

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Improving Wireless Emergency Alerts and) PS Docket No. 15-91
Community-Initiated Alerting)

COMMENTS OF CTIA®

Thomas C. Power
Senior Vice President and General Counsel

Scott K. Bergmann
Vice President, Regulatory Affairs

Brian M. Josef
Assistant Vice President, Regulatory Affairs

Matthew B. Gerst
Director, Regulatory Affairs

CTIA®
1400 Sixteenth Street, NW
Washington, DC 20036

January 13, 2016

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I. INTRODUCTION AND SUMMARY.

CTIA commends the efforts of the Federal Communications Commission (“Commission”) to seek comment on further enhancements to the voluntary Wireless Emergency Alert (“WEA”) system.¹ The WEA system exemplifies a highly successful public-private partnership, which has benefited American consumers in countless ways, including by rescuing abducted children and protecting the lives of those exposed to sudden and devastating weather disasters. The wireless sector has worked diligently and voluntarily to develop and deploy WEA capability, ensuring that alert originators and the ultimate beneficiaries, subscribers, may respectively compose and receive meaningful emergency information in a timely manner. In consultation with these and other stakeholders, wireless providers have considered improvements to the processes for sending WEA messages that would meaningfully enhance the design and dissemination of WEA beyond the Commission’s original requirements, certain of which the Commission discusses and raises for comment in the instant *NPRM*.

As discussed below, CTIA supports the Commission’s proposals to: (1) increase the length of WEA messages to 360 characters for capable wireless handsets; (2) permit wireless

¹ See *Improving Wireless Emergency Alerts and Community-Initiated Alerting*, Notice of Proposed Rulemaking, 30 FCC Rcd 77289 (2015) (“*NPRM*”).

providers to offer more granular geo-targeting of alerts; (3) enable alert originators, as part of their training activities, to test the WEA system on a localized basis; and (4) allow alert originators to use the WEA system to send “Emergency Government Information” when such information directly relates to a previous WEA message and includes specific, relevant information for recipients.

In order to successfully implement these proposals, the Commission should adhere to the final recommendations of the Communications Security, Reliability and Interoperability Council IV, Working Group Two (“CSRIC”)² and the Alliance for Telecommunications Industry Solutions (“ATIS”).³ Adopting proposals consistent with these recommendations is especially appropriate given that CSRIC and ATIS recently issued recommendations on enhancements to the WEA system, after completing comprehensive, public efforts to identify and address the associated challenges based on input from a wide variety of stakeholders. Several of these recommendations implicate changes to relevant technical standards and specifications. Given that standards development processes have yet to begin, any compliance deadlines should be tied to the completion and public release of final standards.

Imposing a multitude of unnecessary additional mandates – including expanding content (by embedding telephone numbers and links to URLs, and adding multimedia) and requiring logging and reporting, multiple languages, and priority access – risks straying from the highly effective system in place today. This, in turn, would jeopardize wireless providers’ significant participation in this voluntary system. Thus, the Commission should proceed mindful of WEA’s

² See *Geographic Targeting, Message Content and Character Limitation Subgroup Report*, CSRIC IV, Working Group Two (Oct. 2014) (“Working Group Two Report”).

³ See *Feasibility Study for WEA Supplemental Text*, ATIS-0700026 (Dec. 2, 2015) (“ATIS Study/WEA Supplemental Text”).

success as a best effort “bell ringer” service and exercise care as it considers applying new requirements on the WEA system.

