



The 1980s: In the Beginning

Chapter 1: Stories and Adventures

Chapter 2: The Last Days of Ma Bell

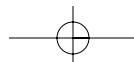
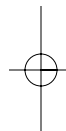
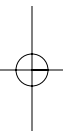
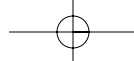
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Stories and Adventures

One of the true joys of the hacker world is the wealth of firsthand accounts that get shared throughout the community. Everyone has a story and many hackers have a whole treasure trove of them. This is what comes from being an inquisitive bunch with a tendency to probe and explore, all the while asking entirely too many questions. The rest of the world simply wasn't prepared for this sort of thing, a fact that hackers used to their advantage time and again.

In the hacker world, you can have adventures and obtain information on a whole variety of levels, using such methods as social engineering, trashing, or simply communicating and meeting up with each other. All of these methods continue to work to this day. Back in the 1980s, excitement via a keyboard was a fairly new concept but it was catching on pretty fast as personal computers started to become commonplace. It seemed incredible (and still does to me) that you could simply stick your telephone into an acoustic modem, type a few letters on a keyboard, and somehow be communicating with someone in an entirely different part of the country or even another part of the globe. Of course, hackers had already been having all sorts of adventures on telephones for years before this, whether it was through boxing, teleconferencing, or just randomly calling people. And there were also the occasional "real-life" adventures, something hackers were certainly not averse to, contrary to the usual stereotypes of pasty-faced teenagers who feared going outside and interacting with the world. The point is that whenever you got a bunch of bored, curious, and daring individuals together, it didn't really matter what the setting was. On the screen, over the phone, or in real life, there was fun to be had and plenty to be learned in the process.

Tales from the Distant Past

Something that is true in any community of forward thinkers is the desire to learn about the past. In our early years, most of those stories had to do with telephone-related material from years and decades past. The two examples that follow rewind to the middle of the 20th century when phones and communications were radically different than what they had become in the 1980s. While the technology may have become obsolete, the interest in how telephones shaped our world remained strong—regardless of the era.

A Story of Eavesdropping (April, 1986)

Everybody knows an old man who was in the Second World War and has plenty of war stories to tell. Well sometimes it pays to take the time to listen.

We knew that the enemy was monitoring all of our international radiotelephone channels, despite the sophisticated voice-scramblers which “inverted” speech, making high tones into low ones and vice versa. Only authorized persons were permitted to use overseas telephone circuits.

We were equipped with elaborate recorders and switching control boxes which permitted us to cut off either side of a conversation, or to substitute ourselves for either party. A strict set of rules forbade us to permit maritime information, weather reports, cargo information, etc. to pass over the circuits.

Influences in Washington sometimes resulted in orders issued to us to permit use of the overseas telephone circuits, even though we were suspicious of previous conversations because parables and unusual phrases often used, made it difficult to follow what was being said. “How can we monitor carefully, when we can’t understand what they’re saying?” went unheeded.

We caught one fellow red-handed in South America using weird terms like “birds leaving the nest with a basket of eggs.” I finally cut in the circuit and told him I’d forgotten what they meant. He tried a couple of other phrases, which I also couldn’t understand. Finally, he lost his patience and blurted out, “Oh hell. I’m talking about those special munition orders which left yesterday for Germany.”

By this time, a special telephone speech scrambler had been developed which was small enough to fit and use on a desk. Its availability was extremely limited, but a couple of army officers—one in the U.S. and the other in Panama—had been able to get hold of a pair of them, and between them secretly installed them on their desks, unbeknownst to us of course!

One day I heard the fellow in Panama say, “OK Joe, now over to the scrambler,” and their ensuing conversation became unintelligible. We quickly checked the radio telephone circuit equipment and discovered that the technical characteristics of the equipment they were using and our own were identical. As a result, when they inserted their scramblers the speech inversion righted itself and their conversations went out over the radiotelephone circuit in clear language—readable by anyone! That was the end of the use of their private “secret conversation system.”

Some of the worst offenders of overseas telephone use security were the top people. I’ll have to list Generals Eisenhower and Marshall as two of them—at least sometimes. I can remember one day the circuit between London and Washington happened to be very poor in quality and “understandability” was stretched to the utmost.

General Marshall in Washington had General Eisenhower on the line in London who couldn't understand a word of what Marshall was saying. Marshall repeated several times "Ike, this is GCM—Marshall—GCM—got it?" without results. Finally in frustration Marshall turned to an aide and could be plainly heard to say "What's the code word for my name?"

