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**Abstract**       John Draper sentenced to four months in prison. Also describes various phone phreaking techniques.

**Keywords**     San Jose, CA; John Draper; Captain Crunch; phone phreak; Pacific Telephone and Telegraph Company (PTT); blue box; whistle; Al Gilbertson (phone phreak); FBI; Denny Teresi; NCIC; auto-verify; autovon; Youth International Party Line (YIPL); Technological American Party (TAP)

**Source**         An anonymous phone phreak

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# Phone Phreak Runs Afoul Of Feds

By Chuck Fager

SAN JOSE, CALIFORNIA—John Draper, of Mountain View California, is a phone phreak; under the pseudonym of "Captain Crunch" he is probably the most famous phone phreak of them all.

On September 20th, John Draper, aka Crunch, went to jail. He will serve four months in a federal pen for defrauding the Pacific Telephone and Telegraph Company of \$30 worth of long distance phone calls. Draper, who pleaded guilty to the charge,

made the illegal calls with a device known as a "blue box." It was his second conviction on similar charges before the same judge, Robert Peckham. The last time, in November 1972, Judge Peckham fined him \$1000 and told Draper that if he ever was brought in before him on similar charges again, he would get a jail sentence. Peckham hadn't forgotten his pledge.

Even so, the judge was not nasty about it. After passing sentence on Monday August 23, Peckham leaned over the bench of the San Jose federal courtroom and said to the defendant, "Good luck to you, and I do hope you will put your abilities into law-abiding activities." Peckham is mostly bald, with a round, almost cherubic face which usually rests on his right fist.

His tender of best wishes was cold comfort to Draper, who stood before him in grimy green pants, brown shirt and battered work boots. Draper's face bears a striking resemblance to Tiny Tim's, and he looked very out of place amid the square corners of the trim brown plastic panelling of the courtroom. His demeanor during the brief sentencing proceeding was grave and con-

trite; his attorney recited a list of cooperative gestures Draper had made since his guilty plea last June 29 in hopes of reducing or avoiding a jail sentence. Peckham, who could have given him five years, did not budge from his four-month sentence.

Once the proceeding was over and Draper was loose again-- Peckham stayed the beginning of the sentence for a month so Draper could get ready-- the new felon's expression changed. Walking down the bare planking along the outside of the low, ranchstyle courthouse to the probation office, he was cheerful; and then when talking to reporters, he became animated. At one point he pulled from his pocket a little red plastic whistle, which he waved around with a wide grin. "Here it is folks," he said, "take a look, they're really rare now." On the top of the whistle, worn almost beyond legibility, were the words "Captain Crunch."

I was impressed. The whistle, tiny bit of plastic that it is, represents a legendary capacity to wreak havoc with the telephone company, the largest corporation in the world. Its holder was impressive too, a man I had wanted to meet for years. Draper, alias Crunch, is a self-taught electronics genius (even the probation office report to the judge said he was) about whom electronic legends abound. And he has a hell of a sense of humor. In the course of his adventures and tangles with the law, he and his fellow phreaks have beeped out an unauthorized but real place for themselves in the great tape that will tell the history of modern communications technology.

