackers for stealing from the American business community. They pay a commission for documented incoming calls terminated in the foreign country.

PBX security is violated in one of three ways: installed open, open by service, or remotely hacked. The scary part: when (not if) fraud occurs, it is often impossible to determine by which form of violation the hack occurred, unless you have established a benchmark.

The first violation of security may have occurred when the system was initially installed. Manufacturers’ and customers’ pass codes may have remained in place. Technicians may have resorted to the familiar to provide service, and security died.

It is imperative that the owner of the switch check the system even when the PBX has been working for a period of time.

Some industry experts state that when upgrading or moving a switch is the most vulnerable time for switch security. Simple oversights may leave a pathway through the system to achieve dial tone.

The second violation of security occurs when service is provided to the switch. Security is altered to check service and is not reinstated. This violation may occur innocently. In-house training is vital. A written security policy in place and shared with your remote and on-site service is also critical.

The third violation of security occurs when your system is compromised remotely by an individual specifically intent on defrauding your company. The remote maintenance port, voice mail, and other adjunct equipment capable of being dialed all provide avenues for potential thieves to access your PBX to perpetrate fraud.

The solution
Determination of responsibility is very important when it comes to paying the fraud bill. No matter what is decided about toll fraud by the FCC, you, the owner of the switch, have primary security responsibility. In order to determine other responsibility, there are at least five steps you must perform:

First: Establish a telecommunications policy. Security must become part of your everyday business operation.

Second: Block known avenues by which hackers penetrate PBX systems. DISA or Remote Access is no longer a ‘gimmee’ feature. Today you must sign an agreement or otherwise request the feature and sign a letter of understanding that you know the vulnerabilities of fraud.

The Remote Maintenance Port is another known hacker avenue of access. It is the hacker’s favorite choice... easy to find and easy to use. You should not disconnect this port as it is important to report trouble and saves money on your maintenance costs. AT&T recently sent out certified letters warning its customer base that this avenue of access must be protected. MCI’s guide to toll fraud prevention warns that when this avenue is not protected, all bets are off for being hacked.

An approved protection device installed to protect the port allows the PBX to report trouble. The point is to protect the port, not disconnect it.

Third: Determine how vulnerable you are to fraud by conducting a risk analysis of your system. This step requires comparing known hacker methodology with PBX features. Remember that Service and Security are opposing features. You must evaluate the security of your system.

Fourth: Secure your PBX system by reprogramming and establishing a security benchmark or fingerprint. Your PBX will deny most hacker attacks. Your system gives and takes away permissions. A security review will establish your ideal security benchmark.

Fifth: Use your list history report, audit trail, SMDR, CDR, or monitoring equipment to maintain your PBX security.

PBX security and toll fraud prevention require the comprehensive, integrated approach of taking all five steps to eliminate possibilities of fraud. Human error creates the greatest opportunity for fraud to occur. Yet, even the hackers have stated that fraud can be stopped by currently available techniques. You must eliminate all hacker opportunities in your system, and then lock the maintenance port in a manner that allows the switch to make maintenance calls and let repair personnel have access to the system.

TeleDesign Management provides a list of associations, potential 800 number problems, some billing company names, and a sample corporate telecommunications policy statement to combat toll fraud. Request by phone (800) 547-1771 or fax (415) 259-1690.

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Pull the plug...
Continued from page 1

operator are fictitious, so tracing the calls is out of the question.

One method available for combatting this type of fraud is SDN teleconferencing which requires a password. Barbee says this and other measures are being taken by the University to safeguard their systems. “Blocking all 800 calls from campus phones almost looks like the only foolproof way to prevent this form of abuse,” says Barbee.

But colleges and universities are not alone in their outrage. Long distance companies express regret that deception has resulted in thousands of dollars in charges to schools across the country—schools who are very good customers—but until recently have felt as though their hands were somewhat tied by, or at least mired in, legal ramifications. Is the 800/900 number provider supposed to ask a customer if calls to the number will encourage fraud and abuse? Such businesses are not known for their veracity.

What’s being done?

However, some measures have been taken which should improve the situation.

• With the FCC’s okay, 800 abusers may be cut off as soon as they’re identified. In most cases, that puts them out of business.

