

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the matter of )  
 )  
Communications Assistance for ) CC Docket No. 97-213  
Law Enforcement Act )

**ORDER ON REMAND**

**Adopted: April 5, 2002**

**Released: April 11, 2002**

**By the Commission:** Commissioner Copps issuing a statement.

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**I. INTRODUCTION**

1. In this *Order on Remand*, we respond to a decision issued by the United States Court of Appeals for the District of Columbia Circuit (“Court”)<sup>1</sup> that vacated four Department of Justice (“DoJ”)/Federal Bureau of Investigation (“FBI”) “punch list” electronic surveillance capabilities mandated by the *Third Report and Order* (“*Third R&O*”) in this proceeding.<sup>2</sup> We find that all of these capabilities are authorized by the Communications Assistance for Law Enforcement Act of 1994 (“CALEA”)<sup>3</sup> and must

<sup>1</sup> See *United States Telecom. Association v. FCC*, 227 F.3d 450 (D.C. Cir. 2000) (hereinafter “*Remand Decision*”). The *Remand Decision* is available at <http://www.fcc.gov/ogc/documents/opinions/2000/99-1442.html>.

<sup>2</sup> Communications Assistance for Law Enforcement Act, *Third Report and Order*, CC Docket No. 97-213, 14 FCC Rcd 16794 (1999).

be provided by wireline, cellular, and broadband Personal Communications Services (“PCS”) telecommunications carriers by June 30, 2002. We also require that two additional “punch list” capabilities that were mandated by the *Third R&O* but not reviewed by the Court be provided by that same date.

## II. BACKGROUND

2. In the *Third R&O*, released August 31, 1999, the Commission specified technical requirements for wireline, cellular, and broadband PCS carriers to comply with the assistance capability requirements prescribed by CALEA. We took this action under Section 107(b) of CALEA<sup>4</sup> in response to petitions filed with us that claimed that industry standards for electronic surveillance failed to satisfy the four general assistance capability requirements in Section 103 of CALEA.<sup>5</sup> Section 103(a) requires that a telecommunications carrier shall ensure 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<sup>6</sup> that is reasonably available<sup>7</sup> 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

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<sup>3</sup> Communications Assistance for Law Enforcement Act, Pub. L. No. 103-414, 108 Stat. 4279 (1994) (codified as amended in scattered sections of 18 U.S.C. and 47 U.S.C. §§ 229, 1001-1010, 1021).

<sup>4</sup> 47 U.S.C. § 1006(b).

<sup>5</sup> See Section 103(a)(1)-(4), 47 U.S.C. § 1002(a)(1)-(4).

<sup>6</sup> Section 102(2) of CALEA defines “call-identifying information” as “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.” 47 U.S.C. § 1001(2).

<sup>7</sup> The Act does not define or interpret the term “reasonably available.”

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.

47 U.S.C. Section 1002(a).

3. Under Section 107(a)(2) of CALEA<sup>8</sup> (the “safe harbor” provision), carriers and manufacturers that comply with industry standards for electronic surveillance are deemed in compliance with their specific responsibilities under Sections 103 and 106 of CALEA.<sup>9</sup> “If industry associations or standard-setting organizations fail to issue technical requirements or standards or if a Government agency or any other person believes that such requirements or standards are deficient,”<sup>10</sup> the Commission is authorized, under Section 107(b) of CALEA, in response to a petition from any Government agency or person, to establish, by rule, technical requirements or standards.

4. In the *Third R&O*, the Commission required that wireline, cellular, and broadband PCS carriers implement all electronic surveillance capabilities of the industry interim standard, J-STD-025 (“J-Standard”)<sup>11</sup> – including two contested features of the interim standard, *i.e.*, a packet-mode communications capability<sup>12</sup> and a location information requirement<sup>13</sup> – and six of nine additional capabilities requested by DoJ/FBI, known as the “punch list” capabilities. With respect to the six required punch list capabilities, “dialed digit extraction” would provide to law enforcement agencies (“LEAs”) those digits dialed by a subject after the initial call setup is completed; “party hold/join/drop” would provide to LEAs information to identify the active parties to a conference call; “subject-initiated dialing and signaling” would provide to LEAs access to all dialing and signaling information available from the subject, such as the use of flash-hook and other feature keys; “in-band and out-of-band signaling” would provide to LEAs information about tones or other network signals and messages that a subject’s service sends to the

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<sup>8</sup> 47 U.S.C. § 1006(a)(2).

<sup>9</sup> 47 U.S.C. §§ 1002 & 1005.

<sup>10</sup> 47 U.S.C. § 1006(b).

<sup>11</sup> The interim standard was jointly published in December 1997 by the Telecommunications Industry Association (TIA) and Committee T1, sponsored by the Alliance for Telecommunications Industry Solutions (ATIS).

<sup>12</sup> Section 3 of J-STD-025 describes packet-mode as a “communication where individual packets or virtual circuits of a communication within a physical circuit are switched or routed by the accessing telecommunication system. Each packet may take a different route through the intervening network(s).”

<sup>13</sup> J-STD-025 includes a 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 law enforcement agency irrespective of whether a call content channel or a call data channel is employed. *See* J-STD-025 at § 6.4.6 and §§ 5.4.1-5.4.8, Tables 1, 5, 6, and 8.

subject or associate, such as notification that a line is ringing or busy; “subject-initiated conference calls” would provide to LEAs the content of conference calls supported by the subject’s service; and “timing information” would provide to LEAs information necessary to correlate call-identifying information with call content.<sup>14</sup>

5. The Commission required that all uncontested capabilities covered by the interim standard, as well as the contested location information requirement, be implemented by June 30, 2000,<sup>15</sup> and further required that the contested packet-mode communications capability and the punch list capabilities be implemented by September 30, 2001.<sup>16</sup> Subsequently, the Commission temporarily suspended the punch list compliance deadline.<sup>17</sup>

6. The United States Telecom Association (“USTA”), Electronic Privacy Information Center (“EPIC”), and others sought review by the Court of the *Third R&O*. In particular, the petitioners challenged the requirements that carriers make available to LEAs four of the six punch list capabilities: dialed digit extraction, party hold/join/drop messages, subject-initiated dialing and signaling information, and in-band and out-of-band signaling information. Petitioners argued that the Commission exceeded its statutory authority, impermissibly expanded the types of call-identifying information that carriers must make accessible to LEAs, and violated CALEA’s requirements that the Commission protect communication privacy and minimize the cost of CALEA implementation.

7. In its August 15, 2000 *Remand Decision*, the Court affirmed the Commission’s findings in the *Third R&O* in part and vacated and remanded in part for further proceedings. In particular, the Court vacated and remanded to the Commission the *Third R&O*’s decisions concerning the four punch list capabilities.<sup>18</sup> As a result of the *Remand Decision*, the Commission issued a *Public Notice* seeking to update the record in the CALEA technical capabilities proceeding.<sup>19</sup> Comments on the *Public Notice* were due by November 16, 2000 and reply comments were due by December 8, 2000.<sup>20</sup> Thirteen parties filed comments and nine parties filed reply comments. Commenting parties are listed in Appendix B.

### III. DISCUSSION

8. Under Section 107(a),<sup>21</sup> CALEA provides a mechanism by which the telecommunications industry is afforded the first opportunity to prescribe the technical standards necessary to meet the required surveillance capabilities. If industry associations or standard-setting organizations fail to issue

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<sup>14</sup> For an in-depth description of the punch list, including the three additional capabilities proposed by DoJ/FBI, which the Commission denied, see *Third R&O*, *supra* n.2, at ¶¶ 57-123. The publishers of the J-Standard subsequently issued a revised standard – J-STD-025-A – that incorporated the changes adopted by the Commission in its *Third R&O*. The revised J-Standard was issued in May 2000.

<sup>15</sup> *Id.* at ¶¶ 13, 46.

<sup>16</sup> *Id.* at ¶¶ 55, 129.

<sup>17</sup> See Communications Assistance for Law Enforcement Act, *Order*, CC Docket No. 97-213, 16 FCC Rcd 17397 (2001). The *Order* also granted a brief extension of the deadline for implementing a packet-mode communications capability until November 19, 2001. *Id.* at 17397 ¶ 1.

<sup>18</sup> 227 F.3d at 463. See ¶ 9, *infra*, for a detailed discussion of the *Remand Decision*.

<sup>19</sup> See “FCC Seeks Comments to Update the Record in the CALEA Technical Capabilities Proceeding,” *Public Notice*, 15 FCC Rcd 20142 (rel. Oct. 17, 2000).

<sup>20</sup> Reply comments were originally due by December 1, 2000, but that deadline was extended by one week. See *Order Extending Time for Reply Comments*, CC Docket No. 97-213, 15 FCC Rcd 23776 (rel. Nov. 29, 2000).

<sup>21</sup> 47 U.S.C. § 1006(a).

technical requirements or standards or “if a Government agency or any person believes that such requirements or standards are deficient,” entities may petition the Commission under Section 107(b)<sup>22</sup> to establish technical requirements or standards that—

- (1) meet the assistance capability requirements of Section 103 by cost-effective methods;
- (2) protect the privacy and security of communications not authorized to be intercepted;
- (3) minimize the cost of such compliance on residential ratepayers;
- (4) serve the policy of the United States to encourage the provision of new technologies and services to the public; and
- (5) 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.

47 U.S.C. Section 1006(a).

9. The Court concluded that the Commission’s decision to include the four punch list capabilities under review (*i.e.*, dialed digit extraction; party hold/join/drop messages; subject-initiated dialing and signaling information; and in-band and out-of-band signaling information) reflected a lack of reasoned decision making. The Court held that the Commission had not explained the basis for its conclusion that the four punch list capabilities are required by CALEA as “call-identifying information.” Citing the structure of CALEA, the Court observed that Section 107(b) limits the Commission’s ability to alter industry-developed technical standards to cases where the Commission finds those standards deficient. The Court held the Commission had not identified any deficiencies in the J-STD-025’s use of the terms “origin,” “destination,” “direction,” and “termination,” which the Court explained are the key statutory terms in defining “call identifying information,” and thus did not satisfy Section 107(b)’s requirements. The Court also concluded that the Commission’s decision suffered from two additional defects under Section 107(b). First, the Court said the Commission had not explained how the punch list capabilities would satisfy CALEA’s Section 103 requirements by “cost-effective methods” or by minimizing the impact on residential ratepayers. Second, the Court found that the Commission failed to explain how the post-cut-through dialed digits requirement would “protect the privacy and security of communications not authorized to be intercepted.”<sup>23</sup>

10. In the discussion that follows, we first address CALEA’s key statutory terms—“call identifying information” and the underlying terms “origin,” “destination,” “termination,” and “direction”—and the criteria by which we will evaluate the cost directives of Section 107(b). We then address each of the four punch list capabilities for compliance with Section 107(b), including cost and privacy considerations.

#### A. Call-Identifying Information

11. Background. Section 102(2) of CALEA defines “call-identifying information” as “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.”<sup>24</sup> The J-Standard further interprets the key terms in this definition as

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<sup>22</sup> 47 U.S.C. § 1006(b).

<sup>23</sup> 227 F.3d at 461-462.

<sup>24</sup> 47 U.S.C. § 1001(2).

follows:

**origin** is the number of the party initiating the call (*e.g.*, calling party); **termination** is the number of the party ultimately receiving a call (*e.g.*, answering party); **direction** is the number to which a call is re-directed or the number from which it came, either incoming or outgoing (*e.g.*, redirected-to party or redirected-from party); and **destination** is the number of the party to which a call is being made (*e.g.*, called party).<sup>25</sup>

12. Although the J-Standard adopts definitions that frame call-identifying information in terms of telephone numbers, the Commission, in the *Third R&O*, found capabilities required under CALEA, in some cases, require carriers to disclose information that is not a telephone number. For example, the Commission found that the provision of cell phone location information is necessary to meet CALEA's assistance capability requirements.<sup>26</sup> Because the Commission-adopted requirements encompass a broader interpretation of "call-identifying information" than that provided for by the industry definition, the Court examined the meaning of "call-identifying information" in the statute to determine whether the Commission properly adopted the challenged CALEA requirements.

13. The Court concluded that the statute does not unambiguously answer whether "call identifying information" is limited to telephone numbers.<sup>27</sup> It also found that the statute is ambiguous as to precisely what constitutes call-identifying information and thus, what the CALEA requirements are. As the Court stated:

Although we reject petitioners' argument that Section 102(2) is unambiguously limited to telephone numbers, we think it is equally clear that nothing points to an "unambiguously expressed intent of Congress" to require every one of the challenged assistance capabilities.<sup>28</sup>

14. Standard of Review. In cases where the intent of Congress is not clear, an agency may develop its interpretation of the statute within the guidelines set forth in *Chevron v. National Resources Defense Counsel, Inc.*, 467 U.S. 837 (1984), and subsequent cases. This so-called *Chevron* "step two" analysis affords an agency considerable deference in its statutory interpretation, but also requires the agency to "cogently explain" its interpretation in such a way that a reviewing court can conclude that the decision was the result of "reasoned decisionmaking."<sup>29</sup>

15. In applying *Chevron* "step two," the Court found that the Commission had failed to provide a sufficient explanation in the *Third R&O* for the Court to determine whether the Commission's interpretation of "call-identifying information" was in fact a reasonable conclusion.<sup>30</sup> Thus, the Court did not reach the question as to whether CALEA could be interpreted in the manner the Commission proposed, but instead found that the Commission had failed to adequately describe its decisionmaking process.

<sup>25</sup> J-STD-025 at 5 (emphasis in original).

<sup>26</sup> *Third R&O*, *supra* n.2, at ¶ 44.

<sup>27</sup> 227 F.3d at 458. Notably, if CALEA unambiguously limited call-identifying information to telephone numbers, the Commission would be bound to adopt standards that implement the express will of Congress – *i.e.*, capabilities that require the provision of no more than telephone numbers.

<sup>28</sup> 227 F.3d at 459.

<sup>29</sup> *Motor Vehicles Mfrs Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 48-52 (1983); *A.L. Pharma, Inc. v. Shalala*, 62 F.3d 1484, 1491 (D.C. Cir. 1995).

<sup>30</sup> 227 F.3d at 460.

16. Based on the *Remand Decision* and in consideration of comments that we received in response to the October 2000 *Public Notice* seeking to update the record in the CALEA technical capabilities proceeding,<sup>31</sup> we re-examine the term “call-identifying information” as used in CALEA. Keeping in mind the standards discussed above, we will set forth an interpretation of the term. We will then be able to determine whether the “punch list” items subject to the Court’s remand meet the statute’s assistance capability requirements.

17. Comments. The majority of commenting parties contend that the J-Standard definition reflects the intent of Congress, note that the standard is the product of the technical expertise of engineers from leading carriers and manufacturers, and urge us to adopt an interpretation of “call-identifying information” that is identical to that adopted in the J-Standard.

18. AT&T Corp. and AT&T Wireless Group (“AT&T”) state that the Commission should not modify J-STD-025’s definition of call-identifying information because the J-Standard defined the terms “origin, direction, destination, or termination” in terms of telephone numbers, and because CALEA’s legislative history shows that Congress understood that call-identifying information was limited to telephone numbers.<sup>32</sup> AT&T also states that because the statute established a mechanism to incorporate the combined expert technical opinions and efforts of the world’s leading system engineers from a wide variety of carriers and manufacturers into the standard-setting process, the Commission should be hesitant to reject the J-Standard. If we find the standard deficient, AT&T argues, we risk ignoring the industry “know-how” that Congress wanted to incorporate into the CALEA standards. Other commenters similarly urge us to show deference to the industry-established standard.<sup>33</sup>

19. The Cellular Telecommunications and Internet Association (“CTIA”)<sup>34</sup> states that we must begin our analysis by accepting the telecommunications industry’s definitions of origin, destination, direction and termination from J-STD-025.<sup>35</sup> CTIA asserts that the four vacated punch list items are not “call-identifying information” within the meaning of CALEA because (1) J-STD-025 accounted for the provision of “call-identifying information” and specifically defined the key concepts of “origin, direction, destination or termination” as they are understood within the industry; (2) these definitions have not been challenged as deficient; and (3) the four vacated capabilities are inconsistent with these definitions.<sup>36</sup>

20. Cingular Wireless LLC (“Cingular”) claims the legislative history of the Act – in particular, the House Report<sup>37</sup> – makes it clear that CALEA does not require, and the Commission cannot impose, any of the four vacated punch list capabilities because none constitute call-identifying information.<sup>38</sup> BellSouth Corporation (“BellSouth”), the Verizon Telephone Companies (“Verizon”), WorldCom, Inc. (“WorldCom”), and The Personal Communications Industry Association (“PCIA”) make similar assertions.<sup>39</sup> Verizon contends that the J-Standard comports with a reading of the Act in the context of

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<sup>31</sup> See *Public Notice*, *supra* n.19.

<sup>32</sup> AT&T Comments at 3-6.

<sup>33</sup> See, e.g., USTA Comments at 7; PCIA Comments at 6.

<sup>34</sup> At the time CTIA filed its comments, it was known as the “Cellular Telecommunications Industry Association.”

<sup>35</sup> CTIA Comments at 2.

<sup>36</sup> *Id.* at 11-12.

<sup>37</sup> See H.R. Rep. No. 103-827, 103<sup>rd</sup> Cong., 2d Sess (1994).

<sup>38</sup> Cingular Comments at 1.

<sup>39</sup> BellSouth Comments at 4-7; Verizon Comments at 2; WorldCom Comments at 3; and PCIA Comments at 3-6.

both plain English and standard industry-accepted terms.<sup>40</sup>

21. The Center for Democracy and Technology (“CDT”) states that we must read CALEA in conjunction with existing laws that authorize electronic surveillance. CDT cites the “pen register” and “trap and trace” provisions of the Electronic Communications Privacy Act of 1986 (“ECPA”)<sup>41</sup> as permitting LEAs to obtain, respectively, only the telephone numbers to which a subject makes calls and the telephone numbers from which a subject receives calls. CDT notes that the ECPA requires a LEA to obtain a court order before using a pen register or trap and trace device, but to be granted such an order the government needs only certify that “the information likely to be obtained is relevant to an ongoing criminal investigation.”<sup>42</sup> CDT also notes that J-STD-025 would guarantee LEAs access to both telephone numbers and call content. Therefore, CDT maintains, the core interests of LEAs are fully addressed by that industry standard.<sup>43</sup>

22. A number of commenters read the record in this proceeding to support retention of the J-Standard without alteration.<sup>44</sup> The Telecommunications Industry Association (“TIA”) states that “absent any express evidence that [the J-Standard’s] technical definitions are inconsistent with CALEA,” we should not alter them, and suggests that such evidence does not exist.<sup>45</sup> USTA further states that we must “defer to the experts” in interpreting the language of CALEA and urges us to refrain from altering the definitions adopted in the J-Standard.<sup>46</sup>

23. DoJ/FBI disagree with industry commenters and contend that the types of information covered by the four punch list capabilities constitute call-identifying information.<sup>47</sup> They state that CALEA does not limit call-identifying information to telephone numbers; rather, it defines that term to encompass, but extend beyond, telephone numbers.<sup>48</sup> As such, they claim, we must find the definitions used by the J-Standard deficient.<sup>49</sup>

24. First, DoJ/FBI point to the Court’s decision to support its contention that “call-identifying information” represents more than telephone numbers. If Congress had intended the definition other commenters support, DoJ/FBI claim, it would have said so. According to DoJ/FBI, the Court found that Congress had not made such a clear statement.<sup>50</sup> Moreover, DoJ/FBI note that the Court affirmed the Commission’s determination that wireless location information constitutes call-identifying information. The Court could not have done so, they claim, unless “call-identifying information” encompasses more than just telephone numbers.<sup>51</sup> DoJ/FBI also dispute whether the legislative history of the Act supports the J-Standard definition. They note the ambiguous nature of the legislative history generally, and claim that the House Report cited by other commenters draws its language from an earlier version of the

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<sup>40</sup> Verizon Comments at 2.

<sup>41</sup> See Electronic Communications Privacy Act of 1986, Pub. L. No. 99-508, 100 Stat. 1848 (1986).

<sup>42</sup> CDT Comments at 3-4 (*citing* 18 U.S.C. §§ 3122-23).

<sup>43</sup> *Id.* at 3.

<sup>44</sup> See, e.g., USTA Comments at 3-4; WorldCom Reply Comments at 2.

<sup>45</sup> TIA Comments at 3.

<sup>46</sup> USTA Comments at 7.

<sup>47</sup> DoJ/FBI Comments at 8-29.

<sup>48</sup> DoJ/FBI Reply Comments at 2-4.

<sup>49</sup> DoJ/FBI Comments at 7.

<sup>50</sup> DoJ/FBI Reply Comments at 3.

<sup>51</sup> *Id.*



legislation that incorporated different terms than the version that was enacted.<sup>52</sup> Even if we were to give full weight to the House Report, DoJ/FBI claim, a plain reading of the text still does not support the J-Standard definition. DoJ/FBI note that the legislative history of CALEA states that call-identifying information “typically” is information that identifies the numbers dialed or otherwise transmitted for the purpose of routing calls through a carrier’s network, and contends that the word “typically” makes clear that the discussion of call-identifying information was not intended to be exhaustive or exclusive.<sup>53</sup> DoJ/FBI also contend that the CALEA legislation added a minimization provision to the pen register statute,<sup>54</sup> and that provision makes clear that LEAs are entitled to “record” and “decode” all “electronic or other impulses” that convey “dialing and signaling information utilized in call processing.” Additionally, DoJ/FBI contend that there is no indication that Congress intended to frame the definition of call-identifying information within the context of the pen register statute exclusively.

25. DoJ/FBI ask us to adopt a rebuttable presumption that call-identifying information includes information that LEAs traditionally have been able to receive through authorized pen register and trap-and-trace surveillance of wireline telephones, and to give this presumption substantial weight wherever CALEA’s statutory language and legislative history neither compel nor foreclose treating particular information as call-identifying information. DoJ/FBI maintain that, under traditional pen register/trap-and-trace surveillance, the electrical impulses transmitted to LEAs include not only the intercept subject’s dialing and signaling activity,<sup>55</sup> but also the audio portion of the call, and that the transmitted signals are processed by equipment that strips out the audio signals, then decodes and records the signals used in call processing. DoJ/FBI state that this information includes not only the phone numbers dialed by the subject, but also all signals that are sent from the subject to the carrier.<sup>56</sup> Furthermore, DoJ/FBI note that Section 103(a)(2) of CALEA provides that carriers must be able to deliver call-identifying information whenever LEAs are entitled to obtain such information “pursuant to a court order or other lawful authorization,” regardless of whether the source of legal authorization is the pen register statute or some other authority. They note that Section 103(a)(2) provides that, “with regard to information acquired solely pursuant to the authority for pen registers and trap and trace devices . . . call-identifying information shall not include any information that may disclose the physical location of the subscriber . . . .” DoJ/FBI maintain that if call-identifying information meant nothing more than “information available under the pen register statute,” then the location information clause of Section 103(a)(2) would be superfluous.<sup>57</sup> By viewing the CALEA definitions in question in conjunction with Section 103(a)(2), DoJ/FBI set forth their basis for an interpretation of “call-identifying information” that is more expansive than that contained in the J-Standard.

