

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

In the Matter of	)	
	)	
Modernization of the Nation's Alerting Systems	)	PS Docket No. 25-224
	)	
Wireless Emergency Alerts	)	PS Docket No. 15-91
	)	
Amendment of 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**

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TABLE OF CONTENTS

I.	SUMMARY	1
II.	REPLY COMMENTS	2
	A. Geolocation Exceptions	2
	1. Disabled Location Services Exemption	2
	2. Exemption for Geocodes	3
	B. Unique IDs	5
	C. Rebroadcast Interval	6
	D. Ensuring the Consistent Transmission of WEA Messages	7
	E. Use of Symbols	8
III.	CONCLUSION	13

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The Alliance for Telecommunications Industry Solutions (ATIS), on behalf of its Wireless Technologies and Systems Committee (WTSC), submits these reply comments in response to the *Further Notice of Proposed Rulemaking (FNPRM)* in the above-referenced dockets.

I. SUMMARY

In these reply comments, ATIS WTSC: (1) urges the Commission to carefully consider the impacts of removing the geotargeting exceptions as each exists for a very specific reason; (2) notes that the elimination of the disabled location services exemption would raise significant technical issues, privacy concerns and device battery issues; (3) opposes increasing the 100-coordinate cap on the number of vertices that can be used to describe a polygon; (4) supports FEMA IPAWS assignment of unique alert identifiers; (4) urges the Commission to continue to permit flexible rebroadcast intervals and practical end-of-broadcast calculations; and (5)

recommends the development of standardized alerting symbols only through expert consultation and accessibility-focused user testing and accompanied by significant consumer education.

II. REPLY COMMENTS

A. Geolocation Exceptions

As explained in its comments, ATIS WTSC strongly opposes the removal of the geotargeting exceptions, noting that elimination of these exceptions raises technical, operational, privacy, and implementation challenges, as well as device impacts that require careful evaluation.¹ ATIS WTSC notes that each of these exceptions exists for a very specific reason and urges the Commission to carefully consider the impacts before eliminating these exceptions.

1. Disabled Location Services Exemption

Elimination of the consumers ability to disable location services exemption would raise significant issues, as ATIS WTSC noted in its comments.² Overriding the choices of consumers by forcing location services could undermine longstanding privacy expectations, erode consumer confidence in wireless emergency communications, and reduce public trust in service providers, alerting authorities, or other government entities with regards to possible location tracking. This would increase the risk of opt-out. CTIA – The Wireless Association (CTIA) agrees, explaining that “requiring location services to be turned on automatically for geofenced WEAs raises significant technical feasibility challenges and privacy concerns that could undermine user confidence in this critical alerting tool.”³ ATIS WTSC believes that, eliminating the disabled location services exemption and overriding consumers’ deliberate privacy choices to activate a

¹ ATIS Comments at p. 7.

² ATIS Comments at pp. 7-8.

³ CTIA Comments at pp.11-12.

feature they did not affirmatively enable could undermine consumer trust and confidence in WEA and would likely increase, rather than decrease, WEA opt-out.

The battery consumption/performance impacts of eliminating this exemption warrant careful considerations, as ATIS WTSC noted in its comments.⁴ ATIS WTSC agrees with CTIA that eliminating the exemption could adversely affect device power consumption, particularly if location services and GPS functionality are activated more frequently or remain continuously available for alert processing.⁵ Forcing location services on could be a significant drain on the battery; this could have unintended public safety considerations for some consumers (particularly those with low/old batteries) in the availability to contact assistance.

While the industry and the Commission agree that reducing the number of consumers who choose to opt out of WEA is a worthy goal, ignoring consumers' privacy choices while draining their batteries is not the correct way to accomplish it. A better solution for alerting authorities is to have the affected area fully described in the alert text to allow the consumer to determine their proximity and react accordingly.

2. Exemption for Geocodes

In the *FNPRM*, the Commission asks whether increasing the limit on the number of vertices that can be used to describe a polygon would facilitate converting geocodes into coordinates.⁶ ATIS WTSC opposes increasing the number of polygons/vertices that can be contained within one CAP message.⁷

⁴ ATIS Comments at pp. 7-8.

