

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

In the Matter of)	
)	
Public Safety and Homeland Security Bureau)	DA 14-1680
Seeks Comment in the E911 Location Accuracy)	
Proceeding on the Location Accuracy “Roadmap”)	
Submitted by APCO, NENA, and the Four National)	
Wireless Carriers)	
)	
Wireless E911 Location Accuracy Requirements)	PS Docket No. 07-114

COMMENTS OF SPRINT CORPORATION

I. BACKGROUND

Sprint Corporation (“Sprint”) hereby submits these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) Public Notice seeking comment on the location accuracy “Roadmap” submitted by the Association of Public-Safety Communications Officials (“APCO”), the National Emergency Number Association (“NENA”), and the four national wireless carriers.¹ Sprint is proud to have been part of the joint effort undertaken by the four national wireless carriers, APCO and NENA to develop the Roadmap for Improving E911 Location Accuracy (“Roadmap”).² Sprint urges the Commission to support the Roadmap, which provides a detailed framework and a meaningful path forward for improving indoor location

¹ Public Safety and Homeland Security Bureau Seeks Comment in the E911 Location Accuracy Proceeding on the Location Accuracy “Roadmap” Submitted by APCO, NENA, and the Four National Wireless Carriers, DA 14-1680, Released November 20, 2014 (“Public Notice”).

² See Letter, John Wright, APCO International, Charles W. McKee, Sprint, Joan Marsh, AT&T Services, Inc., Kathleen O’Brien Ham, T-Mobile USA, Christy Williams, NENA-The 9-1-1 Association, Kathleen Grillo, Verizon, to Marlene H. Dortch, Secretary, Federal Communications Commission, PS Docket No. 07-114 (filed Nov. 18, 2014) (“Roadmap Cover Letter”), Attachment A, “Roadmap for Improving E911 Location Accuracy” (“Roadmap”).

accuracy. The Roadmap establishes more realistic timeframes than the Commission’s proposed rules, allows for technological flexibility, and will ultimately provide public safety with more actionable information in the form of a dispatchable location.

II. DISCUSSION

In the Third Further Notice of Proposed Rulemaking, the Commission proposed extending metrics similar to those in place for outdoor calls to 9-1-1 calls placed from indoor environments. The proposed metrics consist of more granular latitude and longitude data and also include a vertical or “z-axis” component.³ In addition, however, the Commission encouraged stakeholders to work toward a collaborative approach, stating, “... we invite industry and public safety stakeholders to propose consensus-based, voluntary commitments that would address the public safety goals set forth in this proceeding and facilitate closing the regulatory gap between indoor and outdoor location accuracy without the need to adopt regulatory requirements.”⁴ To this end, industry stakeholders, including the four national wireless carriers, worked together with organizations representing the public safety community, APCO and NENA, investing considerable time and effort in developing the Roadmap. The Roadmap establishes specific benchmarks and metrics to ensure progress in delivering more detailed indoor location accuracy information.

The Roadmap outlines an alternative approach to the proposed requirements described in the Third FNPRM. The timeframes for compliance proposed in the Third FNPRM are unrealistic for a number of reasons. The Commission’s proposed two-year horizontal location accuracy requirements cannot be met without further advancements to today’s technology.

³ Wireless E-911 Location Accuracy Requirements, *Third Further Notice of Proposed Rulemaking*, 29 FCC Rcd 2374 (2014) (“Third FNPRM”), par. 38.

⁴ *Id.*, par. 54.

Sprint and others have explained that the technology to meet the Commission's proposed requirements in all morphologies is not currently available.⁵ In addition, a number of commenters that filed comments in the docket have explained that the proposed timeframes are unrealistic based on additional work that would need to occur prior to carriers being able to deploy any new indoor location accuracy technology.⁶ Before any technology can be deployed by carriers, standards work will need to be completed.⁷ Technology will then need to be incorporated into devices and software. The Roadmap outlines more realistic timeframes that take into account the need for the development of standards and technology solutions as well as the deployment of technology.

