Coast Guard published a Supplemental Notice of Proposed Rulemaking (SNPRM) in the **Federal Register** on February 21, 1997 (62 FR 7971). The Coast Guard indicated that it would align the HIN with the recently adopted ISO 14-character HIN standard. The comment period closed May 22, 1997.

The Coast Guard received 31 comments nearly all of which were opposed to the 14-character ISO HIN format. Some of the comments indicated that, if the Coast Guard were to adopt the ISO format, instead of a 17- or 19-character HIN format, some States might refuse to participate in the development of the Vessel Identification System (VIS).

Discussion

There are two opposing views about how to expand the HIN format: (1) the States, bankers, insurers, and theft investigators favor an expanded format with vessel-specific characters and a check digit to deter both boat theft and the alteration of HIN's for fraudulent purposes; and (2) boat builders favor the recently adopted 14-character ISO HIN format. The Coast Guard is developing the Vessel Identification System (VIS), which will provide a nationwide pool of vessel and vessel owner information that will help in identifying and recovering of stolen vessels and deterring vessel theft. If just a few States with large recreational vessel populations refuse to participate in VIS, the usefulness of the system could be seriously jeopardized. However, the Coast Guard lacks detailed information about the anticipated costs and benefits of the HIN format favored by the States, bankers, insurers, and theft investigators. Also, we will believe that, if an expanded HIN format consisting of vessel-specific characters and a check digit is ever adopted, the Coast Guard should be allowed to exempt small manufacturers and manufacturers of high-volume, low-cost boats to minimize costs and information collection burdens. Therefore, the Coast Guard encourages you to comment on (1) the expected benefits of an expanded Hull Identification Number with vessel-specific characters and a check digit; (2) the manner in which the Coast Guard should exempt small entities and the builders of high-volume, low cost boats, such as canoes, kayaks, and inflatables; and (3) the estimated burdens and costs to boat manufacturers if the HIN regulations were revised to require vessel-specific characters and a check digit. We particularly need your help in answering the following questions:

1. *Expanded Hull Identification Number.* What are the expected benefits if the HIN regulations include vessel specific characters delineating a vessel's length, hull material, and means of propulsion and a check digit to help detect fraudulent alterations of HIN's? What are the estimated numbers of thefts that would be prevented? What are the estimated numbers of lost or stolen boats that would be recovered? What is the estimated value of insurance company losses that would be prevented? What are the estimated numbers of fraud attempts that would be prevented? What are the estimated reductions in investigatory expenditures?

1. *Small entities.* The Coast Guard believes that, if it returns to a proposal for regulations to require an HIN consisting of additional vessel-specific characters and a check digit, then we have to be able to exempt some builders to minimize costs and information collection burdens on small manufacturers and manufacturers of high-volume, low-cost boats. Should the Coast Guard consider exempting all builders of non-powered boats? Should the Coast Guard consider exempting manufacturers of boats that sell for less than a certain amount? What alternatives are available that would reduce adverse impacts on small entities and builders of high-volume, low-cost boats?

3. *Costs and burdens.* Preliminary estimates of the time required to manually calculate the check digit for a single boat is 15 minutes. Is this estimate valid? How does this estimate translate into annual costs for manufacturers of various types of recreational boats?

Additional information about the benefits of an expanded HIN consisting of vessel-specific characters and a check digit and possible exceptions for small entities and builders of high-volume, low-cost boats is needed if the Coast Guard is to reconsider an expanded HIN.

Dated: November 5, 1998.

Ernest R. Riutta,

Rear Admiral, U.S. Coast Guard, Assistant Commandant for Operations.

[FR Doc. 98–30597 Filed 11–13–98; 8:45 am]

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 64

[CC Docket No. 97–213, FCC 98–282]

Communications Assistance for Law Enforcement Act

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: This *Further Notice of Proposed Rulemaking* (Further NPRM) addresses alleged deficiencies in industry-developed technical requirements for wireline, cellular and broadband Personal Communications Services (PCS) carriers to comply with the assistance capability requirements prescribed by the Communications Assistance for Law Enforcement Act of 1994 (CALEA, or the Act). The Act authorizes the Commission to establish, by rule, technical requirements or standards that meet the assistance capability requirements, if industry or standards setting organizations have failed to set such standards, or if any party believes that an industry standard is deficient.

DATES: Comments are due December 14, 1998; reply comments are due January 13, 1999.

FOR FURTHER INFORMATION CONTACT: Rodney Small, Office of Engineering and Technology, (202) 418–2452.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Further Notice of Proposed Rulemaking,* CC Docket 97–213, FCC 98–282, adopted October 22, 1998, and released November 5, 1998. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Center (Room CY–C404), 445 Twelfth Street, S.W., Washington, D.C., and also may be purchased from the Commission's duplication contractor, International Transcription Service, (202) 857–3800, 1231 20th Street, N.W., Washington, D.C. 20036.

Summary of the Further Notice of Proposed Rulemaking

1. The Further NPRM addresses alleged deficiencies in industry-developed technical requirements for wireline, cellular, and broadband PCS carriers to comply with the assistance capability requirements prescribed by CALEA. Industry developed these technical requirements in an attempt to satisfy the ''safe harbor'' provision of the Act, which permits telecommunications carriers to be found in compliance with

CALEA if carriers comply with publicly available technical requirements adopted by an industry association or standard-setting organization, or by the Commission. The Act authorizes the Commission to establish, by rule, technical requirements or standards that meet the assistance capability requirements, if industry or standards-setting organizations have failed to set such standards, or if any party believes that an industry standard is deficient. The Commission has received four petitions for rulemaking asking us to establish such requirements or standards pursuant to our statutory authority under the Act. In addition, in response to a *Public Notice* the Commission's Wireless Telecommunications Bureau and Office of Engineering and Technology released on April 20, 1998, we have received numerous comments disputing whether certain specific technical requirements are necessary to comply with CALEA.

2. In light of petitioners' claims that the interim standard adopted by industry is deficient with regard to particular technical requirements it currently includes, this Further NPRM analyzes those specific requirements and reaches tentative conclusions regarding which of them meet the definitions of CALEA Section 103. The Further NPRM also seeks comment on a range of issues associated with the Commission's obligations under the Act. In addition, we seek comment on what role, if any, we can or should play in assisting telecommunications carriers other than wireline, cellular, and broadband PCS carriers to set standards for, or to achieve compliance with, CALEA's requirements.

3. Since 1970, telecommunications carriers have been required to cooperate with law enforcement agencies in conducting electronic surveillance. Recent advances in technology, however, most notably the introduction of digital transmission and processing techniques and the proliferation of wireless services, have hampered the law enforcement community's ability to conduct lawfully authorized surveillance. CALEA was enacted in 1994 to address such problems, and to ensure that law enforcement surveillance efforts would not be unintentionally thwarted by the development and deployment of new telecommunications technologies and services. At the same time, however, Congress recognized the need to protect privacy interests within the context of court-authorized electronic surveillance. In defining the terms and requirements of the Act, therefore, Congress sought to balance three important policies: ''(1) to preserve a narrowly focused capability for law enforcement agencies to carry out properly authorized intercepts; (2) to protect privacy in the face of increasingly powerful and personally revealing technologies; and (3) to avoid impeding the development of new communications services and technologies.'' Based on these considerations, Congress envisioned that the requirements of CALEA would serve as ''both a floor and a ceiling,'' defining the minimum capabilities that should be provided to law enforcement, while also establishing limits as to what can be provided.

4. CALEA directs carriers to ensure that their equipment, facilities, and services are capable of meeting certain requirements to assist law enforcement in carrying out lawfully authorized electronic surveillance. To accomplish this, the Act sets out general assistance capability requirements that telecommunications carriers must meet, and defines the obligations of the industry, the law enforcement community, and the Commission in developing the technical requirements or standards necessary to meet these requirements. To date, industry and the law enforcement community, although they have reached agreement on many issues, disagree on whether certain specific features and/or technical requirements must be provided by carriers to comply with the Act's assistance capability requirements. Consequently, as authorized by the Act, representatives of industry, law enforcement, and the privacy community have petitioned the Commission to establish such technical requirements or standards. In this Further NPRM, therefore, we consider whether certain specific technical requirements are necessary for wireline, cellular and broadband PCS carriers to meet CALEA's assistance capability requirements. Below we discuss the relevant provisions of the Act.

CALEA Assistance Capability Requirements

5. The basic requirements for meeting CALEA's mandates are contained in Section 103, which establishes four general ''assistance capability requirements'' that carriers must meet to achieve compliance. Specifically, Section 103 requires a telecommunications carrier to:

(a) [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 or other lawful authorization, to intercept, to the exclusion of any other communications, all wire and electronic communications carried by the carrier within a service area to or from equipment, facilities, or services of a subscriber of such carrier concurrently with their transmission to or from the subscriber's equipment, facility, or service, or at such later time as may be acceptable to the government;

(2) Expeditiously isolating and enabling the government, pursuant to a court order or other lawful authorization, to access call-identifying information that is reasonably available to the carrier—

(A) Before, during, or immediately after the transmission of a wire or electronic communication (or at such later time as may be acceptable to the government); and

(B) In a manner that allows it to be associated with the communication to which it pertains,

except that, with regard to information acquired solely pursuant to the authority for pen registers and trap and trace devices (as defined in section 3127 of title 18, United States Code), such call-identifying information shall not include any information that may disclose the physical location of the subscriber (except to the extent that the location may be determined from the telephone number);

(3) Delivering intercepted communications and call-identifying information to the government, pursuant to a court order or other lawful authorization, in a format such that they may be transmitted by means of equipment, facilities, or services procured by the government to a location other than the premises of the carrier; and

(4) Facilitating authorized communications interceptions and access to call-identifying information unobtrusively and with a minimum of interference with any subscriber's telecommunications service and in a manner that protects—

(A) The privacy and security of communications and call-identifying information not authorized to be intercepted; and

(B) Information regarding the government's interception of communications and access to call-identifying information.

6. CALEA does not specify how these four assistance capability requirements are to be met. Rather, it states only that telecommunications carriers, in consultation with manufacturers and telecommunications support service providers, must ensure that the carriers' equipment, facilities, and services comply with the requirements. Manufacturers and telecommunications support service providers are subject to a ''cooperation'' requirement, i.e., they are required to make available to carriers the features and modifications necessary for carriers to comply with the requirements ''on a reasonably timely basis and at a reasonable charge.'' Additionally, the Attorney General of the United States must consult with appropriate industry associations and

standards-setting organizations; with representatives of users of telecommunications equipment, facilities, and services; and with state utility commissions ''to ensure the efficient and industry-wide implementation of the assistance capability requirements.''

