Testimony of

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CTIA

on

Ensuring Effective and Reliable Alerts and Warnings

before the

U.S. House of Representatives Committee on Homeland Security

Subcommittee on Emergency Preparedness, Response and Communications

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Chairman Donovan, Ranking Member Payne, and members of the Committee, on behalf of CTIA and our member companies throughout the wireless ecosystem, thank you for the opportunity to appear before you today to discuss the critical and successful role of Wireless Emergency Alerts within our nation's emergency alert system.

CTIA commends the bi-partisan leadership in Congress for its passage of the Warning, Alert, and Response Network (WARN) Act, which created the Wireless Emergency Alert (WEA) program, a public-private partnership between the wireless industry, government, and alert originators. The Wireless Emergency Alert system was launched in 2012 and is jointly implemented and administered by the Federal Communications Commission (FCC) and Federal Emergency Management Agency (FEMA). In the five years since the launch of the Wireless Emergency Alert system, it has become a critical resource for the hundreds of millions of Americans who rely on their mobile phones every day.

CTIA and its member companies are proud of the wireless industry's role in the Wireless Emergency Alert system. Today, all four national wireless providers and dozens of regional providers, serving more than 99 percent of all U.S. subscribers, are voluntarily participating in the Wireless Emergency Alert system; transmitting thousands of alerts each year and helping our public safety professionals save lives.[1] Ensuring that Wireless Emergency Alerts remain a trusted

source of emergency information for the American public is one of our highest priorities.

The false alert that was issued in Hawaii on January 13th, 2018 is of course at top of mind for policymakers, CTIA and its member companies, all WEA stakeholders, and the public writ large. The Hawaii incident underscores to *all* of us the importance of the functionality and integrity – and credibility – of our nation's emergency alert systems. Any incident that affects the public's confidence in emergency alerts risks undermining the effectiveness of all alerting systems, including WEA. We lose the effectiveness of emergency alerting if people simply ignore or opt-out of receiving these critical messages.

For this reason, we are deeply committed to doing our part to ensure that Wireless Emergency Alerts remain a trusted and effective tool for public safety within our nation's emergency alert system, which is managed by FEMA through the Integrated Public Alert and Warning System (IPAWS) that also supports the Emergency Alert System (EAS), National Weather Service, and other alerting tools. With that in mind, I would like to address the WEA program's success, the cooperative voluntary framework on which WEA operates, ongoing efforts to enhance the geographic targeting (geo-targeting) of alert messages, and, finally, the importance of maintaining the WEA system's integrity.

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The Success of Wireless Emergency Alerts

The Wireless Emergency Alert system is the newest and most effective means the nation has for warning Americans of imminent dangers and other incidents requiring immediate action. A decade ago, Congress and this Committee wisely recognized the value of wireless in reaching nearly every American and set in motion the creation of the Wireless Emergency Alert system. Now, as more than half of American households have cut the cord and are "wireless only,"[2] alerts and warnings sent to our mobile devices are the obvious choice for public safety officials to make sure we can take action wherever we are, whatever we are doing.

Wireless Emergency Alerts delivered to wireless devices in a targeted area – with their unique sounds, high volumes, and forceful vibrations – save lives. The WEA system sends out Amber Alerts and shelter-in-place directives, warns citizens of fires, floods, and tornados, and otherwise keeps the public apprised of real threats. Because WEA messages are delivered to consumers with capable mobile devices in an area targeted by local authorities, they are an extremely effective mechanism for reaching those Americans that are directly impacted by an emergency. It is no wonder that some have called Wireless Emergency Alerts "the government's most potent public notification system."[3]

Since 2012, more than 33,000 Wireless Emergency Alerts have been sent to consumers with WEA-capable devices.[4] These messages have warned Americans of imminent threats or disasters and asked the public for help in locating someone in danger.

