

**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
	)	

**COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®**

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**COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®**

**I. INTRODUCTION AND SUMMARY**

CTIA – The Wireless Association® (“CTIA”) respectfully submits these comments in response to the Commission’s Second Report and Order and Third Further Notice of Proposed Rulemaking (“*Third FNPRM*”), which seeks comment on technical issues related to providing enhanced location information and roaming capabilities for texts sent to 9-1-1.<sup>1</sup>

As CTIA and its member companies have made clear throughout this proceeding, the wireless industry remains committed to providing consumers, particularly consumers who are deaf, hard of hearing or speech impaired, with an interim text-to-911 solution while also working toward a more comprehensive Next Generation 911 (“NG911”) system. CTIA and its member companies have consistently collaborated with public safety and other interested stakeholders to lead the way toward implementing an interim text-to-911 solution that is technically feasible and that serves the needs of consumers—including the deaf, hard of hearing, and speech impaired—without inhibiting the long-term deployment of NG911.

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<sup>1</sup> *Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment, Second Report and Order and Third Further Notice of Proposed Rulemaking, FCC 14-118 (Aug. 13, 2014) (“Third FNPRM”).*

To best promote the industry's complementary efforts to deploy interim text-to-911 service and develop NG911 solutions, CTIA respectfully submits that the Commission should refrain from mandating the development of capabilities for legacy platforms, such as Short Message Service ("SMS"), which soon will be superseded by next generation technologies. With this principle in mind, CTIA believes that the Commission should not mandate roaming requirements for text-to-911 at this time. Nor should the Commission require covered text providers to provide enhanced location information. As the record in this proceeding illustrates, the Commission's goals would be best served by allowing affected stakeholders to implement the recently adopted new requirements, and providing additional time for standards work before mandating any additional capabilities be enabled.

Given the number of complex technical challenges and rapidly evolving technology, fostering flexible, voluntary solutions is particularly beneficial for text-to-911 solutions. As documented throughout this proceeding, two significant hurdles are providing roaming capabilities and enhanced location information for text-to-911 services. As explained further below, these issues are a product of the legacy SMS architecture and standards groups are still assessing whether enabling these capabilities would be technically and economically feasible for all covered text providers. CTIA urges the Commission to permit these processes to continue to unfold rather than adopting strict regulatory requirements at this time.

CTIA and its member companies will continue working closely with other interested stakeholders to craft flexible and innovative solutions to implementing both NG911 services and interim text-to-911 services. As the voluntary Carrier-NENA-APCO Agreement<sup>2</sup> demonstrates,

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<sup>2</sup> See Letter from Terry Hall, APCO International, Barbara Jaeger, 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

the wireless industry is firmly dedicated to collaborating with the public safety community to make text-to-911 services as effective and efficient as possible. Accordingly, the Commission can best achieve its goals by continuing to support these voluntary efforts to solve the complex roaming and enhanced location information challenges associated with text-to-911 services.

**II. THE COMMISSION SHOULD NOT MANDATE ROAMING REQUIREMENTS AT THIS TIME BECAUSE FURTHER STANDARDS WORK WOULD BE REQUIRED BEFORE ROAMING CAPABILITIES COULD BE ENABLED**

In the *Third FNPRM*, the Commission notes that routing text messages from roaming subscribers presents “technical complexities that might be necessary to resolve before we could require covered text providers to support text-to-911 in roaming situations.”<sup>3</sup> The Commission further acknowledges that “[c]urrent SMS text delivery protocols do not allow for location information to be included with SMS texts-to-911 while roaming, which precludes the ability of covered text providers to route texts to an appropriate PSAP.”<sup>4</sup> Nevertheless, the Commission proposes requiring covered text providers “to support roaming for text-to-911 no later than two years from the effective date of the adoption of final roaming rules.”<sup>5</sup> With the feasibility of roaming for text-to-911 uncertain, CTIA believes that the Commission should refrain from adopting roaming requirements at this time.

As stakeholders have made clear throughout this proceeding, further standards work must be performed before roaming capabilities can be enabled—let alone required—in the text-to-911

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Commission, and Commissioners McDowell, Clyburn, Rosenworcel, and Pai, PS Docket No. 11-153, PS Docket No. 10-255 (Dec. 6, 2012) (“Carrier-NENA-APCO Agreement”).

