

**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

The Association of Public-Safety Communications Officials-International, Inc. (APCO) hereby submits the following Reply Comments in response to the Public Notice issued by the Public Safety and Homeland Security Bureau (Bureau) of the Federal Communications Commission (FCC), DA 14-1680 (released November 20, 2014). APCO submits these Reply Comments to reiterate that the Roadmap for Improving E911 Location Accuracy (Roadmap) developed by APCO, NENA, and the nation's four largest wireless carriers represents the best path for improving wireless 9-1-1 location accuracy, highlight support in the record for the Roadmap, address criticisms, and refute disinformation.

In many ways, the Roadmap reflects a culmination of decades of advocacy and leadership by both APCO and NENA as leading public safety associations with expertise in 9-1-1 services. Indeed, and as the Roadmap indicates, we have finally reached that point where the public safety community can be on pace with the newest technologies, and no longer be beholden to special proprietary solutions that keep public safety behind the technology curve. APCO is convinced that the Roadmap is far and away the best path forward to obtaining dispatchable location for 9-1-1 calls.

Many commenters have expressed that they desired to have been included in the negotiations – approximately 20 associations by APCO’s count. Since finalizing the Roadmap, APCO has reached out extensively, and will continue to do so, to describe the Roadmap to all interested stakeholders and respond to any questions. Further, APCO welcomes the active assistance of these groups to implement the Roadmap’s solutions to this complex problem.

Expert 9-1-1 Organizations Support the Roadmap

APCO is the largest public safety communications organization in the world. APCO’s public safety communications professionals, numbering over 22,000, consist mainly of state and local government employees whose mission it is to manage and operate systems for responding to 9-1-1 calls and dispatching emergency responders. APCO members are the first of first responders. They are fully immersed in the 9-1-1 and emergency response activities every day and in every corner of the country.

Another expert 9-1-1 association, NENA, is of course a signatory to the Roadmap and served as a valuable partner with APCO during negotiations with the carriers. Improving location accuracy for wireless 9-1-1 calls is first an issue for those whose primary mission is receiving and initially acting upon this location information. Thus, APCO and NENA carry the greatest responsibility and expertise for ensuring the solutions meet 9-1-1’s needs.

Several other organizations, 9-1-1 service providers, technology vendors key to dispatchable location solutions, major technology associations, and state and local government representatives have expressed support for the Roadmap, and many of those who indicate various concerns with the Roadmap nevertheless support its goals while offering suggested improvements. Notably, a third major 9-1-1-focused association, NASNA, has expressed

general support for the Roadmap while providing well-considered and helpful input. This support will be increasingly important as we move forward with implementation, as efforts to improve location accuracy will benefit from a multi-stakeholder approach.

Dispatchable Location is the Universally Held Goal

A fundamental area of agreement shared by public safety associations and several consumer groups submitting comments is the value of obtaining a dispatchable location for wireless 9-1-1 indoor calls.¹

The differences of opinion reflected in the comments of a few of our colleagues in the public safety community are best understood as being about the timing and urgency to achieve a dispatchable location solution. In fact, APCO believes that the Roadmap represents an aggressive effort to achieve a dispatchable location as quickly as possible. The nation's four major wireless carriers, representing approximately 96% of the wireless subscribers, have agreed in remarkable fashion to work together towards this goal, and smaller carriers have expressed support for the Roadmap generally, and its pursuit of a dispatchable location solution, as well.²

As reflected in the aggressive timeframes in the Roadmap related to dispatchable location, APCO supports directing as many resources as possible towards reaching a dispatchable location solution. No more delays. No more limiting public safety to proprietary solutions providing position estimates that, especially inside buildings, can leave responders searching for those who need help.

¹ See, e.g., Comments of NASNA, IACP, IAFC, NASEMSO, NSA, American Association of People with Disabilities, American Foundation for the Blind, National Council on Independent Living, United Spinal Association, and World Institute on Disability.

² APCO understands that smaller carriers may require alternatives to enable them to be a part of the Roadmap but that better match their relative license and service areas. In this regard, APCO is perfectly willing to work with smaller carriers to identify these alternatives. See Comments of Competitive Carriers Association at 2-3.

Imagine someone places a wireless 9-1-1 call from an apartment building as he passes out due to a heart attack. First responders need to know which door to kick down to have any chance of saving his life. The only way to obtain the location with sufficient granularity is through dispatchable location technology. While geospatial coordinates, including the z-axis, would be an improvement over what's available today, they are significantly inferior even if PSAPs have a perfect way to translate the coordinates into actionable information (which poses a significant challenge).³

The public safety telecommunicators, first responders, and the public need a dispatchable location. Furthermore, as Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI) et al. emphasized, consumers expect 9-1-1 call takers to immediately know where the call came from with the same degree of accuracy delivered with landline calls.⁴ Dispatchable location solutions are the only way to meet this expectation, and APCO wants to reach that goal without further delay.

The 9-1-1 Location Problem Should be Solved Based on Facts

There continues to be widespread misunderstanding about the Roadmap, due in part to deliberate disinformation and omissions of fact by proprietary solution vendors. We provide more detail below to clear up as many of these facts as possible so we can move forward with a discussion of the Roadmap on its merits.

- a. No technology has been demonstrated in a real world environment that can provide a nationwide solution for indoor location accuracy within the timeframes proposed by the FCC

³ The vendors of the solutions that are purportedly capable of meeting the FCC's proposed timeline are silent as to how PSAPs and first responders will actually receive and act upon geospatial coordinates. The Roadmap addresses these operational considerations in its study of z-axis solutions to evaluate the benefit to PSAPs.