7. Section 107(a)(2) of CALEA contains a ''safe harbor'' provision, stating that ''[a] telecommunications carrier shall be found to be in compliance with the assistance capability requirements under Section 103, and a manufacturer of telecommunications transmission or switching equipment or a provider of telecommunications support services shall be found to be in compliance with section 106, if the carrier, manufacturer, or support service provider is in compliance with publicly available technical requirements or standards adopted by an industry association or standard-setting organization, or by the Commission under subsection (b), to meet the requirements of Section 103.'' Thus, the Act envisions that an industry association or a standards-setting organization would set applicable standards. Individual carriers, however, are free to choose any technical solution that meets the assistance capability requirements of CALEA, whether based on an industry standard or not. Carriers, therefore, have some degree of flexibility in deciding how they will comply with CALEA's Section 103 requirements. CALEA specifically states, however, that the absence of industry standards does not relieve a carrier of its obligation to comply with the assistance capability requirements.

8. In addition to the safe harbor provision, section 107 also defines certain Commission responsibilities under the Act. Specifically, upon petition, section 107(b) authorizes the Commission to establish, by rule, technical requirements or standards necessary for implementing Section 103. Section 107(b) provides that a petition may be filed with the Commission (1) if industry associations or standard-setting organizations fail to issue technical requirements or standards, or (2) if a government agency or any other person believes that requirements or standards that were issued are deficient.

9. Section 107(b) specifies five factors that the Commission must consider as part of its efforts to establish technical requirements or standards to meet the assistance capability requirements of Section 103. Such technical requirements or standards must:

- Meet the assistance capability requirements of Section 103 by cost-effective methods;
- Protect the privacy and security of communications not authorized to be intercepted;
- Minimize the cost of such compliance on residential ratepayers;
- Serve the policy of the United States to encourage the provision of new technologies and services to the public; and
- Provide a reasonable time and conditions for compliance with and the transition to any new standard, including defining the obligations of telecommunications carriers under Section 103 during any transition period.

10. Section 107(c) authorizes the Commission to extend the compliance date for telecommunications carriers' equipment, facilities, and services. On September 11, 1998, the Commission exercised its authority under section 107(c) by extending the deadline for compliance with Section 103 requirements from October 25, 1998 to June 30, 2000. This extension applies to all telecommunications carriers proposing to install or deploy, or having installed or deployed, any equipment, facility or service prior to the effective date of Section 103, for that part of the carrier's business on which the new equipment, facility or service is used.

Development of Industry Interim Standard J–STD–025

11. Since early 1995, Subcommittee TR45.2 of the Telecommunications Industry Association (TIA) has been working to develop an industry standard that would satisfy the assistance capability requirements of Section 103 for wireline, cellular, and broadband PCS carriers. The standards-setting effort has included participation by industry and law enforcement. In 1996, the Subcommittee received from the Federal Bureau of Investigation (FBI) a document known as the Electronic Surveillance Interface (ESI). The ESI was law enforcement's recommendation for the logical and physical interfaces between a wireline, cellular, or broadband PCS carrier's network and a law enforcement agency's electronic surveillance collection facility. The ESI was developed at the request of industry to describe law enforcement's vision and recommendations for the interface. The ESI defined the requirements for the delivery of both call content and call-identifying information to a law enforcement agency (LEA).

12. By the spring of 1997, TIA developed a final draft of a proposed CALEA industry standard. The draft standard defined services and features to support lawfully authorized electronic surveillance and the interfaces to deliver authorized intercepted communications and call-identifying information to a LEA. Specifically, the draft standard defined the intercept function in terms of five broad categories: access, delivery, service provider administration, collection, and law enforcement administration. This standard was submitted for balloting to all participants in the standards-setting process under procedures of the American National Standards Institute (ANSI). The law enforcement community unanimously opposed adoption of this standard, and it was voted down. The FBI, on behalf of this community, attached a lengthy critique of the draft standard to its ballot, including specific recommendations for changes.

13. The FBI's objections to the draft standard centered around a list of technical capabilities that it contended are necessary to meet CALEA's requirements, but that were not included in the industry interim standard. The FBI's list, which has come to be known as the ''punch list,'' originally contained 11 items, and now contains nine items. Specifically, the FBI's punch list identifies the following capabilities it believes must be provided under CALEA:

(1) Content of subject-initiated conference calls—Would enable law enforcement to access the content of conference calls supported by the subject's service (including the call content of parties on hold).

(2) Party hold, join, drop—Messages would be sent to law enforcement that identify the active parties of a call. Specifically, on a conference call, these messages would indicate whether a party is on hold, has joined or has been dropped from the conference call.

(3) Subject-initiated dialing and signaling information—Access to all dialing and signaling information available from the subject would inform law enforcement of a subject's use of features (such as the use of flash-hook and other feature keys).

(4) In-band and out-of-band signaling (notification message)—A message would be sent to law enforcement whenever a subject's service sends a tone or other network message to the subject or associate (e.g., notification that a line is ringing or busy).

(5) Timing information—Information necessary to correlate call-identifying information with the call content of a communications interception.

(6) Surveillance status—Message that would verify that an interception is still functioning on the appropriate subject.

(7) Continuity check tone (c-tone)—Electronic signal that would alert law enforcement if the facility used for delivery of call content interception has failed or lost continuity.

(8) Feature status—Would affirmatively notify law enforcement of any changes in features to which a subject subscribes.

(9) Dialed digit extraction—Information would include those digits dialed by a subject after the initial call setup is completed.

14. After the close of balloting, Subcommittee TR45.2 held a number of meetings and made changes to the draft industry standard, including a number of changes recommended by the FBI. However, based on the concerns discussed below, none of the FBI punch list items were added to the industry standard. The Subcommittee recommended that the revised standard be considered as a joint TIA/Committee T1 Interim Standard and reballoted under TIA procedures rather than ANSI's. An interim standard, however, is valid for a period of only three years and is considered by ANSI as a ''trial use.'' TIA adopted the recommendations, and the revised draft standard was submitted for voting in the fall of 1997. Because no law enforcement agencies are members of the TIA or Committee T1, however, only industry entities were eligible to cast ballots.

15. The industry unanimously approved the draft standard as fulfilling the requirements mandated by CALEA. In December 1997, the TIA and Committee T1, sponsored by the Alliance for Telecommunications Industry Solutions, announced the joint publication of interim standard J–STD–025, *Lawfully Authorized Electronic Surveillance* (J–STD–025, interim standard, or industry interim standard). This standard defines services and features required to support lawfully authorized electronic surveillance and specifies interfaces necessary to deliver intercepted communications and call-identifying information to a LEA. TIA stated that compliance with J–STD–025 satisfies the ''safe harbor'' provisions of CALEA.

Petitions for Rulemaking

16. In July 1997, before the industry interim standard was released, the Cellular Telecommunications Industry Association (CTIA) filed a petition for rulemaking on behalf of its members requesting that the Commission establish a standard to implement the requirements of Section 103, pursuant to the Commission's authority under section 107(b). CTIA contended that the standards setting process was deadlocked, and that it was unlikely that a standard would be developed in the near future. CTIA attached to its petition the draft industry standard that ultimately became J–STD–025, and argued that this draft standard met the functional requirements of CALEA in their entirety.

17. In August 1997, comments on the CTIA petition were filed jointly by the Center for Democracy and Technology (CDT) and the Electronic Frontier Foundation (EFF). CDT/EFF generally supported CTIA's request to adopt the proposed industry standard; however, they recommended the deletion of provisions relating to subject location and packet-mode information. In March 1998, following adoption of the industry interim standard, DoJ/FBI jointly filed a motion to dismiss CTIA's Petition for Rulemaking on the grounds that the December 1997 adoption of the interim standard rendered CTIA's petition moot. As discussed below, we agree, and dismiss CTIA's July 1997 Petition for Rulemaking.

18. On March 26, 1998, CDT filed a petition for rulemaking, requesting that the Commission intervene in the implementation of CALEA. CDT reiterated the position it and EFF had enunciated in August 1997, arguing that J–STD–025 goes too far in permitting location information capabilities and fails to protect the privacy of packet-mode communications. CDT further argued that the additional surveillance enhancements sought by the FBI in the punch list are not required under CALEA. CDT stated that the telecommunications industry and the FBI had failed to agree on a plan for preserving a narrowly-focused surveillance capability that would protect privacy and, further, were now mired in an argument over designing additional surveillance features into the nation's telecommunications system. Finally, CDT stated that compliance with J–STD–025 was not reasonably achievable and requested that the Commission indefinitely delay implementation of CALEA while a more narrowly-focused standard consistent with the intent of CALEA is developed.

19. On March 27, 1998, DoJ and the FBI jointly filed a petition for expedited rulemaking, asking the Commission to correct deficiencies in the industry standard by establishing additional technical standards that meet the requirements of CALEA. DoJ/FBI claim that the interim standard adopted by industry is deficient because: (1) It does not ensure that law enforcement will be able to receive all of the communications content and call-identifying information that carriers are obligated to deliver under CALEA; and, (2) it fails to ensure that information will be delivered in a timely manner. DoJ/FBI set forth, as a proposed rule, the features (*i.e.*, the punch list items) they believe should be added to the interim standard to correct its deficiencies. DoJ/FBI request that the Commission leave the industry interim standard in effect pending the issuance of a final decision.

20. On April 2, 1998, TIA filed a petition for rulemaking, asking the Commission to resolve the dispute as to whether the interim standard is overinclusive or underinclusive. TIA requested that we: (1) Immediately announce suspension of enforcement of CALEA until we make our determination of a permanent standard; (2) establish a reasonable compliance schedule of at least 24 months to implement the permanent standard; (3) undertake an expedited schedule for establishing a permanent standard; and (4) remand any further technical standardization work to TIA Subcommittee TR45.2.