<sup>3</sup> *Third FNPRM* ¶ 118.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.* ¶ 109.

context.<sup>6</sup> Because SMS technology is a store-and-forward messaging technology that was never designed nor deployed for mission critical services, delivering text messages to 9-1-1 is a “feat in itself.”<sup>7</sup> Unsurprisingly, then, achieving this functionality when a user is roaming is an “exceedingly complex issue that warrants further study.”<sup>8</sup> Indeed, the Commission itself recognizes that “roaming cannot be supported for text-to-911 at this time.”<sup>9</sup> To this end, the current text-to-911 standard, ATIS/TIA J-STD-110, does not provide for roaming support.<sup>10</sup>

Along these lines, the FCC’s Emergency Accessibility Advisory Committee (“EAAC”) has cautioned that appropriate standards organizations, and other interested stakeholders must conduct further study of roaming in the text-to-911 context to determine whether the technical issues can be resolved without significant network modifications before the transition to NG911 is complete.<sup>11</sup> The EAAC also has made clear that with the information limitations inherent in

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<sup>6</sup> See, e.g., Comments of Sprint Corp., PS Docket No. 11-153, PS Docket No. 10-255, at 11 (Apr. 4, 2014) (“Sprint April 2014 Comments”) (“[S]tandards work will need to be completed to address roaming location interactions between the home CMRS network and serving CMRS providers. Importantly, work will also be needed to expand existing roaming agreements”); Comments of AT&T, PS Docket No. 11-153, PS Docket No. 10-255, at 6 (Apr. 4, 2014) (“AT&T April 2014 Comments”) (“[B]ecause carriers are enlisting their off-the-shelf SMS texting products to provide 911 access roaming is unavailable”).

<sup>7</sup> Comments of Motorola Mobility LLC, PS Docket No. 11-153, PS Docket No. 10-255, at 6 (Apr. 4, 2014) (“Motorola April 2014 Comments”).

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

<sup>9</sup> *Third FNPRM* ¶ 109.

<sup>10</sup> See *id.* ¶ 108, n. 291; see generally ATIS and TIA, *Joint ATIS/TIA Native SMS to 9-1-1 Requirements and Architecture Specification*, J-STD-110 (2013) (“*ATIS/TIA Standard*”).

<sup>11</sup> EAAC, *Report of Emergency Access Advisory Committee (EAAC) Subcommittee 1 on Interim Text Messaging to 9-1-1*, at 2 (Mar. 1, 2013) (“EAAC March 2013 Text Messaging Report”).

SMS architecture, routing texts to the appropriate PSAP while roaming may not be possible.<sup>12</sup> Specifically, the EAAC has identified that SMS text messages sent between wireless provider roaming partner networks does not always include “Text Originator Information,” which contains the location information necessary to route the text to the appropriate PSAP when a user is roaming.<sup>13</sup> With this significant information limitation, the EAAC concluded that routing and delivering text messages to 9-1-1 requires further study and development. Because “addressing the ‘Text Originator Information’ and ‘Home Network Control’ issues would require significant modifications to the wireless originator network and core infrastructure that will ultimately delay the deployment of SMS-to-9-1-1 services,” the EAAC advised that “[r]oaming capabilities should be addressed in NG9-1-1 multimedia emergency services.”<sup>14</sup>

Adopting a roaming requirement also would exceed the scope of the voluntary Carrier-NENA-APCO Agreement. As CTIA has noted in its comments throughout this proceeding, the four largest wireless carriers, together with APCO and NENA, committed to implement an interim text-to-911 framework on their networks in December 2012.<sup>15</sup> The Carrier-NENA-APCO Agreement was the culmination of considerable efforts by wireless providers, public safety organizations, standards bodies, and other industry stakeholders. Importantly, the Carrier-NENA-APCO Agreement represents the mutual acknowledgement between carriers and public safety of the features and technical parameters of the interim

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<sup>12</sup> *Id.* at 9-10.

<sup>13</sup> *Id.*

<sup>14</sup> *Id.* at 10.

<sup>15</sup> *See, e.g.*, Comments of CTIA – The Wireless Association®, PS Docket No. 11-153, PS Docket No. 10-255, at 2-3 (Jan. 29, 2013) (“CTIA January 2013 Comments”); Comments of CTIA – The Wireless Association®, PS Docket No. 11-153, PS Docket No. 10-255, at 8-9 (Apr. 4, 2014) (“CTIA April 2014 Comments”).

text-to-911 solution given existing network infrastructures and capabilities. As such, the Commission's regulations should not expand the technological scope of the voluntary agreement to encompass capabilities that were explicitly excluded or implicitly omitted from the Carrier-NENA-APCO Agreement.

