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

REPLY COMMENTS OF SPRINT CORPORATION

I. INTRODUCTION

Sprint Corporation ("Sprint") hereby submits these reply comments in response to the Federal Communications Commission's ("FCC" or "Commission") Second Report and Order and Third Further Notice of Proposed Rulemaking in the above-referenced proceeding.[1] As commenters in this proceeding have discussed, requiring enhanced location information and roaming support for interim SMS based text-to-911 goes beyond the scope of the voluntary commitment entered into by the four largest carriers[2] and risks diverting resources away from efforts to deploy more advanced next generation texting technologies.[3] Privacy issues associated with commercial location based services ("cLBS") have been highlighted by commenters and

[1] *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, Second Report and Order and Third Further Notice of Proposed Rulemaking* (Rel. August 13, 2014) ("Second R&O and Third FNPRM").
[2] *See* Letter from Terry Hall, APCO International, Barbara Jaeger, NENA, Charles W. McKee, Sprint, 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 No. 11-153, PS Docket No. 10-255 (Dec. 6, 2012) (the "Voluntary Commitment"); T-Mobile Comments at 3-4; CTIA Comments at 5-6; 12-13.
[3] T-Mobile Comments at 3, 9; Verizon Comments at 2; AT&T Comments at 5; CTIA Comments at 7, 13.

should be addressed before the Commission takes any further action to mandate the delivery of enhanced location information via text-to-911.[4] Comments also reflect that roaming support for text-to-911 is not achievable within two years due to the technical challenges and the need for the development of standards.[5] For these reasons, the Commission should refrain from adopting further regulatory mandates associated with the provision of text-to-911 via interim SMS technology.

II. DISCUSSION

A. Mandating requirements not contemplated by the Voluntary Commitment would divert resources from efforts to deploy more advanced next generation texting technologies.

The Commission's proposed rules go beyond what was contemplated by the Voluntary Commitment entered into by the four largest carriers. The Voluntary Commitment was crafted with the technological limitations of SMS in mind. As CTIA explains, "… the Carrier-NENA-APCO Agreement represents the mutual acknowledgement between carriers and public safety of the features and technical parameters of the interim text-to-911 solution given existing network infrastructures and capabilities."[6] The Commission should refrain from imposing new mandates that go beyond the scope of the Voluntary Commitment. Sprint agrees with CTIA that, "… 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."[7]

By seeking to go beyond the scope of the Voluntary Commitment, the Commission is undermining the good faith efforts of carriers to voluntarily commit to furthering the deployment

[4] T-Mobile Comments at 9-10.
[5] T-Mobile Comments at 10-11; AT&T Comments at 6-7.
[6] CTIA Comments at 5.
[7] CTIA Comments at 6.

text-to-911. As T-Mobile aptly observes, "In an environment in which industry is continually encouraged to collaborate with appropriate stakeholders to develop solutions to key issues, the path the Commission has chosen in regards to text-to-911—escalating beyond the stakeholder compromise—does little to encourage further voluntary agreements."[8]

Mandating additional capabilities such as enhanced location and roaming support for the legacy SMS system will divert resources away from the deployment of next generation technologies. Many commenters express concern about investing further resources in the interim SMS solution in order to provide enhanced location information and have urged the Commission to focus efforts on next generation technologies.[9] As AT&T states, "Hence the efforts of all stakeholders should be directed to achieving the goal of providing public safety with a dispatchable address for next generation services, and not be undermined by seeking short-term, incremental improvements in location data, especially for legacy systems and services, like SMS text-to-911."[10] APCO indicates support for the Commission's proposal, but also cautions against diverting resources from next generation technologies. According to APCO's comments, "APCO supports the Commission's proposal, provided that the SMS requirement would not divert significant resources that could be better spent on a more rapid deployment of dispatchable location technology for newer text services that will be widely used by the public long after SMS fades away."[11]

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[8] T-Mobile Comments at 4.
[9] T-Mobile Comments at 3,9; Verizon Comments at 2, 7; AT&T Comments at 5; CTIA Comments at 13.
[10] AT&T Comments at 5.
[11] APCO Comments at 3.

