

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

In the Matter of	)	
	)	
Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications	)	PS Docket No. 11-153
	)	
Framework for Next Generation 911 Deployment	)	PS Docket No. 10-255

**REPORT AND ORDER**

**Adopted: May 8, 2013**

**Released: May 17, 2013**

By the Commission: Chairman Genachowski and Commissioners Clyburn and Rosenworcel issuing separate statements; Commissioner Pai concurring and issuing a statement; Commissioner McDowell not participating.

**TABLE OF CONTENTS**

Heading	Paragraph #
I. INTRODUCTION.....	1
II. BACKGROUND.....	4
III. DISCUSSION .....	8
A. Need for a Bounce-back Requirement.....	8
1. Benefits of a Bounce-back Requirement.....	8
2. Cost-Benefit Analysis.....	18
B. Service Providers Subject to Bounce-back Requirement.....	30
1. CMRS Providers.....	30
2. Interconnected Text Providers.....	33
C. Circumstances Requiring Bounce-back Notification.....	42
D. Implementation Deadline.....	55
E. Bounce-back Message Content.....	63
F. Other Technical Issues.....	70
1. Roaming.....	70
2. Limited Exception for Certain Devices.....	73
G. Consumer Education.....	77
1. Responsibility for Consumer Education.....	77
2. Consumer Testing.....	84
H. Legal Authority.....	88
1. Title III.....	89
2. The CVAA.....	100
3. Ancillary Authority.....	128
IV. PROCEDURAL MATTERS.....	141
A. Accessible Formats.....	141
B. Regulatory Flexibility Analysis.....	142
C. Paperwork Reduction Analysis.....	143
D. Congressional Review Act.....	144

V. ORDERING CLAUSES.....	145
APPENDIX A – Final Rules	
APPENDIX B – Final Regulatory Flexibility Act Analysis	
APPENDIX C – List of Commenters	

## I. INTRODUCTION

1. In this *Report and Order*, we require all Commercial Mobile Radio Service (CMRS) providers and providers of interconnected text messaging services (*i.e.*, all providers of software applications that enable a consumer to send text messages to all or substantially all text-capable U.S. telephone numbers and receive text messages from the same) to provide an automatic “bounce-back” text message in situations where a consumer attempts to send a text message to 911 in a location where text-to-911 is not available. The rules we adopt today will substantially reduce the risk of a person sending a text message to 911 in an emergency and mistakenly believing that 911 authorities have received it. Instead, the text sender will receive an immediate response that text-to-911 is not supported along with direction to use another means to contact emergency services, *e.g.*, place a voice call to 911.

2. Requiring all CMRS providers and interconnected text providers to implement a bounce-back mechanism is particularly important because while deployment of text-to-911 has begun, the transition is still in the very early stages and will not be uniform. During the transition, text-to-911 will be available in certain geographic areas sooner than it is available in others and may be supported by certain service providers but not by others. At the same time, as text-to-911 becomes more widely available, it is likely to generate increased consumer expectations as to its availability, which makes it increasingly important for consumers to be made aware when it is *not* available in an emergency.

3. The record in this proceeding indicates that some service providers already send an automatic bounce-back message to their subscribers when a subscriber attempts to send a text to 911. In addition, the four largest CMRS providers – AT&T, Sprint Nextel, T-Mobile, and Verizon – have voluntarily committed to provide bounce-back messaging capability throughout their networks by June 30, 2013. In this *Report and Order*, we build on this voluntary commitment and conclude that all CMRS providers and text application providers that enable consumers to send text messages to and receive text messages from all or substantially all text-capable telephone numbers (collectively, “covered text providers”) should be required to provide this capability. We further specify the circumstances under which a bounce-back message must be provided and the information that the message must contain. Finally, while we find it is technically and economically feasible for all covered text providers to implement this capability quickly, we recognize that not all providers may be able to do so by the June 30, 2013 date to which the four major carriers are committed. Therefore, we establish September 30, 2013 as the deadline for all covered text providers to implement the bounce-back capability required by this *Report and Order*. However, we encourage covered text providers to implement bounce-back message capabilities as soon as possible in order to deal expeditiously with the existing consumer confusion about the availability of text-to-911. The automatic bounce-back message requirements we adopt today establish minimum requirements. We note that providers may voluntarily commit to other terms, provided they meet or exceed the requirements we establish herein by September 30, 2013. Although this new requirement will impose additional costs on some of the covered text providers, we have determined that these costs are small and likely will be far exceeded by the public benefits of substantially reducing the risk of persons sending a text message to 911 in an emergency and mistakenly believing that 911 authorities have received it.

## II. BACKGROUND

4. In September 2011, the Commission released a *Notice of Proposed Rulemaking (2011 Notice)*, which sought comment on a number of issues related to the deployment of Next Generation 911

(NG911), including how to facilitate the deployment of text-to-911.<sup>1</sup> In the *2011 Notice*, the Commission observed that as text-to-911 is implemented, there will be instances where, despite efforts to educate consumers, some individuals will attempt to send text messages to 911 in locations where text-to-911 is not supported. The Commission found that this “could put consumers at risk if they were unaware that an emergency text did not go through or were uninformed about alternative means of reaching the PSAP.”<sup>2</sup> To mitigate this risk, the Commission proposed that when a consumer attempts to text 911 in a location where text-to-911 service is not supported, the consumer should receive an automatic reply text message from the CMRS provider informing him or her that the text was not received by 911 and providing information on how to otherwise contact 911.<sup>3</sup>

5. In response to the *2011 Notice*, commenters generally acknowledged the importance of providing notification of non-delivery to consumers.<sup>4</sup> However, some CMRS providers questioned whether the Commission should adopt a notification requirement.<sup>5</sup> Other commenters supported a requirement to ensure that all consumers would receive notification regardless of which carrier or service provider they use.<sup>6</sup>

6. On December 6, 2012, AT&T, Sprint Nextel, T-Mobile, and Verizon entered into a voluntary agreement with the National Emergency Number Association (NENA) and APCO International (APCO) in which each of the four carriers agreed to provide text-to-911 service by May 15, 2014 to Public Safety Answering Points (PSAPs) that are capable of and request to receive text-to-911 service (Carrier-NENA-APCO Agreement).<sup>7</sup> In addition, the Carrier-NENA-APCO Agreement provided that the major carriers would implement a bounce-back message to alert subscribers attempting to text an

---

<sup>1</sup> In the Matter of Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment, PS Docket No. 11-153, PS Docket No. 10-255, *Notice of Proposed Rulemaking*, 26 FCC Rcd 13615 (2011) (*2011 Notice*).

<sup>2</sup> *2011 Notice*, 26 FCC Rcd at 13628-30, ¶ 110.

<sup>3</sup> *See id.* The Commission sought comment on the approach, including what methods are necessary to ensure that such disclosure is accessible to people with different disabilities; what happens when consumers attempt to send SMS for other text-based messages to 911; whether CMRS providers send any message in response and if so the information conveyed in the message; the technical feasibility for all providers to provide such messages; whether such messages should contain certain standardized information; and what role the Commission should play in developing best practices, model responses, or requirements for the provision of standardized messages. *Id.*

<sup>4</sup> *See, e.g.*, Verizon Wireless 2011 Notice Comments at 18 (noting that it already provides an automated message when a wireless customer attempts to send a text message to 911 in a location where text-to-911 is not available). *See also* Nov. 14, 2011 *Ex Parte* of interconnected text messaging provider textPlus at 1 (noting that it already “sends a bounce-back message to users alerting the user that the 911 address is not recognized”).

<sup>5</sup> *See* Sprint Nextel 2011 Notice Comments at 24 (arguing that before making any decision on this issue, the Commission should first refer the matter to standards organizations “to review the technical aspects associated with delivering an error message and to develop a consistent error response message”).

<sup>6</sup> *See, e.g.*, APCO 2011 Notice Comments at 18; NASNA 2011 Notice Comments at 9; State of California 2011 Notice Comments at 8; Texas 911 Alliance Nov. 1, 2012 *Ex Parte* at 1; Minnesota Department of Public Safety Nov. 3, 2012 *Ex Parte* at 1; State of Hawaii 911 Nov. 6, 2012 *Ex Parte* at 1; California Technology Agency Nov. 9, 2012 *Ex Parte* at 1; BRETSA Nov. 16, 2012 *Ex Parte* at 2.

<sup>7</sup> *See* Letter from Terry Hall, APCO International; Barbara Jaeger, National Emergency Number Association (NENA); Charles W. McKee, Sprint Nextel; Robert W. Quinn, Jr., AT&T; Kathleen O’Brien Ham, T-Mobile USA; and Kathleen Grillo, Verizon, to Julius Genachowski, Chairman, Federal Communications Commission, and Commissioners McDowell, Clyburn, Rosenworcel and Pai, PS Docket 11-153, PS Docket No. 10-255 (Dec. 6, 2012) (Carrier-NENA-APCO Agreement).

emergency message to instead dial 911 when text-to-911 is unavailable in a particular area.<sup>8</sup> The agreement stated that all four carriers would provide this capability by June 30, 2013.<sup>9</sup>

7. In December 2012, we adopted a *Further Notice of Proposed Rulemaking (Further Notice)*,<sup>10</sup> which proposed, *inter alia*, to require all CMRS providers, as well as interconnected text messaging providers, to send automated reply messages to consumers attempting to text 911 when the service is not available.<sup>11</sup> The *Further Notice* sought additional comment on how best to implement the bounce-back message component to the text-to-911 system,<sup>12</sup> and proposed that CMRS providers<sup>13</sup> and other providers of text messaging services be required to automatically notify consumers attempting to text-to-911 in areas where text-to-911 is not supported or in other instances where the text cannot be transmitted to the PSAP.<sup>14</sup>

### III. DISCUSSION

#### A. Need for a Bounce-back Requirement

##### 1. Benefits of a Bounce-back Requirement

8. *Background.* In the *Further Notice*, the Commission proposed to require providers of text messaging services to automatically notify consumers attempting to text-to-911 in areas where text-to-911 is not supported or in other instances where the text cannot be transmitted to the PSAP. We stated that “there appears to be a clear benefit to persons in emergency situations being able to know immediately if a text message has been delivered to the proper authorities.”<sup>15</sup> The Commission further noted that “this automatic feedback may be life-saving, allowing a person in need of assistance to immediately seek out an alternative,” and that it may be “particularly critical during the transition to NG911, as the record to date suggests there are likely to be numerous instances where consumers attempt to send text messages to PSAPs in areas where text-to-911 is not yet available.”<sup>16</sup>

9. In general, public safety commenters agree on the necessity of requiring a bounce-back message rather than relying on voluntary measures. The Texas 911 Entities argue that CMRS providers and other text messaging providers “should be required to automatically notify consumers attempting to text-to-911 in areas where text-to-911 is not supported or in other instances where text cannot be

---

<sup>8</sup> *Id.* at 2-3.

<sup>9</sup> *Id.* at 3.

<sup>10</sup> In the Matter of Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications Framework for Next Generation 911 Deployment, PS Docket No. 11-153, PS Docket No. 10-255, *Further Notice of Proposed Rulemaking*, 27 FCC Rcd 15659, 78 FR 1799 (2012) (*Further Notice*).

<sup>11</sup> *Id.* at ¶ 2. The *Further Notice* used the term “automated error messages” for failed text-to-911 attempts, but in this Order we use the more accurate phrase “bounce-back” message as the reply text message is not notification to the consumer that the consumer has committed an error in sending the text or that the CMRS provider or interconnected text messaging provider experienced a network failure resulting in the failure to deliver the text to a PSAP. Bounce-back more accurately describes the instance as one associated with the CMRS provider or interconnected text messaging provider informing consumers that text-to-911 service is not available in the area they are texting from.

<sup>12</sup> See *Further Notice* at ¶ 2.

<sup>13</sup> 47 C.F.R. § 20.3.

<sup>14</sup> *Id.* at ¶ 25.

<sup>15</sup> *Further Notice* at ¶ 25.

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

transmitted to the Public Safety Answering Point.”<sup>17</sup> BRETSA similarly describes a bounce-back requirement as “critical, so that users sending such text messages will know to pursue other alternatives” rather than “relying on a text message that was never delivered and waiting in vain for help to arrive.”<sup>18</sup> APCO notes that “[p]ublicity regarding text-to-9-1-1 is increasingly creating a false public impression that text-to-9-1-1 capability exists today across the nation when, in fact, it is only available in a handful of test areas. . . . Over time, the requirement will also be important as text-to-9-1-1 capability is rolled out on an incremental basis across the nation’s PSAPs, some of whom may initially choose not to accept texts.”<sup>19</sup> Finally, NENA argues that, “the potential benefits of implementing bounce-back messaging are enormous because doing so would serve to dispel widespread consumer confusion about the availability of text-to-9-1-1 now, while setting the stage for effective text-to-9-1-1 service in the future.”<sup>20</sup>

10. CMRS providers also agree on the benefits of bounce-back messaging. CTIA maintains that “clarifying the purpose and scope of the automatic message will help prevent consumer confusion and promote the public’s understanding of current NG9-1-1 system limitations,” but it believes that “the Commission should make clear that receipt of an automated message is tied only to the availability of the text-to-9-1-1 service and is not associated with isolated transmission errors.”<sup>21</sup> Motorola Mobility supports the Commission’s bounce-back proposal because “[a]lerting customers immediately when their text to 911 cannot go through because the service has not been deployed in their location is essential to protecting the public” and will “help eliminate one potential source of uncertainty and confusion on the part of customers who may believe they can reach 911 via a text message where that is not the case, [the absence of which may cause a customer to] unwittingly be put in jeopardy waiting for a first responder who is not even aware of the emergency.”<sup>22</sup> AT&T argues that “. . . all concerned—the Commission, the public safety community, and providers—have recognized the need to provide end users with some sort of alert when access to emergency services via text messaging is unavailable,” and thus, AT&T “fully support[s] the Commission’s proposal that all ‘CMRS providers and other providers of text messaging services should be required to automatically notify consumers attempting to use text-to-911 in areas where text-to-911 is not supported or in other instances where text cannot be transmitted to the PSAP.’”<sup>23</sup>

11. Disabilities rights groups believe that requiring a bounce-back message will benefit wireless consumers who rely on non-voice communications tools to contact emergency services. Consumer Groups and TAP<sup>24</sup> stress the importance of bounce-back messaging for persons with disabilities, and urges codification of the Carrier-NENA-APCO agreement to require that “all service providers, including small and rural carriers do their part in implementing the error messages.”<sup>25</sup> Wireless

---

<sup>17</sup> Texas 911 Entities Comments at 2. *See also* County of Fairfax Comments at 1; TCS Comments at 5; NENA Comments at 2.

<sup>18</sup> BRETSA Comments at 2.

<sup>19</sup> APCO Comments at 2.

<sup>20</sup> NENA Comments at 2.

<sup>21</sup> CTIA Comments at 9-10.

<sup>22</sup> Motorola Mobility Comments at 2.

<sup>23</sup> AT&T Comments at 2-3.

<sup>24</sup> A coalition of consumer groups including Telecommunications for the Deaf and Hard of Hearing (TDI), Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN), National Association of the Deaf (NAD), Hearing Loss Association of America (HLAA), Association of Late-Deafened Adults, Inc. (ALDA), Cerebral Palsy and Deaf Organization (CPADO), California Coalition of Agencies Serving Deaf and Hard of Hearing People (CCASDHH), and Technology Access Program at Gallaudet University (TAP) (collectively known as “Consumer Groups and TAP”).

<sup>25</sup> Consumer Groups and TAP at 6; *see also* TCS Comments at 2-3.

RERC similarly argues that people with hearing loss or speech disabilities need to be informed when text-to-911 is not available.<sup>26</sup> While acknowledging the voluntary measures taken by the top four CMRS providers, Wireless RERC states that “it is necessary that all mobile service providers be held to the same standards” with respect to providing bounce-back messages.<sup>27</sup>

12. One commenter, the Tarrant County 9-1-1 District Board of Managers (Tarrant County), expresses concern that requiring a bounce-back message could “create an unrealistic citizen expectation” regarding the future implementation of text-to-911.<sup>28</sup> Tarrant County suggests that “without a guaranteed funding mechanism and national standard to support [bounce-back] service, the presence of a return message will stimulate expectations that local communities will not be able to afford nor deliver.”<sup>29</sup>

13. *Discussion.* We find that there is a clear benefit and present need for persons who attempt to send emergency text messages to know immediately if their text cannot be delivered to the proper authorities. In the *Further Notice*, the Commission cited evidence that many consumers already believe they can send text messages to 911.<sup>30</sup> Moreover, there is substantial data to suggest that some consumers are acting on this belief in areas where text to 911 is not available. For example, in a recent webinar sponsored by APCO, TCS reported that Verizon subscribers had sent over 23,000 text messages to 911 since October 2012, and that approximately 13,000 of these were sent in areas where the text-to-911 was not supported.<sup>31</sup> Given this volume of attempted text messages to 911 over a single carrier’s network, the volume of attempted texts over all networks combined is undoubtedly substantially larger.

14. Furthermore, in emergency situations, where call volumes can spike and networks become congested, consumers are often unable to place voice calls. Under these circumstances, it is particularly important that consumers seeking emergency assistance by text receive a notification when text-to-911 functionality is not available.

15. We also believe the likelihood of consumers attempting to text to 911 extends beyond traditional Short Message Service (SMS) and Multimedia Messaging Service (MMS) text services offered by CMRS providers. As we observed in the *Further Notice*, the rapid proliferation of smartphones and other advanced mobile devices is providing consumers with numerous new options for IP-based text applications.<sup>32</sup> In fact, Informa estimates that “By the end of 2013...41 billion OTT messages will be sent

---

<sup>26</sup> Wireless RERC Reply Comments at 3.

<sup>27</sup> *Id.* See also University of California, Berkley Comments at 1 (“the proposed rule [text-to-911] is essential to the health and safety of millions of Americans who have barriers to hearing and/or speaking”).

<sup>28</sup> Tarrant County Comments at 3.

<sup>29</sup> *Id.*

<sup>30</sup> The Commission cited a survey conducted by the North Central Texas Council of Governments (NCTCOG) which found that approximately one-third of their population believed they could text 911. *Further Notice* at ¶ 7 n. 7; Letter from Christy Williams, 9-1-1 Program Manager, NCTCOG, to David S. Turetsky, Chief, Public Safety and Homeland Security Bureau, Federal Communications Commission (Nov. 1, 2012).

<sup>31</sup> See Joint Presentation by the York-Poquoson-Williamsburg Emergency Communications Center, Cassidian Communications, TeleCommunication Systems, Inc., and Verizon Wireless, “Understanding the Challenges of Implementing Text to 9-1-1: The PSAP and the Vendor Perspectives” (Mar. 6, 2013) at 6 available at: <https://www2.gotomeeting.com/register/443513602> (registration required) (last visited April 10, 2013).

<sup>32</sup> *Further Notice* at ¶ 6. See Chen, Brian, “Apps Redirect Text Messages, and Profits, From Cellular Providers,” *New York Times*, Dec. 4, 2012, available at [http://www.nytimes.com/2012/12/05/technology/free-messaging-apps-siphon-profits-from-cellular-providers.html?nl=todaysheadlines&emc=edit\\_th\\_20121205&r=0](http://www.nytimes.com/2012/12/05/technology/free-messaging-apps-siphon-profits-from-cellular-providers.html?nl=todaysheadlines&emc=edit_th_20121205&r=0) (last accessed Dec. 5, 2012).

every day, compared with an average of 19.5 billion P2P SMS messages.”<sup>33</sup> Moreover, some of these applications are being developed expressly for the purpose of enabling consumers to text to virtually anyone, anywhere, including to anyone with a text-capable telephone number.<sup>34</sup> As these applications proliferate, consumers are likely to assume that they should be as capable of reaching 911 as any other telephone number.<sup>35</sup> Moreover, as more consumers become familiar with these applications and use them for everyday text communications, they will be more likely to attempt to use them in emergencies.

16. In light of these trends, automatic message feedback where text-to-911 is not available may be life-saving, allowing a person in need of assistance to immediately seek out an alternative means of communicating with emergency services providers. Moreover, while voluntary steps by individual text providers to implement bounce-back capability are important, there is a risk of further consumer confusion if all covered text providers do not implement this capability. In particular, during the transition period, the availability of text-to-911 will not be uniform but will vary both by service provider and by area, and the extent of availability will change over time as the transition progresses. Consumers may therefore be unaware which service providers support text-to-911 capabilities and which do not, and they may be confused about the availability of text-to-911 in their geographic area. While Tarrant County fears that bounce-back messages may give consumers an unrealistic expectation of future text-to-911 deployment, such expectations do not create any risk of immediate physical harm to the consumer and do not engender confusion in the consumer caller about the availability of first responder assistance at the time such assistance is needed. Accordingly, in comparison to the dangers posed by the possibility that consumers might mistakenly believe that text-to-911 is likely to be deployed in their particular communities, we consider the dangers of consumer confusion and harm to be far greater – and more imminent – in situations where consumers receive no responsive information when they attempt to send a text. As the Commission’s Emergency Access Advisory Committee (EAAC)<sup>36</sup> noted, “[u]sers will expect to receive information on the success or failure of a text-to-9-1-1 message. If PSAPs in an area do not support text-to-9-1-1 yet, the user will expect to receive an automated text response immediately that states that text-to-9-1-1 is not available and that a call should be made to 9-1-1.”<sup>37</sup>

17. Finally, the bounce-back requirement we adopt today is an important measure in preparing the public, as well as relevant 911 stakeholders, for the transition to NG911. As we noted in the *Further Notice*, “implementing text-to-911 represents a crucial next step in the ongoing transition of the legacy 911 system to a Next Generation 911 (NG911) system that will support not only text but will also enable consumers to send photos, videos, and data to PSAPs, enhancing the information available to first responders for assessing and responding to emergencies.”<sup>38</sup> Congress has also recognized that, until the nation completes the transition to a fully IP-based, NG911 environment, it is critical that persons with disabilities have interim solutions that can provide them with access to emergency services.<sup>39</sup> The

<sup>33</sup> Clark-Dickson, Pamela, “Press release: OTT messaging traffic will be twice the volume of P2P SMS traffic by end-2013,” Informa Telecoms and Media (Apr. 29, 2013) available at <http://blogs.informatandm.com/12861/news-release-ott-messaging-traffic-will-be-twice-the-volume-of-p2p-sms-traffic-by-end-2013/> (last accessed May 1, 2013).

<sup>34</sup> See, e.g., Fitchard, Kevin, “TextMe tries to recreate Skype as a mobile-first app,” Gigaom.com, available at <http://gigaom.com/2013/03/19/textme-tries-to-recreate-skype-as-a-mobile-first-app/> (last accessed Mar. 29, 2013).

<sup>35</sup> See, e.g., ¶¶ 9-11 *supra* (discussing the record evidence regarding consumer expectations).

<sup>36</sup> The establishment of the EAAC was mandated by the Twenty-First Century Communications and Video Accessibility Act (CVAA), Pub. L. No. 111-260 § 106.

<sup>37</sup> Emergency Access Advisory Committee, *Report of Emergency Access Advisory Committee (EAAC) Subcommittee 1 on Interim Text Messaging to 9-1-1*, Mar. 1, 2013 at 6.

<sup>38</sup> *Further Notice* at ¶ 4.

<sup>39</sup> See 47 U.S.C. § 615c(g). See also Part III.H. *supra*.

bounce-back notification mechanism is a critical component of this interim solution, because it will provide consumers with important information regarding the availability (and unavailability) of text-to-911 during the transition. In addition, bounce-back notification will continue to be important when NG911 is fully deployed, because even in an NG911 environment, instances may occur where text-to-911 is temporarily unavailable and bounce-back notification will be necessary during the temporary suspension.

## 2. Cost-Benefit Analysis

18. *Background.* In the *Further Notice*, the Commission sought comment on the costs as compared to the benefits associated with implementing a bounce-back requirement. Noting that the four major CMRS providers had voluntarily agreed to implement bounce-back capability without seeking recovery of such costs from state or local government, the Commission found this to suggest that the implementation costs are manageable.<sup>40</sup> The Commission sought comment on this view, on the cost of implementation for other providers (small and rural CMRS providers, interconnected text providers), and on how such costs compared to the public safety benefits for their subscribers.<sup>41</sup>

19. NENA argues that “the relative additional cost of implementing bounce-back messaging now as compared with sometime in the future will be small, limited to the time value of capital expenditures required to implement bounce-back messaging over the period between the effective date of a potential mandate and the date on which deployment would have otherwise occurred.”<sup>42</sup> NENA argues that “the deployments of bounce-back messaging by carriers and other service providers indicate that such deployments are competitively efficient and would likely be undertaken by all carriers eventually, even in the absence of an agreement or regulatory mandate.”<sup>43</sup> Therefore, NENA argues, the Commission should focus its cost-benefit analysis on “the relative costs and benefits of compelling nation-wide deployment on a shorter timeframe than would otherwise naturally occur, rather than on the overall costs of implementing bounce-back messaging.”<sup>44</sup>

20. CMRS providers challenge the Commission’s inference in the *Further Notice* that the absence of cost recovery provisions in the Carrier-NENA-APCO Agreement shows the costs of implementing a bounce-back requirement to be manageable.<sup>45</sup> CTIA notes that the agreement was intended to allow, although not to require, existing cost recovery to be utilized for the bounce-back implementation.<sup>46</sup> CTIA also contends that each carrier has “unique network architectures for text messaging services and therefore the costs associated with implementing a bounce-back notification system may vary widely amongst providers.”<sup>47</sup> T-Mobile warns against underestimating the cost burden

---

<sup>40</sup> *Further Notice* at ¶ 27.

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

<sup>42</sup> NENA Comments at 2-3.

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

<sup>44</sup> *Id.* at 2.

<sup>45</sup> CTIA Comments at 12-13. *See also* CCA Reply Comments at 2-3 (“The FCC mistakenly assume [sic] that costs for implementing a bounce-back message are manageable because the national carrier-signatories to the Carrier-NENA-APCO Agreement made their commitments independent of cost recovery.”).

<sup>46</sup> *Id.*

<sup>47</sup> *Id.* at 13. *See also* Sprint Nextel Comments at 7 (“The signatories to the Voluntary Commitment have committed to provide an auto-reply message “independent” of their ability to recover these associated costs from state or local governments. This does not mean, however, that wireless providers will not seek cost recovery from state or local governments. Further, simply by making the commitment to provide an auto-reply message, wireless providers are in no way representing that the costs associated with sending auto-reply messages are reasonable.”).



on small carriers to mirror commitments made by the four nationwide carriers.<sup>48</sup> T-Mobile also suggests that “as PSAPs begin to accept text messages, implementation will become much more complex and more costly, as carriers will have to determine when and where bounce-back messages should be sent.”<sup>49</sup>

21. In its initial comments, Competitive Carriers Association (CCA) argued that the June 30 deadline is neither technically nor financially feasible for small or rural carriers and the Commission should not “force non-Tier I carriers to implement a bounce-back message on the same deadline as the signatories to the Carrier-NENA-APCO Agreement.”<sup>50</sup> However, in a March 25, 2013 *ex parte* filing, CCA now states that, notwithstanding its prior concerns, it believes that “...based on recent business developments cultivated by CCA and its members, most CCA carrier members will now be able to implement a bounce-back message by June 30, 2013.”<sup>51</sup>

22. *Discussion.* In the *Further Notice*, the Commission presented a cost-benefit case study in which it found that the potential benefits of text-to-911 for a single category of 911 calls (cardiac-related 911 calls) outweighed the costs of implementing text-to-911 for all carriers and PSAPs.<sup>52</sup> The Commission case study was based on a 2002 study of cardiac emergencies in Pennsylvania (Cardiac Study), which found that the adoption of E911 was associated with improvements in the health status of patients, particularly those with cardiac conditions.<sup>53</sup> The Cardiac Study demonstrated that the faster response times associated with E911 was correlated with an over 34 percent reduction in mortality rates from cardiac arrest within the first 48 hours following the incident.<sup>54</sup> Using the Cardiac Study data, the Commission found that access to text-to-911 would accelerate emergency response and thereby save approximately seven lives annually in cardiac emergencies. Applying a value-of-life statistical model developed by the U.S. Department of Transportation, the Commission estimated the public safety benefits of text-to-911 for cardiac patients to be more than ten times the highest estimated cost in the record of implementing text-to-911, which was calculated to be no more than \$4 million annually.<sup>55</sup>

23. While the cost-benefit case study in the *Further Notice* did not separate out the cost of implementing the bounce-back portion of text-to-911, it provides a useful framework for assessing the relative costs and benefits of a bounce-back requirement. The evidence in the record indicates that the cost of implementing bounce-back capability is certain to be lower than the estimated \$4 million cost of

---

<sup>48</sup> T-Mobile Comments at 2.