Moreover, limiting the Commission's mandatory rules to the scope of the Carrier-NENA-APCO Agreement is consistent with the approach that the Commission has taken in adopting rules in this proceeding. Specifically, the Commission has explained that the scope of the text-to-911 rules was "consistent with the scope of obligations under the voluntary agreement."<sup>16</sup> As the Commission has noted, the Carrier-NENA-APCO Agreement explicitly declined to include roaming.<sup>17</sup> Indeed, the Carrier-NENA-APCO explains that "SMS-to-911 will not be available to wireless network subscribers roaming outside of their home network."<sup>18</sup> In keeping with its pledge to enact rules that are consistent with the scope of the obligations set forth in the Carrier-NENA-APCO Agreement, the Commission should not broaden the requirements applicable to covered text providers by mandating support for roaming. With ample record evidence before the Commission that roaming support for existing text-to-911 services require further technical development, the Commission should not enact rules that would redefine the technical parameters of the Carrier-NENA-APCO Agreement.

Nor should the Commission expend finite resources regulating legacy services such as SMS. As the record in this proceeding illustrates, adopting a roaming requirement for text-to-911 would be premature because standards groups are still studying the complexities

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<sup>16</sup> *Third FNPRM* ¶ 68.

<sup>17</sup> *Id.* ¶ 4.

<sup>18</sup> Carrier-NENA-APCO Agreement at 3.

involved in supporting roaming text-to-911 services.<sup>19</sup> Rather than enacting rules—even with a two year window for compliance—the Commission should allow text-to-911 deployment and NG911 development to continue organically. Specifically, the Commission should allow technical experts, standards bodies, and other stakeholders to continue exploring the roaming issue.<sup>20</sup> Such groups should have the first opportunity to determine whether this capability is technically and economically feasible in the near-term before any rules are implemented.

Efforts to pursue interim roaming solutions only would divert resources from the introduction of new text-based emergency communication services and the transition to NG911.<sup>21</sup> With the technically complex issues implicated by providing roaming capabilities, the Commission should allow carriers to continue to work on developing and deploying new emergency communications technologies rather than imposing burdensome backward-looking obligations on a legacy service. As AT&T has cautioned, “by requiring carriers to divert time and resources retrofitting the interim SMS texting solution to meet tasks it was never intended to handle,” such as roaming, the Commission risks impeding the transition to NG911 services.<sup>22</sup>

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<sup>19</sup> See, e.g., T-Mobile April 2014 Comments at 9.

<sup>20</sup> See Sprint April 2014 Comments at 12 (“The Commission should refrain from imposing a regulatory obligation for roaming to be included as part of an interim SMS-based text-to-911 service and instead allow for eventual adoption of standards for roaming in the NG9-1-1 environment.”).

<sup>21</sup> See *id.* (urging the Commission not to impose a roaming requirement and to instead “allow for eventual adoption of standards for roaming in the NG9-1-1- environment”); AT&T April 2014 Comments at 6 (noting it would “take considerable time, effort and money to establish industry standards for SMS text roaming and to provision any solution based on those standards”); T-Mobile April 2014 Comments at 9 (“Resources would be better spent focused on NG911 solutions that can address 911 text roaming in a more holistic and complete manner.”).

<sup>22</sup> AT&T April 2014 Comments at 7.

### **III. THE COMMISSION SHOULD NOT MANDATE ENHANCED LOCATION INFORMATION REQUIREMENTS AT THIS TIME BECAUSE PROVIDING ENHANCED LOCATION INFORMATION IS NOT UNIVERSALLY ATTAINABLE**

The Commission proposes requiring covered text providers to “deliver enhanced location information (consisting of the best available location that covered text providers could obtain from any available location technology or combination of technologies, including device-based location) with texts to 911” within two years of the adoption of final rules.<sup>23</sup> Although the Commission notes that so far, the “majority of commenters indicate that delivery of enhanced location information is not possible at this time,” it suggests that “solutions could be developed to provide enhanced location” information in the proposed two-year time frame.<sup>24</sup> However, the record in this proceeding does not show that such solutions can be developed and broadly implemented in the near term.

To the contrary, the record in this proceeding is replete with evidence that providing enhanced location information has not yet been demonstrated to be universally attainable.<sup>25</sup> Indeed, at the same time that the Commission proposes the enhanced location information requirement, it also acknowledges that “enhanced location information is not yet universally attainable for texts to 911 over either SMS or other messaging platform protocols under development.”<sup>26</sup> As the comments in this proceeding make clear, the Commission should not

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<sup>23</sup> *Third FNPRM* ¶ 82.

<sup>24</sup> *Id.* ¶¶ 82, 84.