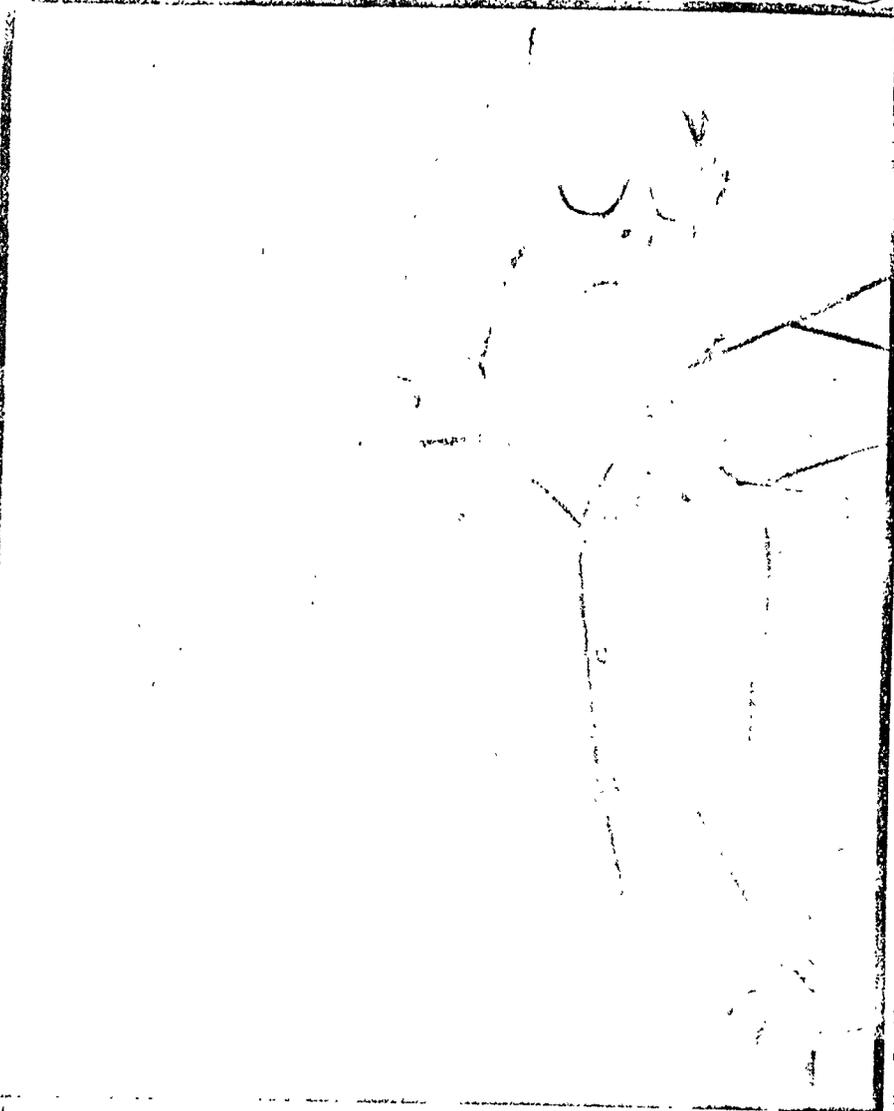
Phone-phreaking as a phenomenon really got going with the invention, distribution and refinement of what is called the "blue box," a device which enabled users to make free long distance phone calls by duplicating the special tones which operated the telephone company's long distance switching system. The boxes were allegedly invented in 1968 by an enterprising electronics engineer who used the pseudonym of Al Gilbertson in conversation with reporter Ron Rosenbaum. I say "allegedly" because there is really no way

to verify his story, though *Play* magazine accepted it sufficiently to publish it in an article in October 1971. Gilbertson said he discovered a list of the tone frequencies in a technical journal published for telephone company engineers, and with the frequencies in hand, it was a simple matter to put together a device which could be put into the phone and duplicate the system's own tones.

Realizing he had a potent gold mine on his hands, Gilbertson soon began producing blue boxes in his basement and selling them for the hefty price of \$500. The price later went down in the face of competition, to \$300, and in Boston three years ago I was offered one for \$150 by a local merchant. The profits involved, even at the low price, were handsome. While researching an article on them I bought all the necessary components at shops around Cambridge for less than \$40 and I was assured by people who knew that putting them together was relatively easy. (Incidentally, why they are called blue boxes is another mystery of the movement; there's no uniformity to the color.)

## All For Phun

Profit was never the motive for the real technical pioneers like Captain Crunch, however. He and most of his friends were electronics whiz kids who found in the telephone system a universal, available and endlessly entertaining technological playground. The stories of their exploits are legion, and they must have given many a telephone security officer a little bit of grey hair. Besides using and perfecting the boxes, these amateur phreaks also began to explore the world of the telephone company's own internal numbers, of which there are thousands, those used by repair people for testing and adjusting circuits, for instance. Among these, in years gone by, were many that could be used to call long distances free. One of the most fascinating of these was called a loop; a loop was a set of two



Wait Blackford photo

were genuinely saddened when the company finally tracked it down and busied it out.

### Hello, I'm the Secret Glitch

Needless to say, Ma Bell's executives and security people were less than amused by these carryings on. They were swift in taking countermeasures: connecting up the test loops to billing computers, so they were no longer free, monitoring the use of the toll-free 800 numbers which phreaks used as

phreaking some years ago. In fact, he says he was set up and entrapped into making the illicit calls for which he was busted this time by an FBI informer. And it is indeed clear from the documents supporting the indictment that the FBI and telephone security people worked together to monitor the phone booth from which Draper made the calls last February.

