DOCKET FILE COPY ORIGINAL

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

MAILED
JUN - 1 2011
FCC Mail Room

In the Matter of	)	
	)	
Review of the Emergency Alert System;	)	EB Docket No. 04-296
	)	
Independent Spanish Broadcasters Association, the Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief	)	
	)	
Randy Gehman Petition for Rulemaking	)	

THIRD FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: May 25, 2011 **Released: May 26, 2011**

Comment Date: **[30 days after date of publication in the Federal Register]**
Reply Comment Date: **[45 days after date of publication in the Federal Register]**

By the Commission: Commissioner Baker not participating.

TABLE OF CONTENTS

Heading Paragraph #

I. INTRODUCTION AND SUMMARY 1
II. BACKGROUND 3
A. EAS Components 4
B. Commission Actions to Facilitate Next Generation EAS 8
1. Second Report and Order 8
2. CSRIC Recommendations for Part 11 16
3. Part 11 Public Notice 18
4. FEMA Adoption of CAP 21
5. Waiver Order 22
III. DISCUSSION 23
A. Scope of CAP-Related Part 11 Revisions 24
B. Obligation to Accept CAP Messages 30
1. CAP-Formatted Message Translation to SAME 31
2. CAP-Related Monitoring Requirements 36
3. Next Generation Distribution Systems 42
4. Equipment Requirements 45
5. Miscellaneous Rule Changes Related to Fully Implementing CAP 61
C. EAS Equipment Certification 90
D. 180-Day CAP Reception Deadline 109
E. CAP Messages Originated by State Governors 112
F. Revising the Procedures for Processing EANs 139
G. Miscellaneous Part 11 Revisions Not Related to CAP 168

IV. PROCEDURAL MATTERS 196
A. *Ex Parte* Presentations 196
B. Comment Filing Procedures 197
C. Accessible Formats 198
D. Regulatory Flexibility Analysis 199
E. Paperwork Reduction Act Analysis 200
V. ORDERING CLAUSES 201
APPENDIX A – Proposed Rules
APPENDIX B – Initial Regulatory Flexibility Analysis

I. INTRODUCTION AND SUMMARY

1. In this *Third Further Notice of Proposed Rulemaking*, we seek comment on proposed changes to our Part 11 rules governing the Emergency Alert System (EAS) to codify the obligation to process alert messages formatted in the Common Alerting Protocol (CAP)[1] and to streamline and clarify these rules generally to enhance their effectiveness.

2. In 2007, as an initial step towards upgrading the EAS to incorporate the latest technologies and capabilities and to facilitate integration of public alerting at the national, state, and local levels, the Commission adopted the *Second Report and Order* in this docket, which, as explained below, incorporated certain CAP-related obligations into the Commission's Part 11 EAS rules.[2] This *Third Further Notice of Proposed Rulemaking* builds on that effort by seeking comment on a wide range of tentative conclusions and proposed revisions to the Part 11 rules that would codify the CAP-related mandates adopted in the *Second Report and Order*. These proposed revisions seek to integrate CAP-based alert messaging into the existing EAS while laying the foundation for transitioning to next generation alert mechanisms. We also seek comment on several proposed rule revisions unrelated to CAP that are designed to modernize and streamline the Part 11 rules by eliminating outdated technical and procedural requirements, and more generally, improve the overall effectiveness of the EAS.[3] Among other things, in this *Third Further Notice of Proposed Rulemaking* we seek comment on and render tentative conclusions in the following areas:

<u>Scope of Part 11 Revision</u>:

- We tentatively conclude, with respect to the CAP-related obligations addressed in this item, that our focus should be on ensuring that CAP-formatted alert messages entered into the EAS are converted into and processed in the same way as messages formatted in the EAS Protocol.[4]

---

[1] *See* 47 C.F.R. § 11.56. *See infra* paras. 11-14 for a description of CAP.

[2] *See* Review of the Emergency Alert System; Independent Spanish Broadcasters Association, The Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, Petition for Immediate Relief, *Second Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 13275 (2007) (alternatively, "*Second Report and Order*" and "*Next Generation EAS FNPRM*").

[3] In a separate proceeding we have adopted an order setting technical parameters for a nationwide test of EAS. *See* Review of the Emergency Alert System, *Third Report and Order*, FCC 11-12, 76 Fed. Reg. 12,600 (March 8, 2011) (*National Test Order*). In addition, later in 2011, we intend to release a Notice of Inquiry on Broadband Alerting to initiate a comprehensive examination of the potential for broadband technologies to enhance alerts and warnings.

[4] *See infra* paras. 27-28. As indicated, we intend to release a Notice of Inquiry on Broadband Alerting later in 2011 to initiate a comprehensive examination of the potential for broadband technologies to enhance alert and warning systems.

Obligation to Accept CAP Messages:

- We tentatively conclude that the Commission should revise the Part 11 rules to make clear that EAS Participants must be able to convert CAP-formatted EAS messages into EAS Protocol-compliant EAS messages in accordance with the ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0 (May 17, 2010).[5]
- We tentatively conclude that the Commission should amend the Part 11 rules to require that EAS Participants monitor the Really Simple Syndication 2.0 feed(s) utilized by: (i) FEMA's Integrated Public Alert and Warning System for federal CAP-formatted messages; and (ii) state alert systems as the source of governor-originated CAP messages (provided these are described in the State Area EAS Plan submitted to and approved by the Commission).[6]
- We seek comment on whether we should permit EAS Participants to meet their CAP-related obligations by deploying intermediary devices that convert CAP-formatted messages into EAS Protocol-formatted messages for transmission over the EAS Participants' transmission platforms.[7]

EAS Equipment Certification:

- We seek comment on whether and how the Commission should incorporate compliance with CAP functionality into its existing certification scheme, including how the Commission should implement conformance testing related to the proper translation of CAP-formatted messages into EAS Protocol-compliant messages and what requirements the Commission should adopt for modified EAS equipment.[8]
- We seek comment on whether the Commission should classify intermediary devices as stand-alone devices subject to the same certification r equirements as stand-alone decoders and encoders.[9]

180-Day CAP Reception Deadline:

- We seek comment on whether the current September 30, 2011, deadline for CAP-compliance is sufficient or whether the Commission should extend or modify it so it is triggered by some action other than FEMA's adoption of CAP, such as implementation by the Commission of revised certification rules.[10]

CAP Messages Originated by State Governors:

- We tentatively conclude that the obligation of EAS Participants to receive and transmit CAP-formatted messages initiated by state governors only applies to the extent that state governors have formatted such CAP messages using FEMA's standards for federal CAP messages.[11]

---

[5] *See infra* para. 35.

[6] *See infra* paras. 38, 40.

[7] *See infra* para. 46.

[8] *See infra* paras. 94-103, 105-108.

[9] *See infra* para. 104.

[10] *See infra* paras. 109-111.

[11] *See infra* para. 116.

- We seek comment on any rule revisions needed to fully implement the obligation to process CAP-formatted messages initiated by state governors, including whether the Commission must adopt a new origination and/or event code and whether the obligation should extend to governors of any adjacent states in which the EAS Participant provides service.[12]
- We tentatively conclude that we should define the geo-targeting element of mandated gubernatorial alerts in Part 11 in the same way as we define the location provisions in the current EAS Protocol.[13]

Revising the Procedures for Processing Emergency Action Notifications (EANs):

- We seek comment on whether the Commission should substantially simplify procedures for processing EANs set forth in section 11.54 and related Part 11 rule sections so that EAS Participants process EANs like any other EAS message, only on a mandatory and priority basis. We also seek comment on whether the Commission should:
  - eliminate the Emergency Action Termination event code and replace it where necessary with the End Of Message code in the Part 11 rules;[14]
  - delete sections 11.16, 11.42, 11.44, and 11.54(a), (b)(1)-(8), (10), (12), and 11.54(c) of the rules;[15] and
  - eliminate the EAS Operating Handbook and instead require EAS Participants to maintain within their facilities a copy of the current FCC-filed and approved versions of the State and Local Area EAS Plans.[16]

Miscellaneous Part 11 Revisions Not Related to CAP:

- We seek comment on whether the Commission can delete some or all of the current provisions relating to the Attention Signal in sections 11.32(9) and 11.33(b) of the rules and instead apply the minimal standard currently set forth in section 11.31(a)(2) or whether we should delete the Attention Signal from the Part 11 rules altogether.[17]
- We seek comment on whether the introduction of CAP to the existing technical framework of the EAS can improve access to emergency information to persons with disabilities.[18]

II. BACKGROUND

3. Congress established the Commission for the purposes of, among other things, the national defense and the promotion of safety of life and property through the regulation of wire and radio communications networks.[19] For nearly fifty years, the Commission has implemented an essential

[12] *See infra* paras. 119-124.

[13] *See infra* para. 126.

[14] *See infra* para. 147.

[15] *See infra* paras. 167, 151, 162-163, 149 and 157-158, respectively.

[16] *See infra* paras. 154-155.

[17] *See infra* paras. 178-180.

[18] *See infra* paras. 189-195.

[19] *See* Section 1 of the Communications Act of 1934 (as amended) (the "Act"), 47 U.S.C § 151.

element of this mandate by affording the American public effective national alert and warning systems.[20] In developing and implementing these systems, the Commission has worked with federal partners and in coordination with state and local stakeholders. The current system, the EAS, is a national public warning system designed to provide the President and heads of state and local governments with the ability to issue alerts to the general public, on a national, state, or local area basis, over broadcast TV and radio, cable, satellite, and other audio and video distribution platforms.[21] Although the EAS was initially designed to provide the President with the ability to communicate rapidly with the American public via radio and TV broadcast networks during a national crisis, a Presidential alert has never been sent over the EAS.[22] The EAS network, however, has been and continues to be used extensively for state, local, and weather–related emergencies.[23]

[20] In addition to Section 151 of the Act, the Commission also has authority to regulate participation in the EAS under Sections 4(i) and (o), 303(r), and 706 of the Act, 47 U.S.C. §§ 154(i) and (o), 303(r), 606.

[21] An overview of the history of EAS is set out in the first Notice of Proposed Rulemaking in this docket. *See* Review of the Emergency Alert System, EB Docket No. 04-296, *Notice of Proposed Rulemaking*, 19 FCC Rcd 15775, 15776-77, paras. 6-8. An overview of the present organization and functioning of the EAS system is set out in the *Second Report and Order*. *See Second Report and Order*, 22 FCC Rcd 13275, 13280-83, paras. 11-14.

