

Subpart C—System Architecture**§ 10.300 Alert Aggregator.**

Reserved.

§ 10.310 Federal Alert Gateway.

Reserved.

§ 10.320 Provider Alert Gateway Requirements.

This section specifies the functions that each Participating Commercial Mobile Service provider is required to support and perform at its CMS provider gateways.

(a) *General.* The CMS provider gateway must provide secure, redundant, and reliable connections to receive Alert Messages from the Federal alert gateway. Each CMS provider gateway must be identified by a unique IP address or domain name.

(b) *Authentication and Validation.* The CMS provider gateway must authenticate interactions with the Federal alert gateway, and validate Alert Message integrity and parameters. The CMS provider gateway must provide an error message immediately to the Federal alert gateway if a validation fails.

(c) *Security.* The CMS provider gateway must support standardized IP-based security mechanisms such as a firewall, and support the defined CMAS “C” interface and associated protocols between the Federal alert gateway and the CMS provider gateway.

(d) *Geographic Targeting.* The CMS provider gateway must determine whether the provider has elected to transmit an Alert Message within a specified alert area and, if so, map the Alert Message to an associated set of transmission sites.

(e) *Message Management.*

(1) *Formatting.* The CMS provider gateway is not required to perform any formatting, reformatting, or translation of an Alert Message, except for transcoding a text, audio, video, or multimedia file into the format supported by mobile devices.

(2) *Reception.* The CMS provider gateway must support a mechanism to stop and start Alert Message deliveries from the Federal alert gateway to the CMS provider gateway.

(3) *Prioritization.* The CMS provider gateway must process an Alert Message on a first in–first out basis except for Presidential Alerts, which must be processed before all non-Presidential alerts.

(4) *Distribution.* A Participating CMS provider must deploy one or more CMS provider gateways to support distribution of Alert Messages and to manage Alert Message traffic.

(5) *Retransmission.* The CMS provider gateway must manage and execute Alert Message retransmission, and support a mechanism to manage congestion within the CMS provider’s infrastructure.

(f) *CMS Provider Profile.* The CMS provider gateway will provide profile information on the CMS provider for the Federal alert gateway to maintain at the Federal alert gateway. This profile information must be provided by an authorized CMS provider representative to the Federal alert gateway administrator. The profile information must include the data listed in Table 10.320(f) and must comply with the following procedures:

(1) The information must be provided 30 days in advance of the date when the CMS provider begins to transmit CMAS alerts.

(2) Updates of any CMS provider profiles must be provided in writing at least 30 days in advance of the effective change date.

Table 10.320(f) CMSP Profile on Federal Alert Gateway

Profile Parameter	Parameter Election	Description
CMSP Name		Unique identification of CMSP
CMSP gateway Address	IP address or Domain Name	
	Alternate IP address	Optional and subject to implementation
Geo-Location Filtering	<yes / no>	If "yes" the only CMAM issued in the listed states will be sent to the CMSP gateway. If "no", all CMAM will be sent to the CMSP gateway.
If yes, list of states	CMAC Geocode for state	List can be state name or abbreviated state name.

§ 10.330 Provider Infrastructure Requirements.

This section specifies the general functions that a Participating CMS Provider is required to perform within their infrastructure. Infrastructure functions are dependent upon the capabilities of the delivery technologies implemented by a Participating CMS Provider.

- (a) Distribution of Alert Messages to mobile devices.
- (b) Authentication of interactions with mobile devices.
- (c) Reference Points D & E. Reference Point D is the interface between a CMS Provider gateway and its infrastructure. Reference Point E is the interface between a provider's infrastructure and mobile devices including air interfaces. Reference Points D and E protocols are defined and controlled by each Participating CMS Provider.

Subpart D—Alert Message Requirements

§ 10.400 Classification.

A Participating CMS Provider is required to receive and transmit three classes of Alert Messages: Presidential Alert; Imminent Threat Alert; and Child Abduction Emergency/AMBER Alert.

- (a) *Presidential Alert*. A Presidential Alert is an alert issued by the President of the United States or the President's authorized designee.
- (b) *Imminent Threat Alert*. An Imminent Threat Alert is an alert that meets a minimum value for each of three CAP elements: Urgency, Severity, and Certainty.
 - (1) *Urgency*. The CAP Urgency element must be either Immediate (*i.e.*, responsive action should be taken immediately) or Expected (*i.e.*, responsive action should be taken soon, within the next hour).
 - (2) *Severity*. The CAP Severity element must be either Extreme (*i.e.*, an extraordinary threat to life or property) or Severe (*i.e.*, a significant threat to life or property).
 - (3) *Certainty*. The CAP Certainty element must be either Observed (*i.e.*, determined to have occurred or to be ongoing) or Likely (*i.e.*, has a probability of greater than 50 percent).

