



public safety and strengthen the country's telecommunications infrastructure. TIA is the leading organization dedicated to providing better interoperability for first responders using wireless devices. TIA created the Public Safety Communications Working Group to educate and inform members of Congress on matters related to the role of public safety communications in homeland security and to highlight the critical role of federal funding for such efforts.

With regard to CMAS, TIA supported passage of the Warning, Alert, and Response Network Act ("WARN Act")<sup>2</sup> as a critical step in fostering an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people in emergency situations.<sup>3</sup> TIA was an active member on the CMSAAC, which was formed pursuant to Section 603 of the WARN Act, and TIA's member companies manufacture much of the communications equipment used to alert the public to any imminent threat to its health or safety.

## DISCUSSION

The *NPRM* seeks comments on the recommendations provided by CMSAAC, including comments on any alternatives to the CMSAAC recommendations.<sup>4</sup> TIA urges the Commission to adopt the CMSAAC recommendations without change. Congress directed the Commission to establish the Committee to development recommendations for the establishment of the CMAS.<sup>5</sup> The CMSAAC was established shortly after enactment of the WARN Act in October 2006 and spent nearly one year evaluating technologies and capabilities for CMAS. It would be unwise and inconsistent with Congressional intent to disregard the recommendations of an expert

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<sup>2</sup> Security and Accountability for Every Port Act of 2006 ("Safe Port Act"), Pub.L. No. 109-347, Title VI — Commercial Mobile Service Alerts ("WARN Act").

<sup>3</sup> See *PulseOnline*, TIA Reflects on 9/11 and Hurricane Katrina; Continues to Work toward Improving Public Safety Interoperability and U.S. Telecommunications Infrastructure (Sept. 2006).

<sup>4</sup> See *NPRM* at ¶ 6.

<sup>5</sup> WARN Act, § 603.

advisory group created pursuant to Congressional direction for the sole purpose of developing CMAS recommendations.

The CMSAAC is comprised of representatives from the commercial mobile radio service (“CMRS”) industry, broadcasters, state and local governments, Indian tribes, developers, manufacturers, the disability community, technical experts, industry associations, and a number of other interested parties. Its recommendations represent the consensus view of this diverse group regarding the technical capabilities for CMAS. Any deviation from the recommendations, therefore, should be based on specific presentations — backed by concrete data — refuting the conclusions of the CMSAAC.

**I. COMMERCIAL MOBILE ALERTS SHOULD BE GEOGRAPHICALLY TARGETED TO THE COUNTY LEVEL**

The Commission seeks comment on the CMSAAC recommendation that, “due to current limited capabilities on the part of [commercial mobile radio service providers (“CMSPs”)], ‘an alert that is specified by a geocode, circle, or polygon . . . will be transmitted to an area not larger than the CMSP’s approximation of coverage for the county or counties with which that geocode, circle, or polygon intersects.’”<sup>6</sup> TIA urges the Commission to adopt this recommendation without change. CMSAAC spent nearly one year evaluating available technologies and the capabilities of CMRS providers and concluded it was not yet feasible to geo-target on a more granular level. This determination is due considerable weight given the nature of CMSAAC — an advisory committee formed at the direction of Congress and comprised of members from different industries and industry segments. Although more precise geo-targeting should be a long-term goal,<sup>7</sup> the initial CMAS rules should be limited to the geo-targeting recommended by CMSAAC.

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<sup>6</sup> *NPRM* at ¶ 21 (quoting CMSAAC Recommendations at Section 5.4.1).

<sup>7</sup> See CMSAAC Recommendations at 52.

Adopting geo-targeting rules that are more stringent than the CMSAAC recommendations could stifle innovation, delay the roll-out of CMAS, and reduce voluntary participation in CMAS.

