

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of:

**Communications Assistance for Law
Enforcement Act**

CC Docket No. 97-213

**Petition for Rulemaking under Sections 107
and 109 of the Communications Assistance
for Law Enforcement Act, filed by Center for
Democracy and Technology**

**Joint Petition for Expedited Rulemaking, filed
by Federal Bureau of Investigation and U.S.
Department of Justice**

**Petition for Rulemaking, filed by
Telecommunications Industry Association**

To: The Commission

**REPLY COMMENTS OF
THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION**

The Telecommunications Industry Association ("TIA") submits these reply comments pursuant to Section 107(b) of the Communications Assistance for Law Enforcement Act ("CALEA"),¹ Sections 1.415 and 1.419 of the Commission's Rules,² and

¹ 47 U.S.C. § 1006(b). CALEA was adopted as Pub. L. No. 103-414, 108 Stat. 4279 (1994).

² 47 C.F.R. §§ 1.415, 1.419.

the Commission's April 20, 1998 Public Notice,³ to reply to the comments filed in this proceeding on May 20, 1998 and to further respond to the Joint Petition for Expedited Rulemaking filed by the Department of Justice and the Federal Bureau of Investigation ("DOJ/FBI Petition") and the Petition for Rulemaking under Sections 107 and 109 of the Communications Assistance for Law Enforcement Act, filed by the Center for Democracy and Technology ("CDT Petition").

In addition, these reply comments attach technical affidavits of employees of TIA member companies Lucent Technologies, Motorola, Inc. and Northern Telecom Limited. The affidavits support the technical assertions regarding telecommunications network design that are contained in the Comments of the Telecommunications Industry Association ("TIA Comments") filed on May 20, 1998.⁴

I. The FCC Should Not Prescribe Specific Changes to J-STD-025 by Rule

The parties that are challenging J-STD-025 – DOJ, FBI and CDT – argue that the Commission should commence a rulemaking proceeding to prescribe changes to J-STD-025.⁵ While the Commission does under certain circumstances have authority to

³ Public Notice, DA 98-762 (Apr. 20, 1998).

⁴ Due to time constraints, these affidavits had not been completed at the time the TIA Comments were filed. The affidavits include page references to the statements in the TIA Comments that they support.

⁵ See Comments [of DOJ and FBI] Regarding Standards for Assistance Capability Requirements, at 24-28 (May 20, 1998) ("DOJ/FBI Comments"); Comments of the Center for Democracy and Technology, at 8 (May 20, 1998) ("CDT Comments"); see also Comments of the Electronic Privacy Information Center, the Electronic Frontier Foundation
(Continued ...)

establish CALEA standards by rule, there is no basis for it to do so at this time. **First**, if the Commission concludes that J-STD-025 is not “deficient,” there is no basis at all for changes to the standard. **Second**, even if the Commission concludes that J-STD-025 is “deficient” in certain respects, it has authority to permit the telecommunications industry, in the first instance, to propose appropriate changes to the standard.

A. The Commission Does Not Need to Conduct a Rulemaking if it Concludes That J-STD-025 Is Not “Deficient”

Section 107(b) of CALEA⁶ permits the FCC to modify a telecommunications industry “safe harbor” CALEA compliance standard only where the standard is “deficient” for failure to satisfy the assistance capability requirements of Section 103(a) of CALEA,⁷ as explained at length in the TIA Comments.⁸ TIA respectfully submits that the record in this proceeding clearly establishes that J-STD-025 is not “deficient.” Therefore, no Commission rulemaking is necessary.

The TIA Comments contain a detailed demonstration that J-STD-025 is not “deficient” for failure to provide to capabilities requested by DOJ and FBI, or for the reasons advanced by CDT.⁹ The vast majority of comments also support the conclusion

and the American Civil Liberties Union, at 28-29 (May 20, 1998) (“EPIC/EFF/ACLU Comments”).

⁶ 47 U.S.C. § 1006(b).

⁷ 47 U.S.C. § 1002(a).

⁸ See TIA Comments at 17-22.

⁹ See id. at 30-81.

that the existing provisions of J-STD-025 are consistent with CALEA.¹⁰ Indeed, the similarity among the arguments made in the comments strongly supports the points made by TIA. In particular, the fact that many telecommunications carriers have similar difficulties regarding delivery of certain types of call-identifying information requested by DOJ and FBI supports the conclusion that these capabilities are not “reasonably available” to carriers.