For example, local emergency officials have used Wireless Emergency Alerts to inform the public of ongoing law enforcement and terrorist threats, and to enlist their assistance. In 2013, Massachusetts authorities sent a shelter-in-place Wireless Emergency Alert while apprehending the suspects in the Boston Marathon Bombing.[5] And in 2016, the City of New York sent a description of the suspect in the Chelsea Bombing through a Wireless Emergency Alert, leading to the suspect's arrest within hours of the alert.[6]

In 2015, an AMBER Alert for a missing child was sent through the WEA system to wireless consumers in Minnesota. A citizen in the area received the alert on their smartphone, saw a black Honda Civic that matched the description issued in the alert, and called 9-1-1. Authorities responded and rescued the child from the abductor. This is just one of many such success stories of our national emergency alert system, which includes WEA -- a total of 910 children have been successfully recovered through the AMBER Alert system, as of January 8, 2018.[7]

Wireless Emergency Alerts have also been used extensively to warn the public of severe weather emergencies. This past fall, more than 300 Wireless

Emergency Alerts warned people around Houston, Texas about Hurricane Harvey and its rising floodwaters, more than 200 Wireless Emergency Alerts warned Floridians about the strong winds of Hurricane Irma, and Wireless Emergency Alerts played a critical role in warning many Californians about the devastating wildfires.[8] In 2013, 29 children were saved from a tornado ripping through a soccer building in Windsor, Connecticut when the camp manager received a Wireless Emergency Alert seconds before the tornado touched down.[9] Even as the system was only months old in 2012, public safety officials were using Wireless Emergency Alerts to warn the people in the path of Superstorm Sandy.[10]

For more than a decade, the wireless industry has worked diligently to develop and deploy this capability in its networks and devices. Through cell broadcast technology unique to the WEA system, mobile providers can broadcast Wireless Emergency Alerts from cell-sites in areas targeted by local emergency officials to wireless devices in a timely manner. Today, there are millions of devices throughout the U.S. that are capable of receiving these critical messages.

Wireless Emergency Alerts are part of the broader national alerting system, known as the Integrated Public Alert and Warning System (IPAWS), managed by FEMA. Through IPAWS, authorized federal, state, and local authorities, known as alert originators, transmit emergency messages to a FEMA-operated system.

FEMA's system authenticates and formats the message for distribution across a variety of channels, including the WEA system. Of note, the substance and distribution channel of an alert is determined by the federal, state, or local government that originates the alert. Wireless providers deliver authorized WEA messages to the target area identified by the alert originator without input into the content of a message or discretion over whether or not to transmit it.

Reflecting the evolution of our mobile wireless networks and devices, the capabilities of the Wireless Emergency Alert system continue to advance in a remarkably short timeframe. In less than six years since the voluntary Wireless Emergency Alert system was first launched, the FCC has adopted various updates and improvements, including an order to enhance WEA's geo-targeting capabilities that was adopted last week. In 2016, the FCC put rules in place to increase the maximum alert length from 90 characters to 360 characters for LTE wireless systems and future networks, as well as support additional local and state testing capabilities, Blue Alerts, Spanish-language alerts, and embedded links and phone numbers. In particular, the FCC noted that allowing embedded references to be included in WEA alerts "will dramatically improve WEA's effectiveness" and that commenters identified this capability as "the most critical among all of our proposed improvements to WEA."[11]

CTIA's member companies are working hard to add these new capabilities into the WEA system, and have already answered public safety's call to ensure that alerts are capable of including embedded links so that consumers will be able to go to a website to see a photo of the missing child or a suspected terrorist.

Enhanced Geo-targeting Requirements

Last week, the FCC adopted another order focused on the geo-targeting capabilities of the WEA system.[12] The FCC initially mandated targeting at the county level, but many participating providers began voluntarily supporting geo-targeting of Wireless Emergency Alerts well below the county level to enable local officials to minimize over-alerting. An appropriately targeted WEA message can mitigate the possibility that an alert will cause distress or panic in areas not actually at risk and enhance public confidence in the emergency alert system. Today, participating providers deliver Wireless Emergency Alerts to a targeted area that best approximates the area identified by the alert originators down to the cell-sector level.

While the ability to geo-target Wireless Emergency Alerts down to the cell-sector level will remain a constant feature of the system, we share the expressed goal of public safety leaders to harness innovative location technologies to further minimize the possibility of over-alerting. For this reason, CTIA supports the framework for enhancing the geo-targeting capabilities of the WEA system that

the FCC adopted last week. To deliver this new capability, wireless providers will shift from a solely network-based approach to target the alert area to one that also harnesses location capabilities within mobile devices. Once available, this capability will give local alert originators an additional tool to minimize the possibility that someone will receive an irrelevant Wireless Emergency Alert.

