Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
Wireless E911 Location Accuracy Requirements	)	PS Docket No. 07-114

COMMENTS OF VERIZON[1]

Verizon is a signatory to the Roadmap for Improving E911 Location Accuracy (the "Roadmap") and urges the Commission to adopt the proposals. The Roadmap combines near-term location accuracy improvements with near- and medium-term efforts to develop and deploy dispatchable location technology by leveraging commercial location technologies already in use today. As a result, the Roadmap will accomplish the public policy goals of our nation's First Responders and ensure that the industry continues to improve location accuracy for 911 calls. This Roadmap – developed and embraced by the nation's most respected public safety organizations – is a meaningful and substantive alternative to the unworkable rules proposed earlier this year.[2] The Commission should quickly adopt the feasible, technology-neutral milestones in the Roadmap that will enable wireless service providers to develop and utilize dispatchable location. The Commission should also embrace the Roadmap's alternative solutions for achieving improved horizontal and vertical accuracy through a transparent and objective testing process.

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[1] In addition to Verizon Wireless, the Verizon companies participating in this filing are the regulated, wholly owned subsidiaries of Verizon Communications Inc.

[2] *Wireless E911 Location Accuracy Requirements*, Third Further Notice of Proposed Rulemaking, 29 FCC Rcd 2374 (2014) ("*NPRM*").

I. THE ROADMAP WILL SIGNIFICANTLY IMPROVE ENHANCED 911 LOCATION ACCURACY FOR OUR NATION'S FIRST RESPONDERS

The Roadmap reflects an important consensus by public safety and industry experts on how best to improve 911 caller location accuracy, particularly for indoor calls. In the *NPRM*, the Commission invited stakeholders to develop alternatives to the proposed rules and sought comment on the timeframes within which "dispatchable address information" could be delivered to PSAPs, and within which commercial location-based services for Wi-Fi and Bluetooth access points could also be utilized for E911 location.[3] The wireless industry and public safety have responded to that call. As the industry and public safety have shown, dispatchable location solutions using commercial technologies are technically feasible, deployable, and scalable in a reasonable timeframe. Most importantly, this solution will also provide far more profound benefits to First Responders and 911 callers than the proposed rules.

In addition, the Roadmap will allow E911 location technology to improve on a parallel track with commercial technologies. Indeed, the solutions proposed in the Roadmap will be made possible through the evolution and wide availability of commercial wireless technologies and their innovative location capabilities. As Verizon and other commenters have explained, the Commission's rules have long been premised on service providers' limited ability to use network architecture deployed outdoors (*e.g.*, base stations, satellites, and location monitoring units) to provide PSAPs with an estimate of the 911 caller's location.[4] The *NPRM*'s proposed rules contemplate that service providers would improve those technologies to deliver a "tighter circle" to PSAPs for indoor calls, but presume that the use of indoor technologies to provide

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[3] *NPRM* ¶¶ 3, 6, 26, 39, 118, 135.

[4] *See* Verizon Comments at 9, 12-21, Appendix; AT&T Comments at 5-7; Cisco Comments at 3; Intrado Comments at 5-7; TeleCommunication Systems (TCS) Comments at 4-6; T-Mobile Comments at 1-2.

dispatchable location is only a longer term possibility. The Roadmap, however, will allow providers to draw upon the same Wi-Fi, Bluetooth, and other indoor technologies that are already widespread throughout the marketplace. Roadmap § 2.[5] Importantly, the signatories all recognize that the dispatchable location solution must be reliable and secure. Roadmap §§ 2.a, 2.e. And while PSAPs and First Responders will benefit from the improvements to outdoor technology that the Roadmap will facilitate, they will no longer be tethered to the inherent limits of those technologies.

In fact, the Roadmap still commits – indeed, compels – service providers to improve outdoor technologies. Roadmap §§ 3, 4. This, in turn, will improve location accuracy for indoor and outdoor 911 callers alike.[6] But the Roadmap also enables service providers to leapfrog interim vertical location technologies to provide PSAPs and First Responders with more meaningful dispatchable location, such as a floor, suite, apartment, or similar information. Roadmap § 2. And if dispatchable location technologies are not deployed as expeditiously as forecast, the Roadmap has built-in backstop mechanisms to ensure that service providers continue to develop and deploy technologies that provide horizontal accuracy within 50 meters and technically feasible standards-based vertical location technologies. Roadmap §§ 4-6.

Finally, the Roadmap enhances service providers' and public safety's existing methods of measuring and monitoring E911 location performance. Today's methods of outdoor drive testing and indoor test bed assessments will remain important and valuable proxies for real-world

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[5] *See also NPRM* ¶ 131 ("indoor location technology has become such a large market that it is bigger than its outdoor counterpart, if commercial buildings are included").

