

Testimony of  
Dr. Farrokh Khatibi  
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Qualcomm Technologies, Inc.

on  
“Future of Emergency Alerting”

before the  
Committee on Energy and Commerce  
Subcommittee on Communications and Technology

May 17, 2017

Thank you for affording Qualcomm the opportunity to participate in today's hearing. Qualcomm is a licensor of highly innovative wireless technology and manufacturer of cutting edge chips for wireless devices.

My name is Farrokh Khatibi, Director of Engineering at Qualcomm. I have been actively involved in the development of Wireless Emergency Alert (WEA) Standards since early 2007. Recently, I was the co-lead of Communications Security, Reliability and Interoperability Council (CSRIC) V Working Group 2<sup>1</sup> on Emergency Alerting Platforms where we completed three Reports on:

- WEA Security
- Social Media & Complementary Alerting Methods
- Wireless Emergency Alerts & Geo-Targeting

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<sup>1</sup> <https://www.fcc.gov/about-fcc/advisory-committees/communications-security-reliability-and-interoperability>

By way of background, WEA grew out of the Warning, Alert and Response Network (or WARN) Act, which became law as Title VI of the SAFE Ports Act<sup>2</sup> in October 2006.

Taking advantage of the ubiquity of the mobile platform, Congress put in place a framework for wireless carriers to provide a voluntary, public safety alerting system utilizing current wireless network technology. That system allows individuals to receive geographically-targeted, text-like messages alerting them of imminent threats to safety in their area. The alerts can be originated from Local, State, or Federal agencies.

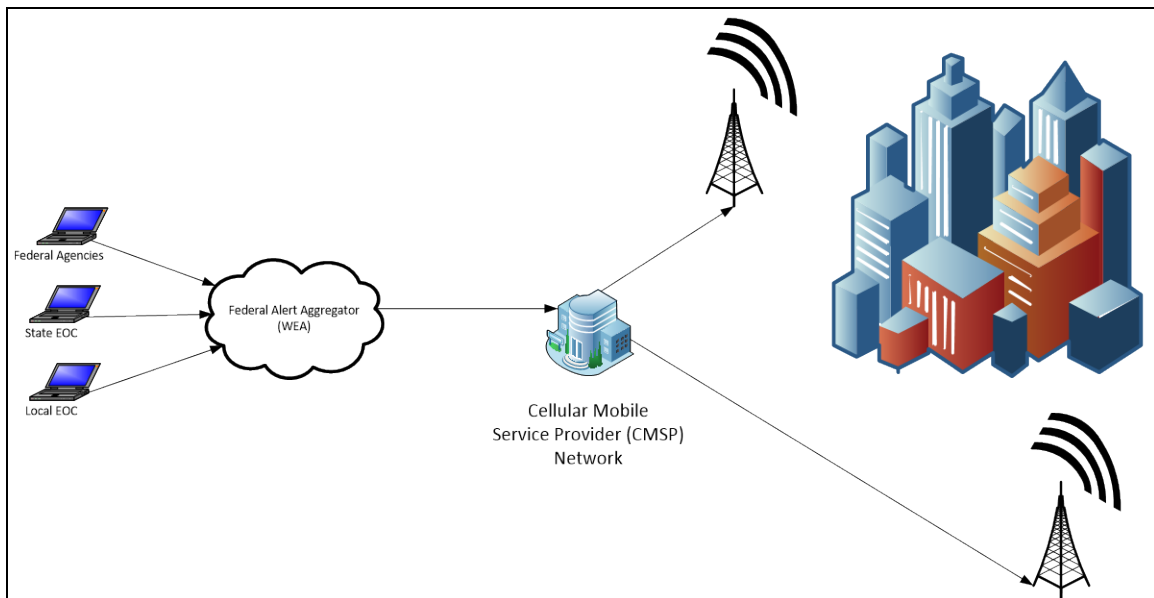
The WEA system represents a successful partnership of public and private entities. Since its launch in 2012, WEA has benefited American wireless subscribers in a number of instances, in which WEA has alerted citizens in the path of impending natural disasters, assisted in the rescue of abducted children, and issued shelter-in-place information during public safety incidents.

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<sup>2</sup> P.L. 109-347.

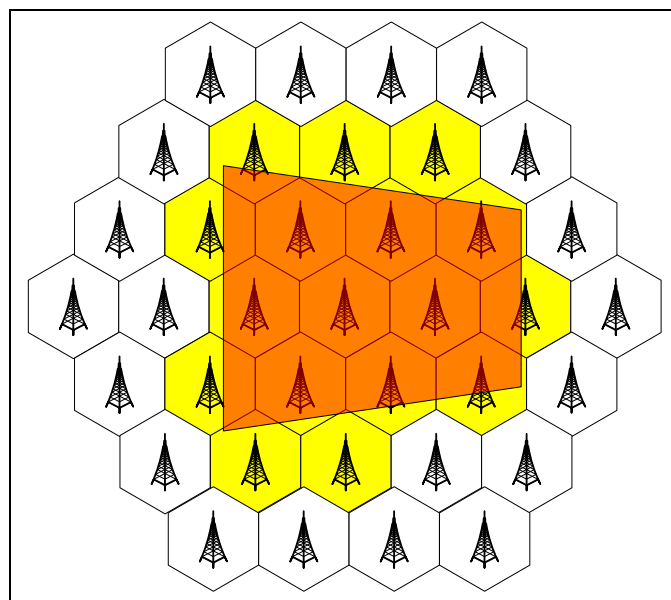
Currently there are three types of alerts sent through this system:

- Alerts issued by the President of the United States;
- Alerts involving imminent threats to safety of life, issued in two different categories: extreme threats and severe threat; and
- AMBER Alerts.