Commenters express similar concerns regarding the proposal to require roaming support.[12] CTIA recommends that, "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."[13] ATIS comments that, "… diverting industry resources towards changes to legacy SMS related systems and standards is not warranted. Instead, the industry should be encouraged to concentrate its resources on the continued deployment of new technologies, such as MMES, which enable new levels of access to emergency communications for consumers."[14]

B. Important privacy issues must be addressed before cLBS can be relied upon for enhanced location information.

With respect to utilizing cLBS to provide enhanced location information for text-to-911, commenters highlight important privacy concerns. As T-Mobile observes, "Overriding existing cLBS privacy settings would require a complete overhaul of emergency services privacy standards to ensure the same kind of privacy protection consumers experience with voice E911 under the interim SMS-to-911 paradigm."[15] CTIA cautions that, "Without resolving these important privacy and cybersecurity issues, the Commission should not mandate a broad location information requirement for text-to-911."[16]

NENA expresses support for the use of cLBS for improved location information arguing that, "the Commission should establish a naturally rising floor for location determination performance, pegged to the capabilities of commonly-available Commercial Location-Based

[12] CTIA Comments at 6-7; ATIS Comments at 6.
[13] CTIA Comments at 7.
[14] ATIS Comments at 6.
[15] T-Mobile Comments at 9-10.
[16] CTIA Comments at 12.

Services (CLBS)."[17] In addition NENA argues that, "… existing technologies can support these features, if it is made clear that they are required, with only minimal changes to CLBS platforms. Considering the benefits to all parties, this minimal effort should not serve as a significant barrier to the introduction of CLBS for text (and voice) 9-1-1 location determination."[18] The cLBS changes that NENA says are minimal are, in fact, very complex. There are significant network and device implications that would need to be addressed. For example, it is not clear what type of emergency mode a device would go into when a consumer sends a text to 9-1-1 in order to obtain information approximating a voice level phase II location fix. It is clear, however, it would not be able to operate in the same manner as a voice emergency device mode.

With respect to privacy concerns, NENA argues that, "As a general principle, however, our members indicate that the communities they serve understand the need to lower location privacy expectations when emergency assistance is requested."[19] NENA urges the Commission, "… to adopt a rule requiring location determination system access for 9-1-1 enabled text services on a prospective basis, without regard to a consumer's handset location privacy settings."[20] There are significant consumer privacy concerns with this proposed approach and, at a minimum, further study is needed regarding privacy expectations and consumer education efforts.

In addition to privacy issues, using cLBS for enhanced location also raises other concerns. For example, Over the Top ("OTT") cLBS has a significant market share of the cLBS business beyond any business relationships with CMRS carriers. Since many cLBS growth and technology enhancements are occurring in the OTT cLBS space, it appears obvious that the

[17] NENA Comments at 3-4.
[18] NENA Comments at 4.
[19] NENA Comments at 8.
[20] NENA Comments at 8.

focus of any use of cLBS for 9-1-1 must include OTT cLBS service providers. The Commission has not, however, addressed whether it has jurisdiction to regulate providers of OTT cLBS and how these entities would be expected to implement 9-1-1 reliability and performance requirements for OTT cLBS in order to obtain best available location capabilities for text-to-911.

C. Vendor claims tied to providing enhanced location information should be closely examined.

As T-Mobile argues, vendor claims must be reviewed for technical and economic feasibility.[21] TruePosition has asserted that its Uplink-Time Difference of Arrival ("U-TDOA") technology could be implemented with relatively minor development effort and makes similar claims in its most recent comments filed in the docket.[22] There are problems associated with using U-TDOA and the development and deployment effort that would be needed to utilize the technology would be significant.[23] T-Mobile also raised issues associated with True Position's claims.[24] T-Mobile points to its earlier comments, which explain that "… implementation of U-TDOA for any location purposes will require deployment of Location Measurement Units ("LMUs") to every 3G and 4G cell site—sites that, in many if not most cases, are not architected to support LMU connections."[25] True Position takes a simplistic view with respect to roaming, asserting that "Roaming cases would require additional but still modest efforts to introduce existing standard functionalities (e.g., Roaming Location Protocol by OMA)."[26] This fails to take into account other complexities including the need to first deploy the NENA National Forest Guide, which should allow the home CMRS provider to identify the proper PSAP to which a

[21] T-Mobile Comments at 8.
[22] True Position Comments at 8.
[23] Sprint Comments at 5-6.
[24] T-Mobile Comments at 8-9.
[25] T-Mobile Comments at T-Mobile Comments at 8 referencing T-Mobile Reply Comments filed on July 14, 2014, PS Docket No. 07-114.
[26] True Position Comments at 8.

text-to-911 message should be routed.[27] However, the NENA National Forest Guide is not likely to be deployed within the near term and certainly not within two years.