The next thing we knew, Marshall was slowly and distinctly repeating his code name interspersed with "GCM" and "Marshall." Of course, we had to cut the circuit and notify the code group in Washington to immediately "bust" the code—we couldn't take any chances—revelation of the code word for his name might have been all the enemy intelligence was waiting for to help it "code-break" other communications.

On the other hand, President Roosevelt and Prime Minister Churchill were two of the best and easiest to monitor. Both used references to previously transmitted overheard messages by numbers and most of the conversations were along the lines: "Well Winnie, on number 528, I really don't think we should do that—you know how they are." Nobody could gain any information from listening to their telephone conversations.

I always enjoyed listening to Sir Winston originating a call. The British telephone operators were required on every connection to announce in advance of a conversation: "You are warned not to mention the names of vessels, sailing dates or conditions, cargoes, weather, etc., etc., etc., any violation on your part will result in the circuit being cut off and your action being reported to the highest authority. Do you understand?" Sir Winston always docilely replied. "Yes ma'am. I understand."

One enemy group had learned the "language" of speech inversion. For example, listening on the air to a radiotelephone circuit, one might hear a word that sounded exactly like *krinkanope*. That was the word *telephone* after it had passed through the speech inversion system!

The First Atomic Bomb: A True Tale (March, 1984)

This story was originally related by Laura Fermi, widow of the nuclear physicist Enrico Fermi who, along with assorted colleagues, participated in the first test bomb in the desert outside Alamogordo, New Mexico, in the early morning hours of a summer day in July 1945.

When the date had been established for the secret test, staff members from the Manhattan Project (as the secret test was known) were invited to bring their spouses to New Mexico to watch the results of the several years of research. Each staff member had been assigned specific tasks to handle while there. Generally, they acted as observers and were stationed in a circle around the perimeter of the bomb site. Enrico and Laura were stationed in an area about twenty miles to the southwest of the bomb site.

The morning came when the bomb was scheduled to be detonated in the test. Laura told it like this...

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Enrico and I woke up at 3:00 a.m., to go to the site. The test was scheduled for 4:30 a.m. that day, which was July 19, 1945. We drove to our post, about twenty miles from the site. It had been arranged that the nearly 100 of us present would be located in a circle about 100 miles in circumference surrounding the bomb site. We were all to be in communication with each other over telephones, all of which were connected through the exchange in Alamogordo.

We arrived at the site at 4:15 a.m. and almost immediately it began to rain, quite a heavy, very typical torrential downpour during the summer. We waited in our car, and at 4:30 a.m. the time came and went, but the bomb did not go off. Enrico and I assumed it might have been postponed due to the rainstorm, but decided to check with the other staff members to see for sure. For some reason, the telephone there at the site did not seem to work; the operator would not respond. *(Note: At that time, nearly all phones in the United States, and certainly in New Mexico, were manual. No dialing of any sort was possible—you had to use the operator for everything.)*

Finally Enrico decided that we would drive into town and try to contact the others and see what went wrong. So we drove back to town, and got there about 5:15 a.m. The only place open at that time of night was a hotel, and we stopped in there to use a pay phone. Strangely enough, the pay phone was not working either, or at least the operator never came on the line to ask what we wanted. Enrico was quite curious about all this and decided to investigate. We went outside the hotel, and Enrico found where the telephone wires came off the pole and down into the building. He decided that we would follow the wires, so we walked down the street looking overhead at the wires on the pole as we went along. Finally, we turned down one street and saw a house. The telephone poles and wires from all directions seemed to come down to this house. There must have been hundreds of wires from telephone poles all coming down onto the side of this house and going in through an opening.

We noticed that there was a front porch light, which was on. The front door was open, but there was a screen door, which was closed. We went up on the front porch and looked into the house. A switchboard was there, and there were a dozen or more lights on the switchboard lit, blinking off and on as people were flashing the switch hooks on their phones trying to raise the operator. The room was just dimly lit, and near the switchboard was a sofa, and a woman was laying on the sofa sound asleep! Enrico pounded very loudly on the screen door, and shouted at the woman. Suddenly she opened her eyes and looked at him, very startled. Then she looked at the switchboard. Immediately she sprang up, dashed over to the board, sat down and began frantically answering the calls.

Without saying any more, Enrico and I left, went back to the hotel where our car was parked, and drove back to our monitoring post twenty miles out into the desert. We had been at our post only about five minutes when the explosion went off, at about

6:30 a.m., which was two hours behind schedule. Later, we talked to the other staff members and found that there had been some confusion because of the rain. None of them had been able to reach the others because the telephone operator had fallen asleep, and the phones were not getting answered/connected...

