



Leaders in Public Safety Communications®

November 12, 2019

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Re: Notice of *Ex Parte*, PS Docket No. 07-114

On November 7, the undersigned met with Commissioner Rosenworcel and Travis Litman to discuss the draft Order on wireless 9-1-1 location accuracy. APCO began by reiterating its major concerns with the draft Order:

1. 9-1-1 professionals from major metropolitan areas agree that vertical location information must be as actionable as possible, and should at least include a floor number when callers are indoors.
2. These professionals also explain that they do not have the resources to create and maintain indoor maps for buildings in their jurisdictions or the ability to use such maps to turn 9-1-1 callers' altitude estimates into actionable information. (Nor should such an expensive and time-consuming burden be shouldered by 9-1-1.)
3. The draft Order would permit the carriers to be fully compliant with the Commission's rules without ever having to provide actionable information, including a dispatchable location, and perhaps also without providing a caller's vertical position within 3 meters for 80% of calls, as the metric seemingly requires.¹
4. Technologies exist today, including those controlled by the wireless carriers, that could produce a floor label (if not a dispatchable location). Indeed, subsequent to this meeting Google submitted an *ex parte* letter²

¹ Nothing is in place to ensure the accuracy requirement set by the z-axis metric translates to real-world performance, or that a z-axis estimate provided by NextNav or Polaris is accessible by public safety at all. Apple has cautioned that the 3-meter metric might not be achieved in the real world and noted several issues related to power consumption, connectivity, and privacy. *See* Letter from Paul Margie, Counsel for Apple Inc., to Marlene H. Dortch, Secretary, FCC, PS Docket No. 07-114 (filed Oct. 29, 2019). Following our meeting, Google expressed concerns as well, raising questions about privacy and user consent, weather dependencies, scaling challenges, and required deployment of new infrastructure. *See* Letter from Megan Anne Stull, Counsel, Google LLC, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 07-114, at 3 (filed Nov. 8, 2019).

² Letter from Megan Anne Stull, Counsel, Google LLC, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 07-114, at 2 (filed Nov. 8, 2019).

urging the Commission to adopt a z-axis metric that permits z-axis information to consist of a floor label. This adds the support of a major technology company to the premise that providing a floor label is achievable and that the Commission's draft Order is not the best path forward.

5. The draft Order would effectively mandate the use of one or two specific technology providers who have developed unique methods for 9-1-1 location (NextNav and Polaris). This would effectively preclude, or at least fail to incentivize consideration of other viable technologies and new innovations such as those described by Google.
6. The draft Order would lead to a worse result, through and beyond 2023, than even the 2014 NPRM.

We next discussed why APCO believes the Commission can and should do better, while other national responder associations have expressed support for the draft Order. APCO explained that:

1. APCO cannot support an outcome that will leave public safety worse off than the Commission's 2014 proposal to require x/y within 50 meters and z within 3 meters. That proposal would have required z-axis information within 3 meters for calls nationwide rather than being limited to the top 50 CMAs, would likely have applied by 2020, and would have based carriers' compliance on delivery of z-axis information to 9-1-1 rather than basing compliance on carriers' deployment of z-axis technology.
2. The Commission should be solving a 9-1-1 problem, not a responder location problem. The Commission's history and jurisdiction concerning 9-1-1 location properly centers on imposing requirements upon the wireless carriers to deliver actionable location information to 9-1-1 centers when citizens call 9-1-1. Put another way, the purpose of this proceeding is to require carriers to locate 9-1-1 callers with the most actionable information as often as possible – not to deploy responder search technologies.³
3. The draft z-axis Order relies on a description of testing performed by NextNav with first responders in 2014 to support the cost/benefit analysis.⁴ The record does not contain sufficient information demonstrating that the results could be replicated for real-world 9-1-1 calls due to factors such as whether location beacons at the test sites were deployed in a manner representative of the real world and whether responders were using devices and applications that will be used by responders regardless of where a 9-1-1 call is made. These results should be afforded much more scrutiny by the Commission, particularly given the clear problems identified in the CTIA test bed concerning whether real-world performance of the NextNav and Polaris solutions will replicate test bed performance.⁵

³ As public safety representatives have indicated in this docket, FirstNet AT&T announced it will provide floor-level accuracy for first responder tracking and situational awareness. IACP et al. Comments at 3 (Oct. 1, 2018). FirstNet AT&T has indicated z-axis location-based services will be delivered for first responders by 2021, possibly sooner. FirstNet Built with AT&T, "Public Safety Communications Checklist," available at https://www.firstnet.com/ecms/dam/att/firstnet/marketing/pdf/Public-Safety-Communications-Checklist_01.14.19-FINAL.pdf. Ensuring first responders have location technology for use cases such as finding incapacitated firefighters is not the role of the Commission.

⁴ Draft Order at para. 53.

⁵ According to CTIA's Stage Z Test Report, "Active calibration of individual mobile devices seems essential to achieve consistent, usable Z-axis measurements for indoor wireless 9-1-1 calls because handset barometer biases significantly affect the accuracy of barometric pressure-based estimation systems." CTIA, 911 Location Test Bed, LLC Report on Stage Z, at 120 (Aug. 3, 2018). The results in the test bed "relied on calibration of the barometric sensor in the mobile devices, which had been performed by the applications provided by [the technology vendors]." *Id.* at 59.

4. The record shows that there is confusion over the draft Order, particularly with regard to whether the z-axis metric will result in location information comparable to what's delivered with landline calls⁶ and whether the draft Order will improve location information nationwide.⁷

Commissioner Rosenworcel expressed that the Commission could do better for 9-1-1, first responders, and the public they serve. Consistent with APCO's October 23 ex parte presentation, we suggested that the Commission's Order should require z-axis information to include an estimated floor and ensure that the accuracy requirements defined in the metric translate to real-world performance, in order to align with the bigger-picture changes to the rules that are needed for getting carriers back on track to providing meaningful improvements to 9-1-1 location accuracy.

Pursuant to Section 1.1206 of the Commission's rules, this letter is being filed electronically with your office.

Respectfully submitted,

APCO INTERNATIONAL

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⁶ See Letter from Chief Steven R. Casstevens, President, IACP, PS Docket No. 07-114 (filed Nov. 7, 2019) (noting that the IACP "has been asking the Commission to consider regulations that require telecommunications providers to provide indoor cellular location data to law enforcement, just like caller data provided for wired phones."). We agree that wireless 9-1-1 location information should be like location information provided for wired phones. That is exactly the goal of dispatchable location solutions. However, the draft Order's mandate of HAE would never lead to this level of actionable location information.

⁷ Under the draft Order, responders outside of the top 50 CMAs will likely never see improvements to indoor 9-1-1 location.