

lead to the deployment of the best possible CMAS, fulfilling the Commission's policy goal of promoting the safety of life and property through wire and radio communications.⁵ Motorola, therefore, urges the Commission to expeditiously adopt the recommendations of the CMSAAC as proposed. In particular, Motorola urges the Commission to adopt the CMSAAC's recommendations regarding the appropriate transport technology.

I. THE FCC SHOULD EXPEDITIOUSLY ADOPT THE CMSAAC RECOMMENDATIONS WITHOUT MODIFICATION.

The CMSAAC's recommendations provide the ideal balance of all interests and will lead to the deployment of the best possible CMAS. The CMSAAC report is the result of a year's work by the committee and working groups. A broad group of participants were involved in the creation of this report, including representatives from federal, state, local, and tribal governments; representatives of the communications industry, including manufacturers and carriers; and national organizations representing people with special needs.⁶ As a result, its recommendations carefully balance all interests in a way that allows CMAS to be deployed quickly by carriers in an economically feasible way that fully meets consumers' needs. Indeed, these comprehensive recommendations go above and beyond even the Emergency Alert System's specifications.⁷

⁵ *NPRM* at ¶ 3.

⁶ *NPRM* at n. 13.

⁷ For example, the CMSAAC proposal recommends that alerts be geo-targeted at a countywide level, while current EAS rules only mandate geo-targeting at the state level. See CMSAAC Report at § 5.4; *Review of the Emergency Alert System*, Second Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 13275, ¶¶ 55-56 (2007). Adoption of the CMSAAC proposal would, therefore, provide a more thorough emergency message system than that is currently in place under EAS rules.

Rapid adoption of the total CMSAAC report is critical. Wireless providers must opt-in to the CMAS by September 2008. Launch of a new communications technology, however, requires substantial lead time for development. As a result, standards efforts are already underway based on the report's recommendations. Any modifications to the CMSAAC report or delay in adopting these recommendations will undermine these efforts and could require this process to restart, making a September 2008 opt-in date unreasonable.

Finally, the CMSAAC's recommendations should be adopted without modification. Complete adoption is the best way of ensuring that consumers receive the capability of receiving emergency alerts on their mobile handsets. The CMSAAC was composed of the country's experts in this field. Their work is the result of significant discussion and negotiation and represents a well-founded means of moving forward. Any modification to the proposal could undermine the consensus positions of the subject matter experts who worked to adopt an actionable proposal that could reasonably be implemented.

II. THE COMMISSION MUST NOT MODIFY SEVERAL IMPORTANT PROPOSALS MADE BY THE CMSAAC.

Although Motorola supports the adoption of the CMSAAC's proposal in its entirety, it offers specific comment on several critically important issues addressed in the CMSAAC report and highlighted by the Commission.

Available Transport Technologies. A point-to-multipoint approach, such as cellular broadcasting, is the most feasible solution for mobile emergency alerts.⁸

⁸ *NPRM* at ¶¶ 8-11 (seeking comment on the availability of technologies now and in the future for the transmission of alerts over the CMAS).

Cellular broadcast allows wireless providers to distribute a single text message to all idle mobiles within range of a cell site. This is a highly efficient means of delivering emergency alert messages, as the same broadcast message can be received by many mobiles at the same time. Furthermore, all devices within the relevant area, including roaming users and home subscribers, receive messages that are distributed via cell broadcast.

In contrast, and as noted by the CMSAAC, point-to-point technologies are not feasible, practical, or desirable in most cases.⁹ Point-to-point short message service ("SMS") cannot handle the load of emergency alerting in large scale deployments. As the CMSAAC properly observed, point-to-point solutions have many flaws, including a high risk of delivery delay, no geo-targeting capability, no unique identifying tone, poor security, and a high risk of causing interference to voice calls.¹⁰ Using point-to-point SMS on a large scale as a means of transmitting an emergency broadcast would take hours—if not longer—during which time the system could be completely locked up, preventing its use for any other purpose. Moreover, during an emergency event, SMS could tax wireless system capacity, potentially resulting in the loss or dropping of voice calls. As a result, the implementation of a point-to-point SMS solution for emergency alerts is not only infeasible and impractical on a large scale basis, it also would contravene the Commission's policy of ensuring that all Americans have the capability to receive timely alerts and communicate in times of emergency.¹¹

⁹ CMSAAC Report at § 5.2 (enumerating reasons why point-to-point or unicast delivery technologies are not feasible or practical for the support of CMAS).

