

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

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

REPLY COMMENTS OF APCO INTERNATIONAL

The Association of Public-Safety Communications Officials-International, Inc. (APCO)¹ submits these reply comments in response to the Federal Communications Commission’s Fifth Report and Order and Fifth Further Notice of Proposed Rulemaking regarding wireless E9-1-1 location accuracy requirements.²

The comments filed in this proceeding confirm the importance of resolving the questions raised in APCO’s Petition for Clarification of the Fifth Report and Order.³ Comments filed by the wireless industry indicate that depending on how the Petition is resolved, the recently adopted z-axis rules could result in no meaningful improvements to 9-1-1 location accuracy.⁴ At the same time, the record reveals growing consensus that dispatchable location, floor level, and nationwide vertical requirements are feasible today.

¹ Founded in 1935, APCO is the nation’s oldest and largest organization of public safety communications professionals. APCO is a non-profit association with over 35,000 members, primarily consisting of state and local government employees who manage and operate public safety communications systems – including 9-1-1 Emergency Communications Centers (ECCs), emergency operations centers, radio networks, and information technology – for law enforcement, fire, emergency medical, and other public safety agencies.

² Wireless E911 Location Accuracy Requirements, Fifth Report and Order and Fifth Further Notice of Proposed Rulemaking, FCC 19-124 (rel. Nov. 25, 2019) amended by Erratum (rel. Jan 15, 2020) (“R&O and FNPRM”).

³ Petition of APCO International for Clarification, PS Docket 07-114 (filed Feb. 7, 2020) (“APCO Petition”).

⁴ That is even if the wireless carriers will comply at all with the recently adopted z-axis metric. *See* Comments of CTIA at 6-7 (“CTIA expects that wireless providers will continue to press ahead to identify, test, and validate solutions to determine if they can meet the ± 3 meter metric and are scalable and deployable by the April 2021 benchmark.” (emphasis added)), Comments of T-Mobile at 4 (“the reality is that carriers are going to face serious difficulties in meeting this metric, particularly in real-world deployments.”).

I. The Commission Must Resolve Confusion Over the Z-Axis Rules

The comments filed in this proceeding confirm the need for the clarification requested in APCO's Petition and indicate that confusion over the requirements is even more extreme than APCO anticipated. For example, APCO sought clarity on how carriers should demonstrate compliance with the requirement that all z-axis capable handsets deliver vertical accuracy of +/- 3 meters for 80% of calls.⁵ Worse than debating how to demonstrate compliance, the carriers seem poised to argue for interpretations that would substantially weaken the z-axis requirements. CTIA's comments were painstakingly worded as if contemplating an argument that carriers need only test and deploy z-axis technology without actually providing z-axis information to ECCs.⁶ One carrier even implied that z-axis capable devices – which the Commission defines as handsets that have the capability to measure and report vertical location information without a hardware upgrade⁷ – are not yet in use today,⁸ and another carrier suggested that there might not be a benefit to narrowing the metric and requiring floor level information.⁹

These comments were not constructive. Given that carriers are expressing doubts about their ability to comply with the April 2021 benchmark, essentially relitigating the z-axis metric itself, the Commission should caution parties that failure to comply with the 9-1-1 location requirements will result in enforcement action.

⁵ APCO Petition 3-5.

⁶ See Comments of CTIA at 2 (“It remains unclear, however, whether vertical location solutions can be deployed with sufficient scale to meet the FCC’s requirement of ± 3 meters for 80% of calls in the Test Bed with deployment to 80% of the population of the Top 25 CMAs by April 2021.”). In contrast, T-Mobile’s comments indicate an understanding that the z-axis rules require carriers to deliver altitude estimates to PSAPs that are accurate within 3 meters for 80% of calls. See Comments of T-Mobile at 2 (“In its Fifth Report and Order (“Fifth R&O”), the Commission took the significant step of mandating the transmission of vertical axis location information to public safety answering points (“PSAPs”) with accuracy within ± 3 meters of the handset location.”).

⁷ R&O and FNPRM para. 25.

⁸ See Comments of Verizon at 4 (recommending a revised z-axis benchmark that requires carriers to begin introducing z-axis capable devices “Once equipment manufacturers are able to begin offering z-axis capable devices” in April 2021).

⁹ See Comments of AT&T at 4 (“Further, it is unclear whether there would be any real benefit from narrowing the metric, such as by requiring CMRS providers to deliver floor level information.”).

