

**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	)	PS Docket No. 15-94
Rules Regarding the Emergency Alert System	)	

**COMMENTS OF CTIA**

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June 12, 2024

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**COMMENTS OF CTIA**

CTIA<sup>1</sup> respectfully submits these comments in response to the Public Notice issued by the Public Safety and Homeland Security Bureau (“Bureau”) in the above-captioned proceedings seeking comment on the use of templates to support multilingual alerting in the Wireless Emergency Alert (“WEA”) system.<sup>2</sup>

**I. INTRODUCTION AND SUMMARY.**

The current WEA system has become one of the most effective, efficient, and reliable alert and warning tools for public safety and consumers across the country. The success of this voluntary system is due in large part to the public-private partnership that has been established among the Federal Communications Commission (the “Commission”), the Federal Emergency Management Agency (“FEMA”), Alert Originators, and Participating Commercial Mobile

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<sup>1</sup> CTIA – The Wireless Association® (“CTIA”) ([www.ctia.org](http://www.ctia.org)) represents the U.S. wireless communications industry and the companies throughout the mobile ecosystem that enable Americans to lead a 21st century connected life. The association’s members include wireless providers, device manufacturers, suppliers as well as apps and content companies. CTIA vigorously advocates at all levels of government for policies that foster continued wireless innovation and investment. The association also coordinates the industry’s voluntary best practices, hosts educational events that promote the wireless industry and co-produces the industry’s leading wireless tradeshow. CTIA was founded in 1984 and is based in Washington, D.C.

<sup>2</sup> *Public Safety and Homeland Security Bureau Seeks Comment on Implementation of Multilingual Wireless Emergency Alerts*, PS Docket Nos. 15-91, 15-94, Public Notice, DA 24-137 (rel. Feb. 15, 2024) (“PN”).

Service Providers (“CMSPs”). While CTIA appreciates the Commission’s efforts to continue to enhance WEA accessibility, the agency should confirm if there is consensus on the use of templates to support multilingual alerting and, if so, fully explore the implementation issues to avoid risking negative impacts to the delivery of WEA messages to the public.

At the outset, CTIA observes that many Alert Originators (and other stakeholders) have expressed concerns about whether pre-installed templates are suitable for delivery of emergency messaging.<sup>3</sup> If the Bureau moves forward, however, there are many more issues that will need to be considered than what is set forth in the Public Notice. Specifically, the Public Notice does not clearly address the range of technical developments that may be necessary to manage, update, securely store, and make templates available to device manufacturers, operating system (“OS”) providers, Participating CMSPs and Alert Originators.<sup>4</sup> In particular, standards bodies will need to develop a mechanism to signal devices which template should be displayed, and when.<sup>5</sup>

Other technical complexities, particularly for OS providers and device manufacturers, with respect to developing and storing templates, will need to be vetted in the record as well. For example, studies will be necessary to determine whether it is feasible to introduce templates on existing devices, how to best support alerts in American Sign Language (“ASL”), and the extent to which devices may face character set and storage limitations. Standards work and end-to-end testing will also be required to introduce unique signals, corresponding to each template, to be designated by Alert Originators, integrated in the Integrated Public Alert and Warning System (“IPAWS”), transmitted over Participating CMSP networks, and triggered on devices. Likewise,

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<sup>3</sup> See *infra* Section II.

<sup>4</sup> See PN at ¶ 30.

<sup>5</sup> See *id.* at ¶ 15.

character support, support on existing devices, and patches and updates will require further stakeholder input, study, and development.

Given the complexities, CTIA urges the Bureau to take an incremental approach to multilingual alert templates that reflects the time and resources required to integrate this capability across the WEA communications chain and solicit additional input from stakeholders at each step. Implementation of the initial template functionality alone will require significantly more time and resources than estimated in the Public Notice. Thirty months is not sufficient to support the static templates proposed by the Commission. Support for static pre-installed templates will require development and specification work that is like the work ATIS evaluated to support infographics and other prior WEA proposals. ATIS determined these would require 36 to 54 months to implement, and that was *after* all details required for the design phase have been addressed.<sup>6</sup> Here, that would include issues related to the number and content of templates.