The few commenters who argue that J-STD-025 is “deficient” take opposite views of the standard, agreeing with TIA in part and disagreeing in part. On the one hand, DOJ, FBI and the New York City Police Department argue that industry must implement the FBI “punch list,”¹¹ but argue that the J-STD-025 provisions on location tracking and packet data are consistent with CALEA.¹² On the other hand, CDT, EPIC/EFF/ACLU and a group led by Americans for Tax Reform raise challenges regarding location tracking and

¹⁰ See Comments of AirTouch Communications, Inc. (May 20, 1998) (“AirTouch Comments”); Comments of (May 20, 1998); Ameritech’s Comments on the Petitions for Rulemaking to Establish Technical Requirements and Standards for CALEA (May 20, 1998); Comments of AT&T Corp. Regarding Scope of CALEA Capabilities (May 20, 1998) (“AT&T Comments”); Comments of BellSouth Corporation et al. (“May 20, 1998”); Comments of the Cellular Telecommunications Industry Association Regarding the Scope of CALEA Capability Requirements (May 20, 1998) (“CTIA Comments”); GTE’s Comments (May 20, 1998); Comments of Nextel Communications, Inc. (May 20, 1998) (“Nextel Comments”); Comments of the Personal Communications Industry Association (May 20, 1998) (“PCIA Comments”); Comments of PrimeCo Personal Communications, L.P. (May 20, 1998) (“PrimeCo Comments”); Comments of SBC Communications, Inc. (May 20, 1998) (“SBC Comments”); Comments of Sprint Spectrum L.P. d/b/a Sprint PCS (May 20, 1998); Comments of the United States Telephone Association (May 20, 1998) (“USTA Comments”); Comments of U S WEST, Inc. (May 20, 1998) (“U S WEST Comments”).

¹¹ See DOJ/FBI Comments at 5-16; Comments of New York City Police Department (May 20, 1998).

¹² See DOJ/FBI Comments at 16-22.

packet data,¹³ but otherwise oppose the DOJ/FBI Petition and agree that J-STD-025 is not “deficient.”¹⁴

The support of most commenters for J-STD-025, together with the fact that those challenging the standard attack it from opposite sides, illustrates that the standard represents a reasonable interpretation of the requirements of CALEA. Moreover, for the specific substantive reasons set out in the TIA Comments, these reply comments and the attached affidavits, it is plain that J-STD-025 is not “deficient” for failure to implement the assistance capability requirements of Section 103(a) of CALEA. Accordingly, the Commission need not engage in any rulemaking regarding J-STD-025, and should simply deny the DOJ/FBI Petition and the CDT Petition.

B. If the Commission Concludes that J-STD-025 is “Deficient,” It Should Remand to TIA the Task of Proposing Changes to the Standard

The Commission should not prescribe specific changes to J-STD-025 by rule, even if it concludes that J-STD-025 is “deficient” in certain respects. Instead, it should identify any such deficiencies, and remand to TIA the task of proposing changes to

¹³ See CDT Comments at 29-38; EPIC/EFF/ACLU Comments at 19-21, 24-25; Comments [of Americans for Tax Reform, Center for Technology Policy, and Citizens for a Sound Economy] in Opposition to the FBI’s and DOJ’s Joint Petition for Expedited Rulemaking, at 25-27 (May 20, 1998).

¹⁴ See CDT Comments at 18-29, 38-46; EPIC/EFF/ACLU Comments at 16-19, 22-23, 25-27.

J-STD-025.¹⁵ Numerous commenters agree that remand is the appropriate course of action for the Commission.¹⁶

Remand to TIA is also consistent with CALEA and with Commission precedent. While CALEA does permit the Commission to modify a deficient industry standard by rule, it does not require the Commission to do so.¹⁷ The policies inherent in CALEA strongly indicate that the Commission should defer, in the first instance, to the telecommunications industry, which is uniquely situated to establish CALEA compliance standards that both (1) are consistent with the design of existing and planned telecommunications networks; and (2) implement the requirements of CALEA in a cost-effective manner that minimizes impacts on ratepayers.¹⁸

Furthermore, the Commission's recent Video Programming Ratings Order¹⁹ supports a decision to permit TIA to formulate any needed changes to J-STD-025. While DOJ and FBI are correct that the Video Programming Ratings Order did not involve an

¹⁵ See TIA Comments at 29-30.

¹⁶ See AirTouch Comments at 27-28; AT&T Comments at 15-17; CTIA Comments at 18-22; Nextel Comments at 13; PCIA Comments at 6-7; PrimeCo Comments at 22; SBC Comments at 16-17; USTA Comments, Attachment at 7-9; U S WEST Comments at 31-33.