¹⁰ CMSAAC Report at § 5.2.

¹¹ *NPRM* at ¶ 3.

In adopting any approach, the Commission must ensure that it is specifically designed for the wireless industry. What works for broadcast radio will not necessarily work for wireless, TV, or satellite. For example, in the NPRM, the Commission proposed using radio data systems such as the Radio Broadcast Data System ("RBDS") to meet its goals for efficient delivery of the CMAS.¹² The RBDS, however, was created by and for the radio broadcast industry and tailored to that delivery model. Commercial mobile wireless is a different medium and the distribution mechanism for it should be tuned to the wireless delivery to ensure that it will function properly. Just as radio does not have a provision for visual broadcasts used over broadcast TV, wireless does not have a readily available delivery mechanism for audio broadcasts used over radio. And unlike radio and TV, wireless requires scheduling delivery and buffering between several other critical broadband and voice services that have other Commission protections against interruption, such as enhanced 911 ("E911") calls.

Similarly, in adopting an approach for CMAS, the Commission must provide the industry with adequate flexibility to tailor the system to specific technologies and providers. Although the basic concepts of cellular broadcast are similar across different air interfaces, there are inherent differences in how cellular broadcast is accomplished at a detailed level. For example, a provider operating over a Code Division Multiple Access ("CDMA") network may not be able to provide cell broadcast in the same manner as a provider operating over a Global System for Mobile ("GSM") network. Indeed, two providers operating over CDMA networks may not be able to provide cell broadcast in the same manner. Air-interface technologies with smaller scale

¹² *NPRM* at ¶ 10 (seeking comment on whether a broadcast distribution model similar to that used to distribute EAS is consistent with the WARN Act and the CMAS).

deployments, such as iDEN, may need additional flexibility to develop and deploy a technically different solution that would provide similar results. As a result, the ways in which the technology must be defined, tested, and implemented, as well as the efforts needed to deliver final solutions, will vary among different technologies and different operators of the same technology. The CMAS Recommendations carefully considered these concerns by creating profiles instead of specific technology solutions.

Alert Formatting, Classes, and Content Issues. The Commission should adopt the CMSAAC's recommendations regarding alert formatting and content. As an initial matter, there should be three classes of CMAS: presidential-level alerts, alerts indicating an imminent threat to life and property, and AMBER Alerts.¹³ Limiting the CMAS to these three classes will ensure efficient and effective delivery of the most important emergency information. In addition, as the CMSAAC recommended, CMAS messages should be limited to 90 characters.¹⁴ To accomplish this, Alert Indicators could use a combination of CAP fields and free form text. This approach will ensure that messages remain short while conveying sufficient and meaningful messages to users. The inclusion of additional information and characters will strain the network, causing few people, if any, to receive the alert.

CMAS for Individuals With Disabilities and the Elderly. The Commission should adopt the CMSAAC's recommendations regarding the incorporation of certain functionalities into the CMAS that will ensure all consumers, including those with

¹³ See CMSAAC Report at § 5.1 (recommending these three classes of messages and proposing that only messages in these three categories be transmitted as CMA messages).

¹⁴ See CMSAAC Report at § 1.1.1 ("The government entity would also act as an "Alert Gateway" to formulate a 90 character alert based on key fields in the CAP alert sent by the alert initiator.") (citations omitted).

disabilities and the elderly, receive emergency alerts in a useful manner.¹⁵ First, both special vibrations and audio tones should be used to notify consumers that a mobile alert has been delivered. Second, all mobile alert messages should use clear and simple language and must be easily readable. Finally, a familiar command should be used to turn off the notification of the message. The adoption of these recommendations will ensure that emergency alerts are useful to *all* consumers, including the elderly and those with disabilities.

The Commission should not adopt any proposal that would require the development of devices designed solely for the elderly or individuals with disabilities. In developing the recommendations above, the CMSAAC observed that one challenge regarding access by the elderly and individuals with disabilities is that not all wireless devices on the market today have the features to support all of its recommendations.¹⁶ Going forward, adoption of CMSAAC proposals by the manufacturers will result in mobile devices with universal design features that meet the needs of all consumers.