[22] *See Second Report and Order*, 22 FCC Rcd 13275, 13282-83, para. 14. Under the Part 11 rules, national activation of the EAS for a Presidential alert message with the Emergency Action Notification (EAN) event code is designed to provide the President the capability to transmit an alert message (in particular, an audio alert message) to the American public within ten minutes from any location at any time and must take priority over any other alert message and preempt other alert messages in progress. *See, e.g.*, Review of the Emergency Alert System, *First Report and Order and Further Notice of Proposed Rule Making*, 20 FCC Rcd 18625, 18628, para. 8 (2005) (*First Report and Order*). *See also* 47 C.F.R. § 11.44(a). Although an actual Presidential alert has never been sent over the EAS, on January 6, 2010, FEMA and the FCC, along with State of Alaska officials and the Alaska Broadcasters Association, conducted a live code test of the Presidential alert and warning capabilities of the EAS in the State of Alaska. *See* "Federal And State Partners To Test National Emergency Alert System In Alaska," *available at* http://www.fema.gov/news/newsrelease.fema?id=50157. A follow-up state-wide test of the EAS in Alaska was conducted on January 26, 2011. *See* FEMA, "Emergency Alert System Test Concludes In Alaska," Release Number: HQ-11-004 (Jan. 27, 2011), *available at* http://www.fema.gov/news/newsrelease.fema?id=53591. As indicated, we adopted the *National Test Order* in February 2011, which revised the Part 11 rules to facilitate a nationwide test of the EAS. *See supra* note 3.

[23] Use of the EAS by state or local governments to initiate warnings and the broadcast and transmission of other-than-Presidential alerts is voluntary, except, as discussed in Section III.E of this item, for EAS messages initiated by state governors that are formatted in CAP and delivered pursuant to procedures set forth in State Area EAS Plans that have been approved by the Commission. *See* 47 C.F.R. § 11.55(a); *see also Second Report and Order*, 22 FCC Rcd at 13300, para. 55. Several thousand state and local EAS messages are transmitted annually, more than 70 percent of which are vital weather-related alerts (such as flash flood, hurricane, and tornado warnings) originated by the National Weather Service (NWS) via the NOAA Weather Radio (NWR) network, which spans the U.S., Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. *See Second Report and Order*, 22 FCC Rcd 13275, 13282-83, para. 14 (*citations omitted*).

A. EAS Components

4. *EAS Oversight*. The Commission, in conjunction with the Federal Emergency Management Agency (FEMA)[24] and the National Weather Service (NWS),[25] implements EAS at the federal level.[26] In addition, State Emergency Coordination Committees (SECC) and Local Emergency Coordination Committees (LECC) develop State and Local Area EAS Plans.[27]

5. *EAS Architecture*. The present-day EAS is a hierarchical alert message distribution system that utilizes radio and television broadcasters, cable service providers, and other regulated entities (collectively known as "EAS Participants")[28] to transmit audio and/or visual emergency alert messages to the public. To initiate an EAS message, whether at the national, state, or local levels, the message originator must format a message in the EAS Protocol,[29] which is identical to the Specific Area Message Encoding (SAME) digital protocol utilized by NWS[30] (hereinafter, "EAS Protocol" and "SAME" are used interchangeably), and send the formatted alert to a designated entry point within the EAS network for

---

[24] Authority to activate the national-level EAS rests solely with the President. This authority has been delegated to DHS's Undersecretary for Emergency Preparedness and Response as director of FEMA. FEMA acts as the White House's executive agent for the development, operations, and maintenance of the national level EAS and is responsible for implementation of the national level activation of EAS, tests, and exercises. *See, e.g., First Report and Order*, 20 FCC Rcd 18628, para. 6.

[25] Working with other federal agencies and EAS, NWS utilizes an all-hazards radio network that broadcasts warnings and post-event information for all types of hazards, including weather, natural, technological, and national emergencies. *See* <http://www.nws.noaa.gov/nwr/allhazard.htm>. *See also Second Report and Order*, 22 FCC Rcd 13275, 13282-83, para. 14.

[26] The respective roles of the Commission, FEMA, and NWS are defined in a series of Executive documents. *See* 1981 State and Local Emergency Broadcasting System (EBS) Memorandum of Understanding Among the Federal Emergency Management Agency (FEMA), Federal Communications Commission (FCC), the National Oceanic and Atmospheric Administration (NOAA), and the National Industry Advisory Committee (NIAC) *reprinted as* Appendix K to Partnership for Public Warning Report 2004-1, The Emergency Alert System (EAS): An Assessment; Assignment of National Security and Emergency Preparedness Telecommunications Functions, Exec. Order No. 12472, 49 Fed. Reg. 13471 (1984); and *Memorandum*, Presidential Communications with the General Public During Periods of National Emergency, The White House (Sept. 15, 1995) (*1995 Presidential Statement*).

[27] *See* Amendment of Part 73, Subpart G, of the Commission's Rules Regarding the Emergency Broadcast System, *Report and Order and Further Notice of Proposed Rulemaking*, 10 FCC Rcd 1786, 1834-36, paras. 131-35 (1994) (*1994 Report and Order*) (subsequent history omitted).

[28] The Commission's rules currently define EAS Participants as "analog radio broadcast stations; digital audio broadcasting stations; analog television broadcast stations; digital television broadcast stations; analog and digital cable systems; wireline video systems; wireless cable systems; direct broadcast satellite (DBS) service providers; and digital audio radio service (SDARS) providers. *See* 47 C.F.R. § 11.11(a). *See infra* para. 63, where we seek comment on revising this definition to delete the obsolete reference to "analog television broadcast stations."

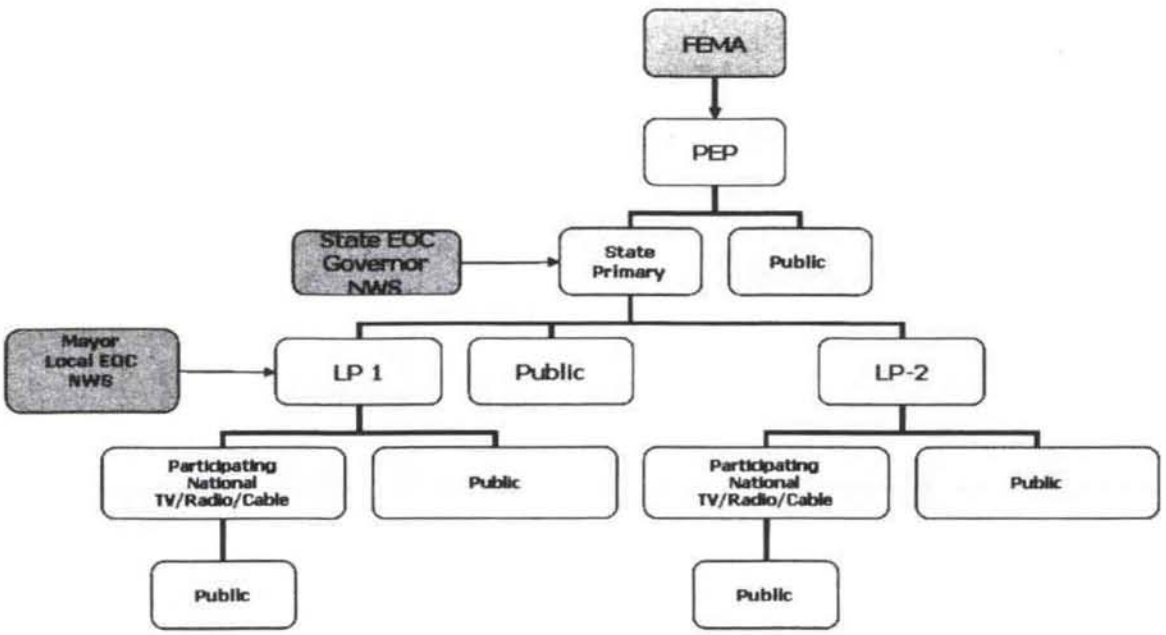
[29] *See* 47 C.F.R. § 11.31. Under this protocol, an EAS alert uses a four-part message: (1) preamble and EAS header codes (these codes contain information regarding the identity of the sender, the type of emergency, its location, and the valid time period of the alert); (2) audio attention signal; (3) message; and (4) preamble and "end of message" (EOM) codes. *See id.* § 11.31(a). Although the EAS Protocol specifies that the message can be audio, video, or text, in practice, only audio is sent.

[30] *See* NOAA Weather Radio SAME Info, http://www.nws.noaa.gov/nwr/nwrsame.htm; Specific Area Message Encoding (SAME), National Weather Service Instruction 10-1712 (Feb. 12, 2007), *available at* http://www.nws.noaa.gov/directives/010/pd01017012b.pdf.

delivery to specialized equipment maintained and operated by EAS Participants that can receive (and decode) the alert for transmission over the EAS Participants' facilities to their end users.

6. The distribution processes for national level alerts and state/local level alerts differ slightly. At the national level, EAS message distribution starts at Primary Entry Point (PEP) stations, which are designated by FEMA and tasked with receiving and transmitting "Presidential Level" messages initiated by FEMA.[31] Although PEP stations will soon be able to reach more than 90 percent of the U.S. population, the EAS requires designated "State Primary" (SP) stations to monitor designated PEP stations for the national level alert[32] and then retransmit the national alert to Local Primary (LP) stations, which in turn are monitored by all other EAS Participants (radio and television broadcasters, cable service providers, etc.).[33] This process of relaying EAS messages from station-to-station is often referred to as the "daisy chain." A functional diagram of the national EAS architecture is contained in Figure 1, below:

Figure 1: National EAS Alert Distribution Architecture



[31] *See* 47 C.F.R. § 11.2(a). As the entry point for national level EAS messages, PEP stations are designated as "National Primary" (NP) stations. *See id.* §§ 11.2(f), 11.18(a). FEMA has indicated that it intends to increase the number of PEP stations from the original 34 to more than 80 stations, thus expanding coverage of the nation's population from approximately 67 percent (in 2009) to over 90 percent when these additional stations become operational. *See* FEMA, "EAS Modernization and Expansion Project" (Jan. 14, 2011), *available at* https://www.fema.gov/emergency/ipaws/projects.shtm.

[32] A PEP station can serve more than one role; for example, it can also serve as an SP station.