In order to achieve the proposals outlined in the Third FNPRM, carriers would be forced to rely on proprietary vendor solutions which have not yet been proven to be compliant with the Commission's proposals in all morphologies. Instead, the Roadmap will afford carriers greater flexibility by allowing for technology neutral approaches.

With respect to the Commission's proposed z-axis requirement, Sprint and others have discussed in detail the issues associated with providing z-axis information. In particular, commenting parties have expressed concern regarding the use of barometric pressure sensors for z-axis information.⁸ As part of the Roadmap, however, carriers have committed to make progress toward examining possible approaches for delivering z-axis information. Carriers have

⁵ Sprint Comments at 4 (filed May 12, 2014); Cisco Comments at 3 (filed May 12, 2014); Qualcomm Comments at 1 (filed May 12, 2014); T-Mobile Comments at 11 (filed May 12, 2014); Verizon Comments at 15 (filed May 12, 2014); Mobile Future and Competitive Carriers Association at 1-2 (filed May 12, 2014); CTIA Comments at 6 (filed May 12, 2014).

⁶ CTIA Comments at 8-9; The Rural Broadband Association ("NTCA") Comments at 2-3 (filed May 12, 2014); T-Mobile Comments at 18-20.

⁷ T-Mobile Comments at 19; NTCA Comments at 3.

⁸ Sprint Comments at 6-8; T-Mobile Comments at 13-14; Qualcomm Comments at 13; AT&T Comments at 15 (filed May 12, 2014).

agreed to promote the development and approval of standards within 18 months to enable the delivery of uncompensated barometric pressure data to PSAPs with 9-1-1 calls.⁹ The signatories have also agreed to “concurrently study other location technologies that would provide a vertical component and to take steps to promote the development of such solutions, when necessary to supplement dispatchable location solutions.”¹⁰ This approach includes undertaking a study of the use of uncompensated barometric pressure data. Under the Roadmap, “If the signatories determine that there is sufficient benefit to PSAPs associated with the delivery of uncompensated barometric pressure data, carriers agree to deliver such data to the PSAPs from any handset that supports such a capability within 3 years, subject to timely availability of standards...”¹¹ It is also important to note that dispatchable location will include the vertical information first responders need in the form of the specific floor, apartment or suite number associated with a call.

The Roadmap will facilitate the delivery of a dispatchable location to public safety entities. Dispatchable location is the physical civic address of the calling party plus additional information including floor, suite, apartment or other information when needed to adequately identify the location of the calling party. Dispatchable location information is more desirable than the estimated latitude/longitude data proposed in the Third FNPRM because it will get first responders closer to being able to knock on the door where the actual emergency is occurring. If public safety’s ultimate goal is to receive dispatchable location information, the industry’s time and resources will be better spent working toward this goal.

⁹ Roadmap at 5.a.

¹⁰ Roadmap Cover Letter at 3.

¹¹ Roadmap at 5.c. The Roadmap provides that a z-axis location accuracy metric would be established based on standards and “shall be expressed in terms of a vertical component for a specific percentage of VoLTE 9-1-1 calls from z-axis capable handsets.” Roadmap at 5.d.

Some parties have filed *ex parte* comments in the docket in response to the Roadmap and have raised concerns about it. Several of these parties are technology vendors who have been pushing for proposed regulations that would ultimately entail carriers purchasing a proprietary vendor solution. These commenters argue the Roadmap does not contain sufficiently measurable commitments or adequate benchmarks to ensure the delivery of a dispatchable address.¹² In fact, the Roadmap contains detailed commitments pursuant to which carriers agree to promote the development and approval of dispatchable location standards within 18 months, design and develop the National Emergency Address Database (“NEAD”) database to correlate known MAC addresses with a dispatchable location within 36 months, and meet metrics for network design/development and handset design/development that will enable the provision of dispatchable location information. Carriers also commit to provide specific percentages of location fixes obtained through either dispatchable location technologies or other “heightened location accuracy” solutions consistent with the Commission’s proposed 50 meter location accuracy requirement for outdoor calls and for those indoor calls where dispatchable location is not available. The Roadmap proposes that a number of these metrics, including those associated with dispatchable location-capable handset design/development and network design/development and the 50 meter location accuracy metric, be incorporated into the Commission’s rules.

