

# JONES DAY

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January 26, 2015

## BY ELECTRONIC DELIVERY

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street S.W.  
Washington D.C. 20554

**Re: Permitted Oral *Ex Parte* Notice  
Wireless E911 Location Accuracy Requirements  
PS Docket No. 07-114**

Dear Ms. Dortch:

On this date, in response to a request from Louis Peraertz, legal advisor to Commissioner Mignon Clyburn, the undersigned responded to questions orally and in writing regarding issues involving the above referenced proceeding.<sup>1</sup> The details of the points made during the discussion are reflected in the *ex parte* notice that NextNav filed yesterday in this docket, dated January 25, 2015. In addition, the undersigned provided a copy of the attached bullet points to Peraertz at his request.

The undersigned also responded to questions about whether the adoption of a non-satellite metric by the Commission would give wireless carriers an undesired incentive to cease accommodating improvements to satellite-based location services. The carriers' claim of a disincentive is incorrect for two reasons.

First, the wireless carriers are presumably going to need to employ additional improvements in satellite-based location services in order to eventually satisfy the proposed blended metric of 80 percent of calls within 50 meters by the sixth year. If the carriers are implying, however, that they don't need further improvements in satellite-based location services to achieve the 80 percent blended metric (*i.e.*, because they *already can* meet the 80 percent blended metric in most locations with the location technologies they are using today), this places into question whether the proposed 80 percent blended metric will require carriers to make any actual improvements in indoor location accuracy during the next six years, as desired by public safety and the Commission.

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<sup>1</sup> 47 C.F.R. § 1.1204(a)(10) (listing permissible exceptions to the *ex parte* restrictions).

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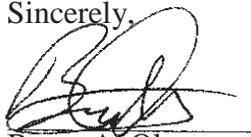
Second, the wireless carriers will have a continued incentive to accommodate ongoing improvements in satellite-based location services because of the importance of continuing to increase the number of communities that are adequately served (both indoors and outdoors) by satellite-based location technologies, thus making unnecessary the addition by the carriers of non-satellite location technologies in those communities. Although the Commission has not established which communities (or types of communities) are sufficiently served by satellite-based location technologies, the number of such communities will inevitably increase as satellite-based location capabilities continue to improve – giving carriers a direct incentive to accommodate those improvements in their handsets.

The undersigned also responded to questions about the carriers' claim that enforcement of a non-satellite location metric would be arbitrary and capricious. As all parties in this proceeding agree, satellite-based location services are currently able to provide location fixes for a significant percentage of wireless calls placed from indoor locations, at least in suburban and rural areas. In urban areas, this percentage falls dramatically unless the wireless caller is situated near the outer edge of a structure, such as by a window.

Therefore, although a non-satellite location metric may not map perfectly with indoor calling, it closely correlates in dense urban and urban areas. More importantly, such a metric clearly documents the very difficult indoor location environments where E911 dispatchers currently receive no location fix (or an inaccurate fix) for emergency calls from wireless phones. The fact that the non-satellite metric may capture only a subset of indoor calls (the more difficult calls) does not make the Commission's adoption of the metric arbitrary or capricious. If anything, an enforceable non-satellite metric ensures that carrier improvements to wireless location accuracy cannot overlook calls made from urban and dense urban environments, or from deep indoor locations in the suburbs, where significant further improvements are most urgently needed. In contrast, the enforcement of only a blended metric is unlikely to result in any appreciable improvements in indoor location accuracy for those deep indoor locations that public safety officials are most anxious to address.

Please contact the undersigned if you have any questions.

Sincerely,



Bruce A. Olcott

## **Indoor Location Accuracy Order**

### **PS Docket 07-114**

#### **Indoor Metric Requirement**

- The express purpose of the indoor location proceeding is to adopt “specific measures in our E911 location accuracy rules to ensure accurate indoor location information.”
  - Any rules that do not include a specific and enforceable metric to demonstrate accurate indoor location performance (undiluted by outdoor results) will manifestly fail to achieve the express purpose of this proceeding.
  - The carriers’ are incorrect in claiming that a blended metric of indoor and outdoor calls will indirectly encourage sufficient improvements to indoor location.
    - CSRIC III tests showed little GPS penetration in urban and dense urban areas, reporting just 11% of calls secured location fixes (yield) in dense urban and 23% of calls secured location fixes in urban test environments.
- A compromise would be to use a blended metric nationwide, but to also enforce a non-satellite based metric (possibly a lower metric) in urban and dense urban environments.

#### **Vertical Location Accuracy**

- Any plan to require the transmission of uncompensated barometric pressure sensor data to PSAPs within three years will serve little purpose because local weather conditions will significantly affect the accuracy of the data.
  - As a CTIA commissioned white paper explained: “For a handset’s barometric pressure sensor to perform an accurate absolute vertical measurement, a calibration measurement must first be made in real-time from a sensor at a known altitude in the same atmospheric conditions as the handset.” (7/14/2014, at 5-6.)
- The Commission should instead adopt its proposed 3 meter requirement to be met by year six, and then modify the objective if appropriate following additional independent testing.

#### **Reporting and Test Bed Verification**

- The proposal to require carriers to file quarterly reports on location performance in four morphologies – dense urban, urban, suburban and rural – should be tied to an enforceable indoor performance metric (*i.e.*, within 50 meters) to be achieved in each morphology.
- The Commission should also require that the accuracy of all location technologies – including dispatchable location technologies – be demonstrated in a test bed to show a specific level of accuracy.