



APCO Membership Bulletin – November 14, 2014

APCO and NENA Reach Consensus Plan with Major Wireless Carriers on Improvements to Locating 911 Callers

Multi-pronged approach will accommodate a variety of technology options and lead to near-term, effective, verifiable, and accountable results

Today, the Association of Public-Safety Communications Officials, International and the National Emergency Number Association have reached a consensus plan with the major wireless carriers that we will present to the Federal Communications Commission (FCC) for making significant progress in locating 9-1-1 callers in both indoor and outdoor environments.

The wireless companies include AT&T, Sprint, T-Mobile, and Verizon. CTIA-The Wireless Association was also integral to facilitating the discussions and released a press statement on behalf of all parties (Attachment 1).

The general public is increasingly using cell phones to call 911, including from indoor locations. These trends require new solutions for 911 centers and first responders to know the location of the caller, especially when the caller is unable to describe where he or she is.

In February of this year, the FCC took an important and welcomed step to propose new rules for improving 911 location accuracy for wireless calls made from both outdoor and indoor locations. In addition to outlining specific benchmarks, the FCC also encouraged public safety, industry, and other stakeholders to work collaboratively to develop alternative proposals for its consideration.

APCO participated in the ensuing public comment period expressing support for the FCC's proposals, while remaining open to consideration of an alternative, consensus approach that may evolve from discussions with wireless carriers and other stakeholders.

Beginning in April, APCO answered the FCC's call to begin discussions with NENA and the wireless industry to attempt to develop a consensus that would lead to the best solutions for achieving improved wireless 911 location accuracy, including indoors.

APCO worked with NENA to identify what would be needed to achieve real gains in location accuracy for the general public seeking emergency assistance, 911 Public Safety Answering Points, and first responders. After numerous meetings over eight months, the signatories have agreed to a consensus plan that is superior to the proposal put forth by the FCC. The accompanying chart (Attachment 2) illustrates how the consensus plan well exceeds the FCC's proposals.

Notable Features of the Consensus Plan:

- Leads to a "dispatchable location" – meaning getting to the 911 caller's apartment, office, hotel room, classroom, etc., or an accurate set of coordinates for outdoor locations.

- The FCC’s proposal did not include a dispatchable location. At best, the FCC proposal for indoor location accuracy would require a horizontal accuracy of 50 meters, which could encompass multiple buildings, and “z axis” vertical accuracy of 3 meters, which could encompass multiple floors and would not provide actual above ground level height or building floor number.
- Employs an open, transparent, and technology-neutral test bed under real-world conditions that any location technology vendor may use to enable public safety to assess actual performance, utility, and value of location solutions.
 - This is markedly different from prior test beds or other test results submitted by location vendors to date that depended upon pre-arranged environments and which were not fully open to public safety professionals and organizations.
- Solves the indoor location problem by utilizing a variety of technology-neutral solutions without relying upon the success or unproven promises of any particular vendor.
 - Locating a 911 caller quickly and accurately is vital and should not depend on a single point of failure, such as a single company or solution.
- Incorporates commitments from the wireless service providers to reasonable and FCC-enforceable timeframes to deliver effective location solutions that are flexible enough to accommodate advancements in technology, such as Next Generation 911.
 - Further, the consensus plan avoids reliance on technology solutions that would be unable to adapt to future innovations in public safety communications.
- Provides for the first time quarterly reports from the carriers to APCO and NENA on live 911 call data illustrating the performance over time of the variety of location technologies.

APCO International Executive Director Derek Poarch said “APCO is very appreciative of the professionalism and dedication of its partners in achieving a consensus solution that we can all be proud of and that, most importantly, will provide meaningful location information to our nation’s public safety communications professionals and first responders as they daily serve the emergency needs of our citizens.”

APCO International President John Wright explained “It was critical to APCO that the consensus plan be achievable within reasonable timeframes with tiered benchmarks for the wireless service providers that are backed up by enforceable FCC rules. We look forward to engaging with the FCC and all other stakeholders to implement this consensus plan as quickly as possible.”

While APCO and NENA were able to reach this consensus plan with the significant support of its industry partners, over the entire course of these efforts, there has unfortunately been a sustained effort on the part of certain advocates to spread falsehoods, disinformation and confusion. These tactics are especially unfortunate given the significant public safety nature of the problems that all other well-intentioned and honorable parties are working hard to solve. To ensure that the real facts over the FCC’s proposal are made known, the attached document (Attachment 3) debunks the false claims that continue to be made.

For questions, contact Jeffrey S. Cohen, Chief Counsel – Law and Policy, APCO International, at cohenj@apcointl.org.