21. On April 20, 1998, the Commission's Wireless Telecommunications Bureau and Office of Engineering and Technology released a *Public Notice* in this proceeding soliciting comment on the above petitions, as well as soliciting comment on whether the October 25, 1998 deadline for compliance with CALEA's capability requirements should be extended. The *Public Notice* also requested specific comment on the scope of the assistance capability requirements necessary to satisfy the obligations imposed by CALEA. In particular, the *Public Notice* requested analyses of whether the technical requirements discussed in the petitions from CDT and from DoJ/FBI are necessary for carriers to meet CALEA's Section 103 requirements. Finally, the *Public Notice* requested comment on remanding any additional standards development to TIA Subcommittee TR45.2.

22. A number of parties petitioned the Commission to extend the October 25, 1998 deadline for complying with the core features of CALEA, and on September 11, 1998, the Commission released a *Memorandum Opinion and Order* (*Extension Order*) granting such an extension until June 30, 2000. Pursuant to our authority under section 107(c) of CALEA, we determined that compliance with the assistance capability requirements of Section 103 was not reasonably achievable by any telecommunications carrier through the application of available technology by CALEA's compliance deadline of

October 25, 1998. Therefore, we granted a blanket extension of CALEA's compliance deadline until June 30, 2000, for all telecommunications carriers similarly situated to the petitioners, *i.e.*, those carriers proposing to install or deploy, or having installed or deployed, any equipment, facility or service prior to the effective date of Section 103, for that part of the carrier's business on which the new equipment, facility or service is used.

Authority and Approach

23. Section 107(b) of CALEA empowers the Commission to establish, by rule, technical requirements or standards to meet the assistance capability requirements of Section 103. Additionally, section 301(a) of CALEA states that ''[t]he Commission shall prescribe such rules as are necessary to implement the requirements of [CALEA].''

24. In fulfilling our obligations under CALEA, our evaluation in this proceeding will closely follow the plain language of the Act. Pursuant to our statutory authority, we will separately examine the two contested features of the J–STD–025 standard (i.e., the location information and packet-mode features opposed by CDT) and the punch list items sought by the FBI, to determine whether each meet the mandates of Section 103.

25. As an initial matter, we will first determine whether the specific item we are evaluating meets the assistance capability requirements set forth in Section 103(a)(1)–(4). In doing so, we propose to interpret these provisions narrowly. As noted above, we look to the plain language, its context, and, if necessary, any legislative history that assists in ascertaining Congressional intent. Specifically, we explore below the intent of Congress' use of the terms ''equipment, facilities or services'' in Section 103(a)(1) as it relates to the content of subject-initiated conference calls. We also seek to interpret Section 103(a)(2)'s provision that call-identifying information must be provided to a LEA only if that information is ''reasonably available'' to a telecommunications carrier. In this regard, we tentatively conclude that before we can make a determination whether a specific technical requirement meets the mandates of Section 103's assistance capability requirements, the Commission must determine whether the information to be provided to a LEA under Section 103(a)(2) is reasonably available to the carrier. The Act does not specify how the term ''reasonably available'' should be defined or interpreted, and the Act's legislative history offers little additional guidance. We therefore request comment on what factors the Commission should use in determining whether the information to be provided to a LEA under Section 103(a)(2) is reasonably available.

26. Specifically, we request comment on how cost should be considered in our determination of reasonable availability. Further, we note that carriers use a variety of system architectures and different types of equipment, leading us to believe that reasonable availability is also likely to vary from carrier to carrier. Commenters should discuss how the Commission can evaluate whether a particular technical requirement is reasonably available in these circumstances and discuss how the application or interpretation of these terms in Section 103(a)(2) is similar to or different from the application or interpretation of ''reasonably achievable'' in section 109(b), and the factors listed there.

27. We also ask commenters to evaluate the type of information that has been traditionally available under pen register and trap-and-trace authorizations, and whether the provision of such information to LEAs, in light of the statutory definitions of ''pen register'' and ''trap and trace device'', and judicial interpretations of them, provide guidance or represent possible factors for determining ''reasonable availability.''

28. Finally, we also invite comment on whether and, if so, under what circumstances and to what extent, information that does not qualify as call-identifying information under Section 102(2) or otherwise is not ''reasonably available'' under Section 103(a)(2), may nevertheless qualify as call content information under Section 103(a)(1) and the definitions of ''wire and electronic communications'' in 18 U.S.C. § 2510(1), (12). Commenters should take into account that the provisions of Section 103(a)(1) do not include a criterion of ''reasonable availability.''

29. If we conclude that the item in question constitutes a technical requirement that meets the Section 103 assistance capability requirements, we will then proceed to analyze each of the factors identified by section 107(b) and seek comment on whether a particular technical requirement: (1) Meets the assistance capability requirements of Section 103 by cost-effective methods; (2) protects the privacy and security of communications not authorized to be intercepted; (3) minimizes the cost of such compliance on residential ratepayers; and, (4) serves the policy of the United States to encourage the provision of new technologies and services to the public. Additionally, section 107(b)(5) requires the Commission to provide a reasonable time and conditions for compliance with and the transition to any new standard, including defining the obligations of telecommunications carriers under Section 103 during any transition period. Thus, we will also seek comment on issues bearing on our section 107(b)(5) determinations. If, on the other hand, we tentatively conclude that a specific technical requirement falls outside of the parameters of the assistance capability requirements established by Section 103, we will seek comment on our tentative conclusion, and request that commenters responding to this conclusion provide support for their agreement or disagreement by thoroughly analyzing the section 107(b) factors mentioned above.

30. We emphasize that, because CALEA specifically requires us to consider the section 107(b) factors, commenters are strongly encouraged to provide us with information as detailed and specific as possible. For sections 107(b)(1) and (3), for example, we seek detailed comment regarding the costs of adding a feature to a telecommunications carrier's network and on what, if any, impact of such costs will have on residential ratepayers. Commenters should consider the costs to manufacturers in developing the equipment or software needed to implement the technical requirement, as well as the cost to carriers to install and deploy such equipment. Commenters should be specific as to which entities would incur the cost of adding particular features; e.g., manufacturers, local exchange carriers (LECs), interexchange carriers (IXCs), or commercial mobile radio service (CMRS) providers, etc. Commenters should also be specific as to what costs would be incurred for hardware, as opposed to software upgrades to carriers' networks, and whether some of these upgrades would have other uses in the networks. If costs are likely to be passed on to residential ratepayers, those costs should be identified, as well as specific mechanisms that could be used to minimize such costs.

31. Under section 107(b)(2), if a party believes that a proposed technical requirement would not protect the privacy and security of communications not authorized to be intercepted, we request comment on modifications or alternative technical requirements that would enable Section 103's capability requirements to be met. In addition, we

seek detailed information on whether our determination that a particular feature must be provided under CALEA will encourage or discourage the provision of new technologies and services to the public. Will the implementation of a particular technical requirement constrain a carrier's ability to develop new services or technologies? Commenters should provide a projected timeline for each technical requirement, identifying the time needed to develop, test, and deploy it. Additionally, commenters should address the extent to which the capacity requirements of section 104 should affect our determinations under section 107(b). Finally, we ask for comment on any conditions necessary for compliance and any specific obligations that should be imposed on telecommunications carriers during the transition to a new standard.

32. We note that the tentative conclusions we reach in this Further NPRM focus on the technical requirements that the petitioners have asked us to address in their petitions pending before us; *i.e.*, the two contested features of J–STD–025 and the nine punch list items. In making our tentative decision, we recognize that CALEA requires carriers to ensure that their networks can provide the capabilities defined in Section 103, but does not mandate use of, or adherence to, any particular standard. In other words, compliance with the industry standard is voluntary, not compulsory. As a result, carriers are free to develop CALEA solutions in any manner they choose. Thus, a carrier may choose to utilize an industry standard as a safe harbor, or they may choose to implement other solutions that meet the capability requirements of Section 103. However, in order for an adopted industry standard to satisfy the safe harbor provision of section 107(a), it must incorporate all of the technical requirements that we ultimately determine meet the assistance capability requirements of Section 103.

33. We note further that this proceeding does not involve any attempt to interpret statutes other than CALEA or define the scope of authorizations needed by LEAs to intercept or obtain call content or call-identifying information. Rather, this proceeding is limited to determining, as a safe harbor, what capabilities each carrier must provide if and when presented with a proper authorization or court order to expeditiously provide LEAs access to call content and call-identifying information.

34. We believe that industry is in the best position to determine how to implement these technical requirements most effectively and efficiently. Standards-setting organizations, manufacturers, and/or individual telecommunications carriers should develop the technical requirements consistent with our ultimate determinations reached in this proceeding. We tentatively conclude that it would then be appropriate for industry, in consultation with the law enforcement community, to develop a final ''safe harbor'' standard for CALEA compliance. We seek comment on this conclusion.

35. Finally, we also note that manufacturers and carriers are free to develop and deploy additional features and capabilities, beyond those required by CALEA, in efforts to assist law enforcement agencies in conducting lawfully-authorized electronic surveillance. Such capabilities, however, will not be subject to any of CALEA's obligations, including cost recovery, and will not affect any party's obligations under CALEA in any way. Thus, nothing in the instant Further NPRM should be construed as limiting or proposing to limit telecommunications manufacturers, carriers or support service providers' ability to negotiate with law enforcement agencies to add additional capabilities to the carrier's systems, nor to define a maximum level of capabilities available to law enforcement under the applicable provisions of law. We now turn to a discussion of whether we should reexamine the uncontested portions of J–STD–025 as part of our section 107(b) inquiry.

Industry Interim Standard J–STD–025

36. The industry interim standard, J–STD–025, which applies only to wireline, cellular, and broadband PCS carriers, specifies that telecommunications carriers are to provide LEAs with two telecommunications channels to perform electronic surveillance—call content channels (CCCs) and call data channels (CDCs). J–STD–025 defines the five functions of the intercept architecture to be used. Those functions are:

- Access—Provides the LEA with the ability to isolate the subject's call content or call-identifying information accurately and unobtrusively. The access function helps to prevent the unauthorized access, manipulation, and disclosure of intercept controls, call content, and call-identifying information.
- Delivery—Accepts call content and call-identifying information from the access function and delivers it to one or more LEA collection functions. Ensures that the call content and call-identifying information that are delivered are authorized for a particular LEA, and thus also prevents the unauthorized access, manipulation, and disclosure of intercept controls, call content, and call-identifying information.
- Collection—Receives and processes call content and call-identifying information for the subject. (This function is the responsibility of the LEA.)
- Service Provider Administration—Controls the carrier's electronic surveillance functions. (This function is beyond the scope of the interim standard.)
- Law Enforcement Administration—Controls the LEA electronic surveillance functions. (This function is the responsibility of the LEA, and is also beyond the scope of the interim standard.)