(c) *Child Abduction Emergency/AMBER Alert*. An AMBER Alert is an alert initiated by a local government official based on the U.S. Department of Justice's five criteria that should be met before an alert is activated: (1) law enforcement confirms a child has been abducted; (2) the child is 17 years or younger; (3) law enforcement believes the child is in imminent danger of serious bodily harm or death; (4) there is enough descriptive information about the victim and the abduction to believe an immediate broadcast alert will help; and (5) the child's name and other data have been entered into the National Crime Information Center. There are four types of AMBER Alerts: Family Abduction; Non-family Abduction; Lost, Injured or Otherwise Missing; and Endangered Runaway.

(1) *Family Abduction*. A Family Abduction (FA) alert involves an abductor who is a family member of the abducted child such as a parent, aunt, grandfather, or stepfather.

(2) *Nonfamily Abduction*. A Nonfamily Abduction (NFA) alert involves an abductor unrelated to the abducted child, either someone unknown to the child and/or the child's family or an acquaintance/friend of the child and/or the child's family.

(3) *Lost, Injured, or Otherwise Missing*. A Lost, Injured, or Otherwise Missing (LIM) alert involves a case where the circumstances of the child's disappearance are unknown.

(4) *Endangered Runaway*. An Endangered Runaway (ERU) alert involves a missing child who is believed to have run away and in imminent danger.

§ 10.410 Prioritization.

A Participating CMS Provider is required to transmit Presidential Alerts upon receipt. Presidential Alerts preempt all other Alert Messages. A Participating CMS Provider is required to transmit Imminent Threat Alerts and AMBER Alerts on a first in-first out (FIFO) basis.

§ 10.420 Message Elements.

A CMAS Alert Message processed by a Participating CMS Provider shall include five mandatory CAP elements—Event Type; Area Affected; Recommended Action; Expiration Time (with time zone); and Sending Agency. This requirement does not apply to Presidential Alerts.

§ 10.430 Character Limit.

A CMAS Alert Message processed by a Participating CMS Provider must not exceed 90 characters of alphanumeric text.

§ 10.440 Embedded Reference Prohibition.

A CMAS Alert Message processed by a Participating CMS Provider must not include an embedded Uniform Resource Locator (URL), which is a reference (an address) to a resource on the Internet, or an embedded telephone number. This prohibition does not apply to Presidential Alerts.

§ 10.450 Geographic Targeting.

This section establishes minimum requirements for the geographic targeting of Alert Messages. A Participating CMS Provider will determine which of its network facilities, elements, and locations will be used to geographically target Alert Messages. A Participating CMS Provider must transmit any Alert Message that is specified by a geocode, circle, or polygon to an area not larger than the provider's approximation of coverage for the Counties or County Equivalents with which that geocode, circle, or polygon intersects. If, however, the propagation area of a provider's transmission site exceeds a single County or County Equivalent, a Participating CMS Provider may transmit an Alert Message to an area not exceeding the propagation area.

§ 10.460 Retransmission Frequency.

Reserved.

§ 10.470 Roaming.

When, pursuant to a roaming agreement (*see* § 20.12 of the Commission's rules), a subscriber receives services from a roamed-upon network of a Participating CMS Provider, the Participating CMS Provider must support CMAS alerts to the roaming subscriber to the extent the subscriber's mobile device is configured for and technically capable of receiving CMAS alerts..

Subpart E—Equipment Requirements**§ 10.500 General Requirements.**

CMAS mobile device functionality is dependent on the capabilities of a Participating CMS Provider's delivery technologies. Mobile devices are required to perform the following functions:

- (a) Authentication of interactions with CMS Provider infrastructure.
- (b) Monitoring for Alert Messages.
- (c) Maintaining subscriber alert opt-out selections, if any.
- (d) Maintaining subscriber alert language preferences, if any.
- (e) Extraction of alert content in English or the subscriber's preferred language, if applicable.
- (f) Presentation of alert content to the device, consistent with subscriber opt-out selections. Presidential Alerts must always be presented.
- (g) Detection and suppression of presentation of duplicate alerts.

§ 10.510 Call Preemption Prohibition.

Devices marketed for public use under Part 10 must not enable an Alert Message to preempt an active voice or data session.

§ 10.520 Common Audio Attention Signal.

A Participating CMS Provider and equipment manufacturers may only market devices for public use under Part 10 that include an audio attention signal that meets the requirements of this section.

- (a) The audio attention signal must have a temporal pattern of one long tone of two (2) seconds, followed by two short tones of one (1) second each, with a half (0.5) second interval between each tone. The entire sequence must be repeated twice with a half (0.5) second interval between each repetition.
- (b) For devices that have polyphonic capabilities, the audio attention signal must consist of the fundamental frequencies of 853 Hz and 960 Hz transmitted simultaneously.
- (c) For devices with only a monophonic capability, the audio attention signal must be 960 Hz.
- (d) The audio attention signal must be restricted to use for Alert Messages under Part 10.
- (e) A device may include the capability to mute the audio attention signal.

