March 5, 2019

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: Ex Parte Presentation, Wireless 9-1-1 Location Accuracy, PS Docket No. 07-114

Dear Ms. Dortch,

On March 1, 2019, CTIA representatives and member companies AT&T, Sprint, T-Mobile, and Verizon (participants) met with Public Safety and Homeland Security Bureau (Bureau) Deputy Chief David Furth and Bureau staff (see Attachment for a list of meeting attendees). The participants reiterated that they are committed to enhancing wireless 9-1-1 location accuracy, particularly indoors, and expressed support for the goals of the draft *Fourth Further Notice of Proposed Rulemaking* (FNPRM) to give certainty to all stakeholders by proposing a z-axis metric.[1] This commitment to wireless 9-1-1 location accuracy extends to ongoing work to achieve a dispatchable location solution through the National Emergency Address Database (NEAD), as well as the alternative path set forth in the *Fourth Report and Order* for the provision of vertical location, or z-axis, together with a more targeted horizontal location requirement.

During the meeting, the participants noted that further technology development and testing remains necessary to validate the accuracy of vertical location technology solutions to meet the FCC's proposed metric of ± 3 meters across regions, weather conditions and

[1] *See Draft Wireless E911 Location Accuracy Requirements,* Fourth Further Notice of Proposed Rulemaking, PS Docket No. 07-114 (circulated Feb. 22, 2019).

devices.[2] To examine innovative z-axis technologies including compensated barometric pressure sensor and 3D Wi-Fi solutions, the 9-1-1 Location Accuracy Technologies Test Bed, LLC (test bed) has announced the launch of the next round of z-axis testing, Stage Za, and has invited vendors to participate.[3] To date, the independent test bed mandated by Section 20.18(i)(3)(i) of the Commission's rules has evaluated two barometric pressure-based z-axis solutions applied to more recent handset models, and those results serve as the primary basis for the FNPRM.[4] The participants previously observed that those results were unable to validate the proposed metric, and so z-axis solutions must be further evaluated to determine whether, as the proposed rule requires, the solution can deliver ± 3 meter vertical location accuracy for 80% of wireless calls in the test bed. Specifically, we understand that the proposed metric of ± 3 meters is accuracy in the test bed, relative to a reference plane, at the 80th percentile. Given the ongoing evolution of vertical location solutions, the participants urged the Commission to encourage all z-axis technology solutions vendors to participate in Stage Za.

In support of the FNPRM's goal of certainty for all stakeholders, the participants noted that the FNPRM could further emphasize the application of the proposed rule as set forth in Appendix A of the FNPRM. Namely, the second sentence of paragraph 11 should include the following underlined language: "To comply with this proposed requirement, the caller's handset should be located within 3 meters above or below the vertical location provided by the phone for 80% of indoor wireless calls to 911, as demonstrated in the test bed." This modification underscores how the proposed z-axis metric would fit into the E911 location accuracy compliance scheme in Section 20.18(i)(2)(iii)(A), as the FNPRM envisions: nationwide CMRS providers are to certify that the indoor location technologies used in their networks are deployed consistently with how they were tested in the test bed (in compliance

[2] *See* Letter from Matthew Gerst, Assistant Vice President, Regulatory Affairs, CTIA, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 07-114 (Dec. 19, 2018).

[3] *See* Press Release, CTIA's 9-1-1 Location Accuracy Technologies Test Bed Opens for Additional Testing (Feb. 26, 2019), https://www.ctia.org/news/ctias-9-1-1-location-accuracy-technologies-test-bed-opens-for-additional-testing.

[4] 47 C.F.R. § 20.18(i)(3)(i); Letter from Scott K. Bergmann, Senior Vice President, Regulatory Affairs, CTIA *et al.*, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 07-114 (filed Aug. 3, 2018) (CTIA Z-Axis Letter) and Attachment, 911 Location Test Bed, LLC, Report on Stage Z (Test Bed Report).

with the metric), for 80% of the population of the top 25 CMAs by April 3, 2021 and the top 50 CMAs by April 3, 2023.[5]

The participants further urged the Commission to seek comment on ways to ensure that the rules maintain flexibility and technological neutrality so that CMRS providers can adopt any solutions that meet the proposed metric and corresponding Commission rules.

Pursuant to Section 1.1206 of the Commission's rules, a copy of this letter is being filed in ECFS and provided to the Commission meeting attendees. Please do not hesitate to contact the undersigned with any questions.

Sincerely,

/s/ Matthew Gerst

Matthew Gerst
Vice President, Regulatory Affairs

cc: David Furth
Brenda Boykin
John Evanoff
Nellie Foosaner
Erika Olsen
Rasoul Safavian

[5] 47 C.F.R. § 20.18(i)(2)(iii)(A), (i)(2)(ii)(C)(2) & (i)(2)(ii)(D)(2).

ATTACHMENT

March 1, 2019 Meeting Attendees

CTIA
Matthew Gerst
Patrick Donovan*
Adam Krinsky, Wilkinson Barker Knauer, LLP

AT&T
Joe Marx

Sprint
Ray Rothermel
Tony Wageman*

T-Mobile
Eric Hagerson

Verizon
Robert Morse
Susan Sherwood*

Public Safety and Homeland Security Bureau
David Furth
Brenda Boykin
John Evanoff
Nellie Foosaner
Erika Olsen*
Rasoul Safavian*

*Participated via conference bridge