37. In seeking to fulfill our obligations under the Act, the Commission acknowledges the immense time and effort both industry and government representatives have put into the development of CALEA standards. We also appreciate the input and involvement of privacy organizations in this proceeding. We further note that the Act expresses a preference for industry to set CALEA standards, in consultation with the Attorney General, and that the Act's legislative history also reveals that Congress envisioned that industry would have primary responsibility in defining standards. Consequently, we believe that the most efficient and effective method for ensuring that CALEA can be implemented as soon as possible is to build on the work that has been done to date.

38. We therefore do not intend to reexamine any of the uncontested technical requirements of the J–STD–025 standard. Instead, we will make determinations only regarding whether each of the location information and packet-mode provisions currently included within J–STD–025, and the nine punch list items that are currently not included, meet the assistance capability requirements of Section 103. We base this approach on the fact that the issues raised in the petitions and comments filed in this proceeding focus solely on the location information and packet-mode provisions of J–STD–025 and the nine punch list items sought by the FBI. Accordingly, these features will be evaluated separately. We further note that no party has raised any specific challenges to J–STD–025 other than with respect to these issues, and we have not been presented with any

compelling reason to reexamine the entire standard. We tentatively conclude that by limiting our inquiry to only these specific technical issues, we will better enable manufacturers and carriers to build on the extensive work already completed or in process, and permit them to deploy CALEA solutions on a more expedited basis. Accordingly, the uncontested technical requirements are beyond the scope of this proceeding.

39. In establishing technical requirements or standards, section 107(b)(5) requires the Commission to provide a ''reasonable time'' for carriers to comply with and/or transition to any new standards and to define the obligations of telecommunications carriers under Section 103 during any transition period. We previously concluded in our decision under section 107(c) that telecommunications carriers must have installed CALEA-compliant equipment and facilities based on the ''core'' features of J–STD–025 by June 30, 2000. A footnote in that decision indicated that the ''core'' of J–STD–025 excludes both the location information feature and the packet-mode feature. We now clarify those findings as follows. J–STD–025 represents an attempt by industry to develop a standard that carriers may choose to adopt voluntarily as a means to comply with CALEA's ''safe harbor'' provision set forth in section 107(a). We further recognize that the statute leaves carriers with the discretion to choose to comply with CALEA by other means. We emphasize that in requiring carriers to comply with the core features of J–STD–025 by June 30, 2000, we did not intend for the *Extension Order* to alter the substantive requirements of CALEA. Rather, we meant only to extend the deadline for compliance. Thus, we now clarify our *Extension Order* by requiring that by June 30, 2000, carriers must either have installed the core features of J–STD–025 to take advantage of the ''safe harbor'' provision of section 107(a) of CALEA or have otherwise developed an individual solution and installed capabilities that meet the assistance capability requirements of Section 103. We believe that this approach is more consistent with the language of the statute and the legislative history on this point. In addition, we now propose to modify footnote 139 of the *Extension Order* to include the location information feature as part of the core of J–STD–025 which, if chosen by carriers as a means to qualify for the ''safe harbor,'' must be implemented by the June 30, 2000 deadline.

40. As detailed in the *Extension Order,* an extension until June 30, 2000, provides sufficient time for manufacturers to produce CALEA compliant equipment based on the core features of J–STD–025 or to develop individual network solutions and provides telecommunications carriers sufficient time to purchase, test and install such equipment throughout their networks. We further recognize that the additional ''non-core'' technical requirements we propose to be adopted in this rulemaking may require additional time for manufacturers to design and develop these capabilities and for telecommunications carriers to incorporate them into their networks. Thus, we will consider establishing another deadline or an implementation schedule for telecommunications carriers to comply with any new technical requirements we ultimately adopt in the instant proceeding. We seek comment on this proposal. Specifically, we ask carriers and manufacturers to supply us with timelines that detail how they plan to develop and deploy the additional technical requirements noted herein.

Location Information

41. J–STD–025 includes a ''location'' parameter that would identify the location of a subject's ''mobile terminal'' whenever this information is reasonably available at the intercept access point and its delivery to law enforcement is legally authorized. Location information would be available to the LEA irrespective of whether a call content channel or a call data channel was employed.

42. We tentatively conclude that location information is call-identifying information under CALEA. The Act states that call-identifying information is ''dialing or signaling information that identifies the origin, direction, destination, or termination of each communication generated or received by a subscriber by means of any equipment, facility, or service of a telecommunications carrier.'' We believe, that location information identifies the ''origin'' or ''destination'' of a communication and thus is covered by CALEA.

43. We also observe that in the wireline environment, irrespective of the precise nature of law enforcement's surveillance authorization, LEAs have been able to obtain location information routinely from the telephone number because the telephone number corresponds with location. With the telephone number, location information is available from a LEA's own 911/Enhanced 911 (E911) database or from the telephone company's electronic records, such as the Loop Maintenance Operating System (LMOS).

44. We note, however, that the location feature as it currently appears in J–STD–025 is unclear. In particular, we note that this feature refers to the identification of the location of a subject's ''mobile terminal,'' but does not specifically state whether it is the precise location of the mobile terminal or handset that is intended, or simply the location of the cell site to which the terminal or handset is connected. Also unstated in J–STD–025 is whether continuous location tracking is intended to be provided, or only the location at the beginning and termination of the call.

45. In view of the above analysis, we tentatively affirm that location information should be construed to mean cell site location at the beginning and termination of a call. We seek comment on these proposals and, as required by section 107(b), on the other factors that we must consider in establishing a technical requirement or standard. We note that location information is already included in J–STD–025, the interim standard adopted by industry, and was opposed solely by the privacy groups. Therefore, we request comment in particular on whether our proposal raises issues regarding the protection of privacy and security of communications which are not authorized to be intercepted. Since the location information feature was included by industry in J–STD–025, we find that the June 30, 2000 CALEA compliance deadline is also sufficient for development and implementation of compliant equipment that includes this feature.

46. Finally, we tentatively conclude that location information is reasonably available to telecommunications carriers, because this technical requirement was developed by industry and is included in the interim standard. However, we request comment on how the Commission should decide or interpret the term ''reasonably available'' in the context of the proposed location information requirement. For example, it appears that location information is already available through the wireless carriers' billing, hand-off and system use features. Additionally, wireless carriers will be required to have a location information capability as part of their E911 obligations. We seek comment as to whether the location information feature in these other contexts can be used to address the needs of law enforcement under CALEA. We request comment on any other issues that may impact our determination as to whether the location information that would be

required to be provided to a LEA is reasonably available to carriers.

47. Commenters should also note CALEA's express statement that ''with regard to information acquired solely pursuant to the authority for pen registers and trap and trace devices (as defined in section 3127 of title 18, United States Code), . . . call-identifying information shall not include any information that may disclose the physical location of the subscriber (except to the extent that the location may be determined from the telephone number).'' We agree with DoJ/FBI that this provision does not exclude location information from the category of ''call-identifying information,'' but simply imposes upon law enforcement an authorization requirement different from that minimally necessary for use of pen registers and trap and trace devices. We seek comment on this issue.

Packet-Mode

48. J–STD–025 provides for LEA access to call-identifying information and the interception of wire and electronic telecommunications, regardless of whether the telecommunications are carried in circuit-mode or in packet-mode. It further states that the ''call-identifying information associated with the circuit-mode content surveillance is provided on the [call data channel],'' but does not specifically address whether call-identifying information, if any, associated with packet-mode surveillance must be provided over a call data channel.

49. Packet data and packet-switching technology are potentially usable for both information services and telecommunications services. We first observe that Section 103(b)(2)(A) of CALEA expressly excludes ''information services'' from its assistance capability requirements. Thus, packet data and packet-switching technology is subject to these requirements only to the extent it is used to provide telecommunications services, and not for information services. Packet-mode telecommunications services are expected to grow rapidly in the near future. J–STD–025 appears to be appropriately limited to apply only to ''telecommunications services'' as defined by the Commission. Second, we observe that CALEA requires telecommunications carriers to provide information to the LEA ''in a manner that protects . . . the privacy and security of communications . . . not authorized to be intercepted.'' This mandate would seem to be violated if the carrier were to give the LEA both call-identifying and call content information when only the former were authorized. Under those circumstances, the LEA would be receiving call content information without having the requisite authorization.

50. The record before us, however, is not sufficiently developed to support a proposal of any particular CALEA technical requirements for packet-mode telecommunications. Additional analysis is needed. We are aware that packet-mode technology is rapidly changing, and that different technologies may require differing CALEA solutions. We do not believe that the record sufficiently addresses packet technologies and the problems that they may present for CALEA purposes. While it is premature to impose any particular technical requirements for packet-mode telecommunications at this time, it is appropriate to ask for a full range of comment on this issue.

51. In seeking to develop a full record, we first set forth an analytical framework we believe will prove useful for evaluating the issue of setting CALEA technical requirements for packet-mode telecommunications. First, we advise commenters to consider the difference between connection-oriented and connectionless packet-mode services, and also between permanent virtual circuits, which have no per-call information, and switched virtual circuits. With these distinctions in mind, we request that commenters provide detailed comments regarding whether and, if so, how the statutory requirements of Section 103(a) of CALEA apply to packet-mode telecommunications. We request comment on what constitutes the equivalent of ''call-identifying information'' for packet-mode telecommunications services within the context of CALEA. Will packet-mode call-identifying information (or its equivalent) be reasonably available to carriers and, thus, subject to the provisions of Section 103(a)(2) of CALEA? How could packet-mode call content and call-identifying information (or its equivalent) be separated for delivery to law enforcement in compliance with CALEA?

52. In addition, we seek comment on the other section 107(b) factors that we must consider in establishing technical requirements. Specifically, we seek comment on any cost-effective methods for incorporating CALEA packet-mode requirements into a telecommunications carrier's system, and whether or not this can be accomplished in a manner that minimizes costs to residential ratepayers. Further, we request additional comment on whether the inclusion of packet-mode technical requirements to meet the assistnace capability requirements envisioned by Section 103 raises issues regarding the protection of privacy and security of communications which are not authorized to be intercepted. Additionally, we solicit comment on whether the inclusion of such technical requirements would have a positive or negative effect on the provision of new technologies and services to the public. Commenters are also asked to provide detailed information regarding the amount of time and conditions that they believe will be necessary to successfully develop and deploy packet-mode technical requirements in telecommunications systems. Finally, we recognize that packet-mode issues are complex, and that relative to the other issues under consideration herein, additional time may be required to resolve them.