<sup>49</sup> *Id.* at 3.

<sup>50</sup> CCA Reply Comments at 2-3.

<sup>51</sup> Letter from Rebecca Murphy Thompson, General Counsel, to Marlene H. Dortch, Secretary, Federal Communications Commission, in PS Docket No. 11-153 and PS Docket No. 10-255, March 25, 2013 (CCA *Ex Parte*).

<sup>52</sup> *Further Notice* at ¶ 68.

<sup>53</sup> *See id.* at ¶ 69; Susan Athey and Scott Stern, *The Impact of Information Technology on Emergency*, The RAND Journal of Economics, Vol. 22, No. 3 (Autumn 2002), available at <http://kuznets.fas.harvard.edu/~athey/itemer.pdf> (last accessed on Aug. 27, 2012) (Cardiac Study). The study examined 19,746 ambulance rides resulting in an emergency hospital admission in 66 Pennsylvania counties during 1994 and 1996. It found a -.012 reduction in the 48 hour mortality rate for cardiac patients due to E911. Given the studies estimate of 304 cardiac incidents each year per 273,000 people (the average population size of a Pennsylvania county), this implies that E911 adoption resulted in 3.648 (i.e. -.012 x 304) lives saved per 273,000 people. The Cardiac Study additionally found that cardiac emergency calls account for less than 20 percent of medical emergency calls and less than 10 percent of total emergency calls, thus the likely benefit of enhanced response times is likely to accrue to a much larger segment of the population than solely cardiac emergencies.

<sup>54</sup> *See* Cardiac Study.

<sup>55</sup> *Further Notice* at ¶ 67.

implementing text-to-911. Significantly, no party has provided data to suggest that bounce-back implementation would be more costly, nor has any party contended that cost is a significant factor with respect to the bounce-back component. Indeed, as noted above, CCA, which initially raised cost as a potential issue, has subsequently indicated that most of its members will be able to implement bounce-back capability by June 30, 2013.

24. We estimate that our new requirement will impose an implementation cost of \$43,200. We base this estimate on changes required in functional elements used by SMS/MMS providers and interconnected text providers. Across these functional elements, discussed in more detail below, the program logic is very similar, consisting of a conditional statement or rule that invokes a message notification if text-to-911 is unavailable. Depending on the capabilities of the functional elements, adding a 911 rule may simply require a configuration change or may require the equipment or software manufacturer to add programming logic. One method for determining the cost of altering an existing software program is the Constructive Cost Model II (COCOMO II), which can provide an estimate of the cost, effort, and schedule for planning new software development activity.<sup>56</sup> The model analyzes a number of variables concerning software size, specifically source lines of code, whether new, reused, modified, or some combination thereof; software scale drivers; software cost drivers related to product, personnel, operating system platform specifics, and project specifics; and software labor rates.<sup>57</sup> We estimate that approximately ten source lines of code are necessary for an application to recognize that a consumer is attempting to text to 911 and trigger the required automatic 911 bounce-back message. Using the COCOMO II model and the Bureau of Labor Statistics occupational wages for software developers, we estimate a one-time cost of \$360 to add ten new source lines of code to an existing application.<sup>58</sup>

25. First, for SMS and MMS text-to-911 traffic, we assume that the cellular network provider can implement the required bounce-back by a minor change in short message service center (SMSC) configuration settings. In cases where the configuration options do not include this capability, a change similar to the one anticipated for interconnected text messages needs to be implemented by the SMSC vendor.<sup>59</sup> For interconnected text messaging services, the bounce-back message can be implemented either within the text application installed on the handset or in the server that routes these messages to either another subscriber of the same service via the Internet or to an SMS/MMS gateway to reach SMS

---

<sup>56</sup> See University of Southern California, Center for Systems and Software Engineering, COCOMO II, available at [http://csse.usc.edu/csse/research/COCOMOII/cocomo\\_main.html](http://csse.usc.edu/csse/research/COCOMOII/cocomo_main.html) (last accessed Apr. 12, 2013).

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

<sup>58</sup> The COCOMO II web-based tool requires one to enter the total new source lines of code and the cost per person-month in dollars and to set a number of software scale and cost drivers at subjective levels (*e.g.*, very low, low, nominal, high, very high, extra high). See COCOMO II, *Constructive Cost Model*, available at <http://csse.usc.edu/tools/COCOMOII.php> (last accessed Apr. 12, 2013). This model estimates that a one-time cost of \$360 will be incurred, assuming that (a) ten new sources lines of code must be added to an existing application in order to meet the bounce-back message mandate, (b) the software labor rate is \$19,391 per person-month, and (c) all cost drivers in the model are set to “nominal.” Cost per Person-Month is estimated as follows: average software engineer/developer/programmer total mean annual salary of \$92,080 (Bureau of Labor Statistics (BLS), May 2011); a cost per person-month of approximately 173 hours; hourly rate of \$44.27 (BLS, May 2011) plus an estimated overhead factor of 2.5, or \$106.25 per person hour. ( $\$93,080 \times 2.5 / 12 = \$19,392$  cost per person-month. For mean annual wage of a software developer of applications, see Bureau of Labor Statistics, Occupational Employment Statistics, Occupational Employment and Wages, May 2011, at <http://bls.gov/oes/current/oes151132.htm>. In general, overhead costs are between 150–250 percent of the cost of a direct labor hour. See Cynthia R. Cook, John C. Graser, RAND, Military Airframe Acquisition Costs (2001) available at [http://www.rand.org/content/dam/rand/pubs/monograph\\_reports/MR1325/MR1325.ch9.pdf](http://www.rand.org/content/dam/rand/pubs/monograph_reports/MR1325/MR1325.ch9.pdf) (last accessed May 7, 2013).

<sup>59</sup> We assume that most carriers would receive the update as part of their normal software maintenance.

and MMS-capable devices. Since these servers are shared by all operating systems platforms and server changes do not require that the consumer updates their application, this option appears to be more likely to be exercised and would reduce the cost below the estimate offered below. In addition, many interconnected text providers use the same gateway platform, further reducing the number of instances that need to be upgraded.

26. We estimate that at present, there are approximately thirty interconnected text messaging services, offering their services on anywhere from one to five different operating system platforms. The application developer generally makes updates available through application stores, such as Apple, Inc.'s App Store and the numerous application stores supporting Google Android applications. (The most common offerings are available on Google Android and Apple iOS.)<sup>60</sup> To account for future proliferation of platform offerings, we estimate that all service providers offer their service across four main operating system platforms and that each of them will incur a one-time cost of \$360 to add ten new source lines of code to an existing application, as discussed above.<sup>61</sup> The resulting nationwide implementation cost for these affected applications is therefore approximately \$43,200 (*i.e.*, 30 x 4 x \$360), and an SMSC modification cost of \$1,800 (*i.e.*, 5 x \$360).<sup>62</sup>

27. Implementing bounce-back messages will require that each interconnected text messaging application developer alter an existing application, add the capability to new interconnected text message applications, or modify its server platform.<sup>63</sup> Thus, our analysis indicates that the potential cost of bounce-back implementation for interconnected text messaging services is small.

28. The nationwide cost of requiring bounce-back implementation by covered text providers is further mitigated by the fact that some text providers are already providing bounce-back messages voluntarily, so their cost will be effectively zero. We also agree with NENA that service providers who are not already providing bounce-back messaging are likely to do so eventually, even in the absence of regulations, as a matter of civic responsibility, customer service, and protection against potential liability.<sup>64</sup> To the extent that service providers would offer bounce-back messaging in the absence of a

---

<sup>60</sup> Apple iOS is the mobile operating system for a range of Apple, Inc. manufactured devices, including iPhones, iPads, and iPods. iOS supports software applications designed specifically for it. *See* Apple, Inc., *iOS*, available at <https://developer.apple.com/technologies/ios/>. Google Android is a Linux-based operating system designed for mobile devices, including smartphones and tablet computers. Android is based on an open standard for mobile devices, allowing any application developer to create applications for a mobile device. *See* Google, *Android*, available at <http://www.android.com/about/>.

<sup>61</sup> *See supra* ¶ 24.

<sup>62</sup> We assume that five SMC implementations are affected by this change, although the number of such vendors is likely to be smaller.

<sup>63</sup> *See* Letter of Brian D. Weimer, Counsel for textPlus, to Marlene Dortch, Secretary, Federal Communications Commission (Apr. 26, 2013) (“Making and implementing changes to the code in an application update cycle like this typically takes two to four week to complete. There are no external costs associated with such an application update cycle and all necessary alterations are completed through code changes in the textPlus application; there are no server side changes required”). *See also* Letter of Gene Lew, CTO of Media Friends Inc., to Marlene Dortch, Secretary, FCC (Apr. 22, 2013) (“MediaFriends implemented the SMS911 bounce back function based on a ‘cloud’ network architecture to facilitate the greatest flexibility for future enhancements. It was completed very efficiently and expeditiously in conformance with recent directives regarding SMS 911 requirements and serves the public interest”). Heywire indicates that, in its experience, “As a Cloud based architecture with flexibility of complex systems inherent, the addition of a bounce back message for SMS 911 purposes was conceptualized, architected, designed and implemented with great speed (1 day) and affected 100% coverage of every HeyWire subscriber immediately upon activation of the feature. No changes to the client software were required.” Letter of Gene Lew, CTO of Media Friends Inc., to Marlene Dortch, Secretary, FCC (May 1, 2013).

<sup>64</sup> *See* NENA Comments at 2-3.

requirement, the additional cost of mandating an earlier deployment of bounce-back messaging is only a small fraction of our \$43,200 cost estimate.<sup>65</sup> Instead, this additional cost would be limited to the time value of incurring that cost this year instead of at some future date. The rules we adopt today merely ensure that this transition will occur sooner and provide more immediate protection to consumers. Thus, in part, the cost we take into consideration here is the difference in cost between a shorter implementation timeframe and a longer one.

29. In summary, we find that an automatic bounce-back requirement will yield benefits significantly in excess of the costs. Our estimated total implementation cost of \$43,200 is far below the \$6.2 million that the Department of Transportation estimates for the value of a human life.<sup>66</sup> We believe this new requirement likely will save many lives but, even if only one life is saved, the benefits will exceed the costs imposed.

## **B. Service Providers Subject to Bounce-back Requirement**

### **1. CMRS Providers**

30. In the *Further Notice*, the Commission proposed to require all CMRS providers to provide their customers with an automatic bounce-back notification, as already agreed to by the four major carriers in the Carrier-NENA-APCO Agreement. Specifically, the Commission sought comment on any significant technical issues for small, regional, or rural CMRS providers that would impact the achievability of an automatic message within that timeframe.

31. CTIA contends that the wireless industry faces “very real technical limitations” and that “any automated message requirements that the Commission adopts must be technically feasible.”<sup>67</sup> Specifically, CTIA expresses concern that carriers using Short Message Service (SMS) may not be able to generate automatic bounce-back messages in all situations where a PSAP fails to receive a text.<sup>68</sup> Some commenters also express concern about extending the bounce-back obligation to smaller and rural CMRS providers. T-Mobile advises the Commission not to “underestimate the challenges for all CMRS carriers to mirror commitments made by the four nationwide carriers,” noting that smaller carriers may “find it challenging” to implement bounce-back capability, “particularly on a short timeframe and without cost recovery from state and local governments.”<sup>69</sup> However, in a recent *ex parte*, the CCA, the primary association representing small and rural CMRS providers, states that most of its members will be able to implement bounce-back capability by the June 30, 2013 date agreed to by the major carriers.<sup>70</sup>

32. *Discussion.* We find that it is technically feasible for all CMRS providers to provide automatic bounce-back messages. The four major CMRS providers have already committed to do so by June 30, 2013, and as CTIA notes in its comments, some of its carrier members have already done so.<sup>71</sup> CCA’s recent *ex parte* indicates that it is feasible for small and rural carriers to implement the same capability without significant difficulty. We recognize, however, that there are circumstances where a

---

<sup>65</sup> NENA Comments at 2-3.

<sup>66</sup> See Memorandum from Polly Trottenberg, Assistant Secretary for Transportation Policy, and Robert S. Rivkin, General Counsel, to Secretarial Officers and Modal Administrators, U.S. Department of Transportation, “Treatment of the Economic Value of a Statistical Life in Departmental Analysis- 2011 Interim Adjustment” (July 29, 2011). See also *Further Notice* at ¶ 71 n. 178.

<sup>67</sup> CTIA Comments at 5.

<sup>68</sup> *Id.* See also Sprint Nextel Comments at 4-5 (“SMS has a number of significant technical limitations.”).

<sup>69</sup> T-Mobile Comments at 2.

<sup>70</sup> CCA *Ex Parte* at 1.

<sup>71</sup> CTIA Comments at 5.

PSAP may not receive a text. Therefore, we limit the bounce-back requirement for CMRS providers to the specific circumstances discussed in Section III.C. below.

## 2. Interconnected Text Providers

33. In the *Further Notice*, the Commission proposed that interconnected text providers be required to send a bounce-back message when a user of the provider's program or application attempts to text to 911 where that service is not available.<sup>72</sup> The Commission proposed to define "interconnected text provider" to include "all providers of software applications that enable a consumer to send text messages to text-capable U.S. mobile telephone numbers and receive text messages from the same."<sup>73</sup> The Commission proposed to exclude from this definition IP-based messaging applications that support communications with a defined set of users of compatible applications but that do not support general communication with text-capable telephone numbers.<sup>74</sup> The Commission sought comment on this approach and whether other types of third party text messaging applications should be included.<sup>75</sup> It also sought comment on the feasibility and cost for third party providers to implement automatic notification and whether they face any unique technical issues not faced by CMRS providers.<sup>76</sup> The Commission also sought comment on whether interconnected text providers could implement a bounce-back requirement by June 30, 2013, or whether they should be subject to a longer timetable.<sup>77</sup>

34. Commenters generally support requiring interconnected text providers to implement a bounce-back capability. APCO argues that the requirement should cover all providers because "consumers are likely to have the same expectations of all text-to-9-1-1 capabilities, regardless of the specific method of text transmission."<sup>78</sup> AT&T similarly argues that any bounce-back message regime "will fail unless all interconnected text messaging service providers are required to provide a bounce-back message to texting subscribers" because "in a world where the bounce-back message exists, the subscriber will be unable to differentiate between providers that do and do not provide it."<sup>79</sup> TCS states that "any messaging application that purports to be a general 'anyone to anyone' communications system should support, at least, automated bounce-back notification when text-to-911 capability is not available."<sup>80</sup>

35. NENA states that it has tested several interconnected text messaging services and text applications available on Android and iPhone handsets to determine whether they generate bounce-back messages. NENA found that in every case, the text application provided "disclaimers to the effect that the application under test did not support 9-1-1," but that virtually none of the applications "produced an explicit message when we attempted to text 9-1-1."<sup>81</sup> Nevertheless, NENA states that given the existing ability of text applications to support automated user notifications, it is "convinced that implementing

---

<sup>72</sup> *Further Notice* at ¶ 29.

<sup>73</sup> *Id.* at ¶ 29.

<sup>74</sup> *Id.* at ¶ 91.

<sup>75</sup> *Id.* at ¶ 92.

<sup>76</sup> *Id.* at ¶ 31.

<sup>77</sup> *Id.* at ¶ 31.

<sup>78</sup> APCO Comments at 2.

<sup>79</sup> AT&T Comments at 6.

<sup>80</sup> TCS Comments at 4.

<sup>81</sup> NENA Comments at 3-4. NENA reports that some applications would not identify "9-1-1" as a contact and did not open a text conversation, while others "gave the appearance that a conversation had been established before showing (in some cases subtly) that our test message could not be delivered."

bounce-back messaging (or its equivalent) will be straightforward and inexpensive for interconnected text messaging service providers.”<sup>82</sup>

36. Providers of interconnected text services acknowledge that implementing a bounce-back mechanism is technically feasible. VON Coalition states that “it should be possible for interconnected text application providers to implement an application-generated message informing users – in every instance – that a text cannot be sent to 911 using the application.”<sup>83</sup> VON Coalition further states that because bounce-back messages associated with interconnected text applications can be handled within the application itself rather than being “dependent on a third-party gateway or an underlying carrier,” the challenges to enabling such a message “are exponentially smaller than these other options.”<sup>84</sup> While acknowledging the technical feasibility of bounce-back messaging, VON Coalition “urges the Commission not to adopt any new obligations at this time on interconnected text messaging applications to provide automatic error messages for texts to 911.”<sup>85</sup>

37. textPlus similarly states that although interconnected text providers may face “hurdles” in providing text-to-911, providing bounce-back messages does not raise “significant technical challenges [and] it is reasonable for the Commission to broadly apply the bounce back requirement to SMS providers and application texting providers.”<sup>86</sup> At the same time, textPlus cautions that “in considering a mandate to provide bounce back messages or any other mandate under consideration in the Notice, the Commission should remain cognizant of the significant technical differences between over-the-top (OTT) text messaging companies like textPlus and the carriers.”<sup>87</sup> According to textPlus, “unlike a typical CMRS subscriber who has immediate access to text messaging services directly on their wireless phone (smart or basic), textPlus users must open and log into the textPlus application on a smart phone before sending a text message.”<sup>88</sup>

38. OnStar cautions against applying text-to-911 requirements to any service which does not already provide interconnected text messaging services and requests that the Commission “clarify in its final rules that CMRS providers that do not offer interconnected text messaging services (such as OnStar with its pre-paid hands-free wireless calling (‘HFC’) services) are not subject to the requirements.”<sup>89</sup> OnStar argues that such a “clarification would ease concerns by OnStar and other similarly situated providers that final rules in this proceeding could be interpreted as requiring the introduction of brand-new interconnected text messaging services in order to comply with the Commission’s new rules.”<sup>90</sup> Texas 911 Entities agrees with OnStar that a provider who offers ‘only voice services’ should not be subject to the text-to-911 requirement.<sup>91</sup>

39. *Discussion.* We find that it is technically feasible for interconnected text messaging providers to provide a bounce-back message to their users. We define interconnected text providers as those providers that enable a consumer to send text messages to all or substantially all text-capable U.S.

---

<sup>82</sup> *Id.*

<sup>83</sup> VON Coalition Comments at 3.

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

<sup>85</sup> *Id.* at 8.

<sup>86</sup> textPlus Reply Comments at 4.

<sup>87</sup> *Id.*

<sup>88</sup> textPlus Comments at 2.

<sup>89</sup> OnStar Comments at 2.

<sup>90</sup> *Id.*

<sup>91</sup> Texas 911 Entities Reply Comments at 2.

telephone numbers and receive text messages from the same.<sup>92</sup> Even commenters that oppose a bounce-back requirement for interconnected text providers nevertheless state that application-generated bounce-back messaging is technically feasible for interconnected text providers, and some interconnected text providers, such as textPlus and Heywire, already provide this capability.<sup>93</sup> Therefore, in light of the public safety and other benefits discussed herein, we extend the bounce-back requirements adopted in this *Report and Order* to all interconnected text messaging providers. For interconnected text applications on the market prior to the adoption of this *Report and Order*, interconnected text providers must make an update available by the implementation date set forth below. For future applications not on the market as of the date of the adoption of this *Report and Order*, interconnected text providers must incorporate a bounce-back message capability into their initial programming. As in the case of CMRS providers, we limit the bounce-back requirement for interconnected text messaging providers to the specific circumstances discussed in Section III.C. below.

40. We affirm that we are extending this provision only to interconnected text message applications as defined herein,<sup>94</sup> and not to non-interconnected IP-based messaging applications that support communication with a defined set of users of compatible applications but that do not support general communication with text-capable telephone numbers. Additionally, we agree with OnStar that the requirements we adopt today should not apply to those providers that offer only voice service, and we therefore clarify that these rules do not apply to voice-only service providers.

41. We affirm that we are extending this provision only to providers of interconnected text messaging services, which we define as providers that enable a consumer to send text messages to all or substantially all text-capable U.S. telephone numbers and receive text messages from the same.<sup>95</sup> Such providers of interconnected text messaging service include providers that enable the transmission of covered messages over their own networks or facilities (e.g., CMRS licensees), as well as third-party or over-the-top (OTT) providers that enable the transmission of covered texts over another providers' network or facilities, including through the use of applications downloaded on mobile phones. For clarity, we have slightly modified the wording of the definition from that proposed in the *Further Notice*, by explicitly stating that the service must be capable of reaching "all or substantially all" text-capable U.S. telephone numbers and removing the reference to mobile numbers, since the North American Numbering Plan does not make distinctions between numbers in the plan. We also affirm that the definition of interconnected text does not extend to text messages that are directed by IP-based messaging applications that support communication with a defined set of users of compatible applications but that do not support general communication with all or substantially all text-capable telephone numbers.<sup>96</sup> Additionally, we agree with OnStar that the requirements we adopt today should not apply to those providers that offer only voice service, and we therefore clarify that these rules do not apply to voice-only service providers.

---

<sup>92</sup> See Appendix A 47 CFR 20.18(n)(1). The term "provider" refers to the entity that provides the application to the consumer. On-line "stores" that enable to consumers to browse and select applications from multiple providers, such as the Apple App Store or Google Play, are not "providers" for purposes of this definition.

<sup>93</sup> See, e.g., the VON Coalition Comments at at 3; Letter from Brian D. Weimer, Counsel for textPlus, to Marlene Dortch, Secretary, Federal Communications Commission (Nov. 14, 2012) at 1. (textPlus Nov. 14 *Ex Parte*).

<sup>94</sup> See discussion *supra* ¶ 39. See also Appendix A 47 CFR 20.18(n)(1).

<sup>95</sup> See Appendix A 47 CFR 20.18(n)(1).

<sup>96</sup> We also note that to the extent this limited type of application hands off a text to another application that does, in fact, support general communication with all or substantially all text-capable telephone numbers, the provider of the service performed by the second application (*i.e.*, the one that supports the general communication) would be considered a provider of interconnected text messaging service and subject to our bounce-back rules.

### C. Circumstances Requiring Bounce-back Notification

42. *Background.* In the Carrier-NENA-APCO Agreement, the four major carriers agreed to implement bounce-back messaging “when Text-to-9-1-1 is unavailable in that area.”<sup>97</sup> In the *Further Notice*, we proposed that CMRS providers and interconnected text providers should similarly be required to automatically notify consumers attempting to text-to-911 “in areas where text-to-911 is not supported or in other instances where the text cannot be transmitted to the PSAP.”<sup>98</sup> We clarified, however, that our proposed requirement for automatic notification to consumers would only apply to situations where the provider (or the provider’s text-to-911 vendor) has direct control over the transmission of the text message and is unable to transmit the text message to the PSAP serving the texting party’s location, whether due to network congestion, the inability of the PSAP to accept such messages, or otherwise.<sup>99</sup> We noted that, under our proposal, notification would not be required where the provider is able to transmit the text to the PSAP, but a failure in the PSAP network results in the text not being delivered to a 911 operator and sought comment on this proposal.<sup>100</sup>

43. Commenters generally support the Commission’s proposal, but some commenters propose clarification or modification of the specific circumstances in which a bounce-back message would be required. For example, commenters generally agree that bounce-back notification should be required in geographic areas where text-to-911 is not supported by the PSAP or by the originating service provider.<sup>101</sup> The EAAC Subcommittee #1 also supports this approach in its report and recommendations to the EAAC.<sup>102</sup> Commenters also generally agree that providers should not be required to provide automatic notification where the consumer uses a text application provided by a third party that the carrier does not control.<sup>103</sup>

44. While commenters generally support the approach proposed in the *Further Notice*, some commenters express concern that the rule could be over-inclusive in defining the circumstances under which a bounce-back message would be required. CTIA contends that SMS-based text providers may not be able to generate automatic bounce-back messages “for granular issues such as network congestion, return receipts, and an individual [PSAP’s] ability to respond to a text message in a timely manner (‘PSAP busy notification’).”<sup>104</sup> Given the technical limitations of SMS, CTIA argues that carriers should only be required to provide notifications “relating to the general support for text-to-911 service in that geographic area by the wireless carrier or PSAP,” but should not be required to provide a bounce-back

---

<sup>97</sup> Carrier-NENA-APCO Agreement at 3.

<sup>98</sup> See *Further Notice* at ¶ 25.

<sup>99</sup> *Id.* at ¶ 32.

<sup>100</sup> *Id.*

<sup>101</sup> See, e.g., Texas 911 Entities Comments at 2; County of Fairfax Comments at 1; TCS Comments at 5; NENA Comments at 2; BRETSA Comments at 2; APCO Comments at 2; CTIA Comments at 9-10; Motorola Mobility Comments at 2; Consumer Groups and TAP Comments at 6; TCS Comments at 2-3; Wireless RERC Reply Comments at 3; University of California, Berkley Comments at 1.

<sup>102</sup> The EAAC Subcommittee #1 Report states that “an automatic response should be provided if text-to-911 service is unavailable due to a lack of network or PSAP support.” See *Report of Emergency Access Advisory Committee (EAAC) Subcommittee 1 on Interim Text Messaging to 9-1-1*, March 1, 2013 at 23 (EAAC Subcommittee #1 Report).

<sup>103</sup> See, e.g., AT&T Comments at 4; BRETSA Comments at 8; Sprint Comments at 5.

<sup>104</sup> CTIA Comments at 6.



message when the inability to deliver text-to-911 is due to “the PSAP’s temporary inability to receive text messages, whether due to technical, operational or personnel issues.”<sup>105</sup>

45. AT&T states that “the Commission should make it clear that individual PSAPs are responsible for ‘courtesy messages’ when the PSAP determines that, under the circumstances at the time, it is appropriate to suspend, in whole or in part, receipt of text-to-911 messages [including] notifying incoming text messengers that the PSAP is temporarily suspending, in whole or in part, text-to-911 communications by returning a courtesy message.”<sup>106</sup> Sprint Nextel believes requiring carriers to intermittently block texts to 911 and provide automatic bounce-back messages “would be rife with the potential for negative consequences, such as delays between the request by the PSAP and when the carrier and/or vendor receives the request and acts on it, both to turn ‘off’ delivery of emergency message to 9-1-1 and to turn it back ‘on.’”<sup>107</sup> According to Sprint, the only acceptable method in such a case would be for a PSAP itself to return an automated message directly to the subscriber indicating that the PSAP is not currently accepting text messages and asking the subscriber to call 911 in the event of an emergency.<sup>108</sup>

46. CTIA also contends that including the phrase “or otherwise” in the proposed rule creates uncertainty about when providers would be required to transmit an automated bounce-back message.<sup>109</sup> Sprint Nextel similarly opposes this language as inconsistent with the Carrier-NENA-APCO Agreement<sup>110</sup> and urges the Commission to revise the rule language to make clear that “the automatic notification requirement would only apply to situations where the provider (or the provider’s text-to-911 vendor) has direct control over the transmission of the text message and text-to-911 is unavailable.”<sup>111</sup> BRETSA, on the other hand, argues that the originating text provider should provide a bounce-back message if a text message is “dropped or deemed undeliverable at any point in the transmission chain, so that confirmation of delivery is not received by the originating service provider or application within a specified period.”<sup>112</sup>

47. BRETSA also proposes that service providers provide a bounce-back message whenever a text message to 911 is attempted “but the location of the device cannot be determined for purposes of call routing.”<sup>113</sup> Blooston believes that carriers should be exempt from providing bounce-back messages in areas where PSAPs have not yet requested E-911 Phase I or Phase II voice service from the carrier.<sup>114</sup>

48. With respect to interconnected text application providers, VON Coalition urges the Commission to “limit [bounce-back requirements] to a message generated by the application notifying

---

<sup>105</sup> *Id.* See also Verizon Feb. 20, 2013 *Ex Parte* at 1-2.