NEWS RELEASE

Wireless Carriers & 9-1-1 Communications Leaders Answer the Call to Improve 9-1-1 Indoor Location Accuracy

Dispatchable location provides address or other critical location information for first responders

WASHINGTON, November 14, 2014 – AT&T, Sprint, T-Mobile and Verizon Wireless, Association of Public-Safety Communications Officials (APCO) and National Emergency Number Association (NENA) today announced a consensus plan to meet the FCC's challenge to improve 9-1-1 indoor location accuracy. The industry has long relied on the public safety expertise at APCO and NENA to find solutions to location accuracy challenges. This agreement builds on that long-term partnership and recognizes that improved indoor location accuracy can be achieved through readily-available indoor location technologies, which will provide field responders with the information they want and need: a dispatchable location. The proposed solution harnesses the availability of Wi-Fi® and Bluetooth® technologies that are already deployed and expected to expand significantly in the near term.

Since 1996, the FCC required a wireless 9-1-1 call to include location information based on outdoor technologies. Increasingly, wireless 9-1-1 calls moved indoors creating challenges for outdoor-based solutions. The FCC called on the wireless industry and public safety community to develop a consensus approach to this important 9-1-1 issue. Through these aggressive and measurable location accuracy commitments based on actual 9-1-1 calls, AT&T, Sprint, T-Mobile and Verizon Wireless, working with public safety partners APCO and NENA, have answered the call.

The solution involves an agreed upon timeline to:

- Verify technologies and vendor performance for indoor and outdoor technologies in a test bed;
- Accelerate the delivery of dispatchable location using indoor technologies with ambitious milestones for demonstration, standards development, and implementation of database and handset capabilities; and
- Improves existing location technologies for better outdoor *and* indoor location fixes.

“CTIA congratulates AT&T, Sprint, T-Mobile and Verizon Wireless and public safety partners on the announcement of this historic agreement,” said Meredith Attwell Baker, President and CEO, CTIA. “A 9-1-1 call is the most important call a wireless consumer makes. This agreement represents meaningful, significant and achievable goals to provide first responders with the information they need to respond to wireless 9-1-1 calls. The FCC issued our industry a challenge, and we are proud of our ability to deliver a clear road map to critical 9-1-1 enhancements that meet the high standards and requirements of our nation's leading public safety organizations.”

“This agreement represents a blueprint for the improvement of 9-1-1 location accuracy, both indoors and outdoors,” said NENA President Christy Williams. “NENA looks forward to working with APCO and the carriers over the established timeframes to develop the details of the blueprint that will ultimately better serve the needs of all who dial 9-1-1, indoors or out.”

APCO Executive Director Derek Poarch said, “APCO is very appreciative of the professionalism and dedication of its partners in achieving a consensus solution that we can all be proud of and that, most

importantly, will provide meaningful location information to our nation's dedicated and hardworking public safety communications professionals and first responders as they daily serve the emergency needs of their citizens."

This agreement defines dispatchable location as the civic address of the calling party plus additional information such as floor, suite, apartment or similar information that may be needed to adequately identify the location of the calling party.

As part of the agreement, the carrier signatories will obtain a location fix using heightened location accuracy technologies for the following percentage of wireless 9-1-1 calls from the date of the agreement based on live call data:

- i) 40% of all wireless 9-1-1 calls within two years;
- ii) 50% of all wireless 9-1-1 calls within three years;
- iii) 75% of all VoLTE wireless 9-1-1 calls within five years; and
- iv) 80% of all VoLTE wireless 9-1-1 calls within six years.

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Press Contact: Amy Storey, astorey@ctia.org, 202-736-3207

Comparison of FCC Proposals to Public Safety Communications/Industry Consensus Plan

Timeframe	FCC Proposal	Consensus Plan
9 months		<ul style="list-style-type: none"> • Demonstrate a pre-standards dispatchable location solution
1 year		<ul style="list-style-type: none"> • Create technology test bed • Test OTDOA & A-GNSS for outdoor & indoor accuracy on VoLTE platforms • Develop the design, operations, and maintenance requirements for National Emergency Address Database (NEAD)
18 months		<ul style="list-style-type: none"> • Target completion of standards development • Commence quarterly reports to APCO and NENA of live wireless 911 call data showing percentage of time any location method is used • Standards for delivering barometric pressure data to PSAPs
2 years	50m (x,y), 67%	<ul style="list-style-type: none"> • Offer 50% of all new VoLTE handsets with A-GNSS (for x, y indoor and outdoor use cases) • Deliver dispatchable location from new wireless consumer home products • Evaluate z-axis solutions and readiness of PSAPs to utilize • Obtain location fix using heightened location accuracy technologies for 40% of wireless 9-1-1 calls that provide a dispatchable location or x,y within 50 meters
3 years	3m (z), 67%	<ul style="list-style-type: none"> • Offer 75% of all new VoLTE handsets with A-GNSS • Implement and initially populate NEAD • Test crowd-sourced lat/long from Wi-Fi beacons • Jointly assess progress of dispatchable location solutions • Obtain location fix using heightened location accuracy technologies for 50% of wireless 9-1-1 calls that provide a dispatchable location or x,y within 50 meters
3½ years		<ul style="list-style-type: none"> • 25% of all new VoLTE handsets capable of delivering dispatchable location • Enable VoLTE networks to deliver dispatchable location