⁵ CTIA Comments at pp. 11-12.

⁶ *FNPRM* at ¶68.

⁷ See NWS Comments at p. 2 (urging the Commission again to adjust the 10/100 rule and increase the number of polygons/vertices that can be contained within one CAP message). ATIS agrees with CTIA that "[r]evisiting that limit would require significant standards work, testing, and stakeholder coordination to resolve complex technical issues, and there is no evidence that such changes would provide meaningful public benefit." See CTIA Comments

The potential benefits envisioned by increasing the 100-coordinate limit would be outweighed by the corresponding negative impacts on alert delivery performance, including increased latency and reduced reliability. While a more granular polygon may more precisely define the alert area and reduce over-alerting outside the affected region, excessive refinement can increase message complexity and processing requirements. As a result, there is a risk that some consumers may experience delayed receipt of alerts or, in certain circumstances, may not receive the complete alert message at all. In addition to the potential performance impacts associated with increasing the coordinate limit, ATIS WTSC notes that the WEA cell broadcast architecture is designed to operate effectively during catastrophic events when multiple alerts may be active simultaneously. To support this objective, the system incorporates payload constraints, including the current 100-coordinate limit, to help ensure the timely and reliable delivery of alerts under peak network loading conditions. Significantly increasing the coordinate payload could introduce unintended consequences during large-scale emergencies by increasing message size, processing complexity, and network resource consumption. In scenarios involving multiple concurrent alerts, these impacts could reduce the system's ability to efficiently distribute emergency notifications while also supporting other critical communications needs of consumers. Accordingly, any proposal to increase the coordinate limit should be evaluated not only for its potential gains in geographic precision, but also for its effect on overall alert delivery reliability, scalability, and public safety performance during high-demand emergency situations.

ATIS WTSC recommends that Alert Originators insert coordinates that define the area affected. The Device-Based Geo-Fencing capability has been available since 2019, and therefore, no additional design planning, software development, or testing is needed.

at p. 14.

ATIS WTSC agrees with industry experts⁸ and cannot overstate the importance of Alert Originators including a description of the affected area in the WEA text. Geographic context is essential to ensure that consumers not only understand whether they are within the impacted area but also can assess the location and movement of the threat in relation to their own location. This information enhances the effectiveness of WEA by providing the situational awareness necessary for consumers to take appropriate protective actions, including selecting safe evacuation routes and avoiding areas of danger.

B. Unique IDs

In its comments, ATIS WTSC explains that it may be possible for FEMA IPAWS to assign a Unique ID that is passed to the Participating CMSPs and then broadcast to devices in a modified WEA message for use in duplication detection.⁹ Other commenters support this view.

The New York City Emergency Management Department (NYCEM), for example, recommends that the identifier be created by IPAWS to avoid the risk of duplicative IDs by Alert Originators.¹⁰ CTIA agrees that FEMA/IPAWS is the appropriate entity to assign unique identifiers and supports the development of standards that define how this identifier is constructed, how it is delivered to providers, and what changes are necessary to provider infrastructure and device levels.¹¹

ATIS WTSC believes that a centralized approach in which FEMA assigns Unique IDs would facilitate faster implementation and lower operational complexity. Requiring Alert

⁸ Consistent with Olson, M. K., Sutton, J., Cain, L. B., & Waugh, N. (2023). A Decade of Wireless Emergency Alerts: A Longitudinal Assessment of Message Content and Completeness. *Journal of Contingencies and Crisis Management*, 1–14. <https://doi.org/10.1111/1468-5973.12518>.

⁹ ATIS Comments at p. 3.

¹⁰ NYCEM Comments at p. 3.

¹¹ CTIA Comments at pp. 3–4.

Originators to manage dedicated ID ranges would necessitate software changes, additional coordination, and ongoing administration, potentially delaying deployment of the capability and its associated public safety benefits.