• Effective September 1, Ameritech is refusing to bill its customers for calls to 800 pay-per-call services that result in charges on their Ameritech bills.

• In a news release dated August 10, AT&T announced it would disconnect service to companies that generate fraudulent charges for calls placed to toll-free 800 numbers.

“800 service has earned an impeccable reputation with business and consumers since we invented it 27 years ago,” said Kenneth E. Sichau, AT&T marketing vice president. “We’re determined to protect the integrity of businesses using [our] 800 service and the confidence of consumers who dial toll-free numbers.”

Previously, AT&T gave providers ten days’ notice to correct their abuses before AT&T terminated their service. But once put on notice by AT&T, these providers simply moved their 800 numbers and abusive practices to another long-distance carrier.

AT&T now impounds 800 numbers immediately if used improperly by any business, depriving them of any future revenue from their advertised 800 numbers.

“We are committed to rooting out deceptive 800 practices,” Sichau said, “restoring consumer confidence and ensuring that 800 calls remain toll free to all callers.”

• NYNEX announced last spring that effective May 31, it would no longer bill for 800 numbers which ultimately are transferred to a 900-type service. Calls that providers submit to NYNEX are coded using BOC industry-wide identifiers that provide information about the type of call. NYNEX has verified that providers are no longer passing such calls on to them for billing.

Other long distance companies have implemented similar policies. ACUTA members are encouraged to consult with the appropriate carrier if disputes arise.

David Jordan of MCI, co-chairman of the Interexchange Carrier Industry Committee–Toll Fraud Subcommittee (ICIC TFS), suggests that telecom managers request from their local exchange carriers line features that provide them with toll billing exclusion and restricted line identification. In this way, equal access carriers will be technically empowered to block toll from targeted numbers.

How can you tell if you’ve been hit?

Look closely at your phone bill. If you have a three-minute U.S. call that costs thirty dollars, you’ve been hit. But you have to really look at your bill. Most of these services don’t show up on your bill with the actual 800 number that was dialed. They list a regular 10-digit number with a standard area code. So, if you scan your bill for...
On the Campus of...

California Lutheran University

In a major reorganization of five departments—library services, academic computing, administrative computing, instructional media, and telecommunications—California Lutheran University has created a single new unit. Information Services is based on the traditional library organization model of technical services and user support services. The reorganization coincides with installation of a fiber optic network connecting all faculty, staff, dorm rooms, and major classrooms, along with a new digital phone system and administrative information system. Contact Associate Vice President for Information Services Ken Pflueger, (805) 493-3250 or e-mail ken@oaks.callutheran.edu.

ACUTA rep at California Lutheran is Tammy Cormier (805) 493-3121.

Stanford University

Stanford University is offering an experimental Netnews Filtering Service to identify articles in Usenet newsgroups that match profiles determined by the user and send a digest of appropriate clippings. Users can then retrieve specific articles or search interactively using keywords. The system includes a relevance feedback feature. For instructions, send e-mail to netnews@db.stanford.edu with the word HELP in the body of the message. The software is available by ftp: ftp://db.stanford.edu/pub/sift/sift-1.0.tar.z

Stanford's ACUTA rep is Jan Thomson (408) 723-2566.

University of Arizona

The University of Arizona recently teamed up with IBM and Integrated Systems Solutions Corporation consultants to assess IT needs and recommend strategies to create an electronic learning environment not bound by classroom walls.

Among the resulting recommendations:

- Provide electronic, full-function network access to all members of the University community
- Work toward implementation of a statewide network
- Logically integrate distributed data and transaction systems; replace primary administrative systems; bring all library and data collections online
- Rank the report’s IT recommendations as one of the University’s “strategic few” priority areas for funding and implementation.

Paula Loendorf has represented University of Arizona at ACUTA events. (602) 621-5100.

Virginia Public Colleges and Universities

A statewide “virtual library” will electronically network libraries at Virginia’s 51 public universities and colleges. Funded by a $5.2-million allocation from the state’s General Assembly, the project is believed to be the most extensive in the country. It will establish regional electronic resource centers at the six doctoral universities, and facilitate exchange of resources between libraries.