Proposals for additional enhancements, such as fillable fields and support for additional languages beyond what has already specified, will require even more time and should be deferred while the Commission and stakeholders work to assess and implement the initial requirements. Additional enhancements, if adopted, will also require significantly more education and support for Alert Originators to ensure any customized information is consistently entered and correctly formatted.

Finally, outreach and education by the Commission and FEMA for Alert Originators to facilitate effective and consistent use of templates will be necessary to preserve the success of

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<sup>6</sup> Letter from Thomas Goode, General Counsel, ATIS, to Marlene H. Dortch, Secretary, FCC, PS Docket Nos. 15-91, 15-94 (filed Feb. 5, 2024) (“ATIS Timeline Estimates”).

the WEA system in disseminating clear and actionable alerts and information. As with other changes to the WEA system, consumer education will be crucial too.

## **II. THE INTRODUCTION OF TEMPLATES MUST BE DONE IN A MANNER THAT DOES NOT UNDERMINE THE SUCCESS OF WEA.**

CTIA and its members are ready partners in the Commission's efforts to ensure that as many consumers as possible receive critical emergency alerts and warning information in a timely manner. Since the system's launch in 2012, over 84,000 WEAs have been sent to warn and inform millions of wireless consumers about dangerous weather events, missing children, and other emergencies.<sup>7</sup> Nationwide wireless providers and dozens of regional providers that serve more than 99% of all U.S. wireless subscribers<sup>8</sup> transmit thousands of WEAs every year to help public safety professionals respond to emergencies and save lives.

The current WEA system is efficient and effective in quickly alerting the public about threats and disseminating other important public safety information. Year-over-year, the percentage of surveyed parties receiving a WEA message during the annual nationwide testing remains consistently high: around 90% in 2021 and over 91% in 2022.<sup>9</sup> As required by the Commission's rules, wireless providers conduct regular, monthly tests to confirm the WEA system's operating status and connectivity.<sup>10</sup> They also work with Alert Originators to conduct state and local and live tests to support confident and successful use of these tools and

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<sup>7</sup> See FCC, *Wireless Emergency Alerts (WEA)*, <https://www.fcc.gov/consumers/guides/wireless-emergency-alerts-wea>.

<sup>8</sup> See *Wireless Emergency Alerts; Amendments to Part 11 of the Commission's Rules Regarding the Emergency Alert System*, Order on Reconsideration, 32 FCC Rcd 9621, 9625 n.28 (2017).

<sup>9</sup> See FCC, *Wireless Emergency Alerts: September 2022 WEA Performance Exercise Report*, at 2 (Apr. 24, 2023), <https://docs.fcc.gov/public/attachments/DOC-392829A1.pdf>; FCC, *Wireless Emergency Alerts: August 11, 2021 Nationwide WEA Test Report*, at 9 (Dec. 30, 2021), <https://docs.fcc.gov/public/attachments/DOC-378907A1.pdf>.

<sup>10</sup> 47 C.F.R. § 10.350.

understanding of WEA functionality and performance. Participating CMSPs and equipment manufacturers have also worked diligently to enhance the WEA system, including by improving geo-targeting capabilities (WEA 3.0), enabling embedded “clickable” links, adopting updated standards, deploying capabilities to expand WEA message lengths, supporting Spanish language text, and enabling state and local test capabilities.<sup>11</sup>

CTIA appreciates the Commission’s interest in further enhancing the accessibility of WEA through template-based multilingual alerts. At the same time, CTIA observes that this is a significant undertaking to achieve support for an enhancement that has generated mixed reactions.<sup>12</sup> As described in more detail below, templates have previously been considered and declined, and some Alert Originators have demonstrated only lukewarm interest in templates due to their limited utility and the risk of confusing consumers. Further, even if only a select group of Alert Originators utilize templates, participation of multiple stakeholders across the WEA ecosystem will be necessary to develop and integrate universal supporting architecture to manage, distribute, and trigger template-based alerts. The Commission should consider whether the substantial costs imposed on all stakeholders would be justified given the potential for limited uptake.