We on the staff all had a big laugh out of it, but nothing more was ever said or done, and I doubt to this day that that woman is even aware that the first atomic explosion in the world was delayed two hours because of her.

Amazing, but true. Alamogordo was a tiny town back in the '40s, and it's very doubtful that the night operator had ever seen so much traffic in her life as the hundred or so people all on the line at once that early morning. More than likely, the poor dear had had a very rough day the day before, in the miserable summer heat, had been unable to sleep during the day, and had come to work that night thoroughly exhausted. She probably decided that "it won't hurt just to close my eyes for a minute..." and the rest of the story is already told. After all, experience had taught her that in fact she would not usually get a dozen calls all night on her shift, and she felt relatively safe in stretching out "just for a minute."

Numbers That Led to Trouble

Having access to telephones and the increasing variety of new uses for them invariably led to all sorts of fun for the average phone phreak. (It was quite common in the hacker world to append a "ph" to any word with an "f" if it had anything at all to do with phones, such as "phreak," "phriend," or "phraud." Sometimes the exact opposite was true, which resulted in the word "fone" popping up every now and then.) Of course, fun in the hacker world usually translated to trouble in the real world, which pretty much summed up where hackers fit in societywise. Our innocence and adventure was always seen as evil and threatening to the uninitiated who couldn't seem to understand what motivated these strange individuals to go and play with phones for hours on end. As a result of our hard work, we would share whatever strange phone numbers we were able to discover with anyone who was interested in hearing about them. Because there weren't as many methods of communication as there are today and because there were significantly less phone numbers floating around, discoveries like the ones that follow seemed to mean a lot more. And then, of course, there was one of the all-time favorite phone phreak pastimes: running a teleconference. The unparalleled pleasure of hooking several dozen of your closest friends together and going on a telephonic voyage around the world was something so few people could even conceive of in the 1980s. And yet, *everyone* in the hacker community had some sort of encounter with teleconferences back then. Some were even rumored to have spent most of the decade connected to one.

The Scariest Number in the World (December, 1984)

Recently, a telephone fanatic in the northwest made an interesting discovery. He was exploring the 804 area code (Virginia) and found out that the 840 exchange did something strange. In the vast majority of cases, in fact in *all* of the cases except one, he would get a recording as if the exchange didn't exist. However, if he dialed 804-840 and four rather predictable numbers, he got a ring!

After one or two rings, somebody picked up. Being experienced at this kind of thing, he could tell that the call didn't "supervise," that is, no charges were being incurred for calling this number. (Calls that get you to an error message, or a special operator, generally don't supe.) A female voice, with a hint of a southern accent said, "Operator, can I help you?"

"Yes," he said. "What number have I reached?"

"What number did you dial, sir?"

He made up a number that was similar.

"I'm sorry, that's not the number you reached." Click.

He was fascinated. What in the world was this? He knew he was going to call back, but before he did, he tried some more experiments. He tried the 840 exchange in several other area codes. In some, it came up as a valid exchange. In others, exactly the same thing happened—the same last four digits, the same southern belle. Oddly enough, he later noticed, the areas it worked in seemed to travel in a beeline from Washington D.C. to Pittsburgh, PA.

He called back from a pay phone. "Operator, can I help you?"

"Yes, this is the phone company. I'm testing this line and we don't seem to have an identification on your circuit. What office is this, please?"

"What number are you trying to reach?"

"I'm not trying to reach *any* number. I'm trying to identify this circuit."

"I'm sorry, I can't help you."

"Ma'am, if I don't get an ID on this line, I'll have to disconnect it. We show no record of it here."

"Hold on a moment, sir."

After about a minute, she came back. "Sir, I can have someone speak to you. Would you give me your number, please?"

He had anticipated this and he had the pay phone number ready. After he gave it, she said, "Mr. XXX will get right back to you."

"Thanks." He hung up the phone. It rang. *Instantly!* "Oh my God," he thought, "They weren't asking for my number; they were *confirming* it!"

"Hello," he said, trying to sound authoritative.

"This is Mr. XXX. Did you just make an inquiry to my office concerning a phone number?"

"Yes. I need an identi—"

“What you need is advice. Don’t ever call that number again. Don’t even think about calling that number again. Forget you ever knew it.”

At this point our friend got so nervous he just hung up. He expected to hear the phone ring again but it didn’t.

Over the next few days he racked his brains trying to figure out what the number was. He knew it was something big—that was pretty certain at this point. It was so big that the number was programmed into every central office in the country. He knew this because if he tried to dial any other number in that exchange, he’d get a local error message from his CO, as if the exchange didn’t exist.