The Commission, consistent with the CMSAAC recommendations, should “encourage DHS/FEMA, in concert with CMSPs, to immediately initiate the research development, testing, and evaluation program referenced in Section 604 of the WARN Act.”<sup>8</sup> More granular geo-targeting requirements should only be adopted after this process determines that such requirements are technically feasible given currently available commercial technologies. The status of this testing and evaluation process should be evaluated as part of the FCC’s biennial review process.<sup>9</sup>

## **II. COMMERCIAL MOBILE ALERTS SHOULD BE DELIVERED UTILIZING POINT-TO-MULTIPOINT TECHNOLOGY**

The Commission seeks comment on current and future technologies for the provision of CMAS and, in particular, whether “point-to-point and point-to-multipoint technologies provide viable solutions for a national CMAS” and whether the “current generation point-to-point services such as short message service (SMS) [can] be used to efficiently alert large populations of people within a short time frame.”<sup>10</sup> Consistent with the congressional directive set forth in Section 603(c) of the WARN Act, the CMSAAC thoroughly evaluated technologies that could potentially be used for the provision of alerts over the CMAS and concluded that:

Point-to-point or unicast delivery technologies are not feasible or practical for the support of CMAS, *i.e.* SMS point-to-point, MMS. Reasons for point-to-point technologies not being feasible or practical are:

- a. Point-to-point technologies can experience significant delivery delays.

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<sup>8</sup> CMSAAC Recommendations at 62-63. Section 604 requires DHS to establish a program to develop innovative technologies that will allow CMSPs to efficiently transmit geo-targeted alerts to the public. *See* WARN Act, § 604.

<sup>9</sup> CMSAAC Recommendations at 53.

<sup>10</sup> *NPRM* at ¶ 8.

- b. Point-to-point technologies can result in network and radio interface congestion to the point of blocking voice calls.
- c. Point-to-point technologies lack security and can be easily spoofed.
- d. Point-to-point technologies lack geo-targeting capabilities because it is targeted to phone numbers instead of a specific alert area.
- e. Point-to-point technologies lack emergency alert specific alert tones and thereby emergency alerts can not be distinguished from normal SMS message traffic.
- f. Point-to-point technologies lack support of roamers.<sup>11</sup>

TIA supports this conclusion. Mandating use of a point-to-point technology would undermine the viability of a CMAS because individual messages would have to be sent to each device in the affected area, rather than a single point-to-multipoint alert. The Commission should allow the market to determine what technologies are deployed, thereby giving carriers the flexibility to determine what technologies are best suited for the delivery of CMAS over their networks.<sup>12</sup> Such an approach would be consistent with the Commission's current Strategic Plan which states: "the Commission shall . . . place primary reliance on market forces to stimulate competition, technical innovation, and development of new services for the benefit of consumers."<sup>13</sup>

### **III. THE COMMISSION SHOULD NOT REQUIRE LEGACY AND NON-INITIALIZED HANDSETS TO BE CMAS-CAPABLE**

As envisioned by the WARN Act and the instant *NPRM*, participation in the CMAS would be purely voluntary.<sup>14</sup> Given the importance of the CMAS for delivering emergency alerts to wireless subscribers, the rules should be carefully crafted to encourage, rather than discourage, voluntary participation by wireless carriers. A requirement that providers of CMAS must ensure that legacy and non-initialized devices are capable of receiving CMAS alerts would

<sup>11</sup> CMSAAC Recommendations at 47.

<sup>12</sup> In some cases, however, point-to-point technologies may be the only viable method for delivering mobile alerts.

<sup>13</sup> *FCC Strategic Plan for 2006-2011*, at 8 (Sept. 30, 2005).

<sup>14</sup> See WARN Act, § 602; *NPRM* at ¶ 2.

discourage participation.<sup>15</sup> It would be extremely costly to upgrade legacy and non-initialized handsets, even if possible via over the air software upgrades, to ensure that they are capable of receiving CMAS alerts. CMSAAC recommended that CMAS providers should not be required to provide alerts to non-initialized<sup>16</sup> or legacy devices.<sup>17</sup> TIA supports these recommendations.

