

**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 replies to the comments submitted in response to the *Further Notice of Proposed Rulemaking (FNPRM)*, released April 21, 2023, in the above-referenced dockets. In these reply comments, ATIS’ Wireless Technologies and Systems Committee (WTSC) notes support among commenters for many recommendations in ATIS WTSC’s comments, such as those related to the use of machine translations and pre-installed symbols, as well as the risks associated with the *FNPRM* proposals regarding multimedia content. ATIS WTSC also notes that some commenters do not have a full understanding of the WEA technology and capabilities, and that further education on WEA is needed. As noted in the record, significant concerns remain “regarding the reliability and maturity of the some of the technology associated with the *FNPRM* proposals, the potential unintended or negative network impacts associated with implementation of the proposals, and technical constraints impeding industry compliance with the performance and reporting proposals contained in the *FNPRM*.”<sup>1</sup>

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<sup>1</sup> Comments of the Competitive Carriers Association at p. 1.

## I. Reply Comments

### A. Expanded Language Support

ATIS WTSC is pleased by other commenters' support for many of the recommendations made in its comments, including those concerning both the utility<sup>2</sup> and need for greater study<sup>3</sup> of device-based machine translations. However, ATIS WTSC disagrees with King County Emergency Management's (King County) recommendation that WEA messages be translated into additional languages beyond those identified in the *FNPRM*. While ATIS WTSC believes that machine translation is the most scalable solution being explored,<sup>4</sup> the 13 languages identified in the *FNPRM*<sup>5</sup> would be an appropriate starting point to allow for additional testing to evaluate whether machine translation is a viable option to enhance WEA language accessibility.

ATIS WTSC's comments explain that it is preferable to continue to provide the English version of the alert along with the preferred language version of the alert even when device translation is used,<sup>6</sup> a view supported by the New York City Emergency Management Department (NYCEM).<sup>7</sup> ATIS disagrees that, as suggested by one commenter, the presentation of the English version along with the preferred language version would lead to confusion.<sup>8</sup> On the contrary, presenting the English version will aid consumer comprehension of alerts by addressing translation errors or presenting words (e.g., street addresses) and numerals for which translation is not needed.

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<sup>2</sup> See, e.g., Comments of AT&T at p. 8, Comments of FEMA Integrated Public Alert and Warning System (IPAWS) Program Office at p. 1; Comments of King County Emergency Management at p. 2.

<sup>3</sup> See, e.g., Comments of New York City Emergency Management Department at p. 3; Comments of T-Mobile USA, Inc. at p. 4.

<sup>4</sup> Comments of ATIS at p.4.

<sup>5</sup> *FNPRM* at ¶13.

<sup>6</sup> Comments of ATIS at pp 4-5.

<sup>7</sup> Comments of NYCEM at p. 3 (recommending that WEA messages be presented in English and the device's preferred language).

<sup>8</sup> Comments of FEMA Integrated Public Alert and Warning System (IPAWS) Program Office at p. 2.

ATIS WTSC believes that there may be confusion among some commenters regarding the two different implementations of “template-based alerts” discussed in the *FNPRM*.<sup>9</sup> One implementation gives the Alert Originator (AO) a choice of pre-scripted templates prior to the sending of the alert, which enhances the speed of the AO’s input by providing the majority of the text and allowing them to fill in the event-specific details before sending.<sup>10</sup> The other proposed implementation involves pre-scripted templates pre-installed on the device to be triggered by a new indicator included by the AO in the alert. This latter implementation raises complex issues around authorization, access, and template management (including server architecture and storage security issues). It also requires a process for maintenance of the device-stored templates and risks possible network impacts if the templates are not managed carefully.<sup>11</sup> This approach also would not permit AOs to tailor messages to their jurisdictions or to include event-specific information. As the Regional Disaster Preparedness Organization (RPDO) states, WEA “[s]hould not rely on scripted templates, as the United States Geological Survey does for Shake Alert. This approach may work well for earthquake early warning, but it is not sufficient for addressing more complex emergency situations, and it reduces flexibility for crafting regionally- and culturally-relevant messages.”<sup>12</sup>

National Oceanic and Atmospheric Administration’s (NOAA’s) National Weather Service (NWS) acknowledges in its comments the need for a new Common Alerting Protocol (CAP) parameter, which would have to be mapped to a new parameter broadcast to mobile devices, to allow the AO to choose the desired templates.<sup>13</sup> ATIS WTSC agrees that use of pre-

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<sup>9</sup> *FNPRM* at ¶13.