It finally came to him. He had an uncle who worked in a federal agency. He had a feeling that this was government related and if it was, his uncle could probably find out what it was. He asked the next day and his uncle promised to look into the matter.

The next time he saw his uncle, he noticed a big change in his manner. He was trembling. “Where did you get that number?” he shouted. “Do you know I almost got fired for asking about it?! They kept wanting to know where I got it!”

Our friend couldn’t contain his excitement. “What is it?” he pleaded. “What’s the number?!”

“It’s the President’s bomb shelter!”

He never called the number after that. He knew that he could probably cause quite a bit of excitement by calling the number and saying something like, “The weather’s not good in Washington. We’re coming over for a visit.” But our friend was smart. He knew that there were some things that were better off unsaid and undone.

(If you have a phone or computer story, call or write us!)

The Truth Behind Those 9999 Numbers (January, 1984)

By Mark Bluebox

Once upon a time, I was talking to one of my favorite friends, one of the nation’s oldest and most experienced telephone enthusiasts—some might refer to him as a phone phreak. In this particular conversation, he mentioned to me that I might want to experiment with a series of 800 numbers: exchanges starting with 9, followed by the suffix 9999 (800-9xx-9999). And so I did, and a whole new world began to open up in front of me.

They were mostly weather and time numbers in various locations throughout the country. And, because these were 800 numbers, there was NO CHARGE! One number in particular was of a great deal of interest to me and to many others. This was 800-957-9999, which hooked up to WWV, the radio station operated by the National Bureau of Standards that does nothing but tell the time and give shortwave reports. This is the most accurate clock in the entire world! You either have to tune WWV in

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on a shortwave receiver or dial 303-499-7111 in Fort Collins, Colorado. Yet, here I was with an 800 access! Being a bit of a shortwave enthusiast, I don't have to tell you how convenient this was for me. Unfortunately, it got too convenient for too many people.

I guess I made the mistake of giving it to a former president of a large amateur radio club in the Dallas area. He, in turn, printed it in the Amateur Radio News Bulletin where thousands of people probably saw it. Another statewide News Bulletin picked it up and printed it. Through an amateur radio news network, which this bulletin was a part of, the news got as far as California.

One day, I called up the West Link Amateur Radio News Service at 213-768-7333. (This is a service located in West Link, California that broadcasts news over amateur radio, VHF, UHF, etc.) Their latest report had this little item: "Speaking of interesting things, the National Bureau of Standards has got a very convenient time number for those of you that are not constantly at a shortwave receiver. You can dial 1-800-957-9999 for WWV. It's just another good toll-free service for us to use." The avalanche had really begun now.

The West Link report was heard on bulletin stations all around the world and apparently one station in Nashville, Tennessee, broadcast it. From there it fell into the hands of one of the writers for the DX program on Radio South Africa! I happened to be listening to a program where they were talking about pulling in distant time stations, weather stations, etc. He then mentioned, "For those of you that live in the United States, a convenient toll-free 800 number has been provided by the National Bureau of Standards for WWV and that number is 1-800-957-9999." Imagine my surprise! Once again, the number had been broadcast all around the world. People in many, many nations now had that number. Of course, the number only worked inside the United States, but the word was being spread by shortwave listeners and QSL people everywhere.

The number was getting swamped. Needless to say, it was busy much of the time. A government official, who *also* had this number, thinking that it was legitimate, called up WWV and complained. He told them that they needed to add some more lines to their new 800 number. The general manager of the station said, "I don't know *what* you're talking about. I don't know of any 800 number that gets you WWV."

The government official told him what the telephone number was. The general manager called it and heard his own station. Astounded, he contacted the Mountain Bell Telephone Company in Denver, Colorado. They said, "You're not paying for any 800 in-WATS number. We show 303-499-7111 for WWV, but we don't have any 800-957-9999."

Mountain Bell checked it out and sure enough, the number existed but not on *their* records. No one was getting charged for this! Now, of course, you know a monopoly as well as I do—they're *sure* not going to let anyone have a free ride. So they told the

WATS coordinator to find out what happened. He finally made the discovery that some technicians had hooked that number up for transmission testing. (These switching technicians are toll technicians, AT&T Long Lines switching technicians, and carrier systems technicians. In other words, they're the group of people who link switching centers together, from New York to Los Angeles, for example. In this case, the whole escapade was a kind of group effort. The switchmen and the carrier people got together and set up this number for testing, finding noisy carriers, carriers with cross talk on them, etc.)

