DHS Science and Technology Directorate
Wireless Emergency Alerts (WEA)

High-Level Overview

In the event of an imminent disaster or the highest level of emergency, providing the public clear and early warnings can result in lives saved and property protected. While current services like the Emergency Alert System broadcast emergency information to the public across television and radio, they do not account for a more mobile population. Nearly 96 percent of the U.S. population subscribes to commercial mobile services (CTIA Year End Figures 2010). People even watch the news and listen to the radio on their mobile devices. Recognizing these trends, the Department of Homeland Security's Science and Technology Directorate (S&T) and the Federal Emergency Management Agency (FEMA) have partnered with the Federal Communications Commission and the Commercial Mobile Service Provider community to create a national alerts and warnings capability for cellular telephones and pagers that provide Presidential, Imminent Threat to life and property, and America's Missing: Broadcast Emergency Response or AMBER Alerts. Wireless Emergency Alerts (WEA), formerly known as the Commercial Mobile Alert Service (CMAS), was deployed in April 2012.

WEA is part of FEMA's larger initiative called the Integrated Public Alert and Warning System (IPAWS), which will enable emergency response agencies to simultaneously disseminate a single alert message across all major communications mediums in the U.S.

The Value

There is an inherent value to receiving actionable information about an emergency as quickly as possible. WEA distributes emergency alert messages across mobile devices, which a majority of Americans have come to rely, on for up-to-date communications and information. WEA is able to rapidly and reliably distribute geographically-targeted messages at the county level to the public in spite of busy wireless networks. Finally, WEA is able to reach a majority of the public who will be impacted by an emergency without requiring them to register their location or subscribe to a local alert service. As a result, WEA is expected to improve the probability that more people will receive location-based critical alert information quickly, thereby creating more time for response.

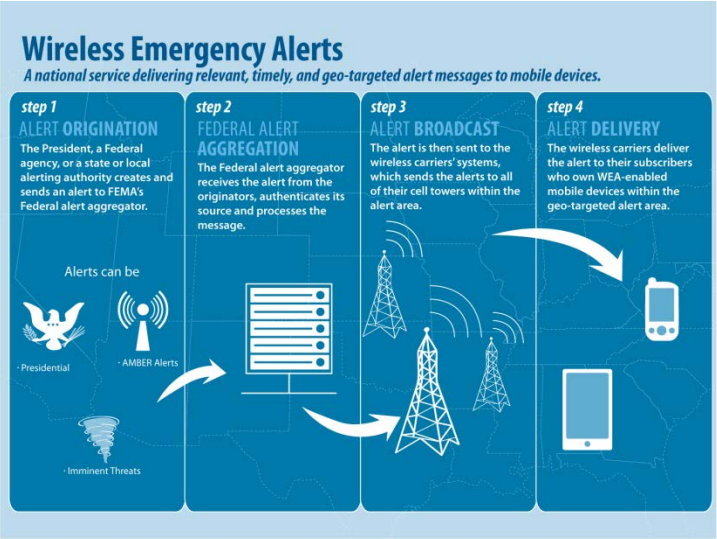

Diagram depicts WEA process from alert origination to mobile device delivery.

How WEA Works

In order for a WEA alert to be delivered successfully to a cell phone or pager, multiple steps must align seamlessly. An authorized alert originator, such as the President, FEMA, or a state's Office of Emergency Management, who has access to the alert origination tools, will submit an alert into the IPAWS Open Platform for Emergency Networks (IPAWS-OPEN) alert aggregator, which collects alerts. The alert aggregator then checks the alert's authenticity and translates it into a standardized format that is optimized for the mobile carriers to broadcast to any WEA-enabled mobile device being serviced by their network including those "roaming" from other carrier networks.

S&T's Planned WEA Activities

Both prior to and following WEA deployment, S&T's WEA Research, Development, Testing, and Evaluation (RDT&E) Program will continue to support WEA development through research initiatives, testing activities, and guidance document development. These activities will support the improvement of future iterations of WEA. Post-deployment activities include refining WEA's geographical-targeting capabilities below the county level; working with wireless service providers and mobile device manufacturers to increase the number of WEA-enabled mobile devices available to the public; and, working with academia and alert originators to improve their understanding of the public's response to WEA alerts and craft more effective WEA alerts during emergency events.

To learn more about WEA and related activities, contact SandTFRG@DHS.gov

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