



# ***Exploding The Phone***

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Bibliographic Cover Sheet

Title           **Ripping Off the Phone Company**

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Abstract       Excellent overview article from Illinois Bell house magazine on toll fraud. Discusses phone phreaks, rip-off mentality, etc. Surprisingly sympathetic.

Keywords      toll fraud; blue box; Illinois Bell; CTI

Notes          Date unknown but probably 1972 or so. Do we have a duplicate copy of this somewhere? I feel certain I've seen it before.

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A phone phreak,  
trying to tap his way  
to happiness, may get  
10 years in the pen.

# ripping off the phone com- pany

**I**f there's a phone phreak out there who doesn't know it yet, fair warning. The Bell System is getting tough on toll fraud.

Just have a look at *Ramparts*, the West Coast magazine which published a story in June giving the plans for a device which avoids billing on long distance calls.

Pacific Telephone complained fast and loud, and *Ramparts* editors were soon scurrying to recall 90,000 copies from newsstands. It wasn't a funny episode.

"Any way you slice it, the person who steals telephone service is a thief," snapped an AT&T spokesman, adding that in more than half the states it's a crime to make, sell, loan or possess plans or instructions for the assembly of toll fraud devices.

About the same time, a 19-year-old Lake Forest College sophomore was surrendering to Lake County sheriff's police to face felony charges for theft of \$1,500 worth of telephone calls.

The student, William H. Straus of Pound Ridge, N.Y., was tracked down by Illinois Bell security officials after a two-month investigation. He is awaiting trial which could result in a fine and up to 10 years in prison.

The Straus case is just the most recent episode locally. At least half a dozen suspected cases of toll fraud are currently under investigation in Illinois and another, which involved international toll fraud on a loop around test circuit in Wilmette, is awaiting trial in federal court.

Straus signed a statement admitting he had been making the calls from his dormitory room using a "blue box." This little electronic device has gathered international publicity, but it's just the tip of the toll fraud iceberg.

In 1971, the Bell System lost \$22.2 million to credit card and third number fraud, plus an undetermined (but large) amount through electronic fraud. Illinois Bell alone lost \$1.4 million.

All this lost revenue eventually is reflected in higher costs for telephone users. It's part of the social cost of crime.

The whole issue first came to public notice last fall in an *Esquire* magazine

article about "phone phreaks" and the little blue boxes that put the international telephone network at their command. Free.

Toll fraud certainly is nothing new, but its steady growth through the 1960's has posed serious problems for telephone companies. The result is the new "get tough" attitude in finding and prosecuting violators.

**W**hy and how did toll fraud become such an intolerable problem? No one knows for sure, but one plausible theory ties the fraud phenomenon to the anti-war movement and the emergence of New Left politics.

In 1966, while casting around for funds to pay for the escalating Vietnam war, the Johnson administration persuaded Congress to renew the 10 per cent federal excise tax on telephone service, which had been slated for elimination. So, even though the telephone excise tax in some form had existed almost continuously since 1914, many people suddenly saw it as a "war tax."

There was a flurry of protest among war dissenters, with some persons refusing to pay the tax. Others may have decided to lodge their protest by gyping the telephone company, which they viewed as an agent of the war effort. In any case, the first big jump in toll fraud occurred that year.

More recently, spokesmen for the radical left have been preaching the theft of goods and services from all big institutions—including telephone companies—because, they say, big institutions "exploit" people. This "rip-off" doctrine was the central theme of a 1970 tract by Abbie Hoffman called *Steal This Book!* (Interestingly; some booksellers took it off the counters in self defense when readers began taking the title literally.)

But one development that certainly fueled a 300 per cent increase in toll fraud during 1970 was the Hollywood Star hoax which fooled thousands of people across the nation.

The story went that Paul Newman (or Steve McQueen or whoever you heard it was) had contracted with his local telephone company for Wide Area Telephone Service (WATS), but then

**The Bell System's problem:  
people who wouldn't think  
of stealing from a store are  
ready to steal phone service.**

found he wasn't using it enough to make it worthwhile. When the company refused to refund his money, he became so angry that he took out a newspaper ad (or appeared on a late-night TV talk show) inviting people to use his credit card number for all their calls. That was allegedly his way of getting even.