The WATS coordinator told them they'd better get this number off—too many people knew about it. He told them to erase *every* 800 test line number that was on the system. Not surprisingly, someone also got chewed out very severely.

So, consequently, 800-957-9999 is no longer in existence. But since then, less than two weeks later, several of the 800 test numbers have begun to defiantly reappear. Check around, you'll probably find a few interesting ones. But I doubt if WWV's brief stint as a toll-free service will ever be repeated.

A True Saga of Teleconferencing (April, 1984) *By Electric Moon*

"God, I wish I had a box." David said. "I can see it now. I bump off information in Wisconsin and get an empty WATS line to play with. I keypunch a few multifrequency operator tones, and ta da! It gives me a conference. But I can't do that anyway, because I'm on ESS."

"David," I responded. "I know this sounds stupid, but I don't understand a word of what you just said. Okay, this is what I know from the conference: With a blue box you make tones of certain pitches, so that the phone thinks you're an operator. That way you can make long-distance calls for free or start a conference."

"Very good."

"But what's ESS?"

"Anyway," David said. "It's easier and safer to use an extender to call long distance than to box."

"*But what's ESS?*" I repeated.

"Okay here we go. The famous Smith briefing for beginning phreaks. Fasten your seatbelts, ladies and gentlemen."

"I resent being called a beginner," I said.

"In the history of our great phone system, Ma Bell has undergone many changes in her youth. She was made up of so-called step-by-step systems. These were lovely and easy to circumvent, but noisy and slow. Also, 2600 Hertz disconnects a step system, so you can't box off of one. Most of these were switched by hand by small-town operators. Then someone came up with crossbar switching, and Ma Bell made little clicking noises all day long as she switched almost automatically.

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“But, horror of horrors, Ma Bell finally got old. She grew senile and paranoid. In order not to forget things, she wrote them down. Every time a little customer called a number he shouldn’t have known, she wrote up a trouble card on him and filed it neatly away. This system was noiseless and easy. Soon Ma came up with better security measures, longer customer records, and tighter filing cabinets. She buried light-fiber cables, and everyone knows you can’t splice two light-fiber cables together. She changed her own phone numbers regularly, and computerized everything. Each change came about slowly, but the final product was ESS. So the main phone systems are step, crossbar, and ESS.”

“Which one am I on?” I asked.

“I don’t know. Some people can tell by listening to the ring or the busy signal, but I can’t,” he admitted. “If you can get call-waiting, you’re on ESS. Call customer service and ask.”

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We talked on conferences almost every night for two weeks. Napoleon Bonaparte set them up, and we talked to the Hacker, Cracker, Tom Keevis, and Max Wilke.

I learned a few things from conferences, and a lot from David. He told me about the Michigan loops. Apparently, if I called a certain number, some stranger would pick up the other end and we could talk. How stupid. Then David explained that the other person was calling a phone number too, and we’d get connected somehow. A loop around here was 424-9900 and 424-9901. If I called one end and someone else called the other, we’d be connected. This was useful if we didn’t want to give out our phone numbers. In Detroit, lots of people—not only phreaks—know about loops. If you call up one end of a Detroit loop, someone else is likely to call within five minutes.

“You never know who you’ll get,” David said. “Hacker and I call and wait, and sometimes homosexuals get on and say, ‘Looking for guys?’ or girls get on and say, ‘Guess what color underwear I have on?’ But you also get other people—car salesmen, teenagers, and college students—lots of college students.”

He gave me some Michigan loop numbers and I started calling them through extenders. I talked to a lot of weird people and a lot of normal people. I also called some pay phones in Berkeley and Carnegie-Mellon, and talked to whoever answered.

The Phreak was my idol. He was the idol of most of the phreaks I knew. Lots agreed that he was the best phreak and hacker (okay, little did we know then). He was only fourteen years old, and lived in Boston.

One day I called up a Michigan loop and heard a lot of static and clicking. I also heard some people talking—mainly two boys. One of them had an unmistakable Boston accent. It was Steve the Phreak.

“Hey Phreak,” I said. “This is Electric Moon!”

“Hi Electric,” he said. Then he asked his friend, “Should we keep her?”

“Yeah, what the heck!” said the anonymous phreak. A beep signaled the departure of the Phreak.

"Where'd Steve go?" I asked.

"Off to look for more loops, the idiot," said the boy. "It's too loud in here already."

"What's your name?" I asked.

"I'm Ivanhoe. I'm a Steve too, but you can call me George."

"What?"

"To differentiate between me and Phreak."

"I'll just call you Ivanhoe," I said. "Where're you located?"