The FCC's geo-targeting Order proposes an aggressive implementation timeline that will present a significant challenge for wireless providers and device manufacturers. As the Order notes, significant standards, deployment and testing work remains to support this enhanced geo-targeting capability throughout the chain of the alert – from alert originators to FEMA's gateway to wireless networks to mobile devices. The wireless industry – including participating providers and device manufacturers – will work intently, as it always has, in an effort to meet the FCC's aggressive deadline.

Maintaining Public Confidence and System Integrity After Hawaii

The January 13th, 2018 incident in Hawaii has underscored for all of us – government and industry alike – that the success of Wireless Emergency Alerts relies on the public's trust. Trust in the system hinges on execution. Alert originators must send Wireless Emergency Alerts appropriately and judiciously; the FEMA authentication and verification process must be expeditious and robust; and participating wireless providers must deliver WEA messages to the targeted area.

Only this way will the public know that when a Wireless Emergency Alert is sent, the danger is real.

This Committee should be commended for focusing on what errors led to the false Hawaii alert and on drawing out lessons learned, particularly around the issue of system integrity and security. Going forward, we should strive to make sure that another harm does not take root – namely, the danger that the next time an alert is issued, that some will not take it seriously or refuse to evacuate. For this reason, CTIA and the wireless industry commend FCC Chairman Pai for swift action to investigate the cause of this incident and appreciate FCC Commissioner Jessica Rosenworcel's recent recommendations and suggestions for new best practices around the training and use of our nation's emergency alert system.

Notably, Congress recognized the need to train and equip our alert originators to more effectively use our nation's emergency alert system when the IPAWS Modernization Act became law in 2015. And in 2016, the FCC encouraged emergency management agencies to engage in proficiency training exercises that could help minimize system failures and ensure that any failures are corrected during a period when no real emergency exists. CTIA strongly supports all of these efforts and encourages FEMA and other public-safety authorities to offer training

opportunities for alert originators that promise to bolster WEA's utility and credibility going forward.

CTIA and our member companies are also keenly focused on the security of wireless networks. Wireless providers work in a collaborative partnership with network equipment manufacturers, chipset and device providers, and the application ecosystem to build robust security in and around wireless networks. They use a combination of technology, security best practices, innovative tools, and tight physical and virtual access controls to manage and protect their networks.[13] In our national emergency alert system, wireless providers participating in WEA depend on the integrity of the messages received from alert originators and FEMA. To promote our common goal of a trusted WEA system, CTIA and the wireless industry engage with the FCC, FEMA, and alert originators to share expertise in the identification of threats and development of recommendations.[14]

While we expect there are many lessons to be learned from the experience in Hawaii, and many will be cautionary, we should also acknowledge that wireless networks and devices performed exactly as designed and effectively delivered and presented the alert message as received from the FEMA gateway. The speed and effectiveness of its delivery should give policymakers and the public confidence that in the event of a real emergency, the Wireless Emergency Alert

system will disseminate information rapidly and accurately to Americans – wherever they may be.

* * *

CTIA and the wireless industry are proud of the critical role that Wireless Emergency Alerts play in our nation's emergency alert system, and are committed to continue working collaboratively with public safety professionals at every level of our government to maintain system integrity and public confidence in Wireless Emergency Alerts.

Thank you for the opportunity to testify today. If CTIA can provide any additional information you would find helpful, please let us know.

[1] *Wireless Emergency Alerts*, Order on Reconsideration, 32 FCC Rcd 9621, 9625 n.28 (2017); *see also*, CTIA, *How Wireless Emergency Alerts Help Save Lives*, https://www.ctia.org/consumer-tips/how-wireless-emergency-alerts-help-save-lives (last visited Jan. 23, 2018).

[2] Stephen J. Blumberg & Julian V. Luke, Ctrs. for Disease Control & Prevention, Nat'l Ctr. for Health Statistics, *Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July–December 2016* (May 2017); *see also,* Alina Sleuth, Nat'l Pub. Radio, *The Daredevils Without Landlines — And Why Health Experts Are Tracking Them* (May 4, 2017), https://www.npr.org/sections/alltechconsidered/2015/12/03/458225197/the-daredevils-without-landlines-and-why-health-experts-are-tracking-them.