<sup>106</sup> AT&T Comments at 4.

<sup>107</sup> Sprint Nextel Comments at 6-7.

<sup>108</sup> *Id.*

<sup>109</sup> CTIA Comments at 7.

<sup>110</sup> Sprint Nextel Comments at 3-4. Sprint notes that in the Carrier-NENA-APCO Agreement, the four carriers “did not agree to provide an auto-reply message [as stated in draft rule 20.18(h)(1)] ‘in other instances where the text cannot be transmitted to the PSAP.’”

<sup>111</sup> *Id.* at 5-6 (arguing that all message handling scenarios beyond a PSAP not provisioned to handle texts would require carriers and [Gateway Service Providers] to specify and develop standards and guidelines, and doing so would require carriers to go beyond the best efforts service outlined in the Voluntary Commitment [Carrier-NENA-APCO Agreement]).

<sup>112</sup> BRETSA Comments at 9.

<sup>113</sup> *Id.*

<sup>114</sup> Blooston Comments at 4.

users that 911 is inaccessible from the application and that they should use alternative means to contact their local [PSAP].” VON Coalition argues that, “Providing this kind of message, generated within the two-way interconnected text application, would be the only feasible way to implement the requirement since considerable development remains before these applications could deliver a text to 911; the development costs may be substantial; and even if all this can be overcome, the service still would not be as certain a means of summoning help as a real-time voice call. For deaf users, CMRS texting would be available as an alternative to a voice call.”<sup>115</sup>

49. *Discussion.* We adopt our proposal with certain modifications to address concerns raised by commenters. In general, we require all covered text providers (*i.e.*, both CMRS providers and interconnected text providers) to provide a bounce-back message when a consumer attempts to send a text message to a PSAP by means of the three-digit short code “911” and the covered text provider cannot deliver the text because (1) the consumer is located in an area where text-to-911 is not available, or (2) the covered text provider either does not support text-to-911 generally or does not support it in the particular area at the time of the consumer’s attempted text.<sup>116</sup>

50. The first scenario addresses the situation where the PSAP serving the consumer’s geographic area has not yet implemented text-to-911 capability. We include the second scenario to address instances where a covered text provider does not support text-to-911, even in areas where the PSAP has implemented text-to-911 capability. This is necessary because implementation of text-to-911 by covered text providers will not be uniform across the nation or within any given area. For example, most of the text-to-911 trials and deployments to date have involved PSAPs only receiving texts from a single carrier. In those situations, consumers of other carriers that are not yet supporting the PSAP’s trial or deployment will be unable to send text messages to 911 for some period of time. Therefore, we require these carriers to provide a bounce-back message to consumers – even though the PSAP is making text-to-911 “available” in the area.

51. We also note that the rule we adopt today requires all covered text providers to implement bounce-back capability even though some providers contend that they cannot and should not be required to support text-to-911. We have not yet decided the issue of whether all covered text providers should be required to support text-to-911 as proposed in the *Further Notice*. That issue remains pending in this proceeding, and we do not prejudge it here. However, regardless of whether all covered text providers are eventually required to support text-to-911, the fact that they provide the ability to text to telephone numbers generally is likely to lead some consumers to assume that they also have text-to-911 capability.<sup>117</sup> This could further lead consumers to put themselves at risk by attempting to send emergency text messages over such applications. We therefore conclude that to prevent consumer confusion and protect life and safety in such situations, the bounce-back requirement should apply to all covered text providers that do not support text-to-911 services.

52. As proposed in the *Further Notice* and supported by commenters, we require covered text providers to provide bounce-back messages only in those cases where the provider (or the provider’s text-to-911 vendor) has direct control over the transmission of the text message.<sup>118</sup> We decline to adopt

---

<sup>115</sup> VON Coalition Reply Comments at 1-2. *See also* textPlus Comments at 2 (“[textPlus] is currently unable to deliver text messages to 911 and very significant hurdles would need to be overcome before doing so would even be technically feasible”).

<sup>116</sup> *See* Appendix A, 47 CFR 20.18(n)(2).

<sup>117</sup> *See, e.g., supra* ¶ 30 (discussing relevant record evidence).

<sup>118</sup> In the case of a preinstalled or downloadable interconnected text application, we define the application provider as having “control” for purposes of the bounce-back requirement. However, if the user or a third party modifies or manipulates the application after it is installed or downloaded so that it no longer supports bounce-back, the provider will be presumed not to have control.

BRETSAs proposal that a bounce-back be provided in every instance where a confirmation of delivery is not received by the text provider, because this may include circumstances outside the text provider's control. However, we agree with BRETSAs that a bounce-back message should be provided when the text provider cannot determine the PSAP to which the text should be routed.

53. We further clarify that the obligation of an interconnected text provider with respect to providing an automatic bounce-back message may differ depending on whether the application uses an IP-based network or a CMRS provider's underlying SMS network to deliver text messages to text-capable telephone numbers. Some interconnected text applications use IP-based transmissions to route text messages to a server, which then converts the message to SMS if necessary for delivery to the destination number.<sup>119</sup> In such cases, the interconnected text service provider is responsible for delivering an application-based automatic bounce-back message to consumers if and when text-to-911 is unavailable. Other interconnected text applications are configured to transmit text messages in SMS format directly over the SMS network of the consumer's underlying CMRS provider, which will result in the application user receiving a bounce-back message from the CMRS provider when text-to-911 is not available.<sup>120</sup> In these cases, where the text message defaults to the underlying CMRS provider's network, the interconnected text provider satisfies its consumer notification obligation so long as it does not prevent or inhibit the CMRS provider's automatic bounce-back message from being delivered to the application user.

54. We also require covered text providers that are delivering texts to PSAPs that are supporting text-to-911 to provide a mechanism for the PSAP to request temporary suspension of text for any reason, including but not limited to network congestion, call-taker overload, PSAP failure, or security breach.<sup>121</sup> In those circumstances, the covered text provider must provide a bounce-back message to any consumer attempting to send a text to 911 in the area covered by the temporary suspension. Covered text providers must also provide a mechanism to allow PSAPs to resume text-to-911 service after such temporary suspension. As suggested by NENA, we encourage carriers, interconnected text messaging providers and PSAPs to establish standard protocols and interfaces for triggering these mechanisms. While some providers have argued that requiring bounce-back messages during temporary shutdowns would lead to potential delays and otherwise would be difficult to implement,<sup>122</sup> we believe it is important that providers provide bounce-back messages when a PSAP requests temporary suspension of text-to-911. Moreover, based on the record, we find that providing bounce-back messages in such circumstances is currently technically feasible.<sup>123</sup> Given the potentially grave public safety implications of failing to

---

<sup>119</sup> For example, TextMe ([go-text.me/](http://go-text.me/)) and Heywire ([www.heywire.com](http://www.heywire.com)).

<sup>120</sup> For example, Apple Messages ([www.apple.com/ios/messages/](http://www.apple.com/ios/messages/)).

<sup>121</sup> See, e.g., *Further Notice*, 27 FCC Rcd at 15670 ¶ 32 & n.70 (proposing and seeking comment on whether an automatic bounce-back notification should be provided when, *inter alia*, a PSAP is unable to accept texts to 911, including circumstances where the PSAP may not be able to handle all incoming text messages, and discussing the temporary blocking of messages and sending of return bounce-back messages).

<sup>122</sup> See Letter from Joseph P. Marx, Assistant Vice President, AT&T Services Inc., to Marlene Dortch, Secretary, Federal Communications Commission (May 2, 2013); Letter from Christopher Guttman-McCabe, Vice President, Regulatory Affairs, CTIA-The Wireless Association, to Marlene Dortch, Secretary, Federal Communications Commission (May 3, 2013).

<sup>123</sup> For example, Verizon already provides a solution that allows PSAPs to stop and reinstate bounce-back messages. Verizon states that it "presents a PSAP with three different text-to-911 options: a web browser interface; a direct IP connection; and SMS-to-TTY conversion. For all three options, the bounceback message is sent if the PSAP has reached a pre-established limit it has designated for the number of concurrent 911 text sessions. In addition, the PSAP can re-initiate the bounceback message for all 911 texts by 'closing the PSAP' from its own premises through an administrator tool or by instructing designated personnel at the vendor's Text Control Center to initiate the bounceback on the PSAP's behalf. In the web browser option, the PSAP can also reinitiate the bounceback message (continued....)

provide bounce-back notifications when text-to-911 service is temporarily unavailable, we believe it serves the public interest to mandate bounce-back notifications in such circumstances. We also emphasize that the bounce-back requirement will only apply where the PSAP requests the temporary shutdown using a notification mechanism established by the provider or the provider's vendor for this purpose. We encourage PSAPs and covered text providers to work together when establishing temporary shutdown mechanisms, so that both PSAPs and providers are clearly apprised of their respective roles and have established procedures in place for establishing such temporary shutdowns.<sup>124</sup>

#### D. Implementation Deadline

55. *Background.* We sought comment in the *Further Notice* on whether it is feasible for all CMRS providers and third-party providers to provide their customers with an automatic notification by June 30, 2013,<sup>125</sup> the same date by which the four major carriers agreed to implement bounce-back messaging in the Carrier-NENA-APCO Agreement.<sup>126</sup> We also sought comment regarding any significant technical issues that would bear on the achievability of an automatic message within that time frame by small, regional, or rural CMRS providers.<sup>127</sup>

56. Public safety entities generally support the Commission's proposal to require that bounce-back messaging begin on June 30, 2013. APCO argues that "[p]ublicity regarding text-to-9-1-1 is increasingly creating a false public impression that text-to-9-1-1 capability exists today across the nation when, in fact, it is only available in a handful of test areas. Thus, the bounce-back message requirement must become effective as soon as possible, certainly by the June 30, 2013, date set forth in the Carrier-NENA-APCO Agreement and proposed in the FNPRM."<sup>128</sup> Texas 911 Entities believes implementing automatic notification by June 30 is necessary to meet growing consumer expectations and use of text during emergencies.<sup>129</sup> Similarly, TCS believes that "all CMRS providers can comply with a June 30, 2013 bounce-back message (indicating the carrier / application is not offering the service at this time) implementation compliance date [and] many if not most text/messaging applications [providers] should be able to meet this date as well."<sup>130</sup> NENA argues that "the large benefits and small additional costs of implementing bounce-back messaging sooner rather than later militate in favor of imposing a requirement that providers of integrated or interconnected text messaging service begin offering bounce-back messaging service to consumers on reasonable and appropriate timeframes."<sup>131</sup> NENA, however, believes

(Continued from previous page) \_\_\_\_\_

by completely logging out of the application." Letter of Nneka Chiazor, Executive Director, Federal Regulatory Affairs, Verizon, to Marlene H. Dortch, Secretary, Federal Communications Commission (May 1, 2013) at 1.

<sup>124</sup> We note that the current ATIS standard provides that, "If an SMS to 9-1-1 message cannot be routed to a text-capable PSAP from a given location, the [Text Control Center] shall generate a bounce-back message indicating that SMS to 9-1-1 is not available in their location and the subscriber should place a voice call to 9-1-1." ATIS and TIA, Joint ATIS/TIA Native SMS to 9-1-1 Requirements and Architecture Specification, March 2013 at 10.

<sup>125</sup> *Further Notice* at ¶¶ 28, 31.

<sup>126</sup> Carrier-NENA-APCO Agreement at 3.

<sup>127</sup> *Further Notice* at ¶ 28.

<sup>128</sup> APCO Comments at 2. *See also* Maine PUC Comments at 1-2 (stating that the proposed June 30, 2013 deadline for implementing the error message requirement is reasonable and that an expansion of that proposed deadline would be contrary to the public interest); Texas 911 Entities Comments at 2; Wireless RERC Reply Comments at 3.

<sup>129</sup> Texas 911 Entities Comments at 2. *See also* BRETSA Comments at 2-3 ("The June 30, 2013 deadline proposed by the Commission for service providers to provide automated error messages appears reasonable, given that several service providers have already agreed to the deadline").

<sup>130</sup> TCS Comments at 2-3.

<sup>131</sup> NENA Comments at 2-3. *See also* TCS Comments at 3.

“the Commission should adopt a bounce-back messaging requirement for integrated and interconnected text messaging services with a primary implementation deadline of June 30th, 2013, and a small-or-rural-carrier deadline of August 31st, 2013.”<sup>132</sup>

57. While carriers generally support the June 30, 2013 deadline,<sup>133</sup> there is some concern that smaller or rural providers may need additional time. Blooston argues that rural carriers may have difficulty acquiring the necessary equipment to enable text-to-911 bounce-back messaging by the June 30 deadline,<sup>134</sup> and requests that “Tier III carriers be accorded adequate time to acquire and install the necessary equipment and software to provide bounce-back messages specifically, and text-to-911 service in general.”<sup>135</sup> Blooston argues that if the signatories to the Carrier-NENA-APCO Agreement do not make bounce-back software available, Tier III carriers should be given one year to implement the bounce-back message feature.<sup>136</sup> CCA, however, indicates that most of its carrier members will be able to implement the bounce-back message by the June 30, 2013 date.<sup>137</sup> Furthermore, the Rural Telecommunications Group (RTG) states that “it is unaware of any of its members to date who anticipate difficulty in complying with the proposed bounceback requirement.”<sup>138</sup> Likewise, Proximiti, which serves an “extremely rural” licensed area, “believes it can comply with the automatic notification . . . if the rules and architecture remain flexible in nature.”<sup>139</sup>

58. With respect to interconnected text applications, the VON Coalition states that the time necessary to implement an application-generated bounce-back message “would vary, depending on the number and complexity of an application provider’s user interfaces,” but “likely could be completed within six months of a Commission order.”<sup>140</sup> textPlus notes that it already provides bounce-back messages to its users regarding connectivity.<sup>141</sup>

59. *Discussion.* We require all covered text providers to provide an automatic bounce-back message to any wireless consumer or user of an interconnected text messaging program or application who attempts to send a text to 911 where text-to-911 is not available by September 30, 2013. In adopting

---

<sup>132</sup> *Id.* at 11.

<sup>133</sup> AT&T Comments at 6. AT&T believes the Commission should move “aggressively to have all providers of text messaging services . . . [follow the same schedule as the signatories to the Carrier-NENA-APCO Agreement] because the primary aim of the bounceback message is to dispel confusion among end users of text messaging services about whether text-to-911 is available and whether the provider was unable to deliver any particular text-to-911 message due to transmission issues in the provider’s network.”

<sup>134</sup> Blooston Rural Carriers Comments at 5 (“[E]quipment manufacturers satisfy the needs of large carriers (Tier I and Tier II) before making equipment available to smaller carriers. . . . [T]here is no reason to believe that the signatories to the Agreement consider the text-to-911 and associated bounce-back software to be anything other than strictly proprietary, and that they have absolutely no intention of making it available to smaller carriers – carriers who compete with them.”) (internal citation omitted).

<sup>135</sup> *Id.* Tier III carriers are non-nationwide wireless radio service providers with 500,000 or fewer subscribers as of the end of 2001. See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers, Order to Stay, 17 FCC Rcd 14841, 14847-48 ¶¶ 22-23 (2002).

<sup>136</sup> Blooston Rural Carriers Comments at 5.

<sup>137</sup> See CCA *Ex Parte* at 1.

<sup>138</sup> RTG Comments at 1-2.

<sup>139</sup> Proximiti Comments at 1.

<sup>140</sup> VON Coalition Comments at 3-4.

<sup>141</sup> textPlus Comments at 1-2.

this timeframe, we balance the need to implement a bounce-back message requirement as soon as possible, in order to prevent confusion and ensure that consumers can successfully and swiftly connect with first responders in an emergency, against the need to afford providers a reasonable period of time to obtain the necessary equipment and software to implement such a requirement.

60. We agree with commenters who assert that an automatic bounce-back message requirement should be implemented as soon as possible. There is widespread adoption and use of texting by wireless consumers, and as APCO and other parties point out, many consumers may already harbor a belief that text-to-911 is available.<sup>142</sup> Bounce-back messaging will provide critical information regarding the availability of requesting emergency services via texting. As a matter of public safety, it is critical that wireless consumers and users of interconnected text messaging programs and applications understand the features and potential limitations of such services in reaching 911. In addition, in light of the major CMRS providers' commitment to uniformly provide automatic bounce-back messages to their subscribers by June 30, 2013, it is important that all CMRS providers and interconnected text messaging providers offer automatic bounce-back messages as soon after this date as possible, in order to ensure industry-wide consistency in messaging to wireless consumers. Once the largest providers implement automatic bounce-back messaging by June 30, 2013, consumers will increasingly expect to receive automatic bounce-back messages if their texts do not reach 911. Consumers who do not receive automatic bounce-back messages might mistakenly believe their texts have reached 911 when, in fact, the particular text application or PSAP does not support text-to-911. Further, the automatic bounce-back requirement will be important as text-to-911 capability is rolled out on an incremental basis across the nation's PSAPs, some of which may not request delivery of emergency texts.

61. While public safety considerations dictate that we adopt the shortest practicable timeframe for implementing a bounce-back message requirement, we also seek to avoid imposing undue costs on covered text providers, particularly smaller and rural providers. Based on the record, we think it is technically feasible for covered text providers to provide automatic bounce-back messaging by September 30, 2013. This timeframe affords providers with additional time beyond the original June 30, 2013 deadline discussed in the *Further Notice*, in order to accommodate concerns by smaller and rural providers that they might need more time to acquire the necessary equipment and software.<sup>143</sup> While the *Further Notice* observed that carriers generally require six months to implement a bounce-back notification,<sup>144</sup> we note that several covered providers have already implemented, or begun implementation of, bounce-back notifications.<sup>145</sup> Additionally, we note that many small and rural carriers have stated that they can implement bounce-back notifications by the original June 30, 2013 deadline established in the Carrier-NENA-APCO Agreement.<sup>146</sup> While we are not according a full six months from the release of this item to implement bounce-back messaging, we do not believe that the September 30, 2013 deadline established in this *Report and Order* will pose an undue burden on carriers and we believe that the public safety benefits far outweigh the burden that the September 30, 2013 deadline would entail.<sup>147</sup>

---

<sup>142</sup> See also Tarrant County at 3.

<sup>143</sup> See, e.g., Blooston Rural Carriers Comments at 5.

<sup>144</sup> *Further Notice* at ¶ 28 n.67.

<sup>145</sup> See, e.g., Verizon Wireless 2011 Notice Comments at 18; CTIA Comments at 5; SouthernLINC Text-to-911 Reply Comments at 3-4; CCA *Ex Parte* at 1; textPlus Nov. 14 *Ex Parte* at 1.

<sup>146</sup> See, e.g., CCA *Ex Parte* at 1; Proximiti Comments at 1; RTG Comments at 1-2.

<sup>147</sup> While we establish a September 30, 2013 implementation deadline, we urge covered providers to implement this requirement as soon as possible, particularly where parties suggest an earlier deadline is technically feasible.

62. For the reasons of public safety and public awareness cited above, we do not find it appropriate to adopt any form of blanket exemption of the September 30, 2013 requirement for CMRS providers and interconnected text messaging providers that believe they will not be able to meet the deadline. Any covered providers who are unable to implement the bounce-back requirement by September 30, 2013 should file a request for waiver. Waivers or exemptions from these requirements are best suited to a case-by-case analysis under the waiver standard, where the facts and circumstances of each individual case can be determined on its own merits.<sup>148</sup> Notwithstanding the availability of the waiver process, we emphasize the important public safety purpose of this requirement and our expectation that providers will implement bounce-back messaging by the deadline.<sup>149</sup>

#### **E. Bounce-back Message Content**

63. *Background.* The *Further Notice* sought comment on the content of the proposed automatic bounce-back message to consumers.<sup>150</sup> The *Further Notice* clarified that the Commission does not propose to require the exact same wording for automatic messages to consumers, but rather that providers would meet the requirement so long as the bounce-back message includes information on how to contact the PSAP.<sup>151</sup> However, the Commission encouraged carriers to work with public safety organizations and disability organizations to develop a common bounce-back message text to simplify consumer education.<sup>152</sup> As discussed below, the record is divided regarding whether the Commission should require specific wording for bounce-back messages.

64. The majority of disabilities groups and public safety organizations commenting on this issue believe that the Commission should mandate wording for the automatic bounce-back message. For example, APCO argues that the absence of such a requirement “would only create confusion by consumers and service providers alike” and therefore urges the adoption of a common message.<sup>153</sup> Similarly, TCS states that “a single uniform bounce-back message is preferable to unique messages,” and “would avoid confusion and simplify public education efforts.”<sup>154</sup> NENA believes that a single standard

---

<sup>148</sup> The Commission may, on its own motion, waive its rules for good cause shown. 47 C.F.R. § 1.3. *See also Northeast Cellular Telephone Co., L.P. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (“FCC has authority to waive its rules if there is ‘good cause’ to do so.”). The Commission may also exercise its discretion to waive a rule where particular facts would make strict compliance inconsistent with the public interest, and grant of a waiver would not undermine the policy served by the rule. *See WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969), *aff’d*, 459 F.2d 1203 (D.C. Cir. 1972), *cert. denied*, 409 U.S. 1027 (1972).

<sup>149</sup> We note that several public safety entities supporting a June 30, 2013 deadline acknowledge that a waiver may be appropriate in limited instances. Given the additional time we are affording covered providers to implement the automatic bounce-back message requirement, we anticipate that few, if any, will require a waiver. *See* BRETSA Comments at 2-3 (“[t]he Commission should grant any such waivers for limited periods to assure that service providers continue to work diligently” toward implementation); NENA Reply Comments at 2, 5 (supporting a June 30, 2013 deadline, “coupled with a tough but fair waiver regime,” and recommending that the Commission “establish a process for requesting and receiving no more than a 60-day extension”); *see also* Texas 911 Entities Reply Comments at 3 (“limited, temporary waivers” may be appropriate in “very special circumstances”).

<sup>150</sup> *Further Notice* at ¶ 32.

<sup>151</sup> *Id.*

<sup>152</sup> *Id.*

<sup>153</sup> APCO Comments at 2.

<sup>154</sup> TCS Comments at 2-3.

notice will ease the conduct of training and public education campaigns related to text-to-911 deployment.<sup>155</sup>

65. A number of parties submit specific language for a standard automatic bounce-back message. For example, based on its work with consumer groups and disability rights advocates, NENA advocates that automatic bounce-back messages read: “Please make a voice or relay call to 9-1-1. Text-to-9-1-1 service is not available at this time.”<sup>156</sup> NENA states that its model language satisfies four key “key criteria” necessary for successful automatic bounce-back messaging. Specifically, NENA argues that automatic bounce-back messages should: (1) provide consumers with an unambiguous message that text messaging is not available; (2) instruct consumers to place a voice call to 9-1-1; (3) remind consumers who may be unable to conduct a voice call of alternative means of accessing 9-1-1; and (4) allow space for carrier-specific text, “such as carrier identification or an indication that the bounce-back message was provided at no cost to the consumer.”<sup>157</sup> Other providers offering specific language include Consumer Groups and TAP,<sup>158</sup> COM 390,<sup>159</sup> ATIS and TIA.<sup>160</sup>

66. On the other hand, industry commenters addressing this issue generally support the Commission’s proposal to allow parties the flexibility to develop their own wording to comply with the automatic bounce-back message requirement. CTIA states that “[p]ermitting flexibility in the wording of automated messages is beneficial because it avoids requiring carriers to revise the work that has already been done to implement bounce-back notification systems. The proposal also will allow wireless carriers to continue to research and develop wording that is most appropriate to include in the automatic messages.”<sup>161</sup> AT&T agrees, stating that “a ‘one size fits all’ regime on the bounce-back messages will potentially make compliance more difficult and costly,” and that providers “will need to develop messages appropriate to the services they offer.”<sup>162</sup> Similarly, CCA argues that rural and regional providers should be allowed to develop the most effective message for their unique customer base.<sup>163</sup> With regard to interconnected text applications, the VON Coalition supports “safe harbor language and guidance on the minimum criteria for the text of the alert.”<sup>164</sup> In light of the fact that OTT application providers generally are unable to connect users to 911, and to limit the potential for customer confusion, the VON Coalition argues that the Commission “should limit the obligation to a message generated by the

---

<sup>155</sup> NENA Comments at 6-7. NENA also recommends that further development work be performed by a subcommittee of the EACC. *Id.*

<sup>156</sup> *Id.*

<sup>157</sup> *Id.* NENA proposes that if the Commission does not prescribe a standard bounce-back message, then it should require that any bounce-back message used by a carrier or interconnected text message service provider meet these four key criteria.

<sup>158</sup> Consumer Groups and TAP Comments at 8 (recommending the message state, “YOUR TEXT TO 9-1-1 WAS NOT RECEIVED BECAUSE TEXT SERVICE IS NOT AVAILABLE IN THIS AREA. DIAL 9-1-1 BY VOICE OR USE RELAY”).

<sup>159</sup> COM 390 Comments at 2 (COM 390 suggests “Text-to-911 service not available. Call 9-1-1 for emergency.”).

<sup>160</sup> ATIS and TIA Reply Comments at 5 (ATIS and TIA report that ATIS has developed a draft standard for bounce-back messages, and that the draft standard “recommends that service providers consider utilizing a straight-forward, clear bounce-back message similar to the following: ‘Make a voice call to 911 for help; text to 911 is not available.’”). *Id.*

<sup>161</sup> CTIA Comments at 8.

<sup>162</sup> AT&T Comments at 5.

<sup>163</sup> CCA Reply Comments at 5-6.

<sup>164</sup> VON Coalition Comments at 2.



application notifying users that 911 is inaccessible from the application and that they should use alternative means to contact their local PSAP.”<sup>165</sup> For purposes of a safe harbor, the VON Coalition suggests, “This application is not capable of connecting to 911. Please make a voice or relay call to contact 911.”<sup>166</sup>

67. Parties also suggest the type of information that should be included in the automatic bounce-back message. BRETSA states that automatic bounce-back messages should “always encourage users to call 9-1-1 if they can safely do so.”<sup>167</sup> Some commenters believe the bounce-back message should contain specific information explaining why the text cannot be routed to the nearest PSAP. For example, Consumer Groups and TAP explain that “consumers should know whether the bounce-back message is the result of the inability of the most appropriate PSAP to receive messages, or if the application by design or by circumstance was not able to transmit (such as due to network congestion or due to roaming), regardless if the PSAP is accepting text messages or not.”<sup>168</sup> Similarly, the Wireless RERC believes that “providing [specific] information within the bounce-back message will enable people to more rapidly assess the situation and take appropriate alternative actions.”<sup>169</sup> On a related note, MobileTREC asks that bounce-back messages be provided to acknowledge receipt of a text to 911, stating that “the acknowledgment of a request for help during an emergency could substantially aid a citizen in need [and suggests] that the scope of the bounce-back be expanded to include an acknowledgment of receipt: a message indicating that the text has arrived and is being routed to a 911 dispatcher for handling.”<sup>170</sup>

68. Regardless of whether they support specific wording for the content of automatic bounce-back messages, parties generally support close coordination between industry and disability and consumer groups in developing an automatic bounce-back message. AT&T states that “providers should be encouraged to work with the public safety community as part of their message development process [because] a bounce-back message that includes input from the public safety community, but which meets the specifications of each individual text messaging service, will further the goal of reducing, if not eliminating, public confusion over the availability of text-to-911.”<sup>171</sup> Fairfax County states that the automatic bounce-back message should be “a consistently worded and standardized message, and encourages the Commission to work with the appropriate standards and industry associations to develop the specific wording of a concise, accurate, and meaningful ‘bounce-back’ error message.”<sup>172</sup> TCS indicates that “a message developed in consultation with disability organizations, via coordination by the Commission, would yield the simplest effective message for all user communities.”<sup>173</sup> Wireless RERC believes it is imperative that the language used in the bounce-back error message be vetted amongst

---

<sup>165</sup> *Id.* at 8. The VON Coalition that language that indicates test-to-911 is not available “at this time,” arguing that such language “may inaccurately convey that the user should try again after a few minutes.” VON Coalition Reply Comments at 2.

