**International Association of Chiefs of Police**

**International Association of Fire Chiefs**

**National Association of State Emergency Medical Services Officials**

**National Sheriffs’ Association**

October 1, 2018

Marlene Dortch

Secretary

Federal Communications Commission

445 12th Street SW

Washington DC 20554

**Re: PS Docket No. 07-114, Wireless Location Accuracy Requirements**

Dear Ms. Dortch:

The International Association of Chiefs of Police (IACP), the International Association of Fire Chiefs (IAFC), the National Association of State EMS Officials (NASEMSO), and the National Sheriffs’ Association together file these comments in response to the Federal Communications Commission’s (FCC) public notice that the Public Safety and Homeland Security Bureau issued on September 10, 2018 seeking comments on the vertical accuracy metric proposed by the nationwide wireless carriers.[[1]](#footnote-1)

The IACP is the world’s largest association of law enforcement leaders, representing more than 30,000 members. The IAFC represents over 12,000 leaders of the nation’s fire and emergency service. The NASEMSO represents executive, medical, operational, regulatory, and other directors of statewide EMS systems in all 56 states and territories. The NSA represents the 3,080 sheriffs of the United States and has a total of more than 20,000 members. The NSA advocates for policies that will improve the quality of service to its constituents.

The IAFC, the IACP, and NASEMSO are members of the CTIA 911 Location Accuracy Advisory Group (Advisory Group). The National Sheriffs Association (National Sheriffs) while not a member of the Advisory Group, endorses our position in this filing.

Our organizations commend the FCC for its continued focus on improving the location information being provided to first responders from wireless devices during 911 calls. More accurate location information, necessarily including vertical information, allows our members to provide lifesaving assistance in the most time-effective manner. Consistent with the FCC’s long-standing dedication to this issue and the critical needs of the public safety community, the FCC should accept or adopt a z-axis metric *only* if it provides the floor- level accuracy that is necessary to determine the location of a caller to 911. The FCC should therefore reject the proposal of the nationwide wireless carriers to set a +/- 5 meters Z-Axis metric.

1. A Z-AXIS METRIC OF SAME-FLOOR ACCURACY IS BOTH ACHIEVABLE AND NECESSARY TO PROVIDE EMERGENCY FIRST RESPONDERS WITH A TRULY ACTIONABLE DISPATCHABLE LOCATION

The singular goal of the public safety community in this proceeding has been the implementation of technology that provides an accurate and reliable dispatchable location for emergency first responders, whether using address-based or coordinate-based location technologies. The definition of dispatchable location has always been clear, it is the information required to locate a wireless caller on the correct floor and in the correct suite. In other words, “the right door to kick in”.

To provide a dispatchable location, the Z-Axis metric must be set to no more than floor- level. To have any greater metric could place first responders on the wrong floor, sacrificing critical time and, too often, the opportunity to save a life also known as the “golden hour”. The need for accurate floor- level information is important not just in responding to life-threatening emergencies, but also with respect to protecting the safety of first responders during building fires, active shooter situations and other emergencies. The ability of incident command to know the location of firefighters, officers and medical personnel inside a large, urban building would be a major step forward with indoor location technology. The vertical location metric that the FCC adopts to protect the public will therefore ultimately benefit all first responders charged with protecting the public safety.

The recent Stage Z test bed confirms that a location fix better than a 3-meter altitude determination is already achievable today, even though the FCC’s rules do not require wireless carriers to implement such a solution until 2021. In fact, the record indicates that technologies capable of achieving vertical floor-level accuracy have existed for at least the past 6 years (dating back to the 2012 CSRIC III testing).

The FCC also should not delay adoption of a same- floor accuracy metric while still further testing is conducted. Multiple test results already in the record show that vertical location technologies are continuing to develop, and that existing technologies and vendors can provide substantial improvements over the untenable status quo. As the Association of Public-Safety Communications Officials-International (APCO) explained in its prior comments, “the Commission has the statutory authority and obligation to make its own evaluation of technical feasibility and should proceed with rules, including deadlines, if it believes that those rule requirements are appropriate.”[[2]](#footnote-2) The recent test results, combined with the consistent results of prior tests, demonstrate that already a better than a 3- meter vertical location metric is feasible, particularly given the fact that the wireless carriers still have multiple years available to implement such solutions. Having said this, we do not object to further testing by the carriers if and only if they can achieve the effective dates that the FCC adopted in the 2015 Fourth Report and Order. These dates are by April 2021, in the top 25 Cellular Market Areas (CMA) and by April 3, 2023, for the top 50 CMA.[[3]](#footnote-3)

In a session held in July 2018 in Washington, D.C, FirstNet AT&T announced it has agreed to provide floor- level accuracy for first responder tracking and situational awareness with a target of meeting this goal by June 2019. The public deserves these same capabilities in their wireless devices. Thus, although the FCC has already decided that the major wireless carriers will not be required to provide vertical location capabilities for the 911 emergency services that are available to the public until 2021, the FCC should not waver on its commitment to floor- level accuracy in its vertical location metric.

1. THE COMMISSION SHOULD REJECT THE EFFORTS OF WIRELESS CARRIERS TO IMPLEMENT A Z-AXIS METRIC THAT FURTHER DILUTES THE DISPATCHABLE LOCATION REQUIREMENT

The major wireless carriers propose a z-axis metric of +/- 5 meters. Depending on the building, this could be as much as two floors above or below the actual floor where the person in distress is located, which is unacceptable.