26. DoJ/FBI therefore recommend that the Commission find that call-identifying information includes all dialing and signaling information that identifies the origin, direction, destination, or termination of communications.<sup>58</sup> DoJ/FBI contend that “origin, destination, direction, or termination” may be “identified” by more than one kind of dialing or signaling information, and that we reasonably

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<sup>52</sup> *Id.*

<sup>53</sup> *Id.* at 2-4.

<sup>54</sup> 18 U.S.C. §§ 3121-3127.

<sup>55</sup> The “intercept subject” is any party using the communications facilities that are being monitored by a LEA. As we stated in the *Third R&O*: “In a particular investigation, the ‘intercept subjects’ could include the subscriber, who may or may not be involved in criminal activity; a non-subscriber who is not involved in criminal activity; or a non-subscriber who *is* involved in criminal activity.” See *Third R&O*, *supra* n.2, at n.11.

<sup>56</sup> DoJ/FBI Comments at 10-12.

<sup>57</sup> DoJ/FBI Reply Comments at 4-7.

<sup>58</sup> DoJ/FBI Comments at 13.

may construe call-identifying information to reach all such information.<sup>59</sup> DoJ/FBI urge us to adopt these definitions:

an **origin** is information that identifies the use of a carrier's equipment, facilities, or services to transmit a communication to another party; a **termination** is dialing or signaling information that identifies the use of a carrier's equipment, facilities, or services to receive a communication from another party; **direction** is dialing or signaling information that identifies the use of a carrier's equipment, facilities, or services to control the path or course of the communication to another party; and **destination** is dialing or signaling information that identifies the use of a carrier's equipment, facilities, or services toward which the communication is directed.<sup>60</sup>

DoJ/FBI base these definitions on Section 103(a) of CALEA, which requires a telecommunications carrier "to ensure that its equipment, facilities, or services that provide a customer or subscriber with the ability to originate, terminate, or direct communications" can provide certain capability requirements. DoJ/FBI note that Section 103(a) does not address the term "destination." DoJ/FBI support its definition by examining the "common usage" of the term, and putting that definition in context with the other terms they have defined in reference to Section 103(a).<sup>61</sup> Finally, DoJ/FBI contend that a multi-party call often involves more than one "communication" and that call-identifying information pursuant to CALEA includes all dialing and signaling information that identifies the origin, direction, destination, or termination of "each communication."<sup>62</sup>

27. DoJ/FBI also contend that, because the Court held that CALEA's definition of call-identifying information neither clearly excludes nor clearly includes the information covered by the four capabilities, we therefore have the discretion to reinstate those capabilities under the *Chevron* "step two" analysis.<sup>63</sup> "The point of the D.C. Circuit's decision was simply to require the Commission to identify the shortcomings of the J-Standard's definition," DoJ/FBI state, "not to compel the Commission to accept that definition."<sup>64</sup> DoJ/FBI also disagree with those commenters who claim that the Commission should afford deference to the industry definition due to the structure of CALEA. Once the industry standards are challenged, DoJ/FBI claim, the statute places disputes about the legal sufficiency of industry standards before the Commission.<sup>65</sup> DoJ/FBI distinguish between the technical expertise necessary to implement legal requirements and the legal expertise in determining what those requirements are. While the industry may possess technical expertise, DoJ/FBI assert, it has no unique legal expertise to justify the deference some commenters claim the Commission should afford when considering whether the J-Standard satisfies the legal requirements of CALEA.<sup>66</sup>

28. Discussion. Several commenting parties continue to assert that the plain meaning of the language of the statute supports the J-Standard's definitions.<sup>67</sup> We do not see how this can be the case in light of the Court's determination that the statute is ambiguous. Nevertheless, that does not mean that we

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<sup>59</sup> *Id.* at 13-14.

<sup>60</sup> *Id.* at 14-16.

<sup>61</sup> *Id.* at 16.

<sup>62</sup> *Id.* at 16-18.

<sup>63</sup> *Id.* at 10.

<sup>64</sup> *Id.* at 9.

<sup>65</sup> *Id.*

<sup>66</sup> *Id.*

<sup>67</sup> *See, e.g.,* Verizon Comments at 2.

cannot conclude, based on the reasoned decisionmaking standard, that a permissible understanding of “call-identifying information” is one that is framed in terms of telephone numbers. As described in detail below, we reject that course. We believe that commenters’ suggestions for a narrow definition are unconvincing and we identify additional situations where “call-identifying information” necessarily includes more than telephone numbers.

29. First, to adopt the J-Standard’s definitions, we would be unable to give all portions of CALEA full effect. The Court noted this fact in its opinion:

CALEA’s definition of “call-identifying information,” moreover, refers not just to “dialing . . . information,” but also to “signaling information,” leading us to believe that Congress may well have intended the definition to cover something more than just the “dialing . . . information” conveyed by telephone numbers. Finally, Section 103(a)(2) of CALEA provides that when information is sought pursuant to a pen register or trap and trace order, “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).” 47 U.S.C. § 1002(a)(2). As the Commission observed, Congress would have had no need to add this limitation if “call-identifying information” referred only to telephone numbers.<sup>68</sup>

We are disinclined to interpret a statute in a manner that will render portions of it superfluous.<sup>69</sup> We do not find that the arguments set forth by those commenters who support the J-Standard’s definitions provide such a justification.

30. We also disagree that Congress clearly concluded that call-identifying information was limited to telephone numbers, as several commenters assert. The legislative history of CALEA does not clearly state Congress’s intent with respect to the key terms at issue. The Court states, for example, that “the Report also echoes CALEA’s inherent ambiguity, stating that call-identifying information is ‘typically the electronic pulses, audio tones, or signaling messages that identify the numbers dialed or otherwise transmitted for the purpose of routing calls through the telecommunications carrier’s network.’”<sup>70</sup> We agree with DoJ/FBI that the use of the word “typically” suggests that the House Report’s discussion of “call-identifying” information was not exhaustive.<sup>71</sup> As described below, LEAs currently receive certain information that consists of more than telephone numbers under existing procedures. We think it would be implausible to read CALEA as providing for a more limited class of information than that which LEAs already receive.

31. Nor do we find a basis for tying our interpretation of CALEA exclusively to a prior, separate statute. For example, some commenters argue that we should limit “call-identifying information” to telephone numbers because such an interpretation mirrors the definitions offered by the ECPA. However, in the *Remand Decision*, the Court stated that CALEA does not cross-reference or incorporate the definitions of pen registers and trap and trace devices in the ECPA.<sup>72</sup> Moreover, these standards are

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<sup>68</sup> 227 F.3d at 458.

<sup>69</sup> See *Remand Decision*, 227 F.3d at 463 (citing *Washington Market Co. v. Hoffman*, 101 U.S. (11 Otto) 112, 115-16 (1879); See also *Pennsylvania Dept. of Pub. Welfare v. Davenport*, 495 U.S. 552, 562 (1990) (expressing “a deep reluctance to interpret a statutory provision so as to render superfluous other provisions in the same enactment”).

<sup>70</sup> 227 F.3d at 458.

<sup>71</sup> DoJ/FBI Reply Comments at 2-4.

<sup>72</sup> 227 F.3d at 459.

evolving. The recently enacted USA PATRIOT Act extends LEAs' authority to encompass electronic surveillance, and expands the terms "pen register" and "trap and trace device" to include the concept of "dialing, routing, addressing, or signaling information."<sup>73</sup> The argument that we should adopt a telephone number-based definition because of the ECPA makes little sense in light of the legislative changes to the pen register and trap and trace definitions. Because of these legislative changes, we dismiss the concern that the adoption of a standard more comprehensive than the J-Standard would mandate capabilities not covered by pen registers and trap and trace devices; that will not be the case. We also agree with DoJ/FBI that CALEA is designed to address electronic surveillance capabilities broadly, and reflects, for example, "Title III" of the Omnibus Crime Control and Safe Streets Act of 1968, as modified by the ECPA,<sup>74</sup> that is outside the scope of the pen register and trap and trace provisions in the ECPA.<sup>75</sup> This fact weighs against us placing too much weight on the definitions in the ECPA.

32. We also reject those comments that would have us adopt the J-Standard's definitions because they represent industry expertise. The language of the statute does not require us to defer to the industry standard as part of our evaluation. Instead, we evaluate the industry-adopted standard in the context of the overall record of this proceeding. Moreover, because the statute requires the Commission to become involved in those cases where the industry and those who hold an interest in the implementation of CALEA cannot agree on the requisite technical standards, we do not see how we could defer to industry expertise without undermining the statute's operation. We likewise reject the suggestion that we should adopt no more than the J-Standard's definitions because only the J-Standard was supported by the vast majority of commenters. Rulemaking by head count, while arguably efficient, is also impermissibly arbitrary and capricious.<sup>76</sup>

33. We conclude that those commenters who urge us to adopt "only *number information* such as that which has traditionally been provided"<sup>77</sup> miss the point. To adopt a definition that rigidly applies number information undermines CALEA's intent. The meaning of "call-identifying information" that we adopt should be tailored to replicate the existing electronic surveillance capability functions, but should also be expressed in sufficiently broad terms so as not to be limited to a specific network technology. This analysis is consistent with overall purpose expressed for the Act: CALEA was intended to preserve the ability of law enforcement officials to conduct electronic surveillance effectively and efficiently in the face of rapid advances in telecommunications technology.<sup>78</sup>

34. An example of this approach can be found in the provision of antenna location information. The Court upheld the Commission's refusal to remove this capability – which requires carriers to make available the physical location of the antenna tower that a mobile phone uses to connect at the beginning

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<sup>73</sup> See 18 U.S.C. § 3127 (2001).

<sup>74</sup> Omnibus Crime Control and Safe Streets Act of 1968, Pub. L. No. 90-351, 82 Stat. 212 (1968), and ECPA, *supra* n.41 (together codified as amended in 18 U.S.C. §§ 2510-2522 and in other Sections of 18 U.S.C.). These statutory provisions delineate the scope and limitations of federal wiretap surveillance authority. A "Title III warrant" – *i.e.* a warrant issued pursuant to Title III of the Omnibus Crime Control and Safe Streets Act of 1968, 18 U.S.C. § 2518(3) – permits a LEA to receive call content if there is "probable cause for belief that an individual is committing, has committed, or is about to commit a particular offense. . . ." See 18 U.S.C. § 2518(3)(a).

<sup>75</sup> DoJ/FBI Reply Comments at 6.

<sup>76</sup> *National Resources Defense Council v. EPA*, 822 F.2d 104, 122 n.17 (D.C. Cir 1987) (stating that an agency decision-making is not "a democratic process by which the majority of commentators prevail by sheer weight of numbers.")

<sup>77</sup> See, *e.g.*, BellSouth Comments at 5 (emphasis added).

<sup>78</sup> 140 Cong. Rec. H-10779-02 (daily ed. October 7, 1994) (statement of Rep. Hyde). See also *Third R&O*, *supra* n.2, at ¶ 2.

and end of a call – from the J-Standard.<sup>79</sup> Structurally, this capability has no equivalent in the traditional wireline architecture. However, the Commission found that antenna location information is functionally equivalent to existing capabilities. Because a wireline telephone number usually corresponds with a subscriber location, LEAs have generally been able to obtain location information. In a wireless environment, the location of the cell sites to which the mobile unit is connected – which quite clearly is not a “telephone number” – serves as the equivalent location information.

35. To frame a complete definition of “call-identifying information,” we also look to information that LEAs receive under existing capabilities. DoJ/FBI describe traditional pen register surveillance in a standard wireline network. LEAs typically receive signaling information generated by the network, such as ringing tones and busy signals. If the caller signals the network – for example, if a call waiting subscriber uses a flash hook to place one party on hold and to complete the circuit between the subscriber and the incoming caller – then the flash hook is reported to the LEA.<sup>80</sup> This signaling information is not a traditional “telephone number.”

36. Similarly, we note that there are many situations in which a party inputs dialing information that, in itself, is not a telephone number. For example, when a party that uses a “speed dial” feature dials a special code, the code itself is not a telephone number. J-STD-025 Annex D, Table 34 (“Speed Calling”) describes such a situation and anticipates reporting both the speed dial code and the telephone number it represents. A caller may also use a “dial-around” code to reach an interexchange carrier that is not the party’s presubscribed interexchange carrier. This carrier access code – *e.g.*, 10-10-321 – is not itself a telephone number but nevertheless contains basic network information.

37. Although we understand “call-identifying information” to consist of both dialing and signaling information that may or may not be described in terms of telephone numbers, we emphasize that not all dialing and signaling information is “call-identifying information.” For example, parties using bank-by-phone systems, automated prescription renewal services, and voicemail systems often enter account numbers, prescription numbers and passcodes that do not affect how the network processes the ongoing call. To reach this distinction, we look at the definition of “call-identifying information”: “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.”<sup>81</sup> While some dialing or signaling information identifies the origin, direction, destination, or termination of a communication,<sup>82</sup> other dialing or signaling information – such as a bank account number – clearly does not. Again, an analysis of traditional pen register surveillance supports this distinction. During a traditional pen register surveillance, a LEA receives all signals that are sent from the intercept subject to the carrier, including ‘off-hook’ and ‘on-hook’ signals, hook flashes, ringing tones and busy signals.<sup>83</sup> Because special equipment is used to identify and record those audio signals used in call processing, the traditional model recognizes that there is a distinction between audio signals that are call content and audio signals that are call-identifying.<sup>84</sup> This model also supports a broad interpretation of what “identifies” the origin, direction, destination, or termination of a communication. We agree with DoJ/FBI that, because these terms can be identified in more than one way and by more than one kind of information, we should construe call-identifying information to include all such

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<sup>79</sup> 227 F.3d at 463.

<sup>80</sup> See DoJ/FBI Comments at 12.

<sup>81</sup> 47 U.S.C. § 1001(2).

<sup>82</sup> We further define these key terms below.

<sup>83</sup> DoJ/FBI Comments at 12.

<sup>84</sup> *Id.*

information.<sup>85</sup> Thus, insofar as a ringing tone or a busy signal provides information that is descriptive of an origin, direction, destination, or termination a communication, we will find that tone or signal “identifies” such a communication for purposes of CALEA and falls within CALEA’s definition of “call-identifying information.”

38. Under the J-Standard’s definitions, call content does not identify the origin, termination, direction, and destination of a communication, and thus is not “call identifying information” for purposes of CALEA. We agree, and further note that the J-Standard’s definitions are generally framed in terms of network architecture. This approach makes sense, and we conclude that the J-Standard is, in general, the appropriate starting point for defining the key terms of origin, termination, direction, and destination.

39. We find that the J-Standard’s definitions are too limited, however. As noted above, Section 102(2) of CALEA defines call-identifying information as “dialing or signaling information that identifies the origin, direction, destination, or termination” of each call or communication. Thus, the origin, direction, destination, or termination of the call is not itself call-identifying information. Instead, the origin, direction, destination, or termination is identified by call-identifying information, such as the caller’s phone number. Accordingly, the J-Standard’s definitions are deficient to the extent that they confuse origin, direction, destination, and termination with phone numbers or other information that may be used to identify the origin, direction, destination, and termination of each call or communication.

40. Turning to the first of the four terms, the J-Standard defines an “origin” as the number of the party initiating a call – *i.e.*, the calling party. For example, in a simple two-way telephone call, the dialing or signaling information that identifies the “origin” of a communication is the calling party’s telephone line (which is commonly identified by a telephone number). We note that there are situations in which information other than a number is needed to identify the party initiating a call. For example, when a wireless phone is used to initiate a call, that origin may be identified by both the number assigned to the wireless phone and the location information of the antenna site to which the phone is connected. However, as discussed above, neither the phone number nor the antenna location (for wireless calls) is the origin of the call. Rather, the phone number and the antenna location (for wireless calls) are information that identifies the origin. With this in mind, we conclude that the statutory term “origin” refers to the initiator of a call (*e.g.*, the “calling party”) and not the phone number of that initiator.

41. Because the origin pertains to a calling party, there may be multiple points in a telephone call scenario that give rise to information that identifies the origin of a communication.<sup>86</sup> An example is the case where the party under surveillance takes an incoming call and subsequently receives a network notification of a second incoming call. Dialing or signaling information that describes this second call would identify the “origin” of the call because it describes a calling party. Although there has already been one origin in this scenario – the first incoming caller – it does not preclude information about the second caller from identifying an origin under the definition we adopt. In the situation where one party (“A”) calls a second party (“B”) (and, thus, information about A describes an origin), B may initiate a three-way call by dialing a third party (“C”). In this case, information about B also describes an origin because B was the calling party that brought C into the call.

42. If an “origin” describes the beginning of a call, then a “termination” can, in the most general sense, be thought of as a stopping point in the network. The J-Standard defines “termination” in terms of the “party *ultimately* receiving the call” (emphasis added). We think common practice as well as the industry’s own technical standards suggest a broader definition that recognizes that a call can “terminate” when it reaches an identifiable stopping point in the network. J-STD-25, Annex D, Table 21 (“Call Waiting and Recall with a Single Call Identity”), Step 6 shows a diagram where the surveillance subject

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<sup>85</sup> *Id.* at 13-14.

<sup>86</sup> We examine these situations in greater depth below as part of our analysis of the “punch list” items.

(“S”) is connected to one party (“A”), while the other party (“B”) is on hold. As shown in the diagram, the communication path starting from party A terminates at S. However, as is also shown in the diagram, the communication path coming from the held party B terminates at the subject’s switch, and not at the subject’s line.

43. This example also supports the proposition that a termination is not always identified by a telephone number. Although the J-Standard illustrates the communication path from a party on hold as ending in a switch, the J-Standard’s definition is too limited to encompass this scenario because (1) a network switch is not a party in a call, and (2) a network switch is a point in the network with no directory telephone number. Accordingly, we also find the J-Standard’s definitions are deficient to the extent that they specify a “party” in a communication. The origin, direction, destination, or termination of a call can be either a party or a place in the network. The network switch is the most obvious example of the latter.

44. Accordingly, we conclude that a “termination” is a party or place at the end of a communication path. Moreover, there can be multiple terminations within a single call. J-STD-025, Annex D, Table 21, Step 6 (“Call Waiting and Recall with a Single Call Identity”) shows a diagram where the surveillance subject (“S”) is connected to one party (“A”), while the other party (“B”) is on hold. As shown in the diagram, the connection starting from A terminates at S. However, the subject (“S”) can toggle between the two other parties, resulting in a situation where A is on hold, and B is connected to S. This situation is illustrated in Step 5 of the same table. At that step, the communication from A terminates at S’s switch, and the communication from B terminates at S. This concept of multiple terminations is consistent with the definition we adopt because there are multiple points in a call at which there is information that identifies the called party. Changes made during the call – such as a called party being put on hold – can generate information that identifies a new or changed termination.

45. The J-Standard identifies the “destination” as the number of the called party. In order to better understand what a “destination” is, we think it is helpful to review common and technical definitions of these terms. Webster’s Dictionary defines “destination” as “the place toward which you are going,”<sup>87</sup> and Newton’s Telecommunications Dictionary defines “destination” as an address or field “that indicates for whom a message is intended.”<sup>88</sup> These definitions, and the J-Standard, all generally describe a place or a party that a calling party is trying to reach. In the CALEA context, then, a “destination” can be understood to be a party or place to which a call is being made.<sup>89</sup>

46. Under the J-Standard, the “direction” is defined as the number to which a call is re-directed or the number from which it came, either incoming or outgoing (e.g., redirected-to party or redirected-from party). Again, we reject the contention that this information is exclusively a telephone number. However, we agree with the general characterization of “direction” as a description of navigation within a network. We find that the “direction” is, broadly speaking, information that identifies the path of communication.

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<sup>87</sup> Webster’s New World Dictionary, College ed. (1962.) at 398.

<sup>88</sup> Newton’s Telecom Dictionary, 5<sup>th</sup> ed., at 273.

<sup>89</sup> We distinguish a “destination” from a “termination.” Webster’s defines “terminate” as to “end,” “conclude,” or “stop” (1504) and Newton’s defines a “terminal” as “the point at which a telephone line ends or is connected to other circuits in a network” (890). In a simple two-party call (“A” calls “B”), the called party (“B”) is both a termination and a destination. However, in more complex scenarios, the termination(s) and destination(s) will not always be identical. Where a calling party dials the access number of an interexchange carrier and connects through that interexchange carrier to reach a called party (“A” to “X” to “B,” where “X” is the interexchange carrier), there are two terminations – first at X (a call-receiving party) and then again B (the called party). If B then calls a third party (“C”) to establish a three-way call, then C is also a termination. If A tries to dial B but the network is unable to make a connection, B would be the destination but, because the network never connects to that point, there is no termination at B.

47. For these reasons, we find it proper to view “call-identifying information” as consisting of dialing or signaling information that is not limited to telephone numbers.<sup>90</sup> However, this dialing or signaling information must identify the origin, termination, direction, or destination of each communication. We define these terms as follows:

**origin** is a party initiating a call (e.g., a calling party), or a place from which a call is initiated; **destination** is a party or place to which a call is being made (e.g., the called party); **direction** is a party or place to which a call is re-directed or the party or place from which it came, either incoming or outgoing (e.g., a redirected-to party or redirected-from party); and **termination** is a party or place at the end of a communication path (e.g., the called or call-receiving party, or the switch of a party that has placed another party on hold).

These changes distinguish between origin, destination, direction, and termination, and the information that identifies them; permit multiple origins, destinations, directions, and terminations in a call; and provide for terminations inside a network switch or at another point within a network.

48. We think this approach defines call-identifying information in a manner that can be converted into actual network capabilities, unlike the definition suggested by DoJ/FBI. DoJ/FBI look to Section 103 of CALEA, which requires a carrier to “ensure that its equipment, facilities, or services that provide a customer or subscriber with the ability to originate, terminate, or direct communications” meet the specified assistance capability requirements, and adopt a parallel definition for the terms “termination,” “origin,” and “direction” under the definition of “call identifying information.” However, it is not clear to us how Section 103 describes the key terms. At most, Section 103 indicates that Congress concluded that customers who originated, terminated, and directed calls might, during this process, use a carrier’s equipment, facilities and services, and that the carrier’s equipment, facilities, and services must be capable of isolating and providing certain information about those activities. It does not tell us what Congress thought a “termination,” “origin,” and “direction” is, nor does it lead to the conclusion that a “termination,” “origin,” or “direction” always uses a carrier’s equipment, facilities, and services in a manner that generates call identifying information. By contrast, the definitions we adopt remedy the J-Standard’s deficiencies insofar that they are not limited to telephone numbers and are framed to accommodate CALEA’s intent to preserve the ability of law enforcement officials to conduct electronic surveillance effectively and efficiently in the face of rapid advances in telecommunications technology. Nevertheless, our interpretation draws heavily from the industry-established standards and is in many cases supported by the industry’s own technical models.