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<sup>11</sup> See, e.g., Communications Security, Reliability, and Interoperability Council VIII, Working Group Six, *Report on WEA Application Programming Interface*, at 21 (Mar. 2023), <https://www.fcc.gov/file/25058/download> (discussing capability for embedded clickable links); ATIS, *Delivering Targeted Alerts - Advancing the Wireless Emergency Alerts (WEA) 3.0 System* (June 26, 2019), <https://atis.org/wp-content/uploads/2020/06/WEA-webinar-final-slides.pdf>; *Wireless Emergency Alerts; Amendments to Part 11 of the Commission’s Rules Regarding the Emergency Alert System*, Second Report and Order and Second Order on Reconsideration, 33 FCC Rcd 1320 (2018) (adopting an enhanced geotargeting requirement); *Wireless Emergency Alerts; Amendments to Part 11 of the Commission’s Rules Regarding the Emergency Alert System*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 11112 (2016) (adopting rules requiring Participating CMSPs to support longer WEA alerts, Spanish-language alerts, and State/Local WEA Tests).

<sup>12</sup> See *infra* Section III at 6-8 and text accompanying n.15.

To be successful, it is imperative that the Commission builds in sufficient time for all stakeholders to identify and resolve the full range of challenges and limitations associated with template-based alerting. As with other significant changes to the WEA system, the Commission and FEMA also should build in time to conduct necessary outreach and education for the public and Alert Originators. In particular, educational resources for Alert Originators should include guidance to promote consistent use of event codes and address an Alert Originator’s discretion to use its own templates or freeform text. By supporting implementation of multilingual alerts with input from all impacted stakeholders, realistic time and cost assessments, and robust education, the Commission can continue to enhance both the capabilities and the effectiveness of the WEA system.

**III. THE BUREAU SHOULD CONSIDER INPUT FROM STAKEHOLDERS ON THE EFFICACY OF TEMPLATES FOR MULTILINGUAL ALERTS.**

As CTIA and others have previously observed, static templates may be less useful to end users because they may lack event-specific information that makes the WEA system such a valuable tool during emergency situations.<sup>13</sup> While static templates can be less complex and error prone than fillable templates (assuming fillable templates are feasible),<sup>14</sup> the Bureau should carefully evaluate input from stakeholders to ensure that any adoption of templates optimizes their cost and utility. Indeed, some Alert Originators have opposed templates or have expressed a preference for other tools, such as freeform text, in prior WEA proceedings.<sup>15</sup> FEMA has also

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<sup>13</sup> See, e.g., Comments of Professor Hamilton Bean, PS Docket Nos. 15-91, 15-94, at 1-2 (filed Feb. 28, 2024); Comments of CTIA, PS Docket Nos. 15-91, 15-94, at 18 (filed July 21, 2023) (“CTIA Comments”); Comments of Alliance for Telecommunications Industry Solutions, PS Docket Nos. 15-91, 15-94, at 7-8 (filed July 21, 2023) (“ATIS Comments”).

<sup>14</sup> See *infra* Section VI.

<sup>15</sup> See Comments of King County Emergency Management, PS Docket Nos. 15-91, 15-94, at 2 (filed July 21, 2023) (“Our Warning Coordination Duty Officers have attempted to create pre-scripted language for



observed that a majority of Alert Originators previously rejected a proposal that the Alert Gateway follow a prescribed template using Common Alerting Protocol (“CAP”) fields in favor of the ability to create freeform text alerts.<sup>16</sup>