§ 10.530 Common Vibration Cadence.

A Participating CMS Provider and equipment manufacturers may only market devices for public use under Part 10 that include a vibration cadence capability that meets the requirements of this section.

- (a) The vibration cadence must have a temporal pattern of one long vibration of two (2) seconds, followed by two short vibrations of one (1) second each, with a half (0.5) second interval between each vibration. The entire sequence must be repeated twice with a half (0.5) second interval between each repetition.
- (b) The vibration cadence must be restricted to use for Alert Messages under Part 10.

(c) A device may include the capability to mute the vibration cadence.

§ 10.540 Attestation Requirement.

Reserved.

**STATEMENT OF
CHAIRMAN KEVIN J. MARTIN**

Re: The Commercial Mobile Alert System, First Report and Order, PS Docket No. 07-287

With the American public increasingly relying on wireless communications in everyday life, it is essential that we support and advance new ways to share critical, time-sensitive information with them in times of crisis. The ability to deliver accurate and timely warnings and alerts through cell phones and other mobile devices is an important next step in our efforts to help ensure that the American public has the information they need to take action to protect themselves and their families prior to, and during, disasters and other emergencies. The Commercial Mobile Services Alert Advisory Committee's recommendations were instrumental in moving this process forward. I commend them for their efforts

No one questions the value that an effective Commercial Mobile Alert System will have on the safety and welfare of the American public. Accordingly, we welcomed the challenge offered to us by the WARN Act as an opportunity to meet our public safety obligations under the Communications Act and to achieve one of our top priorities - an effective alert system for wireless devices.

By adopting technical requirements for the wireless alerting system today, we are enabling wireless providers that choose to participate in this system to begin designing their networks to deliver mobile alerts. It would have been better, of course, if we had a Federal entity in place now to take on the role of alert aggregator and gateway. We are hopeful that we have initiated the dialogue that will allow an appropriate Federal entity to assume that central role in an expeditious manner.

This system has the potential to significantly impact the way Americans receive critical warnings on the go, whether they are at home, work, or vacationing. As we go forward, given the important public safety purpose that these alerts serve, I encourage wireless providers to participate fully in this valuable system.

STATEMENT OF
COMMISSIONER MICHAEL J. COPPS

Re: The Commercial Mobile Alert System, First Report and Order, PS Docket No. 07-287

Today's *Order* creates a framework for delivering emergency alerts to American mobile phones, as required by the Warning Alert Response Network (WARN) Act. Extending the nation's emergency alert system to mobile phones is an enormous step forward. Now Americans will be able to receive warnings about dangerous weather and other imminent threats (including man-made threats like a terrorist attack) in their immediate area, even if they are not near a television set or radio and even if their electrical power is down. This is good news for all of us—especially in these dangerous times.

I also think it is significant that today's *Order* arises out of cooperation—through a process established by the WARN Act—among public safety representatives; government at the state, local and federal level; federally-recognized Indian tribes; industry; and national organizations representing those with special needs. For the most part, the work of the Commercial Mobile Service Alert Advisory Committee (established by the WARN Act) has been a model of how difficult and important decisions can be reached, and consensus forged, even among diverse stakeholders.

The many experts who dedicated their time and energy to this important effort have made today's decision far more informed, and responsive to technical realities, than it otherwise would be. I thank them for their service, and I hope that this spirit of cooperation and shared dedication to improving public safety can serve as a model for other public safety issues before the Commission. To be sure, there will be times when the agency cannot forge consensus and must act based on the best available evidence before it—because doing so is sometimes necessary to protect the American public. But the fact remains that the Commission and industry are both capable of reaching better outcomes when we work cooperatively, and I hope we can do so more often in the months and years ahead.

Unfortunately, there is one final issue that remains unresolved by today's *Order*—an issue that, if left uncorrected, threatens to vitiate it entirely. So far, no federal agency has stepped up to fulfill the unified aggregator/gateway role that virtually all stakeholders agree is necessary for our mobile alert system to work properly. Indeed, if no agency assumes this role, the rules we enact today will never become effective and Americans will never receive the protection of emergency alerts delivered to their mobile phones.

The unwillingness of the Federal Emergency Management Agency (FEMA) to fulfill this role is especially disheartening because FEMA representatives were intimately involved in developing the idea of a unified Federal gateway/aggregator. In fact, not until long after the die was cast, did FEMA suggest that it would be unable for statutory and other reasons to perform this key function. Specifically, it was less than two months ago—*after* the advisory committee had made its recommendation and *after* FEMA's representative had voted in favor of the unified Federal gateway/aggregator scheme—before FEMA raised any objection to assuming this responsibility.

