Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Wireless Emergency Alerts	)	PS Docket No. 15-91
	)	
Amendments to Part 11 of the Commission's Rules Regarding the Emergency Alert System	)	PS Docket No. 15-94

REPLY COMMENTS OF THE ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS

The Alliance for Telecommunications Industry Solutions (ATIS) hereby submits these reply comments in response to the comments submitted to the *Further Notice of Proposed Rulemaking* (*FNPRM*), released April 21, 2022, in the above-referenced dockets. As explained more fully below, ATIS' Wireless Technologies and Systems Committee (WTSC): (1) agrees that there is a need to address false expectations regarding Wireless Emergency Alert (WEA) performance; (2) explains that there are important technical reasons for the limits on the number of vertices and shapes in WEA messages; (3) recommends that the Commission consider previous industry comments regarding multimedia functionality and defer any decision on this topic until the Commission's Communications, Security, Reliability and Interoperability Council (CSRIC) completes its work on leveraging mobile device applications and firmware to enhance WEA; (4) urges the Commission to reject calls that performance data be collected from "live" WEA activations; and (5) urges the Commission to avoid requiring, or placing unreasonable deadlines on, the availability of WEA performance data.

I. Reply Comments

Managing Alert Originator and Consumer Expectations. In their comments to the *FNPRM*, the Adams County E-911 Emergency Telephone Service Authority, Arapahoe County 911 Authority, Arapahoe County Office of Emergency Management, Boulder County Communications, Boulder County Sheriff's Office, Boulder Office of Emergency Management, Boulder Police and Fire Communications Center, City of Boulder, Jefferson County Emergency Communications Authority, and Larimer Emergency Telephone Authority (Colorado Agencies) correctly acknowledge that "there is a false expectation that wireless emergency alerts will always reach everyone that needs to be notified, regardless of the disaster, damage to infrastructure, and the choices individuals make as to how and whether they want to receive alerts."[1] ATIS WTSC agrees and notes that consumer and Alert Originator education regarding the factors that affect the broadcast and receipt of WEA messages would be beneficial. As noted by the Colorado Agencies, the "general public's and media's understanding of emergency alerts is not well-informed as to limitations."[2] ATIS WTSC recommends that the Commission work with the Federal Emergency Management Agency (FEMA) to educate the public, as well as Alert Originators, regarding the factors that impact WEA performance, including the role that consumer choices play in determining whether a WEA message is received. In addition, ATIS WTSC is considering the development of guidance for WEA alert recipients, which would complement the existing ATIS *WEA 3.0 Practical Hints for Alert Originators.*[3]

[1] Initial Comments of Several Colorado Agencies at p. 2.
[2] Initial Comments of Several Colorado Agencies at p. 7.
[3] *WEA 3.0 Practical Hints for Alert Originators* (ATIS-0700049), published in August 2021. This document is available at https://access.atis.org/apps/group_public/download.php/61040/ATIS-0700049.zip.

Number of Vertices and Shapes. The Colorado Agencies also suggest that the current limitations in WEA, including specifically the limit of 100 total vertices and 10 polygons per WEA message, make it virtually impossible to use polygons created prior to an emergency.[4] The Colorado Agencies recommend that the Commission "retool" WEA software to accommodate polygons that contain more than 100 total vertices and 10 shapes per notification.[5] ATIS WTSC strongly disagrees with this recommendation. The limits on the number of vertices and shapes were put in place after a thorough engineering analysis of the WEA system to reduce the possibility of broadcast channel overload, especially during a crisis, as well as to reduce latency for Alert presentation. Such safeguards are particularly important in preventing overloads and reducing latency when WEA messages are transmitted in multiple languages as each contains a full set of coordinates. The Colorado Agencies' concerns are based on their policy of pre-loading of complex polygons into alert origination tools, which could allow them to initiate Alerts more quickly. These pre-populated polygons may exceed the WEA limit of 100 total vertices and 10 shapes per WEA message.[6] A retooling of WEA, which would degrade its performance and have negative impacts to consumers as noted above, would also have significant impacts to standards and to Commercial Mobile Service Provider infrastructure and mobile devices. Thus, ATIS recommends Alert Origination software developers identify mechanisms to accommodate Alert Originator needs in their software while adhering to these limits.

[4] Initial comments of Several Colorado Agencies at p.4.
[5] Initial comments of Several Colorado Agencies at pp. 6-7.
[6] Initial comments of Several Colorado Agencies at p. 4.

