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

In the Matter of	)	
	)	
Public Safety and Homeland Security Bureau	)	PS Docket Nos. 15-91
Seeks Comment on Implementation of	)	
Multilingual Wireless Emergency Alerts	)	PS Docket No. 15-94

Comments of the Alliance for Telecommunications Industry Solutions (ATIS)

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SUMMARY

ATIS believes that further consideration of machine translations is warranted and recommends that the Commission give due consideration to the explosion of interest in AI. ATIS strongly believes that, given the speed at which this technology is developing, machine translations will be much more useful to both the alerting community and to citizens receiving alerts than preinstalled templates.

Static Templates and Identifying Alert Types. If the PSHS Bureau nonetheless requires the use of preinstalled templates, ATIS WTSC supports the Bureau's approach of focusing on the most commonly used alerts that are the most time sensitive due to their imminent threat nature. However, ATIS recommends against the use of static templates for AMBER alerts or active shooter events because event-specific details are critical to the effectiveness of these alerts; static instructions for these alert types could be ineffective or even harmful.

ATIS does not believe that there should be multiple alert templates for each type of time sensitive alert that provides differing instructions to the public. In addition to concerns regarding the higher risk of error or delay associated with the AO having too many options, the need to support more templates per event would also increase the complexity of the technical design solution and the risk that AOs could send the wrong message.

ATIS also does not believe that generic alert templates such as "shelter in place" or "evacuate now" would be useful but instead likely cause confusion and panic and increase milling. Similarly, ATIS believes that "all-clear" templates that do not specify which emergency has concluded may create confusion and panic, particularly if an "all-clear" is sent for a single event when multiple events are active (which is common for severe weather events).

With regard to whether multilingual templates should be displayed on their own or accompanied by the English-language version of the alert, ATIS notes that currently the English-language version of the alert is always presented, while the Spanish-language translation of the alert (if created) is presented only if the user settings indicate that it should be. ATIS recommends that this practice continue for multilingual templates, with presentation of the received English-language alert in addition to presentation of the indicated event template in the preferred language.

While ATIS notes that it may be possible to create a new data element to ensure presentation of the correct template, this data element would require a development effort, and would be expected to impact end-to-end interfaces, including Common Alerting Protocol (CAP). It would also require appropriate updates to ATIS standards and 3GPP specifications. The extent of near-term penetration and device upgradeability cannot be determined until after the standards design phase.

Fillable Templates. In order to process and broadcast the four fillable elements the Commission proposes for WEA templates, additional work would be needed, including: (1) significant development to receive and deliver the customizable event-specific information; (2) additional updates to multiple interfaces impacting both ATIS standards and 3GPP specifications; and (3) additional design considerations for possible error conditions. ATIS notes that, because one of these elements (the optional URL) is allowed as part of the alert text but is not a separate information element in the CAP Message, CAP updates may be required. ATIS also believes that it would be counterproductive in the context of this proceeding (and pose the

risk of website congestion and delays) if the information sourced at the URL is not already translated into all 13 languages plus ASL in addition to English.

While ATIS believes that the fillable template approach is technically feasible, it would require greater complexity and would make upgrades to deployed devices even more challenging, impacting the forecast for near-term market penetration. Any delays that may be caused at the sending end by the inclusion of fillable elements would impact all consumers.

ATIS agrees with the PSHS Bureau that these fillable elements should not be translated.

American Sign Language Considerations. ATIS recommends that ASL templates be pre-loaded onto mobile devices in a similar manner to the other templates, and carefully planned to avoid overloading network capacity. Some consumer devices (particularly, lower cost models) may present technical challenges that may impact the device's ability to support ASL. Standards developed to support ASL templates must therefore consider a broad array of consumer devices handsets and capabilities.

ATIS agrees with the Commission that fillable elements cannot be applied to ASL videos in the same manner as they would be applied to text templates. ATIS believes that most fillable elements would require a series of gestures specific to those elements (e.g., proper names, addresses).

Supporting Additional Languages. ATIS is concerned about the design complexity that would be necessary to expand the number of templates. Adding a large number of additional languages may require updates at the modem layer and would require additional time to develop the standards to support an extensible solution and to evaluate any limitations related to mobile device storage, as well as support for character sets and the resolution of other technical issues.

