

Technical Capability of Telephone Companies for Collecting Information
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Commission Staff at work on the rulemaking concerning privacy of customer information have asked that I prepare a memo to explain the capabilities of telecommunications carriers to track certain information that results when subscribers use their telephones. I was employed as an engineer for 25 years within the Bell System and its offspring, worked for AT&T Wireless in 2000-2001, and as a staff engineer at the Commission from 1995 to 2000, and again as a Policy Advisor since returning to the Commission in 2001. Based on my employment experience, I have knowledge of the ways in which telecommunications carriers track information. Some of these tracking methods are in common use (tracking long-distance calls for billing), while others may be used less frequently to monitor operating efficiencies (such as tracking local dial-up calling to Internet service providers (ISPs)), or when required by law

The technical capability of telecommunications companies to trace and track the calling habits and specific identification of where and to whom the calls are being placed, has resided in the software of electronic network equipment for a number of years. Although the primary use of the information the companies collected was for engineering the network to handle peak loads and forecast growth, recent Congressional legislation has required companies to both extend the types and amounts of information gathered, and to make this information available to government entities in certain situations.

With the passage of the Communications Assistance for Law Enforcement Act, or CALEA, in 1995, telecommunications companies are required to:

[E]nsure that its equipment, facilities or services that provide a customer or subscriber with the ability to originate, terminate, or direct communications, are capable of :

- (1) expeditiously isolating and enabling the government , pursuant to a court order, to intercept...all wire and electronic communications carried by the carrier...[and]
- (2) ...to access call identifying information...
 - (A) before during , or immediately after the transmission...

(CALEA, Sec. 103 (a))

In Section 102 (2) of CALEA, “ call identifying information” is defined as dialing or signaling information identifying “origin, direction, destination, or termination of each communication generated or received by a subscriber by means of any equipment.”

While a telecommunications company may not actually use this information on a day-to-day basis, or may not even track a customer’s usage regularly, the technical capability to

collect the information is certainly available. Without certain restrictions the companies potentially could use the information for marketing or other purposes.

Under the requirements of CALEA, a telecommunications company must at least have the capability to take the following actions:

- Track local calls
- Track long distance calls
- Track feature use
- Track answer or no answer
- Track three-way calling
- Track conference call participation
- Track 800 calls
- Track 900 calls
- Track length of local calls
- Track local dial-up Internet by ISP

For billing purposes, the companies also will be recording information regarding, the length of long distance calls (regardless of long distance carrier) that originate and terminate on their switches. They may also track the number of rings before a phone is answered to either start the billing of the long distance call, or in order to forward an unanswered call. The use of a PIN register allows companies to track paging calls and paging information sent via the use of the touch tone key pad. Use of global positioning system (GPS) devices will allow the tracking of the location of cell phone users. Full tracking may be mitigated to some extent if the GPS devices are deactivated by the user.