So now we are left without a firm candidate for a position that is essential to getting this system off the ground. In light of FEMA's recent and unexpected interpretation of its statutory authority, the Commission's only remaining option is to work with its fellow agencies and the Congress to find a federal entity (whether FEMA, another branch of the Department of Homeland Security, or some other government agency) that can fulfill this function.

I certainly wish it had not come to this. Indeed, I would not be shy about suggesting that the FCC take on this function itself—except that our agency (unlike FEMA, the Department of Justice, and the National Oceanic and Atmospheric Agency) does not currently have experience with originating

emergency alerts; has not received appropriations for operating an emergency alert system (as FEMA has); and does not have statutory authority to borrow money against the DTV Transition Fund to implement the WARN Act (as the Departments of Homeland Security and Commerce have).

The time may come when the FCC must consider whether to begin the task of creating this infrastructure here at our own agency, and I will not hesitate to head down this road if it looks like the fastest and most effective way to bring mobile emergency alerts to the American people. But for now the most fruitful path appears to be working with the Congress and our fellow federal agencies to see if an institution with experience originating emergency alerts is willing and able to assume this role for the CMAS system. I hope—for all of our sakes—that one will be.

**STATEMENT OF
COMMISSIONER JONATHAN S. ADELSTEIN**

Re: The Commercial Mobile Alert System, First Report and Order, PS Docket No. 07-287

The prompt and accurate delivery of national, state and local messages to ensure the safety and security of the American people during natural or man-made disasters is critical. Today's *Report and Order* marks our efforts towards ensuring that there are technologically neutral rules in place to enable commercial mobile service providers to elect to provide these critical alerts to their customers. With over 250 million subscribers of wireless services as of the end of this year, the ability of carriers to transmit emergency alerts to the public via commercial mobile devices is an urgently needed next step.

One of the central purposes for the very creation of the FCC is to promote the safety of life and property of all Americans. The Commission has taken its important role in prescribing these rules very seriously, so I am pleased to support this decision. This significant step forward is due, in large part, to the dedication of state and local governments, industry and other participants that worked collaboratively to provide us with their recommendations. It is worth remembering that, as an elective system, it was vital that the rules implementing the Commercial Mobile Alert System were based upon the coordinated efforts of those that will implement and utilize this system. Collaboration, communication and cooperation have been key to this process. The effectiveness of this emergency alert system rests on the good-faith of all participating entities and I expect this will go a long way in ensuring mobile service providers elect to provide these emergency alerts.

I would like to extend my sincere gratitude to the members of the Commercial Mobile Service Alert Advisory Committee who worked diligently through this important process.

**STATEMENT OF
COMMISSIONER DEBORAH TAYLOR TATE**

Re: The Commercial Mobile Alert System, First Report and Order, PS Docket No. 07-287

With over 255 million Americans subscribing to mobile telephone service, it is critical to public safety and homeland security that the nation's emergency alert system include wireless alerts. To that end, in 2006 Congress established, via the WARN Act, a process to create a mobile emergency alert system. Today we take an important step in fulfilling this goal.

I particularly wish to thank the representatives from industry; public safety providers; local, state and federal government agencies; and others who participated in the Commercial Mobile Service Alert Advisory Committee. The Federal Communications Commission should not - and in this case, can not - perform its duties without the help of such a broad coalition, especially the service providers who ultimately must transmit emergency alerts. I also wish to acknowledge Sen. Jim DeMint for his leadership in sponsoring the WARN Act and his guidance in its implementation. Finally, the excellent staff of the Public Safety and Homeland Security Bureau deserve recognition for their consistent dedication to this effort.

**STATEMENT OF
COMMISSIONER ROBERT M. MCDOWELL**

Re: The Commercial Mobile Alert System, First Report and Order, PS Docket No. 07-287

At the outset, I want to acknowledge and thank Lisa Fowlkes, Jean Ann Collins and all of the team in the Public Safety and Homeland Security Bureau for their hard work. This project has congressionally-mandated deadlines, and they have stayed focused on their tasks to produce a great deal of excellent work in a short period of time.

I also want to thank the folks from private industry and public safety who are so generously giving of their time and expertise to serve on the Commercial Mobile Service Alert Advisory Committee and participate in this important process. This project is an excellent example of the wonderful benefits that flow from a government-industry collaboration. I am pleased that the Commission has had a leading role in the meaningful partnership among the commercial wireless industry, technology providers and public safety entities.

By harnessing the expertise of all interested stakeholders, we have made great strides toward the roll-out of an expanded emergency alert system. We will *all* benefit from the important work this group has undertaken, and I look forward to continuing to work with all of you as we complete the next set of benchmarks. At this point, the Commission is already well poised to “get out of the way” and let the private sector deliver the new alert system for the benefit of America’s wireless consumers.