#### B. Cost Considerations

49. We also reconsider in depth cost considerations related to the punch list items. Under Sections 107(b)(1) and 107(b)(3) of CALEA, if the Commission finds that industry-established technical standards are deficient, it may establish standards that “meet the assistance capability requirements of Section 103 *by cost-effective methods*”<sup>91</sup> and “minimize the cost of such compliance on residential ratepayers.”<sup>92</sup> In the *Remand Decision*, the Court stated that the *Third R&O* “made no attempt to compare

<sup>90</sup> We conclude that this identifying information could include, for example, information that identifies lines, antenna towers, or other telecommunication service provider (“TSP”) facility or facilities. In the wireless location information requirement, which the Court upheld, a provider will have to identify a particular cell tower. Where a call terminates at the TSP switch that serves the subject, we suspect that the provider and LEA may find it more convenient to describe the action instead of providing an identification number for the terminating switch – even though both would be “identifying information.”

<sup>91</sup> 47 U.S.C. § 1006(b)(1) (emphasis added).

<sup>92</sup> 47 U.S.C. § 1006(b)(3).



the cost of implementing the punch list capabilities with the cost of obtaining the same information through alternative means, nor did it explain how it measured cost-effectiveness. Although it mentioned residential ratepayers, it never explained what impact its Order would have on residential rates.”<sup>93</sup> The Court could not find a rational connection between the facts found and the choice made – and thus concluded that the Commission’s treatment of these cost factors represented an arbitrary and capricious action.<sup>94</sup> For this reason, we generally address cost considerations in this Section. We will then apply that general framework in portions of the next four Sections, where we will evaluate each of the four vacated punch list capabilities.

50. Comments. In the October 2000 *Public Notice*, the Commission sought comment on the definition of the term “cost-effective methods,” how cost effectiveness should be measured in relation to the punch list capabilities, and how requiring the capabilities would affect residential ratepayers.<sup>95</sup> It also asked for alternative methods for providing the four capabilities, and for the implementing cost and effect on residential ratepayers of each alternative method.<sup>96</sup> Many commenters contend that the J-Standard is not deficient and, insofar that it will be less expensive to implement than the punch list capabilities, retention of the J-Standard represents the most “cost-effective” option for the Commission.<sup>97</sup> Others suggest that the Commission must consider whether there are less costly alternatives to providing the same functionality as the punch list capabilities.<sup>98</sup> In general, these commenters suggest an approach that measures cost-effectiveness by identifying two or more ways of meeting CALEA’s requirements and then determining which is the least expensive to implement.

51. WorldCom says even if such a comparison is not available, we should adopt a definition that still gives “cost-effective” meaning. “There is a point where a particular capability is simply too costly,” it asserts, adding that it believes that CALEA implementation cannot be an open-ended process in which cost is not a consideration.<sup>99</sup> Other commenters contend that the projected cost of CALEA implementation, by itself, makes it impossible for us to implement the punch list capabilities in a “cost-effective” manner.<sup>100</sup> For example, USTA and others acknowledge that CALEA implementation costs have been reduced by the FBI’s “flexible deployment” program,<sup>101</sup> but USTA argues that not all costs have been defrayed and that there is no assurance that the punch list capabilities can be deployed in a “cost-effective” manner. USTA also maintains that the costs of CALEA far exceed the \$500 million appropriated by Congress to reimburse carriers for CALEA compliance, and that these costs are solely for the benefit of LEAs and would otherwise not be incurred by carriers.<sup>102</sup> Both USTA and BellSouth also

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<sup>93</sup> 227 F.3d at 461.

<sup>94</sup> *Id.* (citing *Motor Vehicle Mfrs.*, 463 U.S. at 43).

<sup>95</sup> See *Public Notice*, *supra* n.19.

<sup>96</sup> *Id.*

<sup>97</sup> See, e.g., USTA Comments at 13; BellSouth Reply Comments at 13.

<sup>98</sup> CTIA Comments at 25 (alternative costs should have been identified and considered); Rural Cellular Association (“RCA”) Comments at 6 (Commission failed to evaluate whether the punch list items were the most cost-effective way of meeting the CALEA requirements); AT&T Reply Comments at 2 (Commission should give serious consideration to the proposed alternative methods for law enforcement to obtain the same information at a substantially lower cost).

<sup>99</sup> WorldCom Reply Comments at 5.

<sup>100</sup> See, e.g., AT&T Comments at 4 (asserting that the provision of the punch list capabilities is not cost-effective because of costs that are “excessive and unreasonably burdensome”).

<sup>101</sup> USTA Comments at 12-13; see also BellSouth Comments at 22; NTCA Reply comments at 4.

<sup>102</sup> USTA Comments at 13.

suggest that we undertake a cost-benefit analysis.<sup>103</sup> BellSouth also claims that cost-minimization is a reasonable means of defining cost-effectiveness.<sup>104</sup>

52. CTIA, which claims that the four vacated capabilities do not meet CALEA's Section 107(b) requirements,<sup>105</sup> acknowledges that DoJ/FBI have entered into "buyout" agreements with several manufacturers, but states that it remains concerned that an uneven playing field will be created if carriers are not covered equally by these agreements. CTIA recommends that the Commission determine which costs the buyout actually reimburses and which costs are left to carriers to pay.<sup>106</sup> CTIA and the National Telephone Cooperative Association ("NTCA") also maintain that Section 107 requires that the Commission evaluate cost-effectiveness across the industry, not on a carrier-by-carrier basis.<sup>107</sup> Additionally, CTIA expresses concern that the DoJ/FBI buyout initiative may cause some carriers to accept and adopt all punch list capabilities before the lawfulness of those capabilities has been determined.<sup>108</sup>

53. Commenters also cite the cost of implementing the punch list capabilities, and claim that the adoption of those capabilities will not minimize the cost of compliance on residential ratepayers. USTA argues that the cost of the J-Standard capabilities, the punch list capabilities, and CALEA capacity requirements far exceed the \$500 million appropriated by Congress to reimburse carriers for CALEA compliance.<sup>109</sup> BellSouth claims that it will incur costs for the four vacated punch list capabilities, plus the two uncontested punch list capabilities, of between \$193-286 million, depending upon whether the FBI buyout has been consummated with all vendors and whether carriers are allowed to install CALEA-compliant equipment and software during regularly scheduled upgrades.<sup>110</sup> These costs, commenters claim, make it impossible to minimize the cost on residential ratepayers,<sup>111</sup> and will have a particularly disproportionate hardship on residential ratepayers subscribed to small telephone companies operating in rural areas with limited resources.<sup>112</sup>

54. DoJ/FBI contend that the aggregate costs of implementing all CALEA capabilities will be much lower than industry estimates both because most costs are being borne by the government and because carriers are generally permitted to deploy CALEA solutions as part of their normal software upgrade cycles.<sup>113</sup> DoJ/FBI note that, under CALEA, certain carrier costs are reimbursable and further note that the FBI has reached cooperative agreements with five manufacturers that greatly reduce carrier

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<sup>103</sup> USTA Reply Comments at 2; BellSouth Comments at 21 (stating that "[m]andating implementation of the four 'punch list' capabilities will add significantly and unnecessarily to the total costs of CALEA compliance, without any countervailing benefits.")

<sup>104</sup> BellSouth Comments at 22. Because BellSouth claims that the J-Standard is not deficient, it concludes that retention of the J-Standard is the best method to achieve cost-minimization and, thus, to adopt a standard that is "cost-effective."

<sup>105</sup> CTIA Comments at 18.

<sup>106</sup> *Id.* at 22-24.

<sup>107</sup> *Id.* at 23 and NTCA Reply Comments at 4.

<sup>108</sup> CTIA Comments at 24.

<sup>109</sup> USTA Comments at 13.

<sup>110</sup> BellSouth Comments at 21.

<sup>111</sup> *See, e.g.*, PCIA Comments at 9 (describing the effect of requiring post cut-through dialed digits).

<sup>112</sup> USTA Comments at 12-13; RCA Comments at 7.

<sup>113</sup> DoJ/FBI Comments at 31, 41-43.

costs. DoJ/FBI contend that, under these buyout agreements, each manufacturer provides a CALEA-compliant software solution for J-STD-025 and the six punch list items required by the *Third R&O*, and that carriers software costs are fully covered. DoJ/FBI maintain that the switch platforms covered by these buyout agreements account for approximately 90% of the wireline and wireless switches currently in use in the United States.<sup>114</sup> Finally, DoJ/FBI argue that, with minor exceptions, CALEA hardware modifications are not attributable to the four contested punch list capabilities.<sup>115</sup> DoJ/FBI further contend that the incremental costs associated with implementing the four punch list capabilities are only a small portion of aggregate costs and that many costs of modifying the J-Standard will be the same regardless of whether the four capabilities are added.<sup>116</sup>

55. More fundamentally, DoJ/FBI argue that the cost criteria of this section do not call on the Commission to decide whether the costs of particular assistance capabilities are worth incurring; rather, these criteria are directed instead at ensuring that the Commission does not subject carriers and residential ratepayers to unnecessary expense by choosing a costly means of meeting Section 103's requirements when an equally effective but less expensive alternative is available. DoJ/FBI contend that because no commenter has identified any alternative means that cure the deficiencies of J-STD-025 by less expensive means,<sup>117</sup> that failure to identify alternatives disposes of any cost-based objections under Section 107(b).<sup>118</sup> Therefore, DoJ/FBI conclude, the Commission can adopt the four punch list capabilities and comply with the cost criteria outlined in Section 107(b) of CALEA.

56. Finally, DoJ/FBI refute BellSouth's asserted CALEA costs of \$193-286 million to implement all six punch list capabilities as unsubstantiated and not credible. DoJ/FBI contend that BellSouth will pay nothing for the software required to implement CALEA on most switching platforms; BellSouth is participating in the FBI's flexible deployment program, which will permit it to adhere to its normal software upgrade cycle; and BellSouth is eligible for federal reimbursement for costs attributable to CALEA's capacity requirements.<sup>119</sup> DoJ/FBI assert that BellSouth offers no explanation for its costs in light of the cost-shifting and cost-minimizing plans in which it will participate, and note that no other carrier has advanced similar cost claims.<sup>120</sup> DoJ/FBI also assert that the relevant costs are those specifically attributable to the four contested punch list capabilities, not the sum total of all possible CALEA implementation costs. Finally, DoJ/FBI assert that CTIA's competitive concerns involve reimbursement issues before DoJ, and not standard-setting issues before the Commission.<sup>121</sup>

57. Discussion. CALEA does not define "cost-effective." We agree with those commenters who suggest one approach for determining whether something is "cost-effective" is to compare two or more ways of accomplishing a task and identifying the process that is the least expensive. We believe this approach is consistent with the *Remand Decision*, where the Court, in addressing Section 107(b)(1)'s requirement "by cost-effective methods," found the Commission "made no attempt to compare the cost of

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<sup>114</sup> DoJ/FBI *Ex Parte* Presentation, CC Docket 97-213, filed April 18, 2001, at 2. This figure represents an update from the 85% figure DoJ/FBI provided in its November 2000 Comments. See DoJ/FBI Comments at 36-40.

<sup>115</sup> DoJ/FBI Comments at 40, 43.

<sup>116</sup> *Id.* at 31, 36-37.

<sup>117</sup> With respect to proposed alternatives for dialed digit extraction, DoJ/FBI assert that they fail to qualify under Section 107(b) because they are inadequate to meet the assistance capability requirements of Section 103. We discuss dialed digit extraction – and these proposed alternatives – *infra*.

<sup>118</sup> DoJ/FBI Comments at 32, 43-47.

<sup>119</sup> DoJ/FBI Reply Comments at 19-20.

<sup>120</sup> *Id.* at 19-20.

<sup>121</sup> *Id.* at 20-21.

implementing the punch list capabilities with the cost of obtaining the same information through alternative means.”<sup>122</sup> Additionally, the Commission has previously used the phrase to describe a comparative process,<sup>123</sup> although it has not had the opportunity to consider “cost-effective” as a statutory term. We find further support for this interpretation of “cost-effective” in other statutes where Congress has defined or described the term,<sup>124</sup> as well as in other agencies’ rules.<sup>125</sup> Thus, we think it makes sense to consider whether a particular option is better than some alternative at achieving some particular regulatory requirement, when such a comparison is available.<sup>126</sup> As described *infra* in our analysis of each punch list capability, we first inquire whether we have in the record an alternative means to accomplish each of the punch list capabilities.<sup>127</sup> To the extent that we determine that each punch list capability “meet(s) the assistance capability requirements” of CALEA, but we are unable to compare the cost of implementing the punch list capabilities with the cost of obtaining the same information through alternative means, we will not end our inquiry. Although we think, based on the comments, the *Remand Decision*, the Commission’s prior interpretation of the term and other statutes that have interpreted the

<sup>122</sup> 227 F.3d at 461.

<sup>123</sup> See, e.g., 47 C.F.R. § 54.603(b)(4); 47 C.F.R. § 54.615 (c)(7) (same definition) (providing, in the Universal Service context, that “the most cost-effective method of providing a service is defined as the method that costs the least after consideration of the features, quality of transmission, reliability, and other factors that the health care provider deems relevant to choosing a method of providing the required health care services”).

<sup>124</sup> “. . . the term “cost effective” means costing no more than the available alternatives, determined by a comparison of all related direct and indirect costs . . . and taking into account the ability of each alternative to accommodate mission requirements as well as the related factors of risk, reliability, schedule, and technical performance. . . .” (15 U.S.C. § 5802, “Commercial Space Competitiveness”) (emphasis added); “‘Cost-effective’, when applied to any measure or resource referred to in this chapter, means that such measure or resource must be forecast – (i) to be reliable and available within the time it is needed, and (ii) to meet or reduce the electric power demand, . . . of the consumers of the customers at an estimated incremental system cost *no greater than that of the least-cost similarly reliable and available alternative measure or resource*, or any combination thereof.” (16 U.S.C. § 839(a), “Pacific Northwest Electric Power Planning and Conservation”) (emphasis added). See also 2 U.S.C. § 1535 (“Least burdensome option or explanation required”); 10 C.F.R. § 436.16 (“Measuring Cost-effectiveness”); 40 C.F.R. Part 35, Subpart E, App. A (“Cost-Effectiveness Analysis Guidelines”); *but see* 5 U.S.C. § 552(a)(u)(4)(A) (requiring a board to conduct a cost-benefit analysis to demonstrate that a program is cost-effective).

<sup>125</sup> The Department of Commerce’s National Oceanic and Atmospheric Administration has defined “cost-effective” to mean “the least costly activity among two or more activities that provide the same or a comparable level of benefits, in the judgment of the trustees.” 15 C.F.R. § 990.30. Similarly, the Department of Interior has defined “cost-effective” to mean “that when two or more activities provide the same or a similar level of benefits, the least costly activity providing that level of benefits will be selected.” 43 C.F.R. § 11.14(j). The Department of Defense has defined “cost effective” to mean “that the required level of workload (output, as described in the performance work statement) is accomplished with as little resource consumption (input) as possible without degradation in the required quality level of products or services.” 32 C.F.R. § 169a.15(d)(3)(i); *but see* 44 C.F.R. § 209.2 (requiring, in a Federal Emergency Management Agency disaster assistance program, that a mitigation activity will not cost more than the anticipated value of the reduction in both direct and indirect damages and subsequent negative impacts to the area if future disasters were to occur).

<sup>126</sup> See also *Husqvarna AB v. EPA*, 254 F.3d 195 at 200 (D.C. Cir. 2001) (finding that because a statute did not mandate a specific method of cost analysis, the Environmental Protection Agency’s choice of how to consider costs was reasonable). In this case, we recognize that the statute does not define “cost-effective” and look to other sources to give this term meaning.

<sup>127</sup> To the extent that commenters suggest that the Commission must independently search for alternative means of meeting a CALEA capability and then evaluate which is the least expensive to implement, we see nothing in the statute that would support such an interpretation and we reject that approach. We note that we have solicited comment as to whether the punch list capabilities met CALEA’s assistance capability requirements, and we will consider *infra* the punch list capabilities, arguments that they do not comply with CALEA’s requirements, and alternative means that have been proposed for complying with CALEA. Further independent inquiry on our part would quickly stray from the record developed in this proceeding.

term, that a cost comparison is the most useful means of determining whether something is “cost-effective,” we recognize that it may not be the only method. If we cannot make a cost comparison, we will consider other ways of determining whether a punch list capability is “cost-effective.” We disagree with those who would have us end our inquiry once we determine that there are no alternative means of meeting a CALEA capability, because under such circumstances other methods of measurement may assist the Commission in giving meaning to the “cost-effective” element.

58. We find merit in BellSouth’s suggestion that something can be “cost-effective” if it serves to minimize costs. In general, something is “effective” if it accomplishes a task in an efficient manner.<sup>128</sup> At the same time, we approach this evaluation cautiously. We disagree with USTA that CALEA costs – including punch list costs – are solely for the benefit of LEAs. The public benefits of implementing the vacated punch list capabilities could be large, if these capabilities significantly assist in crime reduction and prevention. For example, granting LEAs these capabilities could potentially play a major role in the timely apprehension of a terrorist suspect. The benefits of just one such apprehension could be countless lives saved and billions of dollars.<sup>129</sup> However, we decline to adopt or reject a capability solely on the basis of a cost-benefit analysis because Congress has already made such a calculation when it determined the assistance capability requirements of CALEA.<sup>130</sup>

59. For these reasons, we think those comments that would have us reject the punch list capabilities solely because they would be costly to implement are incorrect. As an initial matter, we note that there are costs associated with CALEA, and it is clear that Congress anticipated that carriers would bear some of these costs.<sup>131</sup> However, as part of our examination of whether a technical standard that we require under CALEA is “cost-effective,” we will consider the financial burden it places on carriers. In the case of the punch list capabilities, we note that several aspects of the implementation program significantly mitigate this burden, which serves to make implementation of the punch list capabilities “cost-effective” for carriers.

60. First, DoJ/FBI will be paying for many of the costs associated with implementing the four vacated punch list capabilities. For more than 90% of switches, DoJ/FBI state that they have reached buyout agreements with manufacturers to pay for all necessary software upgrades, and those upgrades represent a significant portion of the total cost of implementing the four vacated punch list capabilities.<sup>132</sup> Second, for the majority of switches, carriers will be permitted to implement required punch list capabilities coincident with routine switch upgrades. Thus, most carriers may defer punch list costs to achieve implementation efficiencies; *i.e.*, punch list costs will be effectively lessened because most carriers will not have to perform a special punch list software upgrade. Third, five telecommunications equipment manufacturers have incorporated all six punch list capabilities required by the *Third R&O* into one

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<sup>128</sup> Webster’s New World Dictionary, College ed. (1962) at 462.

<sup>129</sup> We note that total costs to insurers of the September 11, 2001 terrorist attacks in the United States have been “conservatively estimated at \$US40bn.” and “estimated at \$30 billion to \$70 billion.” See, respectively, *The Australian Financial Review*, “Australasian Business Intelligence” by Devon Spurgeon, October 26, 2001; and *USA Today*, “House passes terrorism-insurance bill,” November 30, 2001 at 1B.

<sup>130</sup> However, we think it is illustrative in this case insofar that it supports our contention that we should not put undue weight on the absolute cost of implementing a capability as part of a determination as to whether it meets CALEA “by cost-effective methods.”

<sup>131</sup> See 140 Cong. Rec. H10773-02, 10782 (daily ed. October 4, 1994) (reporting various statements of representatives discussing, *inter alia*, the legislation’s costs to industry).

<sup>132</sup> See *Order*, supra n.17 at 16 FCC Rcd 17402 ¶ 9.

software upgrade,<sup>133</sup> and it is unclear whether deleting one or more of these capabilities from that upgrade will lessen the cost of the upgrade to those carriers that purchase software from manufacturers that are not covered by the DoJ/FBI buyout agreements.<sup>134</sup> Fourth, carriers can recover at least a portion of their CALEA software and hardware costs by charging to LEAs, for each electronic surveillance order authorized by CALEA, a fee that includes recovery of capital costs, as well as recovery of the specific costs associated with each order.<sup>135</sup> Finally, carriers are not required to pay to make CALEA-compliant any equipment, facility, or service deployed on or before January 1, 1995, unless that equipment, facility, or service has been replaced, significantly upgraded, or undergone major modification.<sup>136</sup> Therefore, for many switches, there will be few costs attributable to CALEA. Together, these factors support a finding that the punch list capabilities represent “cost-effective methods” to meet CALEA’s requirements.

61. We also disagree with CTIA that potential absence of a level playing field for individual carriers should cause us to reject inclusion of any punch list capability. To the extent that a carrier believes that implementing any required capability is not reasonably achievable for cost or other reasons with respect to any equipment, facility, or service deployed after January 1, 1995, the carrier may petition the Commission under Section 109(b) of CALEA for a determination as to whether it must pay for any such implementation.<sup>137</sup> With specific respect to the costs of the six punch list capabilities cited by BellSouth, it is unclear what BellSouth’s costs would be for the two uncontested capabilities alone, and how the DoJ/FBI buyout and flexible deployment programs affect those costs – whether for two, three, four, five, or six punch list capabilities.

62. We agree with commenting parties that we must consider the effect of CALEA compliance on residential ratepayers under Section 107(b)(3). For the reasons discussed below, we consider the effects on residential wireline subscribers only. Although CALEA does not define the term “residential ratepayers,” we note that in debating the CALEA bill in the House of Representatives (H.R. 4922), Congressman Markey stated: “Section 109(b)(1) lists several factors the Commission should consider in determining whether compliance is reasonable. These factors direct the Commission’s attention to, *inter alia*, the impact on rates for basic residential telephone service . . . .”<sup>138</sup> Wireless telecommunications services such as cellular or PCS are intrinsically mobile services, and we have not previously attempted to

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<sup>133</sup> See DoJ/FBI *Ex Parte* Presentation, CC Docket 97-213, filed April 18, 2001, at 2. We also note that USTA made an *ex parte* presentation in this proceeding on April 25, 2001. As part of that presentation, USTA attached a table showing the CALEA capability of eight wireline manufacturers. Four of those manufacturers – Siemens, Nortel, Lucent, and AG Communications Systems (“AGCS”) – included all six punch list capabilities on six major switches. On five of these switches – Siemens “EWSD,” Siemens “DCO,” Nortel “DMS-10,” Lucent “5E,” and AGCS “GTD5” – a toggle permits each capability to be disabled if it is not required. On the remaining switch – Nortel “DMS-100” – a toggle permits each capability except party hold/join/drop to be disabled if it is not required. There was less information available regarding the switches of the other four wireline manufacturers – Mitel, Redcom, Ericsson, and American Digital Switching (“ADS”). For the Mitel “GX5000,” it was not known whether the punch list capabilities would be offered; for the Redcom “MDXI,” software version 6 did not include the punch list capabilities and software version 7, due in mid-2002, is scheduled to include two punch list capabilities; for the Ericsson “AKE10,” a software release date had not been established; and for the “ADS Centura 2000,” there was no resolution regarding the punch list capabilities. See USTA *Ex Parte* Presentation, CC Docket 97-213, filed April 26, 2001, at Table.