<sup>166</sup> VON Coalition Comments at 2-3.

<sup>167</sup> BRETSA Comments at 3-4 (suggesting that a message read, “Help will arrive sooner if you CALL 9-1-1”); *see also* Consumer Groups and TAP Comments at 8 (stating the bounce-back message should include “brief instructions on calling the most appropriate 9-1-1 center”).

<sup>168</sup> Consumer Groups and TAP Comments at 8.

<sup>169</sup> Wireless RERC Reply Comments at 4.

<sup>170</sup> Mobile TREC Comments at 2.

<sup>171</sup> AT&T Comments at 5.

<sup>172</sup> Fairfax County Comments at 1-2.

<sup>173</sup> TCS Comments at 5.

people whose primary language is American Sign Language (ASL).<sup>174</sup> Similarly, TCS states that “a message that directed the texter to make a ‘voice call’ may be inappropriate for deaf/hearing impaired users, one of the important user populations for text-to-911, and alternative language should be used in the notification message.”<sup>175</sup>

69. *Discussion.* We require all covered text providers to provide an automatic bounce-back message that includes, at a minimum, two essential points of information: (1) that text-to-911 is not available; and (2) that the consumer should try to contact 911 using another means. As an example, a sufficient bounce-back message that satisfies our criteria could say: *There is no text-to-911 service available. Make a voice call to 911 or use another means to contact emergency services.* We decline to require covered text providers to use specific wording, as recommended by some commenters.<sup>176</sup> We believe our approach affords covered text providers with the necessary guidance and flexibility to create bounce-back messages that are understood by their particular consumer base. In addition, the approach we adopt today enables covered text providers to continue to use the messages they presently have in operation, to the extent that they conform to our criteria.<sup>177</sup> This approach also provides sufficient uniformity in automatic bounce-back messages to allow for consistent training and public education materials.

## F. Other Technical Issues

### 1. Roaming

70. *Background.* In the *Further Notice*, we agreed with commenters that it is critical for consumers who are roaming to have the ability to text to 911 during an emergency.<sup>178</sup> We noted that the Carrier-NENA-APCO Voluntary Commitment does not provide for text-to-911 service while a subscriber is roaming.<sup>179</sup> We sought comment, therefore, on whether both the home and visited network operators must cooperate to support the delivery of the text to the appropriate PSAP serving the sender’s location when a consumer sends a text message to 911 while roaming. We also sought comment on any technical limitations SMS roaming poses regarding collecting location information on a roaming subscriber.<sup>180</sup>

71. APCO states “the bounceback messaging should be transparent to subscribers, regardless [of] whether they are on the home network or roaming. In all cases, an individual seeking assistance via a text message to 9-1-1 needs to know whether or not the text is delivered to a PSAP.”<sup>181</sup> However, Texas

<sup>174</sup> Wireless RERC Comments at 4 (noting that “ASL is the fourth most common language used in the U.S. so the accommodation would benefit a significant population,” and that, in focus groups conducted to explore the usability of ASL video formats for wireless emergency alerts, “participants emphasized the fact that some phrases and expressions do not translate well into ASL [and] abbreviations and technical terms that may be used in the bounce-back error messages may essentially get lost in translation”).

<sup>175</sup> TCS Comments at 5.

<sup>176</sup> We note that our action today does not preclude the voluntary adoption of a common automatic bounce-back message by covered text providers, developed by industry in coordination with public safety, consumer groups, disability rights advocates, and other interested parties. We encourage close and continued coordination among all relevant parties to ensure the successful implementation of the automatic bounce-back message requirement.

<sup>177</sup> Examples of current bounce-back messages that would satisfy our criteria include those offered by Heywire (“Heywire does not support Enhanced 911. If you are in need of emergency services, please dial 911 on your landline or mobile phone”) and Verizon (“Please make a voice call to 911. There is no text service to 911 available at this time”).

<sup>178</sup> *Further Notice* at ¶ 126.

<sup>179</sup> See Carrier-NENA-APCO Agreement at 3.

<sup>180</sup> *Further Notice* at ¶ 126.

<sup>181</sup> APCO Reply Comments at 2.

911 Entities points out that “[b]ecause the voice network and the SMS network treat ‘roaming’ differently, it appears that the home carrier of a SMS subscriber may currently need to be responsible for generating the required bounce back message [thus] consistent with the further investigation suggested during the January 11, 2013 EAAC meeting, the Commission should further consider the issue of ‘roaming’ in the context of SMS provider responsibilities for bounce back messages.” MobileTREC states that “the concept of roaming has never been considered to be a barrier to reaching a 911 operator [and] [c]itizens are used to a 911 system that simply works everywhere and without consideration or exception.” MobileTREC argues further that “lack of roaming support in text-to-911 introduces an unacceptable level of uncertainty [and] could substantially increase the risk of a failed implementation, since very few citizens know when and where or if they are roaming.”<sup>182</sup> Blooston states that “the proposal contained in the FNPRM does not contemplate that text-to-911 will be offered outside a carrier’s home market, and that carriers would be under no duty to provide the service to roamers. This means that the proposed requirement has limited scope.”<sup>183</sup>

72. *Discussion.* We require all CMRS providers to provide an automatic bounce-back message when a consumer roaming on a network initiates a text-to-911 in an area where text-to-911 service is not available. We agree with commenters that consumers should have access to critical information about whether text-to-911 service is available, regardless of whether the consumer is roaming. As MobileTREC points out, consumers roaming on other carriers’ networks have an expectation that they can access 911 services in an emergency.<sup>184</sup> Given the important safety of life implications, carriers should make automatic bounce-back messages available to consumers roaming on their network to the same extent they provide such messages to their own subscribers.

## 2. Limited Exception for Certain Devices

73. *Legacy Mobile Devices.* Motorola Mobility reports that “it has released well in excess of 100 mobile device and software combinations in the U.S. market within the past four years, none of which has been tested for support of 911 as an SMS short code, as this was not a carrier or Commission requirement at the time of development.” According to Motorola Mobility, “[t]he multiplicity of hardware/software combinations, coupled with the ability of customers to customize their devices, make[] it virtually impossible for manufacturers to determine which of their legacy devices are capable of sending texts via three digit short codes.”<sup>185</sup>

74. *Discussion.* We recognize that certain legacy devices are not capable of sending text messages to a three-digit short code. For those devices that are not capable of generating messages to 911 and whose text messaging software cannot be upgraded over the air (*e.g.*, through a push software upgrade), the CMRS provider will never receive a message and thus cannot generate a bounce-back message.<sup>186</sup> We clarify that legacy devices that are incapable of sending texts via three digit short codes are not subject to the bounce-back message requirement, provided the software for these devices cannot be upgraded over the air to allow text-to-911. In such cases, the messaging application or interface on the mobile device will likely provide an error message indicating an invalid destination number, reducing user confusion somewhat even if the message is less specific than the bounce-back message. If the text

<sup>182</sup> MobileTREC Comments at 3.

<sup>183</sup> Blooston Comments at 4.

<sup>184</sup> See MobileTREC Comments at 3.

<sup>185</sup> Motorola Mobility Comments at 2-3. See also CTIA Comments at 7; CCA Reply Comments at 3

<sup>186</sup> See Motorola Mobility Comments at 2-3 (arguing that the proposed bounce-back message requirement would not help customers who may be located in an area where text-to-911 is supported but who are using a device that is not technically capable of sending a three digit short code).

messaging software can be upgraded, however, we treat such devices in the same manner as the software offered by interconnected text providers.<sup>187</sup>

75. *Non-Service Initialized Devices.* Several commenters request that we clarify the automatic bounce-back message requirement does not extend to non-service initialized (NSI) handsets. For example, Texas 911 Entities states that “the Commission should avoid any erroneous inferences that the Commission intends to require ‘non-service initiated’ (‘NSI’) text-to-911.”<sup>188</sup> Similarly, APCO “agrees with comments suggesting that the Commission modify its definitions to clarify that non-service initialized (NSI) handsets are not subject to text-to-9-1-1 requirements.”<sup>189</sup>

76. *Discussion.* We clarify that CMRS providers are not required to provide an automatic bounce-back message when a consumer attempts to text 911 on a non-service initialized phone. Deliberations of the EAAC have affirmed that the text capability of non-service initialized handsets is neither technically nor economically feasible.<sup>190</sup> The EAAC Subcommittee #1 Report states that “under existing wireless network architectures and standards for SMS, wireless carrier SMS text message services are subscription-based and only service-initialized SMS-capable mobile devices have SMS text message functionality.”<sup>191</sup> The EAAC Subcommittee #1 Report further notes that supporting SMS text messages to 911 is not feasible on non-service initialized phones because it “would require new standards and significant modifications to handsets already available to end users and the wireless originator network radio and core infrastructure.”<sup>192</sup> At the same time, we note that some providers may provide text messaging solutions that allow users to send text messages even on NSI phones (*e.g.*, Wi-Fi-enabled text applications). We clarify that those text providers must still provide bounce-back messaging consistent with the rules we adopt today.

## **G. Consumer Education**

### **1. Responsibility for Consumer Education**

77. *Background.* In the *Further Notice*, we found that educating the public is critical to the successful roll-out of text-to-911 and preventing consumer confusion.<sup>193</sup> We also emphasized in the *Further Notice* that education is imperative to inform the public about the capabilities and limitations of text-to-911 where it is available, and the circumstances under which texting 911 is or is not preferable to making a 911 voice call. In the *Further Notice*, we sought comment on what degree current 911 educational programs could be adapted to help consumers understand the availability, capability, and appropriate use of text-to-911, how the Commission can ensure that education and outreach efforts on text-to-911 are fully accessible to people with disabilities, and on what lessons we can draw from prior educational efforts and educational programs in other countries.<sup>194</sup> We also sought comment on whether covered providers should provide educational information to consumers about the availability and use of text-to-911 and on the text-to-911 capabilities of specific wireless devices on their network.<sup>195</sup> Finally,

---

<sup>187</sup> See *supra* III.B.2.

<sup>188</sup> Texas 911 Entities Reply Comments at 2.

<sup>189</sup> APCO Reply Comments at 1 (citing CTIA Comments at 10).

<sup>190</sup> See, *e.g.*, *Report of Emergency Access Advisory Committee (EAAC) Subcommittee 1 on Interim Text Messaging to 9-1-1*, March 1, 2013 at 9.

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

<sup>192</sup> *Id.*

<sup>193</sup> *Further Notice* at ¶ 36.

<sup>194</sup> *Further Notice* at ¶ 38.

<sup>195</sup> *Id.* at ¶ 39.

we sought comment on who should bear primary responsibility for educating consumers on the limits of text-to-911 and whether the ability to send text messages to PSAPs could facilitate consumer education.<sup>196</sup>

78. Commenters generally agree that a public education campaign on both the availability of and limitations to text-to-911 is critical during the transition to full text-to-911 implementation.<sup>197</sup> As noted earlier in this proceeding,<sup>198</sup> text messages (especially SMS texts) have considerable limitations for emergency response as compared to 911 voice calls, and many commenters stress that consumers must be educated to use text messaging to 911 only in certain situations.<sup>199</sup> Moreover, advocates for the disability community stress the importance of extending consumer education efforts to everyone.<sup>200</sup> To that end, the Consumer Groups and TAP add that “education and outreach efforts to consumers [should] emphasize the importance of including specific location in text messages when it is available. Callers should be aware to type information to guide the responders: ‘I am in apartment B’; ‘I am under the kitchen table.’”<sup>201</sup>

79. Numerous commenters assert that educating the public on text-to-911 capabilities is the joint responsibility of all 911 stakeholders, including state and local 911 authorities, service providers, CMRS providers, and the Commission.<sup>202</sup> At the same time, some commenters highlight the increasingly tight budgets of state and local 911 authorities, giving them limited ability to educate the public sufficiently on text-to-911.<sup>203</sup> Several commenters suggest that the Commission is the best suited for the lead role in text-to-911 consumer education efforts.<sup>204</sup>

---

<sup>196</sup> *Id.* at ¶¶ 40-41.

<sup>197</sup> *See, e.g.*, APCO Comments at 3; CTIA Comments at 11; MobileTrec Comments at 4; BRETSA Comments at 11; Maine PUC Comments at 2; NENA Comments at 8; TCS Comments at 6; Consumer Groups and TAP Comments at 10; Tarrant County Comments at 4; Shaun Ford of NE, Oregon at 1.

<sup>198</sup> *Further Notice* at ¶ 37 (“[a]side from educating the public about the availability or unavailability of text-to-911, education is also imperative to inform the public about the capabilities and limitations of text-to-911 where it is available, and the circumstances under which texting 911 is or is not preferable to making a 911 voice call”).

<sup>199</sup> *See, e.g.*, BRETSA Comments at 11-12; APCO Comments at 3; Sprint Nextel Comments at 8; TCS Comments at 6.

<sup>200</sup> Consumer Groups and TAP Comments at 10; Maine PUC Comments at 2 (Because text-to-911 will be especially valuable to those with hearing or speech difficulties in emergencies, it is obviously essential that the materials be accessible to those with disabilities); COM390 Comments at 4 (“[E]ducation and outreach information must be accessible to people with disabilities, including people who are deaf, hard of hearing, deaf-blind, visually impaired, blind, have a speech disability, and others. The same information also should be available in multiple languages, including ASL and Spanish.”); Wireless RERC Reply Comments at 4-5 (“Materials should be available in alternative formats (i.e., braille, large print, electronic, accessible PDF etc.) and televised PSAs or other promotional videos should always have captions and ASL interpretations. Any awareness campaign should include radio, television, and web content specifically aimed at reaching people with disabilities by not only making the content accessible, but by including persons with disabilities as actors in the PSAs.”).

<sup>201</sup> Consumer Groups and TAP Comments at 10.

<sup>202</sup> BRETSA Comments at 11-12; Texas 911 Entities Comments at 2-3; NENA Comments at 7; AT&T Comments at 7; Sprint Nextel Comments at 7; CTIA Comments at 11; TCS Comments at 6-7; NENA Comments at 7.

<sup>203</sup> BRETSA Comments at 12; Fairfax, VA Comments at 3.

<sup>204</sup> *See, e.g.*, NENA Comments at 8-9; CTIA Comments at 12; AT&T Comments at 7; Sprint Nextel Comments at 7-8; Wireless RERC Reply Comments at 5-6. Some commenters suggest that Commission-led education campaigns can utilize existing 911 education tools for cost-effective education programs in the future. *See, e.g.*, NENA Comments at 8; BRETSA Comments at 13; AT&T Comments at 7.

80. Some commenters favor an industry-led information campaign. BRETSA suggests that service providers are uniquely positioned to best educate consumers about text-to-911: “Service providers have the ability to educate their customers through device packaging, multimedia tutorials pre-loaded on devices they sell for use on their networks, and through service-provider ‘free text messages,’ e-mails, bill inserts or prepaid card packaging, and web site content; as well as customer-initiated phone, internet chat, and retail location contacts.”<sup>205</sup> Fairfax County, Virginia suggests that “[o]ne element of such public education could emulate the ‘push messages’ that telecommunication providers send their customers via email, text message, and the like to alert them that their ‘monthly allocated usage minutes have reached 50% of their agreed plan for the month.’ Using ‘push messages’ to provide targeted and appropriately timed text-to-911 capability reminders and “helpful hints” would be a simple and effective method of educating the public in a meaningful and repeatable fashion.”<sup>206</sup> Furthermore, Wireless RERC says that “the bounce-back message in itself can act as a consumer education tool; alerting users to the limitations of text-to-911 and reinforcing the message that when possible, voice or relay calls to 911 are the preferred method.”<sup>207</sup> AT&T, however, cautions that consumer education information from service providers could come across as self-serving.<sup>208</sup>

81. With regard to funding education efforts, Consumer Groups and TAP suggest that the Commission “contract with independent consumer based organizations, and/or regional coalitions to provide direct training for consumers” on the advantages and disadvantages of text-to-911.<sup>209</sup> They also advocate that “the Commission to set aside one million dollars from the Interstate [Telecommunications Relay Service (TRS)] Fund to provide funding for each of the first two years.”<sup>210</sup>

82. *Discussion.* The record confirms that wide scale and substantive consumer education will be a critical factor in ensuring that consumers fully understand the uses and limitations of text-to-911. The Commission has already committed the Public Safety and Homeland Security Bureau (PSHSB) and the Consumer and the Consumer and Governmental Affairs Bureau (CGB) to implement a comprehensive consumer education program concerning text-to-911, and to coordinate their efforts with state and local 911 authorities, other federal and state agencies, public safety organizations, industry, disability organizations, and consumer groups, consistent with those voluntary measures taken under the Carrier-NENA-APCO Agreement. Based on the record, we agree with commenters that the Commission’s public website can serve as a centralized information portal for all consumers and we direct PSHSB and CGB to put in place a consumer information website that provides the public with information and instructions on how and when to use text-to-911 no later than June 30, 2013. We also direct the Bureaus to ensure that all content is accessible to individuals with hearing and speech disabilities. We direct both Bureaus to work with representatives of the ASL community to include materials and videos providing instructional material.<sup>211</sup>

<sup>205</sup> BRETSA Comments at 12-13. *See also* TCS Comments at 6-7; NENA Comments at 9.

<sup>206</sup> Fairfax, VA Comments at 3.

<sup>207</sup> Wireless RERC Reply Comments at 3-4.

<sup>208</sup> AT&T Comments at 8. NENA echoes this sentiment, noting that “information about wireless devices that are compatible with text-to-9-1-1 will be made available to consumers on a widespread basis due to natural competitive forces and voluntary commitments,” and that the Commission should “stand ready to require the identification of compatible devices offered for sale by a carrier if such information is not made accessible within a reasonable time for at least a subset of popular subscriber equipment offered for sale by the carrier.” NENA Comments at 9.

<sup>209</sup> Consumer Groups and TAP Comments at 10.

<sup>210</sup> *Id.*

<sup>211</sup> We note, however, that the Interstate TRS Fund is not an appropriate vehicle for funding outreach and public education about text-to-911, because the TRS Fund is solely intended to compensate TRS providers for their reasonable costs of providing interstate and IP-based TRS, and state and local certified programs that distribute (continued....)

83. The Carrier-NENA-APCO Agreement includes an outreach effort to “set and manage consumer expectations” regarding text-to-911. We encourage all carriers to follow that model and work with NENA, APCO and the FCC to provide information regarding the text-to-911 capabilities of specific wireless devices operate on their networks. We decline at this time to require carriers and interconnected text messaging providers to prepare specific informational materials to be provided to their customers or revise their terms of service agreements to describe the limitations associated with text-to-911. We believe carriers and interconnected text message providers will provide this information on their own and in the manner that works best to educate their subscribers.

## 2. Consumer Testing

84. *Background.* The *Further Notice* sought comment on the feasibility of providing consumers with the ability to test text-to-911 functionality on their devices.<sup>212</sup> The *Further Notice* suggested that allowing customers to send simulated or test 911 messages could benefit consumers by enabling them to verify the availability of text-to-911 and familiarize themselves with its use.<sup>213</sup> However, the Commission cautioned that any test mechanism would need to be configured to avoid burdening PSAPs with unnecessary text messages, for example, by having the carrier or 911 text services provider reply to test messages with an automated response.<sup>214</sup> The *Further Notice* also sought comment on both technical and cost issues associated with developing such a test capability.<sup>215</sup>

85. Most commenters oppose allowing consumer testing of text-to-911 functionality.<sup>216</sup> NENA expresses concern that “requiring or allowing the handling of test messages could inundate PSAPs or service providers if mal-formed test messages are not effectively screened out, and could expose service providers or PSAPs to liability if non-test messages accidentally are screened out.”<sup>217</sup> APCO states that “[s]ending a ‘test text’ would run counter to long-standing public education messages that ‘9-1-1’ should only be used when there is a genuine emergency.”<sup>218</sup> AT&T states that testing will not verify the availability of text-to-911 “because among other things, in many cases the real emergency text will be sent while the subscriber is mobile and not necessarily in his or her ‘home PSAP area.’”<sup>219</sup> In addition, AT&T states that consumers are already familiar with using text messaging services and therefore do not need text-to-911 testing.<sup>220</sup>

86. Some commenters believe that consumer testing of text-to-911 could be worthwhile, but stress that any form of testing must avoid adversely impacting PSAP operations.<sup>221</sup> Motorola Mobility and TCS suggest using a short code other than 9-1-1 as an alternative test code that would generate an

(Continued from previous page) \_\_\_\_\_

equipment to people who are deaf-blind for their distributed equipment and associated services. See 64.604 (c)(5)(iii); 47 CFR §64.610, *et. seq.*

<sup>212</sup> *Further Notice* at ¶ 41.

<sup>213</sup> *Id.* at ¶ 41.

<sup>214</sup> *Id.* at ¶ 41.

<sup>215</sup> *Id.* at ¶ 41.

<sup>216</sup> See Texas 911 Entities Reply Comments at 3-4; APCO Reply Comments at 1-2, 3; County of Fairfax, VA at 3-4; NENA at 9-10; BRETSA at 16.

<sup>217</sup> NENA Reply Comments at 9-10.

<sup>218</sup> APCO Reply Comments at 3.

<sup>219</sup> AT&T Reply Comments at 9-10.

<sup>220</sup> *Id.*

<sup>221</sup> See T-Mobile Reply Comments at 4; TCS Reply Comments at 7-8; Motorola Mobility Reply Comments at 3-4.

automatic return message from the carrier.<sup>222</sup> Maine PUC states that testing must be kept outside of the live 911 environment, while APCO calls for any testing to be confined to a “controlled closed-loop”<sup>223</sup> Public safety commenters also suggest alternatives to testing such as providing the public with maps containing information about the geographic availability of text-to-9-1-1 service.<sup>224</sup> NENA suggests that the testing issue be referred to the EAAC for further study.<sup>225</sup>

87. *Discussion.* We decline to require covered text providers to provide consumers with text-to-911 testing capability at this time. Although there are potential benefits to text-to-911 testing, we believe that without further exploration of how a testing mechanism would be configured, these benefits are likely to be outweighed by the potential for disruption and drain on PSAP resources. Moreover, even if a testing mechanism could be developed in which test messages stay within the provider’s network and are not delivered to the PSAP or are handled automatically by software at the PSAP, it is not clear that such testing would educate or inform consumers or that it would diminish the risk of consumers sending actual texts to 911 for test purposes. Further, we believe that the bounce-back messaging requirements we adopt in this *Report and Order* will inform the consumers of the actual text-to-911 capability in specific and varying locations as people travel and encounter emergencies. Therefore, until operational experience indicates otherwise, we believe that consumer education efforts should discourage the sending of texts to 911 except in actual emergencies.

## H. Legal Authority

88. In the *Further Notice*, we sought comment on the Commission’s authority to apply the bounce-back requirement to both CMRS providers and other entities that offer interconnected text messaging services (including third-party providers of “over-the-top” or “OTT” text messaging applications).<sup>226</sup> We noted that, in response to the *2011 Notice*, numerous parties addressed the Commission’s authority to adopt text-to-911 rules under Title III, the CVAA, and our ancillary authority.<sup>227</sup> We then asked parties to refresh the record on the legal authority issues and to address their comments to the particular rules proposed in the *Further Notice*.<sup>228</sup> We now conclude that Title III, the CVAA, and our ancillary authority grant the Commission authority to adopt the rules imposed by this *Order*.<sup>229</sup>

### 1. Title III

89. We begin with the Commission’s legal authority under Title III of the Communications Act.<sup>230</sup> We find that numerous Title III provisions provide the Commission with direct authority to

<sup>222</sup> Motorola Mobility Reply Comments at 3-4; TCS Reply Comments at 7-8.

<sup>223</sup> Maine PUC Reply Comments at 2; APCO Reply Comments at 1-2.

<sup>224</sup> APCO Reply Comments at 10-11; Texas 911 Entities at 3-4.

<sup>225</sup> NENA Reply Comments at 9-10.

<sup>226</sup> *Further Notice*, ¶¶ 168-72.

<sup>227</sup> *Further Notice*, ¶ 168.

<sup>228</sup> *Further Notice*, ¶¶ 168-69.

<sup>229</sup> In this *Order*, we are only deciding the scope of the Commission’s authority to adopt a bounce-back requirement, which we proposed in Part III.A of the *Further Notice*. See *Further Notice*, 27 FCC Rcd at 15667-73 (¶¶ 21-41). The Commission sought separate comment on all other sections of the *Further Notice*, including the proposal to require CMRS providers and other providers of interconnected text messaging services to support the ability of consumers to send text messages to 911. The Commission will address those issues and the scope of our legal authority to adopt those proposals in a subsequent decision.

<sup>230</sup> See 47 U.S.C. § 301 *et seq.*



impose the bounce-back requirement on CMRS providers. Indeed, the Supreme Court has long recognized that Title III grants the FCC “expansive powers” and a “comprehensive mandate” to regulate the use of spectrum in the public interest.<sup>231</sup> In *Cellco*, one of the most recent decisions of the U.S. Court of Appeals for the D.C. Circuit (D.C. Circuit) regarding the scope of our Title III authority, the court recognized these long-standing principles and explained that Title III confers on the FCC “broad authority to manage spectrum . . . in the public interest.”<sup>232</sup>

90. We conclude that Sections 301,<sup>233</sup> 303,<sup>234</sup> 307,<sup>235</sup> 309,<sup>236</sup> and 316,<sup>237</sup> taken together or individually, provide the FCC with authority to apply the bounce-back requirement to CMRS providers. For example, Section 303(b) authorizes the FCC to “[p]rescribe the nature of the service to be rendered by each class of licensed stations and each station within any class.”<sup>238</sup> Addressing the scope of this provision in *Cellco*,<sup>239</sup> the D.C. Circuit recognized that Section 303(b) authorizes the FCC to “lay[] down a rule about ‘the nature of the service to be rendered’ by entities licensed” by the Commission.<sup>240</sup> The court further explained that, while a provider may choose not to offer a wireless service, Section 303(b) authorizes the Commission to “define[] the form” that the “service must take for those who seek a license to offer it.”<sup>241</sup>

91. We conclude that Section 303(b) provides the Commission with authority to apply the bounce-back requirement to CMRS providers because the rule prescribes the nature of the service to be

---

<sup>231</sup> *Nat'l Broad. Co. v. United States*, 319 U.S. 190, 219 (1943) (recognizing the FCC’s “expansive powers” and “comprehensive mandate”); see also Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services, *Second Report and Order*, 26 FCC Rcd 5411, 5439-5443 (¶¶ 61-64) (2011) (discussing the scope of the FCC’s Title III authority) (“*Data Roaming Order*”), *petition for review denied Cellco Partnership v. FCC*, 700 F.3d 534 (D.C. Cir. 2012) (upholding the FCC’s authority to rely on Title III provisions to impose the data roaming rule).

<sup>232</sup> *Cellco*, 700 F.3d at 541 (quotation marks omitted).