"I'm in California. I'm seventeen. And you?"

"I'm in Ohio. I'm sixteen. Call me Electric." I suddenly realized I was yelling above the din of the loops. The Phreak kept putting on more and more. The loops themselves made clicks and static, but the people on them made it even worse. They couldn't hear us and they couldn't hear the people on the other loops, so they loudly chatted away.

Every time Ivanhoe or I heard the Phreak beep on or off, we screamed at him to stop adding loops, but he pretended not to notice, and continued at a rate of six or so a minute.

Finally I couldn't take the noise, I yelled a loop number to Ivanhoe, and we ducked out.

"Hello?" asked a quiet, low voice.

"Hi," I panted. "Thank God we're out of that mess."

"Yeah. He'll probably have it up for a few days before they figure it out."

"He's crazy!" I said.

"Yeah, but he knows a lot. He still has a long way to go, though. He has to learn to be careful."

"I know." I tried to act experienced. "Boxing a conference from his home is incredibly stupid."

"Have you heard him on AUTOVON, though? He's a riot, but I'd never do what he does!"

"What does he do?" I asked.

"He'll have to show you," Ivanhoe said.

Click! "Emergency break from G.I. Joe. Will you accept?" asked the operator.

"No," we said in unison. I smiled, imagining the shocked operator. She probably thought his mother was dying.

"No?" she asked uncertainly.

"NO!" we yelled, and laughed as she clicked off again.

"Well," Ivanhoe said, "that must be Phreak. He probably wants me to call him. I'll tell him to start another conference."

"Okay," I said. I hung up the phone and walked into the kitchen. I set my notebook and pencil on the kitchen desk and took a cold apple from the refrigerator. The phone rang as I crunched the first bite.

"Hello?"

"Hi. Anyone you want to add?" asked the Phreak.

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"Sure. Add Trader Vic."

"Okay," he said. I heard a beep, silence, then people talking.

"Quiet down, everyone!" Ivanhoe said. "The Phreak is going to show off, but what he's going to do is pretty dangerous."

Beep-beep! Beep-beep! The Phreak had brought Trader Vic on.

"Hey dudes, what's going on?" he asked.

"Shh!" we said.

"You can't hang up on them once they're on a conference," said Ivanhoe.

"If someone suspects what we're doing, we'll have to hang up the whole conference."

The Phreak beeped off. He was back in a minute, talking officiously.

"Yes, I have a Flash Override call for location four-zero-two-niner," he said calmly.

"Flash Override? Who is this, suh?" asked a deep southern accent.

"This is General Watt." The Phreak had to make the guy believe he was a Joint Chief of Staff.

A nasal tenor came on the line, heralded by an amazing overture of clicks, beeps, and tones.

"General, for whom are you placing this call?"

"For Ronald Reagan," said the Phreak. I felt like I had been stabbed. What an idiot! But I couldn't hang up, because the operator would hear the beeps. I listened instead.

"Ronald Reagan?" asked the voice disbelievingly. "Sir, what is the code on this call?"

"I'm at the White House right now," said the Phreak coolly. I knew he was stalling for time as he flipped through stolen AUTOVON manuals. "Sergeant, I have the code right here. I'm at location C-one-four-six-two-D, placing a Flash Override for Timberwolf to location four-zero-two-niner. The operation code is zero-five-zero-niner."

"That is correct," the operator said, and I could have hugged the Phreak. "Please hold, sir, and I'll put your call through."

Beep! Beep!...ker-chunk.

"Andrews Air Force Base," said a woman. "General Hodge is out right now. Should I sound his beeper?"

Silence. What now? Two people spoke at once. Trader Vic broke through loudly.

"Yeah, like, this is a conference call, and we just, like, wanted to see how you were doing, you know?"

"Excuse me?" asked the startled woman.

"I'm sorry," I interrupted quietly. The time had come to try and salvage this thing. "I'm the White House internal operator, and we seem to have given the wrong location identifier. Thank you very much."

The General's secretary clicked off and our nasal operator checked on. "What seems to be the problem, General?" he asked.

"I'm sorry," Ivanhoe said. "The President decided not to make the call after all. Thank you, though."

"Yes sir, thank you," the operator said, and checked off. We held our breaths until we heard the final beep-beep.

"Vic, you idiot!" I cried.

"What?" he asked. "I thought it was pretty funny!"

"Funny, my foot," Ivanhoe said angrily. "That was a stupid thing to say. And Steve, why didn't you answer?"

"My mom called me and I had to go take out the trash," said the Phreak.