The carriers’ request for a + /- 5 meters vertical metric reflects an ongoing effort by the wireless industry to dilute the definition of dispatchable location that was uniformly agreed to in advance of the FCC’s adoption of its Fourth Report and Order in 2015. As originally reflected in the carriers’ Roadmap for Improving 911 Location Accuracy,[[4]](#footnote-4) and subsequently adopted in the Commission’s rules, dispatchable location means “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.”[[5]](#footnote-5) Critical to this definition is not just the address, but also the exact floor and the exact suite or apartment where the caller is located. Absent reliable floor level vertical location information, the dispatchable location requirement is not satisfied.

The wireless carriers, however, appear to be actively working to undermine the definition of dispatchable location that was agreed to as a part of the Roadmap framework. For example, at the request for the major wireless carriers, the Alliance for Telecommunications Industry Solutions (ATIS) has produced a standard on location accuracy for emergency calls that includes two different definitions or “levels” of dispatchable location. The ATIS standard includes a DL Level 1 that entails location information provided to the Public Safety Answering Point (PSAP) that could be “nearby” and either one floor above or below the actual location of the wireless caller in a multi-level structure. The ATIS standard would further qualify as DL Level 1 an adjacent building or one across the street from the location of the wireless caller. The ATIS standard describes a use case in which a wireless caller to 911 is inside a building that has no Wi-Fi access points. If an adjacent building has registered Wi-Fi points, the National Emergency Address Database (NEAD) would identify the adjacent building as the dispatchable location and direct emergency responders to that incorrect structure.

As we have explained to the Commission in two prior letters,[[6]](#footnote-6) the public safety community strenuously disagrees with this characterization of dispatchable location. Instead, the appropriate representation of dispatchable location is described in the ATIS standard as DL Level 2, which is identified as location information that is enough to locate a wireless caller on the correct floor and in the correct suite. The DL Level 2 standard is what the Commission codified in its rules and is the only accurate description of dispatchable location, embodying the “gold standard” that the major wireless carriers promised to achieve in the Roadmap.

The heavily diluted ATIS standard was developed without the input or agreement of the CTIA location accuracy advisory group. The above-identified public safety organizations raised our concerns with the standard at a quarterly meeting held in September 2017, and in subsequent discussions with CTIA and the wireless carriers, but to no avail. Of concern is that the carriers appear to propose this performance dilution because of claimed technical limitations of the NEAD, something over which they have sole control, and which was promised as a mechanism to identify the room, suite and floor of the calling party, not the location of a Wi-Fi access point which may have no association with the calling party.

The creation of the DL Level 1 concept is likely to create confusion and misperception within the wireless industry regarding the Commission’s regulatory requirements and the critical role of a truly actionable dispatchable location. The use of the term dispatchable location to describe where an access point is located, and not necessarily where a wireless caller is located, all but eliminates the express goals of the Commission’s Fourth Report and Order and the Roadmap principles that formed its basis.

Despite our concerns, the carriers have rejected our views and are continuing to employ their DL Level 1 and DL Level 2 concepts. The Commission must expressly reject these measures and continue to require the major wireless carriers to implement fully compliant dispatchable location solutions that meets with FCC’s definition within the timeframe that the Commission adopted in 2015. The Commission has already provided two different technical approaches by which the carriers can meet their vertical location obligations, using either the NEAD address-based dispatchable location approach or a z-axis altitude-based vertical metric which is the subject of this Public Notice. No carrier is forced to deploy any technology from any vendor, but instead may choose the technical approach which best fits their needs. In both instances, however, the Commission must insist that the carriers deliver the level of accuracy necessary for first responders to locate the victim. Consistent with this, the Commission must adopt a vertical location metric that is truly floor- level for 80% of calls. Any requirement that is more lenient will fail to meet the commitment of the carriers to provide dispatchable location solutions within the timeframe identified in the Roadmap.

On August 3, 2018, CTIA filed a report on Z-Axis metric and report. On page 4 of the cover letter to the report, CTIA and the carriers conclude that +/- 5 meters for 80% of fixes from mobile devices capable of delivering barometric pressure sensor-based altitude estimates is a reasonable proposed metric.[[7]](#footnote-7) A fair reading of the report would seem to indicate that far better results can be achieved already.

Thank you for your attention to these important issues to public safety and the public it serves.

Respectfully,

Vincent Talucci Mark W. Light, CAE

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1. Public Safety and Homeland Security Bureau seeks comments on vertical (Z-Axis) accuracy metric proposed by the nationwide wireless carriers, PS Docket No. 07-114, DA 18-928 (Sept. 10, 2018) (Vertical Metric Public Notice). [↑](#footnote-ref-1)
2. Comments of APCO, PS Docket No. 07-114, at 4 (May 12, 2014). [↑](#footnote-ref-2)
3. Fourth Report and Oder, PS Docket No. 07-112, released February 2, 2015. [↑](#footnote-ref-3)
4. See Letter, John Wright, APCO International, et al., to Marlene H. Dortch, Secretary, FCC, PS Docket No. 07-114, Attachment A, Roadmap for Improving E911 Location Accuracy, at section 2 (a), Roadmap. [↑](#footnote-ref-4)
5. 47 C.F.R. section 20.18 (i) (1). [↑](#footnote-ref-5)
6. *See* Letter from Vincent Talucci, Executive Director and CEO, International Association of Chiefs of Police, *et al.,* to Marlene Dortch, Secretary, Federal Communications Commission, PS Docket No. 07-114 (April 28, 2017);Letter from Vincent Talucci, Executive Director and CEO, International Association of Chiefs of Police, *et al.,* to Marlene Dortch, Secretary, Federal Communications Commission, PS Docket No. 07-114 (Feb. 22, 2017). [↑](#footnote-ref-6)
7. Wireless E-9-1-1 Location Accuracy Requirements (PS Docket No. 07-114), Submission of Z-axis Metric and Report (47 C.F.R. § 20.18(i)(2)(ii)(B)) [↑](#footnote-ref-7)