<sup>134</sup> Accordingly, software costs for the punch list capabilities may no longer be variable based upon the number of punch list capabilities that we deem to be CALEA requirements.

<sup>135</sup> See, e.g., 47 U.S.C. § 229(e) and collateral state regulations.

<sup>136</sup> See Section 109(d) of CALEA, 47 U.S.C. § 1008(d).

<sup>137</sup> 47 U.S.C. § 1008(b).

<sup>138</sup> See 140 Cong. Rec. H10773-02, 10780 (daily ed. October 4, 1994) (statement of Rep. Markey).

describe what “basic residential” service is in the wireless context, nor have we differentiated between residential and other classes of wireless service.<sup>139</sup> By contrast, the concept of “residential ratepayer” has historically been used in the context of rate regulation for wireline telecommunication service, which traditionally differentiates rates for residential and business customers. Interpreting the legislative history to reflect Congress’s desire to ensure that basic wireline telephone rates would not be significantly affected by CALEA is supported by other provisions in CALEA. For example, Section 229(e)(1) allows carriers to petition the Commission to adjust rates to recover costs expended in satisfying CALEA’s capability requirements, and Section 229(e)(3) directs the Commission to convene a Federal-State joint board to recommend appropriate changes to the Commission’s rules for recovering costs pursuant to the Commission’s jurisdiction. Both of these provisions apply only to wireline telecommunications carriers. Pursuant to Section 332 of the Communications Act, states do not have authority to regulate rates for commercial mobile radio services<sup>140</sup> and the Commission has forbore from such rate regulation.<sup>141</sup> Because Congress enacted Section 332 (and the Commission adopted its forbearance decision) prior to CALEA, it is reasonable to conclude that Congress was aware of the lack of rate regulation for wireless services. Accordingly, it is appropriate to limit our consideration of the effect on residential ratepayers to those whose rates are regulated.

63. In addition, we note that at the time CALEA was enacted in October 1994, there were many more households with telephones than wireless subscribers.<sup>142</sup> Moreover, we note that about 94% of households had telephone service when CALEA was enacted and that “basic residential telephone service” at that time was almost entirely wireline.<sup>143</sup> Accordingly, it seems clear that, in expressing

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<sup>139</sup> We recognize that some wireless subscribers may use that service as a substitute for traditional wireline service, but we have only limited data on the extent to which that occurs; see n.143, *infra*.

<sup>140</sup> 47 U.S.C. §332 (enacted as part of the Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-166, Title VI, §6002(b), 107).

<sup>141</sup> Implementation of Sections 3(N) and 332 of the Communications Act – Regulatory Treatment of Mobile Services, *Second Report and Order*, GN Docket No. 93-252, 9 FCC Rcd 1411 (1994).

<sup>142</sup> The number of U.S. households with telephones is about 102 million currently, and was about 94 million at the time CALEA was enacted. See *Telephone Subscribership in the United States*, released by the FCC’s Common Carrier Bureau (now Wireline Competition Bureau) on February 7, 2002. Table 1 shows that the number of households with telephones was 101.7 million as of July 2001, 100.2 million as of November 2000, and 93.7 million as of November 1994. Appendix C, Table 1 of our *Sixth Annual CMRS Competition Report*, FCC 01-192, released July 17, 2001, shows that there were 109.5 million wireless subscribers as of December 2000 and 24.1 million wireless subscribers as of December 1994. Thus, there are currently more wireless subscribers than households with telephones; however, as of late 1994, there were about four times as many households with telephones as wireless subscribers.

<sup>143</sup> See *Telephone Subscribership in the United States*, *supra* n.142. Table 1 shows that, as of November 1994, the percentage of households with telephones was 93.8%. While, as discussed in n.142, there were about 24 million wireless subscribers at that time, it would have been cost-prohibitive for households to use wireless telephone service as a substitute for basic wireline telephone service in late 1994 because wireless telephone rates were much higher than at present. Appendix C, Table 8 of the *Sixth Annual CMRS Competition Report* shows that the cellular consumer price index (“CPI”) declined by 29% between December 1997 and December 2000, versus an increase in the local telephone CPI of 10% during that same period. The cellular CPI is not available prior to December 1997, but in 2001 the Strategis Group, Inc. estimated that the average price per minute for mobile telephone service was 57 cents in 1994, 43 cents per minute in 1997, and 21 cents per minute in 2000; see Thomas J. Sugrue, Opening Remarks to *Sixth Annual CMRS Competition Report*, June 20, 2001, at slide 5. Thus, it seems clear that between 1994 and 2000 there was a major decrease in wireless rates that fueled the dramatic increase in the number of wireless subscribers during that period, including some households substituting wireless service for wireline service. According to a Yankee Group survey of early 2001, about 3% of wireless subscribers did not have a wireline telephone, and a CTIA survey of early 2000 estimated that this percentage could be as high as 5%. See *Sixth Annual CMRS Competition Report*, *supra* n.142 at 32 n.207.

concern about the impact of CALEA compliance on “residential ratepayers,” Congress was referring to wireline subscribers.

64. We believe that the general approach we have taken with our analysis of “cost-effective” is applicable in considering ways of minimizing the impact on residential ratepayers. That which is “cost-effective” is also likely to correlate to the effect on residential ratepayers, and so many of the factors we have identified in our discussion of §107(b)(1) will also apply to a §107(b)(3) analysis. We conclude that the capabilities that we have identified – and the means of implementing them – do serve to minimize the cost on residential ratepayers. The DoJ/FBI buyout agreements incorporate costs related to the four punch list capabilities, and therefore will serve to reduce the overall cost borne by carriers and passed through to their ratepayers – including residential ratepayers.<sup>144</sup> The “flexible deployment program” sponsored by DoJ/FBI permits carriers, in many circumstances, to deploy CALEA-compliant software over the course of regularly scheduled upgrades. The incorporation of CALEA deployment into the regular business cycle can produce efficiencies that reduce CALEA compliance costs.<sup>145</sup> Section 229(e) of the Communications Act sets forth a cost recovery process by which a common carrier may petition the Commission to adjust charges to recover costs associated with CALEA compliance.<sup>146</sup> Because this provision gives the Commission authority to approve these changes “consistent with maintaining just and reasonable charges,” and in furtherance of both the Communications Act and CALEA, we conclude that any CALEA-based charges that traditional wireline carriers wish to pass on to residential ratepayers will be afforded additional Commission review, whereupon the Commission can insure that residential ratepayer costs are minimized. Finally, Section 109 serves as an ultimate check on cost considerations. To the extent that a carrier believes that it cannot undertake the implementation of a particular capability with respect to any equipment, facility, or service, it may request a determination as to whether the capability is “reasonably achievable.”<sup>147</sup> We conclude that the punch list capabilities are supported by DoJ/FBI cost-minimization programs that serve to shift costs away from or ameliorate the cost impact on carriers.<sup>148</sup> These measures, in turn, minimize the impact on the residential ratepayers who otherwise might see these costs reflected in higher bills.

65. To the extent that there are costs borne by the carriers and passed through to customers, we note that it is likely that the costs would be shared by all ratepayers and, therefore, would be significantly diluted on an individual residential ratepayer basis.<sup>149</sup> The fact that costs are spread across such a large base in itself suggests another means by which provision of these capabilities will minimize the effect on residential

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<sup>144</sup> See DoJ/FBI Reply Comments at 18-19.

<sup>145</sup> *Id.* at 41.

<sup>146</sup> 47 U.S.C. §229(e).

<sup>147</sup> We reject those commenters who would have us pre-empt this capability as not “reasonably available” under Section 103(a)(2) because such an approach fails to take into account the particular equipment, facility, or service that may be used to deploy this capability on a case-by-case basis. See DoJ/FBI Reply Comments at 11. Section 109 provides a method for a carrier to obtain a determination that CALEA compliance with respect to its particular equipment, facility, or service is not “reasonably achievable” without eliminating this capability in other situations where it is, in fact, “reasonably achievable.”

<sup>148</sup> Several commenters note that these programs may not apply to all situations and, therefore, they assert that there may be particular situations in which the cost-minimization programs will not minimize costs. See, e.g., NTCA Comments at 4 (“Other carriers may have filed flexible deployment plans that the FBI finds unacceptable. These carriers will be forced to update their equipment immediately at considerable expense or face the potential fines associated with CALEA.”) We do not think that the fact that there may be some cases where the DoJ/FBI programs do not apply serves to defeat our conclusion that, as a whole, they reduce the cost to residential ratepayers associated with the implementation of the punch list capabilities.

<sup>149</sup> We discuss this concept as it is applied to each punch list capability in greater depth *infra*.



ratepayers – that the cost of CALEA compliance for any particular residential ratepayer will be minimal.<sup>150</sup> In this connection, we note that, even if the definition of “residential ratepayers” is broadened to include households that use wireless telephone service as a substitute for local wireline telephone service, there is no reason to believe that implementation of the punch list items would fail to minimize the cost on wireless residential ratepayers. In the *Third R&O*, the Commission found that five major telecommunications manufacturers – which account for the great majority of sales to wireline, cellular, and broadband PCS carriers in the United States – anticipated total revenues from carriers purchasing the four vacated punch list capabilities of about \$277 million. Of this amount, about \$159 million was anticipated in wireless revenues and about \$117 million was anticipated in wireline revenues.<sup>151</sup> While these figures do not include all carrier costs of implementing the four capabilities, in the *Third R&O* we found that, relative to other cost/revenue estimates, the manufacturers’ estimates were “the most detailed and reliable.”<sup>152</sup> Further, the FBI’s buyout and flexible deployment programs, coupled with manufacturers incorporating all punch list capabilities into one software upgrade, would likely lessen costs to such an extent that total costs of implementing the four vacated capabilities nationwide would be well below \$159 million to wireless carriers and \$117 million to wireline carriers. Nonetheless, assuming pessimistically that those costs would eventuate and that they would be passed on to wireless subscribers and residential wireline ratepayers in full as a one-time charge, the respective charge per wireless subscriber and residential wireline ratepayer would average about \$1.45 and \$1.20.<sup>153</sup> Alternatively, if these costs to wireless and wireline carriers were converted to a rate increase to wireless subscribers and residential wireline ratepayers, the rate increase would average only

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<sup>150</sup> We recognize that these costs will likely be greater on a individual residential ratepayer basis in those rural areas where there is a smaller base over which to spread costs. See RCA comments at 7. These carriers may serve areas that do not have a history of LEA surveillance requests and are eligible for DoJ/FBI extended implementation. This circumstance will serve to reduce the cost to carriers and, thus, residential ratepayers, because of implementation efficiencies. We acknowledge that this does not change the per capita cost rural ratepayers may have to pay vis-à-vis urban customers, but note that CALEA requires us only to establish standards that minimize the cost on residential ratepayers. We read this provision to require us to minimize the cost of compliance on residential ratepayers, and not as a mandate to insure that all ratepayers pay exactly the same costs – whether they are in a rural area with a smaller ratepayer base or because they are in a high-crime area in which the flexible deployment program is unavailable.

<sup>151</sup> *Third R&O*, *supra* n.2, at Appendix B. These figures are derived by adding the estimated total revenues for the four vacated punch list capabilities: party hold, join, drop messages; subject-initiated dialing and signaling; in-band and out-of-band signaling; and dialed digit extraction. The sum of wireless and wireline revenues does not add to the total due to rounding.

<sup>152</sup> *Id.* at n.68. We think this continues to be the case, particularly because these manufacturers represent such a large portion of the network equipment industry and we have not received any new reliable industry-wide cost estimates to replace these earlier estimates.

<sup>153</sup> As discussed in n.142, *supra*, there are currently about 109.5 million wireless subscribers and about 101.7 million households with telephones. Dividing the \$159 million estimated wireless cost by 109.5 million wireless subscribers yields a cost of \$1.45 per wireless subscriber. The cost per residential wireline ratepayer cannot be calculated as exactly because some of the 101.7 million households that have telephones may have wireless service only. The Bureau of Census includes questions on telephone availability as part of its Current Population Series (“CPS”). The question asked in the CPS that is most relevant to the issue of the number of households that have wireline service is: “Is there a telephone in this house/apartment?” See *Telephone Subscribership in the United States*, *supra* n.142 at 2. That question could be interpreted by some respondents to mean a wireline telephone only, *i.e.*, a telephone that can be used only in the house/apartment; while other respondents may interpret the question to mean either a wireline or wireless telephone, *i.e.*, either a telephone that can be used only in the house/apartment or a telephone that can be used both in the house/apartment and outside the house/apartment. Based on the surveys done by the Yankee Group and CTIA, *supra* n.143, we will use as the likely range of households that have wireline telephones 96-98 million. Dividing the \$117 million estimated wireline cost by 98 million residential wireline ratepayers yields \$1.19 per residential wireline ratepayer, and dividing the \$117 million estimated wireline cost by 96 million residential wireline ratepayers yields \$1.22 per residential wireline ratepayer.

pennies per month per subscriber/ratepayer.<sup>154</sup> Accordingly, we find that the likely worst-case cost impact of carriers implementing the four vacated capabilities would be minimal on both wireless subscribers and residential wireline ratepayers.

### C. Dialed Digit Extraction

66. This capability would require the telecommunications carrier to provide to the LEA on the call data channel the identity of 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 represents the ultimate destination of the call. As discussed in paragraph nine, *supra*, the Court found that the Commission's treatment of dialed digit extraction in the *Third R&O* was insufficient because it did not explain the basis for its conclusion that this capability constituted call-identifying information, nor how granting LEAs this capability would satisfy CALEA's requirements by cost-effective methods or protect the privacy and security of communications not authorized to be intercepted.

67. Comments. Several commenters claim that post-cut-through digits are never call-identifying from the perspective of the originating carrier. USTA states that once the originating telephone network has processed a phone call, the originating network does not redirect the call, change its destination or alter the point of termination.<sup>155</sup> Similarly, CTIA states that digits dialed after a call is connected are always content from the perspective of the originating carrier, even though those digits may be call identifying from the perspective of the subsequent interexchange carrier. CTIA claims that this is especially true for wireless carriers, which have no local loop, because the digits used to complete the call are carried on the signaling or control channels and post-cut-through digits are carried over the content channels.<sup>156</sup> CTIA also maintains that events that occur on the switches or facilities of other carriers are not contemplated or addressed by the J-Standard.<sup>157</sup> PCIA further notes that a dialed digit extraction capability would require an originating carrier to electronically monitor the call content channel in order to decode all digits dialed after calls are connected, and that some post-cut through digits are used for a variety of transactional purposes rather than for call routing.<sup>158</sup>

68. USTA also argues that inclusion of dialed digit extraction capability would be onerous for carriers because it would require them to subvert normal call processing needs and buy additional equipment solely to accommodate surveillance activities. USTA further argues that J-STD-025 provides for use of a call content channel to monitor the transmit path from a subject and to extract any post dialed digits, and that this existing capability is more economical than a dialed digit extraction capability would be.<sup>159</sup> PCIA contends that post-cut through digits are not reasonably available to the originating carrier

<sup>154</sup> Specifically, a cost of \$159 million to wireless carriers, converted to a rate increase to 109.5 million wireless subscribers, would average 6.8 cents per month per wireless subscriber using a relatively rapid amortization period of two years and a relatively high discount rate of 12%; and would average 2.8 cents per month per wireless subscriber using a relatively slow amortization period of five years and a relatively low discount rate of 6%. A cost of \$117 million to wireline carriers, converted to a rate increase to 96-98 million residential wireline ratepayers, would average 5.6-5.7 cents per month per residential wireline ratepayer using a relatively rapid amortization period of two years and a relatively high discount rate of 12%; and would average 2.3-2.4 cents per month per residential wireline ratepayer using a relatively slow amortization period of five years and a relatively low discount rate of 6%.

<sup>155</sup> USTA Comments at 10.

<sup>156</sup> CTIA Comments at 13. *See also* Cingular Comments at 6; CDT Comments at 6.

<sup>157</sup> CTIA Comments at 12-14.

<sup>158</sup> PCIA Comments at 8-9.

<sup>159</sup> USTA Comments at 9-11.

that completed the call, and that the originating carrier regards all post-cut through digits as call content, even if they are used for call routing.<sup>160</sup> PCIA further contends that providing these digits to LEAs would be a particular problem for wireless carriers because those carriers do not use “tone decoders” in call processing.<sup>161</sup> Thus, PCIA contends, wireless carriers would have to make major, expensive modifications to their switches, including installation of tone decoders that are otherwise unnecessary.<sup>162</sup> Similarly, AT&T contends that the cost of implementing a dialed digit extraction capability for wireless carriers would be exorbitant and not cost-effective because dual tone multi frequency (“DTMF”) tone extractors and decoders would be required for every surveillance target and every telephone line potentially usable by that target with advanced calling features.<sup>163</sup> AT&T recommends that, should the Commission require this capability, we consider requiring LEAs to extract post-cut-through dialed digits on content channels using their own decoders.<sup>164</sup> AT&T contends that this would require LEAs to purchase only a limited number of tone decoding collection devices, which would be much less expensive and more efficient than requiring every switch in the nation to be overhauled to provide a dialed digit extraction capability. AT&T states that the FBI has estimated that it could cost LEAs up to \$20 million per year to provide their own decoding, but AT&T asserts that this would be far less than the economic burden that would be forced upon the telecommunications industry should carriers be required to provide and implement thousands of DTMF decoders.<sup>165</sup>

69. Commenters also claim that there are alternate means for LEAs to obtain the dialed digit functionality. BellSouth and others contend that a LEA could obtain post-cut-through digits by serving the originating carrier with a Title III order, which permits LEAs to access call content.<sup>166</sup> Alternatively, BellSouth suggests that a LEA could obtain these digits by serving the terminating carrier with a pen register order.<sup>167</sup> CDT states that dialed digit extraction entails the impermissible interception of content, and also states that the alternative means discussed above – namely, the use of Title III warrants on originating carriers or pen register orders on terminating carriers – will serve to protect privacy.<sup>168</sup> CTIA also expresses concern about protecting the privacy of post cut through dialed digits, and suggests that a dialed digit extraction capability could lead to a situation where the originating carrier would have to extract spoken digits from the content channel.<sup>169</sup> BellSouth also expresses concern that requiring this capability in the absence of a Title III warrant will jeopardize its responsibility with respect to customer privacy.<sup>170</sup>

70. Both CTIA and AT&T contend that we must consider the legality of requiring dialed digit extraction on a pen register.<sup>171</sup> CTIA maintains that 18 U.S.C. §3121(c) was intended to codify then-existing New York law that made it unlawful to use a pen register device that also had the capacity to

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<sup>160</sup> PCIA Comments at 8.

<sup>161</sup> *Id.* at 9.

<sup>162</sup> *Id.*

<sup>163</sup> AT&T Comments at 11.

<sup>164</sup> *Id.* at 12.

<sup>165</sup> *Id.* at 12-13.

<sup>166</sup> BellSouth Comments at 11. *See also* CDT Comments at 7; PCIA Comments at 3-6; CTIA Comments at 18-22.

<sup>167</sup> BellSouth Comments at 11. *See also* CDT Comments at 7.

<sup>168</sup> CDT Comments at 7.

<sup>169</sup> CTIA Comments at 13.

<sup>170</sup> BellSouth Reply Comments at 17.

<sup>171</sup> CTIA Reply Comments at 13; AT&T Comments at 7.

acquire the contents of the communication.<sup>172</sup> Others state that DoJ/FBI has not identified the legal authority that would permit it to obtain post-cut-through digits under a pen register,<sup>173</sup> and suggest that it would be premature for us to require this functionality in the absence of assurance that LEAs could legally avail themselves of it.<sup>174</sup> BellSouth claims that the burden of proof should be on the government to “toggle on” this feature.<sup>175</sup>

71. CDT also contends that LEAs’ desire to capture all telephone numbers cannot justify requiring disclosure of content, and cites *Brown v. Waddell*,<sup>176</sup> which held that “clone” pager devices cannot be authorized under pen register authority because some of the digits intercepted may be content.<sup>177</sup> CDT also maintains that privacy cannot be protected through a “minimization” scheme, for there is no such scheme that can distinguish between post-cut-through digits that are content and those that are not, and it rejects the minimization requirements of Title III as being applicable to a pen register order.<sup>178</sup> Finally, Cingular claims that if some digits are not call-identifying information, then carriers cannot be required to provide all digits,<sup>179</sup> and WorldCom asks us to state that the CALEA requirements do not preclude LEAs from obtaining the proper legal authority before they obtain information that is otherwise required under the statute.<sup>180</sup>

72. DoJ/FBI refute claims that post-cut-through dialed digits are not “call-identifying information” from the perspective of the originating carrier because that carrier does not use the information to route the call. Instead, DoJ/FBI claim that CALEA is written to include information that identifies the origin, direction, destination, or termination of a communication and does not consider how a particular carrier handles the information.<sup>181</sup> DoJ/FBI also state that while originating carriers may not themselves use post-cut-through digits for call routing purposes, neither the statutory definition of call-identifying information nor CALEA Section 103(a)(2) limits a carrier’s obligation to call-identifying information that is used by the carrier itself.<sup>182</sup> DoJ/FBI also assert that to hold that dialing and signaling information is not call-identifying if a particular carrier does not use the information for call routing purposes would mean that, in many cases, telephone numbers would not qualify as call-identifying information. DoJ/FBI cite a conventional long-distance call in which the originating carrier uses only the area code to route the call. DoJ/FBI maintain that under the commenters’ interpretation of call-identifying information, only the area code would qualify as call-identifying; hence the originating carrier would be under no obligation to provide an LEA the rest of the telephone number. DoJ/FBI contend that CTIA is incorrect in suggesting that, if carriers were to supply to LEAs post-cut-through dialed digits,

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<sup>172</sup> CTIA Comments at 20, citing *People v. Bialostok*, 80 N.Y.2d 738, 610 N.E.2d 374 (1993).

<sup>173</sup> BellSouth Reply Comments at 15.

<sup>174</sup> *Id.* at 15-16. See also AT&T Comments at 10; WorldCom Comments at 5.

<sup>175</sup> BellSouth Reply Comments at 16 n43.

<sup>176</sup> 50 F.3d 285 (4<sup>th</sup> Cir. 1995).

<sup>177</sup> CDT Comments at 4-7.