<sup>233</sup> 47 U.S.C. § 301 (“It is the purpose of this [Act], among other things, to maintain the control of the United States over all the channels of radio transmission; and to provide for the use of such channels, but not the ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority.”).

<sup>234</sup> 47 U.S.C. § 303(b) (authorizing the FCC to “[p]rescribe the nature of the service to be rendered by each class of licensed stations and each station within any class”); 47 U.S.C. § 303(g) (the Commission shall “encourage the larger and more effective use of radio in the public interest”); 47 U.S.C. § 303(r) (the Commission may “prescribe such restrictions and conditions, not inconsistent with law, as may be necessary to carry out the provisions of this [Act]”).

<sup>235</sup> 47 U.S.C. § 307 (authorizing the FCC to grant station licenses “if public convenience, interest, or necessity will be served thereby”).

<sup>236</sup> 47 U.S.C. § 309(a) (authorizing the Commission, in acting on certain license applications, to determine “whether the public interest, convenience, and necessity will be served by granting such application”).

<sup>237</sup> 47 U.S.C. § 316(a) (authorizing the FCC to modify existing licenses to impose new license conditions if, in the judgment of the Commission, such action will promote the public interest, convenience and necessity).

<sup>238</sup> 47 U.S.C. § 303(b); see also *Schurz Communications, Inc. v. FCC*, 982 F.2d 1043, 1048 (7th Cir. 1992) (stating that the Communications Act invests Commission with “enormous discretion” in promulgating licensee obligations that the agency determines will serve the public interest).

<sup>239</sup> *Cellco*, 700 F.3d at 541-44.

<sup>240</sup> *Id.* (quoting 47 U.S.C. § 303(b)). In reaching this conclusion, the court referenced the definition of the word “prescribe,” which the court stated means, among other things, “to lay down a rule.” *Cellco*, 700 F.3d at 542 (quoting Webster’s Third New International Dictionary 1792 (1993)).

<sup>241</sup> *Cellco*, 700 F.3d at 543.

rendered by CMRS providers in their use of spectrum. Specifically, the rule requires that, in furtherance of the public interest purposes noted herein, CMRS providers that seek to use spectrum for the provision of covered text messaging services offer a service that includes the provision of certain text messaging functions—namely, the bounce-back notification, which ensures that consumers using the service do not get the false impression that their text to 911 was received by emergency services. As such, promulgation of the bounce-back rule falls within the scope of our authority under Section 303 and applicable precedents.<sup>242</sup>

92. Moreover, Section 316 authorizes the Commission to impose new conditions on existing licenses if it determines that such action “will promote the public interest, convenience, and necessity.”<sup>243</sup> The D.C. Circuit has recognized it as “undisputed that the Commission always retain[s] the power to alter the term of existing licenses by rulemaking.”<sup>244</sup> We believe that the text-to-911 requirements fall within the Commission’s Section 316 authority to modify the licenses held by CMRS providers,<sup>245</sup> and we exercise that authority in a manner that furthers the Communications Act’s public safety and public interest purposes.<sup>246</sup> Simply put, as discussed above,<sup>247</sup> putting the bounce-back rules in place will avoid consumer confusion on a crucially important public safety matter: whether they have successfully reached 911 services. The rule will thus potentially save lives, as it will prevent consumers from mistakenly concluding that emergency services are sending help. Having this information will hopefully enable consumers to take the important steps necessary to protect their safety and health. We find as well that, as to CMRS providers, our decision to adopt these text-to-911 requirements is a proper exercise of our licensing authority under Sections 307 and 309 of the Act.<sup>248</sup> Both of these provisions require the Commission, in acting on applications for licenses, to determine whether providing for the requested authorizations will serve the public interest, convenience, and necessity.<sup>249</sup> For the reasons explained herein, we have determined, as an exercise of our licensing authority under these provisions, that the

---

<sup>242</sup> See, e.g., *id.* at 541-44; see also *NBC*, 319 U.S. at 214-26 (discussing the FCC’s Section 303 authority).

<sup>243</sup> 47 U.S.C. § 316; see also *Cellco*, 700 F.3d at 543-44 (identifying Section 316 as another Title III provision that supported the FCC’s exercise of authority); see also *Celtronix Telemetry, Inc. v. FCC*, 272 F.3d 585 (D.C. Cir. 2001).

<sup>244</sup> *Celtronix*, 272 F.3d at 589 (citing, e.g., *United States v. Storer Broadcasting Co.*, 351 U.S. 192, 205 (1956)).

<sup>245</sup> We note that our detailed discussion of Title III provisions in this section of the *Order* is not intended to suggest that other Title III provisions identified elsewhere in this decision do not provide independent bases for our authority. For example, we note that Section 301 supports the Commission’s authority to impose the bounce-back requirement on CMRS providers. Section 301 states that “[i]t is the purpose of this [Act], among other things, to maintain the control of the United States over all the channels of radio transmission; and to provide for the use of such channels, but not the ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority.” 47 U.S.C. § 301. In requiring CMRS providers, in their use of radio transmission channels controlled by the United States, to comply with certain text-to-911 requirements, we are effectuating the mandate of the Act by exercising control over the use of radio transmission channels and specifying the parameters of their use, in a manner that we have determined will further substantial public interest goals.

<sup>246</sup> See, e.g., 47 U.S.C. § 151 (establishing the FCC for the purpose of “promoting safety of life and property through the use of wire and radio communication”).

<sup>247</sup> See discussion *supra* Section III.A.

<sup>248</sup> See 47 U.S.C. § 307; see also 47 U.S.C. § 309.

<sup>249</sup> 47 U.S.C. § 307 (requiring the FCC to grant station licenses “if public convenience, interest, or necessity will be served thereby”); see also 47 U.S.C. § 309(a) (requiring the Commission, in acting on certain license applications, to determine “whether the public interest, convenience, and necessity will be served by granting such application”).

public interest, convenience, and necessity is best served by conditioning licenses issued to CMRS providers on compliance with the bounce-back notification requirement.<sup>250</sup>

93. In response to the *Further Notice*'s bounce-back proposal, CTIA stated that it “does not agree that the agency has the legal authority to mandate that wireless providers implement automatic error messages.”<sup>251</sup> By way of explanation, however, CTIA’s bounce-back comments merely “incorporate[] by reference its past comments on the agency’s legal authority,”<sup>252</sup> which, we note, responded to somewhat different sets of proposed rules from our earlier *2011 Notice* and to our *2010 NOI* on NG911 issues.<sup>253</sup> We also note that those earlier comments pre-date *Cellco*, and that CTIA’s current comments do not reference that decision.<sup>254</sup>

94. To the extent CTIA’s cross-referenced legal authority arguments are relevant to the bounce-back rules proposed by the 2012 *Further Notice*, we find such arguments unpersuasive. CTIA’s earlier comments argued that the Commission cannot rely on Title III because, in its view, the CVAA is a more “specific and delimited grant of authority” and “must control over more general grants of authority, such as Title III.”<sup>255</sup> We do not agree with this contention. Congress may, as we find that it did here, choose to confer authority on the FCC pursuant to several statutory provisions. When it does so, the agency has several independent jurisdictional bases for acting. Because we find no conflict between Title III and the CVAA with respect to the rules adopted herein, we do not agree that the “specific” CVAA provisions somehow displace what CTIA’s views as our more “general” Title III authority. We see nothing in the text of the CVAA that would preclude the Commission from relying on our Title III authority, nor have we found any suggestion in the legislative history that Congress intended such a limitation. Rather, we believe Congress intended the CVAA to supplement—not displace—the Commission’s existing sources of authority.<sup>256</sup>

95. CTIA’s earlier comments also contended that “the Commission does not tie its assertion of Title III authority to any specific substantive grant of power.”<sup>257</sup> We disagree. Sections 303 and 316, for example, are substantive grants of authority to protect and advance the public interest.<sup>258</sup> As we tentatively indicated in the 2012 *Further Notice*, and as we demonstrated above, imposing the bounce-back rule is a lawful exercise of our authority under these and other Title III provisions.<sup>259</sup>

---

<sup>250</sup> See, e.g., *Schurz*, 982 F.2d at 1048 (discussing the Commission’s discretion and authority to promulgate license obligations that the agency determines will serve the public interest).

<sup>251</sup> CTIA Comments at 4 (citing Reply Comments of CTIA – The Wireless Association®, PS Docket No. 11-153, PS Docket No. 10-255, at 9-16 (Feb. 9, 2012) (“CTIA February 2012 Reply Comments”); Comments of CTIA – The Wireless Association®, PS Docket No. 11-153, PS Docket No. 10-255, at 19-21 (Dec. 12, 2011) (“CTIA December 2011 Comments”); Comments of CTIA – The Wireless Association®, PS Docket No. 10-255, at 7-10 (Feb. 28, 2011) (“CTIA February 2011 Comments”)).

<sup>252</sup> CTIA Comments at 4.

<sup>253</sup> See CTIA February 2011 Comments, which respond to *In The Matter Of Framework For Next Generation 911 Deployment*, Notice of Inquiry, 25 FCC Rcd 17869 (2010) (*2010 NOI*).

<sup>254</sup> Our *Further Notice* specifically asked commenters to address the scope of our Title III authority in light of *Cellco*. See *Further Notice*, 27 FCC Rcd at 15722 ¶ 170.

<sup>255</sup> CTIA February 2012 Reply Comments at 11.

<sup>256</sup> See S. Rep. 111-386 (11th Cong., 2nd Sess. 2011), 2010 WL 5186403.

<sup>257</sup> CTIA December 2011 Comments at 20.

<sup>258</sup> See *Cellco*, 700 F.3d at 541-43 (relying, *inter alia*, on Sections 303(b) and 316).

<sup>259</sup> We note that CTIA’s earlier comments also claimed that it could not assess whether the Commission’s rules would be a lawful exercise of the Commission’s authority unless the FCC first “advances concrete proposals.” (continued....)

96. We also disagree with CTIA's earlier suggestion that, to the extent we have Title III authority over a service, the Commission's authority to impose text-to-911 rules would be diminished if that service were an unclassified offering or an information service.<sup>260</sup> The Commission previously explained that the classification of an offering "as an information service does not affect the general applicability of the spectrum allocation and licensing provisions of Title III . . . [and that t]hese provisions . . . continue to apply because the service is using radio spectrum."<sup>261</sup> Indeed, the D.C. Circuit recently confirmed this point in *Cellco*, where it upheld the Commission's reliance on our Title III authority to impose rules on an offering that was not classified as a telecommunications service.<sup>262</sup>

97. Moreover, we note that our exercise of Title III authority to impose the bounce-back requirement on CMRS providers is supported by clear Commission precedent. Since 1996, the Commission has exercised authority under Title III of the Communications Act to require CMRS providers, as spectrum licensees, to implement basic 911 and E911 services.<sup>263</sup> These decisions relied upon Sections 301 and 303(r) to require that CMRS providers be capable of transmitting 911 calls to PSAPs.<sup>264</sup> We find that the rules we adopt herein are consistent with the Commission's earlier exercise of Title III authority in the context of 911/E911 regulation.

98. Furthermore, on multiple occasions, Congress has expanded the Commission's obligations to implement 911 and E911 requirements,<sup>265</sup> thereby recognizing and ratifying our prior

(Continued from previous page) \_\_\_\_\_

CTIA December 2011 Comments at 20. While an agency is not required to give notice of all the specifics of a rule that it ultimately promulgates, we observe that there is no question here that the level of detail provided in the FCC's 2012 *Further Notice* was more than sufficient. *See, e.g., Further Notice* at Appendix B (containing the text of proposed rules).

<sup>260</sup> CTIA February 2012 Reply Comments at 14-16.

<sup>261</sup> *Appropriate Regulatory Treatment for Broadband Access to the Internet over Wireless Networks*, 22 FCC Rcd 5901, 5914-15 ¶ 36 (2007); *see also Data Roaming Order*, 26 FCC Rcd at 5440 n.166 ("Application of the Title III provisions is not affected by whether the service using the spectrum is a telecommunications service or information service under the Act."); *Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services*, 11 FCC Rcd 18455, 18471-72 (¶ 31) (1996) (requiring CMRS carriers to make bundled packages that include non-Title II components available for resale pursuant to Title III).

<sup>262</sup> *See Cellco*, 700 F.3d at 537-38.

<sup>263</sup> *See, e.g., Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 18676, 18679 ¶¶ 5, 10 (1996) (*E911 First Report and Order*) (relying on Sections 301 and 303(r) to impose E911 rules on CMRS providers); *see also Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Fourth Memorandum Opinion and Order*, 15 FCC Rcd 17442, 17445 ¶ 6 (2000) (relying on Sections 301, 303(r), and 151 to promulgate E911 rule revisions); *see also Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Second Memorandum Opinion and Order*, 14 FCC Rcd 20850 (1999) (resolving petitions to help accelerate the deployment of E911), *aff'd U.S. Cellular Corp. v. FCC*, 254 F.3d 78 (D.C. Cir. 2001).

<sup>264</sup> 47 C.F.R. § 20.18(c); *see also E911 First Report and Order*, 11 FCC Rcd at 18682-83 (¶ 10).

<sup>265</sup> *See New and Emerging Technologies Improvement Act of 2008*, P.L. 110-283, 122 Stat. 2620 (2008) ("NET 911 Act") (codifying the Commission's E911 requirements for interconnected VoIP services and authorizing the Commission to amend those requirements); *see also Wireless Communications and Public Safety Act of 1999*, P.L. 106-81, 113 Stat. 1286 (1999) ("911 Act") (establishing 911 as the national emergency number and requiring the Commission to provide for appropriate transition periods for areas in which 911 was not in use); *Ensuring Needed Help Arrives Near Callers Employing (ENHANCE) 911 Act of 2004*, Pub. L. 108-494, §§ 104, 158 (b)(1); 118 Stat. 3987-3988; 47 U.S.C. §§ 901, 942 (2004) ("ENHANCE 911 Act") (addressing 911 deployment).

exercise of Title III authority to impose 911 and E911 regulations on CMRS providers.<sup>266</sup> These congressional enactments were specifically designed to “encourage and facilitate the prompt deployment throughout the United States of a seamless, ubiquitous, and reliable end-to-end infrastructure for communications, *including wireless communications*, to meet the Nation’s public safety and other communications needs.”<sup>267</sup> Under well-accepted principles of statutory construction, such congressional ratification of administrative interpretations of statutory provisions, including those granting substantive jurisdiction, is itself evidence of the agency’s authority to regulate.<sup>268</sup> We find that these 911 statutes provide additional support for our finding of jurisdiction to apply the bounce-back requirement to CMRS providers.<sup>269</sup>

99. In sum, we conclude that the Commission has ample Title III authority to apply the bounce-back requirement to CMRS providers. We consider this requirement to be a key step in the FCC’s ongoing efforts to further the important public safety purposes of the Communications Act, including “the purpose of promoting safety of life and property.”<sup>270</sup>

## 2. The CVAA

100. Apart from our Title III authority over licensees, we conclude that the CVAA vests the Commission with direct authority to impose the bounce-back requirement on both CMRS providers and other covered providers of interconnected text messaging services, including OTT providers.<sup>271</sup> We reach this conclusion for two reasons. First, our decision is a proper exercise of our CVAA authority to promulgate regulations that implement one or more of EAAC’s recommendations.<sup>272</sup> Second, and alternatively, our decision is a lawful exercise of our CVAA authority to promulgate specified “other regulations.”<sup>273</sup>

101. *Background.* Congress enacted the CVAA in 2010 to increase the access of persons with disabilities to modern communications, including their access to emergency services through those

---

<sup>266</sup> See *2011 Notice*, 26 FCC Rcd at 13661 n.213 (¶ 117).

<sup>267</sup> See 911 Act § 2(b) (emphasis added).

<sup>268</sup> See, e.g., *Haig v. Agee*, 453 U.S. 280, 300-06 (1981) (long-standing interpretation by the Secretary of State of its power under Passport Act of 1926 as encompassing the power to revoke passports to prevent damage to national security or foreign policy was ratified by congressional acquiescence, even though Secretary exercised power infrequently); *Lorillard v. Pons*, 434 U.S. 575, 580-85 (1978) (Congress is presumed to be aware of administrative and judicial interpretations of a statute and to adopt and ratify those interpretations when it re-enacts a statute without change or incorporates in a new law sections of a prior law that have a settled interpretation); *Zemel v. Rusk*, 381 U.S. 1, 9-13 (1965) (Secretary of State’s interpretation of Passport Act of 1926 as authorizing him to impose area restrictions was ratified by Congress when it left untouched the Secretary’s broad rulemaking authority when it later enacted legislation relating to passports); *Norwegian Nitrogen Products Co. v. U.S.*, 288 U.S. 294, 313-15 (1933) (“administrative practice, consistent and generally unchallenged, will not be overturned except for very cogent reasons if the scope of the command is indefinite and doubtful”).

<sup>269</sup> See discussion *infra* (detailing the scope of the Commission’s authority under various 911 statutes).

<sup>270</sup> See 47 U.S.C. § 151.

<sup>271</sup> See Twenty-First Century Communications and Video Accessibility Act of 2010, Pub. L. No. 111-260, 124 Stat. 2751 (CVAA).

<sup>272</sup> See 47 U.S.C. § 615c(g) (“The Commission shall have the authority to promulgate regulations to implement the recommendations proposed by the Advisory Committee[.]”).

<sup>273</sup> 47 U.S.C. § 615c(g) (“The Commission shall have the authority to promulgate . . . other regulations, technical standards, protocols, and procedures as are necessary to achieve reliable, interoperable communication that ensures access by individuals with disabilities to an Internet protocol-enabled emergency network, where achievable and technically feasible[.]”).

communications, among other purposes.<sup>274</sup> In Section 106 of the CVAA, which is now codified at 47 U.S.C. § 615c, Congress required the FCC to establish an advisory committee—the EAAC—for the purpose of “achieving equal access to emergency services by individuals with disabilities, as a part of the migration to a national Internet protocol-enabled emergency network.”<sup>275</sup> The CVAA directed the EAAC to conduct a national survey of individuals with disabilities “to determine the most effective and efficient technologies and methods by which to enable access to emergency services by individuals with disabilities.”<sup>276</sup>

102. The CVAA further directed the EAAC to develop and submit to the Commission recommendations to implement such technologies and methods, including recommendations “for protocols, technical capabilities, and technical requirements to ensure the reliability and interoperability necessary to ensure access to emergency services by individuals with disabilities.”<sup>277</sup>

103. Pursuant to the CVAA, the EAAC was established in 2010, and it is composed of state and local government representatives responsible for emergency management and response, national organizations representing people with disabilities and senior citizens, communications equipment manufacturers, service providers, and other subject matter experts.<sup>278</sup> In 2011, the EAAC conducted the required national survey, and in July 2011 it submitted its report on the completed survey to the Commission.<sup>279</sup> The EAAC survey confirmed the need for new forms of accessible communications to reach 911 services—including text and video—by persons who have hearing or speech disabilities, and thus for whom voice access to emergency services is ineffective.<sup>280</sup>

104. In December 2011, the EAAC submitted its report to the Commission.<sup>281</sup> The EAAC Report included a number of recommendations that are relevant to the regulations being promulgated today.<sup>282</sup>

105. *Discussion.* As noted above, we now find that two provisions of the CVAA, codified at 47 U.S.C. § 615c(g), authorize the Commission to apply the bounce-back rules to both CMRS and other providers of interconnected text messaging services. We discuss those two sources of CVAA authority below.

106. We first conclude that our decision to adopt the bounce-back requirement is a proper exercise of the Commission’s Section 615c(g) “authority to promulgate regulations to implement the

---

<sup>274</sup> 47 U.S.C. § 615c(a).

<sup>275</sup> CVAA § 106(a) (codified at 47 U.S.C. § 615c(c)).

<sup>276</sup> 47 U.S.C. § 615c(b).

<sup>277</sup> 47 U.S.C. § 615c(c)(2).

<sup>278</sup> See Emergency Access Advisory Committee Announcement of Members, *Public Notice*, DA 10-2318, 25 FCC Rcd 17084 (CGB Dec. 7, 2010) (EAAC Members Announcement PN).

<sup>279</sup> EAAC, *Report on Emergency Calling for Persons with Disabilities Survey Review and Analysis 2011*, July 21, 2011, at 3, available at <http://transition.fcc.gov/cgb/dro/EAAC/EAAC-REPORT.pdf> (EAAC Survey Report).

<sup>280</sup> See *EAAC Survey Report* at 15, Question 8; see also *id.* at 22-29 Questions 15-22.

<sup>281</sup> Emergency Access Advisory Committee (EAAC) Report and Recommendations (Dec. 6, 2011), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-312161A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-312161A1.doc) (EAAC Report).

<sup>282</sup> See, e.g., EAAC Report and Recommendations at 26 (Recommendation P4.1: Interim Text Access); *id.* at 28 (Recommendation T1.2: Interim Mobile Text Solution); *id.* at 21-22 (Recommendation P2.1: Minimum Common Standards); *id.* at 22-23 (Recommendation P2.2: Types of Direct Access). We discuss these recommendations in more detail below.

recommendations proposed by the” EAAC.<sup>283</sup> Specifically, the bounce-back rules implement EAAC recommendations T1.2,<sup>284</sup> P4.1,<sup>285</sup> P2.1,<sup>286</sup> and/or P2.2.<sup>287</sup>

107. EAAC Recommendation T1.2 advises that the Commission, as part of the “[a]ctions needed for the migration to a national Internet protocol-enabled network” develop an interim, mobile text solution that can be rapidly deployed to provide nationwide access to 9-1-1 services.<sup>288</sup> Similarly, EAAC Recommendation P4.1 states that, until certain consumer requirements could be implemented and fully deployed in an NG911 environment, “mobile device manufacturers, carriers and networks should implement an achievable interim method for text-based messaging to 9-1-1.”<sup>289</sup>

108. By adopting the bounce-back requirements today, we are adopting regulations that implement one or more of these EAAC recommendations. Until the nation completes the transition to a fully IP-based, NG911 environment—that is, an environment where consumers nationwide can successfully send and receive all forms of IP-based multi-media messages to emergency services—it is critical, as both EAAC and Congress recognized, that persons with disabilities have interim solutions that give them access to emergency services. We thus implement EAAC’s interim text-to-911 recommendations by promulgating regulations that will give persons with disabilities a notification when they have not been successful in reaching 911 with a text message.<sup>290</sup> We find that this is a critically important part of an interim text-to-911 solution. As the record above shows, persons with disabilities are currently texting 911, but this service is not available in all areas (either because it is not provisioned or enabled by the text provider or because the local PSAP is not yet capable of processing texts to 911).<sup>291</sup> We thus find that, in acting on EAAC’s interim text-to-911 recommendations, we ensure that

---

<sup>283</sup> 47 U.S.C. § 615c(g).

<sup>284</sup> See EAAC Report and Recommendations at 28 (Recommendation T1.2: Interim Mobile Text Solution) (recommending that “the FCC work with Department of Justice, industry, academia, consumer groups and public safety entities to develop an interim solution that can be rapidly deployed to provide nationwide access to 9-1-1 services through industry standards-based mobile text communications solution(s) to provide critical coverage for this important constituency during the transition to NG9-1-1”).

<sup>285</sup> See EAAC Report and Recommendations at 26 (Recommendation P4.1: Interim Text Access) (recommending that, until certain consumer requirements could be implemented and fully deployed as part of the NG911 transition, “mobile device manufacturers, carriers and networks should implement an achievable interim method for text-based messaging to 9-1-1”).

<sup>286</sup> EAAC Report and Recommendations at 21-22 (Recommendation P2.1: Minimum Common Standards) (“The EAAC recommends that the FCC, in consultation with stakeholders including industry, public safety, consumer groups and the DOJ as required, identify and develop, if necessary, standards to ensure direct, reliable and interoperable accessible emergency services to NG9-1-1 and take the appropriate steps to promote the adoption of minimum standards.”).

<sup>287</sup> See EAAC Report and Recommendations at 22-23 (Recommendation P2.2: Types of Direct Access) (“Based on the results of the survey, Consumers identified the following types of equipment and communication needs for direct access to NG9-1-1. As with all NG9-1-1 communications, this communication needs to be reliable and interoperable. Further, in order for NG9-1-1 and to the extent that the solution is usable without causing confusion during an emergency call and for NG9-1-1 emergency services to be accessible, the EAAC recommends that ‘standards and functional requirements be adopted that are technically and economically feasible’ to achieve the following . . . Consumers can: . . . 11. Have the option to speak and listen, and receive back real-time text, IM, SMS or email back from NG9-1-1.”) (citation omitted).

<sup>288</sup> See EAAC Report and Recommendations at 28.

<sup>289</sup> EAAC Report and Recommendations at 26.

<sup>290</sup> See discussion *supra* Part III.A (discussing the importance of bounce-back notifications).

<sup>291</sup> See discussion *supra* Part III.A.

consumers with disabilities do not receive the false impression that their text for help was received. We find it self-evidently important that these consumers, which may be in life threatening situations, know when their text for help was not received and thus can take the steps necessary to reach emergency services.

109. We also note that EAAC Recommendations P2.1 and P2.2 emphasize and recommend that the FCC identify and develop standards that ensure “direct [and] reliable” access to NG911 emergency services.<sup>292</sup> As part of the direct access that EAAC endorses under Recommendation P2.2, EAAC includes options for consumers with disabilities to “receive back real-time text, IM, SMS or email back from NG9-1-1.”<sup>293</sup> We find that our decision today furthers these recommendations because ensuring that persons with disabilities receive a notification when they have failed to successfully reach 911 is part of putting a reliable text-based solution in place. In addition to the points made above, consumers may not trust or rely on text-to-911 services if they have no basis for knowing whether their plea for help has been received by emergency services.

110. We also emphasize, as EAAC did in its Report, the importance of applying the bounce-back requirement to all providers of covered interconnected text messaging services, not just the subset of CMRS providers. EAAC made clear that its recommendations, particularly Recommendation T1.2, should not be limited to CMRS-specific technology, which historically relied on SMS, since, *inter alia*, “phones . . . have applications people use for daily text communication that do not use SMS as their transport protocol but use . . . other protocols (e.g., BlackBerry Messenger, iMessage) to communicate with similar phones and with the SMS features on other people’s phones.”<sup>294</sup> We thus view EAAC recommendation T1.2 as including interconnected text messaging applications services by non-CMRS providers within the scope of the recommendation, and conclude that we have authority under Section 615c(g) to implement that recommendation by adopting the bounce-back rule.

111. Moreover, in addition to serving the interests of the disability community during the migration to a fully IP-enabled NG911 environment, the bounce-back rule furthers the CVAA’s long-term interest in ensuring that members of the disability community have reliable access to IP-enabled emergency services once the transition is complete.<sup>295</sup> As discussed in more detail below, members of the disability community that do not receive a bounce notification during the transition period, and thus erroneously conclude that their text for help was received, may come to distrust text-based methods of reaching 911.<sup>296</sup> This distrust would likely undermine the effectiveness and use of IP-based NG911 systems in contravention of the CVAA’s long-term goal of putting reliable text-based protocols in place.<sup>297</sup>

112. The record here shows that numerous commenters, including public safety entities, members of the disability community, and telecommunications carriers, agree with the Commission’s

---

<sup>292</sup> See EAAC Report and Recommendations at 21-23.

<sup>293</sup> EAAC Report and Recommendations at 22-23.

<sup>294</sup> *Id.* at 29. While this portion of the EAAC Report discussed BlackBerry messenger and other protocols (including e-mail), we emphasize that, at this time, we are not applying the bounce-back rule to all forms of text applications that may be used on phones. For instance, we are limiting the rule, as discussed above, to SMS, MMS, and applications that use IP-based protocols to deliver text messages through service providers to destinations identified by telephone numbers. This *Order* does not intend to include IP-based messaging applications that support communication with a defined set of users of compatible applications but that does not support general communication with text-capable telephone numbers. See discussion *supra* Part III.B.2.