ATIS disagrees with the Commission regarding the proposed 30-month deadline for the implementation of the templates for the 13 languages, English, and ASL, noting that this deadline does not provide enough time for necessary design work, updates to ATIS standards and 3GPP specifications, development, testing, integration testing and end-to-end testing, and first deployment for support of static templates. Additional effort would be needed for the more complex design required for fillable templates. As previously explained to the Commission, ATIS believes that support for WEA enhancements such as this would require between 36 and 54 months.

Future Updates to Alert Types, *Templates and Languages.* Finally, while ATIS has no specific feedback on the process for future modifications to the templates, it does support the concept that the Commission should maintain the official repository of approved templates via the notice and comment processes described in the *Public Notice*.

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Comments of the
Alliance for Telecommunications Industry Solutions (ATIS)

The Alliance for Telecommunications Industry Solutions (ATIS) hereby submits these comments in response to the Federal Communications Commission's (Commission) *Public Notice* in the above-referenced dockets. In the *Public Notice*, the Commission's Public Safety and Homeland Security Bureau seeks comment on the implementation of a set of pre-translated, pre-installed Wireless Emergency Alert (WEA) message templates in the 13 most commonly spoken languages in the U.S. besides English and American Sign Language (ASL). In these comments, ATIS provides input regarding technical and operational issues that should be considered if the Commission implements the proposed templates.

I. BACKGROUND

ATIS is a global standards development and technical planning organization that develops and promotes worldwide technical and operations standards for information, entertainment, and communications technologies. ATIS' diverse membership includes key stakeholders from the Information and Communications Technologies (ICT) industry – wireless, wireline, and VoIP service providers, equipment manufacturers, broadband providers, software developers, consumer electronics companies, emergency management and public safety agencies, and

internet service providers. ATIS is also a founding partner and the North American Organizational Partner of the Third Generation Partnership Project (3GPP), the global collaborative effort that has developed the 4G Long-Term Evolution (LTE) and 5G New Radio (NR) wireless specifications.

ATIS' Wireless Technologies and Systems Committee (WTSC) develops wireless radio access, system, and network solutions related to terrestrial and non-terrestrial wireless and/or mobile services and systems. WTSC develops and continues to enhance solutions necessary to support a U.S. public warning system through the Wireless Emergency Alert system. ATIS is the 3GPP North American partner, and WTSC provides critical technical review and input for necessary contributions into global standards to maintain interoperability.

II. COMMENTS

As an initial matter, ATIS WTSC continues to believe that there is greater potential in the use of machine translations within the proposed timeframe that would be required for development and deployment of the template approach. The Commission indicated in the October 2023 *Third Report and Order* in these dockets that, while some commenters suggested that machine language translation was not ready for utilization in WEA at that time, the technology did hold promise.[1] The Commission therefore agreed that it would continue to examine the feasibility of machine translation technologies and their application to multilingual WEA.[2] ATIS WTSC believes that the Commission should give due consideration to the explosion of interest in AI in the industry that has occurred since the release of the *Third Report and Order* that is resulting in many new forums and organizations centered around AI

[1] *Third Report and Order,* released October 20, 2023, in PS Docket Nos. 15-91 and 15-94. (*2023 WEA Report and Order*) at ¶18.
[2] *Id.*

exploration and application. Based on these developments, more expansive and in-depth consideration of machine translations is warranted, keeping in mind the need to extrapolate its potential over the 3+ years needed to deploy the template solution. ATIS WTSC strongly believes that, given the speed at which this technology is developing and the greater real-time versatility it offers, machine translations will be much more useful to both the alerting community and to citizens receiving alerts than preinstalled templates.

A. Static Templates and Identifying Alert Types

If the PSHS Bureau nonetheless requires the use of preinstalled templates, ATIS WTSC supports the Bureau's approach of focusing on the most commonly used alerts that are the most time sensitive due to their imminent threat nature. Focusing on the most common alerts would limit the number of templates that must be stored in the device and any associated maintenance of the templates.

The PSHS Bureau requests input on the usefulness of supporting static templates for AMBER alerts or active shooter events, noting that "both of these alert types…typically include specific information to describe the incident."[3] ATIS WTSC recommends against the use of static templates for these two types of events because event-specific details are critical to the effectiveness of these alerts. To be effective, AMBER alerts require significant dynamic content, including the descriptions of the people involved, vehicles, license plates and other details. Active shooter events are very fluid situations and relevant instructions will vary based on factors such as the shooter's exact location, specific actions to take, and escape routes, affecting the user's decision to hide or run. Static instructions for these alert types could be ineffective or even harmful.

[3] *Public Notice* at ¶8.