Multimedia Content. In its comments, the Association of Public-Safety Communications Officials (APCO) International, Inc. recommends that the Commission require support for multimedia content in WEA messages.[7] ATIS WTSC notes that there are technical constraints associated with the transmission of multimedia content in WEA messages outside of embedded URLs. The Cell Broadcast Service (CBS) over-the-air interface that is used to transmit WEA messages is not designed for the transmission of multimedia content. The results of ATIS' *Feasibility Study for WEA Supplemental Text* remain relevant to this matter.[8] This study addressed several aspects of the transmission of multimedia content in WEA messages, including the display of photos, and concluded that there remain unresolved technical and/or other considerations that warrant against requiring the inclusion of this content in WEA messages. ATIS WTSC urges the Commission to ensure that the alert broadcast capacity stays within reasonable limits that do not risk consumer impacts. Further, while not specifically addressing multimedia in WEA, ATIS recommends that the Commission allow CSRIC VIII Working Group 6 addressing methods of leveraging mobile device applications and firmware to enhance WEA (e.g., display map) to complete its work. This work may address some of APCO's recommendations on this matter.[9] CSRIC VIII Working Group 6 is investigating methods to enhance the user experience beyond embedded URLs through the device applications and firmware while avoiding additional capacity impacts by using the information already being received by the device.

[7] Comments of APCO International at p. 5.
[8] *Feasibility Study for WEA Supplemental Text* (ATIS-0700026), published in December 2015. This document is available at https://www.atis.org/resources/feasibility-study-for-wea-supplemental-text/.
[9] CSRIC VIII Working Group 6: Leveraging Mobile Device Applications and Firmware to Enhance Wireless Emergency Alerts.

Use of 'Live" WEA Data. ATIS notes that the National Oceanic and Atmospheric Administration's National Weather Service (NWS) and APCO urge the Commission to require service providers to provide WEA performance data based on "live" WEA messages. NWS recommends in its comments that "[r]eporting should be based on live WEA messages and not just tests."[10] APCO similarly suggests that WEA reports "should include an analysis of aggregate data from WEA messages that were or should have been transmitted during the reporting period – not only test messages."[11] ATIS WTSC strongly disagrees and notes that the State/Local Test alert class accurately reflects WEA performance. State/Local Test does not operate any differently than other WEA activations and there is nothing in the system that distinguishes the "test" from a "live" event. As ATIS explained in its comments, State/Local Test follows the same WEA processing -- from FEMA down to the device -- as all other classes of alerts, allows for the same user options as other classes of WEA alerts (with the exception of the National Alert), and can be structured for specific "real life" scenarios.[12] While ATIS recognizes NWS' desire to provide "after-action reports" that include specific WEA performance data within 24 hours after an event for which a WEA is sent, ATIS WTSC concludes the data in these reports would not be actionable to any WEA stakeholder and likely would be incomplete and misleading. In contrast, State/Local Test is more likely to result in data from which actionable conclusions can be drawn. Moreover, State/Local Test also provides other advantages. For example, as explained in ATIS' comments, collecting data via State/Local Test facilitates the collection of actionable performance data metrics as the data collected during a

[10] Letter from Michael Gerber, dated June 21, 2022. See also Comments of APCO International at p. 3. ("[r]eports should include an analysis of aggregate data from WEA messages that were or should have been transmitted during the reporting period – not only test messages.")
[11] Comments of APCO International at p. 3.
[12] ATIS Comments at p. 4.

live alert would introduce too many variables to provide actionable conclusions.[13] State/Local Test also offers an easy way to test a variety of polygons to confirm the success of WEA 3.0 within any designated subset of the Alert Originator's jurisdiction.

Access to WEA Data. NWS in its comments suggests that, "[t]o be most effective, NWS would like to be able to access report information within one day following the event because NWS conducts post-storm analysis as soon as possible following an event."[14] ATIS WTSC recognizes the need for the NWS to conduct a post-storm analysis in a timely manner following an event. However, ATIS WTSC does not believe that the suggested performance data will result in any meaningful outcomes for WEA alert dissemination as the proposed collected data will be incomplete, reducing its statistical meaning and inducing bias in suggesting outcomes, which can lead to invalid conclusions. Even a small percentage of missing data can cause serious problems with the analysis leading to draw wrong conclusions and imperfect knowledge.[15] Such post-event analysis also should not merely focus on WEA, but, rather, include all alert dissemination methods including EAS via broadcast radio and TV. Further, this analysis should only include data that is readily available from the dissemination method (such as an indication if the broadcast was successful and time of broadcast).

ATIS WTSC is also concerned that any collection and use of real-time location and performance data could heighten consumer privacy concerns. As noted in its comments, ATIS WTSC believes that there will be significant privacy concerns related to the collection and use of WEA performance data that may prompt consumers to opt-out of receiving alerts, thereby

[13] ATIS Comments at p. 10.
[14] Letter from Michael Gerber, dated June 21, 2022, at p. 1.
[15] A Study of Incomplete Data – A Review; S. S. Gantayat, Ashok Misra & B. S. Panda; Part of the Advances in Intelligent Systems and Computing book series (AISC, volume 247).

reducing the effectiveness of WEA as a lifesaving tool.[16] ATIS WTSC further notes that, historically, the analysis of WEA issues reported by the NWS rarely identified items that resulted in any changes to the WEA system or operator settings; instead, the analysis provided an opportunity for education of Alert Originators and the public on how WEA works and the anomalies associated with RF propagation. The Commission should therefore not require, nor place unreasonable deadlines on, the availability of WEA performance data.

II. Conclusion

ATIS respectively requests that the Commission consider the input provided in these reply comments.

Respectfully submitted,

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[16] ATIS Comments at p. 11.