<sup>25</sup> *See, e.g.*, Sprint April 2014 Comments at 10 (raising several concerns about requiring location information in the text-to-911 context, including maintaining quality, reliability, and redundancy standards); T-Mobile April 2014 Comments at 6; Letter from Stinson Leonard Street to Marlene H. Dortch, PS Docket No. 11-153, PS Docket No. 10-255, at 1 (Aug. 4, 2014) (“TCS Ex Parte”) (noting the “challenges in getting a precise location fix for texters”).

<sup>26</sup> *Third FNPRM* ¶ 81.

assume that such solutions will be available in two years' time.<sup>27</sup> If anything, the record shows that, even if enhanced location information could be made universally attainable, "significant development time" would be required.<sup>28</sup>

As the Commission has previously acknowledged, there is strong record support in this proceeding for the notion that the FCC "should leave the development of precise location information capability for text-to-911 to further product and application development and related standards work using LTE and NG911 technologies."<sup>29</sup> CTIA agrees with these commenters' statements. Industry stakeholders have continued to express the view that further standards work is required before enhanced location information can be provided. For example, T-Mobile has advised that the Commission should focus its location information efforts "on next generation technologies and networks, including LTE and NG911, rather than on SMS using legacy 2G and 3G networks."<sup>30</sup> Likewise, Motorola Mobility recommended that the Commission permit various "multi-stakeholder processes" and standards work to conclude "before seeking comment on the feasibility of and suggested timeframes for adopting enhanced location information."<sup>31</sup>

The EAAC also has noted that further issues must be resolved before enhanced location information can be provided in the text-to-911 context. Specifically, the EAAC has explained

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<sup>27</sup> See, e.g., Motorola April 2014 Comments at 5; T-Mobile April 2014 Comments at 6 ("[P]rematurely establishing text-to-911 accuracy requirements by rule before the technical capabilities are fully vetted can have negative effects and inadvertently suppress the innovation that will lead to . . . enhanced location capabilities.").

<sup>28</sup> Motorola April 2014 Comments at 5.

<sup>29</sup> *Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications, Framework for Next Generation 911 Deployment, Policy Statement and Second Further Notice of Proposed Rulemaking, FCC 14-6 (Jan. 30, 2014) ("Second FNPRM").*

<sup>30</sup> T-Mobile April 2014 Comments at 8.

<sup>31</sup> Motorola April 2014 Comments at 4.

that modifications to wireless network standards and infrastructure would be required in order to enable location information for texts sent to 911.<sup>32</sup> The EAAC further concluded that such modifications would delay near-term implementation of text-to-911 services.<sup>33</sup> While these challenges may not be insurmountable, the EAAC has cautioned that given existing technologies, there is room only for “extremely limited additional standards development.”<sup>34</sup>

The EAAC is not the only party in this proceeding that has urged the Commission to permit further standards work before developing enhanced location information requirements. Most recently, the FCC’s Communication Security Reliability and Interoperability Council (“CSRIC”) has reviewed available technologies and solutions that may provide location information for text-to-911 services that, from a PSAP perspective, are more akin to Phase II E-911 wireless location information.<sup>35</sup> CSRIC concluded that “there is no solution for generating enhanced location in an SMS text to 9-1-1 session for any currently deployed systems that does not require user equipment (“UE”) changes, network changes, or both.”<sup>36</sup> Although CSRIC has proposed several approaches that covered text providers should consider in exploring options for providing enhanced location information, CSRIC recommends that the FCC not

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<sup>32</sup> EAAC March 2013 Text Messaging Report at 2.

<sup>33</sup> *Id.*

<sup>34</sup> *Id.* at 1.

<sup>35</sup> See CSRIC Working Group 1, *Final Report – Investigation into Location Improvements for Interim SMS (Text) to 9-1-1* (June 2014), available at [http://transition.fcc.gov/pshs/advisory/csric4/CSRIC\\_IV\\_WG-1\\_Task-1\\_Final\\_061814.pdf](http://transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG-1_Task-1_Final_061814.pdf) (“CSRIC Location Accuracy Report”).

<sup>36</sup> *Id.* at 1.

mandate enhanced location information requirements for SMS text-to-911.<sup>37</sup> Instead, CSRIC recommends that the FCC encourage development of enhanced location information for more robust Multimedia Messaging Emergency Services (“MMES”) solutions based on Long Term Evolution (“LTE”)/Internet Protocol (“IP”) Multimedia Subsystem (“IMS”) as Public Safety evolves towards NG911 solutions.<sup>38</sup> CSRIC’s proposed approach recognizes that providing enhanced location information is best addressed through next generation technologies and services. CTIA urges the Commission to adhere to CSRIC’s recommendation and refrain from issuing enhanced location requirements for the legacy SMS service.