The PSHS Bureau requests input in the *Public Notice* regarding whether there should be "multiple alert templates for each type of time sensitive alert that provides differing instructions to the public."[4] In response to the Commission's April 2023 *Further Notice of Proposed Rulemaking* (*FNPRM*) in these same dockets,[5] ATIS notes that Alert Originators (AOs) commented on the higher risk of error or delay when the sending AO has too many options.[6] And, has been noted, any delays would be detrimental for time critical alerts.[7] Moreover, the need to support more templates per event will increase the complexity of the technical design solution and poses the risk that AOs could select the wrong template.

The *Public Notice* also asks whether generic alert templates such as "shelter in place" or "evacuate now" would be useful. [8] ATIS WTSC believes that such alert templates would not be useful but instead would likely cause confusion and panic and increase milling. Research into effective emergency messages has shown that the public will trust and thus react to an emergency alert when it contains five key types of warning message content that motivate people to take timely and appropriate protective action (source, hazard name/description, location, consequences of threat, protective action, time).[9] Without a context to justify the need for action, alert recipients are more likely to spend time checking other sources including social media

[4] *Public Notice* at ¶11.
[5] *FNPRM*, released April 21, 2023, in PS Docket Nos. 15-91 and-15-94.
[6] *See* 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) in PS Docket Nos. 15-91 and 15-94, at p. 8 (July 21, 2023) (agreeing that adding options for the AO, such as whether to include the audio attention signal, increases the potential for human error and that studies show that the major failure point in emergency alerting is the AO and the processes behind that person).
[7] *See* United States Geological Survey Comments in PS Docket Nos. 15-91 and 15-94, at p. 3 (Jul. 27, 2023) (noting that delays of even just one second can degrade the effectiveness of earthquake alerting).
[8] *Public Notice* at ¶12.
[9] Message Design Dashboard (MDD), Dr. Jeanette Sutton, Associate Professor and Director, Emergency and Risk Communication Message Testing Lab, University at Albany, SUNY, available at: https://www.fema.gov/sites/default/files/documents/fema_message_design-dashboard.pdf (last visited June 2, 2024).

rather than following the instructions. If specific information and relevant context are provided, it is more likely that consumers will have confidence in the alert text and take appropriate action.

The *Public Notice* also asks about whether alerting authorities would benefit from an "all clear" template.[10] ATIS WTSC notes that, as with the generic template alerts, "all-clear" templates that do not specify which emergency has concluded may create confusion and panic, particularly if an "all-clear" is sent for a single event when multiple events are active (which is common for severe weather events). In addition, generic "all-clear" templates may be received by consumers who are still at risk, creating the false sense that the danger is over and potentially putting them in harm's way. ATIS WTSC notes that some of this confusion may be alleviated by fillable templates (see Section II.B of these comments).

The PSHS Bureau seeks comment on whether multilingual templates should be displayed on their own or accompanied by the English-language version of the alert.[11] ATIS WTSC notes that currently the English-language version of the alert is always presented, while the Spanish-language translation of the alert (if created by the sending AO) is presented only if the user settings indicate that it should be. ATIS WTSC recommends that a similar practice continue for multilingual templates, with presentation of the received English-language alert in addition to presentation of the indicated event template in the preferred language. As acknowledged by the PSHS Bureau in the *Public Notice*, there are commenters in the record who suggest that "the multilingual template-based alert be displayed together with the English-language alert that

[10] *Public Notice* at ¶13.
[11] *Public Notice* at ¶14.

includes event-specific details, to promote a fuller understanding of the nature of the emergency."[12] This view is shared not only by ATIS but by others including AOs.[13]

The PSHS Bureau also asks whether it is possible to display both a template-based multilingual alert together with an AO-issued alert that includes event-specific information[14] ATIS WTSC believes that there are no technical reasons that would prohibit the presentation of the received English and Spanish WEA along with the template.

ATIS WTSC assumes that the inclusion of the English templates in Appendices C and D is solely to allow reviewers to confirm the translations in the later appendices. English alert text is currently required as part of the signaling from the AO and must be maintained for backwards compatibility in devices not upgradeable. Similarly, Spanish alert text sent from the AO, while not required, is the only Spanish text that can be presented by legacy devices. Because Spanish alert text with event-specific details is currently supported in some jurisdictions, AOs should be encouraged to include Spanish alert text in all WEAs. ATIS WTSC does not see a clear benefit to using Spanish templates given the focus on the imminent-threat alerts currently proposed because any AO that would utilize these particular static templates already sends Spanish as part of their WEA process. ATIS recommends that Spanish templates not be used on the device.