#### **IV. CMAS PROVIDERS AND MANUFACTURERS SHOULD BE ENTITLED TO RECOUP CMAS-RELATED DEVELOPMENT COSTS AND HAVE FLEXIBILITY IN DESIGNING USER INTERFACES**

Section 602(b)(2)(C) states that “[a] commercial mobile service licensee that elects to transmit emergency alerts may not impose a separate or additional charge for such transmission or capability.”<sup>18</sup> The Commission seeks comment on whether this provision precludes CMSP’s from recovering CMAS-related development costs.<sup>19</sup> TIA concurs with the CMSAAC’s position on this issue — the WARN Act does not preclude the recovery of development and manufacturing costs associated with CMAS-capable handsets.<sup>20</sup> The WARN Act only precludes imposing a separate fee for CMAS — carriers are prohibited from charging a subscriber for alerts received on their handsets. The statute does not preclude, however, carriers from recovering the increased costs for developing and providing CMAS —through either rates for service or handset prices. As noted when the CMSAAC Recommendations were adopted: “For the rural carriers to opt into [CMAS] they’re going to have to make sure they keep themselves whole. If there’s an increased cost in the mobile device that has the capability of providing

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<sup>15</sup> See *NPRM* at ¶ 23.

<sup>16</sup> CMSAAC Recommendations at 47.

<sup>17</sup> CMSAAC Recommendations at 64.

<sup>18</sup> WARN Act, § 602(b)(2)(C).

<sup>19</sup> *NPRM* at ¶ 38.

<sup>20</sup> CMSAAC Recommendations at 47.

CMAS then I believe that the rural wireless carrier should be able to charge extra for the mobile device. Not the service, the incremental cost that is incurred to buy the mobile device.”<sup>21</sup>

TIA also notes that the CMSAAC Recommendations generally urge the Commission to give providers and vendors flexibility in developing products and providing CMAS.<sup>22</sup> In particular, TIA agrees with the recommendation that “the CMSP and the mobile device vendors have the flexibility in the design and implementation of mobile devices in order to take the maximum advantages of advances in mobile device technologies.”<sup>23</sup> The regulations should not mandate a particular technology. Such an approach would be inconsistent with the Commission’s policy of ensuring that its regulations do not pick “winners” and “losers.”<sup>24</sup> Moreover, regulations that require a particular technology would preclude rapid implementation of new technologies that may significantly improve CMAS capabilities. Accordingly, the CMAS regulations should be technology-neutral.

## V. CMAS TESTING SHOULD NOT INVOLVE SUBSCRIBERS

Pursuant to Section 602(f), the Commission seeks comment on testing that should be required for CMRS carriers that elect to participate in CMAS.<sup>25</sup> TIA concurs with the recommendations provided by CMSAAC — end-to-end testing should be defined as testing

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<sup>21</sup> *Commercial Mobile Service Alert Advisory Committee Meeting*, Transcript at 51 (Oct. 3, 2007) (“CMSAAC Transcript”).

<sup>22</sup> *See, e.g.*, CMSAAC Recommendations at 15 (“CMAS should allow for mobile device vendor flexibility . . .”); 46 (“A CMSP’s networks shall not be bound to use any specific vendor, technology, software, implementation, client, device, or third party agent, in order to meet the obligations under the WARN Act”); 57 (“CMSP’s and device manufacturers shall have flexibility on how to present the opt-out choices to subscribers”); 64 (“The CMSAAC recommends that the CMSP and the mobile device vendors have the flexibility in the design and implementation of mobile devices in order to take the maximum advantages of advances in mobile device technologies”).

<sup>23</sup> *Id.* at 64

<sup>24</sup> *See, e.g.*, *MTS and WATS Market Structure*, CC Docket No. 78-72, Memorandum Opinion and Order, 102 FCC 2d 849, ¶ 22 (1985) (“It would not be appropriate policymaking, however, for us to slant our rules to favor firms that we forecast will be ‘winners’ in the competitive battle and, in effect, write-off other competitors that we forecast will be ‘losers.’ It is for the marketplace, not this Commission, to determine which competitors will be ‘winners’ and ‘losers’”).