[33] At present, the United States is divided into approximately 550 EAS local areas, each of which contains at least two Local Primary stations, designated "Local Primary One" (LP1) and "Local Primary Two" (LP2). The LP stations must monitor at least two EAS sources for Presidential messages (including State Primary stations and in some cases a regional PEP station) and can also serve as the point of contact for state and local authorities and NWS to activate the EAS for localized events such as severe weather alerts. All other EAS Participants are designated Participating National (PN) stations and must monitor at least two EAS sources, including an LP1 and an LP2 station as specified in the state's EAS plan. *See* 47 C.F.R. §§ 11.18, 11.52(d). Stations that elect not to participate in the national level EAS (*i.e.*, elect not to broadcast the Presidential alert) are designated as Non-participating National (NN) stations and must go off-air while a national EAS alert is in effect. *See* 47 C.F.R. § 11.18(f).

7. At the state level, state governors and state and local emergency operations managers activate the EAS by utilizing state-designated EAS entry points – specifically, State Primary stations and "State Relay" stations.[34] State Relay stations relay both national and state emergency messages to local areas.[35] Local Primary stations are responsible for coordinating the carriage of emergency messages from sources such as the NWS or local emergency management offices as specified in EAS local area plans.[36] State transmission systems vary from state to state but can include "daisy chain" links between broadcast and other terrestrial communications facilities, as well as satellite-based facilities. As depicted in Figure 1, the national EAS is a highly scalable system, with significant overlap in distribution facilities and multiple points of entry for alert messages, depending upon whether they are national, state or local in nature.

B. Commission Actions to Facilitate Next Generation EAS

1. Second Report and Order

8. In 2007, in partial fulfillment of its obligations under *Executive Order 13407*,[37] the Commission adopted the *Second Report and Order*, which revised the Commission's Part 11 EAS rules to lay the foundation for a state-of-the-art, next-generation national EAS (Next Generation EAS).[38] First, to ensure the efficient, rapid, and secure transmission of EAS alerts in a variety of formats (including text, audio, and video) and via different means (broadcast, cable, satellite, and other networks), the Commission required that EAS Participants be capable of receiving CAP-formatted alert messages no later than 180 days after FEMA publicly publishes its adoption of the CAP standard.[39] Second, the

---

[34] The State Relay Network is composed of State Relay sources, leased common carrier communications facilities, or any other available communications facilities. In addition to EAS monitoring, state emergency messages may be distributed by satellites, microwave, FM subcarrier, or any other communications technology. *See* 47 C.F.R. § 11.20.

[35] *See* 47 C.F.R. § 11.18(d).

[36] *See id.* § 11.18(b).

[37] Exec. Order No. 13,407, 71 Fed. Reg. 36975 (June 26, 2006) (*Executive Order 13407*). *Executive Order 13407* provides that "[i]t is the policy of the United States to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people in situations of war, terrorist attack, natural disaster, or other hazards to public safety and well-being (public alert and warning system)." *Id.* § 1. *Executive Order 13407* directs the Secretary of Homeland Security to "administer the Emergency Alert System (EAS) as a critical component of the [national] public alert and warning system," including a requirement to "establish, or adopt, as appropriate, common alerting and warning protocols, standards, terminology, and operating procedures for the public alert and warning system." *Id.* § 2(a)(ii). *Executive Order 13407* also directs the Commission to "adopt rules to ensure that communications systems have the capacity to transmit alerts and warnings to the public as part of the [national] public alert and warning system." *Id.* § 3(b)(iii). The Commission has been committed to working with the Secretary, FEMA, and other governmental entities to ensure the effective implementation of *Executive Order 13407*. For example, we have worked with FEMA to implement EAN testing in the State of Alaska and adopted the *National Test Order* to facilitate nationwide testing of the EAS. *See supra* note 22. We also intend to adopt a Notice of Inquiry in 2011 to examine the extent to which emergency alerting could be more effectively deployed using broadband technologies.

[38] *See supra* note 2.

[39] *See Second Report and Order*, 22 FCC Rcd 13275, 13288, para. 26. As explained below, we extended the deadline for compliance with the obligation to receive CAP-formatted messages adopted in the *Second Report and Order* until September 30, 2011. *See infra* para. 22. FEMA announced its adoption of technical standards and requirements for CAP-formatted EAS alerts intended to interface with the IPAWS system on September 30, 2010. *See infra* para. 21.

Commission required EAS Participants to adopt Next Generation EAS delivery systems no later than 180 days after FEMA publicly releases standards for those systems.[40] Third, the Commission required EAS Participants to transmit state and local EAS alerts that are originated by governors or their designees no later than 180 days after FEMA publishes its adoption of the CAP standard,[41] provided that the state has a Commission-approved State Area EAS Plan that provides for delivery of such alerts.[42] The Commission also concurrently adopted the *Next Generation EAS FNPRM* to explore further certain EAS-related issues.[43]

9. *Structuring Next Generation EAS.* In the *Second Report and Order*, the Commission established the framework for the nation's Next Generation EAS. As the Commission explained, the Next Generation EAS will include new and innovative technologies and distribution systems that will provide increased redundancy and resiliency for the delivery of emergency alerts.[44] The Commission identified four cornerstones of the Next Generation EAS: (1) maintaining the existing EAS network; (2) utilizing CAP, which all EAS Participants will implement following its adoption by FEMA; (3) incorporating new authentication and security requirements; and (4) fostering the deployment of new, redundant EAS delivery systems, including satellite, Internet, and wireline networks.[45]

10. *Maintaining the EAS.* In recognition of the long-standing and important use of the EAS for state, local, and weather–related emergencies; broadcast and cable personnel's familiarity with current EAS equipment; the fact that alternative delivery mechanisms, although potentially more robust, have yet to be deployed; and other factors, the Commission concluded that EAS Participants should maintain the existing EAS.[46] Because the station-relay message dissemination process employed by the EAS lacks the flexibility and redundancy of many evolving digital communications systems, however, the Commission also required that EAS Participants upgrade their networks to the Next Generation EAS while maintaining the existing EAS.[47]

11. *Using Common Alerting Protocol with the EAS.* As explained in the *Second Report and Order*, CAP is an open, interoperable standard, developed within the OASIS standards process,[48] that

---

[40] *See id.* at 22 FCC Rcd 13291, para. 32.

[41] The Mayor of the District of Columbia, as well as the Governors of the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the U.S. Virgin Islands, American Samoa, and Guam, are also required to have this capability. *See* 47 U.S.C. § 153(40) ("[T]he term 'state□ includes the District of Columbia and the Territories and possessions.").

[42] *See Second Report and Order*, 22 FCC Rcd 13275, 13300, para. 55. The Commission also included wireline common carriers providing video programming (Wireline Video Providers) in the EAS. *See id.* at 13296-97, para. 46.

[43] Specifically, the Commission sought comment on how the EAS could best serve non-English speakers and persons with disabilities; the extent to which we should require EAS Participants to receive and transmit alerts initiated by local, county, tribal, or other state governmental entities; and requirements for assessing EAS performance. *See Next Generation EAS FNPRM*, 22 FCC Rcd 13275, 13306-08, paras. 72-75.

[44] *See Second Report and Order*, 22 FCC Rcd 13275, 13283, para. 15.

[45] *See id.* at 13283, para. 16.

[46] *See id.* at 13283-84, paras. 17-18.

[47] *See id.* at 13284, para. 18.

[48] OASIS is a not-for-profit, international consortium that drives the development, convergence, and adoption of e-business standards. OASIS – Who We Are, http://www.oasis-open.org/who/. OASIS Common Alerting Protocol (continued....)

incorporates a language developed and widely used for web documents, which permits links to voice; audio, or data files; images; multilingual translations of alerts; and links providing further information.[49]

12. The CAP standard specifies what fields an alert message can contain and what information can be included in the particular fields.[50] A CAP alert provides fields such as message type, scope, incident, event information, event certainty, sender, geographic scope, and the time when an alert becomes effective and expires.[51] CAP also uniquely identifies each specific alert. CAP's standardized fields provide flexibility that facilitates interoperability between and among devices. As the Commission acknowledged in the *Second Report and Order*, "any EAS initiator can take information from a CAP-based message and translate it into any other standard for distribution over a particular channel, network, or technology," which is particularly relevant to translating a CAP-formatted message into a SAME-formatted message.[52] CAP is also backwards-compatible with SAME to the extent that it can be used to relay SAME data.

13. As indicated above, the EAS and the NWS currently utilize the SAME protocol, which introduces special digital codes at the beginning and the end of messages.[53] SAME provides information concerning the originator of the alert, the type of alert (or "event"), the areas affected, the duration of the alert, the time the alert was issued, and the call sign of the EAS Participant that is transmitting or retransmitting the alert.[54] As explained in the *Second Report and Order*, SAME was originally developed to be transmitted via broadcast radio for receipt by relatively simple devices.[55] While SAME has performed well for the existing EAS and NWR, it does not fully utilize the expansive capabilities inherent in more modern digital transmission systems.[56]

14. Although CAP and SAME both convey data, the two protocols function in entirely different ways. CAP essentially represents an envelope in which data is packaged according to predetermined fields and packetized for transmission over various IP-based mediums, such as the Internet. The SAME protocol is designed to take specific data and an audio message and modulate those onto an RF signal. Thus, for example, CAP can convey an audio message either as an audio file (*e.g.*, .WAV) or a link to a URL (for streaming audio), while for SAME-formatted messages, the audio portion

(Continued from previous page)
Version 1.2 (1 July 2010) (OASIS CAP Standard v1.2) was approved by OASIS on August 12, 2010. *See* Common Alerting Protocol (CAP) 1.2 Receives Approval as OASIS Standard, http://www.oasis-open.org/news/oasis-news-2010-08-12.php. A copy of OASIS CAP Standard v1.2 is available at http://www.oasis-open.org/specs/#capv1.2.

[49] *See Second Report and Order*, 22 FCC Rcd 13275, 13285-88, paras. 22-25. *See also* OASIS Common CAP Standard v1.2, § 3.2.

[50] *See* OASIS Common CAP Standard v1.2, § 3.2.

[51] *See id. See also* "Filtering and Routing of Alert Messages using Common Alerting Protocol (CAP)," Eliot Christian, USGS Slide 14 (Feb. 2005) http://www.search.gov/cap/routing.ppt.