"Phreak, you're crazy," I said.

"I know," he said in his deepest Boston accent. "But you all love it."

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A week later, the Software Pirate called me and said the Phreak had been caught. I called Ivanhoe, who told me that Steve was visited that morning by three FBI and two Bell Security agents. Ten other people were also caught. The FBI woke all the boys up at 6:00 a.m. so they wouldn't have a chance to warn friends.

As soon as school was over, the Phreak called Ivanhoe and told him all this. He waited an hour until it was 4:00 in Utah and called the Software Pirate, who called me.

The news spread among phreaks and pirates so that anyone involved knew about it by dinnertime on the East Coast.

Late that night, the White Knight set up what we thought was the last conference call. Ivanhoe, David, Demon Diode, and the Cracker all expected they would be caught.

We called the Cracker and asked him to talk.

"Why not?" he said dryly. "I'm just sitting here waiting for the FBI. I have nothing better to do."

They got him the next morning.

(The names and locations used in this story have all been changed, so don't even bother.)

Mischief and Ingenuity

While we like to say that hacking is all about education, that's really only partially true. People often got involved in this little world for no other reason than the fact that it was incredibly fun. Apart from simply impressing those around you with your seemingly superhuman abilities by making pay phones ring back or figuring out someone's phone number without their telling you (which actually *was* a big deal back then), you got to meet some really interesting people and explore technologies that most folks didn't

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even know existed. So invariably anyone who was drawn into the hacker culture wound up learning an awful lot whether they wanted to or not. But it was mostly the fun of playing with some incredible new toys that got them involved in the first place. And in the end, hackers were able to apply their knowledge to all sorts of practical applications such as in our first story below. Or, as in the case of our trashing adventure, they figured out another way to quench their thirst for knowledge, this time by invading an often ignored part of the “real world.” And throughout it all, new bits of information and all sorts of theories were constantly making the rounds concerning the latest discoveries.

A Phone Phreak Scores (April, 1985)

This is another story to add to the annals of social engineering, one that we all can learn from...

A few months ago my Mom had some people refinish and blacktop our driveway. So she called some companies in the phone book, and she chose the cheapest one. They came and did most of the work, and Mom paid them, providing they came back soon to finish the blacktopping job. This all sounded fine, but after several weeks of the company calling up and postponing the final work, Mom wanted it done. She decided to visit the company at the address listed in the phone book, because she would always get an answering machine when she called them, but when she got there, she found out that it was just the back room of a storefront and that the company had vacated it a few months earlier. When she tried calling them, their number had been changed. So I did a CNA on their new number for Mom, and she visited the new address that I got. When Mom got to the new address she found a vacant lot. It was at this point that it started to sound pretty fishy to Mom and I. But how could we find out where they were, if they gave a fake address to the phone company?

That's when it occurred to me to call the business office that handles that company's telephone. I called and they answered: “Your number, please.” So I gave them the company's number, and I proceeded to tell them how I did not get my last phone bill, and how I wanted to make sure they were sending it to the right address. They told me the real name and address (not the one at CNA or Directory Assistance, which was the one it was listed under; there is a difference, you know), they asked if I was “Mr. So and So,” to which I responded “Yes.” Then they asked if I wanted to change the mailing address. I said, “No, that's my partner's address. No need to change it. Thank you.”

And that was it. I found their address. Mom visited their new location, which happened to be a trailer in the middle of a big field with a telephone and a power cable going into it. When she found the people at the company, they were quite startled, because it seemed that they did not have a license to do the work that they were doing

and had several other customers and some government agencies looking for them. Because Mom had the goods on them, they were obliged to finish our driveway, and that's all Mom wanted after all.

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Trashing Alaska Style (February, 1985) *By The GCI Guy*

We left that Friday night with no idea that we would end up at our local CO. A group of computer enthusiasts and I usually go cruise and look for trouble in our car properly named The Lead Sled. It is named this because it is an extremely old Monte Carlo that is painted five different shades of gray.

There was nothing happening on the local drag and that is when I remembered something I had seen on a BBS the night before.

"Let's go trashing," I said with hopes of an answer. But all I got was a grumble from the back seat and a question thrown at me from the driver. I explained to them what trashing was and the whole car seemed to like the idea of looking through someone else's garbage, especially our local CO's.

Now the thing that I really hate about our CO is that they have a "mascot" color, baby blue. They paint their repair trucks, representatives, and main building all this same color.

We carefully turned the engine off when we approached the baby blue monster and coasted behind a group of trees. We had to run about a mile to the dumpsters and I think that this was our biggest mistake. But what can you expect from first time trashers?