Content of Subject-initiated Conference Calls

53. This capability would permit the LEA to monitor the content of conversations connected via conference call set up by the facilities under surveillance. Surveillance of all portions of a conference call would continue, even if any party to the call utilized services such as hold, call waiting, or three-way calling. For example, if anyone involved in a conference call were placed on hold, all remaining conversations would continue to be available to the LEA for monitoring. The ability to monitor would continue even after the subject drops off the conference call.

54. We tentatively conclude that the provision of the content of subject-initiated conference calls is a technical requirement that meets the assistance capability requirements of Section 103. With appropriate lawful authorization, the LEA is entitled to ''intercept, to the exclusion of any other communications, all wire and electronic communications carried by the carrier within a service area to or from equipment, facilities, or services of a subscriber.'' TIA asserts that we must first determine whether a conference call capability would unduly expand Title III's concept of ''facilities'' before deciding whether such a capability is required under CALEA. We note, however, that the plan language of CALEA's Section 103 includes the terms ''equipment'' and ''services'', in addition to ''facilities'' thus, extending LEAs entitlement to access the ''services and equipment'', as well as the ''facilities'', of a subscriber. According to the legislative history, ''conference calling'' is one of the ''features and

services'' that is covered by CALEA. We seek comment on this proposal. We also seek comment as to how the Commission should define or interpret Section 103's use of the phrase ''equipment, facilities, or services'' in the context of subscriber-initiated conference calls.

55. We recognize that not all carriers' system architecture is the same. Some carriers, for example, may have systems that support continuation of conference calls after the subscriber drops off the call, while others may not. For those network configurations in which, when a subscriber drops off a conference call, the call nevertheless remains routed through the subscriber's ''equipment, facilities, or services,'' we tentatively interpret CALEA as requiring the carrier to continue to provide the LEA the call content of the remaining parties, pursuant to court order or other lawful authorization. For those configurations, however, in which, when the subscriber drops off the call, the call is either disconnected or rerouted, and the ''equipment, facilities, or services of a subscriber'' are no longer used to maintain the conference call, we tentatively conclude that CALEA does not require the carrier to provide the LEA access to the call content of the remaining parties. Moreover, in some cases where the call is re-routed, the content of the call may no longer be classifiable as ''communications carried by the carrier within a service area'' pursuant to Section 103(a)(1) and (d). Thus, under such circumstances, CALEA would not require the carrier to modify its system architecture in order to support this particular technical requirement. We seek comment on this tentative conclusion. Commenters should address how Sections 103(a)(1) and (d) should be interpreted in this context. Also, we tentatively conclude that CALEA does not extend to conversations between a participant of the conference call other than the subject and any person with whom the participant speaks on an alternative line (*e.g.*, when A, the subjects, is on a conference call with B and C, we tentatively conclude that C's conversation with D on call waiting is beyond CALEA's requirements. We also seek comment on this tentative conclusion.

56. Additionally, we seek comment on the section 107(b) factors that we must consider in establishing a technical requirement or standard. Are there cost-effective methods of incorporating access to conference call content into a telecommunications carrier's system? Can it be accomplished in a manner that minimizes costs to residential ratepayers? Further, we request comment on whether this proposal raises issues regarding the protection of privacy and security of communications which are not authorized to be intercepted. Additionally, we solicit comment on whether the inclusion of this technical requirement within the assistance capability requirements envisioned by Section 103 would positively or negatively affect the provision of new technologies and services to the public. Would, for example, networks have to be redesigned in such a way as to preclude certain new technologies or services? Finally, commenters are asked to provide detailed information regarding the amount of time and conditions that they believe will be necessary to successfully develop and deploy this technical requirement in telecommunications systems.

Party Hold, Join, Drop on Conference Calls

57. This item also involves features designed to aid a LEA in the interception of conference calls. This feature would permit the LEA to receive from the telecommunications carrier messages identifying the parties to a conversation at all times. The party hold message would be provided whenever one or more parties are placed on hold. The party join message would report the addition of a party to an active call or the reactivation of a held call. The party drop message would report when any party to a call is released or disconnects and the call continues with two or more other parties.

58. We tentatively conclude that party hold/join/drop information falls within CALEA's definition of ''call-identifying information'' because it is ''signaling information that identifies the origin, direction, destination, or termination of each communication generated or received'' by the subject. For example, party join information appears to identify the origin of a communication; party drop, the termination of a communication; and party hold, the temporary origin, temporary termination, or re-direction of a communication. This capability also appears to be necessary to enable the LEA to isolate call-identifying and content information because, without it, the LEA would be unable to determine who is talking to whom, and, more accurately, to focus on the subject's role in the conversation. Further, by isolating the call-identifying information in this manner, the LEA can ascertain and isolate third parties who are not privy to the communications involving the subject, thereby furthering the minimization concept.

59. Accordingly, we propose that provision of party hold/join/drop information, if reasonably available to the carrier, is a technical requirement that meets the assistance capability requirements of Section 103. We base this conclusion on the statutory language found in Sections 103(a)(2) and 102(2). We note, however, that LEA access to this information would be required only in those cases where the carrier's facilities, equipment or services are involved in providing the service; in other words, when a network signal is generated. To the extent that customer premises equipment (CPE) is used to provide such features, we tentatively conclude that party hold/join/drop information could not be made available to the LEA since no network signal would be generated. For example, many telephone sets have a ''hold'' button that does not signal the network—thus, from the carrier's point of view, the call's status is unchanged. We seek comment on this tentative conclusion. We also seek comment on TIA's assertion that party/hold/join drop information is already substantially available to the LEA and, if so, whether it is or needs to be provided in real time.

60. We seek comment on our proposal and, as required by section 107(b), on the other factors that we must consider in establishing a technical requirement or standard. Are there cost-effective methods of incorporating a party hold/join/drop capability into a telecommunications carrier's system? Can it be accomplished in a manner that minimizes costs to residential ratepayers? Further, we request comment on whether this proposal raises issues regarding the protection of privacy and security of communications which are not authorized to be intercepted. Additionally, we solicit comment on whether the inclusion of this technical requirement within the assistance capability requirements envisioned by Section 103 would positively or negatively affect the provision of new technologies and services to the public. Further, commenters are asked to provide detailed information regarding the amount of time and conditions that they believe will be necessary to successfully develop and deploy this technical requirement in telecommunications systems.

Subject-initiated Dialing and Signaling Information

61. This capability would permit the LEA to be informed when a subject using the facilities under surveillance

uses services such as call forwarding, call waiting, call hold, three-way calling. DoJ/FBI requests this information for each communication initiated by the subject. This capability would require the telecommunications carrier to deliver a message to the LEA, informing the LEA that the subject has invoked a feature which would place a party on hold, transfer a call, forward a call, or add/remove a party to a call.

62. We tentatively conclude that subject-initiated dialing and signaling information fits within the definition of call-identifying information contained in section 102(2) of CALEA. For example, call-forwarding signaling information identifies the direction and destination of a call, and call-waiting signaling information identifies the origin and termination of each communication. We request comment on whether remote operation of these features should affect our tentative conclusion. For example, a subject may be able to change some aspects of his/her service from a pay telephone, as well as from the subject's telephone.

63. We also tentatively conclude that access to subject-initiated dialing and signaling information may be necessary in order for the LEA to isolate and correlate call-identifying and call content information. Knowing what features a subject is using will ensure that the LEA receives information ''in a manner that allows it to be associated with the communication to which it pertains.'' For example, without knowing that a subject has switched over to a call on call-waiting, the LEA may not be able to associate the call-identifying information with the call content to which it pertains and thus could be more likely to mistake one call for another. Once again, to the extent CPE is used to perform any of the functions described here, and no network signal is generated, that information will not be reasonably available to a carrier, and thus, should not be required to be provided.

64. We observe that signaling data indicating that the subject is accessing his/her voice mail is properly classified as ''call-identifying information.'' The contents of the voice mail fall outside the scope of CALEA. This is because voice mail ''permits a customer to retrieve stored information from . . . information storage facilities,'' and CALEA does not apply to information services. The requirement we propose below is consistent with this distinction because it provides only the call identifying information and is not capable of providing voice content.

65. Accordingly, we propose to include information on subject-initiated dialing and signaling that is reasonably available to the carrier as a technical requirement necessary to meet the assistance capability requirements of Section 103. We base our conclusion regarding subject-initiated dialing and signaling information that is reasonably available to the carrier on the statutory language found in Section 103(a)(2). We seek comment on this proposal and, as required by section 107(b), on the other factors that we must consider in establishing a technical requirement or standard. Are there cost-effective methods of providing subject-initiated dialing and signaling information? Can this requirement be accomplished in a manner that minimizes costs to residential ratepayers? Further, we request comment on whether this proposal or tentative conclusion raises issues regarding the protection of privacy and security of communications which are not authorized to be intercepted. Additionally, we solicit comment on whether the inclusion of this technical requirement within the assistance capability requirements envisioned by Section 103 would positively or negatively affect the provision of new technologies and services to the public. Commenters are asked to provide detailed information regarding the amount of time and conditions that they believe will be necessary to successfully develop and deploy this technical requirement in telecommunications systems. In addition, excluding those CPE-controlled features noted above, and consistent with our proposed ruling regarding voice mail as noted above, we request comment on whether information required to provide LEAs with subject-initiated dialing and signaling activity is reasonably available to carriers. Finally, we recognize that some commenters assert that at least portions of this technical requirement may be provided through other features of J–STD–025. We request comment on the accuracy of these contentions. Commenters should demonstrate clearly how the features required are provided, or not provided, elsewhere in J–STD–025.

In-band and Out-of-band Signaling

66. This technical requirement would allow a telecommunications carrier to send a notification message to the LEA when any network message (ringing, busy, call waiting signal, message light, *etc.*) is sent to a subject using facilities under surveillance. For example, if someone leaves a voice mail message on the subject's phone, the notification to the LEA would indicate the type of message notification sent to the subject (such as the phone's message light, audio signal, text message, *etc.*). For calls the subject originates, a notification message would also indicate whether the subject ended a call when the line was ringing, busy (a busy line or busy trunk), or before the network could complete the call.