<sup>10</sup> *FNPRM* at ¶17 (referencing the approach taken by Google and the United States Geological Survey (USGS) that delivers earthquake early warning messages by triggering devices to display alert content preinstalled on the device).

<sup>11</sup> See Comments of ATIS at pp. 7-8.

<sup>12</sup> Comments of RPDO at p. 2.

<sup>13</sup> Comments of NWS at p.1.

scripted and pre-installed templates on the device, much like symbols and infographics,<sup>14</sup> will require a CAP update, in addition to updates to Federal Emergency Management Agency (FEMA) Integrated Public Alert and Warning System (IPAWS) and the Commercial Mobile Service Provider (CMSP) infrastructure and mobile devices.

ATIS WTSC disagrees with the recommendation made by several Colorado Agencies that the Commission and FEMA develop an “app” that would translate an Emergency Alert into the language selected by the individual, as well as into ASL and text.<sup>15</sup> This app, which is proposed to support the AO in WEA generation, would suffer from the same broadcast capacity issues that ATIS identified in its comments associated with translations by the CMSP,<sup>16</sup> because the additional translations of the alert text would be produced at the AO, placing the burden on the CMSP to broadcast the WEA in all 13 languages.

## **B. Symbology and Infographics**

ATIS WTSC is pleased to see substantial support among commenters for the CSRIC VIII recommendation that easily recognized symbols be pre-installed in the device to prompt quicker comprehension by the user.<sup>17</sup> ATIS WTSC agrees with AT&T Services, Inc. (AT&T) that “further technical and operational evaluation is needed to determine whether and how pre-installed capabilities can be utilized.”<sup>18</sup> ATIS WTSC also supports NYCEM’s comments regarding the benefits of coupling symbology with the use of machine translations to provide a context for the consumer when reading the translated text.<sup>19</sup> ATIS WTSC believes that

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<sup>14</sup> Comments of ATIS at p. 16.

<sup>15</sup> Comments of 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 Disaster Management, Jefferson County Emergency Communications Authority, and Larimer Emergency Telephone Authority (collectively Colorado Agencies) at p. 14.

<sup>16</sup> Comments of ATIS at pp. 7-8.

<sup>17</sup> See Comments of AT&T at pp 1-19; Comments of Verizon at p. 5; Comments of T-Mobile at p. 7.

<sup>18</sup> Comments of AT&T Services, Inc. at p. 19.

<sup>19</sup> Comments of NYCEM at p.3.

infographics and a spoken term or phrase could further enhance this context. NYCEM's comments explained recent research conducted by Notify NYC and Cornell Tech that found that utilizing basic symbols as context boosters doubled comprehension of the alert.<sup>20</sup> As NYCEM observed, use of symbols in WEAs also could aid comprehension by individuals with developmental disabilities who may better comprehend information through the use of communication symbols.<sup>21</sup>

ATIS WTSC disagrees with the Emergency Alert & Warning Work Group's (EAWWG) recommendation that WEA images should include alt-text so that blind and low vision recipients can use screen readers to understand their intent.<sup>22</sup> ATIS WTSC agrees that the needs of blind and low-vision recipients must be considered but believes that development of spoken terms or short phrases representing alerting events, as recommended by CSRIC VIII and supported by ATIS WTSC in its comments,<sup>23</sup> would be an equally effective manner of speeding WEA comprehension by blind or low vision recipients.

### **C. Multimedia Content**

ATIS WTSC disagrees with the Association of Public-Safety Communications Officials (APCO) International, Inc. regarding the transmission of multimedia in WEA. In addition to the changes proposed in the *FNPRM* related to the transmission of multimedia, APCO suggests that service providers "should develop and maintain WEA capabilities in a manner that eliminates disparities between what is available to consumers and what is available to WEA alert originators."<sup>24</sup> ATIS believes that APCO fails to fully understand the nature of the WEA system,

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<sup>20</sup> Comments of NYCEM at p. 6.

