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VIA ELECTRONIC FILING

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street SW
Washington DC 20554

Re: Improving Wireless Emergency Alerts and Community-Initiated Alerting, PS Docket No. 15-91.; Amendment to Part 11 of the Commission's Rules Regarding the Emergency Alert System, PS Docket 15-94

Dear Ms. Dortch:

In our letter filed on December 4th, 2017, AT&T submitted an updated graph to show the potential impact of including compressed vertex information to enable device-based geotargeting on Wireless Emergency Alert Message Length. After additional discussion, we wanted to update the record to include illustrative compression results that were achieved via the Department of Homeland Security (DHS) study¹ and its application in 3GPP Handsets.

The polygon compression algorithm described in detail in Appendix A of the DHS study shows that assumptions were made that the latitude-longitude values were limited to the United States. These assumptions would not apply for 3GPP devices that may be sold anywhere in the world and, thus, device manufacturers would not be able to take advantage of US-only compression techniques. Therefore, it is likely the achievable vertex compression would be at the low end of the DHS study, or 21.4% of the original size. And if the equivalent compression for the text could be obtained then a single WEA message would be limited to a maximum of 87 vertices (see graph in Attachment 1).

This would make the requirement in Paragraph 8², which prohibits Participating CMS Providers from limiting the 360 characters of text in a WEA message difficult to implement, at best. At the very minimum, the FCC should limit the maximum precision allowed in the latitude and longitude data associated with this requirement. The proposed accuracy target of

¹ See U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T), "Wireless Emergency Alerts, Arbitrary Location-Aware Targeting Final Report", June 2015.
<https://www.dhs.gov/sites/default/files/publications/WEA%20JHU%20APL%20ASLAT%20Final%20Report.pdf>

² See paragraph 8 https://transition.fcc.gov/Daily_Releases/Daily_Business/2018/db0109/DOC-348630A1.pdf.
"Accordingly we specify that Participating CMS Providers may not limit emergency managers' ability to use the full 360 characters of alphanumeric text allocated for displayable WEA Alert Messages."

0.1 miles for device-based geotargeting can be met with the use of two digits beyond the decimal point, so emergency managers should be limited to this two-digit precision in order to avoid the negative impacts to handsets³ associated with increasing the number of pages required for a single WEA message.

Sincerely,

/s/ Joseph P. Marx
Assistant Vice President, AT&T Services Inc.

Cc:
Marcus Brown
Megan Henry
Linda Nagle
Zenji Nakazawa
Rasoul Safavian
Emily Talaga
James Wiley

Attachment

³ See handset impacts in Section 4.5 of “Feasibility Study for LTE WEA Message Length”
https://access.atis.org/apps/group_public/download.php/25045/ATIS-0700023.pdf.

Attachment 1: Total Characters Required for a Compressed Polygon and 360 Character Message
(Assuming Compression to 21.4% of Original Size)