<sup>295</sup> See discussion *infra*.

<sup>296</sup> See discussion *infra*; see also Part III.A.1 *supra*.

<sup>297</sup> See also Part III.A.1 *supra*.



view that applying the bounce-back requirement to both CMRS providers and other providers of interconnected text messaging services is an appropriate exercise of our CVAA authority to implement EAAC recommendations.<sup>298</sup> For example, AT&T emphasizes that the Commission's CVAA authority empowers the FCC to adopt EAAC's interim text-to-911 recommendation by imposing the bounce-back rules at issue here.<sup>299</sup> Only two commenters (CTIA and VON Coalition) expressed disagreement with this view of our authority in their bounce-back comments,<sup>300</sup> with CTIA contending that we lack authority to apply the rules to CMRS providers, and VON Coalition maintaining that we lack authority to apply them to other providers of interconnected text messaging applications, including OTT providers. We find the CTIA and VON Coalition arguments unpersuasive.

113. First, CTIA argued in its earlier comments that the Commission could not promulgate regulations implementing any EAAC recommendation because the Commission had not sought formal comment on those recommendations.<sup>301</sup> However, in the *Further Notice*, we specifically asked for comment on those recommendations, including the ones that we rely on in this *Order*.<sup>302</sup>

114. Second, both CTIA and VON Coalition argue that the recommendations exceed the scope of EAAC's mandate under the CVAA, and the Commission's jurisdiction, because the recommendations are not limited to IP-based technologies.<sup>303</sup> They contend that Section 615c confers only limited authority on the EAAC to consider, and on the FCC to implement, methods of accessing next generation, IP-based emergency services and that any rules that would apply to SMS or enable connection to non-IP-based emergency services technologies would exceed the CVAA's scope.<sup>304</sup>

115. We disagree. The CVAA did not limit the EAAC to making these types of IP-based recommendations. Rather, it empowered the EAAC to make (and authorized the Commission to implement) recommendations regarding the nation's "migration" to an IP-based emergency services network.<sup>305</sup> Thus, the statutory text evinces Congress's recognition that the transition is not complete and its intent that EAAC and its recommendations play a role *before* the nation completes the transition to a fully IP-based NG911 environment. This necessarily means that EAAC's mandate cannot be read as preventing it from making recommendations that affect existing, non-IP-based systems during the pendency of the transition. Indeed, numerous portions of EAAC's statutory mandate expressly show that it is not limited to IP-based recommendations.<sup>306</sup>

---

<sup>298</sup> See, e.g., Comments of Texas 911 Entities; see also Comments of Wireless RERC.

<sup>299</sup> See AT&T March 2013 Comments at 23-26.

<sup>300</sup> See CTIA Comments at 4 (purporting to incorporate its earlier legal authority arguments by reference); see also VON Coalition Comments at 6-7; VON Coalition Reply Comments at 1.

<sup>301</sup> CTIA December 2011 Comments at 21.

<sup>302</sup> *Further Notice*, 27 FCC Rcd at 1572-22 (¶ 169).

<sup>303</sup> CTIA December 2011 Comments at 21; see also CTIA February 2012 Reply Comments at 10. VON Coalition Comments at 6-7.

<sup>304</sup> CTIA December 2011 Comments at 21; see also CTIA February 2012 Reply Comments at 9-10. VON Coalition Comments at 6-7.

<sup>305</sup> See, e.g., 47 U.S.C. § 615c(c)(1) (tasking the EAAC to "submit to the Commission recommendations to implement such technologies and methods, including recommendations . . . with respect to what actions are necessary as a part of the migration to a national Internet protocol-enabled network to achieve reliable, interoperable communication transmitted over such network that will ensure access to emergency services by individuals with disabilities").

<sup>306</sup> See, e.g., 47 U.S.C. § 615c(c)(2) (directing the EAAC to make recommendations "for protocols, technical capabilities, and technical requirements to ensure the reliability and interoperability necessary to ensure access to (continued....)").

116. Our reading of the CVAA is amply supported and confirmed by its legislative history and purposes. Congress acted “to ensure that individuals with disabilities are able to utilize fully the essential advanced technologies that have developed since the passing of the Americans with Disabilities Act and subsequent statutes addressing communications accessibility.”<sup>307</sup> Congress wanted EAAC to “submit recommendations to the Commission regarding the effect of the migration to an Internet-protocol network on access to emergency services by persons with disabilities.”<sup>308</sup> Congress thus acknowledged that EAAC would be operating during the transition and did not express an intent to limit EAAC to future, IP-based technologies. Any interpretation of the CVAA that would limit or preclude EAAC from making recommendations, or the Commission from taking action, regarding the use of non-IP technology during the transition to NG911 could force persons with disabilities to wait years to receive the accessibility benefits of text-to-911. Such a reading would be entirely inconsistent with the text and purposes of the CVAA.

117. Fourth, VON Coalition similarly asserts in a footnote that the relevant CVAA requirements “are limited to providers of interconnected and non-interconnected VoIP services,” and thus cannot apply to “providers of interconnected text messaging applications.”<sup>309</sup> We disagree. As the discussion above makes clear, Section 615c is not narrowly focused on ensuring that members of the disability community can use one type of technology (VoIP) to access emergency services. Rather, the CVAA empowered the EAAC to make recommendations regarding, and the FCC to adopt regulations concerning, a broader array of “technologies and methods . . . to enable access to emergency services by individuals with disabilities.”<sup>310</sup> As explained above, those technologies include the applications that covered providers (including OTT providers) offer or enable consumers to use as part of the providers’ provisioning of an interconnected text messaging service. Moreover, this is not the first time the FCC has recognized that the CVAA’s requirements extend to the components of an OTT provider’s service, including their applications. Even outside of Section 615c, Congress evinced its intent—and the Commission made clear when it adopted earlier accessibility regulations—that the CVAA imposes obligations on certain OTT service providers and that those obligations extend to the applications downloaded and run by users over other service providers’ networks.<sup>311</sup>

(Continued from previous page) \_\_\_\_\_

emergency services by individuals with disabilities”); 47 U.S.C. § 615c(c)(4) (directing the EAAC to make recommendations “for relevant technical standards and requirements for communication devices and equipment and technologies to enable the use of reliable emergency access”).

<sup>307</sup> S. Rep. 111-386 (11th Cong., 2nd Sess. 2011), 2010 WL 5186403.

<sup>308</sup> H.R. Rep. 111-563 at 27.

<sup>309</sup> See VON Coalition Comments at 6 n.2 (citing, without substantial elaboration, 47 U.S.C. § 615c(c)).

<sup>310</sup> 47 U.S.C. § 615c(c).

<sup>311</sup> See CVAA § 104 (adding Sections 716, 717, and 718 to the Communications Act); see also *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010*, 26 FCC Rcd 14557 (2011) (“*ACS Report and Order*”) (implementing Section 104 of the CVAA, Sections 716 and 717 of the Communications Act, by recognizing that the CVAA imposes certain accessibility obligations on third-party OTT providers); *id.* at 14565 (¶ 14) (describing the entities covered by certain CVAA accessibility requirements as “includ[ing] entities that provide advanced communications services over their own networks, as well as providers of applications or services accessed (*i.e.*, downloaded and run) by users over other service providers’ networks”); see also *id.* at 14590092 (¶¶ 84, 87). In this regard, we note our disagreement with VON Coalition’s broad contention that no “portion of the Communications Act . . . gives the FCC authority to regulate Over The Top (“OTT”) applications that are not licensed services.” See VON Coalition Comments at 6. Among the other points discussed herein, the CVAA added, *inter alia*, Sections 716 and 717 to the Communications Act, and our 2011 *ACS Report and Order* recognized that those provisions apply to certain OTT providers without drawing a distinction between licensed and unlicensed services.

118. Fifth, CTIA argued that we could not adopt text-to-911 rules because the CVAA limited the Commission to adopting requirements that are “achievable and technically feasible.”<sup>312</sup> As applied to the bounce-back requirements adopted herein, we find CTIA’s argument unavailing because, as discussed above, we determine that the bounce-back rules are achievable and technically feasible.<sup>313</sup>

119. Finally, we disagree with any argument that the FCC must somehow limit its exercise of authority under the CVAA and apply it only to instances where a member of the disability community is texting. We recognize that the purpose of Section 615c is to “achiev[e] equal access to emergency services by individuals with disabilities,”<sup>314</sup> but we do not read the CVAA as requiring the FCC to ensure that any rules we adopt confer zero benefits on consumers outside the disability community or impose no costs or requirements on providers outside of a specific relationship they may have with a particular consumer. Nor, based on our experience and review of the record, do we believe it is possible for the Commission to limit the bounce-back requirement in that manner. Rather, imposing a rule that required text messaging provider to determine the disability status of its consumer and then, based on that information, decide whether to provide a bounce-back notification would impose greater burdens on the providers and likely prove unworkable in practice. Indeed, the EAAC noted that “if the text message to 9-1-1 solution is not available to all people, with and without disabilities, . . . it would be too complicated for carriers and others to qualify some people as eligible and others as ineligible to make an SMS/text message call to 9-1-1 during emergency situations.”<sup>315</sup> We agree and conclude, to the extent it is necessary, that the FCC has authority under the CVAA to require action that is not limited to the disability community.

120. We note too that, in order to achieve the CVAA’s mandate, it is important that we do not limit the rules to text messaging services that happen to be on phones owned by persons with disabilities. In emergency situations, persons with disabilities may need to access emergency services quickly and this may require them to use mobile devices owned by others. For example, their phone may not be as accessible as another device or, in some cases, attempting to reach their phone might place them in greater danger. In these potentially life threatening situations, our rules would be ineffective if they did not extend the important benefits of our interim text-to-911 solution to persons with disabilities regardless of the mobile device they are using.

121. As noted above, the CVAA not only authorizes the Commission to promulgate regulations that implement EAAC’s recommendations,<sup>316</sup> which we find that our decision today does, but also grants the Commission authority to adopt “any other regulations, technical standards, protocols, and procedures as are necessary to achieve reliable, interoperable communication that ensures access by individuals with disabilities to an Internet protocol-enabled emergency network, where achievable and technically feasible.”<sup>317</sup> We find that this provision provides an additional and independent basis for our conclusion that the CVAA vests the Commission with authority to apply the bounce-back rules to both CMRS providers and other covered providers of interconnected text messaging services.

122. The CVAA’s “other regulations” provision expressly grants the Commission authority to adopt regulations as are necessary to achieve reliable, interoperable communication that ensures access by persons with disabilities to an IP-enabled emergency services network.<sup>318</sup> As discussed above,

---

<sup>312</sup> CTIA February 2012 Reply Comments at 10.

<sup>313</sup> See discussion *supra* Part III.

<sup>314</sup> 47 U.S.C. § 615c(a).

<sup>315</sup> EAAC Report and Recommendations at 29 (Note 5).

<sup>316</sup> See 47 U.S.C. § 615c(g).

<sup>317</sup> 47 U.S.C. § 615c(g).

<sup>318</sup> 47 U.S.C. § 615c(g).

PSAPs are currently rolling out IP-enabled emergency services networks that consumers can use to send texts to 911.<sup>319</sup> The bounce-back requirement will help ensure that persons with disabilities have reliable access to those networks because it will prevent them from receiving the false impression that their text to 911 was received by emergency services. In turn, this will enable them to use a different text or other method of successfully reaching emergency services. Part of making sure that consumers have reliable access to emergency services networks is ensuring that consumers know when their text for help has not been received. Uncertainty regarding whether or not emergency services received your text for help would undermine the reliability of the system.

123. Moreover, in the context of the specific language of this provision, and the overall structure, goals, and purposes of the CVAA, we do not read this portion of Section 615c(g) or its use of the word “necessary” in an unduly narrow sense. That is, we do not interpret the language as requiring the Commission to show, as a condition to the exercise of our “other regulation” authority, that our regulations are indispensable, essential, or absolutely required to ensure that individuals with disabilities can reach IP-enabled emergency services.<sup>320</sup> Rather, in light of the CVAA and Section 615c purposes of increasing access and ensuring that individuals with disabilities can reach emergency services during the interim period before full implementation of an IP-based network,<sup>321</sup> we read the statutory language as authorizing (but also limiting) the Commission to taking those actions that are conducive to and plainly crafted for ensuring that persons with disabilities can reach emergency services.<sup>322</sup> A contrary view “would give an unwarranted rigidity to the application of the word ‘necessary,’ which has always been recognized as a word to be harmonized with its context.”<sup>323</sup>

124. At the same time, we do not interpret this portion of the CVAA as granting the Commission unbounded authority to adopt regulations.<sup>324</sup> We find that the CVAA appropriately cabins the Commission’s authority to adopting reasonable regulations focused on ensuring that consumers with disabilities can reach emergency services. This limited but important context is one where Congress has consistently acted and directed the Commission to ensure that consumers using advanced services, including those provided by entities that the Commission has not classified as telecommunications carriers, can reach emergency services.<sup>325</sup> Indeed, one of the principal purposes of the Commission, as set forth by Congress in Section 1 of the Communications Act, is to ensure that we exercise our substantive grants of authority in a manner that “promot[es] safety of life of property.”<sup>326</sup> We thus find

---

<sup>319</sup> See discussion *supra* Part III.A.

<sup>320</sup> See, e.g., *Cellco Partnership v. FCC*, 357 F.3d 88, 97 (D.C. Cir. 2004) (“courts have long recognized that the term ‘necessary’ does not always mean ‘indispensable’ or ‘essential.’”); see also *CTIA v. FCC*, 330 F.3d 502, 509 (D.C. Cir. 2003) (rejecting the argument that “the word ‘necessary’ . . . always mean[s] absolutely required or indispensable”).

<sup>321</sup> See CVAA, Pub. L. 111-260 (describing the CVAA as “An Act To increase the access of persons with disabilities to modern communications, and for other purposes.”); see also CVAA § 106, 47 U.S.C. § 615c(a).

<sup>322</sup> Accord *CTIA*, 330 F.3d at 509; see also, e.g., *Indep. Ins. Agents of Am., Inc. v. Hawke*, 211 F.3d 638 (D.C. Cir. 2000) (term “necessary” in the National Bank Act means “convenient” or “useful”); *Armour & Co. v. Wantouk*, 323 U.S. 126, 129-30 (1944) (term “necessary” in the Fair Labor Standards Act, in context, means reasonably necessary to production, and not “indispensable,” “essential,” or “vital”).

<sup>323</sup> *Armour*, 323 U.S. at 129-30.

<sup>324</sup> In this regard, we disagree with CTIA’s argument that our reading of this portion of the CVAA is one that gives us an unlawful amount of “sweeping authority.” CTIA December 2011 Comments at 10.

<sup>325</sup> See discussion *infra* ¶¶ 134-137 (discussing the 911 Act, the NET 911 Act, and the ENHANCE 911 Act).

<sup>326</sup> 47 U.S.C. § 151.

that the exercise of our CVAA authority in this case is appropriate in light of the text and purposes of the CVAA as well as our more general authority to ensure access to emergency services.

125. Furthermore, as discussed above, we do not read the CVAA as only authorizing the Commission to impose purely IP-based solutions, that is, solutions that only apply where the consumer is accessing an IP-enabled emergency services network. We explained that the CVAA recognizes that the nation is making a “migration” to an IP-enabled emergency network, and we view our bounce-back requirement as consistent with Congress’ intent for the Commission to act in this interim period before fully IP-enabled NG911 systems are in place. We also find that this will further our long-term CVAA interest in ensuring that consumers have reliable access to text-based means of reaching emergency services via IP-enabled networks because an interim system that provides reliable information about text-to-911 communications will engender trust and familiarity with the use of texting modes of interaction within 911 systems and make it more likely that consumers will rely on and use such text offerings in an NG911 environment.

126. We have also established above that we do not view the CVAA as requiring the Commission to ensure that the CVAA rules we adopt be crafted to avoid conferring any benefits on consumers outside the disability community, or that they impose no costs or requirements on providers outside of a specific relationship they may have with a particular consumer.<sup>327</sup> In fact, the record here demonstrates that it would not be possible or practicable for the Commission or providers to limit the bounce-back requirement in that manner.

127. We thus conclude that the Commission’s decision to apply the bounce-back requirements to both CMRS and other providers interconnected text messaging is a proper exercise of our direct authority under the CVAA.

### 3. Ancillary Authority

128. We conclude that the FCC’s ancillary authority also empowers the Commission to apply the bounce-back notification requirement to providers of interconnected text messaging services, including OTT providers.<sup>328</sup> The Commission may act pursuant to its ancillary authority when “(1) the Commission’s general jurisdictional grant under Title I [of the Communications Act] covers the regulated subject and (2) the regulations are reasonably ancillary to the Commission’s effective performance of its statutorily mandated responsibilities.”<sup>329</sup>

129. First, our regulation of these other providers falls within the scope of our general grant of jurisdiction under Title I. Our general Title I jurisdiction extends to “all interstate and foreign

---

<sup>327</sup> See discussion *supra*; see also EAAC Report and Recommendations at 29 (Note 5) (“if the text message to 9-1-1 solution is not available to all people, with and without disabilities, . . . it would be too complicated for carriers and others to qualify some people as eligible and others as ineligible to make an SMS/text message call to 9-1-1 during emergency situations”).

<sup>328</sup> While we believe the Commission has ancillary authority to apply these rules to CMRS providers, we limit our discussion here to the other providers of interconnected text messaging covered by our bounce-back rules, including OTT providers.

<sup>329</sup> *Comcast Corp. v. FCC*, 600 F.3d 642, 646 (D.C. Cir. 2010) (quoting *Am. Lib. Ass’n v. FCC*, 406 F.3d 689, 691-92 (D.C. Cir. 2005)); see also *United States v. Southwestern Cable Co.*, 392 U.S. 157, 178 (1968) (recognizing that the Commission may exercise authority that is “reasonably ancillary to the effective performance of [its] various responsibilities”); *United States v. Midwest Video Corp.*, 406 U.S. 649 (1972) (upholding the Commission’s regulation of cable television under the agency’s ancillary jurisdictional authority, where regulations promoted long-established statutory goals of broadcast regulation); *Computer and Commc’ns Indust. Ass’n v. FCC*, 693 F.2d 198 (D.C. Cir. 1982) (upholding the Commission’s regulation of enhanced services and customer premises equipment pursuant to ancillary authority, where regulations were deemed necessary to assure reasonable rates for wire communications services).

communication by wire or radio.”<sup>330</sup> The Communications Act broadly defines the terms “radio communication” and “communication by radio” as “the transmission by radio of writing, signs, signals, pictures, and sounds of all kinds,”<sup>331</sup> and it further “include[es] all instrumentalities, facilities, apparatus, and services (among other things, the receipt, forwarding, and delivery of communications) incidental to such transmission” within those definitions.<sup>332</sup> Given this definition, we find that interconnected text messaging applications, including those provided by OTT providers, fall within the FCC’s general subject matter jurisdiction to the extent they are enabling consumers to transmit text messages via radio communication: in other words, they are, at least, “incidental to” the transmission of, *inter alia*, “signals” “by radio.”

130. Second, we find that applying our bounce-back rules to these providers is reasonably ancillary to the Commission’s effective performance of its statutorily mandated responsibilities and thus “necessary in the execution of its functions.”<sup>333</sup> We reach this conclusion for several reasons.

131. To start, Title III’s direct grant of authority gives the Commission a mandate to prescribe requirements for the use of spectrum.<sup>334</sup> We explained above that this mandate includes prescribing rules that prevent the transmission of potentially misleading text messages over spectrum authorized for use under Title III—that is, text messages that lack a bounce-back notification and thus have the potential to mislead consumers into thinking that their text for help was received by emergency services. We found that Title III gives us direct authority to carry out this mandate by requiring licensed CMRS providers, in their transmission of text messages over spectrum, to provide consumers with a bounce-back notification. However, if the bounce-back rules were limited to CMRS providers, we would not be able to fully carry out our statutory mandate to ensure that licensed spectrum is not used to transmit potentially misleading text messages. This is so because CMRS providers are not the only providers of interconnected text messages that offer consumers a service that initiates or enables a consumer to send potentially misleading text messages via spectrum. Other entities, including OTT providers, initiate or enable consumers to send these messages. We thus impose the bounce-back requirement on other providers of text messaging services, including OTT providers, under our ancillary authority because doing so is reasonably necessary to carry out our statutory mandate regarding the use of spectrum.

132. In this regard, we note that the *Further Notice* sought comment on whether the Commission could use its direct authority over CMRS providers to require that these licensed providers prevent the use of third-party applications that do not have certain text-to-911 functions.<sup>335</sup> At this time, however, the record does not show that, as a practical matter, CMRS providers could ensure that every third-party interconnected text messaging application includes a bounce-back notification function.<sup>336</sup> We find that this provides further support for the conclusion that our decision to apply the bounce-back rule to

---

<sup>330</sup> 47 U.S.C. § 152(a); *see also Southwestern Cable Co.*, 392 U.S. at 168, 172 (discussing the FCC’s general jurisdictional grant over communications by wire or radio).

<sup>331</sup> 47 U.S.C. § 153(40).

<sup>332</sup> *Id.*

<sup>333</sup> *See* 47 U.S.C. § 154(i); *see also* 47 U.S.C. § 303(r).

<sup>334</sup> *See* discussion *supra* (discussing the Commission’s authority under Sections 303 and 316, as well Sections 303, 307, and 309).

<sup>335</sup> *Further Notice*, 27 FCC Rcd at 15723 (¶ 171).

<sup>336</sup> *See, e.g.*, VON Coalition March 2013 Comments (arguing that the Commission would lack authority to require CMRS providers to take steps to prevent the use of third-party apps that do not include text-to-911 functions).

non-CMRS providers of covered interconnected text messaging services is a proper exercise of our ancillary authority.<sup>337</sup>

133. We also find that imposing the bounce-back rule on these providers is ancillary to our direct authority for other reasons. As discussed above, the nation is in the process of migrating to a fully IP-based, NG911 system in which consumers will be able to transmit text messages and other media to emergency services. We found above that both our Title III and CVAA mandates gave us direct authority to impose bounce-back requirements on the provision of text messages by, *inter alia*, CMRS providers as a reliable means of imposing an interim text-to-911 solution pending the nation's complete transition to fully NG911-capable systems. We now find that extending the bounce-back requirement to other providers of interconnected text messaging services is reasonably ancillary to the effective performance of those mandates because of certain, specific risks posed by consumer confusion.

134. More specifically, the record here shows that, from the consumer's perspective, text messaging applications provided by CMRS providers are often indistinguishable from the messaging applications provided by OTT and other providers.<sup>338</sup> Indeed, some text messaging applications have the capacity to switch protocols from one text to the next without the consumer even noticing the change. This could lead to significant consumer confusion if our bounce-back rule only applied to CMRS-provided text messaging services because, *inter alia*, a consumer might send a text to 911 via their CMRS-provided service in an area where text to 911 is not available, receive a bounce-back error message, and then send a text for help from their OTT-provided application. In the absence of a bounce-back error message from their OTT-provided messaging service, the consumer may mistakenly conclude that their plea for help was received by emergency services. This could quite possibly prevent them from taking steps necessary to receive life-saving help.

135. In addition to the obvious harms that would result in this instance, the confusion would undermine the Commission's ability to fully carry out its Title III and CVAA authority to require CMRS providers to give consumers (in particular, individuals with disabilities) a reliable, interim text-to-911 solution—that is, a bounce-back notification. This confusion could undermine the trust that consumers have in all text-to-911 services, including those offered by CMRS providers, which could both discourage the use of CMRS-provided text messaging in contravention of our Title III- and CVAA-based mandate of putting an interim solution in place, and it could undermine consumer confidence in and use of CMRS-provided text-based methods of reaching 911 once the transition to NG911 systems is complete. Averting the type of confusion that could undermine trust and use of text-to-911 is particularly important to our CVAA mandate because, as the EAAC Report stated, “if individuals cannot use voice reliably or at all to communicate their emergency they have no means of effectively communicating with 9-1-1” other than a text solution.<sup>339</sup> It is thus critical to our CVAA mandate that our text-to-911 rules do not undermine the ability of persons with disabilities to rely on text messages for help. For these reasons, we find that extending the bounce-back rule to other providers of interconnected text messaging, including OTT providers, is reasonably ancillary to the effective performance of our statutorily mandated responsibilities.<sup>340</sup>

---

<sup>337</sup> *Accord Corporate Ownership Reporting and Disclosure by Broadcast Licensees*, 97 F.C.C.2d 997, 1033 (¶ 77) (1984) (*Attribution Decision*) (asserting ancillary authority over non-licensees in order to ensure effective enforcement of multiple ownership rules applicable to broadcast licensees); *see also Pinelands, Inc.*, 7 FCC Rcd 6058, 6067 (¶ 30) (1992) (applying the *Attribution Decision*).

<sup>338</sup> *See discussion supra* Part III.A.1. Moreover, the record shows that members of the disability community are increasingly relying on various text messaging applications, including third-party applications, for their communications needs. *See discussion supra* Part III.A.

<sup>339</sup> EAAC Report and Recommendations at 30.

<sup>340</sup> We note too that EAAC itself recognized the importance of not limiting an interim text-based solution to CMRS-provided messaging services (which traditionally relied on the SMS protocol) because “phones . . . have applications (continued....)

136. We also find that imposing the bounce-back requirement on other providers of interconnected text messaging is reasonably ancillary to the Commission's statutory authority to impose 911 regulations that ensure consumers can reach emergency services. As discussed above, the Commission has, since 1996, exercised our long-standing statutory authority and required providers of new technologies to implement basic 911 and E911 capabilities.<sup>341</sup> Since then, Congress has recognized and added to the Commission's authority to ensure connectivity to 911,<sup>342</sup> including our authority to impose 911 rules on entities that have not been classified as telecommunications carriers (e.g., interconnected VoIP providers).<sup>343</sup>

137. In 2005, for example, prior to enactment of the NET 911 Act and its requirements for imposing 911 rules on entities beyond telecommunications carriers, the Commission relied in part on our ancillary authority to impose E911 requirements on interconnected VoIP providers.<sup>344</sup> The Commission found that "regardless of the regulatory classification, the Commission has ancillary jurisdiction to promote public safety by adopting E911 rules for interconnected VoIP services."<sup>345</sup> The Commission then explained that the rules it was adopting satisfied the second prong of the ancillary authority test, and we included within that analysis a discussion of various 911-specific statutes enacted by Congress.<sup>346</sup> On appeal, the D.C. Circuit upheld our *Interconnected VoIP E911 Order* against claims that it was arbitrary and capricious.<sup>347</sup>

(Continued from previous page) \_\_\_\_\_

people use for daily text communication that do not use SMS as their transport protocol but use email or other protocols (e.g., BlackBerry Messenger, iMessage) to communicate with similar phones and with the SMS features on other people's phones." See EAAC Report and Recommendations at 29. However, we emphasize again that we are not applying the bounce back rule to all forms of text applications that may be used on phones. See Appendix A 47 CFR 20.18(n)(1).

<sup>341</sup> See, e.g., *E911 First Report and Order*, 11 FCC Rcd at 18682-83 ¶¶10, 18701 ¶ 50 (relying on Sections 301 and 303(r) to require that certain CMRS providers process and transmit 911 calls to PSAPs and "be capable of transmitting calls by individuals with speech or hearing disabilities through devices used in conjunction with or as a substitute for traditional wireless mobile handsets, e.g., through the use of Text Telephone Devices (TTY) to local 911 services"); see also *In the Matter of Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems*, 18 FCC Rcd 25340 (2003) (revising the scope of our E911 rules).