The *Public Notice* also seeks comment on the implementation of the templates, specifically asking whether providers could create a new data element that is transmitted upon choosing the template that will ensure devices display the correct templates.[15] ATIS WTSC notes that participating Commercial Mobile Service Providers(CMSPs) and mobile device OS

[12] *Public Notice* at ¶14.
[13] *See* Comments of New York City Emergency Management Department in PS Docket Nos. 15-91 and 15-94 at p. 3 (July 20, 2023) and Comments of Federal Emergency Management Agency (FEMA) Integrated Public Alert and Warning System (IPAWS) Program Office in PS Docket Nos. 15-91 and 15-94 at p. 2 (July 19, 2023).
[14] *Public Notice* at ¶14.
[15] *Public Notice* at ¶15.

providers could support a standards modification that creates signaling to the CMSP network that is then broadcast to the mobile device, and devices could be updated to recognize and process the new information. This new information, used in combination with the user's preferred language setting, could be used to present the alert template. This requires a development effort, and is expected to impact end-to-end interfaces, including Common Alerting Protocol (CAP). It would also require appropriate updates to ATIS standards and 3GPP specifications. The extent of near-term penetration and device upgradeability cannot be determined until after the standards design phase.

B. Fillable Templates

The PSHS Bureau asks about four elements for fillable WEA templates: (1) Sending Agency; (2) Area Affected; (3) Expiration Time; and (4) URL (if desired).[16] As explained above, there are clear benefits to including event-specific information in alerts. However, it should be noted that the four proposed elements are not currently delivered to the mobile device. The support required for processing and broadcasting these four fillable template elements will be more complex than for static templates and will require: (1) significant development to receive and deliver the customizable event-specific information; (2) additional updates to multiple interfaces impacting both ATIS standards and 3GPP specifications; and (3) additional design considerations for possible error conditions. ATIS WTSC notes that these elements are not currently processed in the CMSP network or validated by IPAWS, and some are not in a usable format and are not currently populated by the AOs consistently/properly for use in a fillable template. An analysis is needed to determine whether they can be used in such a way as to be valid for use as a fillable piece of information in the alert template. ATIS WTSC believes that it

[16] *Public Notice* at ¶17.

would be counterproductive in the context of this proceeding (and pose the risk of website congestion and delays) if the information sourced at the URL is not already translated into all 13 languages plus ASL in addition to English.

The *Public Notice* asks about the technical feasibility of its fillable template approach, as well as the ability to update devices already in the field to support fillable templates. [17] ATIS WTSC believes that, while the fillable template approach is technically feasible, it requires greater complexity and would make upgrades to deployed devices even more challenging, impacting the forecast for near-term market penetration. Any negative impacts to legacy devices will be determined during the design process. However, with either static templates or fillable templates, it is common design practice that any new information elements not recognized by legacy devices would be ignored and the alert will be processed as it is currently.

The PSHS Bureau also asks about delays associated with the inclusion of these four fillable elements in WEA.[18] While ATIS WTSC cannot speak to delays that may be caused at the sending end by the inclusion of fillable elements, it notes that any such delays at the sending end would impact all consumers. Any delays in the broadcast and mobile device processing of the fillable fields would be determined during the design process.

The Bureau seeks comment on possible translations for these fillable elements, noting that it anticipates that fillable elements would not be translated into the displayed template language.[19] ATIS WTSC agrees with the PSHS Bureau that these fillable elements should not be translated. Contents of the fillable fields often do not require translation or cannot be translated and any attempted translation could increase confusion for the user, particularly if these

[17] *Public Notice* at ¶18.
[18] *Public Notice* at ¶16.
[19] *Public Notice* at ¶19.

translations of fillable elements need to be understandable in languages read from right to left instead of left to right.

C. American Sign Language Considerations

The *Public Notice* asks about requirements for downloading American Sign Language (ASL) templates to the device and the "minimum resolution or video quality for the ASL video templates to ensure that they are easily understandable to the recipient," as well as whether a single standard that could be adopted across different devices."[20] ATIS WTSC recommends that ASL templates be pre-loaded onto mobile devices in a similar manner to the other templates, and carefully planned to avoid overloading network capacity. In addition, it should be noted that some consumer devices (particularly, lower cost models) may present technical challenges that may impact the device's ability to support ASL. Standards developed to support ASL templates must consider a broad array of consumer devices, handsets and capabilities. ATIS WTSC notes that, due to the significant differences in storage requirements between text and video, this solution is not as scalable as storing a set of preferred language text templates.