<sup>25</sup> *NPRM* at ¶ 41.

between the initiator of a CMAS alert and the CMSP gateway.<sup>26</sup> As recognized by the CMSAAC, the delivery of test messages to wireless subscribers is undesirable.<sup>27</sup> These test messages would unnecessarily strain network resources and potentially alarm and confuse recipients.<sup>28</sup> The best approach would be the ability to send a test message to “test terminals” to verify CMAS functionality.<sup>29</sup> It is unclear, however, whether such a testing mechanism is technically feasible at this time.

The question of whether CMAS participants should be required to send test messages directly to subscribers was extensively analyzed and debated by CMSAAC. In fact, the issue was re-raised during the final CMSAAC meeting with an amendment to the recommendations proposed that would have required such testing.<sup>30</sup> The proposed amendment was soundly rejected.<sup>31</sup> As noted during the debate, it was doubtful that any CMSP would support “having a test message go out to every handset that they had on their network.”<sup>32</sup> Given the voluntary nature of CMAS, onerous regulations that would discourage participation should not be adopted. Accordingly, TIA opposes any requirement that CMAS participants send test messages to their wireless subscribers.<sup>33</sup>

## **VI. CMAS SHOULD BE LIMITED, AT LEAST INITIALLY, TO ALERTS TRANSMITTED IN ENGLISH**

The CMSAAC thoroughly analyzed whether the CMAS should support languages other than English.<sup>34</sup> Although the best alerting system would provide alerts in the native language of

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<sup>26</sup> CMSAAC Recommendations at 72.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 73.

<sup>30</sup> See CMSAAC Transcript at 155.

<sup>31</sup> *Id.* at 158.

<sup>32</sup> *Id.* at 156.

<sup>33</sup> Although TIA opposes the requirement, CMAS providers should not be prohibited from engaging in such testing.

<sup>34</sup> See CMSAAC Transcript at 22-23; see *NPRM* at ¶ 24.



every listener, such a system is “beyond the reach using today’s technology.”<sup>35</sup> There was considerable discussion of this issue during adoption of the CMSAAC recommendations and the Committee concluded that there should be no requirement to transmit alerts in languages other than English:

The CMSAAC has analyzed the technical feasibility of supporting multilanguage CMAS alerts on the various delivery technologies and has determined that support of languages other than English is a very complex issue. Fundamentally the existing air interfaces of CMSPs have technical limitations and the support of multiple languages may result in a significant impact to capacity and latency due to these limitations.

In addition, an important question is how many languages should be considered? On a National basis, only Spanish exceeds 1% of households. On a local basis, however, there are potentially more than 37 languages that exceed 1% of households which would require more than 16 different character sets to be supported in the mobile device. This raises issues such as character set limitations, the amount of CMAS alert message traffic that would need to be delivered in multi-languages, bandwidth limitations, increased cost and complexity, mobile device capabilities and deployment impacts. Additional character sets to support multiple languages also will potentially limit the amount of data that can be transmitted; for example, some character sets require 2 Bytes per character versus 1 Byte per character, and thus 90 characters available in the text profile for a CMAM now reduces the text message to 45 characters. Additional languages increase the cost and complexity both in the mobile device and in the CMSP network. At the present time, the CMSAAC believes there are fundamental technical problems to reliably implement any languages in addition to English.<sup>36</sup>

The issue of providing alerts in multiple languages was raised again in the final CMSAAC meeting to adopt the final recommendations.<sup>37</sup> Numerous committee members reiterated that support for multiple language is not technically feasible at this time because

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<sup>35</sup> CMSAAC Transcript at 23.

<sup>36</sup> CMSAAC Recommendations at 58; *see* CMSAAC Transcript at 147-54.

<sup>37</sup> *See* CMSAAC Transcript at 147-54.