C. Rebroadcast Interval

In its comments, ATIS WTSC recommends against prescribing a fixed nationwide one-minute rebroadcast interval for every alert type and every network implementation, explaining that a mandatory rebroadcast interval would reduce providers' ability to engineer their network resources and could create unnecessary control channel loading during periods of multiple simultaneous alerts.¹² Other commenters share ATIS' concerns over a fixed interval for all alert types and network implementations. National Weather Service (NWS), for example, opposes a mandatory broadcast interval of at least once every 60 seconds without further consideration of other connected elements.¹³ CTIA agrees with ATIS that different alert classes may warrant different retransmission intervals and that the Commission should protect network capacity to avoid delaying communications by users reaching out for help, especially in crisis situations when multiple simultaneous alerts might be active.¹⁴

ATIS WTSC notes that the purpose of a short rebroadcast interval is to ensure the rapid delivery of protective-action information to individuals within the affected area, including those who enter the area after the initial alert transmission. While such intervals may be particularly appropriate for Imminent Threat Alerts, ATIS WTSC believes the Commission should avoid mandating a uniform rebroadcast interval across all alert classes. Instead, providers should retain flexibility to account for the unique characteristics of different alert types, network conditions,

¹² ATIS Comments at p. 5.

¹³ NWS Comments at pp. 1-2.

¹⁴ CTIA Comments at pp. 3-4.

and evolving WEA capabilities. This flexibility will be increasingly important as future enhancements place additional demands on system capacity and network resources.

D. Ensuring the Consistent Transmission of WEA Messages

Seth Morrow, in his comments, discusses the Commission's proposal to address incidents in which the transmission of WEA messages near the end of a 24-hour active period has resulted in mobile devices displaying duplicate alerts. Mr. Morrow believes that the Commission's approach, which would require providers to stop rebroadcasting a WEA with a 24-hour active period five minutes before its scheduled expiration, would create a public-safety edge case. Consumers whose devices enter the target area, regain service, power on, or otherwise become reachable during the final five minutes may not receive alerts that are still officially active.¹⁵ According to Mr. Morrow, "differences between network and handset age calculations can cause some devices to purge duplicate-detection memory too early and display a late retransmission as a duplicate."¹⁶ This statement from Mr. Morrow is based on a statement from the Commission as to the cause of the duplicate alerts.¹⁷

ATIS WTSC respectfully disagrees with the assessment of the cause for the duplicate alert presentations. The age calculations resulting in this edge case occur prior to transmission and are performed at multiple points within the alerting chain, including by the Alert Originator and FEMA. Small mismatches in timing due to clock synchronization issues produce calculations that may result in an additional round of broadcasting more than 24 hours past the original broadcast.

¹⁵ Seth Morrow Comments at p. 2.

¹⁶ *Id.*

¹⁷ *FNPRM* at ¶58.

ATIS WTSC agrees with Mr. Morrow that the scenario under discussion represents an edge case that is unlikely to affect a significant number of consumers. It does not warrant the reworking of WEA or 3GPP standards. A small adjustment to the calculations for the number of rebroadcasts using an input running just short of the 24-hour period addresses this problem. Twenty-four hours is the maximum choice and is likely the default choice for an alerting event with no definite end time, making it unlikely that the last five minutes would be critical. Should the event still be in progress after 24 hours, the Alert Originator would send a new alert, and the broadcast would continue.

E. Use of Symbols

In its comments, ATIS WTSC explains that, while the proposed use of standardized symbols offers potential public safety benefits, such use would require substantial coordination and alignment across multiple ecosystem participants.¹⁸ ATIS WTSC urges the Commission to focus on identifying a common set of symbols that can be used by all Alert Originators across all alert dissemination methods.

ATIS WTSC is pleased to see the widespread support for the use of symbology.¹⁹ The

¹⁸ ATIS Comments at p. 10.