The CO has a "protective" fence around their lot. So we picked a small, thin phreaker to slide under the gate. He then dived into the dumpster with a look of triumph in his eyes.

We waited for him to emerge with a bag when suddenly a man in baby blue overalls appeared. I yelled for everyone to blow and that's what we did. The skinny phreaker slid under the fence and we were history.

I ran fast, the fastest I think I ever ran. But with the CO's security guards after you, you had to. We ran back to the Sled but found that it was surrounded by men in baby blue overalls. This is where we made another mistake—we split up, hoping that maybe we wouldn't be caught if we weren't a large group.

"They've been caught!" was the only thing that ran through my mind as I ran for an abandoned shopping mall. Me and about two other phreakers hid out there for about two hours until we thought the coast was clear. But we were wrong.

As we were making our way back to the Sled, we were stopped by a security guard who asked us *a lot* of questions. Luckily we were able to B.S. him. But when we got back to the Sled, it was gone.

I panicked. No Sled, no ride, and no trash. Then suddenly I heard a honk and it was the Sled.

Since that unfortunate experience we have made countless trips to the CO and have retrieved bags and bags of trash. Learn by your mistakes.

An American Express Phone Story (March, 1986) *By Chester Holmes*

This story is a memory of hacking a formidable American institution—American Express. No, not AX's internal telecommunications network, but the corporation's toll-free charge card authorization computer. The following can be safely told as our "system" went down a few years ago.

It all started in the summer of 1982. I had been on the lookout for various extenders and other nifty things a phone could link up with. Most were found by scanning and searching 800 number series using the time-honored "hang-up-if-a-human-answers" technique. After a long and fruitless afternoon of such looking, I decided to take a run on down to the local Chinese eatery as my stomach's contents had been depleted several hours earlier. I wasn't wont on dining there, take out would be fine. Well, as Murphy would predict, my fried rice order wasn't ready at the appointed time, so I found myself at the register with a few moments to kill. Murphy struck again: on the register was a sticker with several 800 numbers and the words "American Express Charge Authorization" emblazoned thereon.

The MSG in Chinese food affects people in a variety of ways. Some folks get ram-bunctious, but I get sleepy. I told my associate about this number and told him my right index finger was worn down from hours of dialing. He understood and made some discoveries while playing with the system all that night.

If I can recall correctly, when one dialed the number (alas time has erased the number in my brain's RAM), the merchant would be prompted to enter the card number amount etc., and the computer would give an approval code. A *# would abort the procedure at any time and disconnect. Merely pressing ## during the call would get an AX operator. This was accomplished by the system obtaining a dial tone and then automatically touch-toning the four-digit extension. We had our fun harassing the operators, for when they hung up, the dial tone would return but would not automatically dial. We were thus free to make local calls within New York City. We soon tired of this game so instead we developed a method of beating the system's demon dialer. Upon dial-tone receipt, we quickly touch-toned 9958. The first 9 would give us an outside line, and the 958 was the Automatic Number Identification code for New York. The four system-generated digits would then come through and be ignored. This trick saved us from continual arousal of credit-operator suspicion, and the dial tone was returned after ANI did her thing. We also learned how many different phone numbers they used for this system.

You'll note I said we were free to make local calls. We were able to dial 9-0 to get a Bell operator who was most happy to assist in placing our long-distance calls. For some reason however these operators couldn't help with 900 calls (I got the same operator three times in one night while trying to listen to the space shuttle. We developed a kinship by the last call). The AX PBX would give a stern warning if we tried to dial a long-distance call directly ("Class of Service Restriction Class of Service Restriction"), but we soon outsmarted it: it wasn't looking for a 1+NPA etc. but had a timer going and if you dialed more than eight digits (9+ etc.) in a period of about five seconds you'd get that message. So we dialed the first few digits, paused dialed the remainder, and the call went through (even to the space shuttle).

Connections were generally less than optimum (in fact they sucked) but if you and your called party were in quiet rooms, you could talk for hours. Another minor annoyance was crosstalk. I had often heard the familiar 9958 off in the background and once I even faintly heard my buddy. We shouted at one another for a while until one of us hit *#.

I don't think AX was ever quite aware of our exploits on the system since it was on line for several months: a new system was installed when their authorization people moved to Florida. I had had an Amex card all the while but recently gave it up when they raised their annual "membership" to \$45, and didn't tell me. It was them pissing me off like that that prompted me to tell this tale. I hope you can carry on this tradition and it's 2600's pleasure to inform technology enthusiasts everywhere of your stories.