The story spread faster than you could tap out the number on a Touch-Tone® telephone. Before long, people all over the country were calling friends and relatives, supposedly to oblige the irate Hollywood star.

But most amazing, when centralized ticket investigators tracked down people who had made the calls, just about every one of them believed the story. No one, of course, had actually seen the offer printed in a newspaper (it was always in a paper from another city), nor heard the star himself make the offer on TV. There *never was* an ad or a verbal authorization. But people never stopped to question the tale. Possibly many also saw it as a way to strike back at Ma Bell, the "rich" monopoly who, because she is big, must be bad.

The media helped keep the hoax alive. Columnists and commentators alike reported the story, sometimes as a fact, sometimes with disbelief. Those who tried placing a call and billing it to that credit card number often found the operator didn't challenge it. Some were convinced the story was true. By the time anyone thought of asking the star if he had offered it, or of asking the phone company if he had such a line, too many people had found it an easy way to make "free" calls.

In the last couple of years, the underground press has published the codes for making up "valid" telephone credit card numbers, and even suggested some establishment numbers to use: Army recruiting, corporations with defense contracts, banks and, of course, the telephone company. Even "above ground" newspapers are following suit. A week before the 1972 credit card codes went into effect, *The Bradley Scout*, the university-funded student newspaper of Bradley University in Peoria, explained the new code in an article sup-

plied by the Liberation News Service in New York.

Years back, says Security Rep Ray Pufunt, organized crime figures and con men were the biggest credit card and third number offenders. Now the young (students, hippies, military personnel) and members of all ages of the radical underground movement account for the major share of these calls. But there's a generous sprinkling of "establishment types" among the credit card abusers—businessmen, lawyers, housewives, even churchmen.

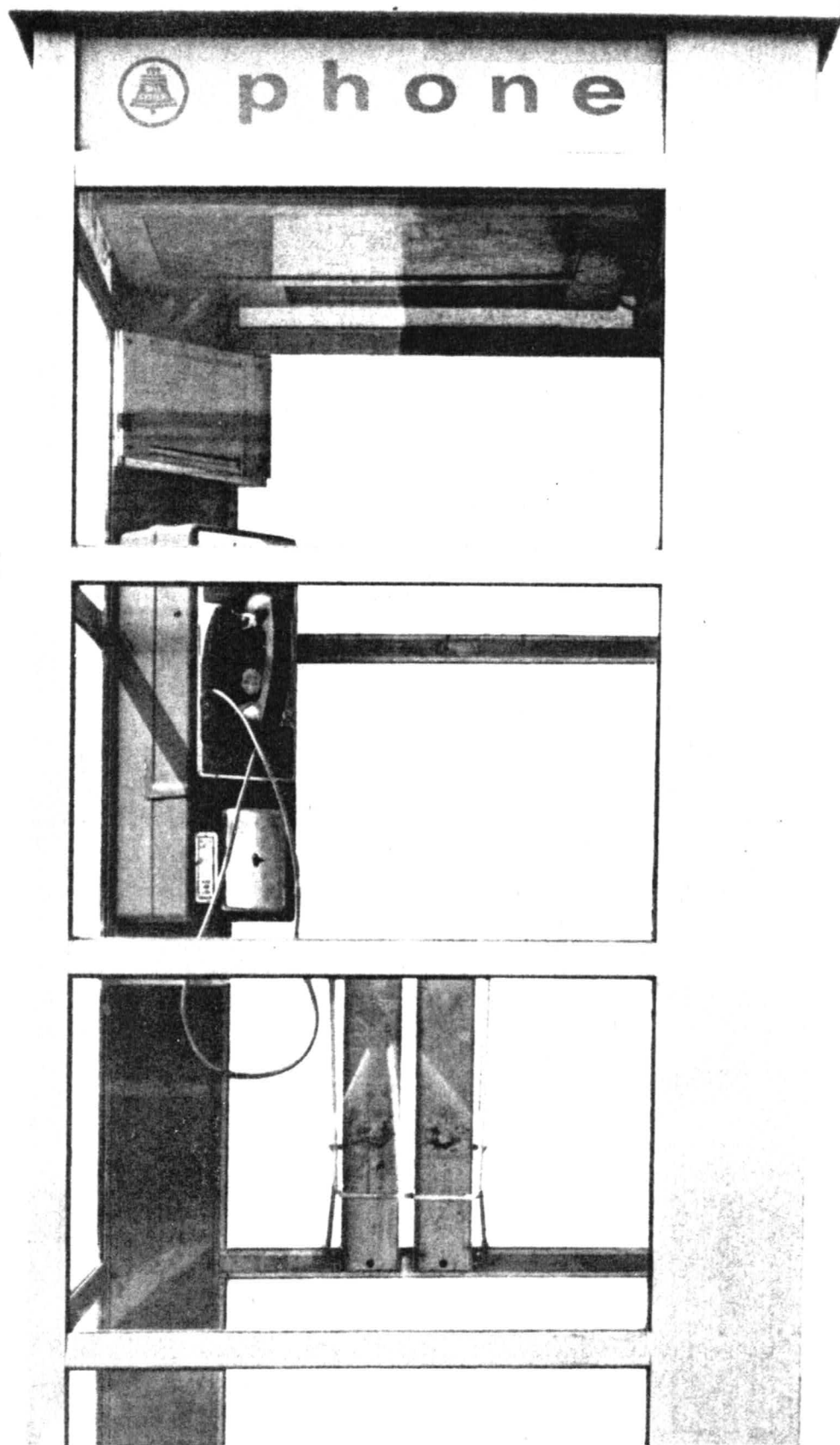
Why do they do it? Ralph Kempcke, staff supervisor in the centralized ticket investigation (CTI) group in Chicago, observes: "People who wouldn't think of stealing something from a store would readily commit theft by wire. They don't equate theft of a service with theft of an object."