67. We believe that certain types of in-band and out-of-band signaling information, such as notification that a voice mail message has been received by a subject, constitute call-identifying information under CALEA; while there may be other types of in-band and out-of-band signaling information that would constitute call content information and thus would raise questions as to under what authority they should be provided to the LEA. However, for purposes of this proceeding, we do not address such questions of whether or what type of authorization LEAs would need to access such information. This is up to the judicial branch. Unless necessary to establish technical standards under CALEA's safe harbor, it is not our intention to specifically decide whether certain types of in-band or out-of-band signaling is either call content or call-identifying information since CALEA requires carrier have the ability to provide access to both. We request comment on what types of in-band and out-of-band signaling should constitute a technical requirement necessary to meet the assistance capability requirements envisioned by Section 103.

68. Also, in the event that we ultimately determine that in-band and out-of-band signaling is a technical requirement necessary to meet the assistance capability requirements under Section 103, we request comment on whether there are cost-effective methods of providing in-band and out-of-band signaling to a LEA. Can this requirement be accomplished in a manner that minimizes costs to residential ratepayers? Further, we request comment on whether this requirement raises issues regarding the protection of privacy and security of communications which are not authorized to be intercepted. Additionally, we solicit comment on whether the inclusion of this technical requirement within the assistance capability requirements envisioned by Section 103 would positively or negatively affect the provision of new technologies and services to the public. Commenters are asked to provide detailed information regarding the amount of time and conditions that they believe will be necessary to successfully develop and deploy this technical

requirement in telecommunications systems.

Timing Information

69. In those cases where the LEA has obtained authorization to intercept both content and call-identifying information, this capability would require that a telecommunications carrier send call timing information to the LEA so that the LEA could associate the call-identifying information with the actual content of the call. There would be two elements to this capability:

(1) Each call-identifying message (answer message, party join message, party drop message, etc.) would be time stamped within a specific amount of time from when the event triggering the message occurred in the intercept access point. This time-stamp would allow the LEA to associate the message to the call content information (i.e., the conversation).

(2) A carrier would be required to send the message to the LEA within a defined amount of time from the event to permit the LEA to associate the number dialed to the conversation.

70. We tentatively conclude that time stamp information fits within the definition of call-identifying information contained within section 102(2) of CALEA and will allow such information ''to be associated with the communication to which it pertains.'' We propose to include timing information that is reasonably available to the carrier as a technical requirement necessary to meet the assistance capability requirements of Section 103(a). We seek comment on this proposal. We base this conclusion on the statutory language found in Section 103(a)(2), and on our tentative conclusion that such information falls within the definition of call-identifying information in section 102(2). A time stamp permits identification of a given call from a series of calls made within a short timeframe, and is necessary to allow a LEA to associate call-identifying information with the communication to which it pertains. We note, however, that CALEA does not impose a specific timing requirement on carriers. Rather, it states that carriers must ''expeditiously'' isolate and enable the government to access call-identifying information ''before, during, or immediately after the transmission of a wire or electronic communication (or at such later time as may be acceptable to the government); and in a manner that allows it to be associated with the communication to which it pertains.'' Therefore, we seek comment on what is a reasonable amount of time to require the carriers to deliver the time stamped message to the LEA. We note that DoJ/FBI have requested delivery within 3 seconds of the beginning of the event and with an accuracy of 100 milliseconds. Commenters should address whether this is a reasonable time frame, and whether there are any technical barriers to implementing such a requirement. Commenters proposing an alternative time frame should also address technical feasibility and how such a time frame will satisfy the requirements of the statute.

71. In addition, we seek comment, as required by section 107(b), on the factors that we must consider in establishing a technical requirement. Are there cost-effective methods of providing timing information to a LEA? Can this requirement be accomplished in a manner that minimizes costs to residential ratepayers? Further, we request comment on whether this proposal raises issues regarding the protection of privacy and security of communications which are not authorized to be intercepted. Additionally, we solicit comment on whether the inclusion of this technical requirement within the assistance capability requirements envisioned by Section 103 would positively or negatively affect the provision of new technologies and services to the public. Commenters are asked to provide detailed information regarding the amount of time and conditions that they believe will be necessary to successfully develop and deploy this technical requirement in telecommunications systems.

Surveillance Status

72. This capability would require the telecommunications carrier to send information to the LEA to verify that a wiretap has been established and is still functioning correctly. This information could include the date, time, and location of the wiretap; identification of the subscriber whose facilities are under surveillance; and identification of all voice channels that are connected to the subscriber. This information would be transmitted to the LEA when the wiretap is activated, updated or deactivated, as well as periodically (varying from once every hour to once every 24 hours).

73. CALEA requires carriers to ensure that authorized wiretaps can be performed in an expeditious manner, and we believe that a surveillance status message could assist carriers and LEAs in determining the status of such wiretaps. We tentatively conclude, however, that a surveillance status message does not fall within any of the provisions of Section 103. We do not believe that it is call-identifying information as defined by CALEA, since the information such a feature would provide is unrelated to any particular call. Nor does a surveillance status message appear to be required under Section 103(a)(1), since it is not necessary to intercept either wire or electronic communications carried on a carrier's system. Nor are we persuaded by the FBI's interpretation that a surveillance status message is required by CALEA's direction that a carrier ''shall ensure'' that its system is capable of meeting the Section 103(a) requirements. Rather, we note that the Act expressly states: ''a telecommunications carrier shall ensure that its equipment, facilities, or services . . . are capable of'' intercepting communications and allowing LEA access to call-identifying information. We interpret the plain language of the statute to mandate compliance with the capability requirements of Section 103(a), but not to require that such capability be proven or verified on a continual basis.

74. Thus, we tentatively conclude that the surveillance status punch list item is not an assistance capability requirement under Section 103. However, we invite comment as to how, generally, carriers intend to ensure that wiretaps remain operational. How, specifically, would ''human intervention'' be exercised? For example, do carriers plan to periodically check the circuit manually and notify the LEA that the wiretap remains operational? Further, to the extent commenters continue to believe that an automated surveillance status message is necessary to implement the requirements of Section 103, we seek comment on the 107(b) factors that the Commission must evaluate under CALEA. In what manner could such a feature be provided? Are there cost effective methods of providing surveillance status information to a LEA? Can this requirement be accomplished in a manner that minimizes costs to residential ratepayers? Could such provision of surveillance status messages compromise the privacy and security of communications not authorized to be intercepted? Would the provision of such information constrain a carrier's ability to develop and deploy new technologies and services? What period of time would be required to develop and deploy such a feature? And, to the extent that this information were to fall under the definition of call-identifying information, is it reasonably available to carriers?

Continuity Check Tone

75. This technical requirement would require that, in cases where a LEA has obtained authority to intercept wire or electronic communications, a C-tone or dial tone be placed on the call content channel received by the LEA from the telecommunications carrier until a user of the facilities under surveillance initiates or receives a call. At that point, the tone would be turned off, indicating to the LEA that the target facilities were in use. This capability would permit correlation between the time a call is initiated and the time the connection is established. The C-tone would also verify that the connection between the carrier's switch and the LEA is in working order.

76. As with the case of surveillance status messages, we believe that continuity tone could assist the LEA in determining the status of a wiretap, but that this technical requirement is not necessary to meet the mandates of Section 103(a). Similar to our reasoning regarding surveillance status messages, we do not believe that a continuity tone falls within CALEA's definition of call-identifying information, nor does it appear to be required under Section 103(a)(1), since it is not necessary to intercept either wire or electronic communications carried on a carrier's system. Furthermore, as explained above, the plain language of the statute mandates compliance with the capability requirements of Section 103(a), but does not require that such capability be proven or verified on a continual basis. Thus, we tentatively conclude that the continuity tone punch list item is not an assistance capability requirement under Section 103.

77. However, to the extent commenters continue to believe such a technical requirement is necessary to implement the requirements of Section 103, we seek comment on the 107(b) factors that the Commission must evaluate under CALEA. In what manner could such a feature be provided? Are there cost effective methods of providing a continuity tone to a LEA? Can this requirement be accomplished in a manner that minimizes costs to residential ratepayers? Could provision of a continuity tone somehow compromise the privacy and security of communications not authorized to be intercepted? For example, could such a tone be detected by the subscriber whose facilities are under surveillance? Would the provision of such information constrain a carrier's ability to develop and deploy new technologies and services? And finally, what period of time would be required to develop and deploy such a feature?

Feature Status

78. This technical requirement would require a carrier to notify the LEA when specific subscription-based calling services are added to or deleted from the facilities under surveillance, including when the subject modifies capabilities remotely through another phone or through an operator. Examples of such services are call waiting, call hold, three-way calling, conference calling, and call return. Also, the carrier would be required to notify the LEA if the telephone number of the facilities under surveillance was changed or service was disconnected.

79. Similar to surveillance status messages and continuity tones, we believe that feature status messages could be useful to a LEA, but that provision of these messages from a carrier to a LEA is not required to meet the mandates of Section 103(a). First, we believe it is clear that feature status messages do not constitute call-identifying information because they do not pertain to the actual placement or receipt of individual calls. Further, feature status messages do not appear to be required under Section 103(a)(1) because they are not necessary to intercept either wire or electronic communications carried on a carrier's system. Rather, they would simply aid a LEA in determining how much capacity is required to implement and maintain effective electronic surveillance of a target facility, information that could be useful in assuring that an interception is fully effectuated and the intercepted material delivered as authorized. However, as noted by AT&T, the information that would be provided by feature status messages can be provided by other means, such as a subpoena to the carrier. In any event, we reiterate our view that the plain language of the Act mandates compliance with the assistance capability requirements of Section 103(a), but does not require carriers to implement any specific quality control capabilities to assist law enforcement. Thus, we tentatively conclude that the feature status punch list item does not meet the assistance capability requirements of Section 103.