<sup>178</sup> *Id.* at 8.

<sup>179</sup> Cingular Reply Comments at 14.

<sup>180</sup> WorldCom Comments at 5.

<sup>181</sup> DoJ/FBI Comments at 21; DoJ/FBI Reply Comments at 12. DoJ/FBI suggest that if a subject dials the same number to reach the same party on two different occasions – the first by calling the party directly and the second by dialing the number after being “cut-through” to a calling card service – that “[t]here is no possible statutory basis for suggesting that the same telephone number is ‘call-identifying information’ the first time and something else the second time.” DoJ/FBI Comments at 19.

<sup>182</sup> DoJ/FBI Comments at 20-21.

that would expand LEAs' surveillance capabilities beyond their traditional scope. DoJ/FBI maintain that LEAs have always had the capability to obtain dialed digits, post-cut-through as well as pre-cut-through, and that only the methods of obtaining those dialed digits have varied.<sup>183</sup> DoJ/FBI also claim that, because dialed digit extraction is merely a capability, we may require it without conflicting with CALEA's provision that limits a LEA from requiring a specific design of equipment, facilities, services, features, or system configurations.<sup>184</sup>

73. As DoJ/FBI state, the applicability of the pen register statute to post-cut-through dialed digits has been disputed in the comments to this proceeding, and the Court noted that this issue has yet to be resolved.<sup>185</sup> However, DoJ/FBI contend that we need not resolve this issue if we distinguish between providing the capability to perform dialed digit extraction and requiring carriers to deliver this information.<sup>186</sup> We can find the former is required as a CALEA capability, DoJ/FBI contend, while emphasizing that a carrier need only provide this information pursuant to a lawful instrument, whether that instrument is a pen register or a Title III warrant. Furthermore, DoJ/FBI contend, we can further CALEA's privacy considerations by requiring carriers to have the capability to turn off dialed digit extraction and refining the dialed digit extraction requirement if technology is subsequently developed that distinguishes between post-cut-through digits that are "call-identifying" and those that are content.<sup>187</sup>

74. DoJ/FBI distinguish *Brown v. Waddell* as inapplicable to our analysis. DoJ/FBI maintain that clone pagers are used by LEAs to intercept content messages transmitted to digital display pagers, and that is why those pager devices cannot be authorized under pen register authority.<sup>188</sup> Instead, DoJ/FBI claim, because digital pagers are used to display visual messages, "[t]he whole point of using a clone pager is to obtain the content of those messages."<sup>189</sup> For dialed digit extraction, LEAs seek those post-cut-through digits that are call-identifying information. Similarly, DoJ/FBI contend that the pen register minimization provision in 18 U.S.C. §3121(c) does not preclude LEAs from recording and decoding post-cut-through digits that are used in call processing.<sup>190</sup> DoJ/FBI also refute CTIA's contention that this provision was intended to federalize the state law decision in *People v. Bialostok* regarding the treatment of pen registers under New York Criminal Procedure Law.

75. DoJ/FBI ask us to reject the alternatives that parties have suggested – serving the originating

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<sup>183</sup> DoJ/FBI Reply Comments at 14.

<sup>184</sup> *Id.* at 23 n9. The applicable provision is codified at 42 U.S.C. §103(b)(1)(A).

<sup>185</sup> DoJ/FBI Comments at 50. DoJ/FBI acknowledge that post-cut-through digits that are dialed for transactional purposes do not constitute call-identifying information, but contend that post-cut-through telephone numbers are call-identifying information.

<sup>186</sup> *Id.* at 50-51. "By making clear its decision is directed solely at the issue of capability, not that of legal authorization, the Commission can ensure that carriers do not mistakenly regard themselves as 'bound' by the Commission's order to deliver post-cut-through digits. If a court determines that the pen register statute does not provide sufficient legal authority for a carrier to perform dialed digit extraction, the Commission's decision would not preclude such a determination."

<sup>187</sup> *Id.* at 51-52 (stating that "[i]f the Commission wishes to do so, it can modify the Third Report and Order to make this toggling capability a condition for dialed digit extraction, thereby ensuring that carriers can execute pen register orders without jeopardizing 'the privacy and security of communications not authorized to be intercepted' if a particular court differs with the government regarding the legality of requiring post-cut-through digits under the pen register statute.")

<sup>188</sup> DoJ/FBI Reply Comments at 27.

<sup>189</sup> *Id.*

<sup>190</sup> *Id.* at 26. The statute requires LEAs to use "reasonable available" technology to restrict recording and decoding to the dialing and signaling information used in call processing.

carrier with a Title III warrant, or serving the terminating carrier with a pen register order – as failing to “meet the assistance requirements” of CALEA.<sup>191</sup> DoJ/FBI claim that these methods are inconsistent with CALEA because they do not ensure that LEAs can obtain the information they seek, and because they would limit LEAs’ ability to obtain information “before, during, or immediately after” the communication has taken place.<sup>192</sup> DoJ/FBI claim that were we to accept these alternatives, we would fail to give meaning to the requirement in Section 103(a)(2) of CALEA that every carrier must be capable of delivering all reasonably available call-identifying information to law enforcement contemporaneously with the transmission of the underlying communication.<sup>193</sup>

76. With respect to the cost of implementing a dialed digit extraction capability, DoJ/FBI concede that this capability may require additional hardware for certain switch platforms, but note that to the extent these hardware add-ons are attributed to capacity requirements, carriers may seek reimbursement under the capacity provisions of DoJ’s cost recovery regulations,<sup>194</sup> and further note that the cost of modifying switches placed into service before 1995 will not be borne by carriers.<sup>195</sup> DoJ/FBI also refute claims that it would be less expensive for originating carriers to deliver post-cut-through digits to LEAs on a call content channel and to have the LEAs use their own tone decoders to extract dialed digits, and contend that this option should be rejected for privacy reasons because LEAs would then receive all of the content of the call.<sup>196</sup>

77. Discussion. As an initial matter, we conclude that the dialed digit extraction capability provides call-identifying information. Post-cut-through digits identify, under many circumstances, a communication’s destination or a termination. For example, a party may dial a toll-free number to connect to a long distance carrier (e.g. 1-800-CALL-ATT) and subsequently enter another phone number to be connected to a party. That second number identifies a “destination” because it is “a party or place to which a call is being made.” If a successful connection is made, that second number also identifies a “termination” because it is the called or call-receiving party. We recognize that a subject may also dial digits that are not call-identifying information – such as a bank account or social security number – but note that many post-cut-through dialed digits simply route the call to the intended party and are, therefore, unquestionably call-identifying information even under a narrow interpretation of that term.

78. We disagree with those commenters who contend that dialed digits are not “call-identifying” because a particular carrier does not use that information as part of its call processing. Such an approach would recast CALEA’s focus from the interception of particular communications (which may pass through several carriers) to the operations of particular carriers. “Call-identifying information” is defined in terms of “communication generated or received by a subscriber.”<sup>197</sup> The definition says nothing about whether a carrier uses the dialed digits as part of its own call processing nor does it distinguish how the carrier handles those digits within its network.<sup>198</sup> We also do not find any support for a carrier-based

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<sup>191</sup> *Id.* at 24.

<sup>192</sup> *Id.* (citing 47 U.S.C. §§1002(a)(2) and 1006(b)(1)).

<sup>193</sup> *Id.* at 30.

<sup>194</sup> We note, however, that, pursuant to the FBI’s *Final Notice of Capacity*, telecommunications carriers were required to file “statements of submission” by September 8, 1998 to apply for reimbursement for expenses incurred to meet the FBI’s capacity requirements. See Implementation of Section 104 of the Communications Assistance for Law Enforcement Act, *Final Notice of Capacity*, 63 FR 12218 (1998).

<sup>195</sup> DoJ/FBI Comments at 40, 43.

<sup>196</sup> DoJ/FBI Reply Comments at 23.

<sup>197</sup> 47 U.S.C. §1001(2).

<sup>198</sup> Post-cut-through digits may be handled on the content channel as opposed to the call data channel. See, e.g., AT&T Comments at 6.

distinction in the legislative history of the Act.<sup>199</sup> Although CALEA considers whether a carrier can reasonably obtain call-identifying information (no one has suggested, for example, that a carrier must provide a LEA information about a call it has not carried), it does not turn on how a carrier treats that information. Therefore, we think Verizon is correct when it observes that dialed digits may be “call-identifying” for purposes of CALEA even if they are not so from a carrier’s perspective.<sup>200</sup> We also agree with DoJ/FBI that limiting “call-identifying information” to that information used by a particular carrier to process calls could lead to absurd results, such as an originating carrier declining to provide a LEA with the seven digits dialed after the area code in a non-post-cut-through long distance call by claiming that it is not “call-identifying information” from that carrier’s perspective.

79. Section 103(a) of CALEA requires carriers to be capable of “expeditiously isolating” wire and electronic communications and call-identifying information to enable LEAs to obtain this information “concurrently with their transmission from the subscriber’s equipment, facility, or service....” (in the case of the interception of wire and electronic communications)<sup>201</sup> or “before, during, or immediately after the transmission of a wire or electronic communication” (in the case of call-identifying information).<sup>202</sup> This timing requirement leads us to reject the alternative of having a LEA serve the terminating carrier with a pen register order to obtain those dialed digits that were placed once a call has been cut-through from the originating carrier. Under this suggestion, we can envision a scenario in which a suspect could connect to multiple interexchange carriers before dialing the final phone number. In that case, the LEA would have to submit pen register orders to each interexchange carrier and, because the identity of each new carrier would only be identified by one immediately before it in the call history, the LEA would have to initiate each pen register sequentially. This process would not simply be burdensome on LEAs; it is inconsistent with Section 103(a) because the government would be unable to obtain call-identifying information concurrently with its transmission to or from a subscriber. Dialed digit extraction, by contrast, does not suffer from this time lag problem.

80. We also find that dialed digit extraction is a capability that is “reasonably available to the carrier” under Section 103 of CALEA.<sup>203</sup> Whether a carrier does or does not process or use these digits in the course of a communication strikes us as much less important for purposes of this analysis than whether the carrier does or does not have access to the digits. PCIA and other commenters note that dialed digit extraction will require greater use of tone decoders in existing switches and the installation of

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<sup>199</sup> CALEA’s legislative history describes “call-identifying” information as information that describes communication “placed to, or received by, the facility or service that is the subject of the court order or lawful authorization.” H.R. Rep. No. 103-827, 103<sup>rd</sup> Cong., 2d Sess (1994) at 21. We do not think the legislative history’s statement that CALEA is “not intended to guarantee ‘one-stop shopping’ for law enforcement” alters our analysis. See H.R. Rep. No. 103-827, 103<sup>rd</sup> Cong., 2d Sess (1994) at 21. This discussion relates to whether a communication is within a particular carrier’s control – and not whether a communication is “call-identifying information” for purposes of CALEA. As discussed, *infra*, post-cut-through digits are available at a carrier’s Intercept Access Point, which suggests that these communications are within a carrier’s control.

<sup>200</sup> “Post-cut-through dialed digits may include the telephone numbers dialed after connecting to a long-distance carrier, in which case they are call-identifying information under CALEA, as they identify the destination of a call. But these digits are call identifying to the long distance company to which the call is delivered, not to the local exchange carrier that merely passes them on just like the rest of the content of the call. Information is not call identifying when the carrier involved in the surveillance does not use it for that purpose.” Verizon Comments at 4. We disagree with Verizon insofar that it would have us hold that this information is not call-identifying.

<sup>201</sup> 47 U.S.C. § 1002(a)(1).

<sup>202</sup> 47 U.S.C. § 1002(a)(2).

<sup>203</sup> *Id.* As mentioned in n.7, *supra*, CALEA does not define the term “reasonably available.”

tone decoders on wireless networks.<sup>204</sup> Because the deployment of tone decoders may result in additional hardware costs, and may require carriers to engage in an activity they do not currently perform (the identification of post-cut-through digits), these commenters conclude that dialed digit extraction is not “reasonably available.”<sup>205</sup> We disagree with this approach, which suggests that, if carriers have to expend funds on tone decoders, a dialed digit extraction capability is not “reasonably available.” The J-Standard defines “reasonably available” as information “present at an Intercept Access Point for call processing purposes.”<sup>206</sup> We think this is a better approach – something is “available” if it is accessible, for example<sup>207</sup> – but we question why the information must be present “for call processing purposes.” We read “reasonably” as a qualifier; if information is only accessible by significantly modifying a network, then we do not think it is “reasonably” available. We reject, *infra*, the proposal that a carrier provide a LEA with the content channel and look to the LEA to obtain post-cut-through dialed digits using their own decoders. When post-cut-through dialed digits are present at a carrier’s Intercept Access Point, we find that they can be made available to a LEA without significantly modifying the carrier’s network.<sup>208</sup> We recognize that there are costs associated with the implementation of dialed digit extraction – in particular, the installation of additional tone decoders – but we do not believe that these costs (especially in light of the reimbursement mechanisms) make the capability any less accessible to carriers. Moreover, because the Commission must take into consideration cost factors when it sets standards under Section 107(b) of CALEA, we think cost concerns are better addressed as part of our Section 107(b) analysis, as opposed to our inquiry as to whether information is “reasonably available” to a carrier.

81. Although we have found that dialed digit extraction is a capability that meets CALEA’s assistance capability requirements under Section 103 of the Act, CALEA requires any technical standards the Commission adopts to comply with the provisions of Section 107(b). Section 107(b)(2) requires that any standards we require must “protect the privacy and security of communications not authorized to be intercepted.”<sup>209</sup> Because not all post-cut-through digits will be “call-identifying information,” several commenters contend that this provision bars us from requiring dialed digit extraction. We disagree.

82. As DoJ/FBI note, we can distinguish between providing the capability to perform dialed digit extraction and deciding whether this information must be delivered under a particular legal authority. While we believe it is clear that LEAs may receive post-cut-through dialed digits that constitute call-identifying information, there currently appears to be no technology that can separate those post-cut-through dialed digits from other post-cut-through dialed digits that are not call-identifying (*i.e.*, that are call content). Moreover, as the Court noted in the *Remand Decision*, although the government contends that a LEA may receive all post-cut-through digits with a pen register order, subject to CALEA’s

<sup>204</sup> PCIA Comments at 8. Cingular Comments at 7. USTA Comments at 10. In wireline calls, a tone decoder in a switch is used to identify the number being dialed by the caller. After the call is cut-through, the decoder is available for another call. In wireless systems, tone decoders are not typically used in the call set-up process. PCIA Comments at 8-9.

<sup>205</sup> See, e.g., USTA Comments at 10: “The inclusion of post-cut-through dialed digits in the J-Standard would be extremely onerous for carriers because it would require carriers to subvert normal call processing needs and buy additional equipment solely to accommodate surveillance activities. Such a result would not be cost effective. In the words of the statute, post cut-through dialed digits are not *reasonably available* from the originating carrier” (emphasis in original).

<sup>206</sup> J-STD-025 § 4.2.1.

<sup>207</sup> Webster’s New World Dictionary, College ed. (1962.) at 101.

<sup>208</sup> Although commenters discuss the hardware modifications that will be required to collect this information – *i.e.* the installation of tone decoders – none argue that the basic structure of the network will not allow for the provision of a dialed digit extraction capability. See also *Third R&O*, *supra* n.2, at ¶¶ 28-31.

<sup>209</sup> 47 U.S.C. § 1006(b)(2).



requirements that the LEA uses “technology reasonably available to it” to avoid processing digits that are content, no court has yet considered that contention and it may be that a Title III warrant is required to receive all post-cut-through digits.<sup>210</sup> We strongly disagree with CTIA’s contention that “the Commission must decide the applicability of the pen register statute to post cut through dialed digits so that a subsequent court can be assured that the law was applied and privacy considered in the decision-making process.”<sup>211</sup> The Court took issue with the Commission precisely because the Commission made such a conclusion. Although the Commission assumed in the *Third R&O* that a pen register order would always be sufficient for a LEA to obtain post-cut-through dialed digits in all cases, the Court observed that “[n]o court has yet considered that contention.”<sup>212</sup> We think it is inadvisable for us to make such a blanket conclusion and we decline to do so here.

83. In a similar vein, we decline to decide whether a Title III warrant is an alternative to dialed digit extraction. Because post-cut-through digits include call identifying information, LEAs should be able to obtain this information under CALEA so long as they have a valid legal instrument. Although a Title III warrant – which would give a LEA call content – may be one such valid instrument, it is not up to us to decide whether it is the only one that could be used. Were we to conclude that a Title III warrant represents an alternative means of accomplishing the dialed digit extraction capability we would necessarily have to assume that a pen register does not entitle a LEA to dialed digit extraction. Such a decision would improperly usurp the role of the courts to decide what legal instrument is necessary to obtain the dialed digit information. DoJ/FBI contend that by enacting the provision found in 18 U.S.C. §3121(c) that requires LEAs to use technology reasonably available to them to limit recording and decoding to dialing and signaling information used in call processing, Congress understood the scope of a pen register to include post-cut-through dialed digits in some cases.<sup>213</sup> We do not know whether this is true, and it may be that a Title III warrant will be a LEA’s only alternative for obtaining post-cut-through dialed digits in some cases.<sup>214</sup> We conclude, however, that that is a legal question that should be left to a court that is considering a specific surveillance request.<sup>215</sup>

84. Our approach is similar to the approach that we employed with respect to a packet-mode communications capability. Our packet-mode approach was upheld by the Court in the *Remand Decision*, and we noted that fact in the *Order* in this proceeding:

At the outset, we note that the Court affirmed our findings in the *Third R&O* not to remove the packet-mode capability that was included in the industry established safe harbor J-STD-025. As we discussed above, the interim standard does not specify the call identifying information for packet communications. As a result, both call-identifying information and call content could be provided for electronic surveillance under the interim standard. The Court noted that nothing in our treatment of packet-mode communications requires carriers to turn over content information to LEAs absent lawful

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<sup>210</sup> 227 F.3d at 462.

<sup>211</sup> CTIA Reply Comments at 13.

<sup>212</sup> *Remand Decision*, 227 F.3d at 462.

<sup>213</sup> DoJ/FBI *Ex Parte* Presentation, CC Docket 97-213, filed April 18, 2001, at 2.

<sup>214</sup> Similarly, we do not know whether changes to wiretap law embodied in the USA PATRIOT Act will affect the scope and nature of pen registers and trap and trace device warrants issued by the courts.

<sup>215</sup> We reject AT&T’s suggestion that we use the structure of CALEA (which gives the Commission authority to resolve certain standards issues) to adopt a “working assumption” that courts will conclude that a Title III order is necessary for LEAs to obtain post-cut-through dialed digits. AT&T Comments at 9-10. Again, as noted above, it is not for the Commission to decide the particular legal authority necessary to obtain post-cut-through dialed digits. Rather, the Commission is to decide whether such capability is required under CALEA.

authorization, and therefore carriers have no reason to believe that they will be forced by our packet-mode decision to submit unauthorized information to LEAs. We agree with DoJ/FBI that while parties may dispute whether a carrier may supply to a LEA the entire packet (*i.e.*, content and call-identifying information) in response to a pen register order, there appears to be no dispute that a carrier must supply the entire packet in response to a Title III order. Thus, the interim standard for the packet capability appears to be appropriate at least in some cases, even though it does not include a standard for separating call-identifying information from the content of the packet. [footnotes omitted]<sup>216</sup>

85. We find that the situation with respect to a dialed digit extraction capability parallels the situation with respect to a packet-mode communications capability. In each instance, it is clear that LEAs possessing a Title III order may receive content information, but it is unclear whether LEAs possessing only a pen register warrant may receive such information. As with any other information provided by a CALEA capability, a LEA must obtain the proper legal authority from a court.<sup>217</sup> If a LEA thinks a pen register is the proper authority to obtain information under the dialed digit extraction capability, then it must convince the court of this fact.<sup>218</sup>

86. We disagree with those commenters that suggest that we should not decide whether dialed digit extraction is a capability that is required under CALEA until after we know what the proper legal instrument is for a LEA to obtain this information. Similarly, we cannot agree with the contention that, because post-cut-through dialed digits are sometimes not call-identifying, carriers should not be required to have the capability to provide to LEAs post-cut-through digits. Because dialed digit extraction includes call-identifying information and we find that it otherwise meets the assistance capability requirements under Section 103, it should be included in our CALEA standards.

87. We do not find the cases cited by commenters to be relevant to our consideration of dialed digit extraction. *Brown v. Waddell* does not preclude LEAs from obtaining post-cut-through dialed digits with a pen register order because that decision pertains to digital display pagers whose messages are inherently content. By contrast, dialed digit extraction includes call-identifying information. *Brown* does not address whether LEAs are able to obtain a mix of content and call-identifying information under a pen register. We find no support in the record for CTIA's contention that the pen register minimization provision in 18 U.S.C. §3121(c) makes it unlawful to use a pen register that also delivers call content – either directly, or through codification of New York State Law. Instead, a plain reading of the legislative history suggests that Congress thought that LEAs would sometimes obtain call content and that it placed the burden on LEAs (as opposed to carriers) to use technology to restrict the information that the pen register captures to dialed digits that are “call-identifying.”<sup>219</sup>

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<sup>216</sup> See *Order*, *supra* n.17, at ¶ 13.

<sup>217</sup> We agree with WorldCom on this point and reiterate that LEAs must always obtain a court authorization or other valid legal instrument before a carrier can be required to provide information as part of a CALEA capability. See also Section 103(a)(4)(A), 47 U.S.C. § 1002(a)(4)(A) (requiring carriers to facilitate interceptions in a manner that protects the privacy of communications “not authorized to be intercepted.”) In each case, a court will have to consider what communications are authorized to be intercepted and what is the appropriate legal instrument for a LEA's surveillance.

<sup>218</sup> See *Remand Decision*, 227 F.3d at 465-66 (discussing how the Commission's treatment of the packet mode capability did not attempt to alter the evidentiary standard nor compel carriers to turn over call content to LEAs absent lawful authorization).

<sup>219</sup> See H.R. Rep. No. 103-827, 103<sup>rd</sup> Cong., 2d Sess (1994) at 32 (stating that government agencies installing pen registers “use, when reasonably available, technology that restricts the information captured by such device to the

88. Because the standards we adopt must protect the privacy and security of communications not authorized to be intercepted, we reject the proposal to allow a LEA to extract dialed digits on content channels using their own decoders. This alternative is not acceptable because it would require the LEA in every case, no matter the level of authorization involved, to obtain the entire content when a less intrusive alternative (dialed digit extraction, whereby carriers separate out tone information) is available. This alternative would also shift from carriers to LEAs responsibility for ensuring that interceptions are conducted in a way that protects the privacy and security of communications not authorized for interception as much as possible. Such a result would be inconsistent with Section 103(a)(4) of CALEA, which requires carriers to protect the privacy and security of communications and call-identifying information not authorized to be intercepted.

