



U.S. Department of Justice Federal Bureau of Investigation

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ELECTRONIC SURVEILLANCE - REPORT ON THE FBI'S PUBLICATION OF THE SECOND NOTICE OF CAPACITY

Introduction

Acting on a mandate from Congress, the Federal Bureau of Investigation today is announcing the amount of telephone system capacity the nation's law enforcement agencies may need for court-approved electronic surveillance to protect the public from terrorism, violence, drugs, and other grave offenses and to deal with unexpected crime emergencies through 1998 and beyond.

The Communications Assistance for Law Enforcement Act of 1994 (CALEA) requires the telephone companies to ensure that their systems and networks have both the capability and capacity to accommodate all federal, state, and local law enforcement agencies' court-approved intercepts in the face of new or changing telephone technology that could otherwise prevent electronic surveillance.

CALEA by itself will not increase the amount of electronic surveillance but only makes certain that law enforcement agencies will be able to carry out court-approved wiretaps, pen registers, and trap and traces no matter how sophisticated wireline or wireless telephone systems may become. As required by CALEA, the "Second Notice of Capacity" being announced today was developed after consultation with other law enforcement agencies, the telephone industry, and the academic community.

"CALEA does not give law enforcement any new electronic surveillance authority. Safeguards that have held law enforcement to strictly-enforced standards and conduct for a quarter of a century remain in effect, including the requirement of court approval of all telephone intercepts," said James K. Kallstrom, Assistant Director of the FBI.

"Under CALEA and as part of this notice process, telephone companies are to be given 'actual' and 'maximum' capacity estimates so that they will know the precise capacity requirements that their systems will need to have in the future to meet their statutory obligation to maintain some level of capacity," said Kallstrom.

"The FBI has conducted unprecedented research to unearth the facts needed to develop the very best estimates possible," Kallstrom said. "The FBI estimates are prudent and conservative, and will enable law enforcement to adequately protect the public without placing any unfair burdens on the telecommunications industry."

"There should be no civil liberties concerns over these estimates because, as we want to stress again and again, the Act and the steps flowing from it do not give

law enforcement any new powers to conduct electronic surveillance," Kallstrom said.

"The purpose of CALEA, and the FBI's purpose in developing the estimates, is to help protect the American people from the worst crimes--terrorism, drug trafficking, violence of all types," Kallstrom said. "Court-approved electronic surveillance is one of law enforcement's most important investigative techniques."

"Telephone systems are routinely used by the worst and most violent criminals to commit the worst and most violent crimes. Long-standing federal law allows for the tightly controlled use of court-authorized electronic surveillance in the investigation of the most serious violent offenses only when other investigative techniques will not work, when other investigative techniques are too dangerous, and when there is probable cause to believe that telephone communications are being used to carry out serious crimes," Kallstrom said.

"In many cases, there is no substitute of electronic surveillance in gathering evidence, preventing crimes, solving crimes, and bringing the violent to justice. In the past 14 years, court-approved electronic surveillance has been directly responsible for obtaining the conviction of more than 26,000 dangerous felons," Kallstrom said. "This does not include the hundreds of thousands of other investigations that have succeeded in part because of pen registers and trap and traces."

"We do not expect there to be any increase in the amount of electronic surveillance nationally because of CALEA itself, because CALEA does not give any new authority to law enforcement. Any increases would be related to growth of crime and unexpected crime emergencies that would have to be met with appropriate enforcement measures," Kallstrom said. "But as CALEA mandates, we must be prepared to meet grave crime problems that could erupt in any part of the nation--urban, suburban, rural."

"This second notice is the product of industry and government working together to find an understandable method of determining what level of electronic surveillance capacity will be preserved as telephone technology changes," said Kallstrom. "It is a fundamentally different approach than the Initial Notice that relied upon a percentage of 'engineered capacity.' That approach readily led to misinterpretation and the erroneous conclusion that the Initial Notice signaled a government intent to greatly expand the use of wiretaps. That conclusion was wrong and this new approach was developed, in part, to correct that misperception."

In addition to the federal government, 41 states, Puerto Rico, the Virgin Islands, and the District of Columbia have statutes allowing for the use of court-authorized wiretaps by law enforcement in the investigation of the most serious criminal acts. All states provide for law enforcement access to dialed telephone numbers using the less intrusive pen registers and trap and trace devices, this latter category constituting the vast majority of all interceptions (approximately 90 percent) covered by the capacity requirements set forth in this notice. Wiretaps account for only 10 percent.