[52] *Second Report and Order*, 22 FCC Rcd 13275, 13286-87, para. 24.

[53] *See supra* para. 5.

[54] *See* 47 C.F.R. § 11.31. Under the SAME/EAS Protocol, an EAS alert uses a four-part message: (1) preamble and EAS header codes (these codes contain information regarding the identity of the sender, the type of emergency, its location, and valid time period of the alert); (2) audio attention signal; (3) message; and (4) preamble and EAS end of message codes. *See id.* § 11.31(a).

[55] *See Second Report and Order*, 22 FCC Rcd 13275, 13284-85, para. 20 (*citations omitted*).

[56] *See id.*

of the message is already modulated onto the RF signal along with the EAS codes.[57] Accordingly, when the EAS decoder receives a SAME-formatted message, it also receives whatever audio may be associated with that message, whereas when an EAS decoder receives a CAP-formatted message, it must play back the audio file or retrieve streaming audio from another source.

15. *Next Generation Distribution System.* While the Commission elected to maintain the existing EAS, it also concluded that it should enhance the distribution architecture of the EAS.[58] Based on the record before it, the Commission acknowledged that it could improve the EAS by authorizing the delivery of alerts through the existing EAS coupled with new redundant distribution systems for EAS, such as satellite.[59] The Commission also concluded, however, that FEMA is best positioned to determine the types of additional EAS systems that EAS Participants should accommodate.[60] Accordingly, the Commission indicated that "should FEMA announce technical standards for any Next Generation EAS alert delivery system, EAS Participants must configure their networks to receive CAP-formatted alerts delivered pursuant to such delivery system, whether wireline, Internet, satellite or other, within 180 days after the date that FEMA announces the technical standards for such Next Generation EAS alert delivery."[61]

2. CSRIC Recommendations for Part 11

16. On March 19, 2009, the Commission, pursuant to the Federal Advisory Committee Act,[62] renewed the charter for the Communications Security, Reliability, and Interoperability Council (CSRIC) for a period of two years, through March 18, 2011,[63] subsequently renewed until March 18, 2013.[64] The purpose of the CSRIC is to provide recommendations to the Commission to ensure optimal security, reliability, operability, and interoperability of communications systems, including public safety, telecommunications, and media communications systems.[65] The CSRIC's duties include recommending ways to improve EAS operations and testing, including best practices, and to ensure that all Americans, including those living in rural areas, the elderly, people with disabilities, and non-English speakers, have

---

[57] Encoding a SAME-formatted message involves modulating the various codes associated with the SAME protocol and an audio message onto an RF signal using the audio frequency-shift keying (AFSK) modulation scheme to open an audio channel in the EAS decoder. Specifically, the EAS decoder is activated by receiving the SAME protocol preamble codes plus header codes, which are repeated three times consecutively at the start of an EAS message transmission. The EAS decoder uses bit-by-bit comparison for error detection to ensure that at least two of the three match. Depending upon the nature of the alert message, this three-time transmission (or "burst") is followed by a two-tone Attention Signal (8-25 seconds in duration), which functions as an audio alert to listeners and viewers that an emergency message follows. The Attention Signal may be followed by an audio message. At the end of this message, the preamble plus end of message code is transmitted three consecutive times to signal to the EAS decoder that the alert message is terminated and to return to regular programming. *See* 47 C.F.R. § 11.31.

[58] *See Second Report and Order*, 22 FCC Rcd 13275, 13291, para. 32.

[59] *See id.*

[60] *See id.* (*citing Executive Order 13407*, §§ 2(a)(ii), 3(b)(iii)).

[61] *See id.*

[62] 5 U.S.C. Appendix 2.

[63] *See* 74 Fed. Reg. 11721-11722 (March 19, 2009).

[64] *See* 76 Fed. Reg. 17650-17652 (March 30, 2011).

[65] *See* Charter of the FCC's Communications, Security, Reliability, and Interoperability Council (*CSRIC Charter*) at 1, *available at* http://www.fcc.gov/pshs/docs/advisory/csric/CSRC_charter_03-19-2009.pdf.

access to EAS alerts and other emergency information.[66]

17. The Commission tasked this advisory committee, a cross-section of government, industry, and public interest experts, to recommend revisions to the Commission's Part 11 rules in light of FEMA's then-pending adoption of CAP.[67] On October 7, 2010, CSRIC adopted a final report from its Working Group 5A, which included a number of recommendations for revisions to the Part 11 rules related to the obligation of EAS Participants to accept CAP-formatted messages (the "*CSRIC Final Report*").[68] We address these recommendations below in our discussion of specific proposals to revise our Part 11 rules.

3. Part 11 Public Notice

18. On March 25, 2010, in anticipation of FEMA's adoption of CAP, the Public Safety and Homeland Security Bureau (Bureau) released the *Part 11 Public Notice*, which sought informal comment regarding what, if any, Part 11 changes the introduction of CAP might necessitate.[69] The *Part 11 Public Notice* asked commenters to identify with specificity those rules the Commission should modify or delete and to suggest new rules for Part 11 – or a new framework of rules – to replace the existing Part 11 rules.[70] The *Part 11 Public Notice* also asked commenters to consider the degree to which the Commission can incorporate flexibility into any new rules it adopts for Part 11, so that the rules can accommodate future versions of CAP without further rule changes.[71]

19. The Bureau observed that the *Second Report and Order* requires EAS Participants to configure their networks to receive CAP-formatted alerts delivered via any new delivery systems, whether wireline, Internet, satellite, or other, within 180 days after the date that FEMA announces the technical standards for the Next Generation EAS but that the Commission's rules presently do not address such alert distribution methods.[72] Accordingly, the *Part 11 Public Notice* also asked commenters to identify specific rule changes or additions that they foresee could advance or facilitate introduction of a CAP-based Next Generation EAS architecture.[73] The *Part 11 Public Notice* also sought comment on what Part 11 rule changes, if any, are necessary to ensure access to a CAP-based EAS by people with disabilities and those who do not speak English; how states that have adopted CAP currently address this issue; and the status of any initiatives or programs developed by, as well as any ongoing discussions among, interested stakeholders to address these issues.[74]

20. We received 14 comments and 10 reply comments in response to the Bureau's *Part 11*

---

[66] *See CSRIC Charter* at 2.

[67] *See* Working Group 5A Description, *available at* http://www.fcc.gov/pshs/advisory/csric/wg-5a.pdf.

[68] *See* CSRIC, Working Group 5A, CAP Introduction, Final Report, *available at* http://www.fcc.gov/pshs/docs/csric/CSRIC%205A%20Working%20Group.pdf.

[69] *See* Public Safety and Homeland Security Bureau Seeks Informal Comment Regarding Revisions to the FCC's Part 11 Rules Governing the Emergency Alert System Pending Adoption of the Common Alerting Protocol by the Federal Emergency Management Agency, *Public Notice*, 25 FCC Rcd 2845 (2010) (*Part 11 Public Notice*).

[70] *See id.* at 2.

[71] *See id.*

[72] *See id.*

[73] *See id.*

[74] *See id.* at 3.

Public Notice, which we address below in our discussion of the Part 11 rule revisions.

4. FEMA Adoption of CAP

21. On September 30, 2010, FEMA announced its adoption of technical standards and requirements for CAP-formatted EAS alerts.[75] Specifically, FEMA identified three documents as defining the FEMA Integrated Public Alert and Warning System (IPAWS) "technical standards and requirements for CAP and its implementation": (1) the OASIS CAP Standard v1.2; (2) an IPAWS Specification to the CAP Standard (CAP v1.2 IPAWS USA Profile v1.0); and (3) the EAS-CAP Industry Group's Recommendations for a CAP-EAS Implementation Guide, Version 1.0 (May 17, 2010).[76] Taken together, these documents set forth the requirements that an alert originator must meet to initiate an alert message in the CAP format to distribute through IPAWS to EAS Participants. Specifically, CAP Standard v1.2 is the baseline message format; CAP v1.2 IPAWS USA Profile v1.0 establishes the additional formatting requirements for processing of a CAP Standard v1.2 message by IPAWS (*i.e.*, it restricts and specifies the fields in CAP that can be used with the IPAWS system); and the EAS-CAP Industry Group's Recommendations for a CAP-EAS Implementation Guide establishes requirements for translating a message formatted pursuant to the foregoing standards into a message that is compliant with the EAS Protocol (*i.e.*, it further restricts and specifies the fields available in a message formatted pursuant to CAP Standard v1.2 and CAP v1.2 IPAWS USA Profile v1.0 that can be used with the EAS).

5. Waiver Order

22. On November 18, 2010, we adopted the *Waiver Order*, which extended the 180-day deadline for EAS Participants to meet the CAP-related obligations we adopted in the *Second Report and Order* until September 30, 2011.[77] We explained that our decision was based on the concern that licensees would face difficulties obtaining the appropriate equipment within 180 days of FEMA's adopting CAP due to various factors raised by parties responding to the *Part 11 Public Notice*.[78] We observed that recent changes to the EAS CAP landscape, such as the novel issue of the relationship between FEMA CAP conformance testing and the Commission's Part 11 certification requirements and FEMA's adoption of the EAS-CAP Industry Group's CAP-to-EAS Implementation Guide as the standard for translating CAP-formatted messages into SAME-compliant messages, presented changed circumstances that would make it difficult for licensees to obtain CAP-compliant EAS equipment by the original 180-day deadline.[79] We also explained in the *Waiver Order* that we would seek comment on whether the extension for CAP acceptance by EAS Participants granted therein is sufficient and reserved the right to further extend the deadline for CAP reception in whatever rule revisions may result from this item.[80]

---

[75] *See* FEMA, "FEMA Announces Adoption of New Standard for Emergency Alerts," Release Number: HQ-10-192 (rel. Sept. 30, 2010), *available at* http://www.fema.gov/news/newsrelease.fema?id=52880.

[76] *See id.*

[77] *See* Review of the Emergency Alert System, Order, EB Docket No. 04-296, FCC 10-191 (rel. Nov. 23, 2010) at para. 1 (*Waiver Order*).

[78] *See id.* para. 9.

[79] *See id.*

[80] *See id.* para. 11.