4 years		<ul style="list-style-type: none"> • Offer 100% of all new VoLTE handsets with A-GNSS • 50% of all new VoLTE handsets capable of delivering dispatchable location • Carriers implement end-to-end dispatchable location functionality on VoLTE networks
4½ years		<ul style="list-style-type: none"> • 100% of all new VoLTE handsets capable of delivering dispatchable location
5 years	50m (x,y), 80% 3m (z), 80%	<ul style="list-style-type: none"> • Obtain location fix using heightened location accuracy technologies for 75% of VoLTE wireless 9-1-1 calls that provide a dispatchable location or x,y within 50 meters
6 years		<ul style="list-style-type: none"> • Obtain location fix using heightened location accuracy technologies for 80% of VoLTE wireless 9-1-1 calls that provide a dispatchable location or x,y within 50 meters
6+ years		<ul style="list-style-type: none"> • If dispatchable location solutions are not on track (Assessment at 3 years), implement z-axis solutions: <ul style="list-style-type: none"> ○ z-axis solutions in 25 most populous cellular market areas 3 years after Assessment, 50 most populous cellular market areas after 5 years ○ Roll out handsets capable of delivering z-axis (100% of new VoLTE models within 5 years of Assessment)

Location Accuracy: Fact vs. Fiction

Fiction	Fact
<p>“The FCC has proposed new standards that will require wireless carriers to be able to accurately locate callers inside buildings no later than two years from now.”</p> <ul style="list-style-type: none"> - FindMe911 survey, March 27-April 3, 2014 	<p>Nothing in the FCC’s proposed indoor location accuracy requirements would provide PSAPs with a dispatchable location inside buildings. The fact is that if the rules are adopted as proposed, and assuming the vendors funding FindMe911 can deliver on their promises, the result after the Commission’s initial two year benchmark would be that 9-1-1 call centers, or Public Safety Answering Points (PSAPs), will be provided with horizontal coordinates only, within a range of 50 meters for two-thirds of wireless 911 calls. And even for those two-thirds of calls, a 50 meter radius can place a caller in another building altogether. Even if this is “realistic and achievable,” it does not enable PSAPs to accurately locate callers inside buildings. Accurately locating callers in buildings requires a dispatchable location, which is part of the consensus agreement but not the FCC’s proposal.</p>
<p>“[T]echnologies exist now that can find callers indoors and save lives.”</p> <p>Jamie Barnett, FindMe911 press release, August 26, 2014</p> <ul style="list-style-type: none"> - 	<p>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.</p>
<p>“Nearly every major public safety organization has since endorsed the FCC’s proposed approach.”</p> <ul style="list-style-type: none"> - FindMe911 press release, July 28, 2014 	<p>Many organizations including APCO have endorsed the FCC’s proposals. However, the FCC specifically invited stakeholders to pursue a consensus approach, and APCO took up the Commission’s invitation to do so.</p>
<p>“The nation’s 9-1-1 professionals have made clear that they are strongly opposed to any carrier deal, with 99% of 9-1-1 managers and staff calling the rule "critically" or "very" important for public safety in their communities, and 97% opposing any delay in its implementation, according to a recent survey.”</p> <ul style="list-style-type: none"> - FindMe911 press release, July 28, 2014 	<p>This statement takes the results from a FindMe911 survey out of context. The survey’s questions were phrased to generate data that FindMe911 could use in its advocacy. What is true is that 9-1-1 professionals recognize the importance of accurate location information.</p>

Location Accuracy: Fact vs. Fiction

<p>The FCC's proposed location accuracy improvements could save 10,120 lives annually.</p> <ul style="list-style-type: none">- FindMe911 Reply Comments to the FCC (citing the FCC's Notice), July 14, 2014	<p>Consumers are increasingly making 9-1-1 calls from wireless phones, and from indoors. Improving location accuracy will improve emergency response, but quantifying the benefits in this way is a big stretch. Regardless, the consensus agreement stands to improve upon the FCC's proposal.</p>
<p>"[O]ur long-term goal should be the gold standard of dispatchable addresses, but to reach it, we must move immediately to set solid interim benchmarks, as the FCC did in its proposed rule."</p> <ul style="list-style-type: none">- FindMe911 press release in response to remarks made by FCC Commissioner Rosenworcel, August 6, 2014	<p>As the FCC said, "The proposed requirements for horizontal location within 50 meters and z-axis information within 3 meters could still result in building misidentification, and are insufficiently granular to provide room or apartment-level location."</p> <p>The consensus approach includes interim benchmarks and will produce a dispatchable location.</p>
<p>"Unfortunately, major cell phone carriers are currently negotiating a backroom deal with executives from APCO, a public safety trade organization, to delay the implementation of this lifesaving rule, costing thousands of additional lives."</p> <ul style="list-style-type: none">- FindMe911 press release, July 28, 2014	<p>APCO is a member-driven non-profit association that includes more than 22,000 public safety communications professionals. The FCC invited public safety and industry stakeholders to propose an alternative, consensus approach. APCO answered this call and reached to its partners in public safety and industry, consistent with its strong track record of forging agreements that have led to significant advancements in public safety communications.</p>