¹⁷ See 47 U.S.C. § 1006(b).

¹⁸ See 47 U.S.C. § 1006(b)(1) (standards must "meet the assistance capability requirements of section 103 by cost-effective methods"), § 1006(b)(3) (standards must "minimize the cost of compliance on residential ratepayers")

¹⁹ Implementation of Section 551 of the Telecommunications Act of 1996; Video Programming Ratings, CS Dkt. No. 97-55, FCC 98-35 (rel. Mar. 13, 1998) ("Video Programming Ratings Order").

actual “remand” to industry,²⁰ the Commission did permit industry to revise proposed TV Parental Guidelines in response to “expressed concern about some aspects of the rating system.”²¹ Because the authority of “distributors of video programming” to establish ratings standards under Section 551(e)(1) of the Telecommunications Act of 1996²² is comparable to the authority of telecommunications industry to establish standards under Section 107 of CALEA, industry should similarly have the first opportunity to draft any needed modifications to J-STD-025.

In any event, the Commission should definitively reject the suggestion of DOJ and FBI that the Proposed Rule attached to the DOJ/FBI Petition should form the basis for a Commission Notice of Proposed Rulemaking (“NPRM”) on CALEA standards.²³ The DOJ/FBI Proposed Rule is inconsistent with CALEA for the numerous reasons set out in the comments in this proceeding, and is entirely incompatible with the capabilities of existing and planned networks. The Proposed Rule would also impose mandatory capability requirements, even though DOJ and FBI explicitly concede that compliance with the specific provisions of a “safe harbor” standard like J-STD-025 is not mandatory.²⁴ Furthermore, primary reliance by the Commission on the Proposed Rule would also be directly inconsistent with the leading role of the telecommunications industry in

²⁰ See DOJ/FBI Comments at 25.

²¹ Video Programming Ratings Order ¶ 5.

²² See Telecommunications Act of 1996, § 551(e)(1), Pub. L. No. 104-104, 110 Stat. 56 (1996).

²³ See DOJ/FBI Comments at 27-28.

²⁴ See id. at 14-16.

establishment of CALEA compliance standards (and the limited, consultative role of law enforcement).²⁵

II. The DOJ/FBI Interpretation of “Reasonably Available” Is Incorrect

The DOJ/FBI Petition entirely ignored the critical limitation of Section 103(a)(2) of CALEA that call-identifying information need only be provided to law enforcement if it is “reasonably available” to a telecommunications carrier.²⁶ The DOJ/FBI Comments do little better, interpreting the term “reasonably available” in a manner that is plainly incorrect and that would render this important limitation effectively meaningless.

DOJ and FBI first state that “[a]lthough call-identifying information often will be accessed at a switch, the routing of calls may be controlled by network elements other than a switch, and call-identifying information may be ‘reasonably available’ elsewhere in the network.”²⁷ By this argument, DOJ and FBI apparently mean to suggest that “reasonably available” means available anywhere in the network. Such an interpretation is inconsistent with the text and legislative history of CALEA and with common sense.

First, certain call-identifying information may reside in a portion of the network not accessible to a carrier, such as a private branch exchange (“PBX”) or the network of a carrier with which the carrier subject to a wiretap order interconnects. It is

²⁵ Compare 47 U.S.C. § 1006(a)(2) (CALEA “safe harbor” standards to be established by “industry association or standard-setting organization”) with 47 U.S.C. § 1006(a)(1) (law enforcement agencies “shall consult with appropriate associations and standard-setting organizations of the telecommunications industry”).

²⁶ See TIA Comments at 39-40.

²⁷ DOJ/FBI Comments at 10 (citation omitted).

plain that any such call-identifying information is not “reasonably available.” Indeed, CALEA explicitly does not cover “equipment, facilities, or services that support the transport or switching of communications for private networks or for the sole purpose of interconnecting telecommunications carriers.”²⁸ Similarly, the legislative history states: “[I]f an advanced intelligent network directs the communication to a different carrier, the subscriber’s carrier only has the responsibility . . . to ensure that law enforcement can identify the new service provider handling the communication.”²⁹

Second, even where particular information is in a part of the network accessible to a carrier, there may be no reason for the carrier’s equipment to detect the information and make it available for delivery to law enforcement. For example, DOJ and FBI contend that post-cut-through dialed digits are call-identifying information. Even if this information were call-identifying information (which it is not), it would not be “reasonably available,” because carriers generally have no reason to detect dialed digits that are not used for call routing.³⁰

DOJ and FBI further contend that “the presence or absence of a ‘business purpose’ for collecting call-identifying information is simply irrelevant to whether the information is ‘reasonably available’ to the carrier.”³¹ In making this argument, DOJ and FBI have apparently forgotten that telecommunications carriers are in the business of

²⁸ 47 U.S.C. § 1002(b)(2)(B); see also H.R. Rep. No. 103-827, Pt. 1, at 24 (1994) (“CALEA House Report”) (“The bill does not cover private branch exchanges (PBX’s).”).