The radicals call their fraudulent calling "people's justice," perhaps seeing themselves as latter-day Robin Hoods who steal from the rich to profit the poor.

Somewhere between the establishment and radicals are the students. They say they use fake credit cards as a temporary expedient when they have little money and great need to talk to friends and lovers who are halfway across the country.

Al Haven, an Illinois Bell security representative, believes that many people who commit credit card fraud don't realize they're doing anything illegal. But as misuse of credit cards grows, it's more and more difficult to get called parties to identify the people who called them. They're wise to the reasons behind our questions, and they're not about to implicate relatives or friends.

These observations are backed up by the CTI group, which checks into all calls that are unbillable to the number shown on the operator's ticket. They average some 215,000 tickets a month in the six Illinois centers, including tickets with operator errors. Many of these can be cleared up quickly, but the ones that are suspected of being fraudulent—about 21% of the total—are referred to a centralized fraud group for further investigation.



But even these figures don't tell us anything about phone phreaks who have garnered public attention through the *Esquire* article and other stories. We can only guess at the dimensions of their blue box activities, and what we do know is hardly reassuring.

**C**onsider this: in a high-technology society, with grade school children learning concepts their grandparents never dreamed of, young people restlessly look for new frontiers to conquer.

Curiosity leads them to the telephone network... the familiar, accessible, yet somehow remote telephone network. It offers just the challenge and excitement phone phreaks seek.