II. THE VOLUNTARY WEA SYSTEM IS A RESOUNDING SUCCESS.

Enacted in October 2006, the WARN Act established a process for the Commission, along with a new federal advisory committee, to create a national mobile alerting system, whereby wireless providers could “voluntarily elect to transmit emergency alerts” to their subscribers.⁴ Indeed, the voluntary nature of the WEA system has led to its success. Rather than imposing prescriptive mandates and hard deadlines, Congress understood that granting the wireless sector the flexibility to bring the system from concept to full fruition would maximize both participation and the associated consumer benefits. Just as Congress intended, the WEA program offers a meaningful, mobile extension of the Emergency Alert System, arming emergency managers with a thoroughly modern “game changer” for helping to inform and therefore protect the public, wherever they may be.⁵

Comprised of carriers that collectively serve 98 percent of U.S. wireless consumers, WEA went live in April 2012. Since that time, thousands of WEA messages have been issued and many have played a key role in protecting the public. Given its myriad benefits, the Commission ought to adhere to Congress’s carefully balanced framework rather than impose requirements that would unnecessarily disrupt this voluntary program.

WEA success stories abound. For example, just last month a vehicle was stolen outside of a residence near Pasco, Washington, with two young children (ages one and three) inside. An

⁴ Warning, Alert and Response Network (WARN) Act § 602(a), Pub. L. No. 109-347, 120 Stat. 1884 (2006).

⁵ Stephen Davis & Bryan Polcyn, *Cell phone users unaware of new emergency alert system*, FOX6 NOW (July 2, 2013), <http://fox6now.com/2013/07/02/cell-phone-users-unaware-of-new-emergency-alert-system/>.

AMBER Alert containing the vehicle information was sent to cell phones via the WEA system. Shortly thereafter, a citizen received the message and realized he was parked next to the vehicle in question at a restaurant, which had been abandoned in the parking lot with both children inside. The children were safely recovered.⁶

WEA also has been deployed extensively to warn the public about impending weather situations that pose an imminent threat to public safety. For example, WEA messages were dispersed “widely and successfully” in areas affected by Hurricane Sandy.⁷ Given the breadth and scope of Sandy, these alerts included warnings of hazardous blizzard and flash-flooding conditions, mandatory evacuations, and shelter-in-place directives. The varied alert messages, along with the significant physical geographic area over which they were distributed – from West Virginia to Maine – demonstrate the impressive depth and breadth of the WEA service.

Moreover, the voluntary cooperation and collaboration among wireless providers and other stakeholders, working in tandem with the CSRIC, has sustained WEA’s success. Consumers have benefited from the ongoing, collective efforts of the wireless industry, as well as FEMA, the Department of Homeland Security’s Science & Technology Directorate, the National Center for Missing and Exploited Children, alert originators, and numerous consumer groups, to publicly analyze possible improvements to the WEA system by addressing and resolving difficult technical issues as ideas arise.

⁶ Dustin Lane, *Pasco man gets Amber Alert on his phone just as he’s parking next to car in question*, Q13 FOX (Dec. 14, 2015), <http://q13fox.com/2015/12/14/pasco-man-gets-amber-alert-on-his-phone-just-as-hes-parking-next-to-car-in-question/>.

⁷ Rick Wimberly, *CMAS/WEA Used Extensively for Hurricane Sandy*, EMERGENCY MANAGEMENT (Oct. 31, 2012), <http://www.emergencymgmt.com/emergency-blogs/alerts/CMASWEA-Used-Extensively-for-103112.html>.

III. REASONABLE ENHANCEMENTS TO THE WEA SYSTEM MAY IMPROVE THE ABILITY TO BOTH WARN THE PUBLIC AND ASSIST ALERT ORIGINATORS.

As discussed below, CTIA supports the Commission’s proposal to expand the maximum WEA message length to 360 characters where technically feasible, consistent with the recommendations from CSRIC and ATIS. CTIA also supports geo-targeting enhancements to allow wireless providers to transmit alerts to the best approximation of specified polygons, circles, or geo-codes in recognition of relevant network considerations. In addition, CTIA supports allowing alert originators to test localized WEAs to opt-in participants, consistent with CSRIC recommendations, and send “Emergency Government Information” in instances where such information directly relates to previous WEA message(s) and includes specific, relevant information for recipients.