CTIA also is concerned that, as proposed, the enhanced location requirement appears to require a covered text provider to constantly upgrade its location information technology. The Commission’s proposal would require covered text providers to offer “the best available location” information that can be obtained—even if that requires using multiple forms of technologies.<sup>39</sup> As drafted, covered text providers may have to make extraordinary efforts to stay ahead of rapidly evolving location technology to comply with the Commission’s enhanced location requirement. Aside from being unattainable, the enhanced location requirement would be a costly drain on the resources of the public safety community and covered text providers—resources that could more effectively be devoted to the NG911 transition. And perhaps most troubling, the proposed language creates a regulatory framework where a carrier may be compliant one day and non-compliant the next, depending on what the Commission deems to be

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<sup>37</sup> See *id.* at 1-2 (“Therefore, it is recommended that the FCC refrain from wireless E9-1-1 Phase II-like mandates for SMS text to 9-1-1 service.”).

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

<sup>39</sup> *Third FNPRM* ¶ 82.

“best available” location information at any given time. The Commission should not make such a sweeping departure from its policy of embracing technological neutrality.

Imposing an enhanced location mandate also raises significant challenges for consumer privacy and cybersecurity. As Verizon has cautioned, complying with location requirements may require accessing providers’ and devices’ commercial location-based service capabilities, with direct implications for consumer privacy settings.<sup>40</sup> CSRIC recently confirmed that overriding these privacy settings to generate location information presents significant obstacles for existing text-to-911 services, including requiring users to expressly permit access to such information or developing an “override” protocol for text-to-911 scenarios.<sup>41</sup> Even if an override functionality can be developed, “overriding a user’s privacy settings in the text-to-911 context raises significant privacy legal considerations.”<sup>42</sup> These difficult issues may be further complicated by the Commission’s approach to interconnected text-based providers support for text-to-911. For this reason alone, the Commission should not adopt the enhanced location requirement. Without resolving these important privacy and cybersecurity issues, the Commission should not mandate a broad location information requirement for text-to-911.

As with the proposed roaming requirement, requiring enhanced location information exceeds the scope of the Carrier-NENA-APCO Agreement. As CTIA has explained above, the Carrier-NENA-APCO Agreement represents a carefully crafted approach to implementing an interim text-to-911 solution. The Carrier-NENA-APCO Agreement specifies that only coarse

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<sup>40</sup> See Comments of Verizon and Verizon Wireless, PS Docket No. 11-153, PS Docket No. 10-255, at 15 (Apr. 4, 2014) (“Verizon April 2014 Comments”).

<sup>41</sup> See CSRIC Location Accuracy Report at 20.

<sup>42</sup> Motorola April 2014 Comments at 5.

location information should be used for text-to-911 purposes.<sup>43</sup> The Commission should not exceed this capability and impose additional burdens on carriers.

Instead of adopting burdensome rules, the Commission should continue to allow technical experts, standards bodies, and other stakeholders to explore the challenges associated with providing enhanced location information. Declining to adopt rigid regulatory requirements at this time also would encourage further collaboration between public safety and covered text providers to develop NG911 technologies and services. The Commission's interests would be best served by allowing the NG911 ecosystem to progress rather than mandating the development of capabilities for legacy platforms that NG911 eventually will supersede. Indeed, as ATIS counsels, the Commission should not "adopt rules that would redirect resources from ongoing efforts to develop and deploy" next generation platforms.<sup>44</sup>

#### **IV. CONCLUSION**

As this proceeding has made clear, voluntary commitments produce results. CTIA member companies representing the vast majority of subscribers already have made considerable efforts to voluntarily enable text-to-911 services on their networks. Rather than expanding the carefully chosen technical requirements of this voluntary agreement, the Commission should not mandate roaming requirements for text-to-911 at this time. Nor should the Commission require covered text providers to provide enhanced location information. As the record in this proceeding illustrates, the Commission's goals would be best served by allowing stakeholders to continue working together to develop roaming and enhanced location solutions, and focusing on

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<sup>43</sup> Carrier-NENA-APCO Agreement at 3.

<sup>44</sup> Comments of the Alliance for Telecommunications Industry Solutions, PS Docket No. 11-153, PS Docket No. 10-255, at 5 (Apr. 4, 2014) ("ATIS April 2014 Comments").

NG911 solutions. By permitting these collaborative, voluntary processes to continue, the Commission will promote flexible and innovative solutions to the technical challenges implicated by SMS-to-911. At the same time, the Commission will avoid stifling the important NG911 transition.

Respectfully submitted,

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