<sup>21</sup> *Id.*

<sup>22</sup> Comments of EAWWG at p. 3.

<sup>23</sup> Comments of ATIS at p. 9.

<sup>24</sup> Comments of APCO at p. 2.

which is a one-way system utilizing the Cell Broadcast Service (CBS). CBS is designed and optimized for text broadcast and offers many advantages for WEA dissemination, particularly in terms of reliability and latency. As noted in its comments, ATIS WTSC does not support the addition of multimedia content in the WEA broadcast because this would create capacity issues that would negatively impact performance, reliability, and latency.<sup>25</sup>

ATIS WTSC agrees with the Colorado Agencies, which acknowledge the risks associated with the *FNPRM* proposals regarding multimedia content. The Colorado Agencies note that multimedia content should not be part of the WEA if Participating CMSPs are worried about network delay and bandwidth limitations because “[t]he risk of delay is too great.”<sup>26</sup> ATIS also agrees with USGS’s) concerns that “changes to the WEA system design or formats required to send multimedia content will adversely affect the speed of message delivery.”<sup>27</sup>

#### **D. Suppression of WEA Attention Signals**

ATIS WTSC disagrees with NYCEM that modifications to WEA attention signals be permitted based on alert class so that, for example, Imminent Threat alerts could have vibration and sound, while Public Safety alerts could be silent.<sup>28</sup> ATIS WTSC notes that any recommendation to base WEA presentation and alerting functions, such as the audio attention signal, on the alert classes would require greater consistency by AOs in the use of the alert classes, and could remove flexibility for the AOs in sending WEAs. ATIS WTSC is concerned that any alert class-based presentation would result in inconsistencies in WEA presentation that would confuse consumers and make WEA less effective.<sup>29</sup>

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<sup>25</sup> Comments of ATIS at p. 11.

<sup>26</sup> Comments of Colorado Agencies at p. 15.

<sup>27</sup> Comments of United States Geological Survey at p. 4.

<sup>28</sup> Comments of NYCEM at p. 6.

<sup>29</sup> Comments of AT&T Services, Inc. at p. 16.

ATIS WTSC supports the views of the Colorado Agencies, which agree that adding options for the AO, such as whether to include the audio attention signal, increases the potential for human error and, further, that studies show that the major failure point in emergency alerting is the AO and the processes behind that person.<sup>30</sup> ATIS WTSC also appreciates the USGS comments that, for the EEW use case, “immediate protective action by the consumer is required, therefore allowing consumers to receive WEAs with the audio attention signal and vibration cadence turned off by default has the same result as opting out of WEA entirely.”<sup>31</sup>

## **E. Performance**

ATIS WTSC disagrees with the EAWWG suggestion that location services always be enabled for WEA on WEA-capable mobile devices, even if they are disabled for other uses.<sup>32</sup> ATIS WTSC opposes requiring location services to be always enabled for WEA. ATIS WTSC believes the Commission should not override consumers’ decisions regarding whether or not to enable location services for WEA. The decision to turn off location services is often made for important reasons (for instance, to extend battery life when battery is low). In addition, ATIS WTSC believes that consumers will have privacy concerns with requiring location services for a network-initiated broadcast alert, where the location data is not related to a user-initiated call for assistance.

NYCEM’s comments express its belief that “WEAs should be delivered to all devices within a targeted area.”<sup>33</sup> As ATIS WTSC has previously explained, alerts are not “delivered” to devices based on their location, but rather are broadcast to any service area overlapping some

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<sup>30</sup> Comments of Colorado Agencies at p. 8.

<sup>31</sup> Comments of the United States Geological Survey at p. 5.

<sup>32</sup> Comments of EAWWG at p. 4.

<sup>33</sup> Comments of NYCEM at p. 9.

portion of the Alert Area.<sup>34</sup> Consumers in areas that interfere with or block wireless signals (e.g., in elevators) may not receive the alert. Similarly, ATIS WTSC notes that, due to the nature of RF propagation and the need to broadcast the WEA to 100% of the Alert Area (subject to technical feasibility), it is impossible to eliminate “overshooting” the Alert Area.

