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ELECTRONIC
SURVEILLANCE

Technologies Continue To
Pose Challenges

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NCJRS

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Mr. Chairman and Members of the Subcommittees:

I am pleased to appear today to discuss S. 2375. My comments will focus on the wiretapping challenges facing law enforcement agencies, the status of law enforcement's technological requirements, and the potential costs of satisfying those requirements.

TRADITIONAL WIRETAPPING METHODS
ARE CHALLENGED BY TECHNOLOGY

In July 1992, we reported to the Congress that law enforcement's ability to execute court-approved wiretaps was challenged by advanced telecommunications technologies.¹ To determine the current status of digital telephony and to identify the changes that have occurred during the last 2 years, we interviewed representatives from law enforcement organizations, telephone service providers, and manufacturing companies. Between April and June of this year, we discussed various telecommunications technologies, such as analog and digital voice communications carried over copper wire and fiber optic telephone lines; land-line, cellular, and satellite switches; and Personal Communication Services, a technology that could be available in the near future. We also discussed special features, such as call forwarding, voice mail, and speed dialing. (A list of the organizations we met with is attached to this statement).

These discussions revealed that although some technological solutions have been developed to facilitate law enforcement agencies' wiretap efforts, other technology changes have made it more difficult for them to use traditional wiretap methods. While these agencies are still able to conduct most court-approved wiretaps, they have reported problems in effecting wiretaps. Further, they report that investigations were delayed or court orders simply were not pursued because of these problems. For example, the National Technical Investigators' Association, which represents over 3,000 federal, state, and local law enforcement officers engaged in technical investigative activities, reports that "it was almost two years after the introduction of Cellular Telephones before law enforcement had any means to intercept criminal activity conducted on cell phones."² In addition, industry representatives told us that there are current and imminent technological situations that would be difficult to wiretap, even though they have not yet received wiretap court orders for those situations.

¹ FBI: Advanced Communications Technologies Pose Wiretapping Challenges (GAO/IMTEC-92-68BR, July 17, 1992).

² "Digital Telephony and Communications Privacy Act of 1994," National Technical Investigators' Association, April 1, 1994.

Clearly, there is a need for action that will preserve law enforcement agencies' ability to conduct court-approved wiretaps. Because the details of law enforcement agencies' problems and the specific technological challenges are classified, I cannot elaborate on them in this hearing. However, I would be glad to arrange a separate classified discussion on those topics at your request.

DEFINITION OF LAW ENFORCEMENT REQUIREMENTS HAS IMPROVED

In 1992 we reported that law enforcement agencies had not sufficiently defined their wiretap requirements. Since then, the Federal Bureau of Investigation, in cooperation with other law enforcement personnel, has issued two documents--one in July 1992 and an update in June 1994--describing their capability and capacity requirements. These documents represent considerable effort by law enforcement agencies to delineate their needs.

The capability requirements, which include the timing and nature of information required from wiretaps, making the wiretap undiscernible to the subject of the wiretap, and the reliability and quality of service, are reasonably well defined. The capability requirements include key technical and operational conditions that are needed to conduct wiretaps, and they are often accompanied by helpful clarifications and examples.

On the other hand, the capacity requirement, or quantity and geographic location of simultaneous wiretaps, is not yet precisely defined. Specifically, the June 1994 requirement document states that law enforcement agencies and industry will need to work together to determine the additional capacity that is needed to implement all lawful requests for wiretaps.

COSTS HINGE ON EVOLVING LAW ENFORCEMENT REQUIREMENTS

S. 2375 specifies that the Attorney General, subject to the availability of appropriations, shall reimburse telecommunications carriers for reasonable costs incurred in carrying out the provisions of the bill, and details the nature of the costs that can be reimbursed. The bill authorizes the appropriation of a total of \$500 million for fiscal years 1995 through 1998, and authorizes the appropriation of such sums as needed to carry out the bill for fiscal years 1999 and beyond. However, it is virtually impossible to precisely estimate the reimbursement costs discussed in this bill because costs will depend on evolving law enforcement requirements.

For example, even though the capability requirements are reasonably defined, much work remains for industry to identify technological alternatives that will satisfy those requirements

across the various technologies. Further, industry must implement those alternatives, which will sometimes involve working with telephone equipment manufacturers. The costs associated with delivering these capabilities can vary widely depending on the technical approaches selected to satisfy the requirements.

More significantly, costs could be affected by how the capacity requirements are defined. S. 2375 suggests basing capacity requirements on characteristics of equipment or service in place, number of subscribers, geographic location, and other factors. If law enforcement requirements demand capacity beyond what is available in current switch technology, then some technology redesign or replacement will be needed to attain the desired capacity levels. Under S. 2375, costs incurred in attaining the desired capacity levels will be subject to reimbursement by the government. These costs will vary greatly depending on how many of the approximately 20,000 land-line switches will need to be replaced to meet the capacity requirements once they are defined.

Although we cannot precisely estimate total costs associated with this bill, an example may illustrate the way costs could vary. Industry estimates for switch upgrades ranged from \$15,000 to about \$100,000 per switch, depending on the extent of changes required to the switch hardware and software. In addition, there could be costs to deliver capabilities in technologies other than land-line switches. As a result of this imprecision, the ultimate total cost of meeting this bill's requirements could range from hundreds of millions to billions of dollars.

LAW ENFORCEMENT AND INDUSTRY CAN TAKE STEPS TO CONTROL COSTS

In conducting our discussions, we observed that industry and law enforcement representatives had made considerable progress in communicating with one another since our July 1992 report. Each demonstrated a better understanding of the technologies involved and of each others' concerns. This progress has been facilitated by their voluntary participation on the Electronic Communications Service Provider Committee sponsored by the Alliance for Telecommunications Industry Solutions. We support continued cooperation of law enforcement and industry representatives through this organization, as well as through other means, to identify and resolve problems.

I would like to conclude my remarks with three observations that could help control costs. First, law enforcement and industry representatives should identify known solutions and communicate these to appropriate law enforcement and industry employees across the country. In our discussions with industry representatives, it was clear that some companies had solved

problems using equipment that other companies thought was unavailable or were using methods that other companies had not considered. Working cooperatively, the government could avoid reimbursing industry for reinventing solutions that already exist.

Second, law enforcement and industry representatives should work together to identify ways to prioritize and sequence development and deployment efforts needed to satisfy this bill's requirements, to ensure that costs are contained and the most critical law enforcement capability and capacity issues are addressed first. For example, if a switch replacement that is needed to meet a capacity requirement can coincide with a switch replacement to meet a carrier's business needs, then costs could be lowered.

Finally, as provided for in S. 2375, law enforcement agencies need to work with industry to provide law enforcement requirements to the standard-setting organizations, which industry consults in designing telecommunications products and services. Alerting industry to these needs near the beginning of the product development cycle should help lower the costs of meeting law enforcement requirements.

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Mr. Chairman, this concludes my remarks. I would be happy to answer any questions you or members of the Subcommittees may have at this time.

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AT&T Company
Bell Atlantic Corporation
BellSouth Corporation
Motorola
NYNEX Corporation
Pacific Telesis Group
Southwestern Bell Corporation
United States Telephone Association
U.S. West Communications

Manufacturing and Research

AT&T Company
Bell Communications Research
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Other

Alliance for Telecommunications Industry Solutions

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