III. DISCUSSION

23. In this *Third Further Notice of Proposed Rulemaking*, we seek comment on what changes we should make to the Part 11 rules to fully effectuate the CAP-related obligations adopted in the *Second Report and Order*, as well as other rule changes and clarifications intended to streamline Part 11 and generally enhance the overall effectiveness of the EAS. We also reach tentative conclusions in response to various recommendations made by CSRIC and the parties responding to the *Part 11 Public Notice* and propose specific revisions to some of the Part 11 rules, which are included in Appendix A.

A. A. Scope of CAP-Related Part 11 Revisions

24. In the *Second Report and Order*, the Commission concluded that EAS Participants should maintain the existing legacy EAS, including use of the SAME protocol, because, among other reasons, EAS Participants had yet to deploy alternative and more robust delivery mechanisms.[81] However, because the daisy-chain message dissemination process used by the legacy EAS lacks the flexibility and redundancy of these evolving digital communications systems, the Commission required that EAS Participants deploy equipment capable of receiving CAP messages[82] and upgrade their networks to the Next Generation EAS as FEMA adopts standards governing Next Generation EAS distribution systems.[83] The implementation of CAP as an EAS alert message formatting option, therefore, was envisioned as a parallel mechanism to initiating SAME-formatted alerts within the existing EAS system. This approach would facilitate a CAP-based Next Generation EAS, which likely will initially be deployed and operate in parallel to the legacy EAS. Because the Next Generation EAS is not yet operational, we focus our efforts here on revising the Part 11 rules to accommodate the processing of CAP-formatted messages within the existing EAS parameters. We seek comment generally on whether this is the correct approach or whether we should consider alternative approaches in light of any developments that may have occurred since adoption of the *Second Report and Order*. What are the potential costs and benefits of this approach? How could any requirements we might consider be tailored to impose the least amount of burden on those affected? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action?

25. Most of the parties responding to the *Part 11 Public Notice* who commented on the issue of facilitating CAP within the existing EAS parameters and Part 11 framework supported this approach. Monroe Electronics, Inc. (Monroe) stated, for example, that the legacy EAS "is a valuable redundancy to the proposed next generation system [and in] most natural disasters the broadcast medium is the last system standing and is unparalleled in the "one to many" message distribution."[84] Sage Alerting Systems, Inc. (Sage) similarly noted that while CAP has many advantages, "[i]n those cases where a telecommunications outage ... occur[s] concurrently with the emergency being alerted, ... a broadcaster to broadcaster link 'daisy chain' may be the only way to relay EAS alerts from the outside of an event to the inside."[85] Sage further observed that "a total rewrite [of the Part 11 rules] is [not] required or desired before the 180 day clock starts," adding that "CAP can begin to be used with the rules as they exist now,

---

[81] *Second Report and Order* at 13283-84, paras. 17-18.

[82] *See id.* at 13288, para. 26.

[83] *See id.* at 13283-84, paras. 17-18, 13291, para. 32.

[84] Monroe Electronics, Inc. Comments, EB Docket 04-296 (filed May 17, 2010) at 2 (Monroe Comments). *See also* SpectraRep LLC Comments, EB Docket 04-296 (filed May 17, 2010) at 2 (SpectraRep Comments) ("[T]he nature of the legacy EAS system ... adds useful redundancy even after CAP EAS has been implemented.").

[85] Sage Alerting Systems, Inc. Comments, EB Docket 04-296 (filed May 17, 2010) (Sage Comments) at 2-3.

with minor tweaks."[86] TFT, Inc. (TFT) asserted that "maintaining the web-structure of EAS monitoring assignments in addition to CAP monitoring is essential," at least until "complete CAP servers and their connections are available to EAS Participants."[87] Commenter Adrienne Abbott-Gutierrez (Abbott-Gutierrez) observed that state and local public safety agencies may not understand the capabilities and nuances of CAP messaging, and therefore we should craft the Part 11 rules to allow EAS Participants the "flexibility they will need to comply with the new rules while dealing with state and local agencies that do not have the ability to initiate CAP messages."[88]

26. Other parties raised concerns about the efficacy of the current EAS. The National Association of Broadcasters (NAB), for example, stated it is "concerned about the potential impact of th[e] technology gap" between the SAME protocol and CAP, and urged the Commission to "ensure that the inadequacies of SAME (*e.g.*, event code overlap, targeting based on political jurisdictions) are not carried over into a new CAP-based next-generation EAS."[89] NAB acknowledged, however, that the existing EAS system "does have certain advantages over the next-generation system" and that "[t]he Commission . . . should [therefore] consider how long broadcasters should maintain SAME-based EAS following the implementation of CAP-formatted EAS."[90] Commenter Art Botterell (Botterell) explained that "the SAME format has several serious deficiencies, especially when compared with the much more complete and flexible CAP format" and stated that the Commission should at least not "allow the familiar status quo of SAME event codes and geographic targeting based on political jurisdiction to slip into new regulations by default."[91] Botterell further suggested: "As a more proactive step[,] the Commission might choose to set a 'sunset' date for the use of the SAME encoding over broadcast signals."[92]

27. Our tentative view is that while the SAME protocol used by the legacy EAS is more limited regarding the information it can convey than CAP,[93] the many benefits of maintaining the legacy EAS previously outlined by the Commission in the *Second Report and Order* continue to apply today.[94] Moreover, FEMA has stated that the legacy EAS will continue to provide a nationwide alerting mechanism to operate as part of FEMA's Integrated Public Alert and Warning System (IPAWS).[95] Further, even after IPAWS is deployed, it is not clear that state alerting authorities and personnel involved with initiating state alerts will be able to initiate anything other than SAME-formatted messages for some time, and we observe that NWS has yet to indicate a date by which it will be switching to a CAP-based alerting format. Thus, switching over to a fully CAP-centric EAS system – where EAS messages are inputted and outputted in CAP format rather than SAME format – at this time could be detrimental to the

[86] *Id.* at 2. *See also* SpecraRep Comments at 2 ("Much of the underlying framework of Part 11 can remain in place.").

[87] TFT, Inc. Reply Comments, EB Docket 04-296 (filed June 11, 2010) at 2-3 (TFT Reply Comments).

[88] Adrienne Abbott-Gutierrez Comments, EB Docket 04-296 (filed May 17, 2010) at 1 (Abbott-Gutierrez Comments).

[89] National Association of Broadcasters Reply Comments, EB Docket 04-296 (filed June 14, 2010) at 10-11 (NAB Reply Comments).

[90] *Id.* at 11.

[91] Art Botterell Comments, EB Docket 04-296 (filed April 19, 2010) at 9 (Botterell Comments).

[92] *Id.*

[93] *See, e.g, Second Report and Order* at 13284-85, para. 20.

[94] *See id.* at 13283-84, paras. 17-18.

[95] *See* http://www.fema.gov/emergency/ipaws

entities that utilize the EAS the most: states and NWS. Finally, we again observe that FEMA has adopted the standards necessary for formatting alert messages into CAP and translating such CAP-formatted messages into SAME-compliant messages; thus, the groundwork for implementing CAP-formatted alert initiation within the existing EAS system is already in place.[96]

28. Accordingly, we tentatively conclude that, for the time being, we will continue the approach adopted by the Commission in the *Second Report and Order* and maintain the existing legacy EAS, including utilization of the SAME protocol. To be clear, under this transitional approach, the CAP-related changes to Part 11 on which we seek comment or that we tentatively propose in this item are designed to permit EAS Participants to process and transmit CAP-formatted messages over the existing EAS, but subject to the technical requirements and limitations of the existing EAS (*i.e.*, the CAP-formatted message will be converted into and broadcast – and to the extent feasible, encoded for rebroadcast[97] – in the SAME format) until the Next Generation EAS has been fully deployed and is ready to replace (or operate in parallel with) the existing EAS. We also tentatively conclude that we will defer to our Notice of Inquiry on Broadband Alerting consideration of what changes, if any, to our Part 11 rules may be necessitated by the adoption of a CAP-based Next Generation EAS alerting system that might replace or operate in parallel with the current EAS.

29. We seek comment on our tentative conclusions. Should we amend the existing Part 11 rules to more fully codify the basic obligations to receive CAP-formatted messages? Alternatively, are the deficiencies of SAME relative to CAP identified by NAB and Botterell sufficiently significant as to outweigh the benefits of retaining the legacy EAS system until such time as it can be replaced by the Next Generation EAS system? How long will it take to switch to a CAP-centric EAS system? Would switching to a CAP-centric EAS system better accommodate FEMA's plans for IPAWS? What would such a CAP-centric approach entail, and how would it affect EAS Participants? Have there been any developments since the *Second Report and Order* that would suggest that an alternative approach is warranted? What are the cost and benefits associated with a CAP-centric EAS system? How could any requirements we might consider be tailored to impose the least amount of burden on those affected? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action?

B. B. Obligation to Accept CAP Messages

30. The Commission also stated in the *Second Report and Order* that it would maintain the existing EAS system, including the EAS Protocol.[98] The general obligation to receive CAP-formatted messages is codified in section 11.56 of the rules.[99] As detailed below, CSRIC and the parties responding to the *Part 11 Public Notice* proposed several additional Part 11 rule revisions to fully codify the obligation to receive CAP messages. These proposals covered CAP-to-SAME protocol translation, CAP monitoring, Next Generation EAS, equipment requirements, and miscellaneous related issues.

---

[96] *See* FEMA, "FEMA Announces Adoption Of New Standard For Emergency Alerts," *available at* http://www.fema.gov/news/newsrelease.fema?id=52880.

[97] Although it appears that a CAP-formatted message can be converted into a SAME-compliant message for broadcast to the public, including any audio portion contained or referenced within the CAP message, it is not clear whether the audio portion of a CAP-formatted message (which generally can be contained as an audio file or a URL link to streaming audio) that has been converted into a SAME-compliant message can be encoded for rebroadcast to monitoring stations.

[98] *Second Report and Order*, 22 FCC Rcd 13275, 13283-84, paras. 17-18.

[99] 47 C.F.R. § 11.56.

1. CAP-Formatted Message Translation to SAME

31. As indicated above, the *Second Report and Order* required that EAS Participants be capable of receiving CAP-formatted EAS messages but did not specify what EAS Participants are required to do with such messages upon receipt. The *Second Report and Order* also required that EAS Participants maintain the existing SAME-based EAS.[100] However, the *Second Report and Order* did not specify whether or how EAS Participants must convert the CAP-formatted messages they receive into SAME-compliant messages for broadcast to the public (and rebroadcast to other stations).