D. The language in the Commission's proposed rule requiring enhanced location information is problematic.

Multiple commenters raised concerns that the language of the proposed rule, which would require "the best available location that covered text providers could obtain from any available location technology or combination of technologies, including device-based location,"[28] is problematic. CTIA correctly observes, "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."[29] AT&T highlights similar concerns: "Moreover, the rule could be read to impose on covered text providers an unlimited, on-going, and instant obligation to adopt every improvement on current technologies, regardless of the degree to which location information is actually improved or the costs or time involved in adopting them."[30] To the extent the Commission moves forward with requiring enhanced location information for text-to-911, it should modify its proposed rule to address these significant concerns.

BRETSA argues that, "An "*any* available location technology or combination of technologies" approach necessarily requires an "*all*-of-the-above" approach, because the availability and accuracy of different location technologies will vary between carriers and areas."[31] While BRETSA's position is somewhat unclear, BRETSA seems to be advocating that all available technologies should be put in use by carriers. Interpreting the proposed requirement

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[27] Sprint Comments at 11-12.
[28] Second R&O and Third FNPRM at Par. 82.
[29] CTIA Comments at 11.
[30] AT&T Comments at 3-4.
[31] BRETSA Comments at 4.

in such a broad fashion would be unduly burdensome to carriers. The current language of the proposed rule, however, is vague and could lead to such an interpretation without further clarification and explicit limitation from the Commission.

E. Supporting roaming for text-to-911 will take longer than two years.

Multiple commenters argue that roaming support would not be possible within two years, as the Commission proposes.[32] There are significant technical complexities associated with roaming support for 9-1-1, which the Commission has itself recognized.[33] Numerous commenters point out that further standards work would be needed to facilitate roaming support for text-to-911.[34] While some public safety organizations argue that roaming should be supported within two years if not sooner[35], they fail to offer viable solutions to the complex technical limitations involved. BRETSA's comments regarding the proposed hub-and-spoke approach, for example, gloss over many of the complexities associated with supporting roaming for SMS text-to-911.[36] Ultimately improvements to both location accuracy and roaming support will result from the deployment of new network architecture associated with next generation technologies.

NENA recommends that in the spirit of the voluntary agreement the Commission temporarily refrain from imposing a text roaming requirement. According to NENA, "This approach could encourage carriers and the public safety community to collaborate on consensus-

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[32] T-Mobile Comments at 10-11; AT&T Comments at 6-7; Rural Wireless Association Comments at 3.
[33] Second R&O and Third FNPRM at par. 108, referencing Facilitating the Deployment of Text-to-911 & Other Next Generation 911 Applications Framework for Next Generation 911 Deployment, PS Docket Nos. 10-255 and 11-153, *Second Further Notice of Proposed Rulemaking*, 29 FCC Rcd 1547 (2014) (*Second Further Notice*), 29 FCC Rcd at 1565-66 par. 48.
[34] AT&T Comments at 6-7; Verizon Comments at 6-7; CTIA Comments at 3-4.
[35] APCO Comments at 4.
[36] BRETSA Comments at 5-6.

based voluntary agreements in the future, consistent with the Commission's support for such agreements expressed in the recent Wireless Location Accuracy proceeding."[37] A consensus-based approach is preferable to mandating specific requirements for roaming and the Commission should allow industry efforts that are already underway to continue to progress.

III. CONCLUSION

For the reasons discussed herein, the Commission should not move forward with proposed requirements to require enhanced location accuracy and roaming support as part of interim SMS-based text-to-911.

Respectfully submitted,

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[37] NENA Comments at 10.