¹⁹ *See, e.g.* Foundation for American Innovation Comments at p. 1 ("The use of standardized symbology within WEAs can improve comprehension of the hazard type..."), Watch Duty Comments at p. ("symbols can improve comprehension for people with disabilities and people with limited English reading proficiency..."); NYCEM Comments at p. 7 ("we generally support the proposal to add standardized symbology that identifies threat types to WEA and EAS alerts"), TDIforAccess, Inc., Deaf Equality, the National Association of the Deaf, the Deaf and Hard of Hearing Technology Rehabilitation Engineering Research Center at Gallaudet University, the Hearing Loss Association of America, Deaf Seniors of America, the American Council of the Blind, Perkins School for the Blind, American Foundation for the Blind, accessSOS, and Communication Service for the Deaf (collectively Accessibility Organizations) Comments at p. 4 ("Properly designed symbols can provide a useful additional means of quickly identifying the nature of an emergency..."), The American Council of the Blind, American Foundation for the Blind, and Bridge Multimedia Corporation Comments at p. 11 ("The Commission should support standardized symbol meaning and vocabulary only within an accessibility framework..."); National Weather Service (NWS) Comments at p. 2 ("The NWS supports looking into the use of symbols, but more discussion is needed amongst the public safety community..."), Digital Alert Systems Comments at p. 23 ("Well-designed visual symbols can improve rapid recognition, assist people with limited English proficiency, support accessibility, and reduce reliance on text alone..."), AGs/NYC Comments at p. 5 ("...The Attorneys General and NYC support the Commission's proposal to

California Governor’s Office of Emergency Services (Cal OES) notes that “[s]tandardized emergency-type symbols will improve comprehension for non-English speakers and individuals with cognitive or hearing disabilities, though standardization matters more than the choice of set.”²⁰ The Attorneys General of New York, Arizona, California, Colorado, Connecticut, the District of Columbia, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New Mexico, North Carolina, Oregon, Rhode Island, Vermont (the Attorneys General) and the City of New York (NYC) (AGs/NYC) similarly notes that “the combination of an attention-grabbing symbol displayed alongside the alert text could improve the accessibility of WEA alerts for deaf, DeafBlind, or Hard of Hearing persons, for whom the WEA audio attention signal/tone is not a feature that likely captures their attention.”²¹ NYCEM in its comments explained that the rollout of its “Notify NYC” emergency mass notification program, which uses 12 alert graphics, “doubled alert comprehension and resulted in a 46% increase in engagement on social media.”²² The comments in this proceeding reflect broad support for symbology as a supplement to text in emergency alerts, with an emphasis on accessibility, standardization, and public comprehension.

Commenters also agree with ATIS on the importance of having experts determine exactly which symbols and infographics would be useful and instantly understood. ATIS WTSC recommends in its comments that the Commission consult with the appropriate communities

integrate ‘standardized symbology that identifies the threat type’ into WEA ... and EAS...”), America’s Public Television Stations and the Public Broadcasting Service (collectively PTV) Comments at p. 10 (“PTV supports the voluntary use of standardized symbols to quickly identify the category of threat associated with an emergency alert...”), National Association of Broadcasters Comments at p. 22 (“...we join with DAS and the State Broadcasters Associations in support of a voluntary approach to the use of EAS symbols.”), and AWARN Comments at p. 4 (“AWARN supports the use of standardized symbols for emergency alerts...”).

²⁰ Cal OES Comments at p. 2.

²¹ AGs/NYC Comments at p. 5.

²² NYCEM Comments at p. 7.

about what symbols would be the most understandable and effective to convey messages.²³ The Foundation for American Innovation similarly recommends “more targeted research and consultations with social scientists before any deployment of the proposed NAPSG symbology in WEA messaging...”²⁴ NWS acknowledges that more discussion is needed amongst the public safety community of what the use of symbols should look like and proposes that the Commission organize a group of public safety representatives to look into this capability for how symbols would be used in practice.”²⁵ The Accessibility Organizations recommend that the Commission require “meaningful user testing” before selecting or standardizing a symbol set, including only whether participants can identify the general hazard, but also whether the complete alert presentation enables them to understand the emergency and the protective action they should take.”²⁶ The American Council of the Blind, American Foundation for the Blind, and Bridge Multimedia Corporation note that “[e]arly and iterative testing [of symbols] should examine symbol comprehension, semantic exposure through assistive technology, interference with other access features, simultaneous-alert presentation, and learnability across disability groups.”²⁷ CTIA urges the Commission to select an appropriate, universally recognized set of symbols endorsed by the accessibility community and the emergency communications community.²⁸ ATIS WTSC agrees that expert consultation, public safety community input, and robust user testing are essential for selecting and standardizing effective emergency alert symbols.