32. With respect to translating CAP-formatted message into SAME, CSRIC and parties responding to the *Part 11 Public Notice* indicated that we need a separate standard to ensure that EAS Participants uniformly present messages and alert data to the public. CSRIC, for example, observed that because "both CAP v1.2 and the CAPv1.2 IPAWS Profile v1.0 make use of several free form text elements and several optional elements, there is ample opportunity for a CAP message rendered by one CAP-to-EAS device to differ when rendered by another vendor's device."[101] Sage stated, "The CAP protocol is significantly more complex than EAS, with even greater opportunity for slight differences in implementations and procedures to cause a failure to deliver consistent results to EAS participants."[102]

33. To ensure uniform consistency across all devices and delivery platforms in how EAS Participants decode messages formatted pursuant to OASIS CAP Standard v1.2 and CAP v1.2 IPAWS USA Profile v1.0 and present them to the public, the EAS-CAP Industry Group (ECIG)[103] developed the ECIG Implementation Guide, which outlines how to translate CAP-formatted messages into SAME-compliant messages (*i.e.*, it specifies the EAS Participant's CAP-to-SAME translation requirements).[104] FEMA announced its adoption of the ECIG Implementation Guide along with its adoption of CAP v1.2 IPAWS Profile v1.0 and OASIS CAP Standard v1.2 on September 30, 2010.[105] CSRIC and other parties recommended that the Commission amend Part 11 to require compliance with the ECIG Implementation

---

[100] *See Second Report and Order* at 13283-84, paras. 17-18.

[101] *CSRIC Final Report*, § 5.4.2.

[102] Sage Comments at 4. *See also* Gary E. Timm Comments, EB Docket 04-296 (filed May 17, 2010) at 8 (Timm Comments).

[103] The EAS-CAP Industry Group "is a coalition of Emergency Alert System equipment, software and service providers, with current voting members including: Alerting Solutions, Inc.; Communications Laboratories, Inc.; iBiquity Digital Corporation; Monroe Electronics, Inc.; MyStateUSA; Sage Alerting Systems, Inc.; SpectraRep, LLC; TFT, Inc.; Trilithic, Inc. and Warning Systems, Inc." EAS-CAP Industry Group, Board of Directors, Comments, EB Docket 04-296 (filed May 17, 2010) at 1-2. *See also* ECIG's web site at http://eas-cap.org/members.htm.

[104] *See* ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0 (May 17, 2010), EB Docket 04-296 (filed May 17, 2010) (the "ECIG Implementation Guide") (this document is also available on ECIG's web site at: http://eas-cap.org/documents.htm). Although the CAP v1.2 IPAWS Profile v1.0 broadly outlines how to incorporate the EAS elements of an alert message into a CAP-formatted message, it does so in the context of sending a message via the IPAWS system (*i.e.*, it specifies the alert message originator's CAP translation requirements). *See* CAP v1.2 IPAWS Profile v1.0, § 1.1 ("In order to meet the needs of the devices intended to receive alerts from the [IPAWS] System of Systems (SoS), this CAP v1.2 IPAWS Profile constrains the CAP v1.2 standard for receipt and translation with and among IPAWS exchange partners."). *See, e.g.*, *CSRIC Final Report*, § 5.4. By contrast, the ECIG Implementation Guide also addresses CAP-to-EAS translation but is more narrowly focused on ensuring that the CAP-formatted message data fields are populated and uniformly decoded in a manner that complies with the SAME protocol requirements.

[105] *See supra* para. 21.

Guide.[106]

34. We seek comment on whether our revision of the Part 11 rules should include a standardized method of decoding and translating CAP-formatted messages into SAME-compliant messages to ensure uniform consistency across devices and delivery platforms in how EAS Participants present these messages to the public. Are CSRIC and the various parties responding to the *Part 11 Public Notice* correct that a specific CAP-to-SAME translation standard is necessary to ensure that EAS Participants uniformly decode and broadcast CAP-formatted alert messages (and encode them for rebroadcast) as SAME-compliant messages? What are the costs and benefits of striving for uniformity in how EAS Participants decode CAP-formatted messages and present them to the public? Given that CAP-formatted messages can only convey audio messages as audio files or links to alternate sources (such as URLs) for streaming audio, is it technically feasible to encode that portion of a CAP-formatted message in a SAME-compliant message for rebroadcast to monitoring stations? If an EAS Participant cannot encode the audio portion of a CAP-formatted message in a SAME-compliant manner, would the audio portion of CAP messages be limited to EAS Participants that initially receive such messages via IP-based connections? Does this approach represent a cost-effective means for achieving uniform consistency across devices and delivery platforms in how CAP alert messages are presented to the public, or are there alternative approaches that could be less burdensome to equipment manufacturers and/or EAS Participants that would achieve the same result? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action?

35. To ensure greater uniformity in the output of devices subject to Part 11, we tentatively conclude that we should amend section 11.56 to require EAS Participants to convert CAP-formatted EAS messages into SAME-compliant EAS messages in accordance with the ECIG Implementation Guide.[107] As indicated above, adopting the ECIG Implementation Guide as the standard for translating CAP-formatted messages into SAME-compliant messages should harmonize CAP elements with the Part 11 rules, thus ensuring that CAP-formatted EAS messages are converted into SAME-compliant messages in a consistent manner across devices and delivery platforms. Should the Commission directly regulate CAP-to-SAME conversion, or is it enough to specify in section 11.56 that EAS equipment must be capable of outputting CAP-formatted messages in EAS protocol-compliant form? What are the cost and benefits associated with ensuring that CAP-formatted EAS messages are converted into SAME-compliant messages? How could any requirements we might consider be tailored to impose the least amount of burden on those affected? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action?

2. CAP-Related Monitoring Requirements

36. Section 11.52 sets forth the basic monitoring requirements that EAS Participants must follow to facilitate receipt of EAS alert messages.[108] This section requires EAS Participants to monitor two EAS sources, which are assigned in the State Area EAS Plan.[109] While the *Second Report and Order* codified in section 11.56 the general obligation of EAS Participants to receive CAP-formatted EAS alerts,

[106] *See CSRIC Final Report*, § 5.1; Monroe Comments at 2; Timm Comments at 8; Sage Comments at 4; TFT Reply Comments at 5.

[107] As indicated, FEMA has adopted the ECIG Implementation Guide to serve this purpose. *See supra* para. 21.

[108] *See* 47 C.F.R. § 11.52.

[109] *See id.* § 11.52(d).

it did not specify any associated monitoring requirements.[110]

37. Commenters made several recommendations with respect to clarifying federal and state CAP-related monitoring requirements. CSRIC stated, "A new subparagraph is needed [in section 11.52] to require EAS participants to monitor multiple IP-based CAP alert sources (*i.e.*, CAP servers); in addition to legacy (audio) EAS alert sources."[111] According to CSRIC, "EAS participants should monitor at least one state and/or local CAP EAS source (*i.e.*, CAP server) in addition to a Federal CAP source."[112] SpectraRep suggested, "Multiple CAP sources should be monitored to ensure redundancy, to provide direct delivery of State and Local CAP messages, and to permit monitoring of national CAP messages from future proposed sources such as IPAWS."[113] SpectraRep recommended that we add a subparagraph to section 11.52 requiring EAS Participants "to monitor at least two CAP sources [one state and one federal] in addition to the requirements of existing subparagraph §11.52 (d)."[114]

38. As a preliminary matter, we observe that the technical construction and distribution methodologies of CAP messages are different from SAME messages. For example, under the current EAS system, SAME-formatted messages are AFSK-modulated data messages that are received by monitoring the over-the-air broadcasts of designated broadcast stations.[115] CAP messages are IP-based data packets that can be distributed using various distribution models. FEMA has indicated that the IPAWS system will employ Really Simple Syndication, version 2.0 (RSS), to distribute CAP-formatted alerts to EAS Participants.[116] RSS is an XML-based format for sharing and distributing Web content, such as news headlines, from various sources.[117] RSS feeds will automatically update content displayed in RSS-enabled browsers, readers, and other programs that use common feed lists. The RSS specification and RSS reader/browser software is freely available online. Under this alert distribution model, RSS-configured EAS equipment will poll FEMA's RSS source at periodic intervals (programmed into the EAS equipment by the EAS Participant), and any pending CAP messages will be sent via the RSS feed to the EAS equipment. The CAP message will be wholly contained within the RSS file's "description" field,[118] and EAS equipment will extract the CAP data in accordance with the ECIG Implementation Guide to

---

[110] *See Second Report and Order*, 22 FCC Rcd 13275, 13288, para. 26.

[111] *CSRIC Final Report*, § 5.1.

[112] *Id.* CSRIC points out, "Monitoring multiple CAP sources is necessary to ensure redundance and support the mandatory Gubernatorial Must-Carry message in §11.55(a)." *Id. See also* TFT, Inc., Comments, EB Docket 04-296 (filed May 14, 2010) at 7 (TFT Comments); Gary E. Timm Reply Comments, EB Docket 04-296 (filed June 7, 2010) at 2 (Timm Reply Comments). CSRIC also recommends updating section 11.54(b)(1) to reflect IPAWS monitoring. *See CSRIC Final Report*, § 5.1.

[113] SpectraRep Comments at 3. *See also* Monroe Reply Comments, EB Docket 04-296 (filed June 14, 2010) at 1 ("§11.20 must make reference to state and local CAP sources and networks, and further that §11.11 and §11.52 must require the monitoring of CAP sources.") (Monroe Reply Comments).

[114] SpectraRep Comments at 2. *See also* TFT Reply Comments at 3.

[115] *See* 47 C.F.R. § 11.31(a). *See also supra* note 57.

[116] *See* http://www.fema.gov/emergency/ipaws/CAP_Feed.shtm

[117] *See, e.g.*, the RSS Advisory Board's description of the RSS specification at http://www.rssboard.org/rss-specification.