²⁹ CALEA House Report at 22.

³⁰ See TIA Comments at 44.

³¹ DOJ/FBI Comments at 10.

providing telecommunications services to the public, not in the business of acquiring wiretap information for law enforcement. It should go without saying that the reason that carriers build particular network capabilities is to serve the needs of their customers, and that these business purposes are directly relevant to whether particular information and capabilities are reasonably available to carriers.

In effect, DOJ and FBI self-servingly seek to interpret the term “reasonably available” in a manner that reads it out of CALEA. The Commission should definitively reject this incorrect interpretation of a critical provision of CALEA. Congress included this important limitation regarding call-identifying information to avoid unjustified burdens on telecommunications carriers (and on the rate-paying public), plainly stating that “if [call-identifying] information is not reasonably available, the carrier does not have to modify its system to make it available.”³² The Commission must in this proceeding give effect to the clear Congressional purpose for the term “reasonably available.”

III. CALEA Did Not Adopt an “Historic Availability” Approach to Intercept Capabilities

The text of Section 103(a) of CALEA makes clear that Congress did not intend CALEA to impose an “historic availability” approach to intercept capabilities, as explained in the TIA Comments.³³ CALEA requires only those intercept capabilities specified in Section 103(a). However, there is confusion in some of the comments on this

³² CALEA House Report at 22.

³³ See TIA Comments at 24-28.

point, associated primarily with a potentially ambiguous passage in the legislative history of CALEA:

The Committee intends the assistance requirements in [Section 103] to be both a floor and a ceiling. The FBI Director testified that the legislation was intended to preserve the status quo, that it was intended to provide law enforcement no more and no less access to information than it had in the past. The Committee urges against overbroad interpretation of the requirements.³⁴

While the references in this passage to the “status quo” and “no more and no less access to information” might be read to support the “historic availability” approach, there are several plain reasons why such a reading is not correct.

First, the “historic availability” approach is nowhere apparent in the text of CALEA. CALEA requires that telecommunications carriers provide the intercept capabilities that are specified by Section 103(a) of the statute.³⁵

Second, the references in the legislative history of CALEA to maintenance of the “status quo” do make sense as applied to the content of communications, which is the essential fruit of any wiretap. There has historically been an obligation to provide access to all communications to or from the facilities of an intercept subject, and continues to be such an obligation under CALEA.³⁶ By contrast, call-identifying information must be

³⁴ CALEA House Report at 22.

³⁵ See TIA Comments at 25-27.

³⁶ See 47 U.S.C. § 1002(a)(1). Interestingly, the only capability requested in the DOJ/FBI Petition that involves content of communications (i.e., provision of conference call communications not heard by the subscriber) involves a capability that DOJ and FBI admit was not historically available. See DOJ/FBI Petition at 30; TIA Comments at 31.

provided only if it is “reasonably available,” and information provided pursuant to this obligation may be either more or less extensive than it has been in the past.³⁷

Third, the legislative history quoted above reports testimony of FBI Director Freeh that was intended to assure Congress and the public that CALEA would not effect a broad expansion of intercept capabilities.³⁸ The fact that Congress intended this statement as a limitation is clear from the immediately following sentence of the legislative history: “The Committee urges against overbroad interpretation of the requirements.”³⁹ DOJ and FBI should not be permitted to pervert this defensive argument that “historic availability” approach is a “ceiling” for CALEA capabilities, into an offensive argument that “historic availability” is a “floor” for CALEA capabilities. In fact, “historic availability” is neither – Congress has made clear that it “intend[ed] the assistance requirements in section [103] to be both a floor and a ceiling.”⁴⁰ It is this Congressional purpose that should inform the Commission’s analysis.

IV. Telecommunications Carriers Do Not Have the Reasonably Available Capability to Separate Packet Headers From Packet Content

The CDT Comments state that the provision of J-STD-025 permitting the delivery of a complete packet stream to law enforcement is based “[o]n the untested

³⁷ See TIA Comments at 26-27.