A. CTIA Supports the Commission’s Proposal to Expand the Maximum WEA Message Length to 360 Characters Where Technically Feasible, Consistent with the Recommendations of CSRIC and ATIS.

Working closely with stakeholders, wireless providers have supported increasing the length of WEA messages where technically feasible, consistent with the recent recommendations from CSRIC and ATIS. Currently, WEA messages are limited in length to a maximum of 90 characters. As an initial matter, CTIA notes that after studying this issue, CSRIC recommended 280 characters as an optimal WEA message length.⁸ ATIS also examined the relationship between the WEA message length, potential transmission delay, and mobile device power consumption.⁹ ATIS recommended “a maximum WEA message length of 360 displayable characters of displayable text based upon the GSM 7-bit alphabet.”¹⁰

⁸ See Working Group Two Report at 2, 31 (reporting “consensus among the group to recommend the FCC modify their rules to increase the maximum WEA Alert Message length consistent with capabilities of 4G LTE (approximately 280 displayable characters subject to technology confirmation by ATIS/TIA standards.”)); see also FCC, Disability Advisory Committee, Emergency Communications Subcommittee

CTIA recognizes that increasing the length of WEA messages has the potential to benefit alert originators by improving their ability to provide more relevant information and greater detail to all consumers, including those relying on features that improve communications accessibility. Given these factors, CTIA agrees with ATIS's recommendation and thus supports the Commission's proposal to increase the maximum character length to 360, provided that the change applies only to technically-capable wireless handsets.¹¹ As discussed below, however, increasing the maximum character length will affect WEA message capacity. For this reason, the Commission should refrain from adopting any additional requirements at this time (*e.g.*, alerting in multiple languages, including multimedia in alerts, etc.), which may also adversely affect WEA message capacity.

With respect to timing for implementation, CTIA notes that ATIS explained that implementation of any WEA enhancements "will require the cellular industry to undertake standards changes to ATIS and 3GPP standards, followed by modifications to the 'C' interface between the FEMA IPAWS Federal Alert Gateway and the CMSP Gateway, and modifications to CMSP infrastructure and mobile devices."¹² Given that the process to develop standards necessary to facilitate expanding the maximum WEA message length has yet to begin, the Commission's proposal to require carriers to accommodate longer messages within one year is infeasible. CTIA would instead support a compliance deadline that provides sufficient time for

(June 23, 2015), <https://www.fcc.gov/general/disability-advisory-committee> (endorsing the FCC CSRIC IV WEA Report).

⁹ See ATIS Study/WEA Supplemental Text, §5.1 at 18.

¹⁰ See *id.*, § 5.2 at 19.

¹¹ See generally ATIS Study/WEA Supplemental Text.

¹² *Id.*, note to § 9.2 at 22.

development and implementation to begin some time after completion and public release of the finalized necessary standards.

Relatedly, as the standards process commences and proceeds, the Commission should closely coordinate with FEMA and alert originators. Each must ensure their ability to support transmission of longer messages consistent with the compliance deadline.

B. CTIA Supports Geo-targeting Enhancements that Allow Wireless Providers to Transmit Alerts to the Best Approximation of Specified Polygons, Circles, or Geo-codes, Given Relevant Network Considerations.

CTIA notes that the vast majority of wireless providers are served by carriers that already provide granular, sub-county level geo-targeting, which closely reflects alert originator-provided polygons, geo-codes, or circles. CTIA respectfully disagrees, however, with the Commission's proposed rule to mandate that the alert target area may not be larger than the alert area as a whole. CTIA instead supports the Commission permitting a wireless provider to geo-target a WEA to the best approximation of the polygon, circle, or geo-code provided by the alert originator.