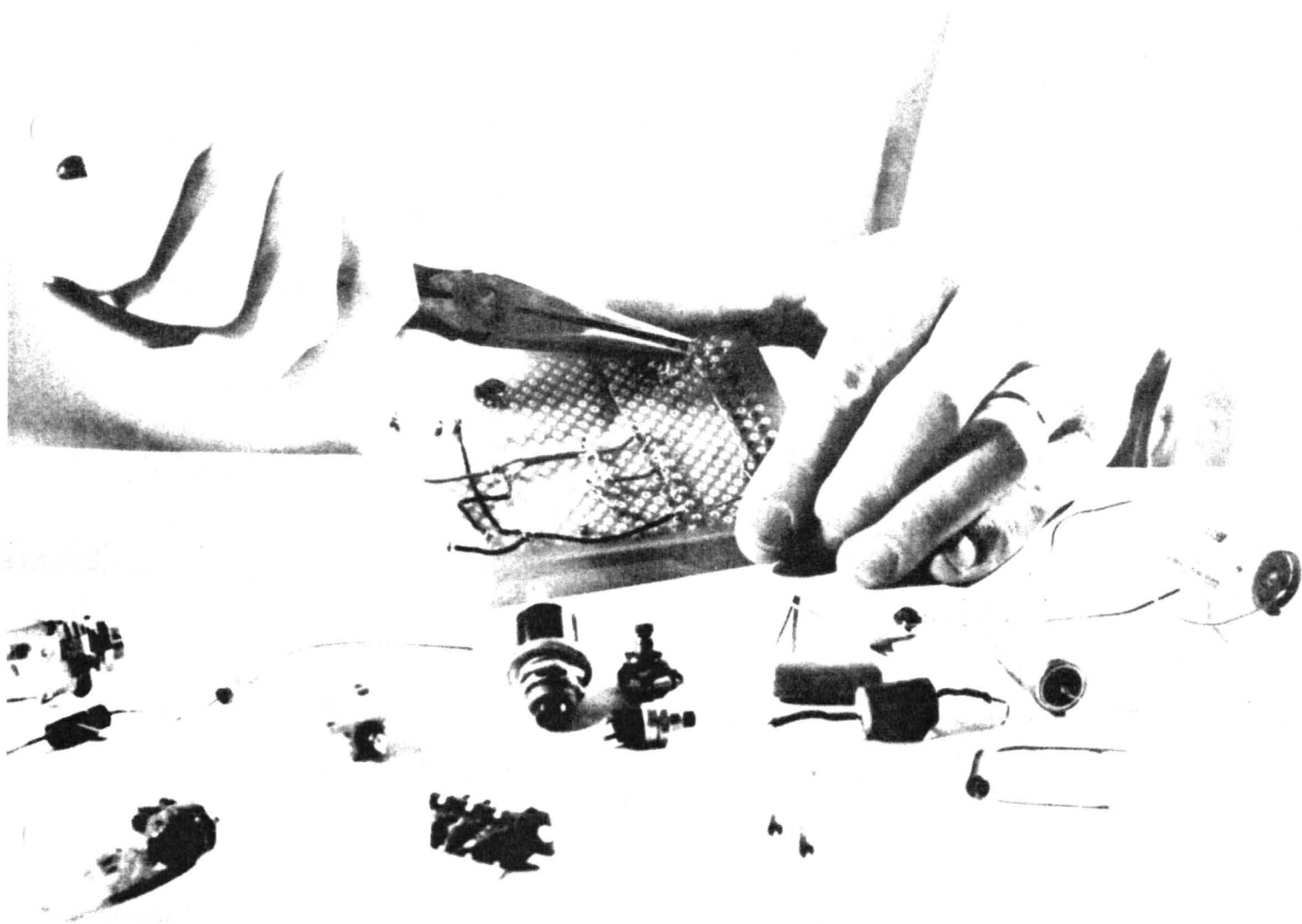
So it seems plausible, if the newspaper and magazine accounts are accurate, that most phone phreaks fit a pattern: they are young (high school or college age or slightly older), zealous, knowledgeable about electronics and the telephone network, and oblivious to the idea that they are doing anything wrong.

They've been fascinated by phones all their lives. All they really want to do, they say, is find out all there is to know about the telephone system. Sabotaging the system, they claim, is the farthest thing from their minds.

Some phone phreaks go so far as to say they'd like to work for the phone company, to help uncover and correct engineering flaws like the ones they're now capitalizing on to make their free calls. Well, maybe so. But doesn't it seem a little strange that of the several hundred phone phreaks that probably exist, only a handful have ever applied for a job with a telephone company? Chances are a good many more pursue their interest more because of the rewards than because of love for the system.