According to Kallstrom, "Because of the nature of older telephone technology and of law enforcement's traditional interception methods, previous generations of telephone equipment and services had virtually a 100 percent capacity to accommodate all court-authorized electronic surveillance. However, many of the newer generations of telephone systems were designed in a way that inadvertently

limited or provided no capacity for conducting any kind of electronic surveillance. Solutions must now be designed and developed that will have the effect of preserving the technical capacity to accommodate court-approved pen register, trap and trace devices, and wiretaps. CALEA seeks only to ensure that some small portion of the capacity of telephone equipment, facilities, and services can accommodate electronic surveillance. This notice is part of that process."

Congress authorized \$500 million to be appropriated to aid telephone companies to make needed changes in existing telephone systems. To date, \$100 million has been made available by the Congress and law enforcement for this purpose.

Capacity Needs And Notices

Section 104 of CALEA requires the Attorney General to publish in the Federal Register and give notice to telecommunications carriers of 1) the actual number of simultaneous communication interceptions, pen registers, and trap-and-trace devices that the Attorney General estimates that all authorized government agencies may need by October, 1998 ("actual capacity") and (2) the maximum capacity required to accommodate all simultaneous communication interceptions, pen registers, and trap-and-trace devices that the Attorney General estimates that all authorized government agencies may need after October, 1998 ("maximum capacity").

A pen register records the numbers dialed in an outgoing telephone call. It does not include the content of the call, i.e., the actual telephone conversation. Trap and trace is a technique that identifies the telephone number and location of an incoming telephone call to a particular telephone. Like the pen register, the content or conversation is not intercepted. A wiretap captures the actual conversation or data going to or from a particular telephone. There are strict and precise legal requirements concerning precisely what can be intercepted during a wiretap. Wiretaps are subject to court supervision once the initial authorizing court order is obtained.

The FBI published on October 16, 1995, its Initial Notice of Capacity in the Federal Register seeking comments from all interested parties. In the Initial Notice, electronic surveillance capacity requirements were expressed as a percentage of "engineered capacity" for all telephone companies, and no distinction was made between wireline and wireless services. "Wireline" is the regular telephone service such as people have in their homes. "Wireless" is cellular and other telephone services that are mobile in nature. Unfortunately, because of the FBI's use of the engineered capacity approach, the Initial Notice led to gross misinterpretation and the erroneous belief that this notice signaled a government intent to use CALEA as a means to greatly expand the number of wiretaps conducted every year. This interpretation was not accurate and, as a result, a new approach was followed by the FBI in formulating this second notice.

The "Second Notice of Capacity" being offered today for comment is responsive to a number of telecommunications industry recommendations that were submitted in response to the Initial Notice. Specifically, the Initial Notice has been replaced with precise capacity numbers on a county-by-county or market-by-market basis throughout the country and a clear distinction has been made between wireline and wireless telecommunications carriers.

The Second Notice estimates the number of simultaneous communications interceptions (e.g., wiretaps) and call identifying information interceptions (e.g.,

pen register and trap and traces) that any or all of the authorized federal, state, or local law enforcement agencies together may require, if and only if, the need should arise and courts approve the applications, from telephone companies in a specific geographic area at any one time.

It is important to note that the terms "actual capacity" and "maximum capacity" do not mean the actual number of wiretaps, pen registers and trap and trace devices that will be conducted. Rather, the estimates of actual and maximum capacity set forth in this notice are only intended to establish sufficient interception-related capacity to accommodate those interceptions authorized by the various federal and state courts at any location throughout the United States should the need arise in the future. As there is no way to predict for most locations if and when the need will arise, the only safe approach from a public safety standpoint is to at least preserve this ability in case it is ever needed.

The concept of estimating future electronic surveillance capacity requirements is analogous to another public safety concept in use today - ensuring that a sufficient number of fire hydrants are positioned in the correct locations throughout the country to guarantee a hydrant's availability when needed by the fire department. Fire hydrants are placed in communities not because they necessarily represent the number of fires that are expected to occur, but are deployed so that, in the event a fire should occur in a particular location, there is a hydrant available for use by the fire department.

Likewise, the "Second Notice of Capacity" does not mean nor should it be misinterpreted as somehow representing the total estimated number of electronic surveillances that law enforcement plans to conduct. Just as it would be incorrect to add up all of the fire hydrants in existence today and assert that the total represents the number of fires that the fire departments anticipate they will encounter, so would it be incorrect to add up the actual or maximum capacity numbers set forth in this notice and assert the number reflects the total number of electronic surveillances that law enforcement agencies want to conduct.