Transmission of CMAS Alerts in Languages Other than English. The Commission should not require the transmission of CMAS alerts in languages other than English at this time. Ensuring that non-English speakers have access to the CMAS is an extremely important goal of the Commission, the wireless industry, and Motorola. At this time, and as reported by the CMSAAC, there are numerous challenges that currently prohibit the transmission of alerts in multiple languages. First,

¹⁵ See CMSAAC Report at §§ 5.5.1-5.5.2 (outlining a series of proposed requirements to ensure that people with disabilities and the elderly are able to receive CMA alerts).

¹⁶ CMSAAC Report at § 5.5. The CMSAAC strongly encouraged manufacturers to implement all of its recommendations to the extent such implementation is technically feasible. *Id.*

in order for transmission in multiple languages to occur, the message must be delivered to the wireless provider in the language that it is to be delivered in, and it must follow the format of the CMAS. Therefore, the Alert Gateway would need to be able to generate mobile alert in multiple languages. Neither wireless provider networks nor mobile devices, however, have the capabilities of translating messages. Second, the existing air interfaces of wireless providers have technical limitations that make the support of multiple languages impossible without a significant negative impact on capacity and latency.¹⁷ These factors prohibit the distribution of mobile alert messages in multiple languages at this time. The Commission and industry, however, should continue to study this issue and address it as technologies evolve.

Cost Recovery. To the extent possible, the Commission should limit the costs carriers must incur to implement CMAS. Accordingly, the Commission should ensure that hardware changes are not required. The development and deployment of new hardware is extremely expensive due to the costs associated with the use of dedicated design and test teams and the loss of economies and scale. As a result, any requirement that would mandate the development of new hardware would make CMAS cost-prohibitive for virtually all, if not all, wireless providers. The CMSAAC expressly recognized this issue and labored to adopt a proposal that would minimize hardware changes for the delivery of mobile alerts. The Commission therefore should endeavor to adopt the CMSAAC report and proposals as provided to ensure that costs associated

¹⁷ Providing CMAS support in languages other than English is further complicated if the alternative language utilizes a different character set than the English language. Not all phones contain all character sets, and handsets may lack memory to house them all. Languages using other characters also may use more data per character than the English language, thereby requiring a shorter message in the English language in order to ensure a translation that meets the data limit.

with any hardware changes are not prohibitive, which would lead wireless providers to opt out of the provision of mobile alerts.

In addition, the Commission should allow carriers to recover the costs they do incur. Even without hardware changes, there will be costs associated with the deployment of CMAS (e.g., software upgrades, testing). Although carriers are forbidden from charging for the delivery of a particular alert under the WARN Act,¹⁸ such general costs should be recoverable through general service fees.

Timeline for Implementation. The Commission must provide the wireless industry adequate time to develop and deploy a CMAS by adopting the CMSAAC's proposed timeline for implementation.¹⁹ Standards must be developed prior to any CMAS implementation. Because of the multi-vendor environment that exists in wireless networks, standards-setting is the only way to deliver common, efficient, and cost-effective solutions. In addition, product developers need time to engineer these solutions, develop them, and bring them into production. Operators will then need time to test and deploy these solutions before they can be used. Additional time also will be needed if new devices must be deployed. The Commission should not establish a timeline that attempts to shortcut this critical process, as such action would simply require additional work and a greater delay for the ultimate delivery of an effective solution.

In addition, the Commission must allow wireless providers adequate time to

¹⁸ *NPRM* at ¶ 38.

¹⁹ While Motorola supports the CMSAAC's proposed timeline for the substantive reasons cited herein, it also notes that should the Commission make any changes to the CMSAAC's recommendation, the clock established by the WARN Act will reset and void efforts that are already underway. Any modifications to the CMSAAC recommendations would likely delay deployment for at least six months to one year.

assess the CMAS before opting in. Vendors cannot estimate the cost or the timeframe in which specific solutions will be available until those solutions have been standardized, designed, and scoped. However, it is unreasonable to expect operators to commit to the CMAS without knowing this fundamental information. As such, the Commission must act expeditiously in this proceeding and adopt the CMSAAC recommendations as provided to the Commission, to ensure wireless providers can make an informed decision by September 2008.

III. **CONCLUSION**

Motorola is fully committed to ensuring that Americans are able to receive timely and accurate emergency alerts on their wireless handsets. For this reason, Motorola supports the CMSAAC proposal and urges the Commission to expeditiously adopt it without modification.

Respectfully submitted,

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