[118] RSS files – or "documents" – contain three mandatory elements, or data fields (although additional elements may be included): title, link (the URL link associated with the RSS channel, or "feed"), and description (*e.g.*, a typical news-oriented RSS document will provide the title of an article, a brief summary (in the description field) and a link to the article on the news organization's web site). *See id.*

ensure an EAS Protocol-compliant output. Accordingly, we tentatively conclude that we should amend section 11.52 to include a requirement that EAS Participants monitor FEMA's IPAWS RSS feed(s) for federal CAP-formatted messages.[119]

39. We seek comment on this tentative conclusion. For example, would our proposed approach be sufficient to ensure that EAS Participants receive federal CAP-formatted messages? Would such an approach to federal CAP monitoring be sufficient to capture the technical elements of monitoring, including any specific machine-to-machine interface requirements that may govern communications between the EAS equipment and the source of the RSS feed? Is or should there be any limit as to how many federal RSS feeds EAS equipment can technically and/or practically monitor? Would use of RSS as the CAP message transport medium limit the utility of CAP, such as its ability to include audio messages as audio files or links to URLs for streaming audio?[120] Should we specify authentication and/or digital verification standards or requirements governing any aspect of this approach? Should we specify the timing intervals governing when the EAS equipment will poll the RSS feed in the Part 11 rules or leave timing intervals to EAS Participants, and if the former, what interval would be appropriate? Would an RSS-based monitoring requirement present any unique equipment certification concerns? Would the ability to distribute alert messages in either the SAME-format via station-to-station broadcasts or CAP format via IP-based RSS connections enhance redundancy? What are the costs and benefits of using the RSS approach to monitor federal CAP sources? Are there alternative approaches that would be less burdensome to equipment manufacturers and/or EAS Participants that would achieve the same result? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action? Is direct regulation of federal CAP monitoring necessary or is it enough to specify in section 11.56 that EAS equipment must be capable of converting CAP-formatted messages into EAS protocol-compliant messages?

40. The Commission did not specify monitoring requirements for CAP-formatted messages initiated by state governors (or their designees), although it did require that the State Area EAS Plan submitted for FCC approval specify the methodology for aggregating and delivering such messages.[121] As discussed in section III.E of this item, while it is conceivable that states could deploy different CAP-based systems[122] – and, presumably, different monitoring specifications – it has never been the

[119] *See Second Report and Order*, 22 FCC Rcd 13275, 13291, para. 32 ("[S]hould FEMA announce technical standards for any Next Generation EAS alert delivery system, EAS Participants must configure their networks to receive CAP-formatted alerts delivered pursuant to such delivery system, whether wireline, Internet, satellite or other, within 180 days after the date that FEMA announces the technical standards for such Next Generation EAS alert delivery.").

[120] Although a CAP-formatted message generally can provide an audio message in the form of an audio file or a URL link to streaming audio, because the RSS file is essentially a text file (that typically includes a URL link to web-based content associated with such file), such as a news article summarized in the RSS text, it would appear that any audio message associated with a CAP-formatted message conveyed within an RSS document would have to be specified in the RSS text as a URL link to streaming audio.

[121] *See* 47 C.F.R. § 11.21(a) ("The State plan must specify how state-level and geographically targeted EAS messages initiated by a state governor or his/her designee will be transmitted to all EAS Participants who provide services in the state, and must include specific and detailed information describing how such messages will be aggregated, designated as mandatory, and delivered to EAS Participants."). *See also* 47 C.F.R. § 11.55.

[122] CSRIC, for example, observed that "IP based systems are . . . in . . . 18 states (plus the District of Columbia), of which at least 10 are already originating and disseminating CAP messages for EAS, and the remainder appear to have near-term plans to begin introducing CAP message origination and dissemination within their state systems." *CSRIC Final Report*, § 4.1.2. CSRIC further observed that "[w]here advanced EAS capabilities have not yet been deployed, emergency managers continue to utilize EAS in traditional manners." *Id.*

Commission's intent that EAS Participants be required to deploy multiple variations of EAS equipment to meet their basic CAP-related obligations.[123] Further, because the Commission's focus in this proceeding has been on implementing Federal CAP message processing over the existing EAS, we have proposed that the basic obligation to process gubernatorial CAP messages should only apply if the message has been formatted consistent with the CAP standards (*i.e.*, pursuant to OASIS CAP Standard v1.2 and CAP v1.2 IPAWS USA Profile v1.0) adopted by FEMA.[124] The same logic should apply to the monitoring aspect of gubernatorial CAP messages. Specifically, we propose that EAS equipment should only be required to employ the same monitoring functionality for state CAP messages that are used for federal CAP messages (*i.e.*, RSS). Accordingly, we tentatively conclude that we should amend section 11.52 to include a requirement that EAS Participants monitor the RSS feed(s) designated by a state as the source of governor-originated CAP messages (and identified in the state's EAS Plan submitted to and approved by the Commission).

41. We seek comment on this proposal. Would such an approach to state CAP monitoring be sufficient to capture the technical elements of monitoring, including any machine-to-machine interface requirements that may govern communications between the EAS equipment and the source of the RSS feed? Is or should there be any limit as to how many state RSS feeds EAS equipment can technically and/or practically monitor? Is there a potential for variation among state CAP systems that might create additional considerations for monitoring that should be taken into account? Should we specify authentication and/or digital verification standards or requirements governing any aspect of this approach? Should we specify the timing intervals governing when the EAS equipment will poll the state RSS feed in the Part 11 rules, leave it to the States to develop in their State EAS Plans or leave the timing intervals to EAS Participants? If we set the timing intervals in the Part 11 rules, what interval would be appropriate? Would the ability to distribute alert messages in either the SAME-format via station-to-station broadcasts or CAP format via IP-based RSS connections enhance redundancy? What are the costs and benefits of using the RSS approach to monitor state CAP sources? Are there alternative approaches that would be less burdensome to equipment manufacturers and/or EAS Participants that would achieve the same result? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action? Is direct regulation of state CAP monitoring necessary, or is it enough to specify in section 11.55 that EAS equipment must be capable of converting gubernatorial CAP-formatted messages into EAS protocol-compliant messages (where the methodology for such CAP system has been detailed in a State Area EAS Plan approved by the Commission)?

3. Next Generation Distribution Systems

42. In the *Second Report and Order*, the Commission concluded that it should enhance the distribution architecture of the existing EAS.[125] The Commission indicated that, based on the record before it, we could improve the EAS by authorizing the delivery of alerts through the existing EAS coupled with new redundant distribution systems for EAS.[126] The Commission further concluded, however, that FEMA is best positioned to determine the types of additional EAS systems that EAS Participants should accommodate.[127] Accordingly, the Commission stated that "should FEMA announce

[123] *See infra* para. 115.

[124] *See infra* para. 116.

[125] *See Second Report and Order*, 22 FCC Rcd 13275, 13291, para. 32.

[126] *See id.*

[127] *See id.*

technical standards for any Next Generation EAS alert delivery system, EAS Participants must configure their networks to receive CAP-formatted alerts delivered pursuant to such delivery system, whether wireline, Internet, satellite or other, within 180 days after the date that FEMA announces the technical standards for such Next Generation EAS alert delivery."[128] The Commission incorporated this obligation into section 11.56, which provides that "all EAS Participants must be able to receive CAP-formatted EAS alerts ... after FEMA publishes the technical standards and requirements for such FEMA transmissions."[129]

43. Commenter Gary E. Timm (Timm) contended that the Part 11 rules are not clear regarding the obligation of EAS Participants to receive CAP-formatted alerts from Next Generation EAS platforms. Specifically, Timm asserted, "It is unclear whether the terms 'receive CAP-formatted EAS alerts' and 'FEMA transmissions' [in section 11.56] are meant to allude to implemented FEMA Next Generation EAS delivery systems."[130] According to Timm, "As it stands now, most EAS Participants interpret that section §11.56 requires only that they acquire the ability to decode a CAP message with no reference as to its possible origin."[131] Timm stated that "if the Commission truly intends to require EAS Participants to implement any Next Generation EAS delivery systems within 180 days of FEMA adopting them it should be more clearly stated."[132]

44. We believe that the language from the *Second Report and Order* regarding receipt of CAP-formatted messages from Next Generation EAS delivery systems was intended to put EAS Participants on notice that, should FEMA adopt technical standards covering delivery of CAP-formatted messages to EAS Participants over specific platforms, such as satellite systems, EAS Participants would ultimately need to configure their systems to be able to interface with such systems to meet their existing obligation to process CAP-formatted messages. The need to specify such technical standards may never arise. The Commission's intent was not to permit FEMA to create or modify existing requirements via publication or adoption of a technical standard. Rather, the Commission's general intent was to revise the existing Part 11 rules to permit initiation and carriage of CAP-based alert messages over the existing EAS, subject to the technical requirements and limitations of the existing EAS, until such time as the Next Generation EAS has been fully deployed. Whatever obligations may arise with respect to the Next Generation EAS will be addressed in future proceedings. We seek comment on whether further clarification of the EAS Participants' obligation to receive and process CAP-formatted EAS messages delivered over Next Generation EAS distribution systems is necessary. In particular, is there a need to codify our interpretation to prevent any confusion that may exist concerning the above-quoted language in the *Second Report and Order* addressing Next Generation EAS distribution platforms?

[128] *Id.*

[129] *See* 47 C.F.R. § 11.56.

[130] Timm Reply Comments at 2-3.

[131] *Id.* at 3.

[132] *Id.*

4. Equipment Requirements

45. *Intermediary Devices.* Various parties responding to the *Part 11 Public Notice* suggested that EAS Participants be allowed to meet their obligation to receive and process CAP messages by deploying intermediary devices that essentially would carry out the function of receiving and decoding a CAP-formatted message, and translating and encoding such message into a SAME-formatted message that could then be inputted into a legacy EAS device via its audio port (just as an over-the-air SAME-formatted message would be) for broadcast over the EAS Participant's transmission platform. SpectraRep, for example, urged that the equipment requirements we impose on EAS Participants to meet the CAP obligations be permitted to "include an integrated CAP receiver/EAS encoder-decoder, or an additional CAP receiver interface module to an existing EAS encoder-decoder."[133] It appears that, depending upon the legacy EAS devices that an EAS Participant has deployed, use of such an intermediary device may provide a cost-effective method for an EAS Participant to meet its obligations to receive and convert CAP-formatted messages into the SAME format without having to replace its existing EAS equipment.