Specifying that the geo-target be "not larger" than the alert area – as the Commission proposes in the *NPRM* – risks providers erring on the side of significantly undershooting the alert polygon, as providers may choose cell sites on the polygon border, or even just outside the polygon, in order to get the best approximation of that polygon. Also, in instances when cell sites within the polygon transmit beyond the boundaries of the polygon, the proposed rule would effectively force providers to forgo using those cell sites and thus undershoot the intended target area. Given the likelihood of these adverse consequences, the Commission should not adopt this proposal.

Accordingly, CTIA proposes that any rule change on this issue must grant a participating provider the flexibility to consider the cell site location, RF propagation characteristics, among other factors, when determining the best approximation of the polygon, circle, or geo-code.

C. CTIA Supports Allowing Alert Originators to Test Localized WEAs to Participants That Opt-In, Consistent with CSRIC Recommendations.

CTIA supports the proposal to allow local alerting authorities to conduct WEA tests in accordance with the recommendations contained in the CSRIC Working Group Two Testing Report, provided that only consumers that elect to “opt in” receive these messages.¹³ Localized tests are intended to support local alert originators’ ability to test and possibly refine their respective procedures for issuing WEA messages. CSRIC recommended that the Commission permit a localized WEA testing procedure involving an opt-in test, with “opt-out” as the default setting and with clear language explicitly identifying the alert as a test message.¹⁴ CSRIC also recommended that standards bodies modify the relevant standards to define a common method for supporting the opt-in test.¹⁵

Testing must not disturb wireless consumers that have not expressly elected to receive test messages. Indeed, the success of the WEA system is dependent on subscribers’ trust and willingness to receive these messages. Only those subscribers who fully appreciate the difference between a test message and an actual message would receive test messages. This way, unwanted test messages will not disturb wireless consumers who could become confused or annoyed by test messages and opt out of WEA entirely.

¹³ CSRIC IV, Working Group Two Testing Subgroup Report, Recommendation 4.1 at 15 (May 2014).

¹⁴ *Id.*

¹⁵ *Id.*

Moreover, CTIA agrees with CSRIC’s expectation that “any single alert originator should issue a [localized] WEA test no more often than once a month.”¹⁶ Indeed, given the large and ever-growing numbers of alert originators authorized to initiate WEA messages, this limited testing nonetheless could result in hundreds or even thousands of additional WEA tests each year. The level of support required for testing alone has the potential to overwhelm wireless providers’ limited resources and detract from critical support for real alerts. Indeed, additional testing may be superfluous given that wireless providers voluntarily conduct regular, monthly tests – pursuant to FCC rules – to confirm operating status and connectivity within the WEA system. Accordingly, wireless providers should not be obligated to provide support for any additional testing.

In addition, the Commission should be aware that only new LTE devices capable of being configured to receive the test messages would support local WEA testing. This means that any new rules must explicitly recognize that this support may not include legacy 2G, 3G, or 4G devices.

Further, modification of existing WEA standards would be necessary to enable the recommended opt-in localized testing approach. Indeed, changes to the J-STD-100 Joint ATIS/TIA CMAS Mobile Device Behavior Specification and supplements, as well as the additional relevant standards contained in Appendix F of the CSRIC Working Group Two Testing Report, would need to occur to define the capability for opt-in to receive the test messages.

Finally, CTIA is hopeful that the Commission will strongly encourage an effort to develop for alert originators and FEMA a set of “best practices” for testing the WEA system.

¹⁶ *Id.*, § 3.6 at 10.

D. CTIA Supports Enabling Alert Originators to Send “Emergency Government Information” Where Such Information Directly Relates to Previous WEA Message(s) and Includes Specific, Relevant Information for Recipients.