Coordinating the project is Katherine Perry, director of George Mason University’s newly created Center for Digital Library and Information Resources.

James Madison University

James Madison University has begun a campus-wide networking initiative to connect 1,500 departmental and personal computers and printers to the campus network, install new twisted pair wire within buildings to each office and classroom, install fiber optic cable between most campus buildings, upgrade its network backbone and Internet connection, and provide e-mail across campus.

ACUTA rep at James Madison is Tom Bonadeo (703) 568-6108.

Pull the plug...

Continued from page 9

800 numbers, you may not find anything.
You need to examine the cost column and compare it to the minutes of use. You may not be concerned with a $3 call, but if that call was only one minute long, you have a problem.

What do you do if you’re hit?
If you’ve been hit by any of the thousands of scam numbers, complain quickly to your telco and refuse to pay the charges. Most telcos will do this the first time you’re hit, but if the same numbers keep showing up every month, you’re going to have to pay for them.

Next, write a letter to the FCC. (Their address is given on page 2 of this newsletter.)

Where is the long-term solution?

The only other alternative is regulatory relief, and that takes an act of Congress. They are the ones who forced the FCC to adopt the existing guidelines, and they are the only ones who can make them more stringent. So last, and perhaps most important, get your legislators’ attention and press for a real solution to this expensive dilemma.
Welcome New Members
August 25–September 28, 1994

In Memorium
Garry Tatum, Assistant Director of Operations and Communication Services at the University of Guelph in Ontario, passed away suddenly September 9, at the age of 53. He is survived by his wife Jane and daughter Sarah.

Garry had been an active member of ACUTA for eleven years, serving as a member of the original Board of Directors at the time of ACUTA's incorporation.

A member of the Rotary Club and an avid sports fan, Garry is warmly remembered by friends for his skills as a professional, his willingness to help others, and his good nature.

Faced with the choice between changing one's mind and proving that there is no need to do so, almost everyone gets busy on the proof.

—John Galbrath

Institutional Members
- Pellissippi State Technical Community College, Knoxville, TN. Norma E. Stone, phone (615) 694-6608; fax (615) 694-6435

Corporate Affiliates
- Capital Telecommunications, Inc., Westminster, MD. Donald J. Clagett, phone (410) 848-7951; fax (410) 876-9415
- ConferTech International, Inc., Denver, CO. Suzanne Brennan, phone (303) 633-3077; fax (303) 633-3001
- Ross Thompson & Associates, Hinsdale, IL. Kevin Bradley, phone (708) 850-3378; fax (708) 850-3379

A gopher on the White House lawn?

Those who live in the central part of the country may recognize a gopher as the mascot of the University of Minnesota. But more important to most of us is the fact that gopher is a name used on the Internet system for a long list of bulletin board type services. Some of these are of interest to ACUTA members.

When does a gopher come in handy?

If you have a connection to Internet on your campus, you should have access to gopher. The setup and menus may be different on each campus, and you may have to ask some questions locally to get started, but once into the gopher system, the information available is extensive.

Look for a menu that has gopher jewels and choose it. The next menu will have about 15 options. One of them is government. Choose it. The next menu has only six options, and you want the one called Federal Agency. Choose it on the next menu as well.

Now you should be at "menu depth 4," and there may be about 67 items including FCC, U. S. Senate, House of Representatives, and many other government agencies. When you choose one of these, you get another menu which leads you through two or three more levels of menus, but in the end you get to text including documents, announcements, meeting schedules, orders, and whatever they choose to list.

Let this gopher do some digging for you. You might be surprised what you can unearth!

Editor's note: For more information about gophers and World-Wide Web, see "Lost on the Information Highway?" on page 9 of the June, 1994 ACUTA News.

ACUTA Events Calendar

Winter Seminar
Maui, Hawaii
Jan. 17–21, 1995
- Inter-Continental Resort
- TOPIC: Campus Networks—Beyond the Walls

Spring Seminar
Kansas City, Missouri
April 9–12, 1995
- Hyatt Regency
- TOPIC: The Video Highway: Can We Get There from Here?