Additionally, federal agencies and other commenters recently expressed concern with the use of templates in the Emergency Alert System (“EAS”) context, with reasoning that applies equally in the WEA context.<sup>17</sup> FEMA explained that pre-installed generic templates “may not be an effective approach,” as “[d]elayed response and/or misunderstood guidance can cause unexpected public reaction that can contribute to increasing the impact of the hazard rather than assisting the public to avoid or mitigate the hazard impact.”<sup>18</sup> FEMA also cautioned that generic event warnings may not effectively motivate consumers to respond in a timely and appropriate manner.<sup>19</sup> The National Weather Service (“NWS”) has noted limitations of fixed templates “because of the dynamic nature of NWS warnings and the need for localizations specific to events and locations.”<sup>20</sup>

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various emergencies, and have come to the conclusion that there are too many incident-specific variables for this to be a good use of time, effort, and storage space on consumer devices.”); Comments of Regional Disaster Preparedness Organization, PS Docket Nos. 15-91, 15-94, at 2 (filed July 20, 2023) (advising against “rely[ing] on scripted templates, as the United States Geological Survey does for ShakeAlert. 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.”); State of Oregon’s OR-Alert Governance Committee, PS Docket No. 15-91 (filed June 20, 2023) (concluding that embedded template-based alerts are insufficient to address the complexity of emergency situations).

<sup>16</sup> See Comments of FEMA Integrated Public Alert and Warning System (“IPAWS”) Program Office, PS Docket Nos. 15-91, 15-94, at 3 (filed July 19, 2023).

<sup>17</sup> See, e.g., Reply Comments of the National Association of Broadcasters, PS Docket No. 15-94, at 2-4 (filed May 6, 2024); Comments of U.S. Council of the International Association of Emergency Managers, PS Docket No. 15-94, at 1 (filed Apr. 8, 2024).

<sup>18</sup> See Comments of FEMA Integrated Public Alert and Warning System (“IPAWS”) Program Office, PS Docket No. 15-94, at 1, 3 (filed Apr. 9, 2024) (“FEMA EAS Comments”).

<sup>19</sup> See *id.* at 1-2, 5.

<sup>20</sup> See Comments of the National Weather Service, PS Docket No. 15-94, at 1 (filed Apr. 5, 2024).

Even EAS commenters that support use of templates see it only as a partial or “interim” measure provided in combination with other available resources such as the potential for clickable links to provide further information.<sup>21</sup> For example, the Boulder Regional Emergency Telephone Service Authority (“BRETSA”) observes that alert warnings and instructions may need to be more specific than can be provided in a template of general applicability, and that different actions may be required for the same event in differently affected areas as the event progresses.<sup>22</sup> The BRETSA comments do not consider whether the limited benefits that templates offer on an “interim” basis justify the substantial time and resources that template-based alerts will require to develop and deploy. The inherent limitations of templates, and lukewarm reception by Alert Originators to date, suggest that the expected benefits of templates may not justify the time and resources required to support them.

**IV. TEMPLATE-BASED ALERTS WILL REQUIRE SIGNIFICANT TECHNICAL DEVELOPMENT, EXTENSIVE WORK BY STANDARDS BODIES, AND ADDITIONAL INPUT FROM ALL STAKEHOLDERS.**

**A. If Templates Are Integrated into the WEA System, Updated Standards Will Be Required.**

Like many new capabilities, implementing templates will entail technical support and development led by standards bodies. First, because existing event codes are not granular enough to clearly indicate a specific event template, standards bodies will need to develop a range of values to map to each template. There is no mechanism in place today to signal devices and indicate which template to display and when.<sup>23</sup> CTIA anticipates that this information

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<sup>21</sup> See Comments of TDIforAccess, Inc. et al., PS Docket No. 15-94, at 4, 6 (filed Apr. 8, 2024); Comments of Boulder Regional Emergency Telephone Service Authority, PS Docket No. 15-94, at 6 (filed Apr. 7, 2024) (“BRETSA Comments”).

<sup>22</sup> See BRETSA comments at 6-7.