80. We note, however, that at least some of the information that would be provided by feature status messages—for example, a change to the phone number of the facilities under surveillance—must be provided to the LEA expeditiously if electronic surveillance is to be effective. We request comment on whether this information can be provided in such an expeditious manner by other means. We also request comment on any other aspects or interpretations of a feature status capability that might cause at least some portion of this feature to meet the assistance capability requirements of Section 103. To the extent commenters believe that such a capability is necessary to implement the requirements of Section 103, we seek a particularized description of such a capability and comment on the 107(b) factors that the Commission must evaluate under CALEA. In what manner could such a capability be provided? Are there cost effective methods of providing feature status messages to a LEA? Can this requirement be accomplished in a manner that minimizes costs to residential ratepayers? Could provision of feature status messages to a LEA compromise the privacy and security of communications not authorized to be intercepted? Would the provision of such information constrain a carrier's ability to develop and deploy new technologies and services? And finally, what period of time would be required to develop and deploy such a capability?

Dialed Digit Extraction

81. This capability would require the telecommunications carrier to provide to the LEA on the call data channel any digits dialed by the subject after connecting to another carrier's service (also known as ''post-cut-through digits''). One example of such dialing and signaling would occur when the subject dials an 800 number to access a long distance carrier. After connecting to the long distance carrier through the 800 number, the subject then dials the telephone number that is the ultimate destination of the call.

82. We tentatively conclude that post-cut-through digits representing all telephone numbers needed to route a call, for example, from the subscriber's telephone through its LEC, then through IXC and other networks, and ultimately to the intended party are call-identifying information. We seek additional comment on whether such call-identifying information is reasonably available to the carrier originating the call. Currently, the second set of numbers a subject dials (the final destination of the call) apparently is transmitted over the CCC (the content portion of the connection) and not over the CDC (a separate signaling channel). This method of transmission raises two primary questions: (1) Since the post-cut-through digits are provided on the content portion of the connection,

should those numbers be considered content for purposes of CALEA?; and (2) Technically, how can such post-cut-through digits be extracted from the content channel and delivered to a LEA by a carrier? We seek comment on whether originating, intermediate, or terminating carriers can deliver such call-identifying information by cost-effective means. We are also aware of the concerns expressed by industry and privacy advocates that this dialed digit extraction feature could prove to be inordinately expensive to design, build, and incorporate into telephone network infrastructures. The record established thus far does not reflect any specific cost estimates but does raise the possibility that there may be newly available, less expensive solutions for this feature, although it is not clear if such solutions have the capability of separating post-cut-through call-identifying digits from those dialed to perform other functions. We seek comment on this proposal and, as required by section 107(b), on the other factors that we must consider in establishing a technical requirement. Can it be accomplished in a manner that minimizes costs to residential ratepayers? Additionally, we solicit comment on whether our proposal would positively or negatively affect the provision of new technologies and services to the public. Commenters are asked to provide detailed information regarding the amount of time and conditions that they believe will be necessary to successfully develop and deploy this technical requirement in telecommunications systems. Finally, we request detailed comment on how the privacy and security of communications that are not authorized to be intercepted can be protected. In particular, we request comment on whether and how such call-identifying information can be distinguished from digits dialed to perform other functions (e.g., to input a credit card number or to access information services after the call reaches its final destination in the PSTN).

Disposition of J–STD–025

83. We believe that the technical requirements proposed herein can be most efficiently implemented by permitting Subcommittee TR45.2 of the TIA to develop the necessary specifications in accord with our determinations. We note that CALEA contemplates that standards will be developed either ''by an industry association or standard-setting organization, or by the Commission.'' We note that LEAs, carriers, and manufacturers are voting members of the Subcommittee. While we could undertake this task, we believe that the Subcommittee already has the experience and resources in place to resolve these issues more quickly. Both law enforcement agencies and telecommunications manufacturers and carriers participate on the Subcommittee. The Subcommittee worked diligently over a period of several years to craft J–STD–025 and both LEAs and privacy groups agree with—or, at least do not raise any specific objections to—the vast majority of the features of that standard. A Commission-based standard-setting activity would necessarily have to rely heavily on the Subcommittee to modify J–STD–025 in any event, and thus would very likely take longer than industry-based processes to develop a final safe harbor standard. Our decision to rely on industry to develop the final technical specifications reflects our commitment to achieve a CALEA solution as expeditiously as possible.

84. Accordingly, we expect TIA to undertake the task of modifying J–STD–025 to be consistent with the technical requirements we ultimately adopt in this proceeding. Further, we expect the TIA to complete any such modifications to J–STD–025 within 180 days of release of the Report and Order in this proceeding. While this is an ambitious schedule, we believe it is achievable because the TIA has been examining CALEA technical standards issues for several years, and the modifications to J–STD–025 are likely to be relatively limited. In fact, all of the technical requirements that we have identified for modification were previously considered in detail by TIA Subcommittee TR45.2. We note that any telecommunications carrier conforming with the revised standard will be considered to have complied with CALEA's safe harbor provisions under section 107(a)(2). We consider 180 days a sufficient time period for industry to adopt revised technical standards compliant with CALEA and we believe that industry will be able to comply with the core requirements of J–STD–025 (excluding the packet-mode feature) by June 30, 2000. Therefore, we do not plan to extend the CALEA compliance deadline for the core J–STD–025 requirements beyond that date, except in the case of individual extenuating circumstances, to which the criteria of section 107(c) of CALEA would apply. Based on comments received in response to this Further NPRM, we will set a separate deadline for compliance with the additional technical requirements that we determine CALEA mandates. We seek comment on these tentative findings and conclusions.

Other Technologies and Systems

85. We seek comment on what role, if any, the Commission can or should play in assisting those telecommunications carriers not covered by J–STD–025 to set standards for, or to achieve compliance with, CALEA's requirements. Insofar as such carriers argue that CALEA contemplates multiple or different standards for services such as paging, digital dispatch and wireless data, we seek comment regarding how our determinations regarding J–STD–025, the FBI's punch list items, and location and packet-mode information will affect the requirements and standards already adopted or currently being established by these other industry segments. For example, can the Commission's determinations in this rulemaking proceeding be adapted to these other technologies? Further, we request comment on if and how we should consider the impact of the technical requirements we ultimately adopt in this proceeding on these other technologies and services.

Other Matters

86. As previously discussed, in March 1998 CDT submitted a petition for rulemaking to the Commission. In its petition, CDT requests relief from the Commission under section 109 (as well as section 107) of CALEA. CDT argues that ''compliance with CALEA is not reasonably achievable with respect to equipment, facilities, and services deployed after January 1, 1995, for the simple reason that carriers have had to make changes to their systems not knowing what was required to comply with CALEA.'' Lack of a CALEA standard, or a dispute about the CALEA standard, however, is not grounds for a rulemaking under section 109. Rather, a section 109 determination by the Commission presupposes that the final requirements that must be met by telecommunications carriers under Section 103 are in place. Those requirements, however, are still in dispute. Accordingly, we are herein dismissing without prejudice that portion of CDT's petition that relies on section 109.

87. Also, as previously discussed, in July 1997 CTIA filed a petition for rulemaking requesting that the Commission establish a standard to implement the mandates of Section 103, and in March 1998 DoJ/FBI submitted a motion to dismiss that petition on the grounds that the December 1997 adoption of J–STD–025 rendered CTIA's petition moot. CTIA agrees with DoJ/FBI

that its petition is moot, both because the adoption of the industry interim standard supersedes its request for the Commission to establish a CALEA standard by rule and because its request in its petition to extend the CALEA compliance deadline has been addressed in this proceeding. We agree. Accordingly, we herein dismiss as moot CTIA's July 16, 1997 Petition for Rulemaking.

Initial Regulatory Flexibility Analysis

88. As required by the Regulatory Flexibility Act (RFA), the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected significant economic impact on small entities by the policies and rules suggested in this Communications Assistance for Law Enforcement Act, Further Notice of Proposed Rulemaking (CALEA Further NPRM). Written public comments are requested on the IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the CALEA Further NPRM provided above on the first page, in the heading. The Secretary shall send a copy of the CALEA Further NPRM, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA) in accordance with paragraph 603(a).

Need for and Objectives of the Proposed Rules

89. This *Further Notice of Proposed Rulemaking* responds to the legislative mandate contained in the Communications Assistance for Law Enforcement Act, Pub. L. No. 103–414, 108 Stat. 4279 (1994) (codified as amended in sections of 18 U.S.C. and 47 U.S.C.).

Legal Basis

90. The proposed action is authorized under the Communications Assistance for Law Enforcement Act, Public Law 103–414, 108 Stat. 4279 (1994) (codified as amended in scattered sections of 18 U.S.C. and 47 U.S.C.). The proposed action is also authorized by sections 1, 4, 201, 202, 204, 205, 218, 229, 332, 403 and 503 of the Communications Act of 1934, as amended, 47 U.S.C. sections 151, 154, 201–205, 218, 229, 301, 303, 312, 332, 403, 501 and 503.

Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply

91. The proposals set forth in this proceeding may have a significant economic impact on a substantial number of small telephone companies identified by the SBA. We seek comment on the obligations of a telecommunications carrier for the purpose of complying with CALEA.

92. The RFA generally defines ''small entity'' as having the same meaning as the term ''small business,'' ''small organization,'' and ''small governmental jurisdiction'' and the same meaning as the term ''small business concern'' under the Small Business Act, unless the Commission has developed one or more definitions that are appropriate to its activities. Under the Small Business Act, a ''small business concern'' is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) meets any additional criteria established by the Small Business Administration (SBA). The SBA has defined a small business for Standard Industrial Classification (SIC) categories 4812 (Radiotelephone Communications) and 4813 (Telephone Communications, Except Radiotelephone) to be small entities when they have fewer than 1,500 employees. We first discuss generally the total number of small telephone companies falling within both of those SIC categories. Then, we discuss the number of small businesses within the two subcategories, and attempt to refine further those estimates to correspond with the categories of telephone companies that are commonly used under our rules.

93. *Telephone Companies (SIC 483).* Consistent with our prior practice, we shall continue to exclude small incumbent LECs from the definition of a small entity for the purpose of this IRFA. Nevertheless, as mentioned above, we include small incumbent LECs in our IRFA. Accordingly, our use of the terms ''small entities'' and ''small businesses'' does not encompass ''small incumbent LECs.'' We use the term ''small incumbent LECs'' to refer to any incumbent LECs that arguably might be defined by SBA as ''small business concerns.''