46. We seek comment on whether EAS Participants should be permitted to meet their CAP-related obligations by deploying such intermediary devices. We observe that these devices would appear to receive a CAP-based alert and encode it into a SAME-formatted message that is fed into the audio input of the EAS Participant's legacy EAS equipment, just as if that message had been received over-the-air from another station. Accordingly, we also seek comment on whether we should subject intermediary devices to some or all of the encoder requirements set forth in section 11.32 and the transmission requirements in section 11.51. Is there any reason to treat these devices differently from an EAS decoder that decodes both SAME and CAP-formatted messages? Specifically, should we subject intermediary devices to some or all of the decoder requirements set forth in section 11.33 and the monitoring requirements in section 11.52? Are there any requirements not currently specified in Part 11 to which we should subject intermediary devices?[134]

47. Do intermediary devices have the same capacity as new CAP-compliant equipment designed to replace legacy EAS devices to be modified via software or firmware to accommodate future changes to CAP, the SAME protocol, or changes to other Part 11 requirements? Would use of intermediary devices provide a cost-effective and efficient method for EAS Participants, including those that qualify as small businesses,[135] to meet the CAP-related obligations addressed in this item? Would EAS Participants deploying intermediary devices likely have to replace such devices with new CAP-compliant equipment sooner than EAS Participants that deployed new CAP-compliant equipment to begin with? What, if any, approximate cost savings (including on a percentage basis) would result from deploying an intermediary device instead of replacing legacy EAS equipment with new CAP-compliant EAS equipment? What are the cost and benefits associated with the use of intermediary devices? How could any requirements we might consider regarding intermediary devices be tailored to impose the least

---

[133] SpectraRep Comments at 3. *See also* Sage Comments at 5 ("Some manufacturers may choose to provide the CAP portion of their system in one unit, and the EAS portion in a separate unit."); TFT Reply Comments at 3 (agreeing with Spectralink that "CAP compliance for an EAS Participant can be achieved with either a single unit that receives both CAP and EAS messages or with a unit that receives CAP only and can be added to an existing FCC Type Notified EAS decoder or EAS combined encoder/decoder").

[134] In Section III.C of this item, we seek comment on whether intermediary devices should be subject to the Commission's certification rules. *See infra* para. 104.

[135] A description of "small business" is contained in the Initial Regulatory Flexibility Analysis in Appendix B of this item.

amount of burden on those affected? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action?

48. *Encoder Requirements.* The functional requirements for EAS encoders are set forth in section 11.32.[136] As discussed below, CSRIC and parties responding to the *Part 11 Public Notice* made various CAP-related recommendations for revising these requirements. We seek comment on these recommendations generally and on any of the encoder requirements not addressed below that commenters believe we should revise to accommodate CAP.

49. *Section 11.32(a).* Section 11.32(a) specifies the minimum requirements for encoders.[137] This section requires that encoders be capable of encoding the EAS Protocol set forth in section 11.31, providing the EAS code transmission requirements described in section 11.51, and meeting various other specifications.[138] CSRIC recommended that the Commission "[m]odify [the] EAS encoder minimum requirement," so that "EAS encoder[s] [are] capable of [r]endering a fully CAP compliant message."[139] We seek comment on this proposal.

50. To the extent that CSRIC is proposing that EAS encoders be required to be capable of encoding a CAP-formatted message (*i.e.*, originating or somehow transmitting a message in the CAP format as opposed to the SAME format), we seek comment on whether such a requirement would be necessary or appropriate. As discussed above, we have tentatively concluded that the scope of the CAP-related Part 11 rule changes under consideration in this item involve ensuring that EAS Participants are capable of receiving CAP-formatted messages and transmitting a SAME-compliant message to the public (and, where applicable and feasible,[140] encoding in SAME for rebroadcast). Some EAS Participants originate (encode) SAME-formatted messages because they can be disseminated to the public over their transmission facilities as well as to other EAS Participants via the daisy chain process.[141] By contrast, CAP messages are essentially IP-based data files that cannot be transmitted in this fashion using the current transmission process. We seek comment on whether there is utility in asking EAS Participants to originate (or encode) messages in the CAP format.

51. *Section 11.32(a)(2).* Section 11.32(a)(2) specifies the input configuration requirements for encoders.[142] This section currently requires that encoders be configured with two inputs: one for audio messages and one for data messages (RS–232C with standard protocol and 1200 baud rate).[143] CSRIC recommended that the Commission modify the input requirements to "[i]nclude [a] requirement for a single Ethernet input with support for multiple IP sources."[144] Although CSRIC did not indicate specifically whether we should retain the 1200 baud RS-232C input requirement, Trilithic, Inc. (Trilithic),

---

[136] *See* 47 C.F.R. § 11.32.

[137] *See id.* § 11.32(a).

[138] *See id.*

[139] *CSRIC Final Report*, § 5.1.

[140] *See supra* note 97.

[141] This process involves modulating data along with an audio signal onto the EAS Participant's main RF transmission signal.

[142] *See* 47 C.F.R. § 11.32(a)(2).

[143] *See id.*

[144] *CSRIC Final Report*, § 5.1.

suggested that we should "[r]emove the requirement for 1200 BAUD RS-232C interface" with respect to both the input configuration requirements and the output configuration requirements set forth in section 11.32(a)(3).[145]

52. We seek comment on these proposals. As a preliminary matter, if we were to decide not to require EAS Participants to encode messages in CAP format, would there be any reason to require that an encoder be configured with an Ethernet port? If so, would a single Ethernet port be sufficient to capture data streams from multiple sources and distribution platforms? Are there any other types of interface ports that it would be appropriate to require be included in these devices to maximize their ability to accommodate various data inputs, such as a USB port? Would an Ethernet port permit receipt of CAP messages over a dial-up modem (for instances in which broadband Internet access is not available)? Assuming we require inclusion of an Ethernet and/or other data ports, would there be any utility to retaining the RS232C connector and 1200 baud rate specifications, or should we delete these altogether? Should any configuration requirements we adopt for encoder inputs also be applied to encoder outputs? Would requiring an Ethernet and/or USB port(s), with the RS232C connector and 1200 baud rate or some other specifications, be a cost-effective means of ensuring a data-reception capability in EAS encoders, or are there alternative approaches less burdensome to equipment manufacturers and/or EAS Participants that would achieve the same result? What are the cost and benefits associated with requiring the inclusion of Ethernet or other data ports in encoders? How could any requirements we might consider with respect to encoder inputs be tailored to impose the least amount of burden on those affected? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action?

53. *Decoder Requirements.* The functional requirements for EAS decoders are set forth in section 11.33.[146] As discussed below, CSRIC and parties responding to the *Part 11 Public Notice* made various CAP-related recommendations for revising these requirements. We seek comment on these recommendations generally and on any of the decoder requirements not addressed below that commenters believe we should revise to accommodate CAP.

54. *Section 11.33(a).* Section 11.33(a) specifies the minimum requirements for decoders.[147] This section requires that decoders be capable of decoding the EAS Protocol set forth in section 11.31, providing the EAS monitoring functions set forth in section 11.52, and meeting various other specifications.[148] Although not raised specifically by CSRIC or others, we seek comment on whether the minimum requirements for decoders in this section should include the capability to decode CAP-formatted messages and convert them into SAME protocol-compliant messages, as set forth in section 11.56 and whether this requirement can be met through the deployment of an intermediary device. The fundamental purpose of decoders is processing EAS messages, whether formatted in the SAME or CAP protocols, and adding CAP reception to section 11.33(a) will put CAP on the same footing as SAME. We seek comment on this proposal. Is direct regulation, in this case specifying CAP-to-SAME conversion as a minimum requirement for decoders, necessary to ensure decoder compliance or is there an alternative approach that would achieve the same end? What are the cost and benefits associated with requiring decoders to carry out CAP-to-SAME conversion? How could any requirements we might consider regarding CAP-to-SAME conversion be tailored to impose the least amount of burden on those affected?

---

[145] Trilithic, Inc., Comments, EB Docket 04-296 (filed May 17, 2010) at 4 (Trilithic Comments).

[146] *See* 47 C.F.R. § 11.33.

[147] *See id.* § 11.33(a).

[148] *See id.*

To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action?

55. *Section 11.33(a)(1).* Section 11.33(a)(1) specifies the input configuration requirements for decoders.[149] This section currently requires that decoders be configured with three inputs: two for audio messages (from EAS monitoring assignments) and one for data (RS–232C with standard protocol and 1200 baud rate).[150] CSRIC recommended that the Commission "[a]dd Ethernet input and multiple IP source requirements."[151] As in the case of encoders, CSRIC did not indicate specifically whether we should retain 1200 baud RS-232C input requirements; however, Trilithic suggested that we should remove them with respect to both the input and output configuration requirements set forth in section 11.33(a)(7).[152]

56. We seek comment on these proposals. Is there any reason to require that a decoder be configured with an Ethernet port? If so, would a single Ethernet port be sufficient to capture data streams from multiple sources and distribution platforms? Are there any other types of interface ports that it would be appropriate to require be included in these devices to maximize their ability to accommodate various data inputs, such as a USB port? Would an Ethernet port permit receipt of CAP messages over a dial-up modem (for instances in which broadband Internet access is not available)? Assuming we require inclusion of an Ethernet and/or other data ports, would there be any utility to retaining the RS232C connector and 1200 baud rate specifications, or should we delete these altogether? Should any configuration requirements we adopt for decoder inputs also be applied to decoder outputs? Would requiring an Ethernet and/or USB port(s), with the RS232C connector and 1200 baud rate or some other specifications, be a cost-effective means of ensuring a data-reception capability in EAS decoders, or are there alternative approaches less burdensome to equipment manufacturers and/or EAS Participants that would achieve the same result? What are the cost and benefits associated with requiring the inclusion of Ethernet or other data ports in decoders? How could any requirements we might consider with respect to decoder inputs be tailored to impose the least amount of burden on those affected? To the extent feasible, what explicit performance objectives should we specify to facilitate monitoring the success of any potential course of action?

57. *Section 11.33(a)(4).* Section 11.33(a)(4) specifies certain visual display and logging requirements for decoders.[153] This section currently requires, among other things, the development of visual display information from header codes, including the originator, event, location, valid time period of the message, and the local time it was transmitted.[154] This section also requires that existing and new models of EAS decoders manufactured after August 1, 2003, provide a means to permit the selective display and logging of EAS messages containing header codes for state and local EAS events.[155] Sage suggested, "If the message was derived from CAP, the contents of the Alert Text, assembled as defined

[149] *See id.* § 11.33(a)(1).

[150] *See id.*

[151] *CSRIC Final Report*, § 5.1.

[152] *See* Trilithic Comments at 4.

[153] *See* 47 C.F.R. § 11.33(a)(4).

[154] *See id.*

[155] *See id.*