24th ANNUAL CONFERENCE
Orlando, Florida
July 16–20, 1995
- Stouffer Resort
- Features: Speakers, Breakout Sessions, User Groups, Exhibits

Fall Seminar
Fort Worth, Texas
Oct. 29–Nov. 1, 1995
- The Worthington Hotel
- TOPICS:
  - Strategic Planning & Budgeting for Telecom Infrastructure
  - The Telecomm Dept: Rx for Change
Editor's Notes...

Congressional Quarterly now makes its current and archived files available via a Gopher server. Users can find the current CQ Weekly Report, the cumulative index, weekly news briefs, the status of major legislation, results from roll call votes, election updates, and more. For information send e-mail to mhenderson@cqalert.com or gopher to gopher.cqalert.com. Interested in participating in discussions related to improving teaching and learning through information resources and technology? Join a new listserv, called AAHEGIT, established by the American Association for Higher Education. The list has more than 1,000 members, results from academic computing support staff, faculty, librarians, administrators, publishers, and representatives of other information industries. To subscribe, send e-mail message to listserv@gwuvm.gwu.edu. In the body of the message type: subscribe AAHEGIT yourfirstname yourlastname. For more information, contact Steve Gilbert at AAHE: gilbert@clark.net; phone 202-293-6440, ext. 54. What's happening on your campus? Call Pat Scott, ACUTA, 152 W. Zandale, Lexington, KY 40503.

Especially for Faculty

On October 28, Indiana Univ. will originate “Networked Information and the Scholar,” a national satellite videoconference focusing on the growing use of networked information and how it can support the goals of higher education. Info: Margaret Lion or Eugene Brancolini (812) 855-2101 or e-mail televis@ucs.indiana.edu.

Position Available

Computer Services Administrator

ACUTA

The following new position has been created in the ACUTA national office in Lexington, KY, for implementation of electronic access to the Association's information and networking resources. We invite referrals from ACUTA members, although reimbursement for relocation expenses is not available.

Responsibilities: Assist with planning and implementation, then administrate new office LAN and national BBS services for a 900-member international college & university telecommunications association. Develop and/or enhance applications for said services. Ensure integration/compatibility of file, communication, and fax servers along with voice mail and CTI application. Implement and support process for converting paper library documents and other resource materials into electronic format.

Qualifications: B.S. in computer science, management info systems, or related field; previous experience with Internet, database applications, LAN administration. Telecommunications and/or BBS exp. required. Flexibility, team-player attributes required for small staff integration.

Salary: Competitive, commensurate attributes with education, experience.

To Apply: Submit cover letter and resume to: Jeri A. Semer, ACUTA, 152 W. Zandale, Ste. 200, Lexington, KY 40503.

ACUTA is an equal opportunity employer.

Directory Correction

ACUTA Program Chairman Jan Weller's e-mail address in the ACUTA Membership Directory is incorrect. Reach Jan at: JWELLER@KUTELECOM.LT.UKANSAS.EDU

Position Available

Manager of Technical Services

Indiana University - Bloomington

Responsibilities: Manage Technical Services work unit in Telecomm. Dept. Unit consists of Computing Services; Plant Services (Wire/Cable and Facilities); and Telecomm Systems Services. Provide leadership as a player/coach, coordinate projects, apply emerging technologies in a custom environment, infuse technical knowledge into other parts of the organization.

Energetic, skilled leader manages operations, supervises staff, reviews technologies, & plans & implements new systems & services in a fast paced technical environment. Other activities include recommending & implementing policies & practices; developing & maintaining technical & construction standards & operational plans.

Qualifications: B.S. in computer science, electrical engineering, or related field; strong interpersonal communication skills; supervisory exp.; work experience in this field. Experience with software, telecommunication switching systems, & project management very desirable.

To Apply: Submit résumé & cover letter to Mike Enyeart, Assistant Director, Indiana University Communication Services, 700 SR 46 Bypass, Bloomington, IN 47405. Equal Opportunity, Affirmative Action Employer

Oops!

Page 6 of the September ACUTA News may have been confusing with extraneous question marks in the Member Service Awards paragraph. Those should have been numbers: 91 five-year pins, 46 ten-year pins, and 2 fifteen-year pins.