ATIS WTSC agrees with the PSHS Bureau that fillable elements cannot be applied to ASL videos in the same manner as they would be applied to text templates. [21] ATIS WTSC believes that most fillable elements would require a series of gestures to spell out those elements (e.g., proper names, addresses).

D. Supporting Additional Languages

The PSHS Bureau seeks comment on whether template-based alerts should be translated into the 13 most commonly spoken languages in the U.S. besides English and American Sign

[20] *Public Notice* at ¶20.
[21] *Public Notice* at ¶24.

Language (ASL), and if so, which ones.[22] The Bureau notes, for example, the recommendation from attorneys general that WEA should be translated into any language for which there are at least 25,000 individual over the age of five with especially high rates of limited English proficiency.[23] While ATIS WTSC does not have any comments on the effort and logistics required to create templates, it is concerned about the design complexity to expand the number of templates.

The *Public Notice* also asks about device limitations associated with support for additional languages.[24] From the device perspective, ATIS WTSC notes that adding a large number of additional languages may require updates at the modem layer. From a standards perspective, additional time would be needed to develop the standards to support an extensible solution and to evaluate any limitations related to mobile device storage, support for character sets, etc.

In the *Public Notice*, the PSHS Bureau seeks feedback on the implementation timeframe associated with the new templates it sought, noting that the *2023 WEA Report and Order* determined that 30 months is a reasonable period to implement the templates for the 13 languages, English, and ASL.[25] The PSHS Bureau expresses its belief that adding additional languages would rely on the same standards and approach to implementation as the original 13 languages and therefore would require less time.[26] ATIS WTSC notes that the Commission's estimate of 30 months is not adequate for static and is inconsistent with the input provided to the

[22] *Public Notice* at ¶26.
[23] *Public Notice* at ¶25.
[24] *Public Notice* at ¶27.
[25] *Public Notice* at ¶28. The 30-month period would run from the date of publication in the *Federal Register* of the order and associated rules addressing the implementation matters raised in this Public Notice. *2023 WEA Report and Order* at ¶¶25-27.
[26] *Public Notice* at ¶28.

Commission by ATIS WTSC regarding the WEA enhancements outlined by CSRIC VIII.[27] ATIS' work analyzed potential enhancements requiring very similar network and device support and concluded that 36-54 months would be required (assuming that any CAP changes would not require more time and that the timeline would commence following the conclusion of all related policy decisions). The 30-month timeframe referenced in the *Public Notice* does not provide enough time for design work, updates to ATIS standards and 3GPP specifications, development, testing, integration testing and end-to-end testing, and first deployment for support of static templates. Additional effort would be needed for the more complex design required for fillable templates. ATIS WTSC does agree, however, with the PSHS Bureau that adding additional languages following the initial implementation should take less time because the design work would already be in place, and the required standardization work and testing will be much more limited; however, this may depend on the number of languages added.

The *Public Notice* also seeks comment on what information should be included in a consumer guide, noting that, in order for multilingual WEA to reach the intended recipient, users of cellular devices must first set their phones to the default language of their choice. [28] ATIS WTSC believes that, while consumer education is always beneficial to some degree, the vast majority of (if not all) users already have the preferred language set appropriately.

E. <u>Future Updates to Alert Types, Templates and Languages</u>

Finally, the PSHS Bureau seeks comments on the process for future modifications to the templates, such as improvements, additions (events or languages), or any other type of requests from the AOs.[29] While ATIS WTSC has no specific feedback on this process, it does support

[27]Letter from ATIS to Marlene Dortch, FCC Secretary, in PS Docket Nos. 15-91 and 15-94 (February 5, 2024).
[28] *Public Notice* at ¶29.
[29] *Public Notice* at ¶30.

the concept that the Commission should maintain the official repository of approved templates via the notice and comment processes described in the *Public Notice*.[30] This will greatly reduce any confusion regarding the most up-to-date and approved templates, which will benefit customers.[31]

III. CONCLUSION

ATIS WTSC appreciates the opportunity to respond to the *Public Notice* and urges the Commission to consider the input above.

Respectfully submitted,

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June 12, 2024

[30] *Public Notice* at ¶30

[31] It should be noted that, while the larger originating service providers could potentially develop the resources and processes required to support templates in their versioning process, this could be a significant challenge for other providers.