89. By concluding that LEAs may obtain dialed digit extraction information only with the appropriate legal instrument, we take into account the privacy considerations in Section 107(b)(2). Just because we determine that a dialed digit extraction capability is required under CALEA does not mean that LEAs may avail themselves of this capability in all circumstances. Instead, a LEA must continue to seek and obtain from an appropriate court the necessary authorization in order to conduct surveillance operations. The specific legal instrument, which will be based on the facts particular to each situation, will frame what communications are authorized to be intercepted. Thus, if a court determines that a pen register is insufficient to obtain post-cut-through digits because of content information contained in the communication, the court will have determined that a LEA is not authorized to obtain the information obtained by dialed digit extraction and a carrier must be able to exclude dialed digit extraction when it is presented with that pen register order. If, on the other hand, a court determines that a pen register order is sufficient for a LEA to obtain dialed digit extraction information in a particular case, then the carrier would be expected to comply with such an order. By providing for a dialed digit extraction capability but not assuming that it will be legally available to LEAs in all circumstances, we will protect the privacy of the communication that a LEA is not authorized to obtain. In doing so, however, we will not prejudge the role of a court to frame what, in a particular situation, constitutes the exact communication that a LEA is authorized and not authorized to obtain.<sup>220</sup>

90. In order to respond to the appropriate legal authority, a carrier must have the ability to turn on and off the dialed digit extraction capability. DoJ/FBI note that “many” of the software upgrades they have negotiated “include the capability for carriers to toggle individual punch list capabilities on or off,” and identify the toggle feature as a means of adding dialed digit extraction as a network capability, but allowing a carrier not to use that capability (*i.e.*, turn it off) if the carrier has reservations about the legal basis for providing all post-cut-through digits.<sup>221</sup> We agree that a toggle feature for dialed digit extraction

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dialing or signaling information necessary to direct or process a call, excluding any further communication conducted through the use of dialed digits that would otherwise be captured”).

<sup>220</sup> We do not discount the responsibility of carriers to ensure that they facilitate authorized communications interceptions in a manner that protects the privacy and security of communications not authorized for interception. *See* ¶ 88, *supra*, and 47 U.S.C. § 1002(a)(4). The burden is clearly on a LEA to convince a court that a pen register is a sufficient legal instrument to obtain dialed digit extraction information. *See* n.217, *supra*, and accompanying text. A carrier that is not convinced that a pen register order is a “valid legal instrument” to obtain dialed digit extraction may decide not to provide this information to a LEA – just as a carrier that is presented with a pen register order may conclude that it is not a “valid legal instrument” for it to provide a call content channel that has been requested by a LEA.

<sup>221</sup> Although a carrier must make information from dialed digit extraction available to a LEA upon presentation of a valid legal instrument, we do not mean to suggest that, by analogy, the provision of selected dialed digits (*i.e.* those that do not constitute call-identifying information) is a capability that is reasonably available to carriers. Were a court to determine that a LEA is authorized to obtain only those dialed digits that do not constitute call-identifying information under a particular pen register order, a carrier would have to decide if it could provide the requested information consistent with its duty under CALEA to protect the privacy of communications not authorized to be

is necessary in order to protect privacy interests under certain circumstances, without disrupting the carrier's ability to provide other punch list capabilities included in the same software. We therefore conclude that carriers must have the equipment and software to support a dialed digit extraction capability with a toggle feature. Where such a toggle feature will not be available from a carrier's vendor by the compliance deadline, that carrier may file a petition with the Commission under Section 107(c), requesting an extension of the compliance deadline.<sup>222</sup>

91. As a final matter, we turn to the cost considerations under Section 107(b)(1) and (3) of CALEA. First, we must find that dialed digit extraction meets CALEA's capability requirements "by cost-effective methods."<sup>223</sup> Because there are no alternative means of accomplishing this objective,<sup>224</sup> we cannot engage in the type of cost-comparison analysis discussed in Section III B, *supra*. However, we note that several mechanisms – including the FBI reimbursement program – do serve to minimize the cost of providing this capability. In the *Third R&O*, the Commission found that five major telecommunications manufacturers anticipated total revenues from carriers purchasing a dialed digit extraction capability of \$121 million.<sup>225</sup> Further, the FBI's buyout and flexible deployment programs, coupled with manufacturers incorporating all punch list capabilities into one software upgrade, could lessen software costs dramatically. We also note that, to the extent that a carrier requires additional DTMF tone extractors and decoders to perform two or more simultaneous wiretaps, the carrier may be reimbursed for expending funds to meet these capacity requirements.<sup>226</sup> Further, as noted in paragraph 60, *supra*, because a single software upgrade incorporating all six punch list capabilities has already been undertaken by five manufacturers, including or not including a dialed digit extraction capability may not significantly change carriers' costs. Because these factors serve to minimize the cost of implementing dialed digit extraction, we conclude that dialed digit extraction meets CALEA's capability requirements "by cost-effective methods."

92. We also find that authorizing a dialed digit extraction capability is unlikely to significantly affect residential ratepayers. The factors we previously identified as minimizing the cost for residential ratepayers – including the FBI buyout and flexible deployment programs – will be applicable to dialed digit extraction. Moreover, we note that carriers will be able to spread costs across a large ratepayer base and there is no indication that the costs of dialed digit extraction will be disproportionately borne by residential (versus other classes of) ratepayers. Even if wireline carriers were forced to bear costs as great as the \$60 million for this capability estimated by five major telecommunications manufacturers<sup>227</sup> and these costs were passed on to residential ratepayers as a one-time charge, the charge per residential ratepayer would average less than one dollar.<sup>228</sup> Alternatively, a \$60 million charge to wireline carriers, if converted to a rate increase to almost 100

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intercepted. If it concluded that it could not, the carrier might decide not to provide a LEA with dialed digit extraction information in response to such an order.

<sup>222</sup> Alternatively, if a carrier believes that deploying a dialed digit extraction capability with a toggle feature is not "reasonably achievable," the carrier may file a petition with the Commission under Section 109(b), requesting an exemption from deployment of this capability. 47 U.S.C. § 1006(b).

<sup>223</sup> 47 U.S.C. § 1006(b).

<sup>224</sup> See *supra*, ¶ 79 (rejecting the alternative of having a LEA serve the terminating carrier with a pen register due to time lag problems), ¶ 83 (declining to find that a Title III warrant is a sufficient alternative to a pen register order), and ¶ 88 (rejecting the alternative of having a LEA use its own decoders to extract dialed digits on call content channels due to privacy concerns).

<sup>225</sup> *Third R&O*, *supra* n.2, at Appendix B. Figure is for wireline and wireless carriers.

<sup>226</sup> However, as discussed in n.194, *supra*, there was a carrier filing deadline of September 8, 1998 to qualify for capacity reimbursements.

<sup>227</sup> *Third R&O*, *supra* n.2, at Appendix B. Figure is for wireline carriers only.

<sup>228</sup> Based on 96-98 million U.S. households with wireline telephone service, the cost would average 61-63 cents per subscribing household. See n.153, *supra*.

million residential ratepayers, would average only 1-3 cents per month per ratepayer.<sup>229</sup>

93. Accordingly, in view of the fact that we conclude that a dialed digit extraction electronic surveillance capability constitutes call-identifying information and that authorizing a dialed digit extraction electronic surveillance capability would be in conformance with Section 107(b) of CALEA, we find that a dialed digit extraction capability is a technical requirement that meets the assistance capability requirements of Section 103 of CALEA.

#### D. Party Hold/Join/Drop Messages

94. This capability would permit the LEA to receive from the telecommunications carrier messages identifying the parties to a conference call 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. As discussed in paragraph nine, *supra*, the Court found that the *Third R&O* did not adequately explain the basis for its conclusion that this capability constituted call-identifying information or how granting LEAs this capability would satisfy CALEA's requirements by cost-effective methods.

95. *Comments.* CDT states that party hold/join/drop messages do not identify calls, but rather identify callers. CDT further states that the *Third R&O* ignored the plain meaning of CALEA in its conclusion that these messages identify the "temporary origin, temporary termination or re-direction of a communication." CDT contends that the concepts of "temporary" origin and termination do not appear in the CALEA statute, and that a call does not terminate or originate when a party drops off, joins, or is placed on hold with respect to a continuing phone call.<sup>230</sup> CTIA states that multiple definitions of "origin" and "termination" makes a mockery of statutory interpretation. In addition, CTIA contends that party information has never been available to LEAs because such information does not identify a call's origin or termination. CTIA further contends that it is unclear why this information would be necessary in the case of a pen register order, where this signaling information would prove meaningless. CTIA asserts that only in the case of a full Title III intercept, where LEAs desire to know who is talking or connected at any given time, is this capability necessary.<sup>231</sup>

96. USTA argues that J-STD-025 already provides information similar to party hold/join/drop messages. Specifically, USTA states that J-STD-025 provides an origination message, which indicates that the subject has placed an outgoing call and identifies the destination directory number; a termination message, which indicates that the subject has an incoming call and identifies the directory number; an answer message, which identifies the directory number where the call is answered in cases when it is not the normal destination (*e.g.*, call pickup or call forwarding); and, a change message, which reports any changes in call identities.<sup>232</sup>

97. DoJ/FBI state that party hold/join/drop information identifies direction or destination of communications whenever a party to a "multi-leg" call (*i.e.*, a call involving three or more parties where at least two parties are not directly connected to one another during the entirety of the call) is joined,

<sup>229</sup> Specifically, a \$60 million charge to carriers, converted to a rate increase to 96-98 million residential ratepayers, would average 2.9-3.0 cents per month per ratepayer using a relatively rapid amortization period of two years and a relatively high discount rate of 12%; and would average 1.2 cents per month per ratepayer using a relatively slow amortization period of 5 years and a relatively low discount rate of 6%.

<sup>230</sup> CDT Comments at 9.

<sup>231</sup> CTIA Comments at 15-16.

<sup>232</sup> USTA Comments at 7-8.

dropped, or placed on hold. DoJ/FBI concede that in the past, party hold and drop information was not available directly and was inferred by indirect means, but argue that call-identifying information includes this information.<sup>233</sup> In reply comments, DoJ/FBI contend that commenters who suggest that party hold/join/drop information is not call-identifying information rely primarily on the theory that call-identifying information does not include information about changes in the various legs of a multi-party call. However, DoJ/FBI maintain that CALEA's definition of call-identifying information covers all dialing and signaling information that identifies the origin, direction, destination, or termination of each communication generated or received by a subscriber. DoJ/FBI note that a multi-leg call can involve more than one communication – for example, when one party toggles back and forth between two other parties, speaking first to one and then to the other. DoJ/FBI contend that a carrier must be capable of notifying LEAs about changes in party status that affect the path of the subsequent communications and assert that J-STD-025's "Change" message reports only changes in overall call identity, and not changes in the identity of each leg of a multi-leg call. DoJ/FBI further contend that CTIA is incorrect in suggesting that party join/hold/drop information is superfluous in Title III cases because LEAs can determine the parties in a multi-leg call simply by listening to their voices. DoJ/FBI assert that this suggestion falls short, for example, when parties are listening without speaking, or when two parties have sufficiently similar voices to raise a reasonable doubt in the mind of a jury.<sup>234</sup>

98. Discussion. We find that authorizing a party hold/join/drop message electronic surveillance capability would be in conformance with Sections 102(2) and 103(a) of CALEA. The changes in origin(s) and termination(s) as parties join a call, are placed on and off hold, and then drop off the call were discussed in paragraph 44, *supra*, and reviewed in detail in J-STD-025, Section D.7.1, "Call Waiting and Recall with a Single Call Identity." We conclude that, under our revised definitions of the components of call-identifying information, party hold/join/drop information is call-identifying information because it identifies changes in the origin(s) and termination(s) of each communication generated or received by the subject. Further, by isolating call-identifying information in this manner, the LEA may more readily avoid monitoring the communications of third parties who are not privy to the communications involving the subject, thereby furthering privacy considerations. In the *Third R&O*, the Commission defined call-identifying information to be "reasonably available" to an originating carrier if such information "is present at an [Intercept Access Point] and can be made available without the carrier being unduly burdened with network modifications."<sup>235</sup> The J-Standard acknowledges that the network must recognize and process party hold/join/drop functions as part of its basic operation. Thus, we conclude that party hold/join/drop information is not only present at an Intercept Access Point but, because it is already being used by the carrier, satisfies the definition of "reasonably available" in the original version of the J-Standard.<sup>236</sup> In short, by any reasonable standard, this information is "reasonably available."

99. Additionally, we note that commenters have presented no alternative ways of obtaining all the information encompassed by this capability. While the J-Standard provides some of the information encompassed by this capability, the J-Standard does not provide all such information, including separate call identities for each leg of multi-leg calls.

100. We now turn to the cost considerations under Section 107(b)(1) and (3) of CALEA. First, we must find that party hold/join/drop meets CALEA's capability requirements "by cost-effective methods."<sup>237</sup> Because there are no alternative means of accomplishing this objective, we cannot engage

<sup>233</sup> DoJ/FBI Comments at 27-28.

<sup>234</sup> DoJ/FBI Reply Comments at 16-18.

<sup>235</sup> *Third R&O*, *supra* n.2, at ¶¶ 28-29. See also *supra* n.206 and accompanying text.

<sup>236</sup> J-STD-025 § 4.2.1.

<sup>237</sup> 47 U.S.C. § 1006(b).

in the type of cost-comparison analysis discussed in Section III B, *supra*. However, we note that several mechanisms – including the FBI reimbursement program – do serve to minimize the cost of providing this capability. In the *Third R&O*, we found that five major telecommunications manufacturers anticipated total revenues from carriers purchasing a party hold/join/drop message capability of \$64 million.<sup>238</sup> Further, as noted above, the FBI's buyout and flexible deployment programs, coupled with five manufacturers incorporating all punch list capabilities into one software upgrade, will lessen software costs significantly, and including or not including a party hold/join/drop message capability may not significantly change carriers' costs. For these reasons, we find that the cost to carriers of implementing this capability would be minimized and that requiring the capability would be cost-effective.

101. We also find that authorizing a party hold/join/drop capability is unlikely to significantly affect residential ratepayers. The factors we previously identified as minimizing the cost for residential ratepayers – including the FBI buyout and flexible deployment programs – will be applicable to party hold/join/drop. Moreover, we note that carriers will be able to spread costs across a large ratepayer base and there is no indication that the costs of party hold/join/drop will be disproportionately borne by residential ratepayers. Even if wireline carriers were forced to bear costs as great as the \$22 million for this capability estimated by five major telecommunications manufacturers<sup>239</sup> and these costs were passed on to residential ratepayers as a one-time charge, the charge per residential ratepayer would average much less than one dollar.<sup>240</sup> Alternatively, a \$22 million charge to wireline carriers, if converted to a rate increase to almost 100 million residential ratepayers, would average only about a penny per month per ratepayer.<sup>241</sup>

102. Finally, we find that authorizing a party hold/join/drop electronic surveillance capability would be in conformance with the second prong of Section 107(b) of CALEA.<sup>242</sup> We see no significant privacy issues arising from grant to LEAs of a party hold/join/drop capability, no party to this proceeding challenged the *Third R&O*'s decision with respect to that capability on privacy grounds, and the Court did not cite privacy as a basis for remanding to the Commission the *Third R&O*'s decision with respect to that capability. Therefore, we do not address this factor further.

103. Accordingly, in view of the fact that we conclude that party hold/join/drop information constitutes call-identifying information and that authorizing a party hold/join/drop electronic surveillance capability would be in conformance with Section 107(b) of CALEA, we find that a party hold/join/drop capability is a technical requirement that meets the assistance capability requirements of Section 103 of CALEA.

#### E. Subject-Initiated Dialing and Signaling Information

104. This capability would permit the LEA to be informed when a subject sends signals or digits to the network. This capability would require the telecommunications carrier to deliver a message to the LEA, for each communication initiated by the subject, informing the LEA whenever the subject has invoked a feature during a call, including features that would place a party on hold, transfer a call, forward a call, or

<sup>238</sup> *Third R&O*, *supra* n.2, at Appendix B. Figure is for wireline and wireless carriers.

<sup>239</sup> *Id.* Figure is for wireline carriers only.

<sup>240</sup> Based on 96-98 million U.S. households with wireline telephone service, the cost would average 22-23 cents per subscribing household. See n.153, *supra*.

<sup>241</sup> Specifically, a \$22 million charge to carriers, converted to a rate increase to 96-98 million residential ratepayers, would average 1.0-1.1 cents per month per ratepayer using a relatively rapid amortization period of two years and a relatively high discount rate of 12%; and would average 0.4 cents per month per ratepayer using a relatively slow amortization period of 5 years and a relatively low discount rate of 6%.

<sup>242</sup> See ¶ 8, *supra*.

add/remove a party to a call. As discussed in paragraph nine, *supra*, the Court found that the *Third R&O* did not adequately explain the basis for its conclusion that this capability constituted call-identifying information nor how granting LEAs this capability would satisfy CALEA's requirements by cost-effective methods.

105. *Comments.* CDT states that CALEA requires only that carriers give LEAs the specific telephone numbers associated with a call. CDT contends that if a subscriber switches from one call to another using call waiting, there are two calls in progress, and that switching back-and-forth between calls does not constitute termination of the first call.<sup>243</sup> CDT further contends that, under the *Third R&O*'s interpretation of call waiting, there would be two "origins" of the same call – the originating phone number and the flash signal used by the subscriber to resume a conversation with the originating caller. Finally, CDT contends that a subscriber's activation of call forwarding service does not identify the origin, direction, destination, or termination of a communication because no communication has taken place.<sup>244</sup> CTIA makes similar comments regarding call waiting and call forwarding. Specifically, CTIA states that although call waiting involves two phone calls, each with an origin and termination, it does not involve the origin and termination of a new communication every time a party switches from one call to another. CTIA further states that activation of call forwarding does not necessarily identify any particular call within the meaning of CALEA, given that a subscriber may activate call forwarding without ever forwarding any call. Finally, CTIA states that the concern that use of call forwarding might hide from LEAs the called telephone number was addressed in J-STD-025 by providing the telephone numbers identifying the direction and termination of forwarded calls.<sup>245</sup>

106. BellSouth states that subject-initiated dialing and signaling information is not call-identifying information. BellSouth argues that J-STD-025 requires carriers to deliver to LEAs telephone numbers that are related to the origination or destination of a call, and that a subject-initiated dialing and signaling capability would provide information that has nothing to do with the routing of a call.<sup>246</sup> BellSouth further argues that, under J-STD-025, carriers report the resultant status change that occurs in the call rather than the stimulus itself, but that the information provided by J-STD-025 is similar to what would be provided by subject-initiated dialing and signaling information.<sup>247</sup> BellSouth also contends that such information is not reasonably available because there are significant technical issues that make a subject-initiated dialing and signaling capability difficult to achieve. For example, BellSouth states that in some switch implementations, detection and collection of off-hook and digit information occur in a line module that is separate and distinct from the main processor of the switch. Accordingly, BellSouth maintains that making this information available to the main processor so that it can be sent to LEAs may require fundamental modifications to switch architecture that are not only technically challenging but also costly.<sup>248</sup>

107. DoJ/FBI state that subject-initiated dialing and signaling information is generated by use of such services as call forwarding, call waiting, call hold, and three-way calling, and that, to the extent these services have been available in the past, LEAs have had access to such information. DoJ/FBI contend that CALEA's definition of call-identifying information encompasses subject-initiated dialing and signaling information because such information identifies the direction or destination of communications.<sup>249</sup> DoJ/FBI further contend that BellSouth is incorrect when it claims that the dialing

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<sup>243</sup> CDT Comments at 10.

<sup>244</sup> *Id.* at 11.

<sup>245</sup> CTIA Comments at 14-15.

<sup>246</sup> BellSouth Comments at 16.

<sup>247</sup> *Id.* at 17.

<sup>248</sup> *Id.* at 17-18.

<sup>249</sup> DoJ/FBI Comments at 23-25.



and signaling activity initiated by pressing a flash hook or feature key is unrelated to call routing. DoJ/FBI assert that the resulting signals are transmitted to the carrier's switch to enable the switch to control the various legs of the call and route the communication properly. DoJ/FBI also assert that BellSouth is incorrect that similar information is already provided to LEAs under J-STD-025 because that standard does not capture all of the call-identifying information that is generated when a subject engages in dialing and signaling activity. DoJ/FBI acknowledge that there may be specific instances in which a particular subject-initiated dialing or signaling action can be detected or inferred through the messages provided by J-STD-025, but maintain that will often not be the case.<sup>250</sup> DoJ/FBI reference their earlier reply comments in this proceeding, in which they argued that the "Change" message of J-STD-025 is inadequate to capture subject-initiated dialing and signaling activity when the subject presses the flash hook to move back and forth between two legs of a call. DoJ/FBI therefore maintain that J-STD-025 does not ensure that LEAs will receive critical information about the direction and destination of each communication within a multi-leg call.<sup>251</sup> DoJ/FBI also maintain that the information that LEAs would derive from a subject's dialing and signaling activity is not redundant with the information that LEAs would derive from party hold/join/drop messages because such activity may be either pre-cut-through or post-cut-through and may be transmitted either in-band or out-of-band. DoJ/FBI contend that, while some subject initiated dialing and signaling activity may result in party hold/join/drop messages, much of it will not.<sup>252</sup>

108. Discussion. We find that authorizing a subject-initiated dialing and signaling electronic surveillance capability would be in conformance with Sections 102(2) and 103(a) of CALEA. We conclude that this capability constitutes call-identifying information because it provides information regarding the party or place to which a forwarded call is redirected and because it provides information regarding a waiting calling party. We also conclude that access to subject-initiated dialing and signaling information may be necessary 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 each feature to be timely 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. Further, we conclude that signals such as on-hook, off-hook, and flash-hook signals, which are generated by a subject, are reasonably available to the carrier because they must be processed at the carrier's Intercept Access Point. DTMF signals generated by a subject that must be processed at the Intercept Access Point also are reasonably available to the carrier; however, some DTMF signals generated by the subject are post-cut-through digits, and those signals are covered under dialed digit extraction. We note that there are some functions that are sometimes performed by the network and that at other times are performed by customer premises equipment. When customer premises equipment is used to perform any of the functions described herein and no network signal is generated, that information is not reasonably available to a carrier, and thus is not required to be provided.

109. Additionally, we note that commenters have presented no alternative ways of obtaining all the information encompassed by this capability. We have found J-STD-025 deficient insofar as it will not guarantee the delivery of all "call-identifying information," and therefore reject those comments that contend that J-STD-025 is an alternative to the provision of subject-initiated dialing and signaling information. For example, J-STD-025 does not provide all call-identifying information that is generated when a subject engages in dialing and signaling activity, such as when the subject uses the flash hook to

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<sup>250</sup> DoJ/FBI Reply Comments at 14-15.