³⁸ See also EPIC/EFF/ACLU Comments at 16-17 & n.52 (collecting similar testimony by FBI Director Freeh).

³⁹ CALEA House Report at 22.

⁴⁰ Id. (emphasis added).

assumption that it is not feasible to provide signaling information separate from content in a packet switching environment.”⁴¹ Furthermore, CDT suggests that available technology permits separation of signaling information from packet content in X.25, Transmission Control Protocol/Internet Protocol (“TCP/IP”), and Asynchronous Transfer Mode (“ATM”) communications.⁴² These contentions are not accurate.

It is not an “untested assumption” that it is not feasible for telecommunications carriers to separate signaling information from content in packet-switched communications. Existing telecommunications networks often do not have technology to provide this capability, as explained in the TIA Comments,⁴³ and there is no business purpose for developing such capability. Furthermore, CDT’s statements regarding the ease of separating header data in X.25, TCP/IP and ATM packet networks are not consistent with existing technology and the circumstances under which telecommunications carriers transmit these types of packet communications.

All packet data protocols, including X.25, TCP/IP and ATM, are based upon the layered protocol stack structure defined by the International Standards Organization and the International Telecommunications Union. In a layered protocol, each layer views the layer above it as content. The content for the current layer, plus its routing information (the header), becomes the content portion for the next lower layer. The chart on the following page illustrates this structure for the protocols discussed by CDT.

⁴¹ CDT Comments at 34.

⁴² See id. at 36-37.

⁴³ See TIA Comments at 78-80.

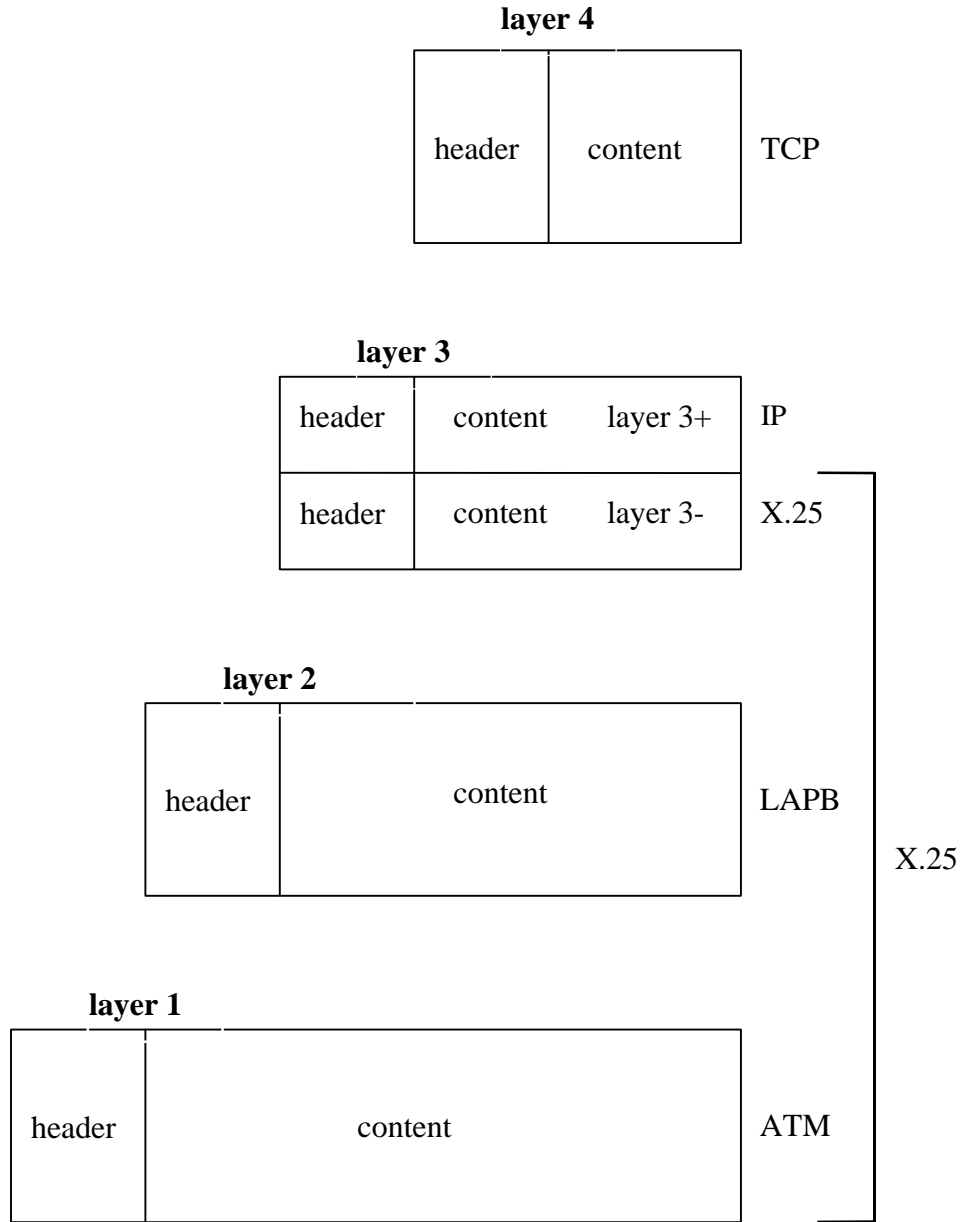
Moving down the protocol stack, multiple layers of information (including both content and routing information for each layer) are contained in the content portion of the lowest layer of the stack (which is known as the “physical layer”). In many cases, the physical layer may consist of a non-packet protocol, such as SONET (Synchronous Optical Network). A telecommunications carrier transporting packet data is often responsible for providing hardware and software support only for the physical layer, and does not have any reason to segregate higher-layer content from higher-layer routing information.