These rewards probably include the sense of power they derive from manipulating the system; the prestige they gain in the eyes of friends for their knowledge and daring; the satisfaction that comes from succeeding while "seeing if I can do it"; the thrill of getting away with something illegal; or their





**Power, prestige and the fun of "getting away with it" mean as much to phone phreaks as the calls they steal.**


pleasure in ripping off the telephone company.

Blue boxes have been around for more than 10 years, says Security Rep John Connolly, though it's only been in the last three or four years that they've existed in any quantity. Information about the multi-frequency tones on which the switching network is predicated has appeared in several technical journals over the years, including some Bell Labs publications. When data transmission began over the telephone network, both the federal and state regulatory commissions required telephone companies to furnish data customers with information about the frequencies that control the switching network. The way our system is set up, these frequencies could interfere with data transmitted at similar levels.

Armed with information from one of these sources, and a broad knowledge of

electronics, phone phreaks are able to build blue boxes themselves, though it isn't easy.

Just what can phone phreaks do with their blue boxes? Joe Enenbach, Illinois Bell's general transmission engineer, confirms they can indeed make free long distance calls, including those to international points. The blue box (it probably was called that because the first one found was blue) looks like a simple metal box with 13 pushbuttons. Each button produces a distinct tone. Besides the 10 pushbuttons that represent the 10 numbers on any dial or Touch-Tone phone, there are three others that control network signalling. Because the tones that activate most telephone equipment are carried over the same circuits people speak on, a phone phreak with a telephone and a blue box can do just about anything a long distance operator can.



In the instances when a caller requests an operator to check whether a line is busy, the caller is never on the same connection—so he can't hear—when the operator momentarily cuts in to check a line.

The claim that phone phreaks can tap into AUTOVON military communications is false. At no point does AUTOVON physically connect to the regular telephone network, and without a physical connection of lines it's impossible to monitor conversations.

Bell System engineers generally agree that phone phreaks can stack tandems, but not to the extent of tying up the circuits in an entire city, as phone phreaks claim. To come anywhere close would require the simultaneous cooperation of massive numbers of phone phreaks. And even then the automatic network control signals would reroute calls and alert switching people to the developing pattern so it could be headed off before it became serious.

Another means of committing toll fraud uses "loop around" test circuits. In every central office the telephone company maintains two lines for testing circuits between that office and other central offices. The lines have two consecutive numbers. If one party calls the first number and another calls the second number, they can talk together.

Phone phreaks avoid being billed for their calls by getting into the long distance network on a legitimate toll free number (an 800 number or a 555-1212 directory assistance line). Once into the network they use their blue boxes to disconnect themselves from the number they've dialed and to connect themselves with any other number they wish.

Beyond this basic ability to make free calls, the phone phreaks' claims are inaccurate or overblown. For example, the claim that they can tap into phone lines. The blue box itself, says Enenbach, does not enable its user to tap into a conversation. To do so would require the cooperation of an operator and there's no reason for an operator to believe that any regular telephone employee would need access to a conversation in progress. That would be wiretapping, and we're strictly enjoined by state and federal law from doing it.

**T**he laws relating to fraud by wire are tough and explicit. Any person or corporation who acts with intent to defraud or to help another defraud a person or corporation of the lawful charge for a telecommunication service may be imprisoned up to one year or fined up to \$500, or both, if convicted under Illinois law. A second offense becomes a felony and carries a prison term of one to 10 years. Conviction under the federal law carries a penalty of up to five years in prison and a fine not to exceed \$1,000. These penalties are for each count on which the defendant is tried. Every fraudulent call is a separate count—so the multiples could be overwhelming.

North Carolina and California have recently passed laws making it illegal to publish a credit card number or the

code for forming a credit card number with the intent that it be used, or with reason to believe that it will be used, to avoid payment of lawful charges. "Publish" as defined by the laws includes oral communication, in person or by telephone, radio or television, or in writing of any kind. The Illinois Telephone Association will press for such a law at the next session of the legislature.