<sup>251</sup> DoJ/FBI "Reply Comments Regarding Standards for Assistance Capability Requirements," CC Docket No. 97-213, filed June 12, 1998, at 48-49.

<sup>252</sup> DoJ/FBI "Reply Comments Regarding Further Notice of Proposed Rulemaking," CC Docket No. 97-213, filed January 27, 1999, at 46-47.

move back and forth between two legs of a multi-leg call. Further, while there may be some overlap between a subject-initiated dialing and signaling information capability and other punch list capabilities, it appears that a subject-initiated dialing and signaling information capability provides some unique call-identifying information; *e.g.*, this capability would permit a LEA to know when services such as call forwarding and call return are being used by the subject.

110. We now turn to the cost considerations under Section 107(b)(1) and (3) of CALEA. First, we must find that subject-initiated dialing and signaling meets CALEA's capability requirements "by cost-effective methods."<sup>253</sup> Because there are no alternative means of accomplishing this objective, we cannot engage in the type of cost-comparison analysis discussed in Section III B, *supra*. However, we note that several mechanisms – including the FBI reimbursement program – do serve to minimize the cost of providing this capability. In the *Third R&O*, we found that five major telecommunications manufacturers anticipated total revenues from carriers purchasing a subject-initiated dialing and signaling capability of just \$35 million.<sup>254</sup> Further, as noted above, the FBI's buyout and flexible deployment programs, coupled with five manufacturers' incorporation of all punch list capabilities into one software upgrade, will lessen software costs significantly, and including or not including a subject-initiated dialing and signaling capability in the manufacturers' software package may not significantly change carriers' costs. For these reasons, we find that the cost to carriers of implementing this capability would be minimized and that requiring the capability would be cost-effective.

111. We also find that authorizing a subject-initiated dialing and signaling capability is unlikely to significantly affect residential ratepayers. The factors we previously identified as minimizing the cost for residential ratepayers – including the FBI buyout and flexible deployment programs – will be applicable to subject-initiated dialing and signaling. Moreover, we note that carriers will be able to spread costs across a large ratepayer base and there is no indication that the costs of subject-initiated dialing and signaling will be disproportionately borne by residential (versus other classes of) ratepayers. Even if wireline carriers were forced to bear costs as great as the \$8 million for this capability estimated by five major telecommunications manufacturers<sup>255</sup> and these costs were passed on to residential ratepayers as a one-time charge, the cost per residential ratepayer would average only a few pennies.<sup>256</sup> Alternatively, an \$8 million charge to wireline carriers, if converted to a rate increase to almost 100 million residential ratepayers, would average less than a penny per month per ratepayer.<sup>257</sup>

112. Finally, we find that authorizing a subject-initiated dialing and signaling information electronic surveillance capability would be in conformance with the second prong of Section 107(b) of CALEA.<sup>258</sup> We see no significant privacy issues arising from grant to LEAs of a subject-initiated dialing and signaling information capability, no party to this proceeding challenged the *Third R&O*'s decision with respect to that capability on privacy grounds, and the Court did not cite privacy as a basis for remanding to the Commission the *Third R&O*'s decision with respect to that capability. Therefore, we do not address this factor further.

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<sup>253</sup> 47 U.S.C. § 1006(b).

<sup>254</sup> *Third R&O*, *supra* n.2, at Appendix B. Figure is for wireline and wireless carriers.

<sup>255</sup> *Id.* Figure is for wireline carriers only.

<sup>256</sup> Based on 96-98 million U.S. households with wireline telephone service, the cost would average 8 cents per subscribing household. See n.153, *supra*.

<sup>257</sup> Specifically, an \$8 million charge to carriers, converted to a rate increase to 96-98 million residential ratepayers, would average 0.4 cents per month per ratepayer using a relatively rapid amortization period of two years and a relatively high discount rate of 12%; and would average 0.2 cents per month per ratepayer using a relatively slow amortization period of 5 years and a relatively low discount rate of 6%.

<sup>258</sup> See ¶ 8, *supra*.

113. Accordingly, in view of the fact that we conclude that subject-initiated dialing and signaling information constitutes call-identifying information and that authorizing a subject-initiated dialing and signaling electronic surveillance capability would be in conformance with Section 107(b) of CALEA, we find that a subject-initiated dialing and signaling capability is a technical requirement that meets the assistance capability requirements of Section 103 of CALEA.

F. In-Band and Out-of-Band Signaling Information

114. This capability would enable a telecommunications carrier to send a notification message to the LEA when any call-identifying network signal (*e.g.*, audible ringing tone, busy, call waiting signal, message light trigger) is sent to a subject. For example, if someone leaves a voice mail message on the subject's phone, the notification to the LEA would indicate the type of call-identifying network signal sent to the subject (*e.g.*, stutter dial tone, message light trigger). 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. As discussed in paragraph nine, *supra*, the Court found that the *Third R&O* did not adequately explain the basis for its conclusion that this capability constituted call-identifying information nor how granting LEAs this capability would satisfy CALEA's requirements by cost-effective methods.

115. *Comments.* Cingular states that most in-band and out-of-band signaling information is not related to call routing and, moreover, cannot be detected from the network or the originating or terminating switches. Cingular therefore argues that in-band and out-of-band network signaling information is not reasonably available to carriers. Cingular further argues that, to the extent these signals can be audibly detected, they can already be obtained through a properly authorized Title III intercept. Finally, Cingular argues that implementing an in-band and out-of-band network signaling information capability would require the widespread deployment of signal detection equipment, at significant cost to residential ratepayers.<sup>259</sup>

116. USTA states that in-band and out-of-band signaling information is not used to process or route calls and, in most cases, does not constitute communications. Instead, USTA maintains, such information is associated with call attempts that do not result in a communication, such as a busy signal. USTA also maintains that J-STD-025 already provides in-band and out-of-band signaling information, including a termination message that indicates whenever a call is incoming to a subject and includes the directory number of the calling party, if available to the network. USTA therefore concludes that an in-band and out-of-band signaling information capability is unnecessary and not cost effective.<sup>260</sup>

117. DoJ/FBI state that in-band and out-of-band network signaling information has traditionally been available to LEAs and constitutes call-identifying information under J-STD-025's definition, which includes unsuccessful call attempts as well as completed calls. DoJ/FBI contend that network signaling information may identify how a call attempt is terminated (*e.g.*, a call attempt that results in a busy signal indicates that the call attempt is being terminated in a different manner from a call attempt that results in ringing); or may identify the direction of a call attempt by the subject's facilities (*e.g.*, a stutter tone may identify the redirection of an incoming call to the subject's voice mail box).<sup>261</sup>

118. In reply comments, DoJ/FBI contend that the suggestion of commenting parties that signals generated during unsuccessful call attempts do not involve communications is incorrect. DoJ/FBI note that J-STD-025 provides a Termination Attempt message to LEAs to report every incoming circuit-

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<sup>259</sup> Cingular Comments at 10.

<sup>260</sup> USTA Comments at 9.

<sup>261</sup> DoJ/FBI Comments at 26-27.

mode call attempt to the intercept subject, and assert that, if the definition of “call-identifying information” were construed to exclude unsuccessful call attempts, LEAs would be denied access even to the telephone numbers associated with such attempts. DoJ/FBI also assert that commenters are incorrect that this capability is duplicative of J-STD-025’s existing message set. DoJ/FBI reference their earlier reply comments in this proceeding, in which they argued that the J-Standard does not require carriers to provide LEAs with notification of network-generated call progress signals.<sup>262</sup> DoJ/FBI note that the J-Standard requires delivery of call content only between call completion and call release, and that there is no requirement that call content be delivered on incoming calls before they are answered. Therefore, they argue that tones such as busy signals will not be delivered to LEAs without an in-band and out-of-band signaling capability.<sup>263</sup> DoJ/FBI also argue that the J-Standard’s Termination Attempt message is an inadequate substitute for both audible tones and alphanumeric display information. For example, DoJ/FBI contend that an alphanumeric display may notify the subject that a call has been redirected to the subscriber’s voice mail box, and none of the J-Standard’s messages would disclose that a voice mail message has been left for the subject.<sup>264</sup> DoJ/FBI conclude that carriers must be capable of providing to LEAs network signals that originate in their own networks, but do not have to provide signals that originate in other carriers’ networks.<sup>265</sup>

119. Decision. We find that authorizing in-band and out-of-band signaling information electronic surveillance capability for call-identifying information that is based on network signals that originate on carriers’ own networks would be in conformance with Sections 102(2) and 103(a) of CALEA. While certain types of signals used by carriers for supervision or control do not trigger any audible or visual message to the subscriber and are therefore not call-identifying information, other types of signals – such as ringing and busy tones – are call-identifying information under our revised definitions because they convey information about the termination of a call. For example, when a subject calls another party, until the called party answers the subject’s communications path is terminated at an audible ringing tone generator. However, if the called party is engaged in another conversation and does not have call waiting, the subject’s communications path is terminated at a busy signal generator. Thus, even for calls from the subject that are never answered, the fact that the subject hears busy or audible ringing signal provides call-identifying information that is not provided to law enforcement via other means.

120. We disagree with USTA that the J-Standard provides adequate in-band and out-of-band signaling information. As DoJ/FBI note, there are both audible signals and alphanumeric display information that the J-Standard does not provide that convey call-identifying information. The fact that a call attempt does not result in a conversation because the line is busy or because the called party does not answer does not mean that no “communication” has taken place.

121. In-band and out-of-band signals that are generated at the carrier’s Intercept Access Point toward the subscriber are handled by the carrier and are clearly available to the carrier at an Intercept Access Point. As discussed *supra*, we conclude that these in-band and out-of-band signals convey call-identifying information. We further note that, because carriers already deliver this information to subscribers, we see no reason why such in-band and out-of-band signaling information cannot also be made available to LEAs without significantly modifying the carrier’s network. Thus, in-band and out-of-band signaling information is “reasonably available.”<sup>266</sup> Additionally, we note that commenters have presented no alternative ways of

<sup>262</sup> DoJ/FBI “Reply Comments Regarding Standards for Assistance Capability Requirements,” *supra* n.251, at 55.

<sup>263</sup> *Id.* at 57.

<sup>264</sup> *Id.* at 58-59.

<sup>265</sup> DoJ/FBI Reply Comments at 15-16.

<sup>266</sup> There is nothing in the record to refute our conclusion that this information can be made available without a carrier being unduly burdened with network modifications. See also *Third R&O*, *supra* n.2, at ¶¶ 28-29; *supra* n.206 and accompanying text.

obtaining all the information encompassed by this capability. While the J-Standard provides some of the information encompassed by this capability, the J-Standard does not provide all such information, including an indication of whether an unanswered call from the subject to another party results in a busy or ringing signal.

122. We now turn to the cost considerations under Section 107(b)(1) and (3) of CALEA. First, we must find that in-band and out-of-band signaling information meets CALEA's capability requirements "by cost-effective methods."<sup>267</sup> Because there are no alternative means of accomplishing this objective, we cannot engage in the type of cost-comparison analysis discussed in Section III B, *supra*. However, we note that several mechanisms – including the FBI reimbursement program – do serve to minimize the cost of providing this capability. In the *Third R&O*, we found that five major telecommunications manufacturers anticipated total revenues from carriers purchasing an in-band and out-of-band signaling information capability of \$57 million.<sup>268</sup> As noted above, the FBI's buyout and flexible deployment programs, coupled with five manufacturers incorporating all punch list capabilities into one software upgrade, will lessen software costs significantly. Also, we again note that including or not including an in-band and out-of-band signaling information capability may not significantly change carriers' costs. For these reasons, we find that the cost to carriers of implementing this capability would be minimized and that requiring the capability would be cost-effective.

123. We also find that authorizing an in-band and out-of-band signaling information capability is unlikely to significantly affect residential ratepayers. The factors we previously identified as minimizing the cost for residential ratepayers – including the FBI buyout and flexible deployment programs – will be applicable to in-band and out-of-band signaling information. Moreover, we note that carriers will be able to spread costs across a large ratepayer base and there is no indication that the costs of in-band and out-of-band signaling information will be disproportionately borne by residential (versus other classes of) ratepayers. Even if wireline carriers were forced to bear costs as great as the \$27 million for this capability estimated by five major telecommunications manufacturers<sup>269</sup> and these costs were passed on to residential ratepayers as a one-time charge, the cost per residential ratepayer would average much less than one dollar.<sup>270</sup> Alternatively, a \$27 million charge to carriers, if converted to a rate increase to almost 100 million residential ratepayers, would average only about a penny per month per ratepayer.<sup>271</sup>

124. Finally, we find that authorizing an in-band and out-of-band signaling information electronic surveillance capability would be in conformance with the second prong of Section 107(b) of CALEA.<sup>272</sup> We see no significant privacy issues arising from grant to LEAs of an in-band and out-of-band signaling information capability, no party to this proceeding challenged the *Third R&O*'s decision with respect to that capability on privacy grounds, and the Court did not cite privacy as a basis for remanding to the Commission the *Third R&O*'s decision with respect to that capability. Therefore, we do not address this factor further.

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<sup>267</sup> 47 U.S.C. § 1006(b).

<sup>268</sup> *Third R&O*, *supra* n.2, at Appendix B. Figure is for wireline and wireless carriers.

<sup>269</sup> *Id.* Figure is for wireline carriers only.

<sup>270</sup> Based on 96-98 million U.S. households with wireline telephone service, the cost would average 28 cents per subscribing household. See n.153, *supra*.

<sup>271</sup> Specifically, a \$27 million charge to carriers, converted to a rate increase to 96-98 million residential ratepayers, would average 1.3 cents per month per ratepayer using a relatively rapid amortization period of two years and a relatively high discount rate of 12%; and would average 0.5 cents per month per ratepayer using a relatively slow amortization period of 5 years and a relatively low discount rate of 6%.

<sup>272</sup> See ¶ 8, *supra*.

125. Accordingly, in view of the fact that we conclude that in-band and out-of-band signaling information constitutes call-identifying information and that authorizing an in-band and out-of-band signaling information electronic surveillance capability would be in conformance with Section 107(b) of CALEA, we find that an in-band and out-of-band signaling information capability is a technical requirement that meets the assistance capability requirements of Section 103 of CALEA.

G. CALEA Section 107(b)(4)

126. Although Section 107(b)(4) – *i.e.*, serve the policy of the United States to encourage the provision of new technologies and services to the public – was not briefed to or addressed by the Court in its *Remand Decision*, we briefly address this factor in accordance with our statutory directive under CALEA. As described in the legislative history, one of the key concerns in enacting CALEA was “the goal of ensuring that the telecommunications industry was not hindered in the rapid development and deployment of the new services and technologies that continue to benefit and revolutionize society.”<sup>273</sup> Aside from one suggestion that the cost of compliance would divert capital from new technology deployment,<sup>274</sup> no commenter has argued – nor is there anything in the record to suggest – that inclusion of the four punch list requirements would impede in any way the provision of new telecommunications technologies or services to the public or would delay in any manner the course or current pace of technology. Rather, the punch list requirements represent a technical solution that interfaces with the carriers’ own network designs to provide LEAs with interception access and the capability to intercept wire and electronic communications. Additionally, as noted above, for the majority of switches, carriers will be permitted under the FBI’s flexible deployment program to implement any required punch list capabilities coincident with routine switch upgrades.<sup>275</sup> Moreover, we do not believe Section 107(b)(4) was intended to bar a feature simply because it imposes costs on telecommunications companies and thereby might affect their other spending. The two express references to costs in Section 107(b) (*i.e.*, cost effectiveness and minimizing impact on residential ratepayers) consider cost in a relative, not an absolute, sense. Accordingly, we do not believe paragraph (b)(4) was intended to prohibit any feature because the cost might have some impact on telecommunications companies’ other spending. Given this, we find that adoption of the punch list requirements is consistent with the United States’ policy of encouraging the provision of new technologies and services to the public

H. Punch List Compliance Date

127. Section 107(b)(5) of CALEA requires that the Commission “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.”<sup>276</sup> The *Third R&O* required that the six punch list capabilities be implemented by wireline, cellular, and broadband PCS carriers by September 30, 2001 and – as discussed in paragraph 60, *supra* – five telecommunications switch manufacturers have incorporated all of these capabilities into one software upgrade. In the *Order* in this proceeding, which suspended the September 30, 2001 deadline for all punch list capabilities, including the two unchallenged capabilities (*i.e.*, subject-initiated conference calls and timing information), we indicated that we anticipated establishing June 30, 2002 as the new compliance date for all required punch list capabilities as we expected to address the Court’s *Remand Decision* by year’s end and given that the record indicates that carriers can implement any required changes to their software

<sup>273</sup> House Report No. 103-827, at 3493.

<sup>274</sup> USTA Comments, at 13.

<sup>275</sup> See ¶ 60, *supra*.

<sup>276</sup> 47 U.S.C. § 1006(b)(5).

within six months of our decision.<sup>277</sup> We find it reasonable to require wireline, cellular, and broadband PCS carriers to implement all punch list capabilities by June 30, 2002, and conclude that the June 30, 2002 deadline will satisfy Section 107(b)(5).<sup>278</sup> At the initial stages of CALEA implementation, the Commission found that carriers could put into effect any required changes to their network within six months of its decision.<sup>279</sup> We recognize that this is a more aggressive timetable than the six months we anticipated earlier. We believe that this accelerated compliance schedule is reasonable for this stage of the CALEA implementation, as carriers have been aware of the CALEA capabilities under consideration in the instant *Order on Remand* since October 2000.<sup>280</sup> In addition, the record indicates that much of the software required to implement the punch list items has already been developed, which should significantly speed implementation.<sup>281</sup> Finally, carriers have much greater experience in meeting CALEA's capability requirements than they had in 1998. Together, these factors make a shorter implementation timetable reasonable.

128. We note that carriers who are unable to comply may seek relief under the applicable provisions of CALEA.<sup>282</sup> The Wireline Competition Bureau (formerly, the Common Carrier Bureau) and the Wireless Telecommunications Bureau previously issued a *Public Notice* outlining the petitioning process for telecommunications carriers seeking relief under Section 107(c) for an extension of the CALEA compliance deadline.<sup>283</sup> Carriers seeking relief from the June 30, 2002 compliance date should follow the procedures outlined in that *Public Notice*. We further note that, in most cases, extensions that the Commission has already granted will apply to the capabilities we are requiring in this *Order on*

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<sup>277</sup> *Order*, *supra* n.17, at ¶ 12.

<sup>278</sup> Because the pleading cycle closed prior to the Commission's decision to suspend the compliance deadline, commenters generally request relief from the original September 30, 2001 deadline as opposed to identifying a specific time period that they believed would be "reasonable." *See, e.g.*, AT&T Reply Comments at 9. However, one commenter – KMC Telecom – specifically requested that the Commission adopt a June 30, 2002 date. KMC Telecom Reply Comments at 4.

<sup>279</sup> *Order*, *supra* n.17, at ¶¶ 9, 12. The Commission reached this decision after considering comments that said it could take longer for large carriers to deploy CALEA-compliant switches and concluding that, among other things, a six-month time period was "sufficient and reasonable given the urgency of ensuring law enforcement access to CALEA's capabilities." Petition for Extension of the Compliance Date under Section 107 of the Communications Assistance for Law Enforcement Act, *Memorandum Opinion and Order*, 13 FCC Rcd 17990, 18017-18 ¶¶ 48-49.

<sup>280</sup> *See Public Notice*, *supra* n.19.

<sup>281</sup> *See* ¶ 60, *supra*.

<sup>282</sup> We again note that a carrier is not required to make any equipment, facility, or service deployed on or before January 1, 1995 CALEA-compliant unless the Attorney General has agreed to pay the carrier the reasonable costs directly associated with such modifications; or unless the equipment, facility, or service has been replaced, significantly upgraded, or undergone major modification. *See* 47 U.S.C. § 1008(c)(3). To the extent that a carrier believes that implementing any required capability is not reasonably achievable for cost or other reasons with respect to any equipment, facility, or service deployed after January 1, 1995, the carrier may petition the Commission under Section 109(b) of CALEA for a determination. If the Commission determines that the capability is not reasonably achievable, then the carrier will not have to make the modifications, unless the Attorney General agrees to pay the additional costs of making the capability requirements reasonably achievable and enters into such an agreement with the carrier. 47 U.S.C. § 1008 (b)(2). *See also* ¶¶ 60-61, *supra*.

<sup>283</sup> The Common Carrier and Wireless Telecommunications Bureaus Establish Procedures for Carriers to Submit or Supplement CALEA Section 107(c) Extension Petitions, Both Generally and With Respect to Packet-Mode and Other Safe Harbor Standards, *Public Notice*, 16 FCC Rcd 17,101 (CCB WTB 2001) (*Extension Petition Procedures Public Notice*). Carriers should be aware that the CALEA Implementation Section (CIS) of FBI may periodically update its Flexible Assistance Guides. *See e.g.*, U.S. Dept. of Justice, FBI, CIS, Flexible Deployment Assistance Guide (Jan. 2000); Deployment Assistance Guide (Jan. 2000); and Flexible Deployment Assistance Guide, Second Edition, Packet-Mode Communications (Aug. 2001). *See also* [www.askcalea.net](http://www.askcalea.net).

*Remand*.<sup>284</sup> As the Wireline Competition and Wireless Telecommunications Bureaus have previously stated: “Unless the Commission action [granting an extension] specifies otherwise, the extension applies to all assistance capability functions, including punch list and packet-mode capabilities, at the listed facilities.”<sup>285</sup>

129. Therefore, we are lifting the suspension of the punch list compliance deadline, and specifying the revised punch list compliance deadline as June 30, 2002. Given that the Commission has rendered its final decision with regard to the challenged punch list features, we expect all carriers to be either fully CALEA-compliant by that date or to have a pending or granted petition seeking relief from compliance with that date that was filed with the Commission under the procedures described above.

#### IV. SUPPLEMENTAL FINAL REGULATORY FLEXIBILITY ANALYSIS

##### (A) *Need for and Purpose of this Action*

130. As required by the Regulatory Flexibility Act (RFA),<sup>286</sup> the Commission incorporated an Initial Regulatory Flexibility Analysis (IRFA) in the *Further NPRM*.<sup>287</sup> The Commission sought written public comments on the proposals in the *Further NPRM*, including the IRFA. In the *Third R&O*, the Commission adopted a Final Regulatory Flexibility Analysis (FRFA).<sup>288</sup> As part of the instant *Order on Remand*, we have prepared this Supplemental FRFA to conform to the RFA.<sup>289</sup>

131. The *Third R&O* responded 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.). The Commission, in compliance with 47 U.S.C. § 229, promulgates rules in this *Order on Remand* to ensure the prompt implementation of section 103 of CALEA. This action simply responds to an Order of the United States Court of Appeals for the District of Columbia Circuit (the “Court”) and puts into effect rules we originally evaluated as part of the FRFA in the *Third R&O*. Also, as noted, we have already done a FRFA for the rules at issue in the *Third R&O*.