¹² Letter, Bruce A. Olcott, Jones Day, attorney for NextNav, LLC to Marlene Dortch, Secretary of the Federal Communications Commission, PS Docket 07-114 (dated November 19, 2014); Letter, James Arden Barnett, Jr., Venable, attorney for True Position, to Marlene Dortch, Secretary of the Federal Communications Commission, PS Docket 07-114 (dated November 19, 2014).

Other commenters raise concerns that the technology solutions outlined in the Roadmap have not been tested in real world environments.¹³ The Roadmap, however, envisions that dispatchable location will be provided using existing technologies, such as Wi-Fi and Bluetooth LE technologies, that have been in use for years for commercial location purposes.

Several public safety representatives and consumer advocacy groups that have filed in opposition to the Roadmap proposal instead argue in favor of the Commission's proposals outlined in the Third FNPRM, but they fail to address the issues carriers have raised regarding the proposed requirements.¹⁴ In particular, as discussed above, the timeframes associated with the Commission's proposals are unrealistic based on additional work that must be completed related to standards and technology development and deployment. Commenters filing in opposition to the Roadmap fail to take these challenges into account and incorrectly assume the Commission's requirements can be met by carriers within the timeframes outlined in the Third FNPRM. These commenters also argue that the Roadmap would remove mandatory

¹³ Letter, Vincent Talucci, Executive Director and CEO, IACP, Mark W. Light, CAE, Chief Executive Officer and Executive Director, IAFC, Paul R. Patrick, President, NASEMSO, John W. Thompson, Acting Executive Director, NSA, to Thomas Wheeler, Chairman, Federal Communications Commission, PS Docket No. 07-114 (filed Nov. 14, 2014).

¹⁴ See Letter, Danita Crombach, President, California Chapter of the National Emergency Number Association, R. Craig Whittington, ENP (Retired), National President 2009/2010 National Emergency Number Association, Richard J. Fiesta, Executive Director Alliance for Retired Americans, Angelo Salvucci, MD, FACEP, Emergency Medical Services (EMS) Medical Directors Association of California, Claude L. Stout, Executive Director Telecommunications for the Deaf and Hard of Hearing, Inc., Nancy B. Rarus, President, Deaf Seniors of America, David Litman, President, Association Of Late-Deafened Adults, Cheryl A. Heppner, Vice Chair, Deaf and Hard of Hearing Consumer Advocacy Network, Sheri Farinha, Acting Chair, California Coalition of Agencies Serving the Deaf and Hard of Hearing, Howard A. Rosenblum, Chief Executive Officer, National Association of the Deaf, Mark Gasaway, President, American Association of the Deaf-Blind, Mark Hill, President, Cerebral Palsy and Deaf Organization, PS Docket No. 07-114 (filed Nov. 19, 2014).

requirements and associated deadlines.¹⁵ As discussed above, however, the Roadmap contains detailed commitments by carriers to promote the development and approval of dispatchable location standards within 18 months, design and develop the NEAD database within 36 months, and meet specific metrics for network design/deployment and handset functionality that will enable the provision of dispatchable location information. In addition, carriers commit to provide specific percentages of location fixes through dispatchable location technologies or other “heightened location accuracy” solutions consistent with the Commission’s proposed 50 meter location accuracy metric for indoor and outdoor calls.

III. CONCLUSION

For the reasons discussed herein, Sprint urges the Commission to support the proposed Roadmap submitted by APCO, NENA, and the four national wireless carriers and refrain from adopting the proposed location accuracy requirements outlined in the Third FNPRM.

Respectfully submitted,

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¹⁵ *Id.*