CTIA supports enabling the limited use by alert originators of “Emergency Government Information” to be sent via the WEA system. As CSRIC explained,

Emergency Government Information is not an alert in itself; it authorizes appropriate agencies the authority to use WEA to provide essential information related to an imminent threat. An Emergency Government Information message should only be used to provide information to assist subscribers regarding actions to take resulting from an imminent threat to life and property; information examples are a boil water order, shelter locations, or an extended utility outage notification.¹⁷

CSRIC also clarified that an Emergency Government Information message would “allow for ... subscriber opt-out capability (per the WARN Act).”¹⁸ CTIA agrees with CSRIC’s finding that an Emergency Government Information message would “provide essential information directly related to an issued weather or non-weather Imminent Threat Alert” and only in connection with assisting citizens facing a looming threat to life and property.¹⁹

Given these factors, CTIA would not recommend that the Commission create a new, separate alerting category that entails new standards requirements. Rather, an Emergency Government Information message should be a standalone message generated from credentialed, authorized, and trained alert originators. The Emergency Government Information message would be a category subset of imminent threat alerts, sent only after WEA notice of a previously announced threat.

¹⁷ CSRIC IV, Working Group Two Geographic Targeting, Message Content and Character Limitation Subgroup Report Recommendation 4.7 at 46.

¹⁸ *Id.*

¹⁹ *Id.*

Finally, by their very nature, emergencies are local in scope and unique to the given community. Local authorities should have full autonomy to determine whether and what imminent threat to life and property constitutes Emergency Government Information.²⁰ Thus, CTIA further suggests that FEMA, as part of its regular education and outreach efforts with alert originators, develop a set of “best practices” and associated training programs in cooperation with alert originators. As part of this effort, the parties ought to explore and establish the types of imminent threats and dangerous circumstances that would merit sending an Emergency Government Information message.

IV. THE COMMISSION SHOULD REFRAIN FROM IMPOSING NEW RULES REGARDING CONTENT, LOGGING AND REPORTING, MULTIPLE LANGUAGES, AND PRIORITY ACCESS.

While CTIA supports the substantial WEA enhancements highlighted above, CTIA respectfully requests that the Commission refrain from imposing at this time requirements regarding content (by including telephone numbers, links to URLs, and multimedia), logging and reporting, multiple languages, and priority access. These proposals risk, at best, significantly delaying the near-term enhancements to the WEA system previously described and, at worst, discouraging voluntary wireless provider participation. CTIA believes the Commission should first allow the appropriate technical experts to evaluate the utility and feasibility of the enhancements described below.

Content Requirements. Although CTIA acknowledges that wireless providers disseminate, rather than develop and draft, messages issued by alert originators, CTIA does not at this time support the proposals to embed telephone numbers and links to URLs, as well as

²⁰ While CTIA supports this determination, alert originators should be mindful not to disseminate those messages that are not related to imminent threats to life or property. For example, WEA alerts to “[t]ake precautions not to cause fires,” 4A7CDBD0-27E509A1: 2015-04-01 T11:18:22, or “[a]ccumulating snow and cold temperatures in your area tonight,” A6674BA9-79278138: 2015-02-25T15:53:17, were not the types of imminent threats envisioned under the WEA system.

multimedia content in WEA messages. As recommended by technical experts, the Commission should not mandate any particular content in WEA messages.

ATIS comprehensively addressed prior work by CSRIC, FEMA and the National Consortium for the Study of Terrorism and Responses to Terrorism (“START”), and concluded that additional content requirements “will result in significant challenges within the [Commercial Mobile Service Provider] infrastructure network ... including network congestion to the point of blocking communications.”²¹ CTIA shares these concerns. First, instances where hundreds or thousands of people are simultaneously actively seeking or accessing additional content from a WEA message could cause serious network congestion. This is especially the case given that a cellular system is a shared resource limited contention based system. When a sudden disaster strikes, networks may become stressed due to unusually high demand for voice and data services. Network denials could preclude public safety mission-critical communications, not to mention the critical ability of consumers to call or text 9-1-1, family and loved ones, or both. Embedding WEA messages with URLs or phone numbers would encourage multiple additional attempts for voice and data communications on already taxed networks, thus compounding network congestion.