132. In enacting CALEA, Congress sought to balance three key policies with CALEA: “(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.”<sup>290</sup> The rules adopted in this *Order on Remand* implement Congress’s goal to balance the three key policies enumerated above. The objective of the rules is to implement as quickly and effectively as possible the national telecommunications policy for wireline, cellular, and broadband PCS telecommunications carriers to support the lawful electronic surveillance needs of law enforcement

<sup>284</sup> Preliminary determinations of pending petitions also will apply to the capabilities we are requiring in this *Order on Remand*.

<sup>285</sup> *Extension Petition Procedures Public Notice* at 16 FCC Rcd 17103 ¶ 8.

<sup>286</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

<sup>287</sup> Communications Assistance for Law Enforcement Act, *Further Notice of Proposed Rulemaking*, 13 FCC Rcd 22632, 22695-703 (1998).

<sup>288</sup> Communications Assistance for Law Enforcement Act, *Third Report and Order*, CC Docket No. 97-213, 14 FCC Rcd 16794, 16852-59 (1999).

<sup>289</sup> See 5 U.S.C. § 604.

<sup>290</sup> H.R. Rep. No. 103-827, 103rd Cong., 2d Sess (1994) at 13.



agencies in a manner that is responsive to the Court's remand of the *Third R&O*.

(B) Summary of the Issues Raised by Public Comments

133. In the *Further NPRM*, the Commission performed an IRFA and asked for comments that specifically addressed issues raised in the IRFA. No parties filed comments directly in response to the IRFA. Similarly, as part of the pleading cycle that followed the Court's remand of the *Third R&O*, no parties filed comments directly in response to the IRFA or the FRFA. In response to non-RFA comments filed in this docket, the Commission modified several of the proposals made in the *Further NPRM*. These modifications include changes to packet switching, conference call content, in-band and out-of-band signaling, and timing information, as first discussed in the *Third R&O*.

134. The Commission's effort to update the record in response to the Court's Remand Order resulted in additional non-RFA comments. The Rural Cellular Association (RCA) asserts that the costs of additional communications assistance capabilities would impose undue cost burdens on and jeopardize the efficient planning and development of facilities by small and rural carriers.<sup>291</sup> Similarly, the National Telephone Cooperative Association (NTCA) claims that any regulation which requires carriers to deploy or upgrade facilities disproportionately affects small and rural carriers.<sup>292</sup>

(C) *Description and Estimate of the Number of Entities Affected*

135. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the action taken.<sup>293</sup> The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>294</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>295</sup> A small business concern is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).<sup>296</sup> A small organization is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."<sup>297</sup> Nationwide, as of 1992, there were approximately 275,801 small organizations.<sup>298</sup> Finally, "small governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."<sup>299</sup> As of 1992, there were approximately 85,006 such jurisdictions in the United States.<sup>300</sup> This number includes

<sup>291</sup> Rural Cellular Association Comments at 7.

<sup>292</sup> National Telephone Cooperative Association Comments at 5.

<sup>293</sup> 5 U.S.C. § 603(b)(3).

<sup>294</sup> *Id.*, § 601(6).

<sup>295</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

<sup>296</sup> Small Business Act, 15 U.S.C. § 632.

<sup>297</sup> 5 U.S.C. § 601(4).

<sup>298</sup> 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

<sup>299</sup> 5 U.S.C. 601(5).

<sup>300</sup> U.S. Dept. of Commerce, Bureau of the Census, "1992 Census of Governments."

38,978 counties, cities, and towns; of these, 37,566, or 96 percent, have populations of fewer than 50,000.<sup>301</sup> The United States Bureau of the Census (Census Bureau) estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (91 percent) are small entities.

136. The most reliable source of information regarding the total numbers of certain common carrier and related providers nationwide appears to be data the Commission publishes annually in its *Telecommunications Provider Locator* report, derived from filings made in connection with the Telecommunications Relay Service (TRS).<sup>302</sup> According to data in the most recent report, there are 5,679 interstate service providers.<sup>303</sup> These providers include, *inter alia*, local exchange carriers, wireline carriers and service providers, interexchange carriers, competitive access providers, operator service providers, pay telephone operators, providers of telephone service, providers of telephone exchange service, and resellers.

137. We have included small incumbent local exchange carriers (LECs)<sup>304</sup> in this present RFA analysis. As noted above, a “small business” under the RFA is one that, *inter alia*, meets the pertinent small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and “is not dominant in its field of operation.”<sup>305</sup> The SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not “national” in scope.<sup>306</sup> We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on FCC analyses and determinations in other, non-RFA contexts.

138. *Total Number of Telecommunications Entities Affected.* 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.<sup>307</sup> This number contains a variety of different categories of entities, 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. It seems certain that some of those 3,497 telephone service firms may not qualify as small entities or small incumbent LECs because they are not “independently owned and operated.”<sup>308</sup> 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

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<sup>301</sup> *Id.*

<sup>302</sup> FCC, Common Carrier Bureau, Industry Analysis Division, *Telecommunications Provider Locator*, Tables 1-2 (November 2001) (*Provider Locator*). This report is available on-line at: [http://www.fcc.gov/Bureaus/Common\\_Carrier/Reports/FCC-State\\_Link/Locator/locat01.pdf](http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/Locator/locat01.pdf)  
*See also* 47 C.F.R. § 64.601 *et seq.*

<sup>303</sup> *Provider Locator* at Table 1.

<sup>304</sup> *See* 47 U.S.C. 251(h) (defining “incumbent local exchange carrier”).

<sup>305</sup> 15 U.S.C. § 632.

<sup>306</sup> Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (May 27, 1999). The Small Business Act contains a definition of “small business concern,” which the RFA incorporates into its own definition of “small business.” *See* 15 U.S.C. § 632(a) (Small Business Act); 5 U.S.C. § 601(3) (RFA). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. 13 C.F.R. § 121.102(b).

<sup>307</sup> United States Dept. of Commerce, Bureau of the Census, *1992 Census of Transportation, Communications, and Utilities: Establishment of Firm Size*, at Firm Size 1-123 (1995) (“1992 Census”).

<sup>308</sup> 15 U.S.C. § 632(a)(1).

LECs that may be affected by the actions taken in this *Order on Remand*.

139. *Wireline Carriers and Service Providers.* The SBA has developed a definition of small entities for wired telecommunications carriers. The Census Bureau reports that there were 2,321 such telephone companies in operation for at least one year at the end of 1992.<sup>309</sup> According to the SBA's definition, such a small business telephone company is one employing no more than 1,500 persons.<sup>310</sup> All but 26 of the 2,321 wireline companies listed by the Census Bureau were reported to have fewer than 1,000 employees. Even if all 26 of the remaining companies had more than 1,500 employees, there would still be 2,295 wireline companies that might qualify as small entities. 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. Therefore, we estimate that fewer than 2,295 communications wireline companies are small entities that may be affected by these rules.

140. *Local Exchange Carriers, Competitive Access Providers, Interexchange Carriers, Operator Service Providers, Payphone Providers, and Resellers.* Neither the Commission nor the SBA has developed a specific size standard definition for small LECs, competitive access providers (CAPs), interexchange carriers (IXCs), operator service providers (OSPs), payphone providers, or resellers. The closest applicable size standard for these carrier-types under SBA rules is for wired telecommunications carriers and telecommunications resellers.<sup>311</sup> The most reliable source of information that we know regarding the number of these carriers nationwide appears to be the data that we collect annually in connection with the TRS.<sup>312</sup> According to our most recent data, there are 1,329 LECs, 532 CAPs, 229 IXCs, 22 OSPs, 936 payphone providers, and 710 resellers.<sup>313</sup> 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 these carriers that would qualify as small business concerns under the SBA's definition. Therefore, we estimate that there are fewer than 1,329 small entity LECs or small incumbent LECs, 532 CAPs, 229 IXCs, 22 OSPs, 936 payphone providers, and 710 resellers that may be affected by these rules.

141. *Wireless Carriers.* The applicable definition of a small entity wireless carrier is the definition under the SBA rules applicable to radiotelephone (wireless) companies. This provides that a small entity is a radiotelephone company employing no more than 1,500 persons. The Census Bureau reports that there were 1,176 radiotelephone (wireless) companies in operation for at least one year at the end of 1992, of which 1,164 had fewer than 1,000 employees.<sup>314</sup> 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 and operated. It seems certain that some of these carriers are not independently owned and operated. Consequently, we estimate that there are fewer than 1,164 small entity radiotelephone companies that may be affected by the actions taken in this *Order on Remand*.

142. *Cellular, PCS, SMR and Other Mobile Service Providers.* The most reliable source of

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<sup>309</sup> 1992 Census at Firm Size 1-123 (based on previous SIC codes).

<sup>310</sup> 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 513310. The category of Telecommunications Resellers, NAICS code 513330 also has an associated business size standard of 1,500 or fewer employees.

<sup>311</sup> 13 C.F.R. § 121.201, NAICS codes 513310 and 513330.

<sup>312</sup> See 47 C.F.R. § 64.601 *et seq.*; *Provider Locator* at Table 1.

<sup>313</sup> *Provider Locator* at Table 1. The total for resellers includes both toll resellers and local resellers.

<sup>314</sup> 1992 Census at Firm Size 1-123.

current information from which we can draw an estimate of the number of small business commercial wireless entities appears to be data the Commission published annually in its Trends in Telephone Service report.<sup>315</sup> According to the most recent Trends Report, 806 carriers reported that they were engaged in the provision of cellular service, PCS services, or SMR telephony services, which are placed together in the data.<sup>316</sup> Moreover, 323 such licensees in combination with their affiliates have 1,500 or fewer employees and thus qualify as “small businesses” under the above definition. Thus, we estimate that there are 323 or fewer small wireless service providers that may be affected by the rules we adopt in this proceeding.

(D) *Description of Projected Reporting, Recordkeeping and Other Compliance Requirements.*

143. No reporting and recordkeeping requirements are imposed on telecommunications carriers. Telecommunications carriers, including small carriers, will have to upgrade their network facilities to provide to law enforcement the assistance capability requirements adopted herein. Although compliance with the technical requirements will impose costs on carriers, we have examined means by which these costs will be minimized (such as by federal cost-reimbursement mechanisms and the ability of carriers to charge for the provision of assistance capability services). The most detailed and reliable cost estimates for carriers to implement the assistance capability features we require herein are \$159 million total for wireless carriers and \$117 million for wireline carriers, including small entities. However, as discussed in paragraph 65, *supra*, we expect the actual costs borne by carriers to be substantially lower after the application of the cost-minimization provisions discussed above.

(E) *Steps Taken to Minimize Significant Economic Impact on Small Entities and Significant Alternatives Considered.*

144. The need for the regulations adopted herein is mandated by Federal legislation. In the regulations we adopt, we affirm our proposals in the *Further NPRM* to establish regulations for wireline, cellular, and broadband PCS telecommunications carriers. Costs to telecommunications carriers will be mitigated in several ways. For example, the final regulations require telecommunications carriers to make available to law enforcement call identifying information when it can be done without unduly burdening the carrier with network modifications, thus allowing cost to be a consideration in determining whether the information is “reasonably available” to the carrier and can be provided to law enforcement. Thus, compliance with the assistance capability requirements of CALEA will be reasonable for all carriers, including small carriers.<sup>317</sup> Also, under CALEA, some carriers will be able to request reimbursement from the Department of Justice for network upgrades to comply with the technical requirements adopted herein, and others may defer network upgrades to their normal business cycle.<sup>318</sup>

145. We believe that these provisions can serve to mitigate any additional cost burdens that would otherwise be borne by small carriers. The Commission considered several alternatives advanced by commenters in the proceeding – including not requiring the assistance capabilities adopted herein – but rejected them after concluding that they would not meet the statutory requirements of CALEA. We note that the statutory mandate under CALEA requires all carriers to provide assistance capabilities, and this includes small entities.<sup>319</sup> Thus, we must rely on cost-mitigation procedures to address NTCA’s assertion

<sup>315</sup> Trends in Telephone Service, Common Carrier Bureau, Industry Analysis Division (Aug. 2001) (“Trends Report”). This report is available on-line at: [http://www.fcc.gov/Bureaus/Common\\_Carrier/Reports/FCC-State\\_Link/IAD/trend801.pdf](http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/trend801.pdf)

<sup>316</sup> Trends Report, Table 5.3.

<sup>317</sup> See n.147, *supra*, and accompanying text.

<sup>318</sup> See ¶ 60, *supra*.

<sup>319</sup> See ¶ 2, *supra*.

that any regulation that requires carriers to deploy or upgrade facilities will disproportionately affect small carriers.

*Report to Congress*

146. The Commission will send a copy of this Supplemental FRFA, along with this Order on Remand, in a report to Congress pursuant to the Congressional Review Act, 5 U.S.C. § 801(a)(1)(A). In addition, the Commission will send a copy of this *Order on Remand*, including this Supplemental FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of this *Order on Remand*, including the Supplemental FRFA, will also be published in the Federal Register. See 5 U.S.C. § 604(b).

**V. ORDERING CLAUSES**

147. Accordingly, IT IS ORDERED that, pursuant to Sections 1, 4, 229, 301, 303, and 332 of the Communications Act of 1934, as amended, and Section 107(b) of the Communications Assistance for Law Enforcement Act, 47 U.S.C. §§ 151, 154, 229, 301, 303, 332, and 1006(b), this *Order on Remand* and the rules specified in Appendix A ARE ADOPTED.

148. IT IS FURTHER ORDERED that the rules set forth in Appendix A WILL BECOME EFFECTIVE 30 days after publication in the Federal Register.

149. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, shall send a copy of this Order on Remand, including the Supplemental Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton  
Acting Secretary

**APPENDIX A: FINAL RULES**

## AMENDMENTS TO THE CODE OF FEDERAL REGULATIONS

## PART 22- PUBLIC MOBILE SERVICES

A. Part 22 of the Code of Federal Regulations is amended as follows:

1. The authority citation in Part 22 continues to read:

AUTHORITY: 47 U.S.C. 154, 222, 303, 309 and 332.

2. Sections 22.1102 and 22.1103 are revised to read as follows:

**§ 22.1102 Definitions.**

\* \* \*

*Origin.* A party initiating a call (*e.g.*, a calling party), or a place from which a call is initiated.

*Termination.* A party or place at the end of a communication path (*e.g.* the called or call-receiving party, or the switch of a party that has placed another party on hold).

*Direction.* A party or place to which a call is re-directed or the party or place from which it came, either incoming or outgoing (*e.g.*, a redirected-to party or redirected-from party).

*Destination.* A party or place to which a call is being made (*e.g.*, the called party).

**§ 22.1103 Capabilities that must be provided by a cellular telecommunications carrier.**

(a) \* \* \*

(b) As of November 19, 2001, a cellular telecommunications carrier shall provide to a LEA communications and call-identifying information transported by packet-mode communications.

(c) As of June 30, 2002, a cellular telecommunications carrier shall provide to a LEA the following capabilities:

- (1) Content of subject-initiated conference calls;
- (2) Party hold, join, drop on conference calls;
- (3) Subject-initiated dialing and signaling information;
- (4) In-band and out-of-band signaling;
- (5) Timing information;
- (6) Dialed digit extraction, with a toggle feature that can activate/deactivate this capability.

## PART 24- PERSONAL COMMUNICATIONS SERVICES

B. Part 24 of the Code of Federal Regulations is amended as follows:

1. The authority citation in Part 24 continues to read:

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 309 and 332.

2. Sections 24.902 and 24.903 are amended to read as follows:

**§ 24.902 Definitions.**

\* \* \*

*Origin.* A party initiating a call (*e.g.*, a calling party), or a place from which a call is initiated.

*Termination.* A party or place at the end of a communication path (*e.g.* the called or call-receiving party, or the switch of a party that has placed another party on hold).

*Direction.* A party or place to which a call is re-directed or the party or place from which it came, either incoming or outgoing (*e.g.*, a redirected-to party or redirected-from party).

*Destination.* A party or place to which a call is being made (*e.g.*, the called party).

**§ 24.903 Capabilities that must be provided by a broadband PCS telecommunications carrier.**

(a) \* \* \*

(b) As of November 19, 2001, a broadband PCS telecommunications carrier shall provide to a LEA communications and call-identifying information transported by packet-mode communications.

(c) As of June 30, 2002, a broadband PCS telecommunications carrier shall provide to a LEA the following capabilities:

- (1) Content of subject-initiated conference calls;
- (2) Party hold, join, drop on conference calls;
- (3) Subject-initiated dialing and signaling information;
- (4) In-band and out-of-band signaling;
- (5) Timing information;
- (6) Dialed digit extraction, with a toggle feature that can activate/deactivate this capability.

**PART 64 - MISCELLANEOUS RULES RELATING TO COMMON CARRIERS**

C. Part 64 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 64 is amended to read as follows:

AUTHORITY: 47 U.S.C. §§ 151, 154, 201, 202, 205, 218-220, and 332 unless otherwise noted. Interpret or apply §§ 201, 218, 225, 226, 227, 229, 332, 48 Stat. 1070, as amended. 47 U.S.C. §§ 201-204, 208, 225, 226, 227, 229, 332, 501 and 503 unless otherwise noted.

2. Sections 64.2202 and 64.2203 are amended to read as follows:

**§ 64.2202 Definitions.**

\* \* \*

*Origin.* A party initiating a call (*e.g.*, a calling party), or a place from which a call is initiated.

*Termination.* A party or place at the end of a communication path (*e.g.* the called or call-receiving party, or the switch of a party that has placed another party on hold).

*Direction.* A party or place to which a call is re-directed or the party or place from which it came, either incoming or outgoing (*e.g.*, a redirected-to party or redirected-from party).

*Destination.* A party or place to which a call is being made (*e.g.*, the called party).

**§ 64.2203 Capabilities that must be provided by a wireline telecommunications carrier.**

(a) \* \* \*

(b) As of November 19, 2001, a wireline telecommunications carrier shall provide to a LEA communications and call-identifying information transported by packet-mode communications.

(c) As of June 30, 2002, a wireline telecommunications carrier shall provide to a LEA the following capabilities:

- (1) Content of subject-initiated conference calls;
- (2) Party hold, join, drop on conference calls;
- (3) Subject-initiated dialing and signaling information;
- (4) In-band and out-of-band signaling;
- (5) Timing information;
- (6) Dialed digit extraction, with a toggle feature that can activate/deactivate this capability.



**APPENDIX B: COMMENTING PARTIES TO PUBLIC NOTICE OF OCTOBER 17, 2000**Comments

AT&T Corp. and AT&T Wireless Group  
BellSouth Corporation  
Cellular Telecommunications and Internet Association  
Center for Democracy and Technology  
Cingular Wireless LLC  
Cisco Systems, Inc.  
Department of Justice and Federal Bureau of Investigation  
Personal Communications Industry Association  
Rural Cellular Association  
SBC Communications, Inc.  
Telecommunications Industry Association  
United States Telecom Association  
Verizon Telephone Companies

Reply Comments

AT&T Corp. and AT&T Wireless Group  
BellSouth Corporation  
Cellular Telecommunications and Internet Association  
Cingular Wireless LLC  
Department of Justice and Federal Bureau of Investigation  
KMC Telecom  
National Telephone Cooperative Association  
United States Telecom Association  
WorldCom, Inc.

**STATEMENT OF COMMISSIONER  
MICHAEL J. COPPS**

RE: Communications Assistance for Law Enforcement.

I support the Commission's actions today. Our responsibilities under Section 107 of the Communications Assistance for Law Enforcement Act ("CALEA") are critical, and I am pleased that the Commission was able to move from our September 18, 2001 Order to today's Order so rapidly. Our actions today will help law enforcement agencies ("LEAs") and the wireless industry make progress in better equipping LEAs to collect call-identifying information.

While I support today's action, I am concerned about two aspects of the Order. First, as the Order notes, we must "establish standards that 'meet the assistance capability requirements of Section 103 by cost effective methods'<sup>320</sup> and 'minimize the cost of such compliance on residential ratepayers.'<sup>321</sup>" The Remand Order states that the Third R&O "made no attempt to compare the cost of implementing the punch list capabilities with the cost of obtaining the same information through alternative means, nor did it explain how it measured cost-effectiveness. Although it mentioned residential ratepayers, it never explained what impact its Order would have on residential rates."<sup>322</sup>

In today's Order, with an explanation of our reasoning, we conclude that the same capabilities that we have identified in our previous Order and the same means of implementing these capabilities are cost-effective and serve to minimize costs on residential ratepayers.

I remain concerned, however, that CALEA-related costs for these government mandates will be high for residential customers and wireless providers, especially for rural providers. Carriers and consumers have only one recourse when faced with these costs – they may petition the Commission under Section 109(b)(1) and demonstrate that compliance with the new assistance capabilities is not "reasonably achievable." The Commission must then consider "the effect on rates for basic residential telephone service" as part of determining whether the capabilities are reasonably achievable for that carrier.

My second issue of concern is privacy. CALEA requires any Commission rule to "protect the privacy and security of communications not authorized to be intercepted." The Court noted in the *Remand Decision* that in justifying its decision: "The Commission spoke of law enforcement's need to obtain post-cut-through dialed digits and of the cost of providing them, but it never explained, as CALEA requires, how its rule will 'protect the privacy and security of communications not authorized to be intercepted.'"<sup>323</sup> The Court also stated that the Commission's rejection of alternatives to its post-cut-through dialed digit decision was based not on technological infeasibility, but because the alternatives "'would shift the cost burden from the originating carrier to the LEA,' 'could be time-consuming,' and might burden law enforcement's ability 'to conduct electronic surveillance effectively and efficiently.'"<sup>324</sup> The Court stated that this was "an entirely unsatisfactory response."<sup>325</sup>

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<sup>320</sup> 47 U.S.C. § 1006(b)(1) (emphasis added).

<sup>321</sup> 47 U.S.C. § 1006(b)(3).

<sup>322</sup> *United States Telecom. Assoc. v. FCC*, 227 F.3d 450, 461 (DC Cir. 2000) (hereafter "*Remand Decision*").

<sup>323</sup> *Remand Decision* at 462.

<sup>324</sup> *Id.*

<sup>325</sup> *Id.*

Congress insisted that we protect individual privacy in CALEA. The Court told us that we must explain how our rule does this, and not accept a solution that fails to protect privacy merely because of costs, time burdens, or difficulties LEAs might encounter from a rule that is more privacy protective. This is an extremely difficult task for the Commission. I would be more satisfied if we had a post-cut-through dialed digit technology available to us that provides LEAs with call-identifying information while protecting other information. Unfortunately, we do not, so we have chosen a technology that ensures that LEAs will receive the information they need, and rely on the fact that a court must decide whether a pen register warrant or a Title III warrant is the appropriate legal authority when that information is mixed with non-call-identifying information. Given our options at this time, I believe that this is the best choice available to us.