To extract packet data routing information, two basic steps must be completed. **First**, packets of interest must be identified and captured. Identification of particular data packets for the purpose of extracting call-identifying information presents technical challenges that most carriers are not currently capable of meeting. In a stream of bits riding across a circuit, the system must be able to recognize the correct sequence of bits which delineates the start of a data packet. This can require that the system “watch” all circuits all the time, looking for data packets. For example, with respect to the X.25 protocol, CDT is correct that communications “are connection-oriented [and] contain separate and distinct call set-up and teardown messages.”⁴⁴ However, this does not mean that separate provision of only the set-up and teardown messages is “reasonably

⁴⁴ CDT Comments at 37.

CHART 1
ILLUSTRATION OF LAYERED PACKET DATA PROTOCOLS

Note: The X.25 protocol defines three separate layers of protocols (1) a physical layer, which may be based on ATM or some other protocol; (2) a data link layer, which is based on the LAPB (Link Access Procedure in a Balanced System) protocol; and (3) a network layer, which is based on the X.25 packet protocol.



available,” as CDT suggests.⁴⁵ A carrier that provides only physical layer transport for an X.25 network would have no reason or ability to detect and segregate such messages.

Second, once packets have been captured, the relevant information must be extracted. The process of extracting header information from content in a layered protocol stack is very complex. To obtain routing information at a level which would provide relevant “call-identifying information” to law enforcement, a carrier would need to extract headers up to at least layer 3+. The system would first strip off routing information (headers) from layer 1 to get to the content. That content contains the header and content for layer 2, which must be separated. Then that content contains the header and content for layer 3, and so on. At each layer the system must not only recognize the beginning and end of each packet, but must recognize the protocol being used so that it can separate the header from the content.

There is no basis in CALEA or the record of this proceeding for the Commission to conclude that the obligation to deliver call-identifying information includes an obligation to conduct such analysis of the content of packet communications. Moreover, this analysis would require technology that is not now available in carrier networks, so that routing information contained in layered packet protocols is plainly not reasonably available to carriers.

The complexities of analysis of packet data routing also clearly demonstrate the fallacy of CDT’s argument that “[e]xisting tools for network performance monitoring generally allow network technicians to copy from a data stream a specific number of bytes

⁴⁵ See id.

of each packet that contain just the protocol headers of interest.”⁴⁶ While this statement may be correct in certain circumstances with respect to physical layer transmissions by a carrier, that does not mean that a carrier is able to analyze or segregate call-identifying information at higher levels of a packet data protocol without installation of a considerable amount of new hardware and development of new software that is not presently available to carriers.

V. Conclusion

For the reasons set out above, the Commission should conclude that J-STD-025 is not “deficient,” should deny the DOJ/FBI Petition and the CDT Petition, and should recognize J-STD-025 as a valid industry standard that is consistent with CALEA. In the alternative, if the Commission concludes that J-STD-025 is “deficient” in any respect, it should not adopt specific CALEA compliance standards, but should indicate the areas of deficiency and return to TIA the task of setting such standards. The Commission should also provide the reasonable time specified in CALEA for transition to any new FCC-mandated standard.

Respectfully submitted,

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⁴⁶ Id.

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