Draper says the informer was a person who became friendly with him, visited him frequently to pick his brain, and urged him

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covers for their own long-distance calls, developing new equipment which was more able to identify "unauthorized" tone signals coming into the system from blue boxes, and tapping the phones of suspected phreaks. A round of arrests resulted from these moves, including one for Draper/Crunch.

After that a sort of cold war developed between the phreaks and the system's managers, a war that apparently continues to this day. Phreaks went underground.

These people and others explained that as new detection techniques were introduced, their side kept coming up with new ways to elude them: fancier circuitry, for instance, enabled blue boxes to make tones so nearly identical to the system's own that the listening detectors couldn't spot them as "unauthorized."

"The phone company's more or less winning that war now," Draper told me, "because even though phreaks can still figure

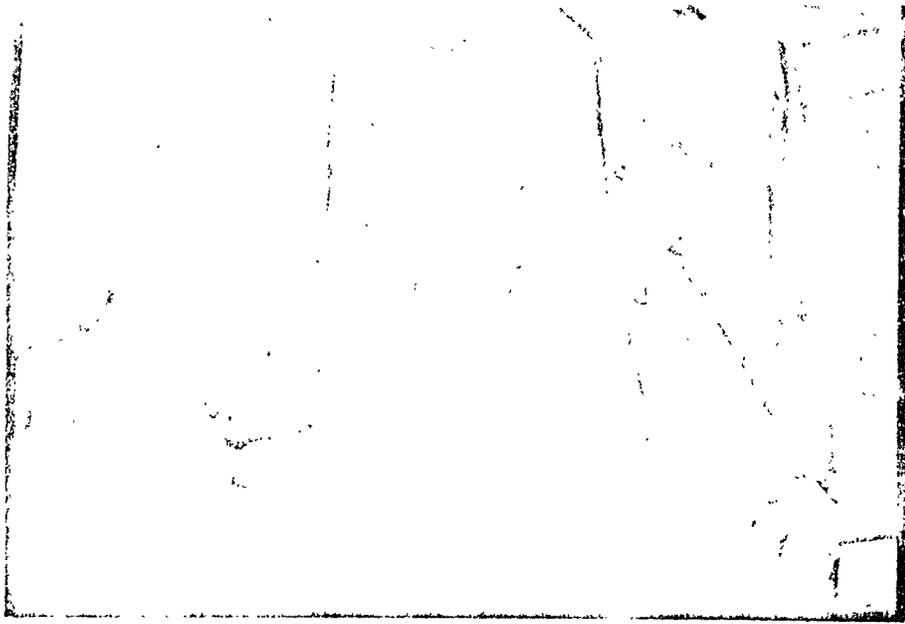
to make some free calls to show what he could do. "I have a problem in that I'm easily persuaded," Draper admitted.

There's no question that Draper has been proud to show off. One of the ways he did it was to place a call from one pay phone, routed all the way around the world to an adjoining pay phone. Then he answered the second phone and talked to himself; since his words took twenty seconds to make their 25,000 mile journey, a mono-dialogue was easy, especially since he spoke in different tones of voice into each phone.

"I've also sent my voice around the world another way," he told *Esquire*, "going east on one phone and going west on the other, going through cable one way, satellite the other, coming back together at the same time, ringing the two phones simultaneously and picking them up and whipping my voice both ways around the world and back to to me. Wow. That was a mind-blower."

Is this a menace to national security? Said Judge Peckham in sentencing Draper, "Good luck to you, and I do hope you will put your abilities to good use in the future."

...cables that were connected up, ... numbers in various exchanges which could be called simultaneously by large numbers of



Walt Blackford photo

Is this man a menace to national security? Said Judge Peckham in sentencing Crunch/Draper, "Good luck to you, and I do hope you will put your abilities into law-abiding activities."

telephone numbers that were connected up, so that if I called one number and you called the other, we would be connected to each other free, even if we were calling from different ends of the country. Lists of these loop numbers were painstakingly collected and circulated by dedicated phone phreaks, and updated as the phone company discovered that they were being used by outsiders and changed them.