II. There Is Growing Consensus that Dispatchable Location, Floor Level, and Nationwide Vertical Requirements Are Feasible

On a positive note, the comments in this proceeding indicate a growing support for APCO's requests that the Commission clarify and revise its rules in several important ways with regard to dispatchable location, floor level information, and expanding the requirements beyond the top 50 CMAs.

The Commission should require carriers to provide dispatchable locations for a significant percentage of 9-1-1 calls. Dispatchable location information is being provided today. Consistent with the Commission's observation in 2015 that a growing number of residential products could easily be used for a dispatchable location solution¹⁰ and APCO's repeated advocacy, Verizon's comments indicate that it has begun delivering dispatchable location from certain devices and that it plans to incorporate dispatchable location capabilities into 5G home voice products.¹¹ APCO appreciates this disclosure and agrees that "nothing should stop service providers today from generating and delivering dispatchable location information to PSAPs when feasible."¹² While the location accuracy rules need to de-couple dispatchable location from the NEAD, carriers should not delay efforts to leverage a variety of technologies to provide the most actionable information possible with 9-1-1 calls.¹³

¹⁰ See Wireless E911 Location Accuracy Requirements, Fourth Report and Order, 30 FCC Rcd 1259 (2015) para. 47.

¹¹ Comments of Verizon 7-8.

¹² *Id.* at 7.

¹³ These efforts should at least entail deploying dispatchable location technologies consistent with the carriers' Roadmap commitment. See Letter, John Wright, APCO International; Charles W. McKee, Sprint Corporation; Joan Marsh, AT&T Services, Inc.; Kathleen O'Brien Ham, T-Mobile USA, Inc.; Christy Williams, National Emergency Number Association; Kathleen Grillo, Verizon Wireless, to Marlene H. Dortch, Secretary, Federal Communications Commission, PS Docket No. 07-114 (filed Nov. 18, 2014), Attachment at 4 (Nov. 18, 2014) ("To the extent that a carrier plans to introduce new wireless consumer home products, such carrier agrees to introduce such products that will provide dispatchable location").

Carriers should be required to provide floor level information if it is technically feasible to obtain the information.¹⁴ APCO agrees with Google that the Commission’s rules could better encourage the delivery of floor level information.¹⁵ If dispatchable location information is being delivered today for certain 9-1-1 calls, providing floor level information is possible for an even larger number of calls. At a minimum, the record confirms that providing floor level is feasible and does not require converting a z-axis altitude estimate to a floor level using 3D maps.¹⁶

APCO previously described a framework for broader changes to the location accuracy rules that could be made without disrupting the existing benchmarks.¹⁷ Among other things, APCO suggested that the Commission revise the rules to harmonize the horizontal and vertical accuracy requirements, and ultimately expand the requirements beyond the top 50 CMAs. The record indicates broad support for establishing nationwide requirements for vertical location accuracy.¹⁸

¹⁴ See APCO Petition 9-10.

¹⁵ Comments of Google 1-4.

¹⁶ Providing floor level information would be feasible anytime dispatchable location information is available, as well as instances in which dispatchable location solutions are able to provide floor level accuracy without the more granular information that would constitute dispatchable location. For an explanation of how floor level information can be derived without converting z-axis information, see Jeff Robertson, *Z-Axis: It’s not as hard as some are making it out to be*, Public Safety Technology Blog (Feb. 29, 2020), <https://publicsafety.tech.blog/2020/02/29/z-axis-its-not-as-hard-as-some-are-making-it-out-to-be/>. Mr. Robertson, the President of the Life and Safety segment of Intrado, notes that “[c]ompanies, like Intrado and others who serve location data can easily inject [floor level information] into the network and pass this to 9-1-1 center’s [sic] and train them how best to use this new information (without costly software upgrades).” See also Letter from Megan Anne Stull, Counsel to Google LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, PS Docket 07-114, at 2 (Nov. 18, 2019) (“For Android Emergency Location Services, for example, floor labeling information provided to public safety would be calculated separately, not simply converted from HAE.”).

¹⁷ See Letter from Jeffrey S. Cohen, APCO International, to Marlene H. Dortch, Secretary, Federal Communications Commission, PS Docket No. 07-114, 7-9 (filed Oct. 25, 2019).

¹⁸ See, e.g., Comments of T-Mobile at 17; Comments of IAFC at 3; Comments of Verizon at 3; Comments of NextNav at 11.

Respectfully submitted,

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