A good many people who commit toll fraud probably don't realize the substantial legal risks they are running. A "reformed credit card crook" quoted in *Telephony* a couple of years ago explained the fallacious logic behind her calls: "(1) persons who have credit cards are usually wealthy enough to be able to afford a single extra call if the random selection of numbers hits them; (2) if the credit card holder notices an extra call, he can complain to the proper place and that call will be deleted from his bill, alleviating his problem; and (3) the phone company can afford such minor losses because it is a huge corporation."

The "former crook" went on to say: "A common myth among many persons unacquainted with the telephone industry is that AT&T is the parent company of all phone companies and therefore owns half the world, and therefore would not chase a person to prison over a few dollars."

Indeed, for many years Bell System companies were quite lenient with persons who committed toll fraud. Whenever possible, the companies would attempt first to stop the calling, then to collect on the calls, rather than take a case to court.

After all, Americans have been reluctant to hang the label of criminal on anyone, particularly a young person, for anything less than a heinous crime. Many people have felt credit card fraud is just not that serious.

But with the upsurge in fraudulent calling, the companies are getting tough. The most effective deterrent, they now believe, is a reputation as a ready—and successful—prosecutor.

Last year, as the crackdown began, there were 377 arrests nationwide for credit card, third number and elec-

## **Illinois Bell is moving on many fronts to cut the threat of toll fraud.**

tronic fraud. There have been 292 convictions with the majority of the remaining cases still awaiting trial. This year there will undoubtedly be many more arrests as security investigators accumulate evidence about other suspects.

All this investigation costs us several thousand dollars more per year than we recover through restitution. Then why do we pursue it? Bob Kitzinger, Illinois Bell's security manager, explains: "First, to deter people from making fraudulent calls. Then, we must protect our customers from being billed for calls they didn't make. If you've ever been unjustly billed for a charge you didn't incur, you know how upsetting it can be. On the other hand, large corporations often don't notice an extra call or two. We must try to see that people aren't charged for calls that are not theirs. We work very closely with CTI groups to protect the public interest here."

Kitzinger lists other reasons for investigating fraudulent calls: to protect the phone network and our rate structure and to recover lost revenues. The rate structure, Kitzinger mentions, is based on the calling volume at various times of the day. The reason we need higher rates for the peak calling periods is that we must have enough equipment to provide service at those times as well as during slacker periods. If defrauders, who don't pay for their calls, tie up the circuits and keep our operators busy,

they prevent paying customers from placing calls. More equipment is necessary to handle the calling volume. This additional capital investment inevitably will be reflected in telephone rates. So eventually telephone subscribers wind up paying for the diversions of phone phreaks, just as they eventually must absorb the losses from credit card and third number fraud.

**I**llinois Bell and other companies are working hard to combat illegal calling. Since February 1, operators have received daily updates of the most frequently abused credit card numbers associated with calls originating from each office. Traffic Service Position System consoles are programmed to spot fraudulent credit card numbers. Changing credit card codes does help. For 1971 and '72, credit card fraud was down about a third during the months immediately following the revisions. Improved intercompany cooperation speeds investigation of unbillable calls. Also effective are the arrests. Whatever the reason, credit card and third number fraud last year dropped \$6.1 million dollars from the 1970 Bell System high of \$28.3 million.

Beginning this July, Illinois Bell operators can check the validity of credit card numbers through a computer as the calls are being placed. Pacific Telephone has been using a similar plan since January 1 this year. In the first two months alone, operators there prevented some 80,000 bogus credit card calls from being made thanks to this system.

On the electronic side, computers are helping identify suspicious calls to 800 and 555-1212 numbers. Once a subscriber has been singled out as a suspect, a special device is used to keep track of the numbers he calls. It's not a wiretap because no one listens to conversations.

The new Electronic Switching Systems have a built-in guard against blue boxes. These ESS machines have a separate control band for sending signals, which makes it impossible for anyone outside the central office to control the switching network.

Many loop around test circuits have been disconnected, until ways have been perfected to restrict access to company lines. The ones still connected are monitored regularly, and it was this monitoring that resulted in the arrest of five persons in Pennsylvania last September.