King County’s comments raise a question regarding the differences between live messages and test messages, stating that it lacks information “on differences that may exist between how live messages and test messages are handled and disseminated...”<sup>35</sup> ATIS WTSC notes that the State/Local WEA Test is processed the same as all other alert class. The only alert processed differently is the National Alert, which is given prioritization in the CMSP infrastructure, and the inability for consumers to opt out. ATIS WTSC further notes that the State/Local WEA Test also offers the same options to AOs as offered by all other alert classes, including Device-Based Geo-Fencing (DBGF).

## **F. Limit on Vertices**

NWS’s comments recommend a substantial increase in the number of vertices to be broadcast with an alert, or simple removal of the limit.<sup>36</sup> The Colorado Agencies similarly request that the Commission significantly increase the number of vertices allowable for use within IPAWS.<sup>37</sup> ATIS WTSC does not support increasing the number of vertices as this would negatively impact performance of WEA nationwide; broadcasting additional vertices would produce similar capacity impacts to those described for the addition of multimedia. ATIS WTSC notes that 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,

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<sup>34</sup> Comments of ATIS to *FNPRM*, released April 21, 2022, in PS Docket Nos. 15-91 and 15-94, at pp. 7-8, 9-10.

<sup>35</sup> Comments of King County Emergency Management at p. 3.

<sup>36</sup> Comments of NWS at p. 5.

<sup>37</sup> Comments of Colorado Agencies at p. 5.



especially during a crisis involving multiple simultaneous alerts, as well as to reduce latency for alert presentation. A retooling of WEA to support additional vertices would degrade its performance and have negative impacts to consumers as noted above, and would also have significant impacts to standards, CMSP infrastructure, and mobile devices.

ATIS WTSC disagrees with the Colorado Agencies that, if additional vertices were available, an AO might not have to be specific in their description of the Alert Area.<sup>38</sup> The Colorado Agencies note that increasing the number of vertices will allow them to use preplanned polygons and “reduces the time we can send an emergency alert because it eliminates the need to verbally describe the footprint of the desired alerting area over public safety.”<sup>39</sup> ATIS WTSC believes that specificity in the description of the Alert Areas will remain vital because not all devices will be able to perform DBGF and may present the alert outside of the Alert Area. Moreover, some consumers depend on screen readers that cannot describe polygons. Text descriptions of the Alert Area in the WEA messages are critical under any circumstances. Also, the current number of vertices supported in WEA does not limit the Colorado Agencies from defining pre-planned polygons for use by AOs in reducing time to send an alert.

## **G. Cost Estimates**

ATIS WTSC disagrees with the assessment of the potential costs associated with the proposals in the *FNPRM*. The Commission estimates that Participating CMSPs would incur a \$39.9 million one-time cost to update the WEA standards and software necessary to comply with the proposals in this *Further Notice*.<sup>40</sup> ATIS believes that this figure does not consider all the potential impacts associated with the *FNPRM*'s proposals, particularly given the potential

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<sup>38</sup> Comments of Colorado Agencies at pp. 6-7

<sup>39</sup> *Id.*

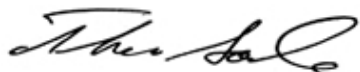
<sup>40</sup> *FNPRM* at ¶93.

impacts to the AO interface, AO software vendors, CAP, FEMA IPAWS, and the CMSP infrastructure and mobile devices.<sup>41</sup> Without a full standards effort to identify the impacts, such cost estimates are premature.

## II. CONCLUSION

ATIS WTSC supports the Commission's efforts to enhance WEA's accessibility. However, the Commission should consider the technical challenges and potential impacts to performance identified by ATIS WTSC and other commenters associated with certain *FNPRM* proposals. As noted in the record, WEAs "should be accessible, but accessibility should never come at the detriment of timeliness or effectiveness."<sup>42</sup>

Respectfully submitted,



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August 21, 2023

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<sup>41</sup> Comments of ATIS at p. 16.

<sup>42</sup> Comments of Colorado Agencies at p. 13.