The "Second Notice of Capacity" was released today on behalf of all federal, state, and local law enforcement agencies. It asks for comments from all interested parties during the next 30 days.

FBI Research and Analysis of Recent Interception Activity

In fulfilling the statutory obligation to estimate the future capacity requirements for new telephone equipment, the FBI believed it was essential to first establish a historical baseline of court-authorized interception activity. This was accomplished by contacting federal, state, and local law enforcement officials in each state; unsealing all types of federal and state electronic surveillance-related court orders; and surveying approximately 1,500 telecommunications carriers operating within the United States. The establishment of a historical baseline entailed an unprecedented, detailed review, and analysis of the available information on all types of federal, state, and local law enforcement interceptions (wiretaps, pen registers, and trap and traces) throughout the United States during the period 1/1/93 to 3/1/95.

The Wiretap Report published annually by the Administrative Office of the United States Courts was a valuable source of historical information on criminal wiretap court orders. However, the Report provided insufficient information to establish an accurate baseline for specific locations or for specific telephone companies

because it does not identify the actual number of telephone lines (or cellular transmission paths) covered in each court order and, by design, it does not address the vastly greater number of lines associated with pen register and trap and trace interceptions (approximately 90 percent of the total number of lines). It is the number of lines--not the number of court orders--that is a reliable predictor of simultaneous capacity needs for individual telephone companies.

Consequently, for the first time ever, comprehensive line- related information for all types of federal, state and local law enforcement court-authorized electronic surveillance interception activity was collected and analyzed to determine the day that peak simultaneous interception activity occurred during the period 1/1/93 - 3/1/95 for every area of the country.

CALEA requires that capacity requirements be expressed in terms of "simultaneous" interceptions. Law enforcement chose to consider interceptions occurring on the same day, rather than at exactly the same moment, as being simultaneous. This time frame was used because courts authorize electronic surveillance for a certain number of days as opposed to some other unit of time and because the time frame of one day was compatible with the historical data that was collected.

The interception activity for each county was examined on a day-to-day basis for the time period studied. An analysis was then used to identify the one day with the highest number of simultaneous interceptions to derive the historical baseline for that county. This approach provides a reasonable representation of past interception needs for the geographic area during the period reviewed. A majority of counties in the United States (57 percent) had no intercept activity during the period under review.

For telecommunications carriers offering local exchange services (wireline), county boundaries are used to define the geographic locations. For telecommunications carriers offering cellular and personal communications services (wireless), market service areas are used to define the geographic locations. The market service areas are currently used by the wireless telecommunications industry and include Metropolitan Statistical Areas (MSAs), Rural Service Areas (RSAs), Major Trading Areas (MTAs), and Basic Trading Areas (BTAs).

The Second Notice of Capacity lists in detail the extensive methodology used to arrive at actual and maximum capacity requirements as well as the historical simultaneous interception activity in each county and market service area throughout the entire United States. The majority of counties had no intercept activity, so a minimal estimate is included solely to preserve this ability should a crime occur that requires law enforcement to use court-approved electronic surveillance. Although unprecedented, these numbers are being provided to ensure that the requirements of CALEA are completely satisfied.

There is no direct correlation between the historical simultaneous intercept numbers included in this notice and the number of court orders for wiretaps published annually by the Administrative Offices of the United States Courts. First, unlike the annual report, these numbers include pen registers, trap and traces, and wiretaps, not just wiretaps. Pen registers and trap and traces constitute approximately 90 percent of the historical simultaneous intercept lines set forth in this notice. The annual report includes only the number of wiretap court orders and does not include the actual number of lines associated with each wiretap order nor does it include the number of pen register and trap and traces orders or their associated line-related information. Secondly, the annual report by design

encompasses only the number of wiretap orders during a single specific year. The historical simultaneous intercept numbers represent the single busiest day in each county and market service area during the 26- month review period. For any given county or market service area, the historical experience could be any combination of pen register, trap and trace and wiretaps line--or the possibility of no wiretaps. Accordingly, while adding all the numbers in the historical intercept column results in a number--24,617--it is a number that does not correlate to the actual number of wiretaps conducted by law enforcement and is not relevant for comparison purposes.