For similar reasons, CTIA does not support inclusion of multimedia messages at this time. Multimedia alerts are not consistent with the text-only, “bell ringer” design of WEA. The use of photos, videos, and maps would impose significant technical challenges implicated by the need for new categories to define and map coordinate data. In addition, multimedia content today is typically point-to-point in nature and does not scale well for a point-to-multipoint framework like WEA. CTIA notes that WEAs are one of several tools available to alert

²¹ ATIS Study/WEA Supplemental Text, § 9.1.3 at 21.

originators and other features such as photos, videos, and maps may be better addressed through other alerting media.

Multimedia has the potential to become a reality in the future, after deployment of LTE evolved multimedia broadcast multicast service (“eMBMS”). Nonetheless, any requirements at this time are premature, as eMBMS deployment stands at a preliminary stage.

Multiple Languages. While neither CTIA nor its members are involved in composing or translating messages, the wireless industry has developed standards to support Spanish language WEA messages using separate WEA messages. Implementation of Spanish language alerts, however, is solely within the purview of – and dependent on support from – FEMA and the alert originator community. For example, to send English and Spanish alerts would require four WEA messages each “alert:” two for 90 characters (English and Spanish), and two for 360 characters. Therefore, the merits surrounding a proposal to offer Spanish language alerts should be informed by support from FEMA and alert originators.²²

The Commission must keep in mind that the technical complexities of supporting multiple languages that existed in 2008 remain today given that the fundamental cell broadcast technology is the same and are both network- and device-based. While there have been significant advances in network capabilities, the underlying design principles of the network remain, especially the cell broadcast mechanism. Thus, CTIA does not support at this time a broader offering of WEA alerts in multiple languages beyond English and Spanish.

Logging and Reporting. CTIA does not support the Commission’s proposals to log and report data associated with localized testing, nor does CTIA agree with imposing priority access

²² Language translation is not and cannot be a function of the commercial mobile service provider infrastructure or mobile devices. Relatedly, the Commission, FEMA and alert originators should keep in mind that translations from English may exceed character limits.

obligations on participating carriers. As a preliminary matter, the ability to log, track, and verify WEA messages is not possible under the current WEA architecture.

Moreover, mandating that wireless providers log and verify WEA messages by end user devices risks reinvigorating subscribers' privacy concerns over the appearance of government tracking the whereabouts of its citizens through their mobile devices.

Priority Access. Any requirement to give WEA messages priority over other data traffic, as the Commission asks, would be problematic. Cell broadcast technology, which forms the basis for WEA, does not enable the prioritization of WEA messages over other data in transit. Cell broadcast technology transmits over a carrier's control channel, while other data traffic typically transmits over distinct channels. Nor should the Commission intrude into prioritization of alert processing on the mobile device. A priority access requirement could interfere, for example, with a subscriber's 9-1-1 call or text to emergency responders or communication with loved ones to confirm the caller's safety and whereabouts during the emergency.

The Commission's proposals suggest an interest in forcing WEA participants to prioritize certain communications content over others. Yet, as noted earlier, wireless providers have *no role* in developing, drafting, or ascertaining the value of the content of WEA messages. Nor do they have such interest. Rather, wireless providers merely disseminate WEA messages.

V. CONCLUSION.

Given the undeniable success of the WEA system to provide timely and pertinent information that has saved lives, CTIA welcomes the opportunity to partner with the Commission to further enhance the voluntary WEA system consistent with these comments. CTIA supports appropriate steps to improve the WEA program for the continued benefit of

wireless subscribers and alert originators, without imposing unreasonable requirements on wireless providers.

Respectfully submitted,

By: /s/ Brian M. Josef
Brian M. Josef
Assistant Vice President, Regulatory Affairs

Thomas C. Power
Senior Vice President and General Counsel

Scott K. Bergmann
Vice President, Regulatory Affairs

Matthew B. Gerst
Director, Regulatory Affairs

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