Even public phones, which phone phreaks and fraudulent credit card users have long considered a safe haven, are no longer beyond our reach. Traffic pattern analyses reveal high risk public phones, and calls can be traced to them almost as easily as to residence phones.

One of the most important weapons in our battle against fraud is our employees. Bernie Egenberger, general security and defense manager, reminds us: "Be careful to guard the proprietary information you have about the telephone system and how it works. Avoid the temptation to tell all you know when a friend or acquaintance asks questions. Often innocent-sounding questions have not-so-innocent motives."

Another way you can help is by watching for suspicious circumstances. One case currently under investigation in Illinois was referred by an employee of New England Telephone. In another case, an alert Illinois Bell installer overheard a conversation at a customer's home that led him to believe a blue box was being used.

Problems like toll fraud probably will exist as long as there is a telephone system, for it's just about impossible to build any system for the masses that can't be thwarted by human ingenuity. So what are the alternatives? Do we eliminate credit card and third number calls? Equip telephones with slots for validating credit cards before a call is placed? Change credit card codes more frequently? All of these possibilities present problems—chiefly economic ones. But the System is studying them.

Preventive measures such as these offer part of the solution to reducing toll fraud. But perhaps the most effective answer lies in educating people about the costs of this crime. For in the long run, toll fraud hurts not only the phone company but all our customers. It must be curtailed.



**There are lots of good reasons not to commit toll fraud—or to help others do so. Morality, for one. The risk of prosecution and a record of arrest, for another. And for telephone employees, loss of their jobs as well. For other reasons, let this coed from a university in the Washington, D.C., area explain:**

**L**ike many students whose lovers are far away, I needed a cheap way to communicate. A friend had a solution: a credit card number. It seemed ideal. Every few days, I'd go to a phone booth near my apartment and call a phone booth in New England by giving the operator a phony credit card number. I knew the card was fake and that no individual was being charged for my calls, which were usually over an hour long, but this was about as far as my concern went. I had never stopped to consider what I was doing was wrong until one night when it was vividly illustrated to me.

I was in the phone booth blissfully talking away when I noticed the approach of four policemen and two men in regular business suits. My immediate impression was that they wanted to use the phone. However, from their expressions I quickly understood that what they wanted was me. I was under arrest.

I couldn't believe it. I had never thought about being caught, let alone being arrested for what I had done. But when I was sitting in the police station being booked, reality hit hard. I felt like I was in a scene from an old gangster movie only this time I was the gangster. It was strange to be on the other side. I was scared and alone with the threatening possibility of a night in the Women's Detention Center. The charge was "false pretense"; a misdemeanor. Friends contacted the Bail Agency, and it was finally decided to release me on personal recognizance. But first I had to be processed. I was taken downtown in the back of a paddy wagon. I'll never forget

the burning humiliation of being fingerprinted and photographed.

This wasn't like being arrested in a demonstration. There was no security in numbers, no solidarity of cause, no brotherhood of experience. This time I was on my own, without support. And at the end of seven hours when I was finally released, there was no "cool" left.

From here, my troubles were only beginning. First, I had to let my parents know what had happened. It was not an easy thing to do. I felt quite small and foolish. I needed to obtain a lawyer. Legal Aid came to the rescue. Then there was the write-up in the papers. The newspaper used my name and address, thus officially announcing my criminality. Next was my indictment. I had to report to Superior Court at 9 a.m. and sit in a court room waiting for my case to be called until 1:30 that afternoon. If you've ever sat in a court room and watched justice in action, you know what a weird experience it was for me. Through a private hearing with the U.S. Attorney and the Chesapeake & Potomac Telephone Company, it was finally agreed that the charges against me would be held in abeyance. However, I still have a record of arrest which can never be cleared.

I was lucky. A conviction because of toll fraud could have ruined my future by reflecting on my integrity. It's extremely disturbing to realize that I came so close to ruining my life because of my own stupidity. But I'm not writing this to moralize. My purpose is only to show what has happened to me, the rest is up to you. The C&P Telephone Company's new "get tough" policy is extremely efficient. Think about it.