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Title **On the trail of 'phone freakers'**

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Abstract New York Telephone Co. demonstrates its technology to foil phone phreaks using blue boxes. Article discusses AT&T's call surveillance, also the cost of toll fraud, with a mention of other methods but no concrete information about anything but blue boxes.

Keywords phone phreaks; blue box; New York Telephone Company (NYTCo); American Telephone and Telegraph Co. (AT&T); Bell Telephone Laboratories (BTL); David L. Watters (former WECo. emp.); Western Electric Co. (WECo, AT&T's production arm); J.F. Doherty (dir. of corp. security, AT&T); black box; yellow box; brown box; black-red box; cheesebox; cheese box

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HEADLINE: On the trail of 'phone freakers'

HIGHLIGHT:
New Bell System equipment will catch toll cheaters, but it worthwhile?

BODY:

That pesky brigade of so-called "phone freakers" who use "blue boxes" to make unbilled long-distance telephone calls seems finally to have met its match. This became evident when New York Telephone Co., a subsidiary of American Telephone & Telegraph Co., announced recently that it has a way to detect the cheats, and the use of the devices in Manhattan, where they have been most common, quickly dropped from 300 calls a day to only 12.

The new detection circuitry designed by Bell Telephone Laboratories seems foolproof. A blue box is little more than a multifrequency oscillator that mimics the audible tone frequencies of the phone network. By adding a sophisticated new program to its central-office computers, a phone company can detect such trickery instantly and print out both the calling and receiving numbers.

However, some question why AT&T is moving so late in the game. Within three years, new signaling equipment throughout most of the system would make blue-box calls impossible anyway. And David L. Watters, a telecommunications consultant and former engineer with Western Electric Co., AT&T's production arm, told the company 25 years ago that its signaling system would be vulnerable to devices like blue boxes and that the signaling system it is about to adopt, and which was then available, would be a superior approach.

Tougher questions

Besides, such criticism, New York Telephone's anti-blue-box move, which involves only passive electronic monitoring, has also drawn attention to a long-simmering controversy over AT&T's other, active monitoring of phone calls. Civil libertarians have for years complained that the company intercepts and records thousands of suspected blue-box and other conversations annually for a variety of purposes -- and without first securing court orders to do so.

To such criticism, J. F. Doherty, director of corporate security AT&T, replies that the company intercepts and records "to a very, very limited extent. " While he concedes that AT&T does not always proceed with a court order, he claims that it only intercepts calls to make sure that operators are efficient and courteous or to secure evidence in cases of theft or fraud.

Nevertheless, company employees represented by the Communications Workers of America have called for federal legislation to halt all in-house monitoring without the prior approval of both the employee and the person with whom he or she is speaking. And freshman Representative Dale E. Kildee (D-Mich.) last week introduced a bill in Congress that, if passed, would oblige the telephone company to obtain court orders for all company-initiated intercepts and would require the addition of a warning beeper at the start and finish of the surveillance.

"There is a serious question," said Terril J. Steichen of the White House Office of Telecommunications Policy in personal and unofficial testimony before a Michigan state senate committee recently, "about whether electronic interception of a private communication is inherently an unreasonable search and whether it is thus unconstitutional under the 4th Amendment."

Toll fraud

For its part, AT&T obviously regards phone freaking as a serious problem. Last year, the company says $5 million worth of blue-box calls were placed throughout the system, and there is no certain way of telling how much other types of electronic cheating devices -- bearing such colorful nicknames as "black," "yellow," "brown," "black-red," and "cheese" boxes -- cost AT&T in lost revenues. In congressional testimony, AT&T has acknowledged that it electronically scanned 30 million direct-dial long-distance calls for the purpose of sniffing out toll fraud from 1965 through 1970.

John S. Whitman, security manager for New York Telephone, explains that blue-box calls have been possible because toll signaling and exchange signaling equipment have been operating on the same channels. Thus a blue box can break off a regular call to some toll-free number by emitting a special 2,600-hertz "pilot" tone unique to the toll network.This allows the caller then to dial almost anywhere in the world, while the billing equipment thinks he is talking to Information or perhaps to an "800" number such as that used by the Sheraton Corp.'s national hotel reservation system. Learning the right pilot tone frequency was no problem: AT&T published the information several years ago.

With the practice all but stopped, several blue-boxers have seen a lucrative business dry up. They include:

* One entrepreneur who was nabbed with 85 of the devices, which he had paid an electrician $10 each to assemble. He expected to be paid up to $300 each for them by street salesmen.

* Businessmen, such as the arbitrageur who made frequent calls to Switzerland to check on hourly gold prices, who paid as much as $2,500 for their very own blue box.

* A particularly resourceful phone freaker who dispensed with the blue box altogether because, he claimed, he could whistle his way to toll-free calls.

Critics of monitoring and intercepts wonder if AT&T's efforts to stop phone freaking are economically worthwhile. Steichen, for instance, says that his nunbers show that toll-fraud convictions have cost AT&T hundreds of thousands of dollars each and that the losses represent a drop in the bucket compared to the some $32 billion in annual AT&T revenues.But Doherty of AT&T disputes Steichen's analysis. "A conviction may cost us anywhere from $200 to $3,000 or $4,000, depending upon the situation," he says. "Furthermore, without the deterrent of knowing we are taking countermeasures, the use of these devices would probably be much more widespread."

That, of course, assumes that the anti-blue-box equipment continues to be a strong deterrent -- especially to calls from public telephones. "I suppose if someone really wants to cheat us," says a spokesman for New York Telephone, "they'll find a way to do it."

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GRAPHIC: Picture, Detective: New York Telephone's Whitman and "blue boxes" he hunts down. The terminal (foreground) signals their use. John Marmaras