<sup>23</sup> See PN at ¶ 15.

element in the signaling would consist of a string of bits by which each value would map to a particular template, similar to the infographic mechanism that ATIS described in its ex parte filing with the Commission.<sup>24</sup>

End-to-end stakeholder signaling changes may be needed to support this proposal. In addition to participation by OS providers, device manufacturers, and Participating CMSPs to ensure the signal can be successfully transmitted to devices and trigger the correct template, coordination with Alert Originators will be necessary to ensure the new indicator is included with alerts utilizing the templates. As noted by the Commission, an indicator from the Alert Originator over CAP would be needed,<sup>25</sup> in addition to changes in the interface between FEMA and the Participating CMSP gateway, throughout the network, and over the broadcast. If Alert Originators attempt to utilize one event code to trigger multiple event templates or multiple template permutations, devices may not be able to select a template for display. Use of one event code for multiple templates could also cause different consumers to receive different templates — and instructions — for the same events.

**B. The Public Notice Overlooks Other Important Aspects of Implementation.**

CTIA encourages the Bureau to clarify how the approach to templates set out in the Public Notice will be technically supported and consider whether a different approach may be warranted. The Public Notice seems to suggest that, once finalized, the appendix of static alerts will be the exclusive resource defining the number, type, and content of static alerts to be pre-installed on devices, and that any changes would be achieved by a public comment process.<sup>26</sup> In

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<sup>24</sup> ATIS Timeline Estimates at 1, 3.

<sup>25</sup> See PN at ¶ 15.

<sup>26</sup> See *id.* at ¶ 30.

this case, the Commission should be guided by feedback from device manufacturers and OS providers on the feasibility of implementing and maintaining pre-installed templates.

More broadly, much of the effort to implement template-based alerts will impact OS developers and equipment manufacturers, as noted by FEMA in the EAS context, but that aspect is not sufficiently addressed in the Public Notice.<sup>27</sup> Depending on the initial record developed in response to this Public Notice, the Bureau may need to request further input from stakeholders on specific issues. For example, input and standards work will be necessary to determine whether existing operating systems and devices can support multilingual templates or whether, as seems likely, the capability will require new devices. Input may also be required to determine whether storing templates on devices will present cumulative storage issues, particularly for ASL video templates. While the templates proposed in the Public Notice are likely supportable, the differing storage requirements for pre-installed video templates and text templates could impact the future scalability of pre-installed templates. Over time, storage capabilities could limit the number of templates that may be supported or produce a divide between the number of alerts that can be supported for some languages (via pre-installed text templates) compared to the number of alerts that can be supported for ASL (via pre-installed video templates).

**C. Additional Proposals in the Public Notice Will Require Work by Standards Bodies to Ensure Proper Functionality and Security.**

The Public Notice identifies many other aspects of implementation that will require engagement by standards bodies and additional stakeholder input to determine their feasibility, cost, and time to develop.

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<sup>27</sup> See FEMA EAS comments at 2.

**Character support.** Engagement by standards bodies, particularly for OS providers and device manufacturers, will be necessary to resolve issues related to reconciling the template text with available character support. Moreover, the Public Notice appears to assume that storage on devices should alleviate character set limitations.<sup>28</sup> Yet storing templates of any size will negatively impact device manufacturers, a consequence that has not yet been evaluated in the record. Device storage availability is not unlimited and a size limitation of some amount for templates will be necessary. Use of templates that are not limited to 90 or 360 characters, as well as additional character sets, will require even more storage space, hastening the impact of these storage-related constraints and concerns.

**Updates.** The Public Notice asks if support for templates in devices can be done via an over-the-air software update or if Participating CMSPs could create a new data element that is transmitted upon choosing the template that will ensure devices display the correct templates.<sup>29</sup> Standards bodies have indicated that new devices may be needed to support templates; however, those bodies also need to be engaged to determine the feasibility of device support for templates.<sup>30</sup>

**ASL Videos.** The Public Notice requests input on requiring Participating CMSPs to support a minimum resolution or video quality for ASL video templates and whether a single standard could be adopted across different devices.<sup>31</sup> A single, lower standard could create consistency for users. However, adoption of a minimum resolution or video requirement may not reflect technical device or network constraints. Moreover, codifying a certain video

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<sup>28</sup> See PN at ¶ 9.