<sup>342</sup> See New and Emerging Technologies Improvement Act of 2008, P.L. 110-283, 122 Stat. 2620 (2008) ("NET 911 Act") (codifying the Commission's E911 requirements for interconnected VoIP services and authorizing the Commission to amend those requirements); see also Wireless Communications and Public Safety Act of 1999, P.L. 106-81, 113 Stat. 1286 (1999) ("911 Act") (establishing 911 as the national emergency number and requiring the Commission to provide for appropriate transition periods for areas in which 911 was not in use); Ensuring Needed Help Arrives Near Callers Employing (ENHANCE) 911 Act of 2004, Pub. L. 108-494, §§ 104, 158 (b)(1); 118 Stat. 3987-3988; 47 U.S.C. §§ 901, 942 (2004) ("ENHANCE 911 Act") (addressing 911 deployment).

<sup>343</sup> See NET 911 Act; see also discussion *supra*.

<sup>344</sup> See *In the Matters of IP-Enabled Services, E911 Requirements for IP-Enabled Services Providers*, 20 FCC Rcd 10245, 10261-66 (¶¶ 26-35) (2005) ("*Interconnected VoIP E911 Order*").

<sup>345</sup> See *Interconnected VoIP E911 Order*, 20 FCC Rcd at 10261 (¶ 26). While the Commission relied in part on Title I to satisfy both portions of the ancillary authority test in the *Interconnected VoIP E911 Order*, we explain here how our decision to impose the bounce requirement is reasonably ancillary to statutory provisions outside of Title I.

<sup>346</sup> See *Interconnected VoIP E911 Order*, 20 FCC Rcd at 10264-64 (¶ 30) 10264-65 (¶ 32) (discussing the 911 Act and ENHANCE 911 Act). While the Commission relied in part on Title I to satisfy both portions of the ancillary authority test in the *Interconnected VoIP E911 Order*, we explain here how our decision to impose the bounce requirement is reasonably ancillary to statutory provisions outside of Title I.

<sup>347</sup> *Nuvio*, 473 F.3d at 302.



138. Congress subsequently passed the NET 911 Act, which codified and confirmed the Commission's earlier exercise of authority to regulate the provision of 911 by interconnected VoIP providers.<sup>348</sup> The NET 911 Act built on prior Congressional actions designed to ensure that consumers have access to 911. For instance, under the earlier 911 Act of 1999, which amended Section 251 of the Communications Act,<sup>349</sup> Congress established 911 as the official national emergency telephone number and acted "to encourage and facilitate the prompt deployment throughout the United States of a seamless, ubiquitous, and reliable end-to-end infrastructure for communications,"<sup>350</sup> and found that "emerging technologies can be a critical component of the end-to-end communications infrastructure connecting the public with emergency medical service providers."<sup>351</sup> Similarly, in the 2004 ENHANCE 911 Act, Congress found that "for the sake of our Nation's homeland security and public safety, a universal emergency telephone number (911) that is enhanced with the most modern and state-of-the-art telecommunications capabilities possible should be available to all citizens in all regions of the Nation."<sup>352</sup>

139. We interpret these 911 statutes together as recognizing and adding to the Commission's long-standing authority under the Communications Act to ensure that consumers using advanced communications technologies have the ability to reach 911 and, as part of that authority, to ensure that consumers sending these transmissions receive a notification that their attempt to reach 911 did not succeed. Even if these statutes do not directly authorize the FCC to impose 911 requirements on providers of interconnected text messaging, we find that in this limited context—that is, where a text messaging provider offers consumers the ability to send and receive messages from all or substantially all text-capable U.S. telephone numbers and enables those consumers, as part of the functionality being provided, to rely *on spectrum* for the transmission of those messages—our decision to require the provision of a bounce-back message is reasonably ancillary to the effective performance of our statutorily mandated responsibilities. Due in part to the types of specific forms of consumer confusion discussed above, we find that we could not fully realize our statutory 911 responsibilities to ensure that consumers using advanced services can reach 911 if consumers do not view a text to 911 as a reliable means of either reaching 911 or finding out that their text was not received, which will then allow them to use appropriate means for reaching help.

140. We emphasize again the important limits and context in which we exercise our statutory authority today. The above-discussed exercise of our substantive grants of authority is conditioned and limited by the Communications Act's "purpose of promoting safety of life and property."<sup>353</sup> This is a situation in which a narrow set of rules help to save lives. In a similar context, Judge Kavanaugh emphasized in his concurrence in *Nuvio*, which upheld our interconnected VoIP E911 rules, that "the FCC possesses the statutory authority, which the Commission may reasonably choose to exercise, to address the public safety threat" posed by a lack of access to 911 by "ensur[ing] adequate 911 connections" for consumers using interconnected VoIP,<sup>354</sup> which is an offering not classified as a telecommunications service. Judge Kavanaugh's opinion relied on Congress's instructions to the FCC, under the 911 Act of 1999, ENHANCE 911 Act, and other statutory provisions.<sup>355</sup> We thus conclude that

---

<sup>348</sup> See Net 911 Act.

<sup>349</sup> See 47 U.S.C. § 251(e).

<sup>350</sup> NET 911 Act § 2(b).

<sup>351</sup> NET 911 Act § 2(a)(3).

<sup>352</sup> ENHANCE 911 Act § 102.

<sup>353</sup> See 47 U.S.C. § 151.

<sup>354</sup> *Nuvio*, 473 F.3d at 310-11 (Kavanaugh, J., concurring).

<sup>355</sup> *Id.*

our decision to apply the bounce-back rules to providers of interconnected text messaging is a narrow one that is consistent with our earlier, limited use of ancillary authority to ensure reasonable access to 911.

#### IV. PROCEDURAL MATTERS

##### A. Accessible Formats

141. To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

##### B. Regulatory Flexibility Analysis

142. As required by the Regulatory Flexibility Act of 1980, *see* 5 U.S.C. § 604, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document. The FRFA is set forth in Appendix B.

##### C. Paperwork Reduction Analysis

143. The Report and Order does not contain new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law No. 104-13. Therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198.

##### D. Congressional Review Act

144. The Commission will send a copy of this *Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act (CRA), *see* 5 U.S.C. § 801(a)(1)(A)

#### V. ORDERING CLAUSES

145. Accordingly, IT IS ORDERED, pursuant to Sections 1, 4(i), 301, 303(b), 303(r), 307, 309, 316, 319, 324, 332, 333, 615a, 615a-1, and 615b of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 301, 303(b), 303(r), 307, 309, 316, 319, 324, 332, 333, 615a, 615a-1, 615b, and 47 U.S.C. § 615c that the *Report and Order* in PS Docket No. 11-153 and PS Docket No. 10-255 IS ADOPTED and that Part 20 of the Commission's Rules, 47 C.F.R. Part 20, is amended as set forth in Appendix A. The *Report and Order* shall become effective 30 days after publication in the Federal Register.

146. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

## APPENDIX A

## Final Rules

Part 20 of the Code of Federal Regulations is amended as follows:

**PART 20 – COMMERCIAL MOBILE SERVICES**

1. The authority for Part 20 is revised to read as follows:

**Authority:** 47 U.S.C. Sections 151, 154, 160, 201, 251-254, 301, 303, 303(b), 303(r), 307, 309, 316, 319, 324, 332, 333, 615a, 615a-1, 615b, and 615c unless otherwise noted. Section 20.12 is also issued under 47 U.S.C. 1302.

2. Section 20.18 is amended to add a new paragraph 20.18(n):

\* \* \* \* \*

(n) *Text-to-911 Requirements.*

(1) Covered Text Provider: Notwithstanding any other provisions in this section, for purposes of this subsection (n), a "covered text provider" includes all CMRS providers as well as all providers of interconnected text messaging services that enable consumers to send text messages to and receive text messages from all or substantially all text-capable U.S. telephone numbers, including through the use of applications downloaded or otherwise installed on mobile phones.

(2) Automatic Bounce-back Message: an automatic text message delivered to a consumer by a covered text provider in response to the consumer's attempt to send a text message to 911 when the consumer is located in an area where text-to-911 service is unavailable or the covered text provider does not support text-to-911 service generally or in the area where the consumer is located at the time.

(3) No later than September 30, 2013, all covered text providers shall provide an automatic bounce-back message under the following circumstances:

(a) a consumer attempts to send a text message to a Public Safety Answering Point (PSAP) by means of the three-digit short code "911"; and

(b) the covered text provider cannot deliver the text because the consumer is located in an area where:

(i) text-to-911 service is unavailable; or

(ii) the covered text provider does not support text-to-911 service at the time.

(4) (a) A covered text provider is not required to provide an automatic bounce-back message when:

(i) transmission of the text message is not controlled by the provider;

(ii) a consumer is attempting to text 911, through a text messaging application that requires CMRS service, from a non-service initialized handset;

(iii) when the text-to-911 message cannot be delivered to a PSAP due to failure in the PSAP network that has not been reported to the provider; or

(iv) a consumer is attempting to text 911 through a device that is incapable of sending texts via three digit short codes, provided the software for the device cannot be upgraded over the air to allow text-to-911.

(b) The provider of a preinstalled or downloadable interconnected text application is considered to have "control" over transmission of text messages for purposes of section (a)(i) of this section.

However, if a user or a third party modifies or manipulates the application after it is installed or downloaded so that it no longer supports bounce-back messaging, the application provider will be presumed not to have control.

(5) The automatic bounce-back message shall, at a minimum, inform the consumer that text-to-911 service is not available and advise the consumer or texting program user to use another means to contact emergency services.

(6) Covered text providers that support text-to-911 must provide a mechanism to allow PSAPs that accept text-to-911 to request temporary suspension of text-to-911 service for any reason, including, but not limited to, network congestion, call taker overload, PSAP failure, or security breach, and to request resumption of text-to-911 service after such temporary suspension. During any period of suspension of text-to-911 service, the covered text provider must provide an automatic bounce-back message to any consumer attempting to text to 911 in the area subject to the temporary suspension.

(7) A CMRS provider subject to § 20.12 shall provide an automatic bounce-back message to any consumer roaming on its network who sends a text message to 911 when (a) the consumer is located in an area where text-to-911 service is unavailable or (b) the CMRS provider does not support text-to-911 service at the time.

(8) A software application provider that transmits text messages directly into the SMS network of the consumer's underlying CMRS provider satisfies the obligations of paragraph 20.18(n)(3) of this section provided it does not prevent or inhibit delivery of the CMRS provider's automatic bounce-back message to the consumer.

## APPENDIX B

## Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> the Commission incorporated an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the *Notice of Proposed Rulemaking (NPRM)*. No comments were filed addressing the IRFA regarding the issues raised in the *Report and Order*. Because the Commission amends the rules in this *Report and Order*, the Commission has included this Final Regulatory Flexibility Analysis (FRFA). This present FRFA conforms to the RFA.<sup>2</sup>

**A. Need for, and Objectives of, the Proposed Rules**

2. In this *Report and Order*, the Commission requires all CMRS providers and providers of interconnected text messaging services (*i.e.*, all providers of software applications that enable a consumer to send text messages to all or substantially all text-capable U.S. telephone numbers and receive text messages from the same) to provide an automatic “bounce-back” text message in situations where a consumer attempts to send a text message to 911 in a location where text-to-911 is not available. The rules the Commission adopts in this *Report and Order* will substantially reduce the risk of a person sending a text message to 911 in an emergency and mistakenly believing that 911 authorities have received it. Instead, the text sender will receive an immediate response that text-to-911 is not supported along with direction to use another means to contact emergency services.

3. Requiring all CMRS providers and interconnected text providers to implement a bounce-back mechanism is particularly important because while deployment of text-to-911 has begun, the transition is still in the very early stages and will not be uniform. During the transition, text-to-911 will be available in certain geographic areas sooner than it is available in others and may be supported by certain service providers but not by others. At the same time, as text-to-911 becomes more widely available, it is likely to generate increased consumer expectations as to its availability, which makes it increasingly important for consumers to be made aware when it is *not* available in an emergency.

4. The record in this proceeding indicates that some service providers already send an automatic bounce-back message to their subscribers when a subscriber attempts to send a text to 911. In addition, the four largest CMRS providers – AT&T, Sprint Nextel, T-Mobile, and Verizon – have voluntarily committed to provide bounce-back messaging capability throughout their networks by June 30, 2013. In this *Report and Order*, the Commission builds on this voluntary commitment and concludes that all CMRS providers and interconnected text providers (collectively, “covered text providers”) should be required to provide this capability. The Commission further specifies the circumstances under which a bounce-back message must be provided and the information that the message must contain. Finally, while the Commission finds it is technically and economically feasible for all covered text providers to implement this capability quickly, the Commission recognizes that not all providers may be able to do so by the June 30, 2013 date to which the four major carriers are committed. Therefore, the Commission establishes September 30, 2013 as the deadline for all covered text providers to implement the bounce-back capability required by this *Report and Order*. However, the Commission encourages covered text providers to implement bounce-back message capabilities as soon as possible in order to deal expeditiously with the existing consumer confusion about the availability of text-to-911. Although this new requirement will impose additional costs on some of the covered text providers, the Commission has determined that these costs likely will be far exceeded by the public benefits of substantially reducing the

<sup>1</sup> See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996, (SBREFA) Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>2</sup> See 5 U.S.C. § 604.

risk of persons sending a text message to 911 in an emergency and mistakenly believing that 911 authorities have received it.

**B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA**

5. No commenter raised issues in response to the bounce-back portion of the IRFA included in the *Further Notice*.<sup>3</sup> The Commission concludes that the proposed mandates here provide covered text providers and Public Safety Answering Points (PSAPs) with a sufficient measure of flexibility to account for technical and cost-related concerns. In the event that small entities face unique circumstances that restrict their ability to comply with the Commission's rules, the Commission can address them through the waiver process. The Commission has determined that implementing bounce-back messages is technically feasible and the cost of implementation is small.

**C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Would Apply**

6. 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 rules adopted, herein.<sup>4</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>5</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>6</sup> A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.<sup>7</sup> Below, we describe and estimate the number of small entity licensees that may be affected by the adopted rules.

7. *Small Businesses, Small Organizations, and Small Governmental Jurisdictions.* As of 2009, small businesses represented 99.9% of the 27.5 million businesses in the United States, according to the SBA.<sup>8</sup> Additionally, a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."<sup>9</sup> Nationwide, as of 2007, there were approximately 1,621,315 small organizations.<sup>10</sup> Finally, the term "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."<sup>11</sup> Census Bureau data for 2007 indicate that there were 89,527 governmental jurisdictions in the United States.<sup>12</sup> We estimate that, of this total, as

---

<sup>3</sup> Some comments were received in response to the IRFA regarding other proposed rules in the *Further Notice*; however no commenter raised concerns regarding the proposed bounce-back rules.

<sup>4</sup> 5 U.S.C. § 603(b)(3).

<sup>5</sup> 5 U.S.C. § 601(6).

<sup>6</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), 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."

<sup>7</sup> 15 U.S.C. § 632.

<sup>8</sup> See SBA, Office of Advocacy, "Frequently Asked Questions," available at <http://web.sba.gov/faqs/faqindex.cfm?areaID=24> (last visited Dec. 11, 2012).

<sup>9</sup> 5 U.S.C. § 601(4).

<sup>10</sup> INDEPENDENT SECTOR, THE NEW NONPROFIT ALMANAC & DESK REFERENCE (2010).

<sup>11</sup> 5 U.S.C. § 601(5).

<sup>12</sup> U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2011, Table 427 (2007).

many as 88,761 entities may qualify as “small governmental jurisdictions.”<sup>13</sup> Thus, we estimate that most governmental jurisdictions are small.

#### a. Wireless Telecommunications Service Providers

8. Below, for those services subject to auctions, we note that, as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated.

9. *Wireless Telecommunications Carriers (except satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.<sup>14</sup> The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>15</sup> Census Bureau data for 2007, which now supersede data from the 2002 Census, show that there were 3,188 firms in this category that operated for the entire year. Of this total, 3,144 had employment of 999 or fewer, and 44 firms had employment of 1,000 employees or more. Thus under this category and the associated small business size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities that may be affected by our actions.<sup>16</sup>

10. *Incumbent Local Exchange Carriers (Incumbent LECs)*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to incumbent local exchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>17</sup> According to Commission data, 1,307 carriers reported that they were incumbent local exchange service providers.<sup>18</sup> Of these 1,307 carriers, an estimated 1,006 have 1,500 or fewer employees

<sup>13</sup> The 2007 U.S. Census data for small governmental organizations are not presented based on the size of the population in each such organization. There were 89,476 local governmental organizations in 2007. If we assume that county, municipal, township, and school district organizations are more likely than larger governmental organizations to have populations of 50,000 or less, the total of these organizations is 52,095. If we make the same population assumption about special districts, specifically that they are likely to have a population of 50,000 or less, and also assume that special districts are different from county, municipal, township, and school districts, in 2007 there were 37,381 such special districts. Therefore, there are a total of 89,476 local government organizations. As a basis of estimating how many of these 89,476 local government organizations were small, in 2011, we note that there were a total of 715 cities and towns (incorporated places and minor civil divisions) with populations over 50,000. CITY AND TOWNS TOTALS: VINTAGE 2011 – U.S. Census Bureau, *available at* <http://www.census.gov/popest/data/cities/totals/2011/index.html>. If we subtract the 715 cities and towns that meet or exceed the 50,000 population threshold, we conclude that approximately 88,761 are small. U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES 2011, Tables 427, 426 (Data cited therein are from 2007).

<sup>14</sup> <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517210&search=2007%20NAICS%20Search>

<sup>15</sup> 13 C.F.R. § 121.201, NAICS code 517110.

<sup>16</sup> See [http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-fds\\_name=EC0700A1&-geo\\_id=&-skip=600&-ds\\_name=EC0751SSSZ5&-lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-fds_name=EC0700A1&-geo_id=&-skip=600&-ds_name=EC0751SSSZ5&-lang=en)

<sup>17</sup> See 13 C.F.R. § 121.201, NAICS code 517110.

<sup>18</sup> See Federal Communications Commission, *Trends in Telephone Service* (Sep. 2010) at Table 5.3, *available at* [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-301823A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf) (last accessed Apr. 25, 2013).

and 301 have more than 1,500 employees.<sup>19</sup> Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by rules adopted pursuant to the NPRM.

11. We have included small incumbent LECs 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>20</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>21</sup> We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

12. *Competitive Local Exchange Carriers (Competitive LECs), Competitive Access Providers (CAPs), Shared-Tenant Service Providers, and Other Local Service Providers.* Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>22</sup> According to Commission data, 1,442 carriers reported that they were engaged in the provision of either competitive local exchange services or competitive access provider services.<sup>23</sup> Of these 1,442 carriers, an estimated 1,256 have 1,500 or fewer employees and 186 have more than 1,500 employees.<sup>24</sup> In addition, 17 carriers have reported that they are Shared-Tenant Service Providers, and all 17 are estimated to have 1,500 or fewer employees.<sup>25</sup> In addition, 72 carriers have reported that they are Other Local Service Providers.<sup>26</sup> Of the 72, seventy have 1,500 or fewer employees and two have more than 1,500 employees.<sup>27</sup> Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, Shared-Tenant Service Providers, and Other Local Service Providers are small entities that may be affected by rules adopted pursuant to the NPRM.

13. *Broadband Personal Communications Service.* The broadband personal communications services (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission initially defined a “small business” for C- and F-Block licenses as an entity that has average gross revenues of \$40 million or less in the three previous calendar years.<sup>28</sup> For F-Block licenses, an additional small business size standard for “very

<sup>19</sup> See *id.*

<sup>20</sup> 5 U.S.C. § 601(3).

<sup>21</sup> See 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); see also 5 U.S.C. § 601(3). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. See 13 C.F.R. § 121.102(b).

<sup>22</sup> See 13 C.F.R. § 121.201, NAICS code 517110.

<sup>23</sup> See *Trends in Telephone Service* at Table 5.3.

<sup>24</sup> See *id.*

<sup>25</sup> See *id.*

<sup>26</sup> See *id.*

<sup>27</sup> See *id.*

<sup>28</sup> See *Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap; Amendment of the Commission’s Cellular/PCS Cross-Ownership* (continued....)



small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>29</sup> These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.<sup>30</sup> No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that claimed small business status in the first two C-Block auctions. A total of 93 bidders that claimed small business status won approximately 40 percent of the 1,479 licenses in the first auction for the D, E, and F Blocks.<sup>31</sup> On April 15, 1999, the Commission completed the reauction of 347 C-, D-, E-, and F-Block licenses in Auction No. 22.<sup>32</sup> Of the 57 winning bidders in that auction, 48 claimed small business status and won 277 licenses.

14. On January 26, 2001, the Commission completed the auction of 422 C and F Block Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in that auction, 29 claimed small business status.<sup>33</sup> Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant. On February 15, 2005, the Commission completed an auction of 242 C-, D-, E-, and F-Block licenses in Auction No. 58. Of the 24 winning bidders in that auction, 16 claimed small business status and won 156 licenses.<sup>34</sup> On May 21, 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction No. 71.<sup>35</sup> Of the 12 winning bidders in that auction, five claimed small business status and won 18 licenses.<sup>36</sup> On August 20, 2008, the Commission completed the auction of 20 C-, D-, E-, and F-Block Broadband PCS licenses in Auction No. 78.<sup>37</sup> Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.<sup>38</sup>

15. *Narrowband Personal Communications Services.* To date, two auctions of narrowband personal communications services (PCS) licenses have been conducted. For purposes of the two auctions that have already been held, “small businesses” were entities with average gross revenues for the prior three calendar years of \$40 million or less. Through these auctions, the Commission has awarded a total of 41 licenses, out of which 11 were obtained by small businesses. To ensure meaningful participation of

(Continued from previous page) \_\_\_\_\_

*Rule*; WT Docket No. 96-59, GN Docket No. 90-314, Report and Order, 11 FCC Rcd 7824, 7850–52, ¶¶ 57–60 (1996) (“*PCS Report and Order*”); *see also* 47 C.F.R. § 24.720(b).

<sup>29</sup> *See PCS Report and Order*, 11 FCC Rcd at 7852, ¶ 60.

<sup>30</sup> *See Alvarez Letter 1998*.

<sup>31</sup> *See Broadband PCS, D, E and F Block Auction Closes*, Public Notice, Doc. No. 89838 (rel. Jan. 14, 1997).

<sup>32</sup> *See C, D, E, and F Block Broadband PCS Auction Closes*, Public Notice, 14 FCC Rcd 6688 (WTB 1999). Before Auction No. 22, the Commission established a very small standard for the C Block to match the standard used for F Block. *Amendment of the Commission’s Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees*, WT Docket No. 97-82, Fourth Report and Order, 13 FCC Rcd 15743, 15768, ¶ 46 (1998).

<sup>33</sup> *See C and F Block Broadband PCS Auction Closes; Winning Bidders Announced*, Public Notice, 16 FCC Rcd 2339 (2001).

<sup>34</sup> *See Broadband PCS Spectrum Auction Closes; Winning Bidders Announced for Auction No. 58*, Public Notice, 20 FCC Rcd 3703 (2005).

<sup>35</sup> *See Auction of Broadband PCS Spectrum Licenses Closes; Winning Bidders Announced for Auction No. 71*, Public Notice, 22 FCC Rcd 9247 (2007).

<sup>36</sup> *Id.*

<sup>37</sup> *See Auction of AWS-1 and Broadband PCS Licenses Closes; Winning Bidders Announced for Auction 78*, Public Notice, 23 FCC Rcd 12749 (WTB 2008).

<sup>38</sup> *Id.*

small business entities in future auctions, the Commission has adopted a two-tiered small business size standard in the Narrowband PCS Second Report and Order.<sup>39</sup> A “small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$40 million. A “very small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$15 million. The SBA has approved these small business size standards.<sup>40</sup>

16. *Rural Radiotelephone Service.* The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service. A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System (“BETRS”). In the present context, we will use the SBA’s small business size standard applicable to Wireless Telecommunications Carriers (except Satellite), i.e., an entity employing no more than 1,500 persons.<sup>41</sup> There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies adopted herein.

17. *Wireless Communications Services.* This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses in the 2305-2320 MHz and 2345-2360 MHz bands. The Commission defined “small business” for the wireless communications services (WCS) auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” as an entity with average gross revenues of \$15 million for each of the three preceding years.<sup>42</sup> The SBA has approved these definitions.<sup>43</sup> The Commission auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity.

18. *220 MHz Radio Service – Phase I Licensees.* The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz band. The Commission has not developed a small business size standard for small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, the Commission applies the small business size standard under the SBA rules applicable. The SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.<sup>44</sup> For this service, the SBA uses the category of Wireless Telecommunications Carriers (except Satellite). Census data for 2007, which supersede data contained in the 2002 Census, show that there were 1,383 firms that operated that year.<sup>45</sup> Of those 1,383, 1,368 had fewer than 100

---

<sup>39</sup> *Amendment of the Commission’s Rules to Establish New Personal Communications Services, Narrowband PCS*, GEN Docket No. 90-314, ET Docket No. 92-100, PP Docket No. 93-253, Second Report and Order and Second Further Notice of Proposed Rulemaking, 15 FCC Rcd 10456 (2000).

<sup>40</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Dec. 2, 1998).

<sup>41</sup> NAICS Code 51210.

<sup>42</sup> *Amendment of the Commission’s Rules to Establish Part 27, the Wireless Communications Service (WCS)*, Report and Order, 12 FCC Rcd 10785, 10879 ¶ 194 (1997).

<sup>43</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

<sup>44</sup> 13 C.F.R. § 121.201, NAICS code 517210 (2007 NAICS). The now-superseded, pre-2007 C.F.R. citations were 13 C.F.R. § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

<sup>45</sup> U.S. Census Bureau, 2007 Economic Census, Sector 51, 2007 NAICS code 517210 (rel. Oct. 20, 2009), (continued....)

employees, and 15 firms had more than 100 employees. Thus under this category and the associated small business size standard, the majority of firms can be considered small.

19. *220 MHz Radio Service – Phase II Licensees.* The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is a new service, and is subject to spectrum auctions. In the *220 MHz Third Report and Order*, the Commission adopted a small business size standard for defining “small” and “very small” businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>46</sup> This small business standard indicates that a “small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.<sup>47</sup> A “very small business” is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed \$3 million for the preceding three years.<sup>48</sup> The SBA has approved these small size standards.<sup>49</sup> Auctions of Phase II licenses commenced on and closed in 1998.<sup>50</sup> In the first auction, 908 licenses were auctioned in three different-sized geographic areas: three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold.<sup>51</sup> Thirty-nine small businesses won 373 licenses in the first 220 MHz auction. A second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.<sup>52</sup> A third auction included four licenses: 2 BEA licenses and 2 EAG licenses in the 220 MHz Service. No small or very small business won any of these licenses.<sup>53</sup> In 2007, the Commission conducted a fourth auction of the 220 MHz licenses.<sup>54</sup> Bidding credits were offered to small businesses. A bidder with attributed average annual gross revenues that exceeded \$3 million and did not exceed \$15 million for the preceding three years (“small business”) received a 25 percent discount on its winning bid. A bidder with attributed average annual gross revenues that did not exceed \$3 million for the preceding three years received a 35 percent discount on its winning bid (“very small business”). Auction 72, which offered 94 Phase II 220 MHz Service licenses, concluded in 2007.<sup>55</sup> In this auction, five winning bidders won a total of 76 licenses. Two winning bidders

(Continued from previous page) \_\_\_\_\_

[http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-geo\\_id=&-fds\\_name=EC0700A1&-\\_skip=700&-ds\\_name=EC0751SSSZ5&-\\_lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-fds_name=EC0700A1&-_skip=700&-ds_name=EC0751SSSZ5&-_lang=en)

<sup>46</sup> Amendment of Part 90 of the Commission’s Rules to Provide For the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, *Third Report and Order*, 12 FCC Rcd 10943, 11068-70 ¶¶ 291-295 (1997).

<sup>47</sup> *Id.* at 11068 ¶ 291.

