verizon

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April 7, 2016

Ex Parte

Ms. Marlene H. 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

Dear Ms. Dortch:

On April 5, 2016, Robert Morse, Lawrence Rybar, Xiaomei Wang (via teleconference), Jyotsna Kachroo (via teleconference), and Choi Byunghun (via teleconference) of Verizon met with the following staff of the Commission's Public Safety and Homeland Security Bureau: James Wiley; Gregory Cooke; Rasoul Safavian; Yoon Chang; and Steven Carpenter. The attendees discussed the Commission's rulemaking regarding potential improvements to Wireless Emergency Alerts (WEA). Verizon discussed many of the points raised in its comments, including the need to focus on new alert capabilities that are technically feasible through next-generation networks and devices, and timetables that allow time for new technical standards, device upgrades and FEMA implementation. Verizon also responded to several specific questions from Bureau staff on a number of issues raised in the *Notice of Proposed Rulemaking*, summarized below.

Character Limits/Concatenation. Verizon reiterated its support for expanding WEA message length to 360 characters for LTE devices prospectively, while applying the current 90-character limit to all other devices. Verizon explained its concerns for proposals to divide single 360 character messages into four concatenated messages. Concatenation is a significant engineering challenge, and would *reduce* the amount of space available on the message for readable characters. In any case it is not a viable method of expanding message length for existing devices: concatenation requires 2-3 years of new technical standards and device development after rules are adopted, as well as network upgrades at the carrier and FEMA network gateways necessary to manipulate the WEA alert.

Verizon currently anticipates retiring its legacy CDMA/1X network by the end of 2019, and has already begun refarming that spectrum for other uses. Further, consumers turn over new devices every 2.5 years on average. For these reasons, requiring concatenation would impose significant cost and time resources with little if any countervailing benefit for consumers.

Embedded URLs and Phone Numbers. Verizon explained its concerns for inadvertent network congestion that might occur if alert originators include URLs and phone numbers in WEA alerts. Every emergency is unique, and Verizon does not suggest that service-degrading network congestion will occur for every WEA that includes a URL or phone number. Nevertheless, the same emergency events that trigger high call volume and data usage (*e.g.* natural disasters, terrorist attacks) may also trigger WEAs. When those events affect a fairly small and defined area, as is often the case for Imminent Threat Alerts in particular, the risk of service-affecting network congestion is even higher. WEA alerts alone already result in noticeable spikes in network traffic. And additional network usage during recent disaster events has resulted in fewer network resources available for emergency services such as Wireless Priority Service (WPS). The impact would only be exacerbated if the widespread broadcast of embedded URLs work as the alert originators intend by triggering substantial additional data sessions or telephone calls in the same time period and geographic area.

Multimedia Alerts. Multimedia messaging using WEA is not feasible at this time and warrants further study to determine its feasibility on LTE or later generation networks. Verizon cautioned against relying on eMBMS as a potential near-or medium-term method of delivering multimedia content in WEA alerts. Service providers have deployed eMBMS in very limited geographic areas, it requires significant spectrum resources to maintain, only a limited number of devices support it, and eMBMS has significant cost and limited market demand. And in any case, multimedia WEA broadcasts would require standardization across service providers, FEMA and alert originators.

Multilingual Alerts. Verizon reiterated its support for transmitting Spanish language WEA alerts in accordance with new technical standards for LTE networks and devices. Expanding WEA alerts to include additional languages, particularly character-based languages, would require new technical standards to revamp the text and character requirements uniformly used for mobile messaging. This is a worthy longer-term endeavor in which alert originators must play a principal role, but is not feasible in the near-term.

Geo-Targeting/Geo-Fencing. Verizon reiterated its support for the CSRIC IV's recommended geo-targeting approach, which draws the appropriate balance between narrowing the geographic scope of an alert, while also leveraging service providers' existing networks and capabilities. Verizon already targets its alerts to areas substantially smaller than a single county using the FEMA-preferred polygon-

based approach. The feasibility of further refinements of geo-targeting techniques, such as "geo-fencing" methods that utilize an individual device's location and data capabilities, will largely depend on the capabilities and interest of handset manufacturers. Geo-fencing would nonetheless raise a number of potential concerns for service providers and consumers, including: the wireless network's need to derive a separate target area and a slightly larger "fencing" area, and the device's need to distinguish between the two; the potential need to establish a data session to enable a device to receive alert area coordinates, which could adversely affect network capability when many devices attempt to establish new sessions in a confined area; and a device's need to track the customer's location (which the user may turn off) and the attendant privacy concerns and latency challenges. For these reasons and others highlighted by ATIS,[1] the Commission should first allow widespread industry implementation of the more targeted polygon-based approach, and then assess whether the marginal improvements of geo-fencing (if any) warrant the substantial effort of new device- and network-level standards.

Prioritization. Verizon described the WEA alert prioritization capabilities available on devices today. Currently, LTE devices can receive a WEA alert during a live VoLTE call or data session, although the alerting tone is limited to the customer's volume setting to prevent a loud alert noise directly into the user's ear. These capabilities are not feasible for 2G or 3G devices, however, because the handset does not monitor the control channel for incoming WEA messages during a voice call or data session.

Alert Logging/Test Reporting. Additional alert logging and test reporting requirements are unnecessary. Verizon automatically logs all the WEA alerts at the CMSP gateway. It captures all the alerts received from the Federal alert gateway as well as the points to which it is distributed within Verizon's network. However, there is no WEA logging at edge of the network (e.g. at the cell sites). While tracing and logging may be manually and temporarily activated for a specific cell site during a troubleshooting session, it is not part of normal daily operations to record, store, collect and process all of the information transmitted through all the cell sites. Enhancing the data storage and processing capabilities of tens of thousands of cell sites in a manner that does not compromise the sites' processing capabilities, and developing processes and capacity to aggregate and store that data at a more centralized location would provide only limited additional information for which there is limited (if any) demand or interest while imposing significant cost and IT burdens on service providers.

Opt-Out Choices/Preservation of Alerts. There are standards and specifications for device behavior that govern consumers' opt-out choices and the manner in which alerts are preserved on the handset. How they are ultimately implemented in an individual device model's user interface, however, will vary

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[1] *See* ATIS, *Feasibility Study for WEA Cell Broadcast Geo-Targeting*, ATIS-0700027, (Dec. 2015).

between manufacturers and individual devices. In Verizon's experience, handset manufacturers invest considerable time and resources to improve their user interfaces so that they can differentiate their products and succeed in the market. Manufacturers and service providers thus need the flexibility to ensure that new industry standards are not needed whenever a change to a user interface occurs, to facilitate the introduction of new innovative products and services. Any regulations or standards, however, risk stifling handset manufacturer creativity, with questionable overall benefit to consumers.

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This letter is submitted in accordance with Section 1.1206(b) of the Commission's rules, 47 C.F.R. § 1.1206(b). Please contact the undersigned if there are questions concerning this filing.

Sincerely,