<sup>29</sup> See *id.* at ¶¶ 15, 27-28.

<sup>30</sup> See ATIS Comments at 8.

<sup>31</sup> PN at ¶ 20.

resolution could stifle future innovation, and any single standard across all devices will be constrained by the limitations of the least-capable supported devices.

CTIA urges the Bureau to garner the input necessary to evaluate these issues, carefully evaluate the time and cost necessary to resolve them, and support any enhancements with sufficient development work to ensure smooth and lasting implementation.

**V. THE NUMBER AND USE OF TEMPLATES SHOULD BE STREAMLINED TO AVOID CONFUSION OR ALERT FATIGUE.**

Rather than expanding the range of alert types and on various permutations of alerts,<sup>32</sup> CTIA recommends that the Bureau focus solely on the imminent threat, time-critical alert types already identified in the Public Notice and consider ways to streamline the use of templates. Adding alerts or permutations at this time would be premature, as they may not be technically feasible or may add time to the implementation process.

CTIA is interested in feedback from Alert Originators on the set of templates suggested in the Public Notice, and any recommendations from Alert Originators on the appropriate types of alerts and their content. For example, NWS has indicated that it remains committed to its own template development and may have input on the utility of the weather templates included in the Public Notice, compared to the templates it is developing.<sup>33</sup>

While Alert Originators are best positioned to evaluate the specific aspects of the templates proposed by the Bureau, in general, CTIA believes that templates are most appropriate for events that are not volatile, such that the information provided in the emergency alert is not likely to change during the course of the event. The proposed templates lack the most critical

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<sup>32</sup> *See id.* at ¶¶ 8, 11-13.

<sup>33</sup> *See id.* ¶ 6; Comments of the National Weather Service, PS Docket No. 15-91, at 1 (filed July 21, 2023).

information for weather alerts, such as the duration of the alert and the affected area. Issuing an alert that lacks this critical information may confuse consumers, while issuing a follow-up alert providing event-specific instructions or information could cause confusion, alert fatigue, or milling rather than immediate action. The utility of templates may also be undermined if multiple permutations of templates are required for the same event. For example, various jurisdictions may define key alert terminology differently.<sup>34</sup> Permitting multiple permutations of templates may also create confusion if consumers in the same area receive the same alert with conflicting instructions.<sup>35</sup>

CTIA does not support the “all clear” template, which risks creating confusion, endangering consumers, and negatively impacting Participating CMSP networks.<sup>36</sup> Unless an “all clear” alert is transmitted as a separate WEA, Participating CMSPs will have no way of knowing critical information, such as the expiration time or—in the case of multiple active events—the alert or alert area to which the “all clear” applies. Particularly in situations where multiple alerts overlap in time or place, an “all clear” alert that lacks sufficiently detailed information could incorrectly lead consumers to believe that an ongoing alert has passed. This could occur, for example, in situations where a flood warning continues after a storm has passed due to swollen creeks, or in the case of aftershocks following an earthquake. Moreover, adding an “all clear” alert effectively doubles the WEAs issued for each alert and is inconsistent with efforts to manage capacity constraints and avoid alert fatigue that are fundamental to the success of the WEA system.

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<sup>34</sup> See Comments of Sara Lana, PS Docket Nos. 15-91, 15-94 (filed Feb. 21, 2024) (describing the distinct meanings of “evacuation warning,” “evacuation order,” “tsunami warning” and “tsunami advisory”).

<sup>35</sup> See PN at ¶ 11.

<sup>36</sup> See *id.* at ¶ 13.