<sup>48</sup> *Id.*

<sup>49</sup> See Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998 (*Alvarez to Phythyon Letter 1998*).

<sup>50</sup> See generally “220 MHz Service Auction Closes,” *Public Notice*, 14 FCC Rcd 605 (WTB 1998).

<sup>51</sup> See “FCC Announces It is Prepared to Grant 654 Phase II 220 MHz Licenses After Final Payment is Made,” *Public Notice*, 14 FCC Rcd 1085 (WTB 1999).

<sup>52</sup> See “Phase II 220 MHz Service Spectrum Auction Closes,” *Public Notice*, 14 FCC Rcd 11218 (WTB 1999).

<sup>53</sup> See “Multi-Radio Service Auction Closes,” *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

<sup>54</sup> See “Auction of Phase II 220 MHz Service Spectrum Scheduled for June 20, 2007, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures for Auction 72,” *Public Notice*, 22 FCC Rcd 3404 (2007).

<sup>55</sup> See “Auction of Phase II 220 MHz Service Spectrum Licenses Closes, Winning Bidders Announced for Auction 72, Down Payments due July 18, 2007, FCC Forms 601 and 602 due July 18, 2007, Final Payments due August 1, 2007, Ten-Day Petition to Deny Period,” *Public Notice*, 22 FCC Rcd 11573 (2007).

identified themselves as very small businesses won 56 of the 76 licenses. One of the winning bidders that identified themselves as a small business won 5 of the 76 licenses won.

20. *Wireless Telephony.* Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. As noted, the SBA has developed a small business size standard for Wireless Telecommunications Carriers (except Satellite).<sup>56</sup> Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees.<sup>57</sup> According to *Trends in Telephone Service* data, 413 carriers reported that they were engaged in wireless telephony.<sup>58</sup> Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees.<sup>59</sup> Therefore, more than half of these entities can be considered small.

21. *Satellite Telecommunications Providers.* Two economic census categories address the satellite industry. The first category has a small business size standard of \$15 million or less in average annual receipts, under SBA rules.<sup>60</sup> The second has a size standard of \$25 million or less in annual receipts.<sup>61</sup>

22. The category of Satellite Telecommunications “comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”<sup>62</sup> Census Bureau data for 2007 show that 512 Satellite Telecommunications firms that operated for that entire year.<sup>63</sup> Of this total, 464 firms had annual receipts of under \$10 million, and 18 firms had receipts of \$10 million to \$24,999,999.<sup>64</sup> Consequently, the Commission estimates that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

23. The second category, *i.e.*, “All Other Telecommunications,” comprises “establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or Voice over Internet Protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.”<sup>65</sup> For this category, Census Bureau data for 2007 show that there were a total of 2,383 firms that operated for the entire year.<sup>66</sup> Of this total, 2,346 firms had annual receipts of under \$25

<sup>56</sup> 13 C.F.R. § 121.201, NAICS code 517210.

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

<sup>58</sup> *Trends in Telephone Service* at Table 5.3.

<sup>59</sup> *Id.*

<sup>60</sup> 13 C.F.R. § 121.201, NAICS code 517410.

<sup>61</sup> 13 C.F.R. § 121.201, NAICS code 517919.

<sup>62</sup> U.S. Census Bureau, 2007 NAICS Definitions, “517410 Satellite Telecommunications.”..

<sup>63</sup> See [http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-geo\\_id=&-\\_skip=900&-ds\\_name=EC0751SSSZ4&-\\_lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en).

<sup>64</sup> [http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-geo\\_id=&-\\_skip=900&-ds\\_name=EC0751SSSZ4&-\\_lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en).

<sup>65</sup> <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517919&search=2007%20NAICS%20Search>.

<sup>66</sup> U.S. Cens[http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-geo\\_id=&-\\_skip=900&-ds\\_name=EC0751SSSZ4&-\\_lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en).

million and 37 firms had annual receipts of \$25 million to \$49,999,999.<sup>67</sup> Consequently, the Commission estimates that the majority of All Other Telecommunications firms are small entities that might be affected by our action.

### b. Equipment Manufacturers

24. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.”<sup>68</sup> The SBA has developed a small business size standard for firms in this category, which is: all such firms having 750 or fewer employees.<sup>69</sup> According to Census Bureau data for 2010, there were a total of 810 establishments in this category that operated for the entire year.<sup>70</sup> Of this total, 787 had employment of fewer than 500, and an additional 23 had employment of 500 to 999.<sup>71</sup> Thus, under this size standard, the majority of firms can be considered small.

25. *Semiconductor and Related Device Manufacturing.* These establishments manufacture “computer storage devices that allow the storage and retrieval of data from a phase change, magnetic, optical, or magnetic/optical media. The SBA has developed a small business size standard for this category of manufacturing; that size standard is 500 or fewer employees storage and retrieval of data from a phase change, magnetic, optical, or magnetic/optical media.”<sup>72</sup> According to data from the 2007 U.S. Census, in 2007, there were 954 establishments engaged in this business. Of these, 545 had from 1 to 19 employees; 219 had from 20 to 99 employees; and 190 had 100 or more employees.<sup>73</sup> Based on this data, the Commission concludes that the majority of the businesses engaged in this industry are small.

### c. Information Service and Software Providers

26. *Software Publishers.* Since 2007 these services have been defined within the broad economic census category of Custom Computer Programming Services; that category is defined as establishments primarily engaged in writing, modifying, testing, and supporting software to meet the needs of a particular customer.<sup>74</sup> The SBA has developed a small business size standard for this category,

<sup>67</sup> [http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-geo\\_id=&-\\_skip=900&-ds\\_name=EC0751SSSZ4&-\\_lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=900&-ds_name=EC0751SSSZ4&-_lang=en).

<sup>68</sup> U.S. Census Bureau, 2007 NAICS Definitions, “334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing”; <http://www.census.gov/naics/2007/def/ND334220.HTM#N334220>.

<sup>69</sup> 13 C.F.R. § 121.201, NAICS code 334220.

<sup>70</sup> U.S. Census Bureau, American FactFinder, 2010 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (released June 26, 2012); <http://factfinder.census.gov>. The number of “establishments” is a less helpful indicator of small business prevalence in this context than would be the number of “firms” or “companies,” because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses.

<sup>71</sup> *Id.* Eighteen establishments had employment of 1,000 or more.

<sup>72</sup> U.S. Census Bureau, 2007 Economic Census, Industry Series: Manufacturing, “Semiconductor and Related Device Manufacturing,” NAICS code 334413.

<sup>73</sup> [http://factfinder.census.gov/servlet/IBQTable?\\_bm=y&-geo\\_id=&-\\_skip=300&-ds\\_name=EC073111&-\\_lang=en](http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-_skip=300&-ds_name=EC073111&-_lang=en).

<sup>74</sup> <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>

which is annual gross receipts of \$25 million or less.<sup>75</sup> According to data from the 2007 U.S. Census, there were 41,571 establishments engaged in this business in 2007. Of these, 40,149 had annual gross receipts of less than \$10,000,000. Another 1,422 establishments had gross receipts of \$10,000,000 or more.<sup>76</sup> Based on this data, the Commission concludes that the majority of the businesses engaged in this industry are small.

27. *Internet Service Providers.* Since 2007, these services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: “This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies.”<sup>77</sup> The SBA has developed a small business size standard for this category, which is: all such firms having 1,500 or fewer employees.<sup>78</sup> According to Census Bureau data for 2007, there were 3,188 firms in this category, total, that operated for the entire year.<sup>79</sup> Of this total, 3,144 firms had employment of 999 or fewer employees, and 44 firms had employment of 1000 employees or more.<sup>80</sup> Thus, under this size standard, the majority of firms can be considered small. In addition, according to Census Bureau data for 2007, there were a total of 396 firms in the category Internet Service Providers (broadband) that operated for the entire year.<sup>81</sup> Of this total, 394 firms had employment of 999 or fewer employees, and two firms had employment of 1000 employees or more.<sup>82</sup> Consequently, we estimate that the majority of these firms are small entities that may be affected by rules adopted pursuant to the *Report and Order*.

28. *Internet Publishing and Broadcasting and Web Search Portals.* The Commission’s action may pertain to interconnected Voice over Internet Protocol (VoIP) services, which could be provided by entities that provide other services such as email, online gaming, web browsing, video conferencing, instant messaging, and other, similar IP-enabled services. The Commission has not adopted a size standard for entities that create or provide these types of services or applications. However, the Census Bureau has identified firms that “primarily engaged in (1) publishing and/or broadcasting content on the Internet exclusively or (2) operating Web sites that use a search engine to generate and maintain extensive databases of Internet addresses and content in an easily searchable format (and known as Web search portals).”<sup>83</sup> The SBA has developed a small business size standard for this

---

<sup>75</sup> 13 C.F.R. Section 121.201

<sup>76</sup>

[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN\\_2007\\_US\\_54SSSZ1&prodType=table](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_54SSSZ1&prodType=table)

<sup>77</sup> U.S. Census Bureau, 2007 NAICS Definitions, “517110 Wired Telecommunications Carriers” (partial definition), available at <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517110&search=2007%20NAICS%20Search> (last visited Mar. 27, 2013).

<sup>78</sup> 13 C.F.R. § 121.201, NAICS code 517110.

<sup>79</sup> U.S. Census Bureau, 2007 Economic Census, Information: Subject Series – Estab and Firm Size: Table 5, “Employment Size of Firms for the United States: 2007, NAICS Code 517110” (issued Nov. 2010).

<sup>80</sup> *See id.*

<sup>81</sup> U.S. Census Bureau, 2007 Economic Census, Information: Subject Series – Estab and Firm Size: Table 5, “Employment Size of Firms for the United States: 2007, NAICS Code 5171103” (issued Nov. 2010).

<sup>82</sup> *See id.*

<sup>83</sup> U.S. Census Bureau, “2007 NAICS Definitions: 519130 Internet Publishing and Broadcasting and Web Search Portals,” available at <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=519130&search=2007%20NAICS%20Search> (last visited Mar. 27, 2013).

category, which is: all such firms having 500 or fewer employees.<sup>84</sup> According to Census Bureau data for 2007, there were 2,705 firms in this category that operated for the entire year.<sup>85</sup> Of this total, 2,682 firms had employment of 499 or fewer employees, and 23 firms had employment of 500 employees or more.<sup>86</sup> Consequently, the Commission estimates that the majority of these firms are small entities that may be affected by rules adopted pursuant to the *Report and Order*.

29. *All Other Information Services.* The Census Bureau defines this industry as including “establishments primarily engaged in providing other information services (except news syndicates, libraries, archives, Internet publishing and broadcasting, and Web search portals).”<sup>87</sup> The Commission’s action pertains to interconnected VoIP services, which could be provided by entities that provide other services such as email, online gaming, web browsing, video conferencing, instant messaging, and other, similar IP-enabled services. The SBA has developed a small business size standard for this category; that size standard is \$7.0 million or less in average annual receipts.<sup>88</sup> According to Census Bureau data for 2007, there were 367 firms in this category that operated for the entire year.<sup>89</sup> Of these, 334 had annual receipts of under \$5.0 million, and an additional 11 firms had receipts of between \$5 million and \$9,999,999.<sup>90</sup> Consequently, the Commission estimates that the majority of these firms are small entities that may be affected by our action.

30. *All Other Telecommunications.* The Census Bureau defines this industry as including “establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or Voice over Internet Protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.”<sup>91</sup> The SBA has developed a small business size standard for this category; that size standard is \$30.0 million or less in average annual receipts.<sup>92</sup> According to Census Bureau data for 2007, there were 2,383 firms in this category that operated for the entire year.<sup>93</sup> Of these, 2,305 establishments had annual receipts of under \$10 million and 84 establishments had annual receipts of \$10

---

<sup>84</sup> See 13 C.F.R. § 121.201, NAICS code 519130.

<sup>85</sup> U.S. Census Bureau, 2007 Economic Census, Information: Subject Series – Estab and Firm Size: Table 5, “Employment Size of Firms for the United States: 2007, NAICS Code 519130” (issued Nov. 2010).

<sup>86</sup> *Id.*

<sup>87</sup> U.S. Census Bureau, “2007 NAICS Definitions: 519190 All Other Information Services,” available at <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=519190&search=2007%20NAICS%20Search> (last visited Mar. 27, 2013).

<sup>88</sup> See 13 C.F.R. § 121.201, NAICS code 519190.

<sup>89</sup> U.S. Census Bureau, 2007 Economic Census, Information: Subject Series – Estab and Firm Size: Table 5, “Employment Size of Firms for the United States: 2007, NAICS Code 519190” (issued Nov. 2010).

<sup>90</sup> U.S. Census Bureau, 2007 Economic Census, Information: Subject Series – Estab and Firm Size: Table 4, “Receipts Size of Firms for the United States: 2007, NAICS Code 519190” (issued Nov. 2010).

<sup>91</sup> U.S. Census Bureau, “2007 NAICS Definitions: 517919 All Other Telecommunications,” available at <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517919&search=2007%20NAICS%20Search> (last visited Mar. 27, 2013).

<sup>92</sup> See 13 C.F.R. § 121.201, NAICS code 517919.

<sup>93</sup> U.S. Census Bureau, 2007 Economic Census, Information: Subject Series – Estab and Firm Size: Table 4, “Receipts Size of Firms for the United States: 2007, NAICS Code 517919” (issued Nov. 2010).

million or more.<sup>94</sup> Consequently, the Commission estimates that the majority of these firms are small entities that may be affected by our action.

**D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

31. In the *Report and Order*, the Commission amends its Part 20 rules to require CMRS providers and certain interconnected text providers to implement “bounce-back” messages when a consumer attempts to text 911 in an area where text-to-911 is unavailable. Specifically, the rules apply to all CMRS providers as well as all providers of interconnected text messaging services that enable consumers to send text messages to and receive text messages from all or substantially all text-capable U.S. telephone numbers, including through the use of applications downloaded or otherwise installed on mobile phones. The rules also require covered text providers that are delivering texts to PSAPs that are supporting text-to-911 to provide a mechanism for the PSAP to request temporary suspension of text for any reason, including but not limited to network congestion, call-taker overload, PSAP failure, or security breach. In those circumstances, the covered text provider must provide a bounce-back message to any consumer attempting to send a text to 911 in the area covered by the temporary suspension. Covered text providers must also provide a mechanism to allow PSAPs to resume text-to-911 service after such temporary suspension.

32. The projected compliance requirements resulting from the *Report and Order* will apply to all entities in the same manner. The Commission believes that applying the same rules equally to all entities in this context is necessary to alleviate potential consumer confusion from adopting different rules for different providers. As the nation transitions to full text-to-911, it is critical that all consumers, including consumers of services offered by small entities, be made aware of the limitations of text-to-911 in their area. The Commission believes, and the record in this proceeding confirms, that the costs and/or administrative burdens associated with the rules will not unduly burden small entities.

33. Compliance costs for the new rule will be small, requiring only minor coding and/or server changes. Based on the record, CMRS providers and interconnected text providers have agreed that these changes are technically and financially feasible, with small costs to the covered provider. Additionally, the Commission provides an example of language that covered providers may use to satisfy the bounce-back requirement, further reducing potential administrative, legal and technical costs of compliance.

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

34. The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.”<sup>95</sup>

35. Based on the Commission’s review of the record, the Commission finds that it is practicable for all CMRS providers, including small providers, to implement a bounce-back notification without incurring unduly burdensome costs. The record also reflects that it would not be unduly

---

<sup>94</sup> *See id.*

<sup>95</sup> 5 U.S.C. §§ 603(c)(1)-(c)(4).



burdensome for covered text providers to implement bounce-back capability.<sup>96</sup> The record in this proceeding indicates that some service providers, including small or rural providers,<sup>97</sup> as well as covered text providers,<sup>98</sup> already send an automatic bounce-back message to their subscribers when a subscriber attempts to send a text to 911. The *Report and Order* recognizes the technical and operational issues that must be addressed before imposing a specific notification requirement, and allows time for implementation of a standardized message.

36. In considering the record received in response to the *Further Notice*, the Commission examined alternatives to ease the burden on small and rural covered text providers. These alternatives included extending the implementation deadline, or exempting small and rural covered text providers. However, the record in this proceeding indicates that the technical and financial costs for implementing bounce-back messages are small. Many small carriers have argued that they can meet the requirements imposed in this *Report and Order* on a faster timeline than the one established in the rules. For example, the Competitive Carriers Association (CCA), which represents many small and rural CMRS providers, states that, "...based on recent business developments cultivated by CCA and its members, most CCA carrier members will now be able to implement a bounce-back message by June 30, 2013."<sup>99</sup> Nonetheless, in order to further ease the burden on small and rural covered providers, the rules we adopt in the *Report and Order* extend the deadline proposed in the *Further Notice* from June 30, 2013 to September 30, 2013. Additionally, the rules adopted in the *Report and Order* allow for certain limited exemptions in cases where it is technologically infeasible to implement a bounce-back message (*e.g.*, for certain handsets that are incapable of doing so).

37. Further, the *Report and Order* contains a detailed Cost-Benefit Analysis which finds that the life-saving public safety benefits of imposing a bounce-back requirement on covered text providers far outweigh the costs of such a rule.

38. Finally, in the event that small entities face unique circumstances with respect to these rules, such entities may request waiver relief from the Commission. Accordingly, the Commission finds that it has discharged its duty to consider the burdens imposed on small entities.

#### **F. Legal Basis**

39. The legal basis for any action that may be taken pursuant to this *Report and Order* is contained in Sections 1, 4(i), 301, 303(b), 303(r), 307, 309, 316, 319, 324, 332, 333, 615a, 615a-1, and 615b of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 301, 303(b), 303(r), 307, 309, 316, 319, 324, 332, 333, 615a, 615a-1, 615b, and 47 U.S.C. § 615c.

---

<sup>96</sup> See, *e.g.*, Letter from Rebecca Murphy Thompson, General Counsel, to Marlene H. Dortch, Secretary, Federal Communications Commission, in PS Docket No. 11-153 and PS Docket No. 10-255, March 25, 2013 (CCA *Ex Parte*); Proximiti Comments at 1.

<sup>97</sup> For example, SouthernLINC.

<sup>98</sup> For example, textPlus and Heywire.

<sup>99</sup> CCA *Ex Parte* at 1.

**APPENDIX C****List of Commenters**

Association of Public-Safety Communications Officials  
AT&T  
Alliance for Telecommunications Industry Solutions  
Blooston Rural Carriers  
Boulder Regional Emergency Telephone Service Authority  
COM 390  
Competitive Carrier Association  
Consumer Groups and TAP  
County of Fairfax, VA  
CTIA – The Wireless Association  
Maine PUC  
MobileTREC  
Motorola Mobility  
National Emergency Number Association  
OnStar  
Proximiti  
Rural Telecommunications Group  
Sprint Nextel  
Telecommunications Industry Association  
Telecommunications Systems, Inc.  
Texas 911 Entities  
textPlus  
T-Mobile  
TracFone  
VON Coalition  
Wireless RERC

**STATEMENT OF  
CHAIRMAN JULIUS GENACHOWSKI**

RE: Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, PS Docket No. 11-153; Framework for Next Generation 911 Deployment, PS Docket No. 10-255.

When faced with an emergency, one of the first things people do is reach out to seek help for themselves or others. We communicate by whatever means we can, and more than ever a go-to means of communications is text messaging. This is why one of the Commission's top priorities has been promoting the rapid deployment of NG 911. NG 911 will revolutionize the way consumers and first responders interact, providing enhanced tools like text-to-9-1-1 to improve public safety and save lives.

Until text-to-911 is widely available, and especially during the transition, it is imperative that consumers do not mistakenly believe that an undelivered text has been received by emergency authorities.

The automatic "bounce back" requirement now adopted by the Commission will quickly inform consumers that text-to-911 service is not available and to contact emergency services by another means, such as a voice call or, for individuals with disabilities, using telecommunications relay services to access 911.

Importantly, today's action ensures that all consumers--whether using traditional SMS or interconnected text services, such as messaging apps that can text any phone number--will get bounce-back messages when 911 is unreachable by text. This is vital: As technology transitions continue the Commission must continue to protect consumers and public safety.

**STATEMENT OF  
COMMISSIONER MIGNON L. CLYBURN**

RE: Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, PS Docket No. 11-153; Framework for Next Generation 911 Deployment, PS Docket No. 10-255.

Some reports estimate as many as six billion text messages are exchanged each day in the U. S., and over the past 20 years, this form of communications has become the most preferred means of telephonic engagement for those aged 30 and under. Today's mobile phone users probably take for granted, that their nearest Public Safety Access Point (PSAP), just like their friends and family, are equipped to support this type of dialogue. With most emergency centers, not only is this not the case, but today, a sender has no way of knowing whether or not that distress message was ever received.

So I am pleased to commend Chairman Genachowski, for making a bounce back message requirement, an important policy priority. The agency issued a Further Notice on this proposal in December 2012, and in less than five months, we are adopting an Order and setting a date certain – September 30, 2013 – by which all CMRS providers and interconnected text providers, must provide this capability. Specifically, a bounce-back message will be required where text-to-911 is not supported either because the PSAP has not yet implemented a text-to-911 capability, or because a covered text provider does not support this service. This message will also be required when a PSAP has a temporary inability to accept text messages, for example, due to a mass calling event.

This mechanism is particularly important, because while deployment of text-to-911 has already begun, the migration to this service will not be uniform. It will be available in some geographic areas sooner than in others, and as text-to-911 becomes more widely available, it is likely to generate increased consumer expectations. Therefore, it is critical that consumers know when that service is not available and a bounce back message will immediately alert a person in need of assistance to employ an alternative means of notification.

Adopting the bounce back message requirement also fulfills Congressional intent in several statutes. Section 106 of the Communications Video Accessibility Act (CVAA) requires the FCC to establish an advisory committee -- the Emergency Access Advisory Committee (EAAC) -- for the purpose of "achieving equal access to emergency services by individuals with disabilities, as a part of the migration to a national Internet protocol-enabled emergency network." The plain language of the CVAA authorizes the Commission "to promulgate regulations to implement the recommendations" proposed by the EAAC. The EAAC recommended the bounce back message requirement because to give people with hearing or speech disabilities, equal access to emergency communications during the migration to IP enabled emergency networks. It will notify them when text to 9-1-1 does not work, making them aware that they need to try TTY or relay services, in order to get help. For these reasons, the bounce back message is well within the Commission's authority under the CVAA. I also support the Order's conclusion that this requirement is consistent with the directives in Titles I and III of the Communications Act.

The four nationwide wireless carriers -- AT&T, Verizon, Sprint, and T-Mobile -- are to be commended for voluntarily committing to providing this bounce back capability by June 30, 2013. This agreement will accelerate deployment of this critical public safety communications to more than 90 percent of the nation's wireless consumers.

I also wish to thank David Turetsky, Sean Lev, and the talented staff in the Public Safety Homeland Security Bureau and Office of General Counsel, for carefully examining the implementation issues and providing us with an excellent Order.

**STATEMENT OF  
COMMISSIONER JESSICA ROSENWORCEL**

RE: Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, PS Docket No. 11-153; Framework for Next Generation 911 Deployment, PS Docket No. 10-255.

The digital age has multiplied the ways we communicate. With our mobile devices almost always in hand, we stay connected like never before. But reaching out today means more than talk. It means texting, too. We text to contact friends and family, to confirm plans, to vote in contests, and to donate to charities and campaigns. In light of this, last year the Commission took steps to make it possible to text in times of emergency—to text 911.

Today we build on this earlier effort. Specifically, we address consumer confusion regarding the availability of texting to 911. This is important. Because texting to 911 is not yet uniformly available, it is hard for consumers to know where this feature works and when it can be used. Yet when it comes to matters of public safety, our policies have no room for confusion. Simply put, it can be a matter of life and death.

To reduce this possibility, I believe the Commission needs to focus on three essential things.

First, consumers should have the confidence that comes from a firm date by which everyone can text to 911 nationwide. Last year the four nationwide wireless carriers agreed to provide this certainty by committing to offer the service by May 15 of next year. So far, so good.

Second, we need an extensive consumer outreach program, involving the Commission, public safety organizations, carriers, and the deaf and hard-of-hearing community all working together. Although we are only at the beginning stages of this effort, we are making progress.

Third and finally, consumers should receive an immediate notification—a bounce back message—any time their text to 911 does not go through.

It is this final point the Commission addresses today. It is absolutely critical. For too long, when a call for help went out as a text message, the only response was painful silence. But no one should be left wondering in an emergency if they have been heard.

Accordingly, in this decision we ensure that by September 30 of this year, consumers will have the confidence of knowing whether or not their text to 911 has gone through. Even better, this critical capability will not be limited to wireless carriers. IP-based texting applications that are increasingly substituting for traditional SMS text services will also begin providing bounce-back messages.

But as good as this is, the job is not done. I think more work is needed to clean up the bounce back messages so that are provided.

Here's why. I have visited half of the active text to 911 trials that are ongoing across the country. I have seen text to 911 in action in Vermont, Maryland, and Virginia. What I learned is that while the numbers of texts received today is low, the potential is great. But I also learned about the bounce back messages in place today. They run the gamut—from helpful to confusing, from reliable to simply unavailable.

Some, consistent with today's decision, provide two critical pieces of information—that text to 911 is not available and that the consumer should try to contact 911 using another means. For instance, from one carrier: "Call 911 for emergency. Text to 911 service not available."

But others are a mix. From one carrier: “You have entered an invalid address.”

From another: “Message failed would you like to retry?”

From yet another, even worse: no response.

We can do better. So it is both my hope and expectation that before September 30, the carriers and providers of IP-based texting applications that are covered by this decision will develop a more consistent and more meaningful bounce-back message. They should. Because this is not just about reaching out, it is about communicating when the unthinkable occurs—and making sure that every call for help gets answered.

**CONCURRING STATEMENT OF  
COMMISSIONER PAI**

RE: Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, PS Docket No. 11-153; Framework for Next Generation 911 Deployment, PS Docket No. 10-255.

People in need of emergency assistance should not be left with the false impression that first responders are on the way, when in fact they are not. That is why I support the automatic “bounce-back” text message requirement set forth in this Report and Order. If Americans send an emergency text to 911 in a location where text-to-911 capability is not yet available, they should be notified immediately that they must contact public safety personnel in another way, such as by calling 911. This “bounce-back” requirement that we adopt today is of particular importance to deaf and hard-of-hearing Americans, who disproportionately rely on texting as a means of communication.

I also believe that the Commission possesses the legal authority to issue these rules. But I cannot support the lengthy legal analysis contained in this item, which offers a grab bag of theories, some far-reaching and questionable. For example, the Commission today claims sweeping authority to prescribe “rules that prevent the transmission of potentially misleading text messages.”<sup>1</sup> This remarkable assertion of power raises serious First Amendment questions and should give pause to anyone who has ever sent a “potentially misleading” text message. Similarly, the reliance on a statutory provision that empowers the Commission to implement policy recommendations made by non-governmental actors<sup>2</sup> evokes constitutional doubts dating back to the Great Depression.<sup>3</sup> Law and prudence suggest we go no further than necessary in justifying otherwise worthwhile policy choices.

---

<sup>1</sup> Report and Order, para. 129.

<sup>2</sup> *Id.*, para. 97 (citing 47 U.S.C. § 615c(g) (“The Commission shall have the authority to promulgate regulations to implement the recommendations proposed by the [Emergency Access] Advisory Committee[.]”)).

<sup>3</sup> *See, e.g., A.L.A. Schechter Poultry Corp. v. United States*, 295 U.S. 495, 541–42 (1935) (striking down as an unconstitutional delegation of authority provision of National Industrial Recovery Act giving President power to approve “codes of fair competition” as recommended by trade or industrial associations or groups); *Carter v. Carter Coal Co.*, 298 U.S. 238, 310–11 (1936) (holding unconstitutional statutory provision granting private entities the authority to set certain labor conditions).