⁴ Comments of TDI at 2.

There is no near term solution to the indoor location accuracy problem. All proposals, including those put forth by the FCC and the location vendors, depend upon new handsets and significant network deployments. No vendor could meet the FCC's benchmarks within two years, or likely within three years. The technology solution offered by NextNav would depend upon the completion of necessary standards, deployment of thousands of new beacons operating under its commercial spectrum license to cover all buildings across the country, and new handsets. Other vendors have similar network and handset deployment prerequisites, and even worse, have not demonstrated through prior testing that they could meet the FCC's proposed benchmarks. And even if these proprietary technology vendors can provide a comprehensive solution for indoor locations across the country, five years into the future, PSAPs would receive geospatial estimates only, not a dispatchable location.

b. The Roadmap improves upon the FCC's proposed benchmarks

As compared to the FCC performance benchmarks, the Roadmap offers two prominent, qualitative improvements. First, the Roadmap focuses on achieving the gold standard of 9-1-1 indoor location – a dispatchable location (meaning the actual room, apartment, office, etc.) – and includes aggressive commitments regarding the required handset and network changes, standards, and secure database.⁵ Second, compliance with the benchmarks is determined by live 9-1-1 call data for the first time. This will show how each location technology – including dispatchable location technologies designed for indoors – is being used for actual 9-1-1 calls, which provides a novel and transparent way for public safety to evaluate the carriers' performance and hold them accountable. As the carriers implement the Roadmap, the live 9-1-1

⁵ In this regard, we appreciate the important question about privacy and security posed by FCC Public Safety Bureau Chief, Admiral Simpson in his December 17 blog post, "Closing the 911 Location Gap." We agree that security and privacy are important considerations for implementing the Roadmap, and we look forward to working with the Commission and other stakeholders to ensure 9-1-1 location accuracy solutions preserve these values.

data will show the growth of dispatchable location delivery. This objectively measurable trend will indicate the extent to which callers are being located indoors with the gold standard of location accuracy.

c. The Roadmap includes technology that has been proven in the real world

A major strength of the Roadmap is that it allows 9-1-1 to benefit from technologies that have been used for commercial purposes: the many millions of Wi-Fi access points and Bluetooth sensors already out in the public domain. Further, public safety will be in a position to keep pace with technologies that are providing commercial location based services and future generations of wireless industry technologies.

d. The Roadmap permits the use of all proven technologies for improving location accuracy

Any location technology can be used to meet the location accuracy benchmarks in the Roadmap, including the use of barometric pressure solutions, provided it is proven effective and useful to PSAPs and first responders in a new open, transparent, technology-neutral, and vendor-neutral test bed that is subject to real world conditions. Thus, APCO would expect that technology vendors confident in the performance and utility of their products and services would welcome participation in the Roadmap's test bed. Yet the vendors of proprietary solutions have instead pushed for a blind adoption of the FCC's proposal, in hopes that the rules will effectively mandate use of their technologies.

e. Vertical location information is an essential component of the Roadmap

Dispatchable location, by its very definition, provides vertical information superior to a z-axis measurement. The Roadmap focuses on dispatchable location solutions because they are needed and a logical correlate to placing public safety on the same level as commercial location based services. While dispatchable location solutions are being implemented, standards will be

developed and operational considerations will be researched for the provision of z-axis solutions to further improve location accuracy. The Roadmap recognizes the importance of evaluating such technologies not only for technical performance, but for usefulness by 9-1-1 professionals and first responders. Importantly, the carriers have committed to implementing either a dispatchable location or z-axis location solution.

f. Concerns over GLONASS are baseless

TruePosition spends a large portion of its comments using hyperbole and plainly false statements that stretch the imagination to try to make a case that the Roadmap's inclusion of GLONASS for location determination presents a security threat.⁶ TruePosition has demonstrated a complete lack of credibility, given that TruePosition has previously celebrated the benefits of GLONASS for its own location technology.⁷

g. A deliberate disinformation campaign is impeding efforts to solve a public safety problem

The record in this proceeding has been tainted by a deliberate disinformation campaign that has no place before the FCC, particularly for a public safety issue. Disinformation about the Roadmap, the FCC's proposal, and the capabilities of proprietary location technology has impeded a constructive dialogue about the best ways to improve 9-1-1 location accuracy.

The "FindMe911 Coalition" is the most egregious purveyor of disinformation and is doing a disservice to the public, the FCC, and the public safety community. That its comments in this proceeding were merely a copy of its deeply flawed survey offering a false "comparison"

⁶ Comments of TruePosition at 27-31 (beginning at section entitled "The Plan relies on Russian military satellites").
⁷ Ex Parte Presentation of Technocom (transmitting "TruePosition Indoor Test Report, Wilmington, DE"), Att. at 79 (June 23, 2014) (TruePosition's testing used a handset that supports GLONASS, which "likely contributed to the better deep indoor availability"). The report even used AGPS as "a common shorthand to indicate assisted GPS + GLONASS." Id. at 8 n.4.

of the Roadmap to the FCC's proposal is an indication that it is running out of ideas.⁸ APCO long ago dismissed FindMe911 as having any legitimacy. FindMe911's unrelenting disinformation campaign should be summarily dismissed.

CONCLUSION

APCO continues to urge the FCC to adopt rules consistent with the Roadmap to ensure the best path for improving wireless 9-1-1 location accuracy.

Respectfully submitted,

/s/

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December 24, 2014

⁸ The weak response of 328 purported public safety officials speaks for itself.