With your permission, I would like to highlight two important aspects of WEA.

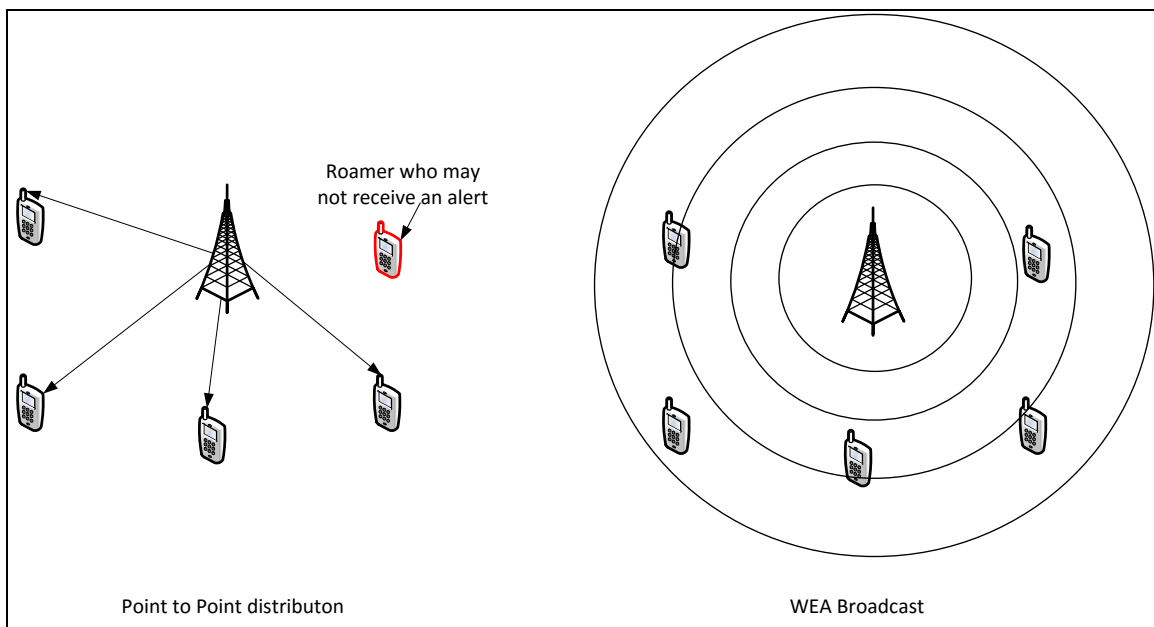
First, emergency alerts are broadcast only to the cell towers in the coverage areas that best match the zone of an emergency. All WEA-capable phones that are in the coverage area of the cell towers in the alert zone will receive WEA.



Orange: geographically-targeted alert area  
Yellow: area where the alert is broadcast

This means that if an alert is sent to a zone in New York, all WEA-capable phones in the alert zone can receive it, even if they are roaming or visiting from another state. Individuals do not need to sign up for this service, and Congress provided the ability for users to choose to opt-out of receiving WEA messages for imminent threats and AMBER alerts, but not for Presidential messages.

The second important aspect of WEA is that it uses cellular technology and the wireless provider networks to broadcast from cell towers to mobile devices in the area. Broadcasting the alerts ensures an efficient and timely distribution of the alerts compared to sending the alerts point to point (e.g., SMS).



The wireless industry has worked for years to evolve the service to add new and greater capabilities. For example, after careful coordination with alert originators and our federal partners, the wireless industry is taking steps to offer capabilities that will:

- Extend the alert message length from 90 to 360 characters for 4G LTE;
- Improve Geographical-targeting;
- Include embedded references (URLs and phone numbers) in WEA messages;
- Add a new alert category of Public Safety Information messages;
- Add Spanish language alerts;
- Provide State/Local alert originators the ability to conduct individual tests of the WEA system in their jurisdictions.

The wireless industry is committed to enhancing WEA. To that end, the industry has taken the lead to study potential future enhancements to WEA such as:

- Enhancements to end-to-end security: the wireless industry is vigilant in constantly surveying and addressing security in all of its offerings, and this work follows the recommendations from CSRIC V Report on WEA Security.
- Event codes: in the June 2016 FCC Commission meeting, rules were circulated for adding three new codes for the U.S. Emergency Alert System: Storm Surge Warning (SSW),

Extreme Wind Warning (EWW), and Severe Weather Statement (SVS). While these rules were specifically for Part 11 EAS rules and do not directly apply to Part 10 WEA rules, at the request of the National Weather Service, the wireless industry is working to voluntarily support these new codes on WEA.

- Device-Assisted Geo-targeting: the wireless industry is studying methods for delivering to the mobile device the geographically-targeted alert area defined by the alerting authority, along with the WEA message. A well-managed application on mobile devices may then use this information to determine if it is inside the alert area and act accordingly.



Thank you again for the opportunity to participate in today's hearing. Qualcomm looks forward to working with the wireless industry, the FCC, the Subcommittee, FEMA, and others in the public safety community to ensure that WEA continues to offer a unique and useful way to help protect the American public.