CTIA urges the Commission to require that the detailed English or Spanish alert always accompany use of any pre-installed template.<sup>37</sup> Legacy devices that cannot display a pre-installed template will otherwise not display an alert at all. Further, the detailed alert will contain additional details that many end-users can still understand and apply, such as the end time. As noted in the EAS context, providing English content alongside the template would provide more event-specific information that could benefit a consumer with some level of fluency in English.<sup>38</sup>

For alerts that use freeform text, either because no template is available or because an Alert Originator elects not to use the template, CTIA agrees that translation into the 13 most-spoken languages is not feasible.<sup>39</sup> In that case, the English alert should still be issued, and the Bureau could clarify that it is acceptable in this instance that no translation is available or required for these alerts. Likewise, Alert Originators that have the capability of issuing freeform alerts in Spanish should have the ability to choose between using a template and drafting an alert using freeform Spanish text. These parameters can enable ongoing WEA enhancements and provide critical, lifesaving information in more users' native languages, while minimizing confusion, danger, and network impacts that undermine the efficacy of the WEA system.

## **VI. ADDITIONAL ENHANCEMENTS REQUIRE FURTHER STUDY AND DEVELOPMENT.**

CTIA recommends that the Bureau focus on the development of feasible methods for providing WEA templates rather than attempting to add more functionalities. After successful implementation of the proposed list of templates, the Bureau could consider additional enhancements including fillable fields, software and firmware patches, and additional languages.

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<sup>37</sup> *See id.* at ¶ 14.

<sup>38</sup> *See* Comments of REC Networks and Riverton Radio Project Association, PS Docket No. 15-94, at 4-5 (filed Apr. 6, 2024).

<sup>39</sup> *See* PN at ¶ 15.



**Fillable Fields.** The Commission directed the Bureau to seek comment on whether templates can be customizable to include event-specific information,<sup>40</sup> and the Public Notice seeks comment on feasibility.<sup>41</sup> CTIA has serious concerns with this approach.

Development and implementation of fillable fields would require significant additional standards development and end-to-end testing to ensure the resulting alerts do not confuse or endanger consumers. For example, standards bodies must develop a protocol for any fillable fields not completed, inconsistently completed, or improperly formatted by an Alert Originator. One option would be for FEMA to reject the submitted alert as an error, although this could delay transmission of alerts. Alternatively, if the alert is transmitted as provided by the Alert Originator to avoid delay, the message would have blank spaces or inconsistent language that could confuse consumers. Challenges have already been seen with the five mandatory CAP elements. Research conducted by the University at Albany found that over 25% of WEAs do not include the hazard name.<sup>42</sup> Other formatting may be required as a matter of course. For example, the expiration time may need converted to a user-readable format.

Implementing fillable fields requires additional development work and the added complexity and costs may not be justified.<sup>43</sup> For example, a mechanism would need to be developed, in coordination with OS providers and device manufacturers and standards bodies, to integrate fillable information with a template in a mobile device. As the Commission notes, many types of information entered into fillable fields could not be translated or would not need

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<sup>40</sup> *Wireless Emergency Alerts; Amendments to Part 11 of the Commission's Rules Regarding the Emergency Alert System*, PS Docket Nos. 15-91, 15-94, Third Report and Order, FCC 23-88, ¶ 22 (rel. Oct. 20, 2023).

<sup>41</sup> See PN at ¶¶ 16-19.

<sup>42</sup> See Comments of Jeannette Sutton, PS Docket Nos. 15-91, 15-94 (filed July 19, 2023).

<sup>43</sup> See PN at ¶ 33.

translated,<sup>44</sup> which suggests that sending a detailed English or Spanish alert along with any pre-installed template may obviate the need for fillable templates. CTIA agrees that translation of fillable fields is unlikely to be necessary and would be technically difficult, if not infeasible.<sup>45</sup>

Developing the capability for customizable alerts in ASL presents additional complexities. It is unclear if integrating fillable fields is feasible with ASL, as some fillable fields, such as those containing proper nouns, are generally spelled out. CTIA looks forward to input from the ASL community on this issue.