Another discovery was the open circuit,

numbers in various exchanges which could be called simultaneously by large numbers of people, who were then connected up together into one huge conference call. When these numbers were found, the ensuing marathon conversations, involving people from all over the continent, were called phone phreak conferences. One of the most memorable was centered in a circuit in Vancouver, Canada. The conference went on continuously for months and the phreaks who took part in it

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"The phone company's more or less winning that war now," Draper told me, "because even though phreaks can still figure out how to beat the detection equipment, it is becoming more and more expensive to get the components you need to do it. And at a certain point, if you can afford the really top kind of blue box, you can afford to pay for your calls."

This is one reason, though in actuality a minor one, why Draper insists that he gave up, or rather graduated from, phone

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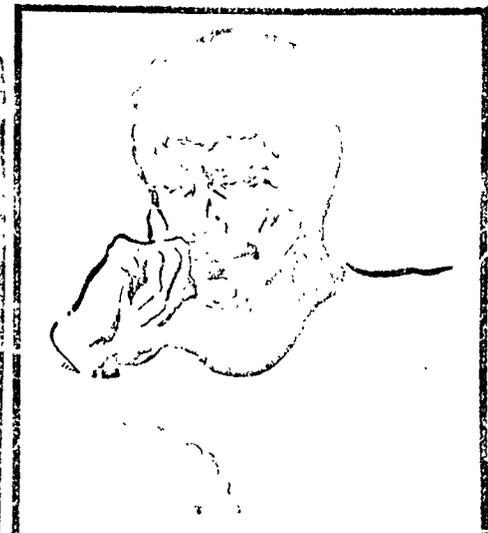
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But those, as Draper, Teresi and the other alumni phreaks gathered around him at the courthouse August 23 said more than once, were the good old days. What has taken the place of the blue box in Captain Crunch's life? Draper didn't hesitate: "I'm into computers now. They're more fun, and I can play more games with them legally too." He has been going to school, studying them, and

See Captain Crunch Page 10

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# Captain Crunch Gets Clink

(Continued from Page 9)

wants to continue his education at Berkeley in programming and systems analysis. He has had trouble in recent years keeping a job, partly he feels because of the notoriety of Captain Crunch, but now he's working at a respectable outfit designing a radar system which is supposed to help avoid ship collisions.

Yet Draper hasn't lost that old gleam in his eye, and he was quick to tell me stories about computer freaks, or hacks as they are more familiarly known. These are programmers who know more about the computers than anyone else, especially their superiors. They are the kind of people who put into computer banks things like "The Secret Glitch," programming it to interrupt regular readouts at random, virtually untraceable intervals with declarations like "Hello, I'm the secret glitch. Catch me if you can..." Or they unobtrusively key it into the "Cancer program" a program which is set to reproduce itself geometrically, much like a real cancer cell, until it fills up all the computer's available storage space and shuts the machine down. Such "Cancer programs" can only be "cured" by application of the "Antidote Program" which reverses the process - if the boss can figure out how to do that.

## The FBI Taps In

Draper and his friends chuckled gleefully over these stories, and it is comforting to think of their whimsy and puckishness being included, however infrequently, in the depersonalized universe of the computer. Yet there is also a darker side to these games. Draper spoke of this aspect when I asked him how he felt about facing jail. "I'm not much worried about it," he said, "except that it opens up the possibility that I might fall into the hands of some bigtime criminal or someone from the radical underground. You know how it can be in prison, I could be forced to tell these people a lot of information that I wouldn't want to, information that could be dangerous."

Draper is not actively dangerous, this in fact is one of the FBI's quandaries when its agents tap into Draper's Mountain View home. The FBI has had to be discreet about

the Operating Manual for their National Crime Information Center. The NCIC, if you don't know, is a giant computer bank in Washington which contains a centralized record of crime reports from all over the country (except for the state of Massachusetts, which has refused to hook up to it on grounds of fear for its citizens' privacy). Now this Operating Manual is not something you will find on sale in the Do-It-Yourself electronics made easy section of your corner paperback bookstore, and when the agents saw it they scurried back to headquarters with it fast. Soon a plea bargaining session was held, and Draper, facing a possible five years, agreed to tell the FBI everything he knew about them and their system, in return for immunity from further charges from what he would reveal, a six-month sentence, and an agreement that he could talk without being pressured to identify or implicate any other individuals.