There is also broad support from commenters that symbols should complement rather than replace clear instructions from Alert Originators. The Accessibility Organizations note that

²³ ATIS Comments at p. 10.

²⁴ Foundation for American Innovation Comments at p. 1.

²⁵ NWS Comments at pp. 2-3.

²⁶ Accessibility Organizations Comments at p. 5.

²⁷ American Council of the Blind, American Foundation for the Blind, and Bridge Multimedia Corporation Comments at p. 12.

²⁸ CTIA Comments at p. 7.

“[s]ymbols should supplement emergency alert information, but not substitute for communications that align with their recipients’ primary communication modality.”²⁹ The American Council of the Blind, American Foundation for the Blind, and Bridge Multimedia Corporation urge the Commission to support standardized symbol meaning and vocabulary “only within an accessibility framework in which symbols supplement, rather than replace, complete plain-language emergency information.”³⁰ International Deaf Emergency recommends that “a symbol must arrive together with an action-first plain-language instruction and with non-visual carriers of the same information.”³¹ The AGs/NYC in their comments recommend against standalone symbols, explaining that “[s]ymbols must complement the text, never replace it. Critical information regarding the hazard, location, expected duration, and recommended actions must remain fully accessible in plain text....”³² ATIS WTSC also notes that including text labels for each symbol, as CTIA recommends,³³ would add an extra assurance of understanding.

ATIS WTSC notes that commenters also support the need for and importance of consumer education about the use of symbols. The AGs/NYC in its comments note the need for a robust educational campaign and recommend that the Commission include explanatory information about symbols in consumer guides (in English, multiple languages, and ASL) and conduct community outreach to familiarize the public with the meanings of symbols before implementation.³⁴ The American Council of the Blind, American Foundation for the Blind, and

²⁹ Accessibility Organizations Comments at p. 11.

³⁰ American Council of the Blind, American Foundation for the Blind, Bridge Multimedia Comments at p.11.

³¹ International Deaf Emergency Comments at p. 3.

³² AGs/NYC Comments at p. 6. *See also* Digital Alert Systems Comments at p. 23 (“Symbols should supplement alert text and audio, not replace them.”), Washington Emergency Management Division (WA EMD) Comments at p. 3 (“Symbols should supplement, rather than replace, clear text and protective action instructions and should be tested to ensure they are easily understood by the public.”), and Sinclair, Inc. (Sinclair) Comments at p. 5 (noting that improvements such as recognizable threat symbols “should supplement, rather than burden, the initial alert”).

³³ CTIA Comments at p. 7.

³⁴ AGs/NYC Comments at p. 5.

Bridge Multimedia Corporation agree that “accessible public education should accompany implementation so users can learn standardized meanings before an emergency occurs.”³⁵ ATIS WTSC urges the Commission to develop consumer education tools and public guides to ensure that symbols in emergency alerts are understood and effective.

Finally, ATIS WTSC notes that, much like multilingual templates, the symbols would need to be stored at the devices rather than included in the broadcast due to capacity constraints. To support such functionality, standards development would be required to define a common signaling mechanism through which the Alert Originator can indicate the specific symbol or infographic associated with an alert. Corresponding standards would also be needed to specify how participating networks convey this information and how mobile devices interpret the signaling and select the appropriate locally stored symbol for presentation. Without such standardized signaling and device behavior, consistent and interoperable implementation across the WEA ecosystem would not be possible.

³⁵ American Council of the Blind, American Foundation for the Blind, Bridge Multimedia Comments at p. 12.

II. CONCLUSION

ATIS WTSC appreciates the opportunity to respond to the comments submitted to the FNPRM and urges the Commission to consider the input above.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Thomas Goode", written in a cursive style.

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