**Software/firmware Patches.** The Bureau inquires whether templates and additional languages can be supported via software and firmware patches.<sup>46</sup> The Commission should look to input from OS providers and device manufacturers on the feasibility of offering templates on existing devices and, if feasible, the use of software and firmware patches to transfer information to devices to implement template-based alerts.<sup>47</sup> It should also be aware that, while Participating CMSPs can explore strategies to update signaling and transport of templates on their networks, feasibility will be limited by network capacity to get template information to devices. Developments by OS providers and device manufacturers to servers and devices to support this capability are outside of the control of Participating CMSPs but may significantly impact network capacity. Once feasibility for the initial provisioning of templates is determined, a similar process must be evaluated for updating templates.

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<sup>44</sup> *See id.* at ¶ 19.

<sup>45</sup> *Id.*

<sup>46</sup> *See id.* at ¶¶ 15, 27-28.

<sup>47</sup> *See id.*

**Additional Languages.** The Bureau should refrain until a later date from expanding the list of supported languages.<sup>48</sup> The Bureau should focus on implementation of the 13 languages plus ASL before considering additional languages, which will require extensive time and resources to develop and implement. Any further changes to update, supplement, or otherwise require improvements for templates should be subject to comment before adoption to allow all impacted parties to address any technical concerns or considerations.

**VII. THE PUBLIC NOTICE’S COST ANALYSIS AND IMPLEMENTATION TIMELINE SIGNIFICANTLY UNDERESTIMATE THE BURDENS INVOLVED.**

CTIA disagrees that the costs to support templates are minimally burdensome.<sup>49</sup> As discussed above, the Public Notice failed to consider additional implementation work and associated costs, including the need for substantial standards efforts to determine the feasibility and cost to support templates. Notably, a signal to trigger the proper template must be developed and network capacity constraints must be evaluated. Additionally, device manufacturers will need to utilize storage space on devices for templates, which means that space is no longer available to consumers for their use. It is also likely that new software will need to be created to support templates. All of this must be included in the analysis.

The timelines proposed in the Public Notice will be insufficient to achieve the end-to-end design, testing, and integration required to support templates. ATIS evaluated similar development and specification work that would be necessary to support infographics and other proposals.<sup>50</sup> Many developments ATIS identified for infographics will also be necessary for templates, suggesting that a similar timeline will be required for templates. It concluded that a

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<sup>48</sup> See *id.* at ¶ 34.

<sup>49</sup> See *id.* at ¶¶ 31-35.

<sup>50</sup> See ATIS Timeline Estimates at 1.

range of 36-54 months will be required for those proposals.<sup>51</sup> However, that timeline begins after all mandatory details for the design phase have been addressed,<sup>52</sup> which in this case would include issues related to the number and content of templates. Like the infographics proposals considered by ATIS, templates will require new bits carried throughout the communications chain to direct the device to access specific stored information for display. Similarly, the timeline ATIS determined would be necessary for infographics assumed that Alert Originator Vendor Interface or CAP signaling development would run in parallel to other development.<sup>53</sup> These same considerations will apply to the development of templates and would be in addition to development of the template management system, which is outside of the scope of ATIS and Participating CMSP networks. If any aspect of development is delayed, integration testing will be delayed, leading to delay in deployment.

## **VIII. CONCLUSION.**

CTIA supports the work of the Commission to continue enhancing multilingual support for WEAs. However, the templates proposed by the Bureau may have limited utility, risk endangering or confusing consumers, and will impose significantly more time and costs to implement than envisioned in the Public Notice. If the agency proceeds with multilingual templates, robust engagement with impacted stakeholders, technical development, and extensive educational resources will be crucial to avoid undermining the success of the WEA system.

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<sup>51</sup> *See id.* at 3.

<sup>52</sup> *Id.* at 2 (“[T]he timeline estimates do not reflect the additional time needed for any studies intended to result in decisions required prior to the high-level design phase.”).

<sup>53</sup> *See id.*

Respectfully submitted,

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June 12, 2024