On this basis, Draper met with FBI technical experts six times during the spring and summer, talking for hours at a time in a San Francisco motel room about what he had learned of their system and - especially - its bugs. Draper declined to go into detail concerning what he told the FBI about its system, but he assured me that it was extensive. Moreover, there were two other areas of particular concern to the people he spoke with besides the NCIC Computer. One was what is called the "auto-verify" circuit used by the phone company. This is the circuit used when an operator breaks in on a call to tell a party that an emergency call is coming through. The circuit is set up so that the conversation is scrambled when the operator hears it before breaking-in; the operator knows what the numbers involved are, but not what the parties are saying, thus protecting their privacy. But what Draper says is that phone phreaks now know how to break the code used by the scrambler, so they could actually tap people's phone lines automatically with no special equipment attached to a particular phone line.

Draper said he told the technical people he talked to how they could begin correcting this vulnerability of their system. I went on to ask, "Doesn't this thing also work the other way, making it possible for the FBI or some other government agency to tap anyone's phone lines without anyone ever knowing

...observed, there are some hospitals in Connecticut that do not consider rape an emergency."

## What Can Be Done?

But what can be done about rape; how can instances of rape be decreased?

Police officer Wertz offers one perspective. She stresses the importance of reporting rapes. She cited the case of a rapist last summer who would enter a woman's home while she slept, place a pillow on the woman's face and rape her while she couldn't see him. The police had seven reports of this type of rape, Wertz said. Finally, the rapist became so sure of himself that he no longer used the pillow. The last woman was able to identify him, and he was apprehended. If that last victim had not reported the rape, Wertz said, the man would probably still be on the street.

Moreover, according to Inspector DeRosa of the New Haven Police Department's Investigative Services, New Haven has a clearance rate of 75-80 per cent, much better than the national rate of 51 per cent.

Clearance rate is the percentage of reported cases on which arrests are made. Obviously, as with other crimes, the sooner the crime is reported the more likely an arrest can be made.

So much for immediate response to rape. There are other responses. "The long-term

required to approve them?" He nodded and said cryptically, "Think about it and see for yourself."

There is another vulnerable system he is familiar with called "autovon," which is an independent telephone setup inside the telephone system which links up military bases and is supposed to be for exclusive use of the military. This is not a secret system; only unclassified material is to be discussed on it; yet independent access to the system from outside is supposed to be impossible. The informer who Draper says set him up also told the FBI that Draper knew how to get into it with a blue box. Draper did not tell me whether he knew how or not; but he did say he was familiar with the autovon system and discussed it extensively with the FBI.

There are some phone phreaks who would not want information of this sort to be shared with the FBI. A group in New York which was originally called Youth International Party Line, and later changed its name to Technological American Party (TAP), was

...bursement," Moynihan declares, "is one area that needs more attention."

Attention of other kinds - psychological as well as medical - is readily given by the Yale New Haven unit. Operating out of the hospital's emergency room, the Rape Counseling Team is staffed around the clock by social workers as well as nurses (phone 436-1960). They work closely with the police, who Team Director Moynihan notes are very cooperative. "There is one woman, Carol Macri, and four male detectives," says Moynihan, "and they are all very discreet and sensitive."

Yet, despite the availability of such people and services it is evident that most women are still not reporting rapes.

"It appears that women are knowledgeable of the ordeal that they must go through to process a sexual assault case in the courts," says a recent report by the Hartford Rape Crisis Service. "Apparently, reporting is not an attractive alternative for justice and most victims would rather 'just forget it.'"

This report emphasizes that the legal and social climate must change significantly in order to encourage women to report all rapes. "In order to convince women to report sexual assault, they need to have more confidence in the police and the legal system," the report concludes. "This unfortunately, cannot occur until there are major changes in the attitudes and processes of the authorities and courts." □

most of its monthly newsletter to detailing ways of cheating and disrupting telephone and other utilities. But Draper/Crunch is a prankster, not a radical. He told me he was very disappointed in TAP because of their heavy political line. And he told *Esquire* that he was very concerned about the possibility that only three properly-equipped people could 'busy out' and disrupt the whole American telephone system.

In fact, Draper's ultimate goal is to be an engineering consultant to the electronics and computer industries, showing them how his ingenious diversions could be applied in pursuit of their own objectives, or for more constructive purposes. For instance, the old phone phreak conference line could be resurrected on a local or regional basis to make available to homebound people a way to be in direct contact with a group of others. So far Draper has not had much luck in getting these ideas across to the industry and telephone "establishments." But he remains hopeful, even as he prepares to travel off to Terminal Island or Lombok for the rest of