94. *Total Number of Telephone Companies Affected.* Many of the decisions and rules adopted herein may have a significant effect on a substantial number of the small telephone companies identified by SBA. The United States Bureau of the Census (the Census Bureau) reports that, at the end of 1992, there were 3,497 firms engaged in providing telephone services, as defined therein, for at least one year. This number contains a variety of different categories of carriers, including local exchange carriers, interexchange carriers, competitive access providers, cellular carriers, mobile service carriers, operator service providers, pay telephone operators, PCS providers, covered SMR providers, and resellers. Some of these providers—for example, all SMR providers—are not covered by this Further NPRM, and it seems certain that some of the 3,497 telephone service firms may not qualify as small entities or small incumbent LECs because they are not ''independently owned and operated.'' For example, a PCS provider that is affiliated with an interexchange carrier having more than 1,500 employees would not meet the definition of a small business. It seems reasonable to conclude, therefore, that fewer than 3,497 telephone service firms are small entity telephone service firms or small incumbent LECs that may be affected by this Further NPRM.

95. *Wireline Carriers and Service Providers.* SBA has developed a definition of small entities for telephone communications companies other than radiotelephone (wireless) companies. The Census Bureau reports that there were 2,321 such telephone companies in operation for at least one year at the end of 1992. According to SBA's definition, a small business telephone company other than a radiotelephone company is one employing fewer than 1,500 persons. All but 26 of the 2,321 non-radiotelephone companies listed by the Census Bureau were reported to have fewer than 1,000 employees. Thus, even if all 26 of those companies had more than 1,500 employees, there would still be 2,295 non-radiotelephone companies that might qualify as small entities or small incumbent LECs. Although it seems certain that some of these carriers are not independently owned and operated, we are unable at this time to estimate with greater precision the number of wireline carriers and service providers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 2,295 small entity telephone communications companies other than radiotelephone companies that may be affected by the decisions and rules recommended for adoption in this NPRM.

96. *Local Exchange Carriers.* Neither the Commission nor SBA has developed a definition of small providers of local exchange services (LECs). The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of LECs nationwide of which we are aware appears to be the data that we collect annually in connection with the Telecommunications Relay Service (TARS). According to our most recent data, 1,347 companies reported that

they were engaged in the provision of local exchange services. Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of LECs that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 1,347 small incumbent LECs that may be affected by the decisions and rules recommended for adoption in this NPRM.

97. *Interexchange Carriers.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of interexchange services (IXCs). The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of IXCs nationwide of which we are aware appears to be the data that we collect annually in connection with TARS. According to our most recent data, 130 companies reported that they were engaged in the provision of interexchange services. Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of IXCs that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 130 small entity IXCs that may be affected by the decisions and rules recommended for adoption in this NPRM.

98. *Competitive Access Providers.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of competitive access services (CAPs). The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of CAPs nationwide of which we are aware appears to be the data that we collect annually in connection with the TARS. According to our most recent data, 57 companies reported that they were engaged in the provision of competitive access services. Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of CAPs that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 57 small entity CAPs that may be affected by the decisions and rules recommended for adoption in this NPRM.

99. *Operator Service Providers.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to providers of operator services. The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of operator service providers nationwide of which we are aware appears to be the data that we collect annually in connection with the TARS. According to our most recent data, 25 companies reported that they were engaged in the provision of operator services. Although it seems certain that some of these companies are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of operator service providers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 25 small entity operator service providers that may be affected by the decisions and rules recommended for adoption in this NPRM.

100. *Wireless (Radiotelephone) Carriers.* SBA has developed a definition of small entities for radiotelephone (wireless) companies. The Census Bureau reports that there were 1,176 such companies in operation for at least one year at the end of 1992. According to SBA's definition, a small business radiotelephone company is one employing fewer than 1,500 persons. The Census Bureau also reported that 1,164 of those radiotelephone companies had fewer than 1,000 employees. Thus, even if all of the remaining 12 companies had more than 1,500 employees, there would still be 1,164 radiotelephone companies that might qualify as small entities if they are independently owned are operated. Although it seems certain that some of these carriers are not independently owned and operated, we are unable at this time to estimate with greater precision the number of radiotelephone carriers and service providers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 1,164 small entity radiotelephone companies that may be affected by the decisions and rules recommended for adoption in this NPRM.

101. *Cellular and Mobile Service Carriers:* In an effort to further refine our calculation of the number of radiotelephone companies affected by the rules adopted herein, we consider the categories of radiotelephone carriers, Cellular Service Carriers and Mobile Service Carriers. Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to Cellular Service Carriers and to Mobile Service Carriers. The closest applicable definition under SBA rules for both services is for telephone companies other than radiotelephone (wireless) companies. The most reliable source of information regarding the number of Cellular Service Carriers and Mobile Service Carriers nationwide of which we are aware appears to be the data that we collect annually in connection with the TARS. According to our most recent data, 792 companies reported that they are engaged in the provision of cellular services and 117 companies reported that they are engaged in the provision of mobile services. Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of Cellular Service Carriers and Mobile Service Carriers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 792 small entity Cellular Service Carriers and fewer than 138 small entity Mobile Service Carriers that might be affected by the actions and rules adopted in this NPRM.

102. *Broadband PCS Licensees.* The broadband PCS spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission defined ''small entity'' for Blocks C and F as an entity that has average gross revenues of less than $40 million in the three previous calendar years. For Block F, an additional classification for ''very small business'' was added, and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years. These regulations defining ''small entity'' in the context of broadband PCS auctions have been approved by SBA. No small businesses within the SBA-approved definition bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auctions. A total of 93 small and very small business bidders won approximately 40% of the 1,479 licenses for Blocks D, E, and F. However,

licenses for Blocks C through F have not been awarded fully, therefore there are few, if any, small businesses currently providing PCS services. Based on this information, we conclude that the number of small broadband PCS licenses will include the 90 winning C Block bidders and the 93 qualifying bidders in the D, E, and F blocks, for a total of 183 small PCS providers as defined by the SBA and the Commissioner's auction rules.

103. *Resellers.* Neither the Commission nor SBA has developed a definition of small entities specifically applicable to resellers. The closest applicable definition under SBA rules is for all telephone communications companies. The most reliable source of information regarding the number of resellers nationwide of which we are aware appears to be the data that we collect annually in connection with the TARS. According to our most recent data, 260 companies reported that they were engaged in the resale of telephone services. Although it seems certain that some of these carriers are not independently owned and operated, or have more than 1,500 employees, we are unable at this time to estimate with greater precision the number of resellers that would qualify as small business concerns under SBA's definition. Consequently, we estimate that there are fewer than 260 small entity resellers that may be affected by the decisions and rules recommended for adoption in this NPRM.

Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

104. The rules proposed in the NPRM require telecommunications carriers to establish policies and procedures governing the conduct of officers and employees who are engaged in surveillance activity. Those proposed rules require telecommunications carriers to maintain records of all interceptions of communications and call identification information. Further, those proposed rules require telecommunications carriers classified as Class A companies pursuant to 47 U.S.C. § 32.11 to file individually with the Commission a statement of its processes and procedures used to comply with the systems security rules promulgated by the Commission. Telecommunications carriers classified as Class B companies pursuant to 47 U.S.C. § 32.11 may elect to either file a statement describing their security processes and procedures or to certify that they observe procedures consistent with the security rules promulgated by the Commission.

105. We tentatively conclude that a substantial number of telecommunications carriers, who have been subjected to demands from law enforcement personnel to provide lawful interceptions and call-identifying information for a period time preceding CALEA, already have in place practices for proper employee conduct and recordkeeping. We seek comment on this tentative conclusion. As a practical matter, telecommunications carriers need these practices to protect themselves from suit by persons who claim they were the victims of illegal surveillance. By providing general guidance regarding the conduct of carrier personnel and the content of records in this Further NPRM, the Commission permits telecommunications carriers to use their existing practices to the maximum extent possible. Thus, we tentatively conclude that the additional cost to most telecommunications carriers for conforming to the Commission regulations contained in this Further NPRM, should be minimal. We seek comment on this tentative conclusion.

Significant Alternatives to Proposed Rules Which Minimize Significant Economic Impact on Small Entities and Accomplish Stated Objectives

106. As we noted in Part I of this IRFA, *supra*, the need for the proposed regulations is mandated by Federal legislation. The legislation is specific on the content of employee conduct and recordkeeping regulations for telecommunications carriers, which removes from Commission discretion the consideration of alternative employee conduct and recordkeeping regulations for smaller telecommunications carriers. The legislation, however, provides for Commission discretion to formulate compliance reporting requirements for telecommunications carriers that favor smaller telecommunications carriers, and in the NPRM the Commission exercised that discretion by proposing rules that allow smaller carriers the option to file a certification of compliance with the Commission instead of a statement of the policies, processes and procedures they use to comply with the CALEA regulations.

Federal Rules That May Overlap, Duplicate, or Conflict With the Proposed Rules

107. As we noted in Part I of this IRFA, *supra*, the need for the proposed regulations is mandated by Federal legislation. The purpose of CALEA was to empower and require the Federal Communications Commission and the Department of Justice to craft regulations pursuant to specific statutory instructions. Because there were no other Federal Rules in existence before CALEA was enacted, there are no duplicate Federal Rules. In addition, there are no overlapping, duplicating, or conflicting Federal Rules to the Federal Rules proposed in this proceeding.

Ordering Clauses

108. Accordingly, pursuant to sections 1, 4, 229, 301, 303, and 332 of the Communications Act of 1934, as amended, and 107(b) of the Communications Assistance for Law Enforcement Act, 47 U.S.C. sections 151, 154, 229, 301, 303, 332, and 1006(b), *it is ordered* that this Further Notice of Proposed Rulemaking is hereby adopted. *It is further ordered* that the Petition for Rulemaking filed by the Cellular Telecommunications Industry Association on July 16, 1997 *is dismissed* as moot. *It is further ordered* that the Petition for Rulemaking filed by the Center for Democracy and Technology *is dismissed* without prejudice to the extent the petition seeks relief under section 109 of CALEA, 47 U.S.C. section 1008. *It is further ordered* that the Commission *shall send* a copy of this Further Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Part 64

Communications common carriers.

Federal Communications Commission.

Magalie Roman Salas,

Secretary.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Parts 1842 and 1852

Application of Earned Value Management (EVM)

AGENCY: National Aeronautics and Space Administration (NASA).

ACTION: Proposed rule.

SUMMARY: This proposed rule would effect a change to the NASA FAR Supplement relative to the application of Earned Value Management (EVM) at NASA. The proposed change would establish NASA-wide clauses and provisions compatible with those used by DoD. Specifically, the change would clarify the role of the Defense Contract Management Command (DCMC) with