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Congress of the United States

House of Representatives

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MEMORANDUM

May 15, 2017

To: Subcommittee on Communications and Technology Democratic Members and Staff

Fr: Committee on Energy and Commerce Democratic Staff

Re: Subcommittee Hearing on "Future of Emergency Alerting"

On **Wednesday, May 17, 2017, at 10:00 a.m. in room 2123 of the Rayburn House Office Building**, the Subcommittee on Communications and Technology will hold a hearing titled "Future of Emergency Alerting."

I. BACKGROUND

Emergency alerting is an essential part of our nation's public safety systems. Americans rely on the vital information contained in an emergency alert message in order to protect life and property in emergency situations. The original intent of the first warning system was to provide the President with the ability to communicate a live, nationwide message to the public during a national emergency. Now, alerts to the public tend to be more localized by providing information on severe weather threats, child abductions, and other emergencies. Public safety advocates continue to look for ways to improve alerting systems. New technologies also have ushered in more ways to ensure the public gets the information it needs as quickly as possible. Below is a brief summary of the current alerting systems, including information on potential new advancements.

A. Emergency Alert System (EAS)

EAS is the legacy system that allows the President to address the nation through the use of broadcast TV, broadcast radio, cable systems, and satellite systems. The Federal Communications Commission (FCC), along with the Federal Emergency Management Agency (FEMA) and the National Weather Service, implements the EAS at the national level. The FCC requires all EAS participants to have the capability to receive and transmit Presidential alerts. Distribution of state and local EAS messages are on a voluntary basis, and messages are generally broadcast in English. The FCC recently declined to require multilingual alerts, but adopted reporting requirements to gather data on the extent to which multilingual EAS messages are currently available.

A message initiated by the appropriate authority cascades down to the public through a

hierarchical system. Once the alert message is encoded, it is broadcast from one or more EAS participants and relayed to additional stations until all affected EAS participants have received and delivered the message to the public. Except for two national tests in 2011 and 2016, FEMA has never activated EAS to provide a Presidential alert to the public. The national test in 2011 provided the FCC and FEMA with valuable information that has resulted in modifications to address problems occurring during the test. The 2016 test was used to evaluate the reliability and effectiveness of FEMA's Integrated Public Alert and Warning System (IPAWS).

The results of the 2016 test showed that distribution of alerts through IPAWS greatly improved the quality and accessibility of EAS alerts, but that there continued to be technical and operational issues. The FCC's Public Safety and Homeland Security Bureau (PSHSB) recommended specific operational actions to ensure the viability of the EAS.

B. Wireless Emergency Alerts (WEA)

The WEA system, established by the WARN Act (Pub. L. No. 109-347), allows wireless customers with enabled mobile devices to receive geographically-targeted, alert messages. Participation in WEA by wireless carriers is voluntary, but wireless carriers representing 98 percent of subscribers deploy WEA messages. Consumers do not have to sign up for WEA alerts, and automatically receive three types of alerts: (1) messages from the President; (2) messages involving immediate threats to safety or life; or (3) Amber Alerts. Messages are sent using a separate technology outside of voice calls and text messaging to ensure WEA messages are received even in highly congested areas. Since 2014, all non-commercial TV stations in the U.S. provide a back-up system by broadcasting the WEA messages to cellular providers.

The FCC recently adopted modifications to the WEA system to improve alert message content, require that carriers maintain logs regarding alerts and narrow geographic targeting, and create a framework for testing and outreach of WEA. The FCC also is seeking comment on other ways to improve WEA's multimedia, multilingual, and geo-targeting capabilities.

C. Integrated Public Alert and Warning System (IPAWS)

IPAWS is an Internet-based system that Federal, State, and Local authorities can use to issue content-rich alerts over a secure internet gateway. It is used in conjunction with EAS and WEA, as well as the National Oceanic and Atmospheric Administration's weather radios. IPAWS has the capability to include multilingual messages, high quality digital audio, and text files that can be used to create accessible video crawls. PSHSB recently recommended as part of its review of the 2016 national EAS test that the FCC encourage the use of IPAWS as the primary source of nationwide alerts, and preserve over-the-air alerting as a redundant and resilient alternative.

D. Next Generation Broadcast TV Standard

The FCC recently began a proceeding that proposes to allow TV broadcasters to voluntarily use the "Next Generation" broadcast TV transmission standard (NextGen TV). Some of the potential benefits listed by proponents is that the emergency alerts can be geographically-targeted and provide enhanced data for first responders. NextGen TV alerts can also "wake up" devices (TVs, smartphones or tablets) to provide alerts even when devices are turned off. If approved by the FCC, consumers will only be able to receive NextGen TV from TV stations that opt to transition to it and if the consumer also purchases a new TV or other devices that contain the appropriate chip or receiver.

II. WITNESSES

The following witnesses have been invited to testify:

Sam Matheny
Chief Technology Officer
National Association of Broadcasters

Christopher Guttman-McCabe
Chief Executive Officer
CGM Advisors, LLC

Dr. Farrokh Khartibi
Director of Engineering
Qualcomm Technology, Inc.