The results of the historical analysis also indicated that there were significant areas in the United States where law enforcement did not conduct electronic surveillance during the 26- month review period. For example, during this period, of the 3,146 counties in the United States, 1,788 reported no intercept activity. Likewise, of the 734 cellular market service areas, 467 reported no intercept activity. This is not to say that law enforcement did not conduct electronic surveillance either before or after the examined period, or would never need to conduct electronic surveillance in these locations in the future. In order to preserve law enforcement's ability to conduct electronic surveillance, a minimum baseline value of one interception was applied to cover instances where the **studied time period** did not provide historical interception information in a county or market service area.

The historical baseline data and the electronic surveillance capacity requirements set forth in this notice should not be misinterpreted or misconstrued as representing the crime rates in each county.

Estimates Of Needed Intercepts

One of the purposes of this Second Notice of Capacity is to publish for comment estimates for possible future court-approved pen register, trap and trace, and wiretap activity. The county and market service area capacity estimates were determined by applying growth factors to the historical simultaneous interception activity, including those areas where there was no activity, to project a safe level of capacity as of October 1998 and thereafter.

To remain consistent with the approach to establish separate capacity requirements for wireline and wireless carriers, separate growth analyses were conducted for wireline and wireless services. The growth factors were developed from three historical records: 1) criminal wiretap orders set forth in the Wiretap Report (1980-1995); 2) Department of Justice (DOJ) survey of Pen Register/Trap and Trace court orders (1987-1995); and 3) historical interception information covering a 26-month period (1/1/93-3/1/95).

Growth in criminal wiretap and DOJ pen register/trap-and-trace court orders was used as a reasonable predictor of growth in interception activity since no long-standing collection of historical line-related interception activity exists. A commonly-used statistical approach referred to as best-fit-line analysis was used to track the number of court orders over time and then project the number into the future.

The resulting growth factors for wireline carriers (applied to the historical baseline for the county) correspond to an annual growth rates of 5.92 percent for the years 1994-1998 and 4.55 percent for the years 1998-2004. The resulting growth factors for wireless carriers (applied to the historical baseline for the market service areas)

correspond to an annual growth of 14.30 percent for the years 1994-1998 and 8.38 percent for the years 1998-2004. These growth rates are consistent with annual subscriber growth rates predicted for the wireline and wireless industries over the same period, which are projected at 3.5 percent and 12.0 percent respectively.

The growth factors derived are not necessarily indicative of the number of court-approved interceptions law enforcement will, in fact, perform in the future. Rather, they are part of a statistical method used for calculating future actual and maximum capacity requirements for the affected telephone companies as required by CALEA. To ensure law enforcement's future ability to conduct court-authorized electronic surveillance in all geographic areas of the country, capacity requirements were also established for those areas of the country in which no interception activity occurred during the period. This was accomplished by assigning each of those counties or market service areas with an historical interception factor of one and then increasing that number by the appropriate wireline or wireless growth rate. While this may have the appearance of artificially increasing the total number of all areas combined, it was necessary to ensure that the ability of law enforcement to conduct lawfully authorized pen registers, trap and traces, and wiretaps was not lost in a substantial number of counties and market service areas (2,255).

For wireline carriers operating in a county with no interception activity during the studied period, an actual capacity to accommodate two simultaneous court-authorized interceptions and a maximum capacity to accommodate three simultaneous court-authorized interceptions were estimated. For wireless carriers operating in a market service area in which no interception activity occurred during the studied period, an actual capacity to accommodate two simultaneous court-authorized interceptions and a maximum capacity to accommodate four simultaneous court-authorized electronic surveillance were established.

Using the chosen statistical method, actual and maximum capacity numbers were calculated for every county and market service area. These numbers represent the total number of simultaneous intercepts that individual telephone companies in every county and market service area must be able to accommodate by the dates specified in the law, should the need ever arise and law enforcement obtains the appropriate court order. This would include any combination of simultaneous pen registers, trap and traces, and wiretaps.

Again, it does not mean that there will be this much electronic surveillance. It is only establishing, through analysis of historical intercept data, some level of capacity across the country to be available should a situation or crisis arise in an individual investigation and all of the legal requirements for electronic surveillance can be satisfied.

Both the actual and maximum capacity columns set forth in this notice can be totaled but those numbers are not relevant for comparison purposes. For example, there are currently over 160 million telephone lines in the United States. Had new technology not have been developed, all of them would have continued to be fully capable of supporting a wiretap or other intercepts--that is, support 100 percent capacity to do 160 million plus simultaneous intercepts. If the actual and maximum capacity columns are totaled, the exceptionally modest sum of each respectively would be 39,767 and 57,749.