[6] *See* Verizon Comments at 12; *see also* NextNav Comments at 8-11 (describing benefits of A-GNSS in areas where its service would not have coverage); Technocom *Ex Parte* Presentation, Att. at 79 (June 23, 2014) (TruePosition's testing used a handset "which supports GLONASS in addition to GPS, which likely contributed to the better deep indoor availability").

performance, but the Roadmap supplements them by enabling public safety and industry stakeholders to gauge the performance of E911 location technologies through timely access to actual 911 call data. Stakeholders will thus have more direct insight into how improvements in location technology are affecting consumers and First Responders in real-world situations. And while the Roadmap leaves in place the existing outdoor location accuracy rules, its focus on location position sources provides a potential approach for a unitary performance standard for indoor and outdoor location in the future – which has long been a Commission goal.

The Commission should reject the criticisms of the Roadmap leveled by some organizations. First, several of these critics have commercial interests in promoting the use of their own proprietary 911 technology.[7] Others base their criticism on misunderstandings or out-of-context assertions regarding *earlier* drafts of the Roadmap. Finally, many of the Roadmap's critics erroneously presume that compliance with the proposed rules would be technically feasible. As Verizon and others have exhaustively demonstrated, the proposed rules are technically infeasible and as a result will not benefit consumers or public safety.[8]

II. THE COMMISSION SHOULD ADOPT TECHNOLOGY-NEUTRAL RULES THAT INCORPORATE THE ROADMAP'S MILESTONES

The Roadmap was the result of lengthy, substantive and serious negotiations, in which industry and public safety stakeholders made concessions on individual issues to reach agreement on a comprehensive approach. By design and intent, the Roadmap is an alternative –

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[7] *See, e.g.,* TruePosition *Ex Parte* Letter, PS Docket No. 07-114 (Nov. 19, 2014) ("TruePosition *Ex Parte* Letter"); NextNav *Ex Parte* Letter, PS Docket No. 07-114 (Nov. 19, 2014) ("NextNav November 19 Letter").

[8] *See* Verizon *Ex Parte*, PS Docket No. 07-114, Attachment (Nov. 10, 2014).

not a supplement – to the *NPRM*'s proposed location accuracy standards and timetables.[9] It would achieve significant improvements in location accuracy through feasible timetables and demonstrated technologies, and thus reflects a careful balancing of policy objectives. Importantly, the advantages of dispatchable location, which will benefit both public safety and service providers, are the common thread that enabled the signatories to reach agreement on the most challenging issues. Imposing substantial accuracy performance obligations in addition to the Roadmap's (such as those in the proposed rules) or attempting to modify carefully negotiated piece parts of the comprehensive Roadmap would disrupt the achieved balance and require a reassessment of the Roadmap's viability.

The Roadmap itself proposes that the most significant deployment milestones be incorporated into the Commission's rules, Roadmap § 7, and critics that state otherwise are mistaken.[10] These include handset and network-level deployment milestones for both near-term improvements in existing location technologies and, contrary to TruePosition's assertions, dispatchable location technology. Roadmap § 2.[11] Those deadlines will necessarily prod service providers to take action on the other Roadmap commitments without the need for new obligations that unnecessarily micromanage how service providers meet the milestones. Thus, it is unnecessary to incorporate every component of the Roadmap into the rules.

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[9] *See Public Notice* at 2 (asking "whether the Roadmap presents a reasonable alternative, in whole or in part, to the proposals set forth in the *Third Further Notice*.").

[10] *See* NextNav November 19 Letter at 2 (describing Roadmap as "voluntary"); CalNENA et al. *Ex Parte* Letter at 1 (Nov. 12, 2014) (describing Roadmap as "unenforceable"); *see also* The International Association of Chiefs of Police et al., *Ex Parte* Letter at 2 (Nov. 14, 2014) (supporting enforceable milestones).

[11] *See* TruePosition *Ex Parte* Letter at 2.

III. CONCLUSION

In the *NPRM*, the Commission challenged industry and public safety stakeholders to achieve a consensus approach that promotes the objectives of (1) "mak[ing] indoor location as widely available as technically and economically feasible" in a manner that "track[s] recent improvements in location technology," (2) enabling stakeholders and the Commission to "monitor performance and compliance," and (3) adopting technology-neutral, cost-efficient, and understandable and administrable rules.[12] The Roadmap achieves these objectives more effectively than the proposed rules and other proposals in the rulemaking record, and the Commission should take prompt action to incorporate the Roadmap into its E911 standards so that service providers can continue to move forward to implement their commitments with regulatory certainty and Commission support.

Respectfully submitted,

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[12] *See NPRM* ¶ 39.