[3] Aaron C. Davis & Sandhya Somashekhar, *The only California county that sent a warning to residents' cellphones has no reported fatalities*, Wash. Post, Oct. 13 2017, https://www.washingtonpost.com/investigations/the-only-california-county-that-sent-a-warning-to-residents-cellphones-has-no-reported-fatalities/2017/10/13/b28b5af4-b01f-11e7-a908-a3470754bbb9_story.html?utm_term=.cd24bb9ecf9chttps://www.washingtonpost.com/investigations/the-only-california-county-that-sent-a-warning-to-residents-cellphones-has-no-reported-fatalities-/2017/10/13/b28b5af4-b01f-11e7-a908-a3470754bbb9_story.html?utm_term=.cd24bb9ecf9c.

[4] Mark Lucero, Fed. Emergency Mgmt. Agency, *Integrated Public Alert & Warning System*16 16 (Aug. 8, 2017), https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.napsgfoundation.org%2Fwp-content%2Fuploads%2F2017%2F08%2FFEMA_IPAWS_Keynote_MarkLucero_20170708.pptxhttps://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.-napsgfoundation.org%2Fwp-content%2Fuploads%2F2017%2F08%2FFEMA_IPAWS_Keynote_Mark-Lucero_20170708.pptx.

[5] Rick Wimberly, *Powerful Wireless Emergency Alerts Success Stories at Congressional Hearing*, Emergency Management, Oct. 24, 2013, http://www.govtech.com/em/emergency-blogs/alerts/Powerful-Wireless-Emergency-Alerts-Success-Stories-at-Congressional-Hearing.html.

[6] David Goodman & David Gelles, *Cellphone Alerts Used in New York to Search for Bombing Suspect*, N.Y. Times, Sept. 19, 2016, https://www.nytimes.com/2016/09/20/nyregion/cellphone-alerts-used-in-search-of-manhattan-bombing-suspect.html.

[7] *Amber Alerts*, Nat'l Ctr. for Missing & Exploited Children, http://www.missingkids.com/gethelpnow/amber (last visited Jan. 23, 2018).

[8] *See generally* CTIA, *Hurricane Harvey: Resiliency & Relief*, https://www.ctia.org/hurricane-harvey/ (last visited Jan. 16, 2018); Davis & Somashekhar, *supra* note 3; Richard Perez-Pena, Fire Alert Sent to Millions of Cellphones Was California's Largest Warning Yet, N.Y. Times, Dec. 7, 2017, https://www.nytimes.com/2017/12/07/us/cellphone-alerts-california-fires.html.

[9] Wimberly, *supra* note 5; *see also,* David Owens & Chloe Miller, *National Weather Service Confirms Two Tornadoes Monday*, Hartford Courant, July 2, 2013, http://articles.courant.com/2013-07-02/news/hc-tornado-warning-0702-20130701_1_windsor-locks-dome-national-weather-service-confirms.

[10] Rick Wimberly, *CMAS/WEA Used Extensively for Hurricane Sandy*, Emergency Management, Oct. 31, 2012, http://www.govtech.com/em/emergency-blogs/alerts/CMASWEA-Used-Extensively-for-103112.html (noting that "alerts were issued all along the eastern seaboard in Virginia, West Virginia, Maryland, New York, Massachusetts, New Hampshire, and Maine").

[11] *Wireless Emergency Alerts*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 11112, 11137-38 (2016).

[12] *Wireless Emergency Alerts*, Second Report and Order and Second Order on Reconsideration (rel. Jan. 31, 2018), available at https://www.fcc.gov/document/fcc-improves-wireless-emergency-alerts-0.

[13] CTIA, *Protecting America's Wireless Networks*, Apr. 2017, https://www.ctia.org/docs/default-source/default-document-library/protecting-americas-wireless-networks.pdf.

[14] *See, e.g.,* FCC, Communications Security, Reliability, and Interoperability Council V, Working Group 2, Emergency Alerting Platforms, WEA Security Sub-Working Group, Final Report.