In essence, the entire national capacity is going from 160 million lines to less than 60,000 lines. Both numbers represent capacity to be available should a crime

occur that warrants court authorized intercepts or should some other crisis such as a terrorist bombing or kidnapping occur. Neither number represents or has relevance to the number of intercepts that will occur in the future. That number will be determined by the happenstance of serious or grave crimes and severely but appropriately limited by what the law permits and resources allow.

Additional Comments And Final Notice

As previously noted, federal law and laws in 41 states allow for the use of court-authorized wiretaps in the investigation of the most serious criminal felony offenses only when other investigative techniques will not work or are too dangerous to employ and only when there is probable cause to believe that communications are being used in the furtherance of these serious criminal acts. However, law enforcement in all states utilizes pen registers and trap and trace devices to acquire telephone numbers that are dialed during significant investigations.

It is important to remember that in 1968 when Congress statutorily authorized the use of court-ordered electronic surveillance, there were no technological limitations on the number of simultaneous interceptions that a telecommunications carrier could implement for law enforcement. In the past as well as for the future, the limitations on the number of electronic surveillance interceptions conducted by law enforcement have been and will continue to be determined by two factors, 1) that amount of criminal activity being advanced through the use of our Nation's communications networks and 2) adherence to the stringent legal requirements set forth in the federal and state statutes that govern the use of electronic surveillance.

Since 1970, telecommunications carriers have been statutorily required to provide law enforcement with the technical assistance needed to accomplish court-ordered electronic surveillance. CALEA's purpose was to further clarify this existing statutory obligation of telecommunications carriers to provide law enforcement with such technical assistance. CALEA was needed because some telecommunications carriers were technologically unable to provide law enforcement with access to all of the communications content or access to all of the call-identifying information that law enforcement was authorized by court order to intercept. This is so because of technological impediments within their systems, both in terms of network capabilities and in terms of the number of simultaneous interceptions that were needed to be performed (capacity). These technological impediments were brought on by recent advances in telecommunications technology.

CALEA applies to all telecommunications carriers as defined in section 102(8) of the Act. However, the "Second Notice of Capacity" now being offered for comment and its associated future "Final Notice of Capacity" only apply to those telecommunications carriers that are of the most immediate concern to law enforcement, that is, those telecommunications carriers offering local exchange, cellular, and personal communication services (PCS). Law enforcement welcomes written comments from all telecommunications carriers, to include those telecommunications carriers offering services other than those set forth in this notice, as well as other interested parties.

After the 30-day comment period for the "Second Notice of Capacity" closes and a review of all relevant comments received is completed, a "Final Notice of Capacity" will be issued by the FBI which will fulfill the obligations of the Attorney General under section 104(a)(1) of CALEA. Telecommunications carriers will then

have 180 days after publication of the "Final Notice of Capacity" in the Federal Register to submit a "Carrier Statement" as mandated by section 104(d) to the Government identifying any of its systems or services that do not have the capacity to accommodate these public safety requirements.

Even though CALEA requires law enforcement to estimate its future interception capacity requirements, which has the effect of specifying technological limitations on the number of simultaneous interceptions that can be conducted in a specific geographic area by telecommunications carriers, law enforcement believes that the capacity requirements set forth in this notice are reasonable, responsible and sufficient to maintain law enforcement's current ability to protect the public from the most serious crimes. If anything, a conservative approach was taken based on the historical data collected. The public must recognize, however, that it is possible in a given crisis situation that the needs of law enforcement may not be met by the capacities identified in this notice. It is possible that, as crime trends change or as new crime problems develop in specific areas of the country, these estimates may prove to be too conservative for particular counties or market service areas and the public safety will dictate revisiting capacity requirements in those areas. CALEA envisions that possibility and provides a process through which it can be addressed.

CALEA preserved law enforcement's long-standing ability to access with court-approved intercepted communications content and call-identifying information in an ever-changing telecommunications environment. The safeguards that have held law enforcement to strictly enforced standards and conduct for conducting electronic surveillance for a quarter of a century remain in effect, including the requirement of prior court approval for all electronic surveillance interceptions. It is important to remember that in 1968 when Congress statutorily authorized the use of court-ordered electronic surveillance, there were no technological limitations on the number of simultaneous interceptions that a telecommunications carrier could implement for law enforcement.

Written comments must be received on or before February 13, 1997, and should be submitted in triplicate to the Telecommunications Industry Liaison Unit (TILU), Federal Bureau of Investigation, P.O. Box 220450, Chantilly, VA 20153-0450.